NetZeroCities

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Report on City Needs, Drivers and Barriers Towards Climate Neutrality

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Summary

Cities are leading the efforts toward achieving the climate goals and commitments set by the EU Green Deal. NetZeroCities, as part of the Horizon 2020 Research and Innovation Programme will support cities in overcoming the current structural, institutional and cultural barriers they face in order to achieve climate neutrality by 2030 and will directly support the European Commission?s Mission of ?100 Climate-Neutral and Smart Cities by 2030?. This report, as a first step, compiles the experiences of a sample of participating cities and documents their needs, drivers and barriers to achieving this goal. This assessment has been carried out through 10 focus group discussions and an associated survey, facilitated by the city network partners of the NZC consortium, with each meeting curated along specific themes in line with the Mission for Cities. Together, the meetings engaged 64 cities from 22 EU Member States and 3 Associated Countries. These cities capture typological diversities along geography, size and level of maturity of climate action. Additionally, preliminary results from the Mission Call for Expression of Interest, which gathered data from 362 cities from all EU Member States and Associated Countries, have also been integrated. It is clear from the research with the cities that their needs, drivers and barriers to climate neutrality can be defined under five key enabling themes: policy and governance; implementation practices; culture, social innovation and participation; finance and business models; and strategic learning. Cities recognise that the target of climate neutrality requires a multi-governance collaboration with all stakeholders on board. Climate City Contracts have been identified not only as a tool to engage local communities and stakeholders but as a process that can build trust, transparency and support to accelerate the transition. Recognising that fragmentation of responsibilities and a siloed structure of working remains a crucial barrier, cities are in need of more support through enabling regulatory frameworks at the national level. There is consensus on the need for a systemic approach and new governance model that links different action plans into one overarching environmental strategy. The majority of cities also recognise that there is a disconnect between strategy-making and implementation. Cities want to scale up their existing policies and actions and understand the need to move from a project to portfolio approa...

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NET ZERO CITIES

City Needs, Drivers and Barriers towards Climate Neutrality

Deliverable D13.1

Version N°03

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This project has received funding from the H2020 Research and Innovation Programme under the grant agreement n°101036519.

Abbreviations and acronyms

Acronym	Description
CCC	Climate City Contract
EC	European Commission
EoI	Expression of Interest
NBS	Nature-Based Solutions
NZC	NetZeroCities
UNEP	UN Environment Programme
WP	Work Package

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- Copenhagen
- Dublin
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- Glasgow
- Gothenburg
- Greater Manchester
- Grenoble Alpes Metropole
- Groningen
- Issy les Moulineaux
- Järfälla
- Krakow
- Križevc
- Leuven
- Lund
- Madrid
- Malmo
- Mannheim
- Maribor
- Milan
- Münster
- Nantes Metropole
- Nis
- Paris
- Pau
- Porto
- Prague
- Reykjavik
- Riga
- Rotterdam
- Saint-Germain-en-Laye
- Seville
- Soria
- Stockholm
- Tallinn
- Tampere
- Tartu
- The Hague
- Thessaloniki
- Trikala
- Turku
- Umeå
- Uppsala
- Valencia
- Valladolid
- Växjö
- Vejle
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- Zagreb

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Executive Summary

Cities are leading the efforts toward achieving the climate goals and commitments set by the EU Green Deal. NetZeroCities, as part of the Horizon 2020 Research and Innovation Programme will support cities in overcoming the current structural, institutional and cultural barriers they face in order to achieve climate neutrality by 2030 and will directly support the European Commission's Mission of "100 Climate-Neutral and Smart Cities by 2030". This report, as a first step, compiles the experiences of a sample of participating cities and documents their needs, drivers and barriers to achieving this goal. This assessment has been carried out through 10 focus group discussions and an associated survey, facilitated by the city network partners of the NZC consortium, with each meeting curated along specific themes in line with the Mission for Cities. Together, the meetings engaged 64 cities from 22 EU Member States and 3 Associated Countries. These cities capture typological diversities along geography, size and level of maturity of climate action. Additionally, preliminary results from the Mission Call for Expression of Interest, which gathered data from 362 cities from all EU Member States and Associated Countries, have also been integrated.

It is clear from the research with the cities that their needs, drivers and barriers to climate neutrality can be defined under five key enabling themes: policy and governance; implementation practices; culture, social innovation and participation; finance and business models; and strategic learning. Cities recognise that the target of climate neutrality requires a multi-governance collaboration with all stakeholders on board. Climate City Contracts have been identified not only as a tool to engage local communities and stakeholders but as a process that can build trust, transparency and support to accelerate the transition. Recognising that fragmentation of responsibilities and a siloed structure of working remains a crucial barrier, cities are in need of more support through enabling regulatory frameworks at the national level. There is consensus on the need for a systemic approach and new governance model that links different action plans into one overarching environmental strategy.

The majority of cities also recognise that there is a disconnect between strategy-making and implementation. Cities want to scale up their existing policies and actions and understand the need to move from a project to portfolio approach. Next to technological advice, cities are looking to scale up capacity to implement solutions. Cities are also looking to increase their capacity in citizen engagement efforts. There is a unanimous understanding that the role of cities in engaging local communities must focus on building reciprocal trust and commitments, ownership and support, and promoting behavioural change. Through the Mission Platform, cities need advice, tools and methods to scale up inclusive participation, engage marginalised groups and move beyond the usual suspects. Cities seek to use this platform as a political tool that can enhance communication both internally and externally.

Cities would also like to build more collaborative partnerships with the private sector, to unlock more technological and business innovation and create reciprocal commitments that can help bridge fundings gaps. With the lack of funding and finance schemes recognised as a key barrier to achieving climate neutrality, cities are looking to receive tailormade support and know-how on climate finance and climate investment planning. In particular, they lack input on investment roadmaps, including actions, impacts, benefits and priorities to steer investment in the right direction. Cities recognise the need to set up peer-to-peer learning networks to increase their knowledge and operational capacity. They see immense value in learning from each other, especially from those who share similar cultural backgrounds, challenges and governance arrangements. There is a further need for data and monitoring frameworks that can contribute to better decision making as well as assessment of impacts.

Through NetZeroCities, cities seek to receive support that can help mobilise, implement and scale up actions towards climate neutrality. The findings of this report will further shape the Mission Platform and the services that NZC will deliver. This is only the first step of an ongoing dialogue that the NZC project will establish with the cities and city practitioners throughout the duration of the program.

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1 Introduction

All EU Member States have committed to the European Green Deal aimed at turning the EU into the first climate neutral continent by 2050. They have also set an intermediate target of 55% emissions reduction by 2030, compared to 1990 emission levels (European Commission, 2021). As cities are responsible for approximately 75% of global emissions (UNEP, n.d.), they are central to meeting these targets. It is also evident that action needs to be taken urgently.

In response to this urgency, the commission took forward the recommendations of the Horizon Europe Mission Board in the "100 Climate-neutral Cities by 2030 – by and for the Citizens" report (Directorate-General for Research and Innovation (European Commission), 2020). The report calls for substantial intensification of decarbonisation of cities and acceleration of existing efforts. To achieve this is not going to be easy for cities; it will require profound changes in how they develop and approach their policies and portfolios of projects and programmes. While the ambition is present, the pathway to meeting it is not laid out yet.

The NetZeroCities (NZC) project is designed to support the Mission for Cities, by enabling European cities and citizens to show the way forward towards an inclusive, thriving, climate resilient and sustainable future. To be successful, NZC future services will need to respond to existing city needs, to help address – or be aware of – barriers that cities face, but also to leverage existing opportunities in cities towards neutrality. In this context, NZC takes a socio-technical transformation approach to address this intricate challenge (see Figure 1 showing the need for multilevel intervention).

Taking the above into consideration, the project naturally kicked off with an early engagement process of cities to capture their experience – i.e. explore what they feel their needs are, what barriers they face and where their opportunities lie. This city engagement will ensure that service design and delivery is fit for purpose. The engagement process involved a series of focus group meetings as well as the distribution of an online survey to which cities responded. The methodology of the engagement process is described in detail in Chapter 2, while the engagement assessment outcomes are described in Chapter 3.

It is worth noting that cities articulate needs, drivers and barriers within their own context of understanding (mental maps) and, therefore, significant effort has been placed in coding, structuring and synthesizing those in a way that is coherent across focus groups and cities so that the reader can easily understand them, and the project can ultimately use them. As a result, Chapter 3 is comprised of five key integration areas that capture the full picture of needs/drivers/barriers, namely:

1. Policy and governance
2. Implementation practices
3. Culture, social innovation and participation
4. Finance and business models, and
5. Strategic learning

The generated knowledge is a synthesis using input from diverse European city contexts, considering the wide geographical cover of cities participating in the focus groups and contributing to the survey. This allows the NZC project to draw sound, albeit qualitative, conclusions for the development of its services, whose ultimate user will be cities themselves.

This is not the first attempt to map cities' needs, barriers and opportunities and this analysis corroborates previous findings. National legislation is not always supportive of the transition, with burdensome regulations and complex administrative procedures creating legal barriers for public and private sector investment. Cities are also facing a lack of technical expertise that will help them undertake long-term climate and energy actions (Covenant of Mayors, 2017). According to previous research by the Covenant of Mayors, local authorities lack financial resources to implement projects.

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Grant funding, upon which local authorities are already heavily reliant, is not sufficient to close the gap and the private sector is unwilling to offer loans with sufficient flexibility, or sufficiently low interest rates (PROSPECT, 2017). As shown in the following chapters, these findings were also corroborated in the focus group consultations and the city responses to the European Commission's Mission Call for Expression of Interest and are expanded further in the analysis.

Despite the unfavourable environment, cities have shown leadership within this space and are experimenting with new technological solutions, new forms of climate governance and developing policies to support their climate agenda. Numerous technology-oriented interventions in the building, urban waste, transport and energy sectors have demonstrated high marginal abatement potential, while urban form related measures have lower marginal abatement potential but wider scope (Sethi, Lamb, Minx, & Creutzig, 2020). These measures are typically enabled by innovative governance arrangements. As such, techno-policy choices are found to maximise impact – i.e. supporting deployment of technological solutions through policy (ibid).

The focus groups have also revealed emerging trends which follow the global elevation of the climate agenda. Cities are shifting towards a culture of participation as they understand that behavioural change, as well as the contribution of diverse stakeholders, is necessary. For comparison, it is worth noting that a culture of citizen and stakeholder participation in adaptation action has been mainstreamed for some time. Cities also appear to look for structured ways to learn from their peers, and then replicate solutions.

Cities engaged during the focus group sessions have shown a great response and enthusiasm, which might not have been the same a few years ago. This happens as they start seeing themselves as actors who will drive change rather than mere observants. Their eagerness to accelerate their climate-focused work demonstrated in the focus groups comes also with a great responsibility for the present project. Cities have requested hands-on and tailored support, which NZC as well as EU agencies shall facilitate together with national governments.

Taking into account the breadth of the five aforementioned integration areas of this deliverable, multiple audiences are expected to find its outcomes relevant to their work. It is expected to support project partners working on a variety of topics across the project's Work Packages (WPs). The aim, in this case, is to provide them with a comprehensive understanding of how cities perceive and experience climate action. The report is therefore not aimed at going into depth on technical matters concerning each WP separately. Yet, issues around specific themes (e.g. the Climate City Contract, the NZC platform, specific support around peer-to-peer learning and stakeholder participation) will feed directly into the respective WPs. In addition, city representatives and city practitioners who wish to learn more about challenges of systemic change, and who might engage with the Mission's services, will benefit from accessing this deliverable. At the same time, the European Commission agencies that participate in the Mission for Cities can potentially find this work valuable to inform their work. Last but not least, the broader audience with an interest in urban sustainability and climate change can get an overview of current challenges and opportunities towards the transition to 2030.

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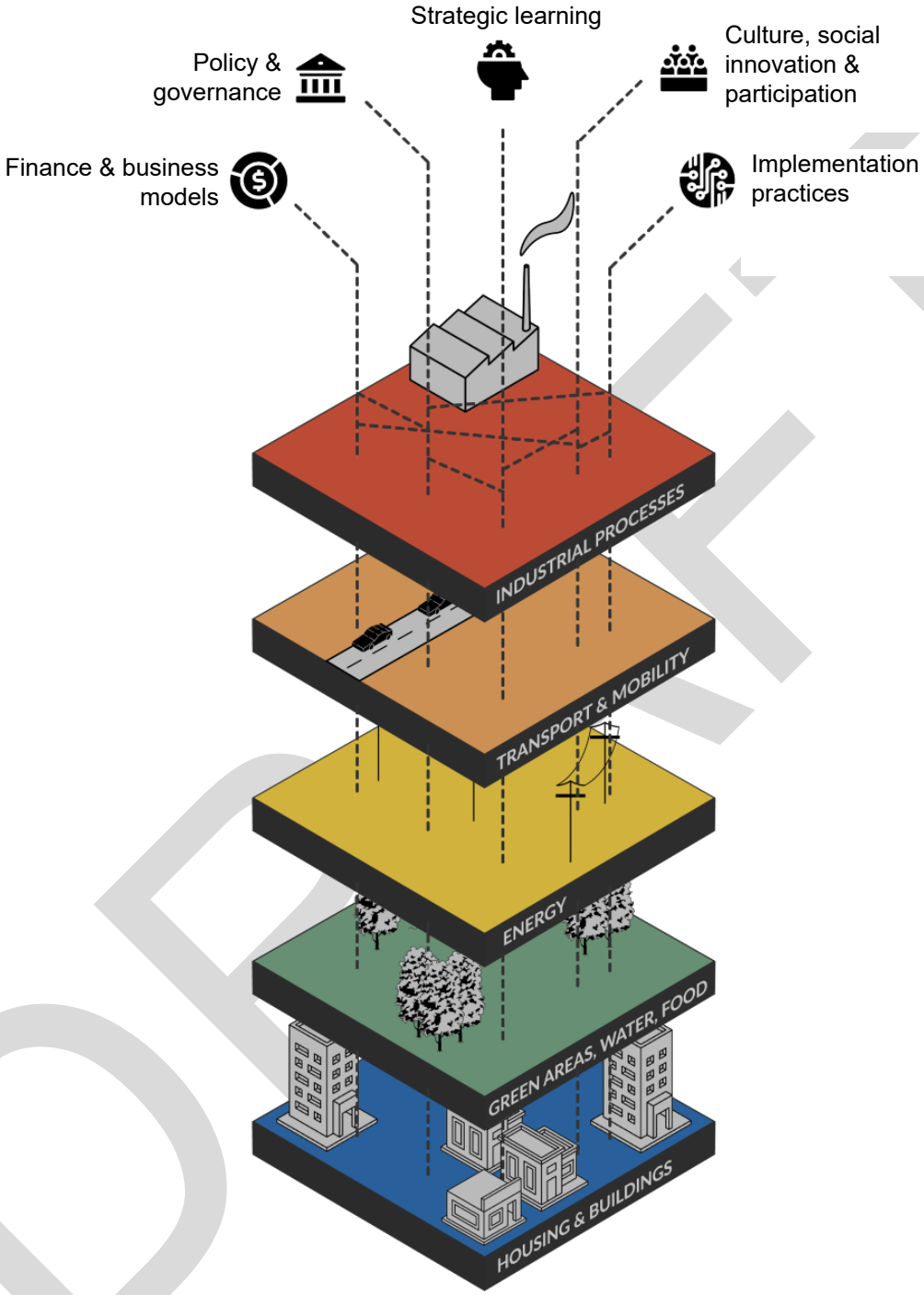

Figure 1: Diagram showing how working towards neutrality means working across urban physical, social, economic and organizational systems (adapted from DarkMatterLabs, NZC consortium presentation, Feb. 2022)

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2 Methodology

This assessment aims to address three questions:

- Why might a city engage with the concept of climate neutrality and strive to become climate neutral? (drivers)
- What hinders a city's path to climate neutrality? (barriers)
- What creates the enabling environment at various levels for a city to achieve climate neutrality? (needs)

These questions have guided the work undertaken in this assessment. Consequently, this report lends perspective to the current status of climate action in various cities and helps identify entry points into advancing efforts towards climate neutrality.

The questions were investigated through a series of focus groups with relevant city representatives. These discussions allowed for synthesising relevant findings which inform further development of project activities in NetZeroCities. Additionally the high-level findings from the EC's Mission Call for Expression of Interest to become a Climate Neutral and Smart City by 2030, which collected responses from 362 cities from all 27 EU Member States and Associated Countries, have also been integrated. These lend further insight into the needs, barriers and drivers to climate neutrality in combination with the findings of the focus group discussions. See Figure 2 for the methodology for this assessment.

The findings of this report build an evidence base of the types of support that are required by cities, and documents good practices in cities as further inspiration. The following section illustrates the various methods and frameworks used in this assessment, the thematic areas of the organised focus groups and the tools that were used to facilitate the discussions.

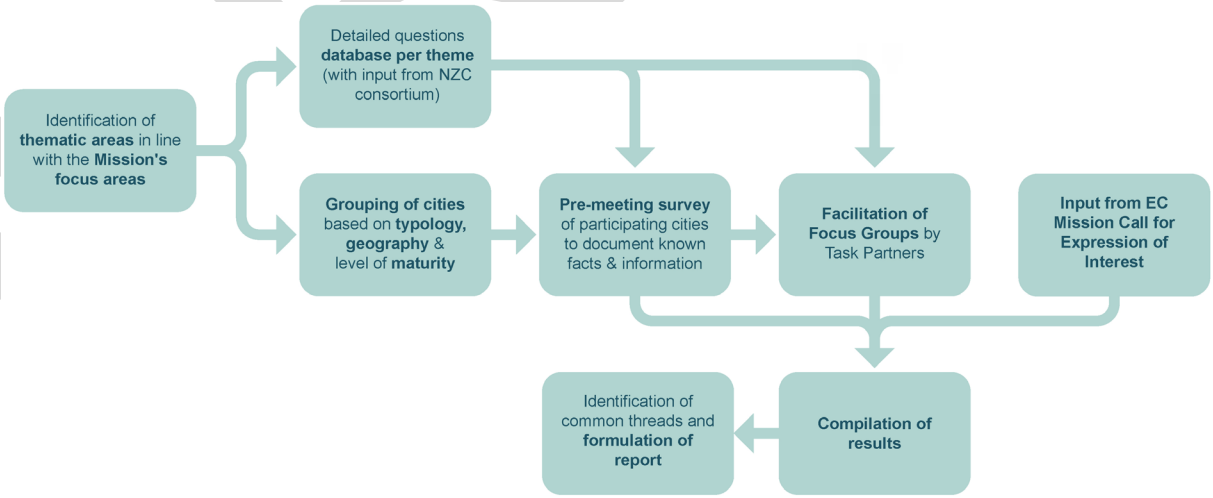

Figure 2: Methodology of the assessment

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2.1 Focus group meetings with city representatives

Ten focus group meetings with city representatives from EU Member States and Associated Countries were organised between December 2021 and February 2022. These meetings were facilitated by city networks and NZC project partners, namely: Resilient Cities Network, Eurocities, Climate-KIC, ICLEI, EIT-Urban Mobility, Energy Cities, ERRIN and Viable Cities. The format of these meetings facilitated focused discussions on particular thematic areas in groups of 7–12 cities, while also ensuring representation and diversity among the participating cities, on the basis of:

- Typology of cities (small, medium, large)
- Geographical location of cities (various EU member states and regional clusters)
- Level of maturity of existing climate action

Figure 3: Cities engaged through focus group meetings

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Based on the themes of each consultation, participants consisted of diverse backgrounds and expertise. The focus groups engaged several Climate Officers, Energy Officers and experts, and Resilience Officers. Participants also consisted of city practitioners with experience in policy and strategy making (like SUMP, SECAP), representatives from regional and national government bodies, mayoral advisors, and members of the city networks' existing working groups on finance, circular economy and other programmes. Each focus group involved municipal representatives from the departments of energy, mobility, transport, built environment, stakeholder engagement and ecology, among others, depending on the theme. Furthermore, the majority of the representatives per city were also responsible for organising their city's submission to the EC's Expression of Interest to become a Mission city.

Through these 10 focus group meetings a total of **64 cities** were engaged, from **22 EU Member States and 3 Associated Countries.**

The cities that participated in the consultation sessions represent a total population of **52 million** across Europe and the Associated Countries. These cities covered a wide range of population sizes – from Soria (Spain), which is home to under 40,000 residents, to Paris (France), with more than 2 million.

The cities were also in different stages of their climate neutrality journeys with many of them at the very beginning, such as Thessaloniki or Zagreb, while others were already in an advanced stage, such as Rotterdam or Barcelona.

2.1.1 Thematic focus

Each discussion was defined by a thematic focus within the context of climate neutrality, to develop an in-depth understanding of the status quo, ambitions and learnings from past experiences of the cities. The themes were selected to reflect the focus areas of the Mission for 100 Climate neutral and smart cities by 2030 (illustrated in the Implementation Plan and info-kit).

The thematic areas identified below provided a holistic framework to explore the many aspects of becoming climate neutral. Additionally, these themes were structured to plug into the various Work Packages within the NetZeroCities project.

Table 1: Thematic areas identified

	Themes
Enabling	Governance, Policy, Climate City Contracts
	Social Innovation and Digitisation
	Stakeholder Engagement
	Financing, Funding and Partnerships
	Peer-to-Peer Learning
Sectoral	Energy Systems
	Built Environment
	Mobility and Transport
	Circular Economy
	Nature Based Solutions

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Using these thematic areas as a base and superimposing the city networks' existing working groups, cohorts of cities and expertise, an interesting combination between enabling and sectoral themes was made for each focus group. Each meeting was designed to lead with an enabling theme followed by a sectoral theme or vice versa. The final thematic focus of the meetings conducted were as follows:

- Urban governance with a focus on Climate City Contracts (led by Eurocities)
- Funding, financing and partnerships (led by ERRIN)
- Stakeholder engagement (led by R-Cities)
- Climate City Contract and climate investment planning (led by Viable Cities)
- Built environment and systemic innovation (led by Climate KIC)
- Energy systems with a focus on sustainable heating and cooling (led by Energy Cities)
- Mobility and transport with focus on innovation management, digitalisation and funding (led by Mobility KIC)
- Circular economy and strategic planning (led by ICLEI)
- Co-benefits and nature-based solutions (led by R-Cities)
- NZC portal design exploration and feedback session (led by Eurocities)

See detailed summaries for each meeting in **Annex 1**.

Through this process, we intended to explore how the Mission for Cities can be fulfilled and the transformation that cities will need to undergo in order to achieve the goal. During the meetings, cities were encouraged to share positive examples and ways in which they have overcome challenges. The meetings also adopted an approach to frame questions such that participants could respond to learnings from the project case studies from other cities, with statements on what works well/does not work well/supposedly works well. The meetings were used for testing and as a way to reinforce/ disprove/modify statements. To facilitate critical thinking and discussions on systemic change, cities were encouraged to brainstorm on:

- potential resolutions to identified barriers
- factors that cut across multiple layers of governance and policy
- the external support that they foresee for implementation of climate action
- ways to stimulate incremental change
- the alliances they would need to make internally and externally
- roadblocks to innovation
- opportunities for scaling up existing actions

In this manner, cities were able to articulate their needs, barriers and drivers more precisely, thereby creating valuable input to further influence the services provided by the NetZeroCities project to the cities. The focus groups were also aimed at facilitating an information exchange, where cities were also briefed on the Mission for climate neutral and smart cities by 2030, what it intends to deliver, and how they can contribute to the continuous development of the project. Several cities responded positively at these meetings and expressed an intention to apply. It is interesting to note that 48 out of the 64 cities engaged in this process also responded to the EC's Mission Call for Expression of Interest.

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2.1.2 Tools for facilitation

It was a key objective of this work to ensure that the 10 focus group meetings provided valuable insights for the ongoing design of the NetZeroCities project and the support to be provided to cities. Therefore, a detailed questions database was prepared with input from all partners of the NetZeroCities consortium to target specific topics and test initial approaches on the services during the consultation meetings with the cities.

Additionally, prior to each meeting, an online stock-taking survey was sent to all participating cities to capture existing governance setups, current practices, ambitions and plans for climate neutrality. The results from the survey were used as a basis for discussion during the meetings themselves, especially to validate similarities in the status quo and challenges faced by cities. The survey collected data from 44 cities. Together, the survey and questions database framed the talking points for each meeting.

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3 Assessment Outcomes

This chapter is structured around five key areas that were highlighted by the consulted cities as critical in terms of the barriers they are facing and what they need to accelerate their climate action. **1) Policy and governance**, with a focus on how cities are thinking about the Climate City Contracts, a key element of the Mission. **2) Implementation practices** cities are currently leading with an emphasis on the various city systems that play a crucial role in the transition (i.e. mobility, energy systems, built environment, circular economy, nature-based solutions). **3) Culture, social innovation and participation** and the whole-of-society approach they need to take. **4) Finance and business models**, understanding what type of support cities need to develop investment plans and leverage financing. **5) Strategic learning**, which refers both to the importance of peer-to-peer learning and what cities need to measure, evaluate and learn from the work they are doing on the ground.

In each section we are presenting the key insights that were identified through the focus groups, a preliminary analysis of the key data from the Mission Call for Expression of Interest, along with examples of initiatives cities are currently implementing on the ground. The city examples are meant to showcase the ambition and breadth of work that is taking place in cities across the region and provide a better understanding of the nuances that the NetZeroCities project partners and urban practitioners in general need to understand to better support cities in their ambitious journey towards climate neutrality.

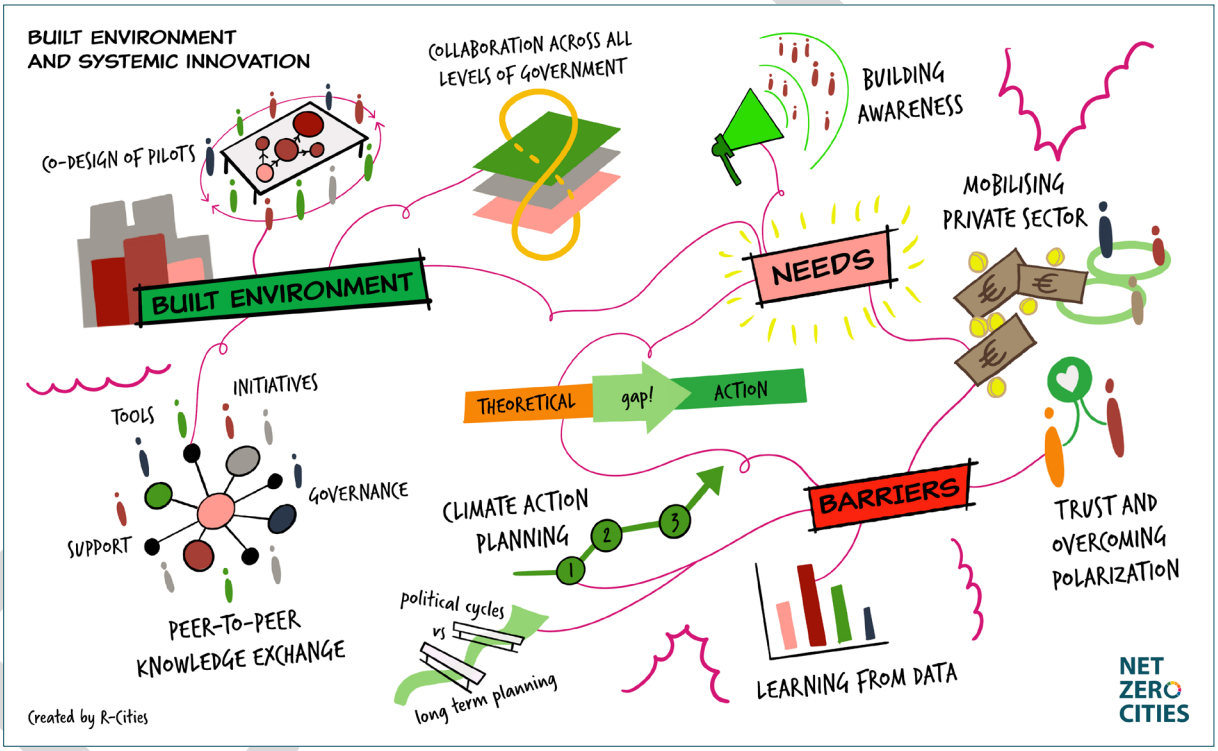

Figure 4: Findings from the focus group meeting on built environment and systemic innovation

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3.1. Policy and governance

47%
of the cities identified fragmentation of responsibilities as a barrier

45%
of the cities identified insufficient administrative and/or operational capacity as a barrier

68%
of the cities identified lack of funding/financing schemes as a barrier

(EC's Mission EoI)

The Mission to achieve 100 climate neutral and smart cities by 2030 sets a very ambitious target, in order to accelerate and enable the transition towards a more sustainable and climate-resilient future. Municipalities and local authorities are aware of the complexity of this Mission, which provides a clear direction and calls for systemic changes and institutional innovation. Making cities climate neutral in less than ten years is a wide societal challenge, but it is also a political commitment. The successful accomplishment of climate neutrality in European cities requires political processes able to support and govern this transition.

The vast majority of the cities we consulted with were not only willing to participate in the Mission, but also sincerely committed to achieve concrete results in terms of emission reductions. In this sense, the majority of cities have already set their own targets of carbon reduction regardless of their participation in the Mission, even if the timeframe considered usually goes until 2040 or 2050. For instance, the city of Vejle committed to reduce CO2 emissions by 70% in 2030 and to reach net zero emissions by 2050. The city of Maribor developed a Sustainable Energy and Climate Action Plan (SECAP) with targets of 2040 and 2050. Similarly, Rotterdam had the target of climate neutrality by 2050 and 49% reduction by 2030. Vienna published a roadmap indicating how the city will become climate neutral by 2040. Therefore, the real challenge seems to be accelerating and scaling up the transition towards climate neutrality, rather than starting from scratch. Nevertheless, cities still face several gaps and barriers in governance, which significantly hinder the achievement of the desired targets of carbon reduction.

Silos and fragmentation of responsibilities

One of the greatest barriers commonly described by cities is the fragmentation of responsibilities within the municipal administration in implementing climate action. This fragmentation is commonly referred to as policy and sectoral silos, and it is well known within European multi-level and integrated urban governance (European Commission, 2019). Climate policy is often split between different city departments, which work differently, rely on different skill sets, objectives, tools and indicators. According to the survey conducted, 61% of respondent cities have climate responsibilities shared across different departments. The absence of adequate coordination and integration makes it very difficult to achieve proper policy alignment and mainstream climate action. For instance, it is hard to maximise positive results in heating and cooling if the energy and planning departments do not interact enough or at all. Similarly, it is complex to design effective circular economy processes without proper alignment of all the sectors involved. Last but not least, different city departments might have different specific targets, creating potential conflict.

"Each department tries to do their best technically but they can have negative impacts on other areas, making wrong assumptions, or not taking into account other departments' goals. They set their own targets and these might not be enough to reach climate neutrality." (Barcelona)

Cities unanimously recognise that working in silos is one of the most significant barriers and a major obstacle. What is needed is a systemic approach and new governance model that is able to link different action plans to one overarching environmental strategy.

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Following this approach, climate goals are designated in specific city departments, which collaborate and operate in an integrated way. According to the responses to the EoI, only 12% of the cities believe that their staff is sufficiently trained and skilled to design and implement climate neutral policies at a cross-sectoral level and in all sectors relevant to climate neutrality. Hence, this also raises a need to build capacity for an integrated way of working.

Lack of coordination between administrative levels

Beside sectoral silos, the lack of coordination is also a problem between administrative levels. Cities clearly state that they need more support from the national level and that the lack of enabling national regulatory frameworks is a barrier to climate action. According to cities' perspective, there are two critical issues: not only is there a lack of coherence between national and local policies, but also national policies are considered not tailored enough to the local context. As a result, some national policies tend to be conflicting with the goal of emissions reduction and require significant effort and time to be implemented. This aspect is particularly highlighted by cities with large and strategic national infrastructure within their territory, such as a harbour. For example, Rotterdam has the largest seaport in Europe, accountable for around 15% of the total carbon emissions of the Netherlands (Port of Rotterdam, 2021), and with an administration that goes beyond the local authority.

"The time between the first idea, launching the procurement process, choosing the private company that will do the project for you, and finally finishing the project can take 5-10 years." (City of Pau)

More specifically, national policies also set limitations which make it difficult to implement specific interventions or restrict the space of action for municipalities. For example, fiscal regulations might not

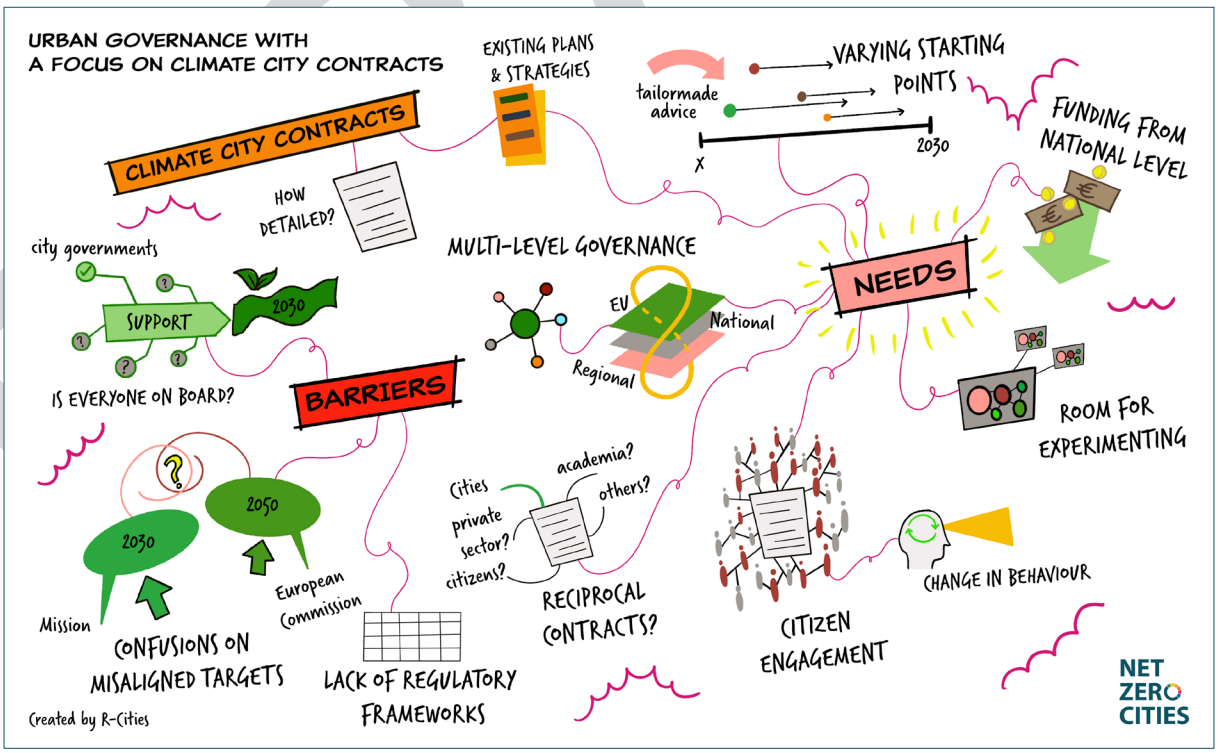

Figure 5: Findings from the focus group meeting on urban governance with focus on Climate City Contracts

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allow municipalities to make use of specific tools (such as green bonds). Public procurement processes are generally too slow for short-term climate neutrality targets.
In other cases, the national regulations are rigid, making limited room for local shifts and decentralization. For instance, it is difficult to promote a circular economy approach when current legislation still encourages linear modes of production and consumption. Likewise, regulations designed for a centralised energy system can limit interesting possibilities at the local level. In this sense, a better understanding of the policies that are needed on a European and national level is critical to unlock action in cities.

84%
of the cities involve the regional and national government in policy making

61%
of the cities collaborate with neighbouring local/regional governments

(EC's Mission EoI)

In summary, these strong governance barriers indicate that cities need to change their planning and financing processes and the way they work in order to reach climate neutrality by 2030. An integrated management requires cross-department collaboration, intended in its broader meaning, for instance including also regional public agencies and public companies controlled by municipalities. This integration can be supported in various ways, for example by using certification frameworks and reward schemes. Most of all, it requires cities to move from pure administration to a more entrepreneurial mindset and proactive role, focusing on long-term lifecycle thinking, on the interaction between policies, interventions and systemic change.

Need for reciprocal commitments at EU, national and regional levels

However, it is increasingly clear that cities cannot be left alone in accomplishing the mission for climate neutrality. Without a strong political backing from other government levels, cities will not be able to achieve the target by themselves. In fact, one of the major concerns is that the European Commission is putting all the political pressure on city administrations, without enough support from the other government levels. In this perspective, Climate City Contracts (see Box 1) can be a promising tool to undertake different reciprocal commitments and align with regional, national and European actors. For the cities consulted, NetZeroCities can become the catalyst facilitating the dialogue between cities both at a national and EU level.

Spotlight 1: Climate City Contracts (CCC)

The Climate City Contract concept and process is currently being designed by NZC in collaboration with the European Commission. It will comprise the CCC (commitments document), an action plan and an investment plan.

According to the cities consulted, the Climate City Contract is one of the most interesting governance tools developed in recent years. With its main objective to accelerate the transition to climate neutral and sustainable cities by involving a large number of stakeholders at the national, regional and local level, the Climate City Contract is not only a tool for the cities, but also a process, "a long-term commitment that ensures cooperation between cities and the other government levels." (Source: Viable Cities).

A Climate City Contract usually comprises a clear declaration and commitment to reach climate-related goals, and it is supported by an action plan and investment plan. The majority of the consulted cities stated that signing an effective Climate City Contract can provide important benefits and contribute to overcoming some of the most important governance barriers. It sets a

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framework to bring together and engage a large group of very different stakeholders. It focuses on actions and commitment, aligning multiple levels and areas of governance. It sets out the needed transformation, indicating a process, who leads it, and strengthening bottom-up initiatives. Most importantly, the CCC is for the cities a way to align climate investment plans and to move from a project-based funding to a mission-oriented focus.

Cities emphasised that for the CCCs to be effective and not just a bureaucratic instrument, they should be the milestone of a co-designed and reciprocal process, building trust, cultivating interpersonal relationships, consolidating and sharing learning. On the negative side, one of the major difficulties a number of cities identified is how to incorporate and manage individual citizens' commitments in the contracting process. The CCC process needs to consider the different starting points of the cities (which affects the timeframe, the process of developing their CCC, as well as the target), and make sure that the already developed local plans and strategies are incorporated into the process and not duplicated.

Implementing a Climate City Contract requires staff capacity and certain skillsets. Cities need support in this process. In fact, as highlighted by the preliminary results from the Mission Call for Expression of Interest, 27% of the cities admitted a lack of available staff in implementing the CCC with the majority of them (52%) stating that they are currently taking steps in building their internal capabilities to manage the CCC process.

Case Study: Swedish Climate City Contracts. The example of Umeå

The Municipality of Umeå signed the Climate City Contract 2030 together with five Swedish Government agencies: the Swedish Energy Agency, Vinnova, Formas, the Swedish Agency for Economic and Regional Growth, the Swedish Transport administration, and the strategic innovation programme Viable Cities. The main purpose of the CCC is to "accelerate the pace of the climate transition in Swedish cities up to 2030 within the framework of Agenda 2030, while at the same time contribute to the recovery of the Swedish economy from the COVID-19 pandemic" (Climate City Contract, Umea Kommun, 2021). The document sets and describes the different commitments of the parties who signed the contract.

The city of Umeå has the ambition to become a model city for climate neutrality. In particular, the city underlines the importance of integrating the climate transition with other socio-economic development priorities. At the same time, Umeå acknowledges the added value of engaging stakeholders from all levels in the process. In this sense, the municipality is currently working on a pilot project to develop a regional climate city contract during 2022 with the northern regions in Sweden.

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3.2 Implementation practices

Many cities are already working on climate neutrality, regardless of their participation in the Mission. There are plenty of local plans, policies, and initiatives undertaken by the municipalities in terms of climate mitigation. The mission to reach climate neutrality by 2030 established by the European Commission represents an opportunity to improve and scale up the existing efforts to bring cities closer to the goal of climate neutrality, rather than starting from scratch. Overcoming the barriers to implementation and supporting cities' needs is a fundamental step to accelerate the transition and achieve tangible results in terms of carbon emissions reduction.

Disconnect between strategy and implementation

One of the major problems highlighted by cities is the disconnection between strategy making and implementation. Having a strategy is necessary because it provides a shared vision and a framework for action. However, this is not enough; strategy can be a driver for action, but implementation is what delivers change. Many cities struggle in translating overarching and broad strategies into concrete actions and measures which fit into the local context, the operational reality, and the conditions of local communities and stakeholders. In fact, despite sincere commitments, there is often a gap between declared ambitions and the concrete outcomes of policies and regulations.

Fostering long-term consensus and systems thinking approach

Moreover, there is a problem of time. New policies often take time to be designed and implemented, and the positive effects of a measure might take years before being visible and measurable. This represents a considerable problem given the short timeframe to reach climate neutrality by 2030. An important driver of change is to develop processes which foster a genuine long-term consensus, agreed and signed on national, local and community commitments (such as Climate City Contracts). However, these processes inevitably require resources, time, and a transformative change approach which goes beyond short-term political cycles and short-term goals.

"We have already realised several projects, but mostly at the small scale. We have done all the pilots and we are really looking to scale everything up and we would like to receive more support on this." (The Hague)

As a result, if cites want to advance the work towards climate neutrality quickly enough, they need to scale up the existing projects and initiatives, and move from a project approach towards a portfolio approach. A more systemic approach towards climate action is needed, because cities have a large number of small-scale projects (often pilot projects) that are scattered and not integrated. Scaling up, identifying synergies and co-benefits can significantly accelerate the transition and maximise the impacts on climate mitigation. Similarly, during the consultation phase some cities asked for guidance on how to move from theoretical research to action.

Towards a portfolio approach

Furthermore, a portfolio approach can also be beneficial in overcoming conflicts and competition between different measures to be implemented. Limited space in cities often implies that green and energy interventions are competing with each other. For instance, a municipality that works in silos and on scattered projects might be prone to select a specific measure rather than exploring synergies

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and combinations. It might choose the installation of solar panels rather than vegetation for a green roof, or trees for shading rather than solar canopy.

"We have a competition in the use of roofs: shall we use roofs for renewable energy or shall we do green roofs?" (Paris)

The lack of human resources is another huge challenge for cities. Although in a lot of cases there is available funding to leverage for the implementation of capital projects, it still requires a lot of human resources from the city departments to develop and mature investment projects. Cities struggle to find the workforce with the necessary knowledge and skills, and it is particularly challenging to find people who are able to think outside of their departmental area or specific sector. From this point of view, education and re-skilling are important components to address this problem.

Cities face cultural barriers and inertia

Last but not least, there are also cultural barriers. For instance, according to the responses to the EoI, 63% of cities identified slow behavioural transformation including cultural barriers as the key barriers in the waste/ wastewater management sector. Various cities mention cultural inertia as a factor hindering the deployment of potential solutions. The lack of knowledge about a solution often becomes a reason for not changing the 'business as usual', instead of being a driver to explore new opportunities.

3.2.1 City systems

Based on the thematic areas identified within the NetZeroCities project, the focus groups provided cities the opportunity to discuss interesting implementation practices in key sectors for climate neutrality. These include: mobility, energy systems, built environment, circular economy and nature-based solutions.

Mobility

The mobility and transport system is considered by the cities as one of the most important sectors to reduce carbon emissions within urban areas. Many of the cities who took part in the consultation process acknowledge it as one of the top priorities and they are currently implementing several policies and initiatives for Green House Gas (GHG) emissions reduction related to mobility. Two lines of actions seem to be most effective: on the one hand, deploying more sustainable transport solutions and reducing the use of private cars through more effective Sustainable Urban Mobility Plans; on the other hand, reorienting individuals' behaviour towards more sustainable transport modes.

38%
of the cities identified people's time & economic constraints to use public transport as a barrier for mobility.

(EC's Mission EoI)

Reorienting behaviour and perceptions

For example, Milan has a good offer of public transport and it aims to improve the integration and facilitate the change between micro electric vehicles and public transport, to make the sustainable choice easier and more attractive. In order to reduce the local greenhouse gas emissions, the city is also promoting the 15-Minute City strategy, supporting pedestrian mobility and limited traffic areas. However, the city is facing resistance because the elderly and families do not usually see active mobility as an option, while many shop owners still perceive pedestrianisation as economically damaging.

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Case study: Pau - hydrogen-powered bus rapid transport system

In 2019, the city of Pau launched the world's first hydrogen-powered bus rapid transport system, called Fébus. The municipality worked with a local private company to develop fuel cell buses and started a pilot project which, according to the city, proved to work very well. Pau selected eight fuel-cell electric buses. These were preferred to battery electric buses for better performance in terms of operational requirements such as charging time and number of vehicles required. At the same time, the municipality carried out a study on the potential socio-economic impacts for the city of not doing the project. Thanks to this study, they managed to convince stakeholders that it was better to invest in this project, even if the upfront investment cost was high, due to the cost of inaction. During the consultation process, the municipality of Pau articulated how the project was both an opportunity for the city to meet its climate neutrality efforts and for the private company to showcase their work and access new markets. Since then, the city has also received many visits from other French cities and companies interested in replicating the project.

Energy systems

Decarbonising energy system is a challenging task for cities. This is down to structural reasons such as the fact that a lot of energy systems are regulated by other levels of government, and that energy providers are largely privatised. As emerged during the consultation phase, cities need more human capacity, a clearer classification of instruments and processes, a clearer framework for investment and better ways to showcase the socio-economic impacts of inaction. When it comes to heating and cooling networks, cities see the current business models as a major barrier, mentioning problems in the bidding process and the type of supply contracts with energy providers. Moreover, there is also the problem of high upfront investment costs. Some cities adopted the competitive dialogue procedure as a procurement approach and quickly saw the benefits of it: in the case of Dublin, competitive dialogue provided a greater understanding of the clients' needs and greater flexibility and innovation in project proposals.

72%
of the cities identified high initial capital costs as a barrier for the energy sector

(EC's Mission EoI)

"Cities need adequate energy infrastructure around the new buildings to meet the high standards requested. But cities cannot cover it financially." (Eindhoven)

Limited data and monitoring frameworks

Another issue is around data and availability of information. Cities often lack quality and disaggregated data of energy consumption in buildings, as well as other relevant information such as construction period, gross floor area, density, and refurbishment. This gap calls for more synergies and collaboration with energy companies and distribution network operators (DNOs). Vienna shared an interesting experience thanks to the EU project "Urban Learning", in which the city made graphics of the different process flows for urban and energy planning. The methodology followed a triple-step approach: first, identify relevant processes (i.e. refurbishment, retrofitting processes); second, deep analysis of these processes (i.e. who is doing what, at which step, what is the outcome); third, create an overview using flow charts. The project Urban Learning will also provide input to the Vienna Urban Development Plan 2025 which foresees a concept for integrative urban energy planning. Hence, stakeholder collaboration becomes fundamental to

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achieve positive results. Many cities presented different examples of initiatives aiming at involving citizens and stakeholders in the process. The city of Niš has set up a commission for price change approval involving citizens; in this way, it has managed to avoid people opting out of the district heating network; in addition, there are now citizens' representatives on the advisory board of the district heating company whose role is to approve price changes. Valencia arranged an energy round table gathering 22 private, public, academia, civil society and media organisations to set up a commission and discuss the implementation of a district heating network.

Need for more citizens engagement

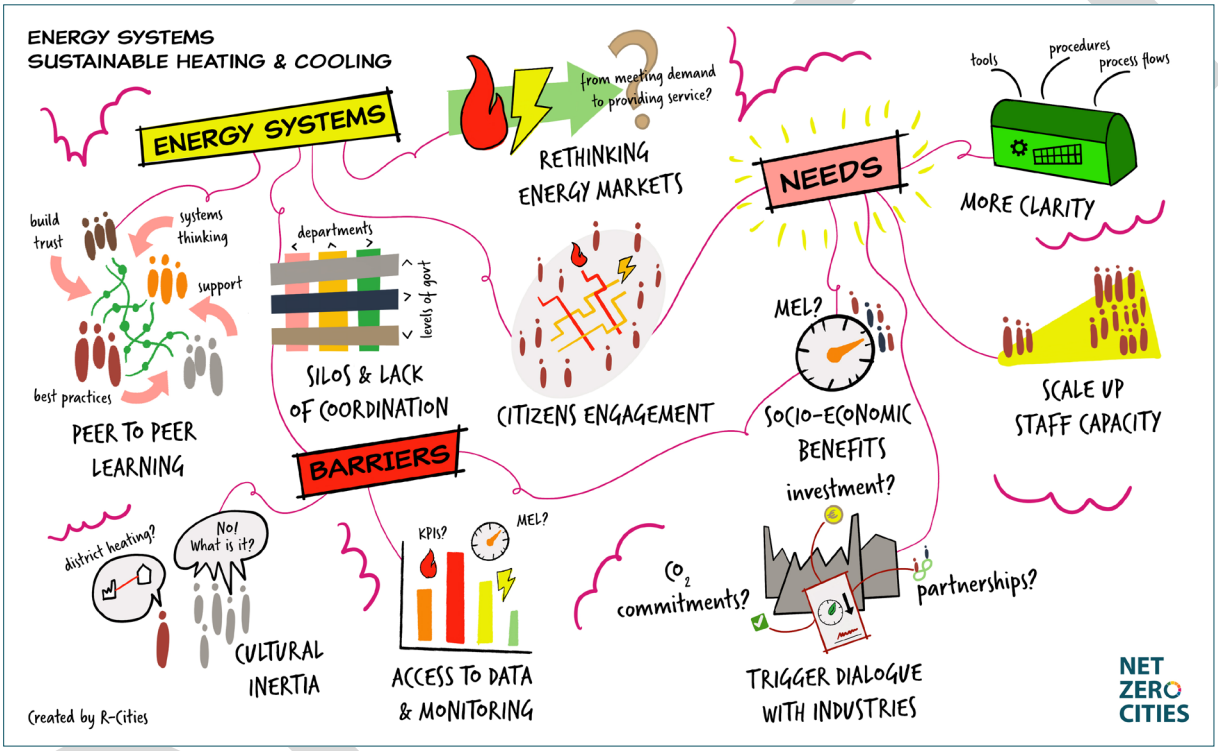

Figure 6: Findings from the focus group meeting on energy systems

Built environment

The building sector is critical to reach climate neutrality and all cities involved in the consultation process agreed that this is a priority. According to an estimation about the breakdown of the carbon emission within the municipality borders, the city of The Hague explained that around 40% depends on housing, while transport is accountable only for about 20%. However, all the cities consider the mission of climate neutrality very challenging in the building sector, due to the difficulties in achieving tangible results in the short-term.

"It will take a lot of time to make all houses and buildings carbon neutral, especially for central district heating." (Rotterdam)

Collaboration and integration within different sectors

Carbon neutrality in buildings inevitably refers to the materials, construction and the energy use of the buildings. In this sense it is closely linked with the energy sector (considering for instance the use of renewable energy and carbon storage), and the domain of circular economy the materials. Once again, cities identified as crucial the collaboration between departments, especially planning

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and energy, in order to understand and address building needs and requirements. Moreover, it is fundamental to engage stakeholders, in particular householders. In order to achieve significant changes in the building sector, it is necessary to involve private owners and convince them to take action on their own house or building.

"Our challenge is really in buildings: we have a huge tendency on fossil fuel for heating on buildings." (Belfast)

Case study: Rotterdam - the built environment in the Climate Agreement

Rotterdam signed a Climate Agreement in 2019 after a broad participatory process under the leadership of independently-chaired 'climate round tables'. One of these focused on the built environment and involved especially building owners, groups of citizens and social housing corporations. A series of climate deals were signed and aim to make 15,000 homes more sustainable and prepare 10,000 homes to be free of natural gas. One of the deals directly involved Bouwinvest, a nationally operating property investor with approximately 1,200 homes, 2 office buildings and 2 shopping centres in Rotterdam. The investor ensured that by 2045 the entire portfolio will become energy neutral and natural gas-free (Energieswitch, 2019).

Circular economy

Circular economy is one of the most important cross-sectoral domains which can contribute to climate neutrality. For this reason, it is on the agenda of many consulted cities, and several initiatives are taking place within Europe. Yet, circular economy requires a systemic approach, a different way of thinking and investing resources in the traceability of materials and products. For this reason, it is difficult to mainstream circular economy in the daily practice and management of cities.

"Circular Economy is a capital-intensive industry, funding for land and equipment is needed and we don't get much funding from neither national government nor the EU. This is a big obstacle for us, it would be great to improve this." (Grenoble Alpes Metropole)

Based on the survey's results, local authorities are mostly promoting circular economy in the sector of solid waste and recycling, followed by material and construction, food systems and water systems. This is not surprising because circular economy essentially means closing the loop in material streams and moving from linear value chains towards circular approaches. It implies the creation of new activities and processes (often from scratch), more difficult to manage because resources are kept longer within the economy. It requires availability of data and constant traceability of products, materials, stocks, flows and their impacts to achieve effective circular transitions. Moreover, supporting circular economy processes in a specific value chain makes it necessary to support the entire ecosystem and not only the production itself, including activities like storage, distribution, retail activities and so on. From this point of view, cities struggle due to a very limited control and influence along the process and the chain to product design. In a context of insufficient funding and limited capacity to build a functioning ecosystem, this represents a significant burden for local authorities.

Limited streams of investments

Financing the transition to a circular economy approach often relies on public funding because the initial investment is too high or because many associated activities are not profitable yet or at all.

Even in cases where the project investment is covered, subsequent

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operational costs might not be covered. Additionally, even if potentially profitable, new activities are inherently risky, dissuading private investors and requiring additional public money to mitigate the risk. Besides that, there are also connected regulatory barriers, often linked to the size of local industries. Large industries might require approval from the national government (taking lot of time) while SMEs might not have enough capacity to take such initiatives.

Overcoming technical and operational challenges

There are also technical issues. A few cities mentioned that they do not have the adequate technology or infrastructure, for example to treat waste, and they were relying on obsolete treatment plants. In some cases, the technology already exists but it is either not available yet to local authorities at commercial scale or competing standards make it difficult to choose the right solution. Furthermore, cities have the necessity to better understand incoming and outcoming material flows and to assess the stock of materials within the city limits and built environment. Material Flow Analysis and Urban Metabolism studies are useful approaches, relevant especially for the construction sector. Nevertheless, it is also essential that local authorities invest in human resource, improving capacities of key staff and promoting a different way of thinking.

Case study: Grenoble Alpes Métropole - Local value chain

Grenoble Alpes Métropole has the ambition to develop and structure the local circular economy value chain. As such, it is actively supporting all kinds of reuse, repair or recycling activities in an effort to improve resource efficiency and close the loop in a number of strategic waste streams. For instance, it has set up a cooperative called Fabricanova, bringing together all actors as part of the ecosystem in order to scale up and 'industrialise' their activities. It has also set up the Pôle R, a dedicated site with 8,000m² of buildings that will house a range of facilities for reuse, repair and recovery of materials, along with an incubator for circular economy start-ups.

Nature-based solutions

Unlocking multiple benefits to society

Nature-based solutions (NBS) play an increasingly significant role in promoting sustainability in urban areas and on cities' agendas to achieve climate neutrality. One of the reasons which explains the growing interest in NBS is that they are generally considered to provide simultaneous benefits in terms of climate mitigation, adaptation and resilience. According to the survey, the most recurring NBS projects include street trees, green roofs and community gardens.

Climate mitigation and adaptation are not linked yet in many cities. Several NBS projects are implemented with a goal to improve adaptation capacity and spatial quality, but the emissions reduction potential is practically not quantified.

Lack of emission measuring tools and frameworks

Even though cities have been making serious efforts and implemented several projects and initiatives on NBS, they often have neither the capacity nor the tools to measure and quantify the reduction of carbon emissions, or carbon sequestration through NBS. The same issue applies also in more straightforward measurements, such as temperature variations in the heat island effect. Thus, all

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participating cities acknowledged a lack of capacity and expressed their interest in receiving more support within the framework of the Mission, as well as guidance to replicate and scale-up the existing portfolio of NBS.

"The quantification of co-benefits is one of the key aspects where we would like to receive support. It is very difficult, but it would really help to get political parties onboard. It contributes to create strong and compelling stories and arguments to get everybody onboard." (The Hague)

Case study: Belfast - One Million Trees

Planting trees within the municipality is one of the most popular NBS initiatives, especially for its impact in raising awareness and engaging citizens. Trees can provide various co-benefits such as air quality and health, improved public space, reduced urban noise and shading to name a few. The city of Belfast has launched the programme One Million Trees, to be completed by 2035. The project is a collaboration between public, private and voluntary sector partners, aiming at reducing carbon emissions, improving air quality, reducing flooding, supporting urban cooling, supporting biodiversity and improving citizens' wellbeing. Similarly, the city of Milan aims to plant three million trees by 2030 though the initiative ForestaMi, an urban forestry project with the goal to plant one tree per inhabitant.

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3.3 Culture, social innovation and participation

3.3.1 Promoting and inviting a culture of inclusive participation

"Over 60% of measures to achieve net zero emissions will require societal change. In this context, it is essential that our communities understand the nature and scale of the climate challenge, having the opportunity to shape and influence local and national decisions about how to address the climate and ecological emergency."
(Source: Glasgow Climate Plan)

Inclusive citizens engagement and co-creation

The ambition of climate neutrality calls for cooperation at all administrative levels and involvement of local communities, institutions, stakeholders and citizens in order to foster transition towards the 2030 goal. By engaging with different groups from all levels of society, the transformation gains added value and will be resilient to fragilities and uncertainties in the long term.

80%
of the cities implement educational programmes

60%
of the cities are implementing co-creation, participatory urban planning and deliverable practices

(EC's Mission EoI)

There is awareness that the role of the city in engaging local communities has to change. This goes beyond changing policies and regulation, but rather bringing groups that share common goals to the table. It is important for both cities and their citizens to come to a mutual understanding on the need for collective effort and the support that each can lend to the other while undergoing this crucial transition. Hence, it is a matter of building reciprocal trust and collaboration. There is consensus among cities on the idea that all relevant actors need to be on board, actively co-create at all stages of the journey, and need to collaborate and provide support to achieve climate neutrality. This is also crucial during the different stages of co-creating the Climate City Contracts. Civic contracting has tremendous value for the city on many levels; for example, it builds support, trust, responsibility, ownership and transparency, which are necessary antidotes to the growing polarization in the community.

"A barrier to citizens' engagement is the lack of trust between citizens and politicians and policy makers. Fake news [regarding new measures] is also a problem to achieve deeper engagement."
(Krakow)

According to the cities, citizen engagement should focus on ways to catalyse and support civic behavioural change as a necessary part of achieving climate neutrality. It is evident that citizens play a central role in operationalising, implementing and taking ownership of the transition.

Focus on catalysing behavioural change

To empower citizens to take on this active role and achieve systemic transformation, behavioural change is essential. Cities noted that the economic situation and in particular external shocks, such as the pandemic or soaring energy prices, could be used to raise awareness and engage with local actors and the wider public. For instance, recent disruptions of global supply chains have helped local authorities engage with businesses and adopt resilience strategies aiming to decrease the reliance on imported products and materials.

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Case Study: Turku – Empowering citizens as climate change makers

In Turku, everyone is encouraged to become a "Climate Agent" and contribute with concrete climate actions. Turku has a Climate Team, which is founded by the City of Turku, which aims to encourage companies, organisations and communities to join the city's climate neutrality plan. There is a shared platform for climate action where private companies and public entities can join the Climate Team by committing to different climate actions. In turn, they are showcased on the city's website and social media channels. Celebrities have now joined the promotion of this Climate Team.

During the focus group discussions, over 70% of cities indicated that they engage business owners, researchers, public institutions like schools and cultural organisations, associations, residents and civil society groups. However, cities also flagged that not all citizen groups engage and participate through civic organisations. Therefore, awareness building and engagement needs also to take place at an individual level and be creative in engaging various kinds of citizen groups.

Case Study: Gothenburg – Inviting knowledge sharing and co-design

Gothenburg offers an online community engagement platform called the "Citizens Lab". This allows residents to exchange ideas and thoughts with city officials and politicians around a specific topic. In this way, citizens can participate and shape decisions that affect their daily life.

Gothenburg Residents have also been invited for participatory budgeting, to submit their ideas/proposals online for how the money should be invested. Citizens can then vote online to decide which ideas/projects eventually receive public funding for implementation.

94%
of the cities carry out awareness raising campaigns

50%
of the cities are implementing info-points, workshops and incentives/ disincentives to influence consumption mindsets

84%
of the cities engage citizens

81% cities engage academia

73% cities engage NGOs and associations

61% cities engage youth and education sector

19% cities engage trade unions

(EC's Mission EoI)

Cities face resistance and/or fear to change business as usual behaviour

The most critical barrier that a majority of the cities identified is resistance and/or fear from communities to change business as usual behaviour. Cities identify that the resistance may come from a lack of trust in the decision-making process. There is also an increasing polarisation in communities, exacerbated through isolation from COVID-19 lockdowns that, according to the respondents, has made dialogues within local communities more difficult. Furthermore, with rising energy prices, cities foresee an impact on citizen perceptions in two ways. The first leads towards energy independence and an opportunity to get more people on board for renewable energy, while the other leads towards further pressure to move towards energy access, meaning more support for fossil fuel-produced energy. Given that these perceptions could either benefit or hinder the momentum towards climate neutrality, cities see a need to engage with communities consistently.

Within this context, however, most cities still lack capacity and adequate resources to carry out complete participatory processes. Cities recognise the importance of engaging marginalised communities and go beyond the "usual suspects" or the "front runners". However, cities struggle to effectively involve all

31%
of the cities engage vulnerable groups in climate change mitigation/emission reduction policy making

(EC's Mission EoI)

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conventionally overlooked groups in the process. While they are able to reach some specific groups more than others, there are some groups eventually left out of the process. In this sense, cities consider themselves still in the process of learning how to engage all groups.

Lack of capacity for scaling up citizens engagement

This lack of capacity also extends to making innovative connections between various pathways. For instance, on how to combine the collaborative approach, which gathers input on climate investment from both citizen and stakeholder dialogues, with the actual investment planning process, as it requires advanced knowledge on the topic. In this way, cities are looking to expand their expertise and capacity on advancing the findings uncovered through their participatory processes.

"Capacity is a very big issue. We had to negotiate hard to receive budget to procure the engagement process for updating the new Climate Action Plan." (Athens)

There is consensus that participating in the Mission inevitably requires the need to go deeper in co-creation processes at different levels. In this sense, they require additional tools and methods, as well as guidance on implementing these processes. Cities suggested that the Mission Platform should provide specific guidance on involving the most vulnerable as well as methods to deal with conflicting groups in order to promote healthy dialogue and collaboration.

"Each project is different, with different working dynamics, taking into account collective and individual interests. You need more synergies and multi-disciplinary teams." (Barcelona)

Need for tools, methods and best practices on engagement practices

The Mission Platform should help cities in raising awareness among citizens about the benefits of democratic engagement. Some cities indicated that it would be useful to have an overview of the different typologies of deliberative democracy and citizen engagement approaches. Case studies and dialogue about best practices can

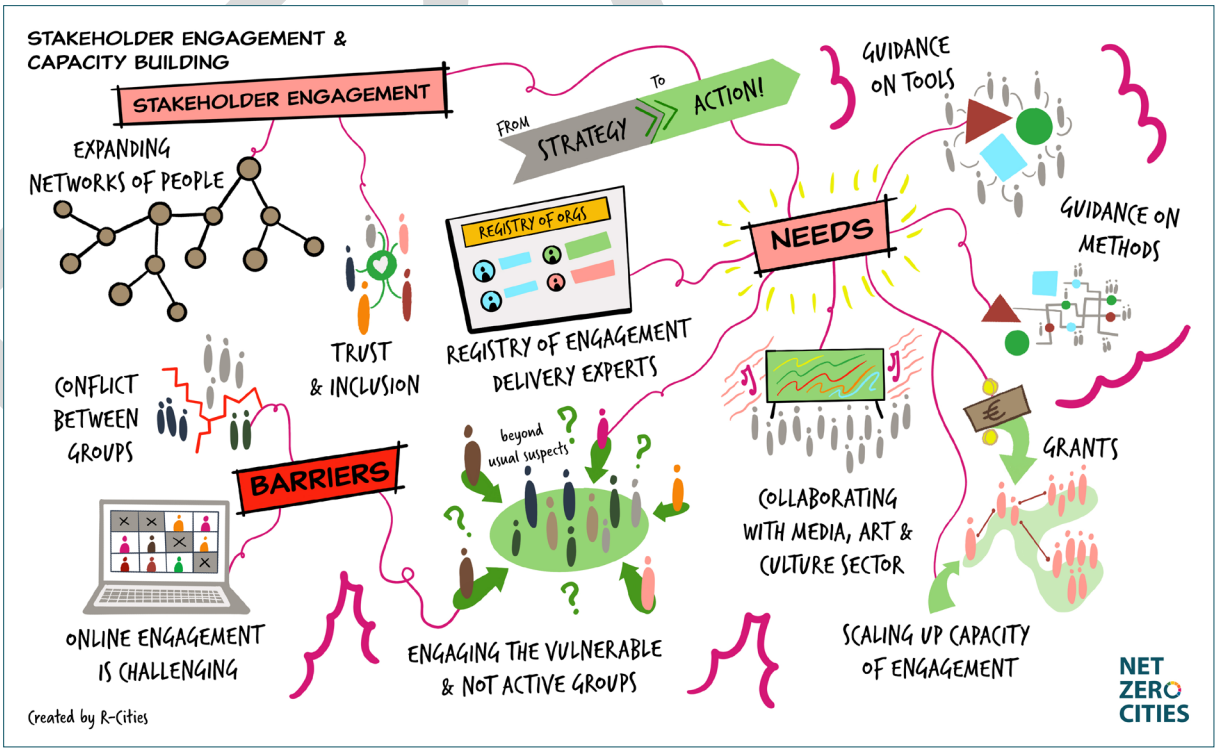

Figure 7: Findings from the focus group meeting on stakeholder engagement

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help cities understand how to structure such processes and which engagement tools are more effective.

According to the cities, the Mission Platform should also provide support to scale up engagement processes to all the citizens. The focus should be on actions rather than strategies and policies, based on bottom-up approaches. A register of practitioners/organisations that can deliver engagement approaches was identified as a direct need and cities suggested that the Mission Platform should help cities identify trusted delivery partners to work with.

"Until now, the focus on engagement has been on the front runners, thinking if the front runners are going and get going, it will spread and the mass will come eventually. We have done a lot of pilot projects on different themes at the neighbourhood, street and at individual level. We are ready to scale it up and we would like the platform to help us to target the whole city." (The Hague)

"A guide on the use of citizen engagement approaches, as well as other training and resources, can lower the practical barriers for municipalities to design and implement such approaches." (Glasgow)

"NetZeroCities needs to help cities to create new narratives to engage citizens and build common political advocacy methods for cities with shared challenges." (Madrid)

Build partnerships with private sector

Finally, the alliances and partnerships with the private sector came up multiple times during the meetings as a common barrier for cities. According to the responses to the EoI, 79% of the cities are mostly working with the private sector in the area of Research and Innovation for new technologies. Cities would like to form more collaborative partnerships and engage in reciprocal commitments given that public funding is limited and the climate ambition requires buy-in from the private sector. Cities flagged that their networks to engage the private sector are limited and they have difficulty in establishing these kinds of partnerships.

3.3.2 Towards social innovation

At this stage, cities agree that the target of climate neutrality needs mostly social and organisational innovation, rather than technological innovation. There is a need for the integration of the climate transition with other socio-economic development priorities. For instance, to decarbonise energy systems, cities need a better way of showcasing the socio-economic impacts of inaction. Often technical solutions already exist and are known by cities, however what they need is guidance on integrating them within their system, and making them acceptable. An integrated approach to the interlinked topics is hence required. Additionally, cities identified the need for providing security and clear criteria to reduce the risks in this transformation. The Mission needs to create ways and methodologies that help improve systemic transformation and innovation in cities.

Spotlight 2: NZC Platform – Creating a one-stop-shop for cities

NetZeroCities will help deliver the EC Mission on 100 Climate Neutral and Smart Cities by combining resources, tools and expertise in a one-stop-shop platform to help cities find the support and solutions they need to achieve climate neutrality. To test how and in which ways this platform could be useful to the cities, a hands-on focus group was conducted. Cities deliberated on the resourcefulness of this platform as well its relevance for peer-to-peer collaboration and social forums that it can facilitate. A key takeaway was the value of the platform as a political communications tool. A city's climate team often plays a central coordination role in collecting

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insights, data, and decisions from a multitude of departments and teams. Often this is done in a native language (not English). It is key that any surveys, questionnaires, etc. which the NZC portal expects city representatives to complete is provided in a form that is easily translated into native languages. Both internal and external collaboration (with other partners and cites) has been a challenge for many cities. Hence, the platform needs to pay additional attention to alleviating these barriers. Cities expressed interest to use this platform also as an internal communication tool which can be used for storytelling and scenario-making. It is hence essential that the platform is easy to use and visually appealing to encourage more users within cities.

The focus group survey also uncovered insights into the purpose of using such a platform. More than 50% of the cities indicated that they would access it for informational content and member networking. It is also clear that cities are eager to learn and support one another by exchanging knowledge and experiences, and this platform can help facilitate this collaboration.

Cities already spend a great deal of time and resources on a pre-existing set of online platforms (e.g. Civitas, ClimateView, CDP/ICLEI, Covenant of Mayors). It is hence important the NZC portal does not ask them to duplicate their efforts but instead seamlessly aligns with existing platforms by re-using them via Application Programming Interfaces (APIs) and other means.

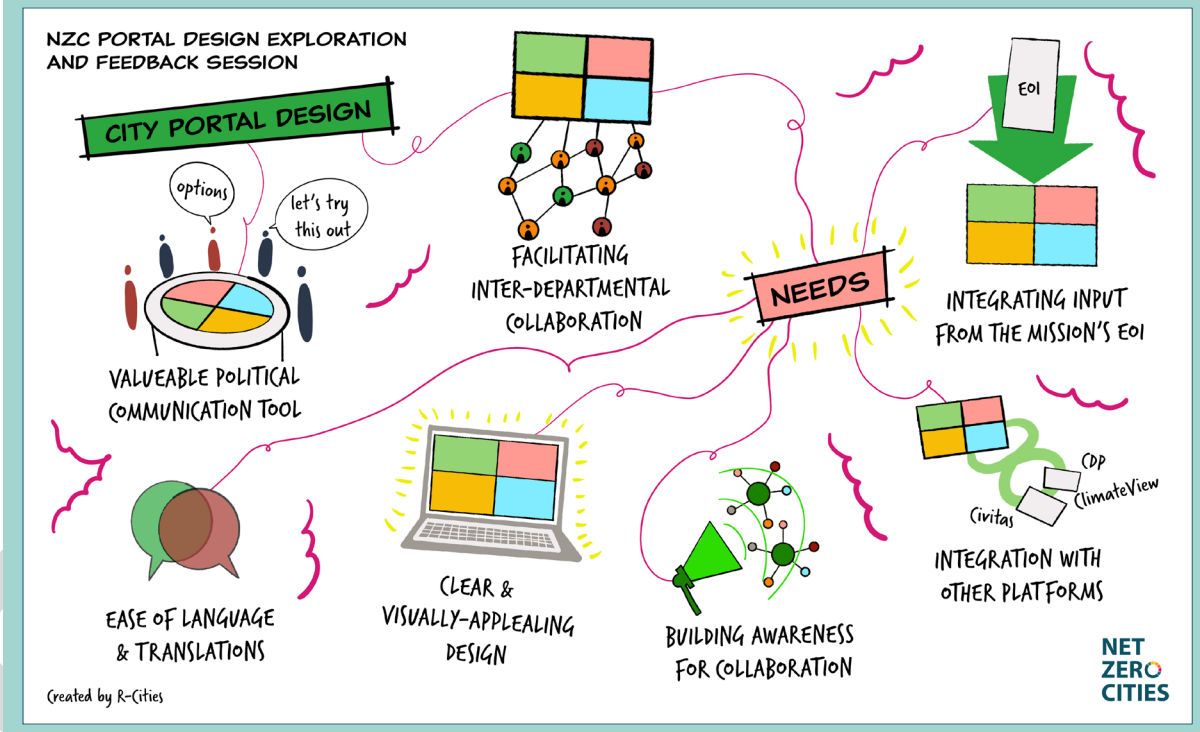

Figure 8: Findings from the focus group meeting on the NZC portal design

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3.4 Finance and business models

68%
of the cities identified lack of funding/financing schemes as the biggest barrier to pursuing climate neutrality

(EC's Mission EoI)

The transition towards climate neutrality requires large investments and all the cities consulted agree that the lack of funding and financing schemes is probably the most important barrier. Nevertheless, investing in climate projects can bring new business opportunities to local actors in cities, something which is considered a key driver by the cities. In fact, being able to understand the broad socio-economic value of these projects is critical in order to accelerate investments and de-risk political decisions. There are interesting examples of cities developing alternative financing tools and schemes to accelerate climate transition, such as climate budgets, green bonds and crowdsourcing. Interesting innovations have also taken place in involving citizens directly through participatory budgeting. However, despite being promising, none of these will be enough to cover the cost of actions required to reach climate neutrality.

Build partnerships with private sector

The barriers linked to funding and financing are more complex than just the high initial investment costs. Many countries have regulatory and governance barriers which makes it difficult for cities to carry out these investments and projects. Siloed funding structures become barriers in developing a mission-oriented portfolio. In general, cities state that they face limited access to financial markets and mechanisms and require more coordinated action across levels of government. During one of the focus groups, the city of Valencia mentioned how they are creating new instruments to make the investments in net zero more attractive to private finance by creating and showing bankable business cases in each area of work and creating diverse funding portfolios to reduce private risk and increase return of investment.

"Private sector is interested and willing to risk investments, there is interest but we need to build new financial models that work." (Belfast)

Lack of knowledge on climate finance and investment planning

Furthermore, the cities consulted generally face a lack of know-how and expertise on climate finance and climate investments, and they need tailor-made support to access funding and finance projects. In particular, cities need support from experts in investment roadmaps, including actions, impacts, benefits and priorities to steer investments in the right direction. In fact, cities are not used to developing investment plans and, therefore, this is a major challenge that will require both general guidance as well as tailored support. Assistance in translating the investment opportunities and financial advice into concrete actions is also needed. Moreover, cities lack an understanding of how to combine different sources of funding (private, regional and European) and the applicable rules for this kind of combined funding. In this sense, cities need to be helped with new financial instruments, such as green bonds, blended finance approaches and investor–city matching market platforms.

"Leuven has in the past few years partnered with experts like Bankers without Boundaries which has helped the city grow its knowledge, but even with those experiences we find it difficult to translate this into concrete actions. Long-term partnerships between cities and financial experts are needed." (City of Leuven)

In summary, to overcome these limitations, cities need a more structured framework to assess funding alternatives and the profitability of different financing options, trigger private investments, measure impacts and foster experimentation. As a result, this might open new opportunities for new businesses and opportunities to local actors.

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Case study: Île-de-France - Participatory Budget
The Île-de-France administrative region, centred on the city of Paris, launched the first Ecology- and Solidarity-based Participatory Budget in 2020. The project is part of a more ambitious regional programme to mobilise the ecological transformation of the region by 2024, and it has a EUR 500 million budget allocated for a five-year period. All the residents of the region over the age of 15 (including anyone studying or working in the area) are entitled to partake and contribute to citizens-based initiatives for the future of the region. Participants can promote or support a project within five different domains: Food, biodiversity and green spaces; Cycling and clean mobility; Cleanliness, waste prevention and management, the circular economy; Renewable energies and energy efficiency; and Environmental health. The programme's budget will be allocated according to two categories: local projects (up to EUR 10,000) and large projects (up to EUR 300,000).

Case study: Gothenburg - Climate Partnership
The city of Gothenburg has set up the Gothenburg Climate Partnership, which is a long-term, active collaboration between the business community in the Gothenburg region and the City of Gothenburg to reduce its carbon footprint. Being part of the partnership offers many benefits for companies, like collaboration opportunities, marketing of their climate actions, access to key actors within the city, and support to implement sustainability projects. Additionally, the city has developed a Strategic Business Programme which is the city's common roadmap for creating better conditions for entrepreneurship in the city and which includes environmental and climate aspects.

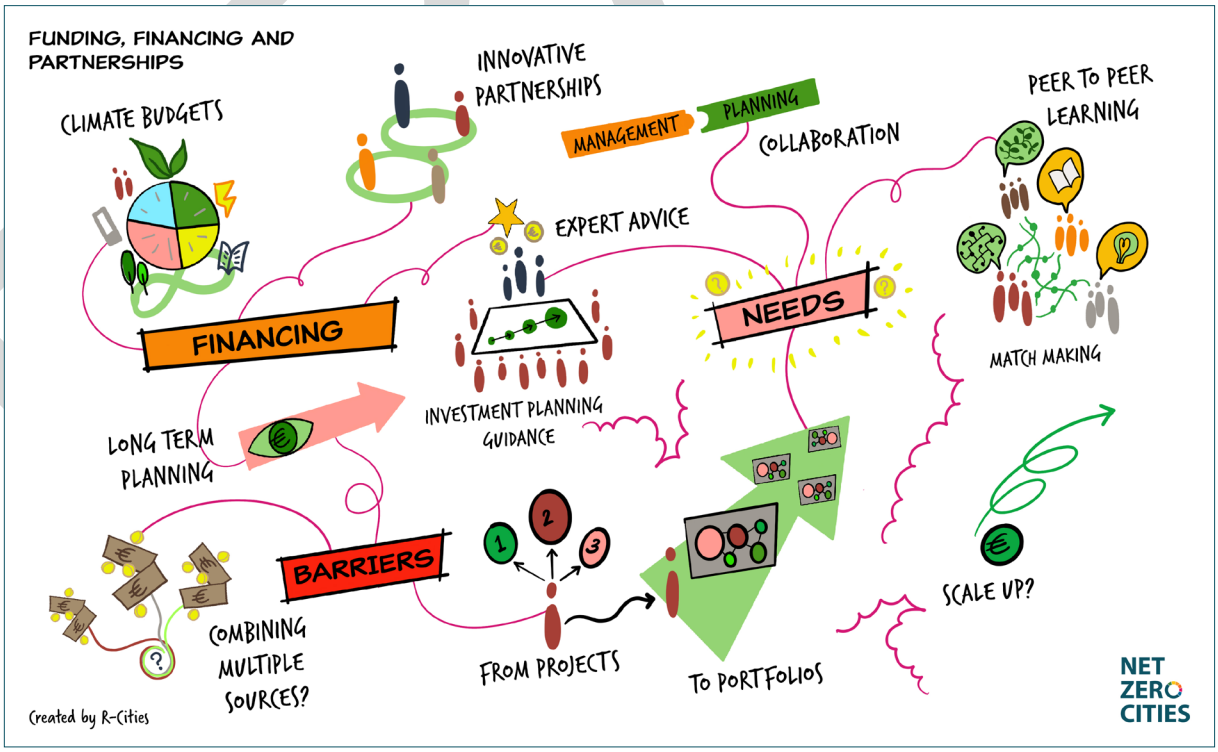

Figure 9: Findings from the focus group meeting funding, finance and partnerships

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3.5 Strategic learning

Cities are eager to learn from and support other cities
Peer-to-peer knowledge transfer is a key driver to reach climate neutrality. Learning from cities in other regions and countries was considered a valuable resource by the cities consulted. While cities already do this on a voluntary basis, they crave more systematic exchanges and increased support from the national and regional levels. In fact, just 18% of cities that responded to the survey indicated that peer-to-peer learning is part of their national programme.

Exchange of tools, methods, experiences and best practices

Peer-to-peer learning, as recognised by the cities, should encompass the sharing of best practices on tools, technologies, multi-level governance, spatial planning and infrastructural solutions (e.g. NBS, material innovation), among others. Cities also need insight into the process of setting up innovative and systemic pilots, implementing them, potential challenges they may face and ways to replicate and scale up pilots.

"There is the need to make synergies with other cities with the same problems and context." (Thessaloniki)

In terms of methods of learning, workshops, city visits, one-to-one discussions and reports with case studies were among the most preferred resources in the focus group survey. Cities are looking to receive training on new tools and methodologies that other cities have been successful in implementing. Additionally, training delivered by external experts was also identified as a need to improve inter-disciplinary capacity. A better understanding of existing and new solutions is likely to build trust and ensure that these solutions are taken up and implemented.

There is a need to encourage and inspire cities towards open minded and systemic approaches. Peer reviews have also been identified as a helpful method, as cities are not always able to identify their own knowledge gaps.

Learning from cities with similar backgrounds

Cities want to learn from those who face similar problems and share similar journeys, and there is a need for matchmaking that can facilitate these relationships. According to them, this collaboration can bring potential solutions to overcome many barriers, especially cultural inertia, but also inspire new models and solutions for the climate and energy transition. Especially for civic initiatives and creating momentum at the local level, cities want to exchange knowledge and know-how. By improving their capacity, they will be better placed to encourage and negotiate better decision making from other levels of government.

Cities believe that peer-to-peer learning spaces can go beyond just exchange of information and expertise. The ambition of climate neutrality and navigating the processes of the Mission will require immense time and effort from the cities. Taking this into account, cities expressed a need for the creation of a 'safe environment' wherein they can share both good and bad experiences and seek mental health support from other cities.

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Monitoring, Evaluation and Learning
Cities need monitoring frameworks to measure progress, results and impacts and thereby to evaluate public policies after their implementation. It is crucial to have a good understanding of the baseline and identify the current starting points for cities.

There was consensus that cities need new approaches for data collection and visualization. With respect to monitoring frameworks for greenhouse gas emissions, only half the cities indicated that they use some kind of a reporting platform.

Cities expressed the need for frameworks and indicators to measure the quantitative and tangible impacts of their actions, as well as to measure the qualitative and intangible impacts. Cities are particularly faced with challenges while trying to measure the co-benefits of their projects, for instance, in terms of improvement to health, learning, awareness, knowledge and quality of life. In fact, only 48% of the cities are attempting to analyse the co-benefits or adverse impacts generated by their local scale climate mitigation policies, according to the EoI responses (see more information on the right). Additionally, cities also need frameworks to measure risk, socio-economic impacts consequences and benefits on an individual and sectoral basis.

Cities also highlighted the need for access to quality data and KPIs. Despite the existence of platforms to share and access data, the limited availability and completeness of it remains a key barrier for cities. Data analysis and learning from data continues to be a challenge, hindering the quality of actions that can be taken. Since data at the local level is missing in most cases, cities are unable to integrate key information to inform policy making. This barrier to good quality data is also an issue of capacity and collaboration. Local authorities often do not have the internal capacity to collect reliable data. Currently cities have access to regional level data, however there are insufficiencies and a lack of integration at the national level. Additionally, cities stressed the difficulty in accessing private sector data and engaging with businesses for data collection.

"We have not built the capacity to calculate the emission reductions on our own. For instance, we had the participation of universities in specific projects, but this happens on an ad hoc basis." (Athens)

Case study: Paris - The 15-Minute City
One of the most interesting urban models which has emerged in recent years is the concept of the 15-Minute City, theorised for the first time in Paris in 2016. This new urban model highlights the importance of designing human-centred and liveable cities, focused on promoting walkability, accessibility, service provision, green spaces and amenities. Citizens should be able to access essential functions within a 15-minute walk or bike from their homes. This model envisages a more sustainable city and it is based on four components (density, proximity, diversity and digitisation) as main drivers to improve climate mitigation.

In Paris, the 15-Minute City involves a holistic and cross-sectoral

"Data and monitoring are key in order to make strategic choices in the context of local government." (Ghent)

"The quantification of co-benefits is one of the key aspects where we would like to receive support. It is very difficult, but it would really help to get political parties onboard. It contributes to create strong and compelling stories and arguments to get everybody onboard." (The Hague)

48%
of the cities are attempting to assess co-benefits of their climate mitigation policies along the following themes

(% of cities assessing x)

Economic
84% costs
67% number of jobs created

Social
72% mobility and access
63% education and awareness
>50% social inclusion, equality, justice and energy poverty

Public Health
88% air quality
>45% impact on physical/ mental health and impact of extreme heat/cold

Environment
83% resilience to climate change/adaptation and green quality
72% biodiversity
61% water/soil quality

(EC's Mission EoI)

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approach to urban development, with a variety of interventions aimed at reducing carbon emissions. First of all, allowing access to essential services by using a low impact mode of transportation reduces the need for private cars. Second, making everyday services available within 15 minutes is a way to promote selective densification of neighbourhoods, reducing land development and rethinking the use of urban spaces in a more creative way. This aspect also implies working on the optimisation of existing buildings and facilities, avoiding emissions linked to the construction of new ones. Interesting examples are the programmes of 'open courtyards', 'Rues aux écoles' (school streets), as well as various initiatives dedicated to promote sport and culture in outdoor public spaces.

This new model is expected to provide positive impacts on sustainability and quality of life, in particular on physical and mental health, circular economy, citizens' engagement, and last but not least, the creation of green jobs and new economic activities. However, the city of Paris is still struggling to adequately measure and monitor the expected positive impacts. Making use of effective methodologies and tools could contribute to accelerating the transition towards climate neutrality and this renewed urban model.

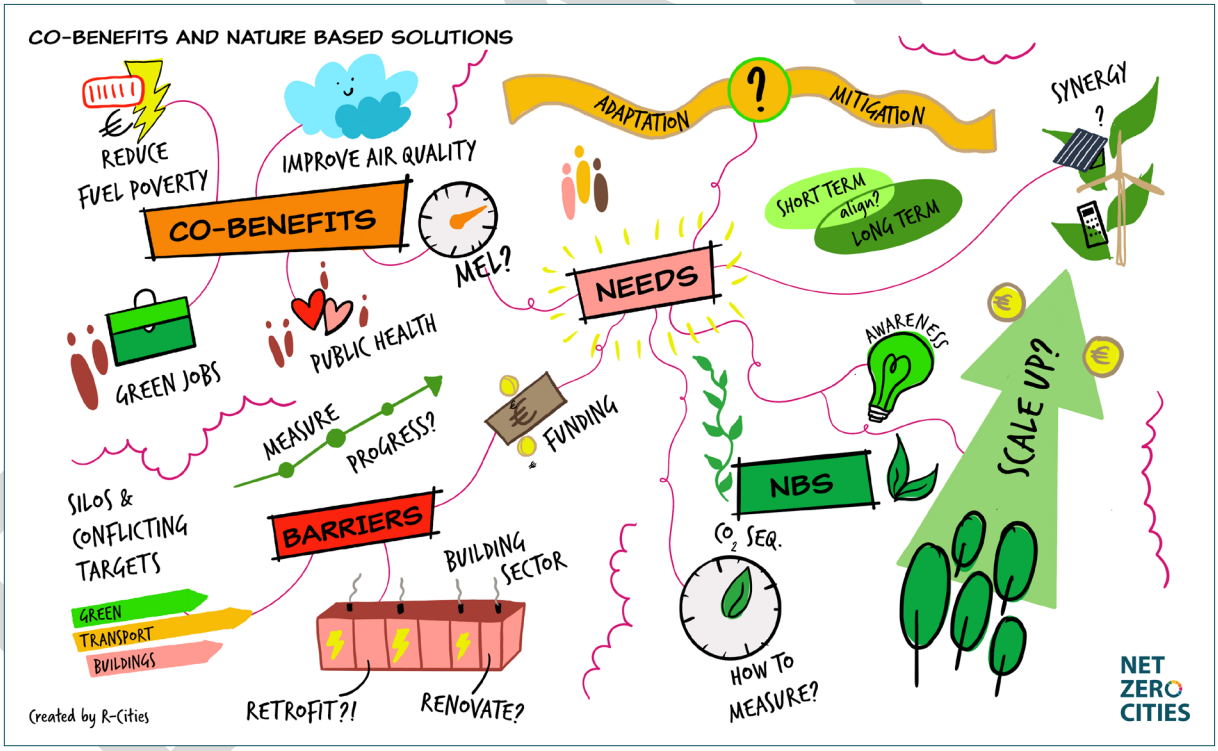

Figure 10: Findings from the focus group meeting on Co-benefits and Nature-Based Solutions

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4 Conclusion

Making cities climate neutral in less than ten years poses a wide societal challenge. Municipalities recognise the level of transformation that needs to take place in order to meet this ambitious target. Nevertheless, the vast majority of the cities we consulted were not only willing to participate in the Mission, but also sincerely committed to achieve concrete results in terms of emissions reduction. From the city projects showcased in this report, we can get a sense of the innovation and transformation that is currently taking place within the various municipalities from across the region as well as their strong commitment to support their communities in this journey.

From the consultation process it was clear that cities know exactly what their key barriers are and what support they need both at an EU and at a national level to meet their targets.

In this context, the cities expect NetZeroCities to play a key role as the facilitator supporting multi-level dialogues, providing a space for peer-to-peer learning and offering tailor made support.

There is also consensus that the Climate City Contract is an important tool to successfully engage with local communities and stakeholders while emphasising that it needs to integrate existing plans cities have developed and align with the timelines they have already defined.

The investment plans are considered an essential part of the Climate City Contracts and a way to move from a project approach towards a portfolio one. At the same time, cities are asking for tailor made support to develop investment plans and assistance in translating the investment opportunities and financial advice into concrete actions.

Cities also articulated the need for support in crafting compelling narratives and measuring the co-benefits of the energy transition for their citizens and communities. There is consensus that participating in the Mission inevitably requires the need to go deeper in co-creation processes at different levels. In this sense, they require additional tools and methods, as well as guidance through these processes. Cities suggested that the Mission Platform should provide specific guidance on involving the most vulnerable as well as methods to deal with conflicting groups in order to promote healthy collaboration.

Cities are craving peer-to-peer learning especially on governance experiences, technologies and tools other cities have deployed, peer reviews, and opportunities for co-creation and co-development of new ideas and projects.

The needs, barriers and drivers of neutrality, as expressed by more than 50 European Cities, have been compiled and presented here offering the NetZeroCities partners and wider group of actors and stakeholders in climate neutrality a comprehensive understanding of where cities lie in relation to the Mission's challenge. This report therefore can serve as a preliminary guide for customizing NZC offerings to cities' needs. This is only the first step of an ongoing consultation that the NZC project will establish with the cities and city practitioners throughout the duration of the program. Last but not least, the report has highlighted the complex nature of the Mission's challenge and pointed to the fact that cities cannot address it on their own. It therefore also appeals for deeper engagement and contribution by all relevant agents, from individual citizens to urban practitioners, governments and the European Commission, each of them within their own role and capacities to contribute towards becoming climate neutral by 2030.

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Annex 1: Focus Group Summaries

Focus Group 1 | Urban governance with a focus on Climate City Contracts

General information	
Date	26 January 2022
Leading Partner	Eurocities
Thematic area	Climate City Contracts and Urban Governance
Number of cities represented	7
Participating Cities	Amsterdam, Gothenburg, Grenoble-Alpes Metropole, Mannheim, Riga, Stockholm, Turku

1 Summary

Key takeaway messages

1. Multi-level governance is critical to participating cities – especially reciprocal commitments from EU, national and regional governments.
2. Several cities expressed concern around the fact that the EC is putting all the political pressure on city administrations, with no support from other levels.
3. The achievability of climate neutrality by 2030 remains a concern for cities, as they consider that they do not yet have all the answers to reach the target by 2030 (i.e. Don't know how to fill the gaps). Most cities in the Focus Group expressed the opinion that the focus of the Mission should be on acceleration rather than on numbers.
4. There is no real clarity or consensus about the appropirate level of detail in the Climate City Contract (CCC), Action Plan and Investment Plan.
5. Cities want to ensure that previous work on their local plans/strategies is incorporated into the CCC and not repeated.
6. Cities will have different starting points for the 2030 climate transition, which will influence the practical timeframe for developing their CCCs.
7. The misalignment between the EC climate target of 2050 and the Mission's 2030 target can be an obstacle and can cause confusion amongst citizens.
8. Cities would like to see reciprocal commitments from stakeholders, e.g. academia, private sector, citizens, among others.
9. There are different views as to how should citizens be involved in the contracting process. Generally, individual citizen commitments would be difficult to manage but if there was an easy way of doing it, they would be open to it.
10. Citizen engagement should also focus on how to catalyse and support citizen behaviour change as a necessary part of achieving climate neutrality

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2 Structure and Agenda

The Focus Group on Climate City Contracts was structured broadly in two parts. The first part covered the Cities Mission, the NZC project and the EOI, which set the stage for the second part: a discussion on the Climate City Contracts. These parts and corresponding sub-parts are briefly described below:

Agenda	
30 min.	Presentation of the Cities Mission and NZC initiative and discussion about cities' experiences with the Expression of Interest
15 min.	• Discussion on cities' expectations around Climate City Contracts • *Key questions:* • *What do you think a CCC is?* • *What should a CCC contain?* • *How detailed should it be?* • *Who should be involved in developing your CCC?* • *Who should sign your CCC?*
30 min.	Presentation and discussion on the proposed draft Climate City Contract concept and process
40 min	Discussion on the different elements of the Climate City Contract - multi-level governance, stakeholder engagement, citizen engagement
5 min	Wrap up

3 Participating Cities

Seven cities were represented in the Focus Group (Amsterdam, Gothenburg, Grenoble-Alpes Metropole, Mannheim, Riga, Stockholm, and Turku), all members of the Eurocities network. Most of these cities are large (with between 200 000 and 1 000 000 inhabitants).

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Four cities responded to the pre-meeting survey and reported that they have a climate neutrality target: two of them by 2030; one between 2030-2040; and one between 2040-2050. Moreover, Turku has committed to climate neutrality by 2029.

On average, cities were represented by one or two people per city. The majority of them work on climate strategy, for the Climate/Environment and International/EU departments of their municipalities, and are directly responsible for preparing the EoI to become a Mission City. Moreover, there were some officials working on citizen engagement and innovation.

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Support from other levels of government	Cities cannot achieve climate neutrality by themselves, they need support from national, regional and EU levels to fully meet this ambitious target by 2030. Thus, other levels need to also undertake reciprocal commitments. Aligning with regional, national and EU actors to the 2030 target will be crucial in this respect. - *"It is important to have each party (involved), i.e. mutual commitments. For instance, the European Commission should explain what they will bring to cities in terms of assistance, opportunities." (Grenoble-Alpes Metropole)*
Create adequate framework conditions in the field of regulations	Several cities expressed the need to enable national regulatory and legal frameworks to take the necessary steps to achieve climate neutrality.
More room for experimenting and piloting climate actions	There is growing consensus that experimentation is a key means through which cities can help drive the climate transition. Some participating cities consider that national authorities should ensure that city governments are given the capacity, incentives and resources to experiment and test new solutions and projects.
Unlock additional finance and funding opportunities	Finance is another area that requires more co-ordinated actions across levels of government. Cities face limited access to financial markets, mechanisms. Thus, cities would like to see further financial support from other levels, particularly the national level.
Provide cities with tailored support depending on their individual starting points	Cities have different starting points in the climate neutrality transition. This means that their needs are different and will require contextualized support. For example, one of the cities explained that they are quite advanced, but they would need tailored financial support to develop their 2030 Investment Plan. Another city suggested avoiding big meeting/conference formats for providing support and to prioritise intimate, small formats. It is important to ensure that cities' needs are heard, particularly where support is required, and that the consortium remains flexible and adaptable to the different contexts and starting points of different cities. - *"Mission cities might need very different support in the different CCC phases. For us it would be interesting to get support with the Investment Plan, for instance." (Turku)*

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Cities' barriers

Identified cities' barriers	
Lack of an adequate regulatory framework	The lack of enabling national regulatory frameworks is a barrier to implement climate actions.
Diverging objectives and targets	Several cities reported a misalignment between the target to achieve climate neutrality by 2030, and longer-term national and EU targets (e.g. climate neutrality by 2040 or 2050). The contradiction between levels of government often hinders the city's communication with citizens and local stakeholders around climate neutrality and makes it difficult to change the public perception and behaviours around the topic. This lack of coordination may also compromise the likelihood to achieve the 2030 target in cities. - *"We say that we want to be climate neutral in 2030, but as long as our national government has targets in 2050, it will never happen. That is part of the discussion we have and that is why it is so important that we do it all together." (Amsterdam)*

Cities' drivers

Identified cities' drivers	
Collaboration and co-creation with stakeholders	There is consensus around the idea that all relevant stakeholders need to be on board, actively involved and need to collaborate and provide support to achieve climate neutrality. Stakeholders need to be involved in a co-creation process at different stages of the CCC process. City officials also expressed that they would like to see reciprocal commitments from stakeholders (e.g. academia, private sector, citizens, etc.). Cities shared many existing examples of bottom-up ways in which they are already engaging stakeholders, which could serve as inspiration. - *"It is important that there is commitment from the whole ecosystem. There are different bottom-up ways for different cities of doing this [...], e.g. Leuven 2030, Turku Climate Team. These bottom-up initiatives could be strengthened through the CCC" (Turku)*
Change citizen behaviour	Behavioural change in citizens is crucial to achieve systemic change and climate neutrality. Some cities explained that citizens do not always engage through citizen or civic organisations. Thus, it is important to communicate and engage citizens at an individual level to help change consumption patterns and help transform production. - *"Citizens themselves have to change when it comes to consumption and awareness on how their behaviour affects the climate." (Amsterdam)*
Cross-sectoral approach	As the climate issue holds implications for several domains, city officials consider that coordination and collaboration across the relevant departments is key.

Examples from Cities
Many of these examples were only mentioned but not fully explained.

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- **Participatory budgeting in Gothenburg**
  Residents are invited to submit their ideas/proposals online for how the money should be invested. Citizens can then vote online to decide which ideas/projects eventually receive public funding for implementation.
  Link: https://medborgarbudget.lundby.goteborg.se/?locale=sv
- **Leuven 2030**
  Leuven 2030 is a 400-member network of local government, knowledge institutions, companies, and citizens working to make the Belgian city of Leuven carbon-neutral.
  Link: https://www.leuven2030.be/
- **Turku Climate team**
  In Turku, everybody is encouraged to become a "Climate Agent" and contribute with concrete climate actions. There is a shared platform for climate action where private companies and public entities can join our Climate Team by committing to different climate actions. Celebrities are also promoting this Climate Team.
- **1.5 Degree Lifestyle Campaign in Turku**
  The 1.5-degree campaign wants to encourage citizens and businesses to make climate-friendly choices. The measures include small and easy day-to-day acts, as well as significant interventions.
  Link: https://www.turku.fi/en/carbon-neutral-turku/15-degree-life-campaign
- **Mannheim Local Green Deals (LGD)**
  The basis for the Mannheim LGD consists of three key aspects: a vision (the Mannheim Message); the existing local, national, and European policy framework; and an analysis of local stakeholders and their willingness to get involved. The city is currently building on this baseline framework to develop an action plan for LGDs (may be already ready), which will include key targets and identify the initiatives, stakeholders, funding opportunities, and timescales which will be implemented to achieve them.
  In order to manage the initiative, the city has created a new LGD team. The team's work centres on engaging with their colleagues across the entire administration. It is anticipated that each initiative set out in the future action plan will follow its own internal governance structure, funding, and timescales. However, the core LGD team will facilitate knowledge exchange and will create synergies between initiatives.
  Link: https://www.intelligentcitieschallenge.eu/sites/default/files/2021-06/Local%20Green%20Deals-8.pdf
- **Climate Action Agency Mannheim**
  The Climate Action Agency implements the climate strategy through specific projects and actions together with citizens and stakeholders. It focuses on local actions such as the City's role model effect (Role Model City), the sustainable development of districts (Sustainable District), the enhancement of climate awareness and commitment (Local Commitment) as well as on the engagement of companies for sustainable operations (Active Businesses).
- **Citizen labs in Gothenburg**
  Gothenburg offers an online community engagement platform. This allows residents to exchange ideas and thoughts with city officials and politicians around a specific topic. In this way, citizens can participate and shape decisions that affect their daily life.
  Link: https://goteborg.se/wps/portal/start/kommun-o-politik/sa-kan-du-paverka/medborgardialog

5 Other relevant topics or issues emerged

- All participating cities confirmed that they are applying to join the Mission and said it was a significant effort to complete the EOI.

- Cities asked about and discussed who should be the national contact point in the CCC process and negotiation. The answer is still unclear. The call "HORIZON-MISS-2021-CIT-01-01: Supporting national, regional and local authorities across Europe to prepare for the transition towards climate neutrality within cities" will mobilise national level actors and departments in many Member States in order to connect to the CCC process. Amsterdam

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challenged this statement by arguing that the contact point should be the national government itself, and not an intermediary that will coordinate different departments/ministries.

- There were several references to the Swedish Climate City Contracts, particularly referring to what is missing or could be improved. For instance, the Swedish CCC is mainly a contract between the city and the national level. The local level contracting is missing in most of the Swedish cities. Moreover, Stockholm explained that, in their case, it was the national authorities (offering financial support, administering EU and national funding) who signed the contract but not ministries/departments. The national agencies did more of the operational / delivery part, not the political, policy and regulatory part. Ideally, both commitments would be needed.

6 Evaluation and remarks

- A MIRO board was used to support the discussion to present relevant information, take notes, and collect live (and post-meeting) feedback from participants. We also used the MIRO board to guide the discussion. In practice, cities were asked a couple of questions and had time to reflect and translate their thoughts into the MIRO board. Afterwards, the organising team moderated an open discussion that built on cities' contributions to the board.

- Even though the participants were a bit quiet at first, we had a good level of participation and active engagement, with a balanced distribution of interventions among participants. Because the Climate City Contract is a novel tool that has only been tested in a few contexts, the participants needed more time to reflect on the materials presented. MIRO was helpful in this regard, as it allowed participants to refer back to the presentation materials in the MIRO board while they digested the information and reflected on their answers.

- The length of the Focus Group (2h) was considered adequate.

7 Results from Pre-Meeting Survey

- A total of 4 cities responded to the Pre-Meeting Survey. These cities are: Gothenburg (Sweden), Grenoble-Alpes Metropole (France), Riga (Latvia), and Stockholm (Sweden).

- All respondent cities have or are planning to have city-wide 2030 climate change action plans or strategies.

- All respondents reported to have some kind of climate governance arrangement in place (e.g. climate department, climate working group, climate officer, etc). Some respondents reported that climate responsibilities are shared across departments and/or officers. There's diversity as to where the climate neutrality agenda sits in the cities - environment department, sprinkled, mayor's office.

- All four cities have a climate neutrality, net zero or similar target. Two of them by 2030 (Riga and Gothenburg); one between 2030-2040 (Stockholm); and one between 2040-2050 (Grenoble-Alpes Metropole). Moreover, Turku has also committed to climate neutrality by 2029 (mentioned during the Focus Group).

- Energy Systems and Mobility/Transport sector were the most chosen priority sectors for GHG emissions reduction.

- High investment costs, followed by policy silos, lack of citizen support/awareness, and lack of enabling policy at the national level, were the most recurrent barriers identified by the cities.

- Most cities (3) use panels and assemblies and co-design methodologies to engage different stakeholders and citizens. Interestingly, there are different views around the level of importance of stakeholder and citizen engagement. Some cities consider it very important; others see it as relatively important or not important.

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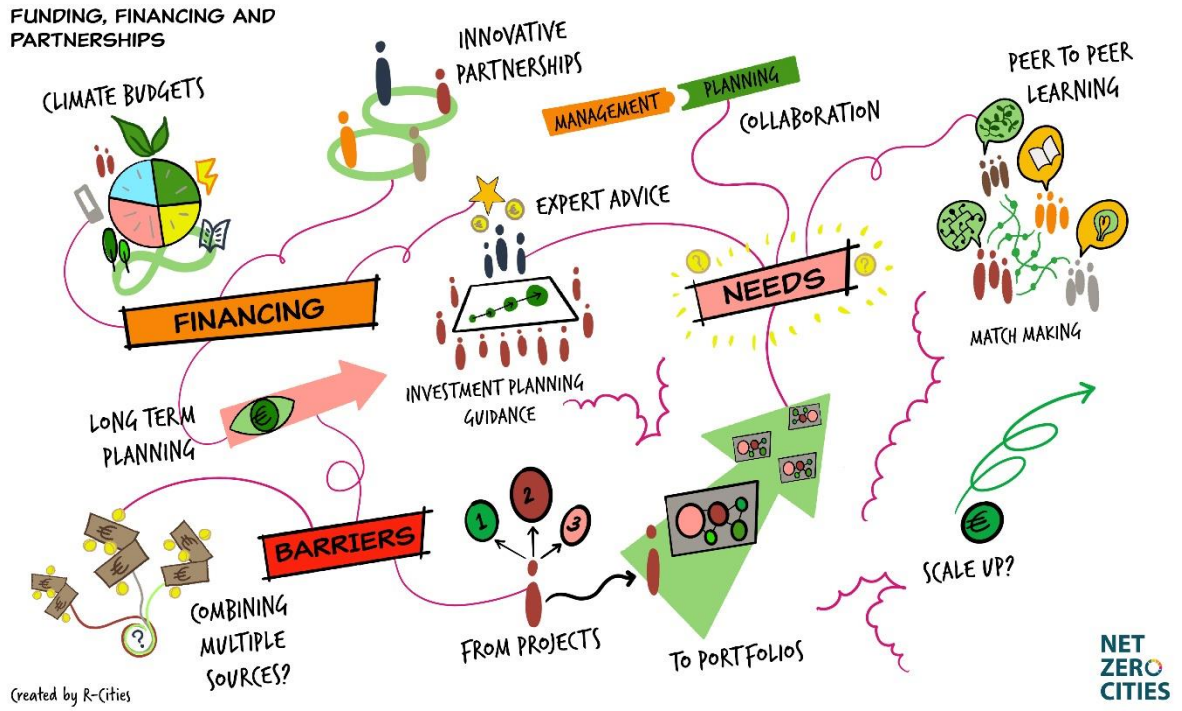
Focus Group 2 | Funding, Financing & Partnerships

General information	
Date	24 January 2022
Leading Partner	ERRIN
Thematic area	Funding, Financing & Partnerships
Number of cities represented	12
Participating Cities	Eindhoven, Groningen, Espoo, Tampere, Turku, Gothenburg, Aarhus, Frankfurt am Main, Saint-Germain-en-Laye, Pau, Issy les Moulineaux, Leuven

1 Summary

Key takeaway messages

1. Cities need support from financial experts who can assist in developing comprehensive investment plans. Cities are not used to developing investment plans and, therefore, this is a major challenge that will require both general guidance as well as tailored support. Assistance in translating the investment opportunities and financial advice into concrete actions is also needed.
2. There is a need for a structured overview that allows cities to understand the different existing financing and funding options and how to make best use of them – what measures in their climate plans are best funded by which funding or financing mechanism?
3. There is a need to move from a project approach towards a portfolio approach. There are currently too many small-scale projects that are not connected and not scaled up.
4. Cities lack an understanding of how to combine different sources of funding – private, regional, national and EU, and the applicable rules for such kind of combined funding.
5. Many countries have regulatory and governance barriers related to climate investments and projects which makes it difficult for cities to carry out these investments and projects.



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2 Structure and Agenda

The focus group meeting was organised online on Microsoft Teams with 23 participants representing 12 cities and three facilitators from ERRIN's side. The online tool Miro was used instead of PowerPoint slides to present the information and to capture the key messages during the discussions.

The meeting focused on the topic of investment plans and was structured into four main parts - with an introductory part in the beginning and a concluding part at the end of the meeting. **Part 1** was dedicated to a presentation of the call for Expression of Interest, the NetZeroCities project, the Mission Platform, and the objective of the focus group meetings. This part was followed by a short Q&A session where participants could ask questions related to the presented information. In **Part 2**, the participating cities' current climate neutrality targets were discussed together with lessons learnt so far in terms of climate funding and financing. **Part 3** was dedicated to a discussion on funding and financing barriers, needs and drivers to achieve a net zero future, while **Part 4** concentrated on local partnerships for climate funding – how can cities create incentives for local actors to unlock private funding for the transition to net zero?

Agenda	
10 min	Welcome and introductions
20 min	Part 1: Presentation and discussion on the Expression of Interest and the NetZeroCities Mission Platform, followed by a short Q&A session
15 min	Part 2: Cities' journeys towards a net zero future and lessons learnt
45 min	Part 3: Funding and financing barriers, needs and drivers towards a net zero future
20 min	Part 4: Barriers, needs and drivers for local partnerships
10 min	Conclusions and next steps

3 Participating Cities

The 12 participating cities represent medium-sized cities, located in the northern and western parts of Europe – the vast majority of them being advanced in their work towards achieving climate neutrality. The only exception being the two French communes Saint-Germain-en-Laye and Issy les Moulineaux, which have smaller populations but which belong to the larger Île-de-France region.

The 23 participants consisted of regional representatives working in the regional offices based in Brussels; city employees working on climate-related topics; and city employees working on financing/climate financing in the cities. The participants therefore had a good knowledge of the topics discussed in the meeting and were able to contribute with valuable input and feedback.

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4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Financial expertise and assistance for developing investment plans	Cities need financial experts who can assist in developing comprehensive investments plans that bring all the climate work done across the city administration together. Assistance in translating the investment opportunities and financial advice into concrete actions is also needed. - "Leuven has in the past few years partnered with experts like Bankers without Boundaries which has helped the city grow its knowledge, but even with those experiences we find it difficult to translate this into concrete actions. Long-term partnerships between cities and financial experts are needed." (City of Leuven)
High investment needs for climate neutrality	Investment needs for climate neutrality are very high and much more financing has to be mobilised. Becoming climate neutral will require large amounts of money in pre-financing that should be available to cities upfront. It will also be important to differentiate between profitable and unprofitable funding and financing to achieve climate neutrality. - "What we have learnt in Groningen in the past years, is that the entire challenge probably requires around €2.5 billion. What we see, is that there is a large unprofitable top that the city also has to find in some way. Around 70-80% is money that the city will have to pre-finance in some way, because we cannot ask our citizens to pay everything at the same time themselves." (City of Groningen)
Change in management processes and cities' mindset	Management processes (planning and financing processes) and the way cities work have to change – cities need to adopt a more long-term lifecycle thinking and an entrepreneurial mindset. Further collaboration between city departments is still needed in order to address the multi-faceted challenge of achieving climate neutrality, which includes both technical and financial issues.

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Improved collaboration between governance levels	There is a need for incentives that support collaboration and exchange between the different levels of government, but also between decision makers and the technical actors involved in the transition to climate neutrality.
Peer to peer learning and matchmaking between cities	Peer to peer exchange and matchmaking between cities to learn from each other and share experiences on specific issues and topics. Peer reviews could also be helpful as cities are not always able to identify their own knowledge gaps.
Overview of existing funding and financing options	There is a need for a structured overview that allows cities to understand the different existing financing and funding options and how to make best use of them – what measures in their climate plans are best funded by which funding or financing mechanism (programmes, instruments, actors, etc.)? An understanding of how to use the EU taxonomy in the applications for different subsidies, e.g. EIB loan packages, but also when developing local investment projects is also needed.
Move from project approach to project portfolios	There is a need to move from a project approach towards a portfolio approach. There are currently too many small-scale projects that are not connected and not scaled up. Cities need a strategic direction and an overview of the investments needed to create a coherent project portfolio that will enable them to scale up and create synergies between projects. The scale-up and replication of solutions is currently a major challenge for cities.

Cities' barriers

Identified cities' barriers	
Lack of know-how on climate financing	Lack of know-how and expertise on climate financing and climate investment poses a great challenge to cities. - "Local authorities are traditionally about spending money – we have a budget and we spend it – we are not about turning a profit or developing a business plan. It seems that we have to get that expertise in, in order to get the large investments that would be needed to achieve the ambition of the mission. It will require expertise that is insufficiently available in cities." (City of Eindhoven)

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Lack of knowledge on how to combine different sources of funding	Cities lack an understanding of how to combine different sources of funding – private, regional, national and EU, and the applicable rules for such kind of combined funding. - "You need to be aware of all the different rules to make sure that you can combine different sources of funding – making sure that it is legal and possible. This is not helping to speed up the process." (City of Pau)
Small-scale and scattered projects	Cities have large numbers of small-scale projects that are scattered and not connected, making it challenging to advance the work towards climate neutrality quickly enough.
Lack of knowledge on how to include citizen and stakeholder engagement in investment planning	Lack of knowledge on how to combine the collaborative approach including citizen and stakeholder dialogues and input around climate investments with the actual investment planning, as the it requires advanced knowledge on the topic.
Regulatory and governance barriers	Many countries have regulatory and governance barriers related to climate investments and projects which makes it difficult for cities to carry out these investments and projects. - See examples from The Netherlands, Belgium and France below.
Procurement processes are too long and slow	Public procurement is used to finance the up-scaling of climate projects in cities. However, procurement processes are too slow for short-term climate neutrality targets. - "The time between the first idea and you launching the procurement process, choosing the private company that will do the project for you, and finally finishing the project can take 5-10 years depending on the nature of the project." (City of Pau)

Examples from Cities

- In **The Netherlands** and in **Belgium**, cities are not allowed to run deficits which makes investments difficult.
- In **France**, there are some general frameworks that are imposed from higher levels of government for the distribution of funding and the organisation of projects, which make the process more difficult.

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Cities' drivers

Identified cities' drivers	
How can climate budgets be used as a tool to move towards investment plans that have a more long-term perspective?	Climate budgets can support investment plans as they provide information on where the city currently is in its climate neutrality journey towards decision makers, and act as a tool for detailed, short-term planning. However, the key question is how we can use existing tools and practices, such as the climate budgets, as a way to move towards investment plans that go beyond city budgets and that have a more long-term perspective? - "The investment plan and the climate budget are linked, but the climate budget is a more detailed, short-term plan whereas you as a city really need a long-term plan that goes all the way to climate neutrality." (City of Tampere) - "We have been using the climate budget for about three years now and we are still working on how to combine all the different parts together. For us, the climate budget is a tool to inform decision makers of where we are at." (City of Tampere)
Climate projects can bring new business opportunities	The transition to climate neutrality and investing in climate projects can bring new business opportunities to local actors in cities. - See examples from Groningen, Pau, Turku and Gothenburg below.
Socio-economic value of climate projects	It is important to also consider the socio-economic value of climate projects and technologies, and to not always just focus on the costs of the investments. - "An area to be considered when developing the investment plans, is to evaluate all impacts and benefits of the investments and not only the costs. It is important to also gain insights into the positive impacts (such as socio-economic impacts) of climate projects in order to show that although they are expensive, it is worth investing in them because otherwise there may be other externalities that will cost even more." (City of Pau) - See an example from Groningen below.

Examples from Cities
- Thanks to some EU-funded projects, **Groningen** was able to invest in hydrogen and vehicles running on hydrogen, which led to a local company starting to reconstruct passenger cars to make them run on hydrogen. This started as a small-scale project but

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has now turned into a growing business – being one of the few in Europe with this expertise.

- **Pau** has been working with a local private company to develop fuel cell buses, which started as a pilot project but which proved to work very well. The project provided an opportunity for the city to promote its climate neutrality efforts, but also for the company to showcase their work. The city has received many visits from other French cities and companies interested in learning more about the project, which has enabled the company to access new markets.
- **Turku** has a Climate Team, which is founded by the City of Turku, which aims to encourage companies, organisations and communities to join the city's climate neutrality plan. Companies can submit voluntary climate action pledges and join the team, and will in return be showcased on the city's website and social media channels. Additionally, the city will use resources to highlight the companies' stories and their climate pledges, and collect the pledges in the SECAP plan cards and the climate report. Some of the successful actions which have had an impact in the city will also be showcased during the annual climate forum of the city. This has proven to be a successful way of including local companies in the climate work, as they see it as a profitable way to promote themselves and their actions. The climate team also provides an opportunity for collaboration as the involved companies can find new collaboration partners and opportunities through the network it provides.
    - For the development of investment plans, cities need to explore how to use processes like this to engage companies to contribute in a coordinated effort towards climate neutrality. This needs to be something that goes beyond climate pledges.
- **Gothenburg** has set up the Gothenburg Climate Partnership, which is a long-term and active collaboration between the business community in the Gothenburg region and the City of Gothenburg to reduce its climate impact. Being part of the partnership offers many benefits for companies, e.g. collaboration opportunities, marketing of their climate actions, access to key actors within the city, and support to implement sustainability projects. Additionally, the city has developed a Strategic Business Program which is the city's common roadmap for creating better conditions for entrepreneurship in the city and which includes environmental and climate aspects.

- There was a study done in **Groningen** recently which showed that the savings in energy costs that people make as a result of moving towards climate neutral alternatives (isolation, solar panels, heat pumps, etc.) are actually mostly being spent/re-invested in the local economy.
- Participatory budgeting: The region of **Île-de-France** gives the opportunity to the residents of the region to become active players in the regional environment and to take part in a regional citizen initiative, with a budget of €500 million over the course of five years. The region allows working or studying residents (over the age of 15) to become involved in a project one of the five different areas, including renewable energy and energy efficiency.

Conclusions:

- Cities will need **hands-on** financial expertise and assistance through the Mission Platform and the NetZeroCities project to develop their investment plans. The assistance needs to be more long-term and tailored to focus on each city's individual context. Cities are not used to developing investment plans and therefore this is a major challenge that will require both general guidance as well as tailored support.

- The Climate Neutral Cities Advisor will be important in the work to connect the dots and create an overview of the city's ongoing climate work. The Climate Neutral Cities Advisor will also need to help the city to create a strategic direction with an overview of the investments needed in order to create a coherent project portfolio that can bring the city to climate neutrality.

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- The Mission Platform needs to create an overview of available funding and financing mechanisms that cities can use to finance the transition to climate neutrality. This should also include guidance on what measures in their climate plans that are best funded by which funding or financing mechanism. The Climate Neutral Cities Advisor could then support in practice by helping cities to understand what measures and projects can be financed by which funding or financing instruments, as well as how these instruments can be combined in the most efficient way.

- The Mission Platform will be an important tool for cities to exchange and learn from each other. It is important that cities are able to easily find other cities that are tackling the same challenges and have similar needs. Concrete proposals were also made to use the platform as a 'dating place' to share hurdles and match interests, for example related to procurement.

5 Other relevant topics or issues emerged

- Cities are complex ecosystems and would therefore also benefit from advice on how the different building blocks come together – not only on the financial side, but also regarding the actors, technologies, projects, etc. How should they interact and support each other in order for a city to achieve climate neutrality?

- The Mission Platform should offer city-specific guidance throughout the process – offer ideas and concepts to cities which the experts know work well and which they think should be scaled up in cities, while also help evaluating whether the idea is suitable for the city in question or not. The Mission Platform should help cities build concepts that boost things into moving faster by providing advice on when to involve the different stakeholders, how to finance the investment, etc.

- Lack of human resources is a huge challenge for cities. As the target year for climate neutrality for many cities is approaching fast, cities cannot afford to prioritise, but have to work on everything simultaneously. Although there is available funding and good project plans, it requires a lot of human resources from the city departments to implement investment projects.

- Cities struggle to find the workforce with the necessary knowledge and skills to make a city climate neutral. It is a challenge to find people who are able to think outside of their departmental area or specific sector. Education and re-skilling are important to address this problem.

6 Evaluation and remarks

- It is helpful from the organisational side to have enough facilitators that can take care of the different tasks – moderation, checking the chat, posting post-it notes on the Miro board, etc.

- Involve a moderator with knowledge on the topic of the meeting.

- Invite people with relevant knowledge on the topic of the meeting, if possible. We had several participants working with climate financing issues in the cities, which allowed for relevant and high-quality input.

- In our experience, it is better to have too many rather than too few participants as there will always be a few passive participants.

7 Results from Pre-Meeting Survey

- 10 cities answered the survey.

- The main funding gaps recognised by cities are difficulties in identifying the right type of funding and lack of mixed funding models. Additionally, lack of funding options for large-scale projects was identified by several respondents as a challenge.

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- Most cities have experience in managing the following funding instruments: EU (Interreg, Horizon 2020), EIB loans, national funding instruments, regional funding instruments, local funding (municipality or department).

- Tampere has a Climate Budget and Turku is currently developing its Climate Budget. Issy-les-Moulineaux has a budget that includes all the listed areas. Four cities have a Green Mobility Budget (Groningen, Pau, Aarhus and Espoo) and 2-3 cities responded that they have the other types of budgets. The City of Gothenburg does not have a specifically allocated budget, but directed funds for climate objectives.

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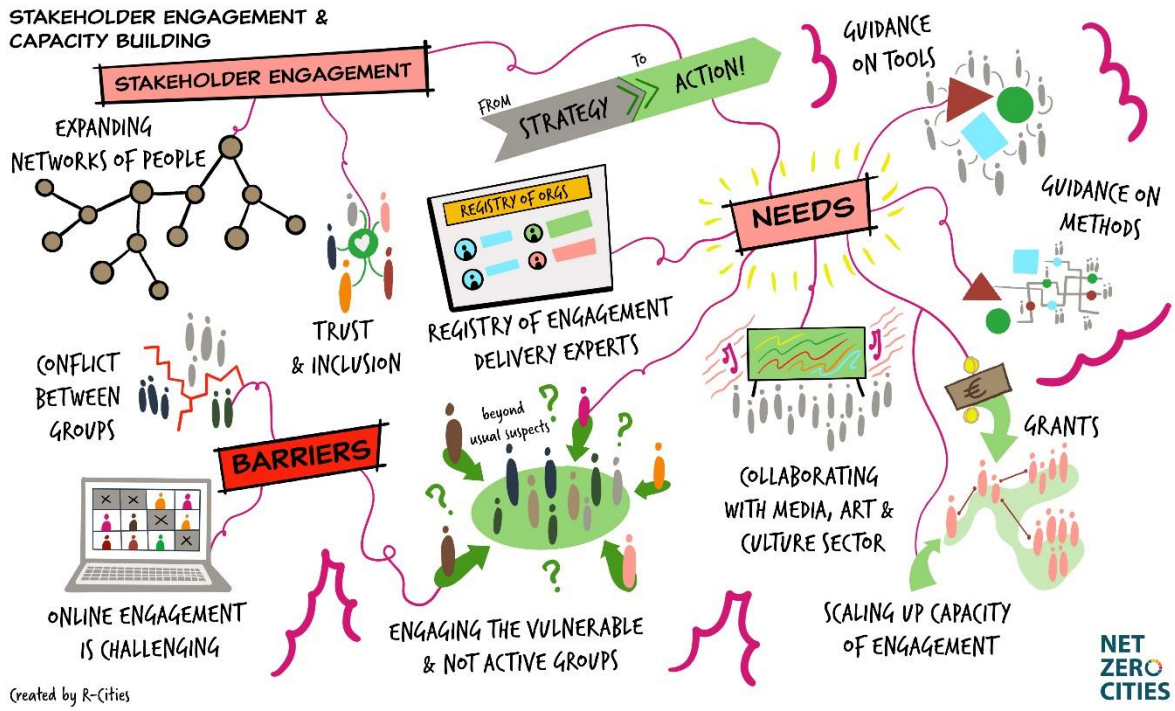
Focus Group 3 | Stakeholder Engagement

General information	
Date	16 February 2021
Leading Partner	Resilient Cities Network
Thematic area	Learning, capacity building and stakeholder engagement
Number of cities represented	10
Participating Cities	Athens, Barcelona, Belfast, Glasgow, Greater Manchester, Milan, Paris, Rotterdam, The Hague, Thessaloniki

1 Summary

Key takeaway messages

1. Cities have increasingly clear that, in order to reach the ambitious goals of the Mission, they need to go through a large scale of transition and exponential rate in decarbonization. This inevitably require a **large and systemic engagement** of citizens, stakeholders groups and local communities.
2. Cities require guidance and support regarding **methods and tools** to successfully engage stakeholders and communities. The Mission Platform can provide important support in terms of engagement approach, case studies, best practices and dialogue among cities. Cities do not have sufficient capacities.
3. **Scaling-up engagement** beyond the "usual suspect" and the "front-runners" is one of the most difficult and urgent barriers.
4. **Cultural events and media** can be important drivers to reach out to larger groups of citizens and stakeholders.



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2 Structure and Agenda

The Focus Group on **learning, capacity building and stakeholder engagement** was structured in 3 parts:

1. Introduction to stakeholder and community engagement as enabling topic both the Eu Mission for climate neutral cities, and for the cities involved in previous consultation groups.
2. Case-study presentation from cities, reflecting on their experiences in stakeholder engagement, highlighting challenges and potential improvements.
3. Discussion about the Mission Platform and how this could support cities when it comes to stakeholder and community engagement

Agenda	
10 min.	Presentation of the NZC initiative and introduction to the Focus Group
10 min.	Reflections on the role of stakeholder engagement in Net Zero City and summary from previous focus groups
70 min.	Learning from cities: case-study presentation
30 min	Discussion on how the NZC platform can meet cities' needs

3 Participating Cities

A total of 10 cities were represented in the meeting (Athens, Barcelona, Belfast, Glasgow, Greater Manchester, Milan, Paris, Rotterdam, The Hague, Thessaloniki) all members of the Resilient Cities Network. The following cities delivered a presentation: Rotterdam, Thessaloniki, Athens, Barcelona, Belfast, The Hague and Glasgow.

The cities were represented by 1 or 2 people per city (the Chief Resilience Officer and/or a city representative working on stakeholder and community engagement).

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Guidance on tools and methods for participation and engagement	Cities have clear that participating in the Mission inevitably requires the need to go deeper in co-creation processes at different levels. In this sense, they require additional tools and methods, as well as guidance over these. Some cities indicate as useful to have an overview of the different typologies of deliberative democracy and citizens engagement approaches. Case studies and dialogue about best practice can help cities to understand how to structure such processes and which engagement tools are more effective. • *"We would hope for this mission platform to give us more tools to scale up our capacities and to incentivize the civil society to participate, to make alliances and collaborate."* (Thessaloniki)

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	• *"From the mission platform it is interesting to have the vision and the map of different approaches to citizens engagement".* (Paris) • *Provide guide on the use of citizen engagement approaches, as well as other training and resources can lower the practical barriers for municipalities to design and implement such approaches" (Glasgow)* • *"Each project is different, with different working dynamics, taking into account collective and individual interests. You need more synergies and multi-disciplinary teams." (Barcelona)*
More fundings	• *It is an open process, there is a lot of uncertainty. Technical and administrative follow-up are required but we have limited resources (we need more grants).* (Barcelona)
Scale-up the engagement process	Cities struggle to achieve successful engagement beyond the usual suspect and pioneer groups. The mission Platform should provide support to scale-up the engagement process to all the citizens. The focus should me on more actions rather than strategies and policies, based on bottom-up approaches. Moreover, the Mission Platforms should also help cities in raising more awareness among citizens about the benefits of democratic engagement. • *Our engagement strategy is focused on a bottom up approach, so that means we really try to engage citizens to mostly insulate their own buildings, but also to initiate car sharing or to initiatives on climate adaptation. Until now, the focus has been on the front runners, thinking if the front runners are going and get going, it will spread and the mass will come eventually. We have done a lot of pilots projects on different themes at the neighborhood, street and at individual level. We are ready to scale it up and we would like the platform to help us from this focus on front runner to be able to target the whole city.* (The Hague)
Guidance on engaging the most vulnerable people	• *"The Mission Platform should provide specific guidance on involving the most vulnerable and help removing the practical barriers associated with ensuring a just transition"* (Glasgow)
Register of practitioner/organisations that can deliver engagement approaches	• *"The Mission Platform should help cities identify trusted delivery partners to work with to begin their engagement approaches, and to learn for others."* (Glasgow)

Examples from Cities
- Thessaloniki, Barcelona,

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Cities' barriers

Identified cities' barriers	
Conflict and tensions between different stakeholder groups	Participatory processes usually face some conflicts between different groups or directly against the municipality. The reason behind these conflicts are generally diverging goals and interest. Cities should be aware of these conflict and try to be as inclusive and transparent as possible. • *"The most important thing is acknowledging upfront that that are going to be tensions. How do you cope with that? In our case it was very important that the whole process was transparent from the beginning. We knew that after one year, at the end of the process, we needed to have a formal agreement." (Rotterdam)* •
Engage all the desired stakeholders in the process	In participatory process it is important to engage also those actor who usually do not have a voice, going beyond the "usual suspect" or the "front runners". However cities struggle to approach stakeholder directly and involve these groups effectively in the process. While they might be able to reach effectively specific groups, they might fail to engage other groups. In this sense, cities consider themselves still in the process to learn how to do it. • *In Rotterdam we focused on engaging the biggest owners of most of the houses in the city. The biggest struggles is to engage other single homeowners and citizens and to give them a meaningful role in the process. … We are still in the process of learning how to do it effectively. (Rotterdam)* • *We were directed to actually go and find the communities and the people that usually are not heard. How do you find and reach out to people that usually do not have a voice? This is always an issue, but opening up the City Hall is an interesting process. (Athens)* • "We *have done a lot of work around sustainable development goals five on gender with girls and young women in the city. Climate leadership is an important issue." (Glasgow)* • *"We have already done some little attempt to promote stakeholder engagement. For instance we started with a platform like Barcelona did. We started with some voluntary groups talking about climate change, but the numbers of people really engaged are still very little. Our main concern is to make these groups of engaged people larger."* (Milan)
Lack of resources and capacities	Many cities still lack capacities and adequate resources to carry on complete participatory processes.

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	• *"We tried through working groups, small workshops, we used questionnaires and networking sessions in order to meet other people together. Not everything was good, because the lack of capacities, fundings and flexibility is always a problem. Now after Covid-19, funding is extremely difficult for the municipality."* (Thessaloniki) • *Capacity is a very big issues. We had to persuade to receive budget to procure the engagement process for updating the new climate Action Plan. It included planning it and delivering workshops and surveys* (Athens) • *"If you get the mandate to that, being willing to step outside the comfort is a challenge for city officers because it requires new skills and knowledge.* (Glasgow)
In person vs online engagement	Several consultation processes started in person but were forced to be switched to digital forms of engagement. Municipalities are adapting but they still face some challenges in terms of flexibility and adaptability. • *"The resilient strategy consultation that we ran was from January 2020 to June 2020. Of the biggest challenges was that we started with face-to-face engagement, but the pandemic came a long and we had to switch a lot of our engagement to online and digital. It was important to be flexible and adaptable, and it was a quite hard work because some of the processes and structures were already setup" (Belfast)*
Change people's behaviours and preferences	• *"The current houses, around 260,000, make a large part of current CO2 emissions. It is a big call for The Hague to reduce these emissions, but we do not own these building s. it is a task of getting citizens informed and make them willing to act, but at the same time we cannot force them."* (The Hague)
Silos	Engagement is done also in different sectors, therefore not in a systemic way. • "We have a sort of Community engagement team who sits over there, we have a sort of an economic development team who sits over there, and the sustainability team who sits over there. In the past community engagement was seen as something specific and sectorial. The challenge is

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	to mainstream engagement around new approaches." (Glasgow)

Examples from Cities
- Thessaloniki participatory process on resilient strategy - Belfast consultation Resilience Strategy

Cities' drivers

Identified cities' drivers	
Building trust and role of the government	There is awareness that the role of cities in engaging stakeholders and communities has to change. It is not only a matter of changing policies and regulation, but bring actors to the table, sharing common goals. It is a matter of building reciprocal trust and collaboration. • "We all know that, to make big steps in energy transition, not only policy must change, but also the way we behave as a government, engaging with citizens and with businesses and giving them also trust and also a seat on the table to talk about those new policies. (Rotterdam) • "It is also important how you position yourself as government within the process: it is one of the player and not the one who leads the whole process • "According to a survey among young people (we received 1200 responses), a lot of information about climate change comes from social media and friends, and information from family and friends is more trusted, while local politicians are less trusted (Belfast).
Using people's network to achieve broader engagement	Important to reach out directly to group, and reach out a the community level to engage them ore, and reach the next level. Not only involve them but make them also active and willing to act. • "If you want to reach out and engage citizens, you need to adapt to their characteristics. So we form a local action group by using existing networks (i.e., group of citizens, associations, local business). That is the strong part of this community-lead approach, because through these network we are able to reach people which we, as government, would never reach." (The Hague)
Role of art, culture and media	• *"As part of an economic development program we have identified both co design participation, inclusion and the role of arts and culture and media as leaders of change in how we bring about that economic transformation the for the city." (Glasgow)*

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	• *"It is increasingly clear the role of culture in participation and engagement. Cultural activities are a key for opening up to different kind of people and activities, contributing to make climate change part of our daily lives. There is the opportunity to insist more on cultural activities for engagement and participation"* (Milan)
Give agency and legitimacy to people	• *"It helps keep discussion centred on citizens' needs and what is in the long term interest of our citizens. But I think the most important piece, for us to come next is around trust and legitimacy, giving citizens a sense of agency. (Glasgow)*

Examples from Cities
- Rotterdam Climate Agreement: signed in 2019 after a broad participatory process divided in 5 different thematic (lead by independent chairmen)

5 Other relevant topics or issues emerged

- Many cities acknowledged the difficulties to implement the Net Zero Agenda and reach climate neutrality by 2030. Cities did not express concerns about the implications of not achieving the expected targets from the Mission, but they pointed out the importance of supporting the expected commitments with technical credibility.
- Most of the cities have already set in place targets and commitments to significantly reduce carbon emission in the next years. Most of the cities set 2050 as timeframe, often with intermediate goals to reach by 2030.
- Nature-based Solutions is nowadays considered a quite popular and successful field across local communities and citizens.
- Cities expressed interest in linking Nature-based Solutions with other sectors (for instance linking NBS with circular economy, defining mandatory NBS specifications for new building constructions).

6 Evaluation and remarks

- Miro was used as support during the discussion, useful to showcase relevant information and collect some notes.
- Good level of participation and active engagement, with a balanced distribution of interventions among participants.
- The length of the Focus Group (2h) was considered adequate

7 Results from Pre-Meeting Survey

- A total of 7 cities responded.
- Most cities have at least one commitment like SECAP, Resilience Strategy etc. 4 out of 7 cities have a net-zero target already. The timelines vary between 2030 to 2050.

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- Built Environment, Energy Systems and Mobility/Transport sector were the most chosen sector for GHG emissions reduction.
- Administrative barriers, lack of investment and hurdles in building effective partnerships were the most recurrent barriers identified by the cities.
- The co-benefits were of particular interest to this meeting. Four co-benefits stood out as clear drivers for net zero for the cities. These are reduced risk to climate hazards, improved public health and quality of life, increased participation and awareness, and economic growth and boosted local businesses.
- Another area of interest for this meeting was the NBS approach in cities. 5 cities had experience in implementing NBS in their cities. The challenges identified were the asymmetries between short term expected results and long tern benefits of NBS, inadequate financial resources, and gaps in knowledge, quantification and coordination. Nearly all cities look towards NBS for improving greening and biodiversity in their cities, while the other identified scopes of NBS were water management, improving urban spatial quality and carbon sequestration.

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Focus Group 4 | Climate City Contract and climate investment planning

General information	
Date	16 February 2022
Leading Partner	Viable Cities
Thematic area	Governance, Climate City Contracts and Funding, Finance, and Partnerships
Number of cities represented	14
Participating Cities	Barcelona, Madrid, Soria, Valencia, Valladolid, Vitoria-Gasteiz Gothenburg, Järfälla, Lund, Malmö, Stockholm, Uppsala, Växjö, Umeå

1 Summary

Key takeaway messages

1. Several suggestions were given regarding how to involve cities not part of the 100 Climate Neutral and Smart Cities programme, such as making use of already ongoing regional initiatives and also connect the the Climate Adjustment Mission.
2. Many features of the national climate city contracts were identified as possible to transfer to the EU level for example "make it an engaging, holistic and multi-level governance process enabling co-creation of the climate contract involving all stakeholders and citizens in the process".
3. Climate investment plans were considered as an essential part of the climate city contract, and a way to go from the focus on project-based funding to mission-oriented.
4. The investment road maps with actions and impacts, climate and co-benefis with an economic perspective are needed to prioritise common transition areas and steer investments in the right direction.
5. Many experiences from the work with investment roadmaps were identified as possible to transfer to the EU level, for example that such plans or roadmaps need to be co-created with a number of people from both the municipality and other stakeholders from different sectors and levels.

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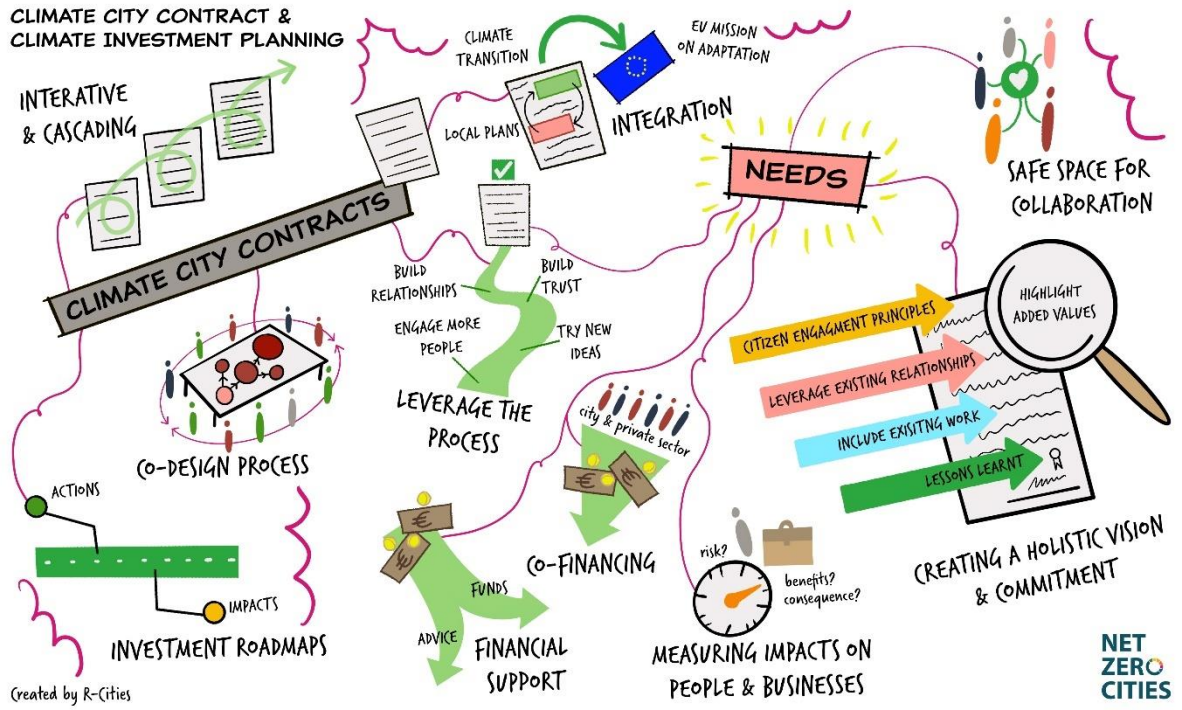

2 Structure and Agenda

The Focus Group on governance, climate city contracts and funding, financing and partnerships was structured in three parts. The first was an introduction to the topics and their relationships, whereas the two others were focusing on the specifics and also included group discussions. Finally, some closing remarks were made and plans for the future. These parts are briefly described below:

1. Introduction to the workshop and the themes, and how they relate to each other. Special emphasis on the mission to become climate neutral with a good life for everyone within the planetary boundaries.
2. Presentation and discussion on governance and the experience so far in Spain and Sweden regarding Climate City Contracts. Special attention was given to the issue of how to involve cities not part of the 100 Climate Neutral and Smart Cities programme and good features of the national climate city contracts that could possibly be transferred to the EU level. Here the cities of Umeå and Valencia gave examples of their reasoning behind joining the national climate city contract processes.
3. Presentation and discussion on Funding, Financing, and Partnerships with an emphasis on the experience of using climate investment plans as part of the climate city contract. Special attention was given to the question of how to involve different stakeholders in the process of making and fulfilling the plans, and on success-factors behind moving away from a project-based funding to a mission-oriented approach. Here the city of Malmö talked about their experiences of developing climate investment plans in order to achieve the mission.
4. Closing reflections and remarks. Introducing an extra survey to be filled in immediately after the workshop, summarising impressions.

Agenda	
20 min.	Introduction to the workshop and the themes, and how they relate to each other
30 min.	Presentation and discussion on governance and the experience so far in Spain and Sweden regarding Climate City Contracts

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35 min	Presentation and discussion on Funding, Financing, and Partnerships with an emphasis on the experience of using climate investment plans as part of the climate city contract
5 min	Closing with information about an extra survey to sum up the focus group

3 Participating Cities

14 cities were represented in the meeting: Barcelona, Madrid, Soria, Valencia, Valladolid, Vitoria-Gasteiz, Gothenburg, Järfälla, Lund, Malmö, Stockholm, Uppsala, Växjö, and Umeå. The cities were represented by 1 or 2 people per city with an experience from participating in the national climate city contract programmes and processes in Swedish Viable Cities or Spanish citiES2030, respectively.

4 Synthesis of discussion

4.1 Governance and Climate City Contracts

This session started with some reflections from the work done by Viable Cities and citiES 2030. Although somewhat different in design, Viable Cities and citiES 2030 shared the same three key learnings:

- A climate city contract is A PEOPLE process rather than a bureaucratic instrument. There is a need for specific convening vehicles, building trust and cultivating interpersonal relationships. It is also important to consolidate and share learnings with all the promoters.
- The climate city contract process should be CO-DESIGNED and iterative rather than linear or vertical.
- The climate city contract is A RECIPROCAL commitment between cities and national government, but other levels of governance, i.e., regional, European should also be included (cascading climate city contracts)

The City of Umeå and The City of Valencia also provided information about their experience with the climate city contract work.

The city of Umeå stressed the importance of integration of the climate transition with other socio-economic development.priorities, where Umeå wants to be a role model city. Also, the added value of engaging different stakeholders from all levels of society in the transformation. Here the work with national climate city contracts, and the commitments from the Swedish government agencies is an important process, but also needs to involve the regional and EU levels. Umeå is involved in a pilot for a regional climate city contract in Sweden during 2022, focusing on the northern regions in Sweden.

Valencia provided several reasons for joining the citiES 2030 initiative such as it being a collective journey and learning with multi-actor and multi-level engagement. They also consider the initiativ a "safe" space for discussions and trying out new ideas, but also for overcoming barriers to become more systemic and disruptive. They also mentioned the importance of gaining scale to boost change and attract funding, and to be at the interlocution at the state and EU level.

Valencia also mentioned several benefits from signing a climate contract such as that it puts the focus on actions and commitments, and at the same time align multiple levels and areas of governance. It sets out the needed transformations and who leads them, by nurturing ecosystems and engagement through local contracts. Another benefit is that it encourages benchmarking between cities.

4.1.1 Group discussion

Regarding the issue of how to involve cities not part of the 100 Climate Neutral and Smart Cities programme several suggestions were put forward in the discussions:

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- Link to already ongoing regional initiatives, as is the case in both Spain and Sweden.
- Build strong national platforms with the task to support all cities, and connect the national level and EU level to support the mission implementation beyond the 100 cities.
- Link to the Climate Adaptation mission, especially since it is focusing on regions
- Make sure that funding and financing perspectives are expanded to all cities, and not only those in the programme.
- Make use of already existing relationships between cities, both within countries and between.
- Make responsibilities fall on different levels of governance (European, national and regional)
- Make sure that co-investment are made in projects between several cities and private partners.
- Involve the other cities from the beginning for example as observers and validating tools or methods.
- Find ways to summarise the work already done by the first cities and distribute to others, in terms of lessons learned, and guidelines.

Several recommendations were also put forward regarding good features of the national climate city contracts that could possibly be transferred to the EU level:

- Make it an engaging, holistic and multi-level governance process enabling co-creation of the climate contract involving all stakeholders and citizens in the process.
- Limit bureaucracy and reporting requirements - take into account the need for speed.
- Focus on the acceleration, with tools and policies also on the EU level in combination with the national level.
- Make them flexible/adaptable to the different cities, as long as the structure is the same.
- Have good processes for securing binding commitments and following up compliance.
- Make sure to explain the added value of having a climate city contract at the EU level, and the difference between a contract and climate plan.
- Include citizen engagement approaches, and be explicit about what kind of collaboration should be included in terms of both formal and informal.

4.1.2 Final survey results

When asked which features of the national support they consider as important to transfer to the EU level, the results indicate a high interest in many features where experience already is developed. The two aspects that were considered most important was (a) to provide a joint and clear long-term mission as a counterweight to short-term projects and political changes in local and national government, and (b) to provide competences regarding for example fiscal incentives, change in regulations, and co-governance of funding. An additional aspect was also added: Simplify the process to seek and report on funding.

ANSWER CHOICES	RESPONSES	
Provide a joint and clear long-term mission as a counterweight to short-term projects and political changes in local and national government.	86.67%	13
Be a gathering force in the collaboration with the authorities.	46.67%	7
Provide analysis based on jointly gathered data.	26.67%	4
Help cities to find collaboration opportunities.	53.33%	8
Provide easy accessible learning opportunities through various kinds of means and activities.	53.33%	8
Help aligning instruments to support the mission.	66.67%	10
Provide competences regarding for example fiscal incentives, change in regulations, and co-governance of funding.	80.00%	12

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The results from the survey also indicate a strong emphasis on making the climate city contracts at the EU level reciprocal, easy to fit into contracts at other levels, and include a climate investment plan.

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ANSWER CHOICES	RESPONSES	
Easy to fit into contracts at other levels (local, regional, national).	66.67%	10
Reciprocal, making sure that all parties involved have commitments.	86.67%	13
Iterative to ensure learning and engagement of new stakeholders.	40.00%	6
Include integrated climate investment plans.	73.33%	11
Include collaboration commitments with other cities, both national and international, including cities not part of the 100 CNSC.	40.00%	6

Other suggestions included (a) Add value to existing work on climate action, (b) Flexibility: tailor-made for each city to ensure the cities needs are attended for mission success, and (c) Setting up conditions for the cities to show that the CCCs really result in actions and concrete effects etcetra.

4.2 Funding, Finance, and Partnerships

This session started with an introduction to the work conducted by Vlable Cities and several Swedish cities. The work so far has resulted in a guide for developing climate investment plans but also in a number of insights:

- A climate investment plan is a key component of Climate City Contracts.
- Understand and close the climate policy gap by including the economic perspective.
- Co-create investment road maps with actions and impacts, climate and co-benefis with an economic perspective are needed to prioritise common transition areas and steer investments in the right direction.
- Better understand and influence policy relating to finance and climate, to ensure current and forthcoming policy alignment.
- Better understand current investments, consumption and public + private + civic assets.
- A stronger Long term perspective – 2030.
- Coherence between capital supply and investments aligned with mission to avoid green washing.
- Coordination of public and private financing needed to close the climate-policy gap.

The City of Malmö testified to the importance of working together on creating climate investment plans as part of the climate city work, in order to achieve the mission with a special focus on the social issues and a fair transition. Malmö emphasised that climate investment plans provide a a map that makes it possible to understand where you are, where you want to go, how to get there and what the road looks like.

They also pointed out that it is rather easy to look at measurements related to transportation and energy, whereas it is tricker to understand the consequences for the citizens and small and large businesses, for example the risks they might run into and how to manage that. In Malmö the Mayor has been very clear that the goal is not only a climate transformation but also a societal transformation, which is an objective they share with many other cities. For Malmö this has meant that they need also to keep track of other measures such as health, better environments for children, and inclusion. They emphasise that it is important to make sure that we don't leave out people in this transformation and to really understand the economic dimensions of this.

Malmö started to explore this work in the Climate-KIC Deep Demonstrator project together with Spanish cities some years ago. One insight from this work is that it takes time for the cities to build institutional capacity and for academic partners to develop an understanding of how to actually do this at a city scale. Malmö has started to work with Material Economics and RISE to develop an understanding of the implications. According to Malmö, it is vital that we can say what this climate transformation can mean for our city in terms of job creation, health benefits etcetera and that these are the changes in policy initiatives needed on different levels to make it happen. They also pointed

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out that European initiatives like Fit for 55 and others also need to look into what this means for the city space, that is, these issues go both ways.

4.2.1 Group discussions

The discussion provided several suggestions regarding the question of how to involve different stakeholders in the process of making and fulfilling the climate investment plans:

- Understand what issues need to be impacted in order to produce a systemic change, including identifying the key stakeholders.
- Clear political leadership and commitment at the highest level, providing the resources necessary including training.
- Make it part of the Climate City Contract process, and make it iterative in order to involve people along the way.
- Introducing cross-cutting initiatives or groups making people from different departments sit at the same table and co-create.
- Include not only public initiatives but also private and civic ones.
- Make sure that these initiatives are also cross-cutting when it comes to funding.
- Introduce mutual environmental- and climate strategies that all institutions and administrations of the city have to work with and be responsible to deliver on.
- Address goal conflicts.
- Have a clearness about the design needs (financial info and key issues) for funding a portfolio.
- Combine mitigation and adaptation.
- Make sure to move from scenario analysis to incorporation in policies.

Several success-factors behind moving away from a project-based funding to a mission-oriented approach were also mentioned:

- Making use of mission-oriented EU funding.
- Reorienting tools such as grants and procurement to make sure that they have a mission focus.
- Having peer-learning processes between cities experience involving citizens and all stakeholders in the urban transformation path (universities, companies, etc.)

4.2.2 Final survey results

The result from the final survey also demonstrated clear views on several important features of investment plans, in addition to it being an integrated part of the climate city contract:

ANSWER CHOICES	RESPONSES	
Involving people from both the municipal and external stakeholders.	73.33%	11
Involving people from several parts of the municipality including finance/treasury, city planning, business & enterprise, and the transformation office.	80.00%	12
Co-create investment road maps/climate investments plans with actions and impacts, climate and co-benefits with economic perspectives in order to identify and close the climate policy gap.	73.33%	11
Better understanding of (a) current investments, (b) consumption and (c) public + private + civic assets in order to steer current and future actions and investments in the right direction.	73.33%	11
Better understanding of policy relating to finance and climate to ensure current and forthcoming policy alignment and to avoid green washing.	73.33%	11
Coordination of public and private financing to close the climate policy gap – to promote institutional transition capacity, enable investments needed and shared risks.	80.00%	12

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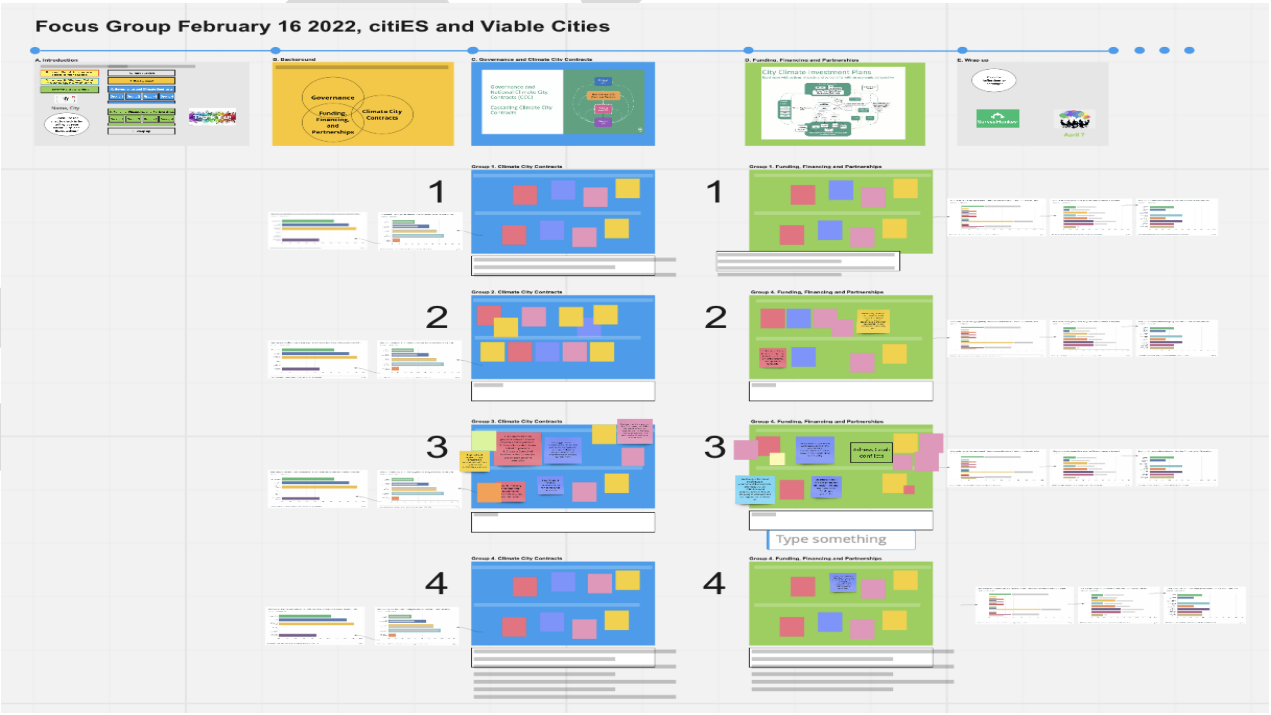
Other suggestions included (a) Standardized easily applied methodology, (b) Create mixed funds tools to make attractive the 85% of private investment, (c) Respect legal obligations for municipalities e g profitability of companies and sound business models, and (d) Ensuring climate justice.

5 Other relevant topics or issues emerged

- A series of workshops will be organised by citiES 2030 and Viable Cities during 2022 in order to continue the collaboration between the organisations and the cities. If possible, the conclusions from these meetings can feed into the work of NetZeroCities as well.
- One suggested topic was how to engage with local media.

6 Evaluation and remarks

- Miro was used as support during the discussion, useful to showcase relevant information and collect notes, although there was a great variation in previous experience in using this kind of tool.
- We include some of the results from the survey in direct connection to the questions in the discussions.
- We skipped most of the introduction to the NetZeroCities and 100 Climate Neutral and Smart Cities programme, since both Viable Cities and citiES 2030 had provided that information to the cities in other meetings and forums before the focus group.
- There was a good level of participation and active engagement, with a balanced distribution of interventions among participants.
- The length of the Focus Group (1,5h) was too short but provided good input, especially in combination with the surveys.
- Several cities participated in several focus groups and were not that keen to fill in the survey more than once, but it was not simple to transfer answers from one batch to the other.



7 Results from Pre-Meeting Survey

- A total of 9 cities responded.

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- Built Environment, Energy Systems and Mobility/Transport sector were the most chosen sectors for GHG emissions reduction.
- The top three barriers were: (a) very high investment costs, (b) insufficient administrative and operational capacity, and (c) lack of support/awareness by citizens.
- The top four funding gaps were: (a) lack of funding for operation & maintenance costs, (b) lack of mixed funding models, (c) lack of funding for project preparation, and (d) lack of funding for capital costs.
- None of the respondents had a budget for a circular economy.

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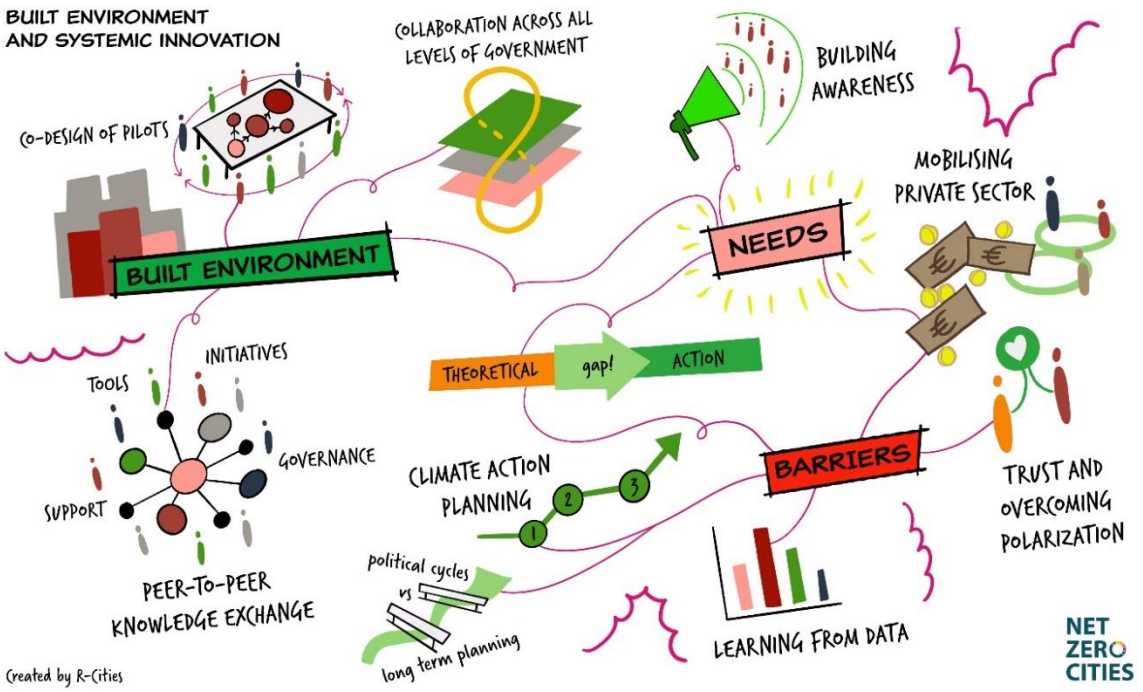
Focus Group 5 | Built environment and systemic innovation

General information	
Date	26 January 2026
Leading Partner	Climate-KIC
Thematic area	Built Environment
Number of cities represented	10
Participating Cities	Barcelona, Copenhagen, Kraków, Leuven, Križevci Maribor, Madrid, Malmö, Milan, Valencia

1 Summary

Key takeaway messages

1. The cities were inclined to discuss the overall systemic transformation towards climate-neutrality, positioning 'Built environment' as a transversal theme than a narrow technical one.
2. The cities were extremely mature and aware in the assessment of their needs and barriers and what support they expect from the Mission platform.
3. All cities came prepared with specific examples of climate-neutrality interventions to share (whether from their contexts or elsewhere) which could be replicated or supported to the Mission platform.
4. Cities appreciated the knowledge exchange and expressed gratitude for creating the space for Mission-focused deliberation and key takeaways which resonated highly with them.
5. Articulating, capturing, and learning for systemic impacts and co-benefits through innovative experimentation methods and approaches emerged as a key obstacle towards large-scale transformation and multi-level governance challenges.



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2 Structure and Agenda

The Focus Group on the **Built environment** was structured in five parts. The first three were considered preliminary and served to set the ground for the discussion on the specific challenges. These parts are briefly described below:

1. Expression of Interest (EoI): preliminary discussion about the EoI, with the goal to identify cities' motivations or resistance to engage with the EU Mission for climate neutral cities.
2. Existing action plans and policies: understanding cities' ambitions and commitments to reach climate neutrality based on their existing targets, plans and policies implemented and feasibility of 2030 timelines.
3. Discussion on what we mean by systemic innovation using examples from EIT Climate-KIC's Deep Demonstration approach and some tangible and practical ways of building and deploying climate-neutrality portfolios.
4. Discussion on key finding from the survey and reflection on priority themes like finance, MEL, and citizen engagement.
5. Expression of cities' needs for support from NZC and EU Mission.

Agenda	
20 min.	Introductions to the group and presentation on NZC, Q&A on process and application
20 min.	Playback from the survey and cities' current commitments
20 min.	What do we mean by 'systemic' innovation & impact?
20 min.	What worked well? – Drivers & Enablers
20 min.	What could be done differently? – Barriers & challenges
20 min.	Needs and Expectations from NZC & EU Mission/ Wrap and next steps

3 Participating Cities

Ten cities were represented in the meeting (Barcelona, Copenhagen, Kraków, Leuven, Križevci Maribor, Madrid, Malmö, Milan, Valencia) mostly members of the Healthy, Clean Cities Deep Demonstration (HCC DD) and the Future Cities of the South-East group (FCSE).

The cities were represented by one or two people per city. Most of them were leaders of HCC DD/FCSE and directly involved in the development of the EoI for becoming a Mission City.

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Peer-network and knowledge transfer opportunities	Milan: Need for sharing best practices of governance experiences and training on new technologies ant tools available; Other topics include spatial and infrastructure possibilities - toolbox on NBS, new materials, etc. (such as those related to the new EU Bauhaus and customised for city practitioners).

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	Maribor: Support for connecting civic initiatives between the cities - to transfer the knowledge and empower them (also to put the pressure on and encourage the decision-makers); Efficient Peer-to-Peer mechanism (both at operational and strategic levels).
Support in engaging with EU Mission process and transformation for climate-neutrality	Leuven & Krakow: Need to create a 'safe' environment for exchange of experiences, for mental support in these challenging Mission-related processes; Sharing good, but also bad experiences (in order not to repeat them). Valencia: Need for providing security and clear criteria to reduce the risks for cities in this transformation; Create ways and methodologies that help to improve the systemic transformation and innovation that the mission needs. Maribor: Need for an EU project consortium set up to address the list of collective needs of the 100 CNC cities.
Collective & strategic learning and co-design of Pilots	Vienna: Need for ensuring sensemaking and a systemic approach for pilots and how to scale those; hosting exchange with other cities (best 1:1) on setup and challenges of implementing innovative, systemic pilots; Vienna: Support also needed in co-creating and co-developing ideas pot for pilots and best-case examples that can be replicated and contextualised in other cities (white label style). Leuven: Need for bringing in valuable inspiration to encourage open minded, systemic approaches; connecting cities on similarly faced barriers, learnings, approaches across cities (e.g., topics like a multi-city-fund); Need to actively connect climate ambitious cities structurally as an important lever for a climate-neutral Europe.
Support to facilitate collaboration at national & regional levels	Maribor: Trust (in the process) has taken a long time to be established, but cities need help in the process led by the NZC consortium, including addressing the financial barriers. Also, support is needed for creating a space for the coordination at the national level with the ministries and the national framework. Valencia: NZC can facilitate as a European actor in dialogue with regional and national governments; Coordination mechanism and contract obligations for the local and national levels.
Citizen engagement and advocacy	Copenhagen: Citizen investments mechanisms - like energy communities or blockchain instruments to attract foreign capital. Madrid: Need to help cities to create new narratives to engage citizen and built common political advocacy methods for cities with shared challenges.
Support on finance and funding approaches	Copenhagen: Construct funds and finance needed for a long time (10 years' timeline) as a joint programme, as was intended with EIT Climate-KIC's Deep Demonstration approach. Kraków: helping with the new financial instruments (like Green Bonds). Vienna: blended finance approach contextualised to our city and support in set-up of Green Bonds. Maribor: Investor city matching market platform - need and opportunities in the city (city portfolios) and regional/global investors. Valencia: Need for representation of the 100-cities scale within the financial sectors and capital markets.

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Examples from Cities
- Copenhagen have made a 'Climate Task Force through the COP26 engagement and believe they can have a governance model which may be able to address major needs. For this city national/EU constraints on investment are a barrier. The civic official said, "even though funds are available, sometimes they are not allowed to use them. E.g., not allowed to take a loan. That is nothing they, as a city, can change alone but it is a topic that needs to be discussed at a larger scale. However, the solution may not be able to be applied in all countries, because the national regulations vary significantly." - Vienna has recently published a climate roadmap indicating how Vienna will be climate-neutral by 2040. Political will and from a communications perspective it would have been tricky to sign a commitment stating carbon-neutrality by 2030 only four days later given the needs of the city. - As started by participant from Maribor, climate neutrality goals are often linked to the national level. If they are more ambitious that might create political tensions (incl. financial implications), and therefore, there is a need for EU-scale intermediaries and support from city networks. - Leuven mentioned that there is need for creating a 'safe' environment for exchange of experiences, for mental support to engage in the challenging Mission-related processes.

Cities' barriers

Identified cities' barriers	
Governance (National-city-level gaps)	- Fragmented responsibility & siloed governance structures - Key stakeholders are resistant to Systemic Change - Too many bureaucratic hurdles - European and national policies Understanding the policies that are needed on a European and National level will be critical to unlock action in cities.
Climate action planning barriers	- Gap between declared ambition and enabling enforcement regulation - Short Political cycles and short-term goals with a lack of long-term ambition and regard to gradual change - Genuinely having a long-term political consensus agreed and signed on national, local government and community commitments - The aversion to risk in the City Administration.
Finance & funding gap	- Mobilising Private investment is a key barrier. The transition requires very large sums of investment. - The private sector is more relaxed about funding public works due the public guarantee but financing most of the transition is steeped in too much risk to be deemed profitable - Current funding structures are acting as barriers to investing in climate positive and climate transition works. - Siloed ways of tackling these barriers are preventing a cohesive mechanism from being built. - Siloed requests on Finance – instead of a mission orientated portfolio requiring funding – means risk is too great and funding opportunities are being missed - National/EU constraints on investment is another barrier. Even though they have the money, sometimes they are not allowed to use it. E.g., cities are not allowed to take a loan.
Participation & polarisation	- Engaging residents and activating them fully in the transformation of their local community - There is growing polarisation in communities – isolation from Lockdown is partially at fault, as is the shutdown of

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	debate, the ease of shaming and trolling through social media and the strong opinions which systems change brings out due to the inevitable impacts to ways of life it causes. - Engaging, increasing trust and transparency of climate actions are necessary antidotes to these issues and these are notable barriers in themselves to overcome. New Governance structures are needed. Civic Contracting with aggregated data demonstrating whole community impact is regarded as a potential tool to overcome the issues of polarisation and update Governance structures. - Clashing of 'participatory' actions and those which are not. For example, when large scale energy infrastructure is restructured – leading to fuel/gas price increase for example – and asking people to commit to various other lifestyle changing initiatives like turning their parking space into a pocket park is likely to lead to civil annoyance/unrest. - As Copenhagen so beautifully put it the challenge of moving the Yellow Vests (Gilet Jaunes) into Green Collars (as opposed to blue or white…). There is great polarisation on Climate Action. - Sharing and communicating the social value of the mission and climate innovation with citizens to bring them in to the fold.
The Theoretical – Action gap	- The danger of staying in the theoretical space of conversation about barriers rather than the actionable space of how to overcome them. - Barriers can be overcome, but through action. - Data analysis is needed from which to base learnings and from here cause change and spur action.
The Data-Learning Gap	- Cities do not have enough data on their city level. Data is linked to the national level when it needs to be made available by the national level to the cities, fully open. The regional level, which they have access to, is not enough. - Challenge of measuring "soft" impact, e.g., learning and co-benefits. We need to be able to measure and demonstrate the whole picture, however the systems to show the varied impacts of collective measures are not strong enough.

Examples of Barriers from Cities
- Leuven – a clear barrier in the Healthy Clean Cities work is the dampening effect of a reticent recipients. It is very difficult for the city administration to embrace the idea of an experimental/learning mindset - partially to do with lack of capacity, time, and mandate. City ambitions therefore remain solutions led. - Madrid – Powerful lobbies are a major barrier. However, as Madrid explained, the Spanish Cities Network helps overcome this by creating a strong lever for change at a national level, despite the fact the eight cities in the network differ in their political leanings - Malmo I – Agreed that each barrier represented in the workshop is pertinent in varied respects with the various climate transition activities taking place in Malmo. It was also added that these same barriers were being discussed for bringing about change 20 years ago in the city. The real work they want to see happening is not the conversation about what barriers there are, but how to overcome them because there are many good examples such as the Swedish Cities Network with 23 Swedish cities and various agencies such as Buildings and Infrastructure, and Transports signing the Swedish Climate Contract which is driving change.

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- Malmo II – brought a positive example of starting to overcome one of its key barriers which is the siloed ways of working in the city administration. Through using data, Malmo did an analysis on plastic use and 6 months later Malmo had two working streams – one local and the other national – on how to solve the plastic issue. Various policy initiatives at a national level started and Malmo have set goals on being operationally Net Zero.
- Valencia: From their conversations with the Spanish finance sector, there is no problem in financing public projects because of public guarantee. However, the problem comes when the administration wants to mobilise the private investment sector in the mission work because they only want to Finance projects which are deemed to be profitable. Those deemed 'experimental' do not fit this mould. Valencia has realised that they need to create new instruments to make the work attractive to private investments. Including creating and showing profitable business cases in each area of work and creating diverse funding portfolios to reduce private risk and increase return.

Cities' drivers

Identified cities' drivers	
Governance and national city networks	– All participating cities have climate responsibilities shared across different departments. Climate task forces and other cooperation models to build a governance which works towards transformative change are strong drivers for this work.
Citizen Participation, Social Campaigns & Communication	– 'Locally, you can reflect on local matters.' (Local) Civic contracting has tremendous value for the city on many levels, for example, it builds trust and transparency, which are necessary antidotes to the growing polarisation in the community. – Civil society groups, building owners, researcher and utilities are seen as the groups with most potential for engagement to move towards climate neutrality.
Funding and Financial Innovations	– Cities see the following budgetary allocations as most promising: climate mitigation budget, climate adaptation budget, green mobility budget, energy efficiency budget. – Spanish cities have positive experiences with a new public-private investment scheme for solar PV: Setting up a local energy provider has enabled to reduce costs and emissions. Cold and heat networks are the next opportunity in this field. – Easter European cities receive funds from national level for buying buses, but there is a competition between cities for these funds. The partnership with the private sector is not mature, because it is not clear if the cities will gain from a public-private financing model.
MEL & Co-benefits	– By far the most sought-after co-benefit to the city becoming climate neutral is seen as the improved public health and quality of life. – Enhanced attractiveness of cities is another co-benefits cities are interested in. – No cities believes that poverty alleviation is a co-benefit of becoming climate neutral.
Experience from sustainability/climate platforms	– All cities see networking with other members as the main driver for a sustainability platform. – Interactive content, and tailormade solutions are also wished for.

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Examples of Drivers from Cities

- Maribor: 'There is much competition for funds. Usually investors want to 'test out' the city or the policy departments first, and then decide on large projects in partnerships. So, if we speak for example of 100 cities and a shared public budget of 200,000,000 EUR, then we have to be really prepared as a city to offer everything possible for be investor, and we are thinking about that. For example, investors do not want to have single projects, they want to build a kind of a story, which is also more profitable. We are thinking that maybe a way to test all this would be by **experimenting on the district level and then scale up at city level**. And I think we would need a lot of these kind of district experiments, which are almost as complex as the city but still more manageable.'
- Vienna: 'As part of Climate-KIC's Deep Demonstration project, Vienna started a participatory budget for climate action. And for the two pilot years, we now have €13 million allocated for climate action that before were not. The budget now has a 'green label,' which is already a great progress. Of course, it is still a small amount for a big city, but the biggest win and surprise we had was that we had the steering group meeting last week and suddenly all the decision makers announced that they find it particularly important. It is not only cities owned budget that is used for this climate action, but the citizens and also private foundations and similar can contribute, they have a chance to 'chip in' as well, and to decide how this money is spent. So, this idea that the Deep Demonstration team had already a year ago and only got answers like 'this is impossible, we will never do this as Vienna' suddenly will be implemented. This is a hopeful example that sometimes ideas are too early, but then eventually they find their way through. So, we find that **a more blended approach of how to finance climate action is possible**.'
- 'The local ownership and finance models are very different across Europe but together with international design partners Copenhagen will try deep dive into the next few years on how we can construct a citizen community for organized blended finance models in Copenhagen. In Copenhagen we have built what we call the climate Task force, where **agencies across the municipality work together with local community organizers**. We are launching it this year. We believe through this governance model we can shorten the step between what's going on at this city scale, and what's going on in communities around the city.'
- Leuven: There have been interesting insights in the group and a lot of eagerness up till the level of the mayor to definitely and with a priority move forward on this research. *We [cities] also see this process of empowering stakeholders [citizens, public and private companies] through a way of governing their shared challenges [civic contracting] as a response to the polarization that we see growing in our communities all over Europe, or even globally. It is also about transparency and trust, and we see that as very necessary and urgent. It is a matter of strengthening democracy. We should approach it from a big enough perspective, because it has a tremendous value for the work [towards climate neutrality] that we have to do. All our cities will come under bigger and bigger pressure also because of this polarization.'*

5 Other relevant topics or issues emerged

- Valencia: We have two lines of work for governing the climate mission: we have to make some internal structures transversal and get the social communication of the value of the mission. We made a **first social campaign of communication** talking about the benefits of the missions, not just in terms of technical stuff, but what it means in terms of the benefits for the people. The name of the mission is quite inspired, 'By and for citizens,' so we are trying to translate that.'

- In Leuven, we have been experimenting in a **first step with civic contracting**, working in a wider range of contracting forums with stakeholders (schools, citizens, public transport company) that use public space in a certain district of Leuven. We researched how can we empower them, starting from the point where they agree upon a shared vision on a certain climate related ambition, but we were not selected amongst the 15 lasts cities in the Bloomberg Mayors Challenge so that work will now be slowed down a bit. But it was interesting to see that the first point is **where is your common ground, and so the work**.

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What is the dot on the horizon that we share and how can we empower everyone to contribute and bring that dotted horizon closer?

6 Evaluation and remarks

- Miro was used as support during the discussion, useful to display relevant information and collect some notes.
- Good level of participation and active engagement, with a balanced distribution of interventions among participants.
- The duration of the Focus Group (2h) was considered adequate.

7 Results from Pre-Meeting Survey

- A total of 6 cities responded to the survey and their findings served as a valuable tool for facilitation and dialogue among the participants. Cities which had not yet responded to the survey added their inputs verbally.
- **Key takeaways:**

a. Most cities mentioned that climate responsibilities shared across different departments within their respective governance arrangements.

b. Most cities flagged lack of mixed funding models as a key funding gap.

c. Most cities consider improved public health and quality of life as a crucial co-benefit for their climate action.

d. Many cities appreciate the networking opportunities and are active members of the Covenant of Mayors.

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Focus Group 6 | Energy systems with a focus on sustainable heating and cooling

General information	
Date	3 February 2022
Leading Partner	Energy Cities
Thematic area	Energy systems
Number of cities represented	5
Participating Cities	Dublin, Pau, Nis, Valencia, Vienna

1 Summary

Key takeaway messages

1. For cities, peer-to-peer knowledge transfer is a key **driver** to reach climate neutrality. They already do this on a voluntary basis but are craving for more systematic exchanges and more support from the national and regional levels. Better knowledge of existing examples would contribute to building more trust in technologies and processes and would support their further deployment.
2. To decarbonise energy systems, cities **need** more human capacity, a clearer classification of instruments and processes, a clearer framework for investment and a better way of showcasing the socio-economic impacts of inaction.
3. The lack of coherence between national and local levels, combined with silo working between different administrations are serious **barriers** which cities are facing.
4. On top of that, access to data and the ability to establish proper contracts with industries are also hindering the decarbonisation progress.
5. The involvement of all stakeholders will be needed to achieve the transformation of the energy system. The possibility to gather everyone around the table and to shift perspectives from energy contracting to service contracting has been listed as a key **challenge** for cities on their journey towards climate neutrality.

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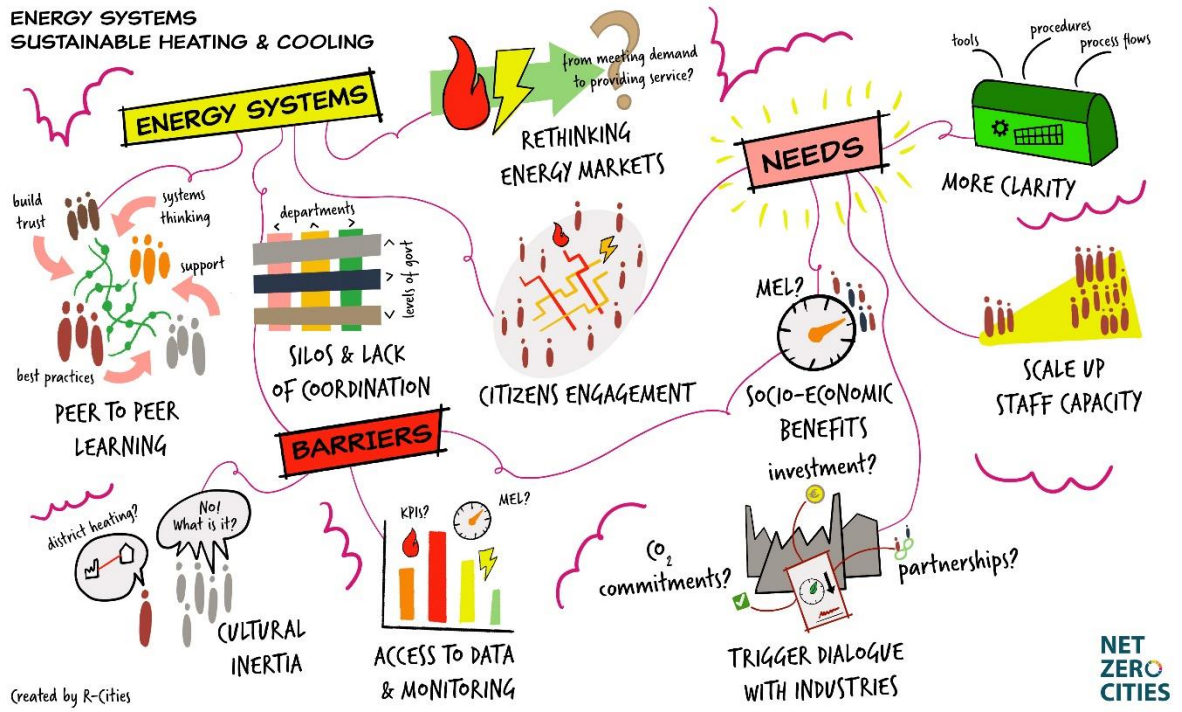

2 Structure and Agenda

Agenda	
30 min.	Introduction, presentation of NZC and potential involvement for cities
15 min.	Cities' current commitments to Net Zero
45 min.	Discussion on Energy Systems (governance and innovation for sustainable heating and cooling)
25 min	Discussion on Built Environment (engagement aspects)
5 min.	Closing

3 Participating Cities

Initially 7 cities answered positively to the invitation to participate in the focus group. However, only 5 of them took part in the session in the end (Dublin, Pau, Nis, Valencia, Vienna). All of them are members of Energy Cities and active in the field of energy systems and more precisely on sustainable heating and cooling.

Each city was represented by one or two people, mostly from the Energy department of their municipalities. They all had experience in drafting energy plans and/or SECAPs and the majority are involved in drafting energy masterplans.

4 Summary of discussion

Cities' needs

Identified cities' needs	
More staff dedicated to climate	Cities need more human capacity to be able to properly deliver on the energy transition. At the moment, competences are scattered

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	amongst different employees, with no one having a role fully dedicated to energy or climate. - "The problem is that staff are not primarily dedicated to climate: they try to squeeze this in alongside their primary role" - "Organisations such as energy agencies can provide essential technical support to municipalities"
More clarity on terms, instruments, and process flows	Cities acknowledged that governance is key in energy systems. However, some terms used in a city may have a very different meaning in another Member State and can also imply very different steps in the planning process (e.g. zoning plans). A clear identification of instruments, different process flows, their responsible stakeholder and their translation into a flow chart is essential to enable understanding and exchanges between cities.
A framework to trigger investment	Very often, cities lack a proper framework to trigger investment from the private sector. This hinders the development of further decarbonisation solutions and reduces opportunities for new projects. - "At the moment, there is not really any heavy industry which could be recognised as a source of excess or waste heat and no legal obligation for anyone to be connected to the district heating system. We are now in the middle of a call for a PPP for biomass (the district heating company and a private partner will build 3 bio-houses run on biomass, providing heating for the citizens at a lower price). This is how some kind of investment can be triggered." - "The time needed to develop a project is too long. Up to 10 years between first feasibility studies and the project being operational!"
Better consideration of socio-economic benefits	Several cities underlined how difficult it is sometimes to have a project approved because of the upfront investment needed. However, carrying out studies on the real socio-economic costs of not doing a project or investment can prove powerful for decision-making. - "The problem is not so much to get money to cover high investments, but to cover the operations which may not be perfect at the beginning and scare stakeholders away." - "Systems should be compared on long terms for all their impacts (life cycle): maybe investment costs are high for district heating, but operating costs are low, so in the long term you win" - "The lack of knowledge and experience regarding socio-economic impacts of a project does not allow to anticipate and have confident conversations with people developing innovative projects."

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Examples from Cities
• Vienna benefitted from the EU project URBAN LEARNING to make graphics of the different process flows they have for urban and energy planning and shared the methodology: 1. Identify relevant processes (e.g., urban planning process, refurbishment / retrofitting process) 2. Deep analysis of these processes (who is doing what at which step, what is the result / decision of each step, who is responsible) 3. Create an overview by using flow charts 4. Discuss these flow charts with relevant stakeholders (integrate energy in these processes) • Pau tasked the university to carry out a study on the potential socio-economic impact for the city of not doing the fuel cell buses project. Thanks to this study, they managed to convince stakeholders that it was better to invest in this project and to carry it out, even if the investment was high at the beginning, because the benefits would be higher than not doing anything.

Cities' barriers

Identified cities' barriers	
No vision of the big picture at local level	Several cities highlighted the problem that a nationally centralised vision of energy creates at local level. It makes it very difficult to understand what is possible to do at local level and to identify and enable complementarities between stakeholders. - "When we want to do a project at local level, we are facing so many different stakeholders of energy looking at electricity and gas networks and all competing towards one another" - "In general, there is a lack of capacities and knowledge in the local ecosystem (industries, final users, municipality, local DSO)"
Lack of joined-up thinking. No coherence of work at city scale	Cities recognised that even within municipalities a significant issue is that work often happens in silos: energy and urban planning departments do not interact enough (or at all), which hinders the further decarbonisation of energy systems, especially heating and cooling. - "To look into how to improve the way we work with urban planning is key because, when they plan the next district development, it would be good to be part of the discussion to provide energy and see the building needs" - "Quality Energy planning and integrated urban planning are crucial" - "Urban planners and Energy planners must work together from the beginning"
Access to data	Cities highlighted how access to quality data and KPIs (from the network, from energy providers and from successful projects) is key but currently very limited. As a result, despite the existence of some platforms to share data, these often remain incomplete. - "We need quality and disaggregated data of energy consumption of the building stock (collaboration with DSOs and energy companies)"

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	- "Connect data from different sources (building register - point, match with building polygons)" - "Basic data: ensure that your city has good data about their buildings (construction period, gross floor area, compactness, refurbishments)" - "Collecting and analysing data needs to be strongly supported by academia, national government..." - "In an ideal world, we would like to directly transfer what some cities have already done into our city and to collect the relevant data for that, but there is no political will for that in the first place, so it is difficult to organise the collection of quality data"
Dialogue with the industry	Cities told us that it is complicated for them to interact with and make decisions about industries, especially re connecting them to the district heating networks. This clearly slows down the deployment of the network and the possibility of getting new customers. - "We try to connect local industries to the network, but they often do not have the appropriate size: either they are too big, so they need the approval from the national governance and it takes very long, or they are small SMEs and they do not have the capacity to make the decision if they want to join the district heating network..."
Liberalised conception of the energy market	According to cities, one of the biggest barriers to decarbonising energy systems, and more precisely heating and cooling networks, is the current business model. There are two barriers to overcome: the bidding process and the revision of the business models of energy providers. The latter implies that, instead of basing the contract on energy demand, the contract should be based on temperature as a service. For instance, people would choose to have a specific temperature in a specific room for a specific number of hours a month. - "It will be key to bring energy supply/providers to the thinking that they are providing a service" - "Rather than bidding on the whole capital cost, bidding on renewable and carbon content. Not being too prescriptive not to slow down innovation." - "Competitive dialogue form of procurement can be a good way to develop innovative projects"
Cultural inertia	The last barrier mentioned by cities concerned cultural inertia. They insisted on how the fact of not having something (e.g., a district heating system), and thus not knowing about it, creates inertia and hinders the potential development of such a solution. - "There are very few examples of (district heating and cooling) projects operating in the Valencian region, so decision-makers and technicians do not consider it at all in the new urban planning."

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Examples from Cities
- To develop its district heating network, Pau managed to put all the energy stakeholders around the table to prepare an energy masterplan. This was made possible only through strong political will. - Dublin & Pau both implemented competitive dialogue as procurement approaches and quickly saw the benefits of it: competitive dialogue procurement keeps both sides happy as it provides greater understanding of the clients' needs and greater flexibility and innovation in project proposals - Dublin gives priority to open-source tools and makes them available for others to download and to replicate projects. A lot of their maps are also made available to planners. They also have a policy of cleaning up data, disseminating data to other organisations and academia.

Cities' drivers

Identified cities' drivers	
Peer-to-peer knowledge transfer	The first driver praised by cities is the importance of peer-to-peer knowledge transfer and capacity building. The possibility to learn from other cities, be them in the region or in another country, is deemed very valuable. It can bring solutions to overcome some barriers, especially the cultural inertia, but also inspire new models and solutions for the energy system. - "Everyone is afraid to make the decision because the costs are much bigger. No one wants to be the Guinea pig. That is why it is valuable to have examples of other countries who are more advanced, not to scare off people" - "Support from regional and national government in sharing successful projects and building capacities of local stakeholders is key" - "Good practices should not only be for citizens but also for people working in academia, the private sector and the administration. Capacity building programmes / workshops should be more directed to professionals"
Cooperation and stakeholder engagement	One of the key drivers for decarbonisation of energy systems, and more specifically of heating and cooling networks, is to have stakeholders engaged. - "You need the stakeholders onboard. In a housing project, we have the main association on board and the energy provider. They provide the right framework in which you can punctually involve citizens" - "You need to tailor the engagement for each stakeholder based on their level of interest and impact" - "Engage as early as possible to get buy-in"
Citizen engagement	For energy systems to be decarbonised, cities acknowledged the importance of citizen engagement. However, cities did not agree on the stage at which citizens should be engaged. - "The ability for citizens to vote on technologies for their area may facilitate aggregation of smaller projects such as home energy efficiency upgrades to improve economies of

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	scale and make such projects more attractive for investors" - "You need a lot of resources to involve citizens. It really depends on the needs."

Examples from Cities
- Niš has set up a commission for price change approval involving citizens and as a result has avoided people opting-out of the district heating network. There are now citizen representatives on the advisory board of the district heating company whose role is to approve price changes - The energy round table in Valencia gathered 22 private, public, academia, civil society and media organisations. The city also plans to use this existing local working group to set up a sectoral commission and discuss the implementation of a district heating network - Dublin sketched out a stakeholder engagement approach in a document.

5 Other relevant topics or issues emerged

- An outdated perception of the energy system is another challenge: most of the people in energy sector still think in old ways – they often do not believe in innovations and renewables, while still believing natural gas is the best solution.

- The issue of transparency and clarity is also a key element to reach net-zero. It will build trust and thus have an impact on stakeholder engagement (bringing the possibility for projects to be carried out) and also on citizens (socio-economic benefits, transparency on bills). It will in the end make it easier for other regions to then find appropriate solutions, which will also have a big impact on citizens.

- The concept of awareness-raising has also been mentioned by many cities. Especially when it comes to decarbonizing systems, it is necessary to raise awareness, educate citizens and share key messages so that decarbonised solutions become the norm.

6 Evaluation and remarks

- Miro was used as support during the discussion. Information, examples, and additional resources were collected during the focus group, as well as notes.

- There was a good level of participation and active engagement, with a balanced distribution of interventions from participants. However, two participants dropped out last minute (sick leave and unforeseen change in the workplan).

- The focus group at some points enabled capacity building through the exchanges of experiences and examples.

- The length of the Focus Group (2h) was considered slightly too short, as the topic is broad, and participants had a lot to share

7 Results from Pre-Meeting Survey

- A total of 5 cities responded (4 which took part in the focus group one which dropped out on the day of the focus group)

- Each city has at least one commitment (the majority have a SECAP). 2 cities have a net-zero target with a timeline range of 2030-2040, 1 has no target yet and 1 has no target but an intention of committing.

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- The priority sectors identified for GHG emission reduction by all cities are energy systems and built environment. A majority also listed mobility and transport as a key topic. High investment costs, the lack of enabling policy at the national/ regional level and the lack of political leadership are key barriers to reaching those reductions.

- Respondents declared being particularly active in involving stakeholders and citizens through consultation on strategies & policies, the co-design of strategies and neighbourhood information events/ sessions. They ranked the importance of stakeholder and citizen engagement at 8/10.

- The most involved groups in climate action projects are residents, building owners, public institutions like schools, cultural organisations, entrepreneurs & business owners, and energy suppliers. The main identified barriers to this engagement are the limited frameworks or methodologies for engagement and the influential gatekeepers of communities and/or political barriers.

- Funding gaps have also been acknowledged, especially the lack of funding for capital costs and the lack of mixed funding models.

- Every respondent already took part in peer-to-peer exchanges, and they particularly praised the format of city visits, which could happen on quarterly basis in their opinion. The importance of finding local examples, which are more relevant to local stakeholders, was also highlighted.

- Respondents were very divided over the question regarding the possibility for them to make decisions about industries within municipal limits on policy/ regulation/ engagement. Each respondent gave a different answer, from a lot to not at all.

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Focus Group 7 | Mobility and transport with focus on innovation management, digitalisation and funding

General information	
Date	2nd February
Leading Partner	EIT Urban Mobility
Thematic area	Mobility and Transport
Number of cities represented	7
Participating Cities	Zagreb, Tartu, Krakow, Madrid, Milan, Thessaloniki, and Eindhoven

1 Summary

Key takeaway messages

1. Cities identified the **Mobility and Transport** domain as their **priority sector** to reduce emissions. All cities acknowledge that a large number of emissions comes from this sector and all cities are currently implementing actions that contribute to tackle this.
2. Cities **need** tailor-made support for climate funding/financing, more funding for pilot projects, peer learning through knowledge exchange and transfer as well as increasing municipal capacities in climate action through training.
3. Fragmentation of responsibilities, finance gaps, lack of engagement with private sector are considered the main **barriers** for climate neutrality.
4. Cities have different **drivers** but share their interest in encouraging the use of sustainable modes of transport to advance the climate agenda and reduce emissions in the sector.

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2 Structure and Agenda

The Focus group on Mobility and Transport was structured in three parts. The first part covered the introduction by EIT Urban Mobility and the presentation of the EU Mission-NetZeroCities project. The second part of the session involved a discussion around the cities' current commitments to achieve climate neutrality. The first and second part served as preliminary sections to set the ground for the main discussion in the third part of the meeting. These parts are briefly described below:

1. Welcome and Introduction from EIT Urban Mobility/Presentation of Mission and NZC Project.
2. Cities current commitments and policies for climate neutrality: the discussion was structured to understand cities ambitions and commitments to reach climate neutrality, their existing targets and policies implemented.
3. Discussion on Mobility and Transport: the aim of the discussion was to understand and assess the drivers, needs and barriers cities faced in integrating climate mitigation in the mobility and transport area. The discussion was designed to also discuss aspects of the implementation of mobility and transport projects to advance the climate neutral agenda, such as innovation management and digitalization and funding and partnerships.

Agenda	
5 min.	Welcome and introduction from EIT Urban Mobility
5 min.	Presentation of Mission and NZC Project
30 min.	Discussion on Cities current commitments and policies for climate neutrality
5 min.	Short Break
70 min.	Main discussion on Mobility and Transport: ○ Innovation management and Digitalization ○ Funding and partnerships
5 min.	Closing statements and wrap up

3 Participating Cities

Seven cities were represented in the Focus Group, (Zagreb, Tartu, Krakow, Madrid, Milan, Thessaloniki, and Eindhoven)[1]. The seven cities are part of EIT Urban Mobility Network. Three of the cities (Zagreb, Tartu, and Krakow) are part of EIT's Regional Innovation Scheme and two cities (Milan and Eindhoven) are members of EIT Urban Mobility's City Club platform. The remaining two cities (Madrid and Thessaloniki) are actively involved in innovation projects related to sustainable and liveable urban mobility systems.

The seven participating cities reported in the pre-meeting survey to have a climate neutrality target in place: five of the cities have set targets by 2040 and 2050; two by 2030 and only 1 city has not set a climate neutrality target yet.

Cities were represented by one or two persons. Most representatives were from the mobility department, resilience office, environmental transition department and energy and climate office. In some cases,

[1] Tallin city was invited and confirmed their assistance to the Focus Group Meeting, but the day of the meeting couldn't attend. The pre-meeting survey was responded by them, accounting for the total of 8 respondents as the results of the survey show.

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they were the designated person in charge of preparing and submitting the Expression of Interest to become one of the 100 Climate-Neutral and Smart Cities.

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Tailor made support and solutions for climate funding and financing	Cities expressed that most often they don't have all the expertise to do everything by themselves and that they need tailor-made support in funding and financing. The support could be in the form of a dedicated resource to help cities to find funding opportunities or financial support to develop climate investments plans. - *"One need is to have tailor-made solutions and professional experts to find funding opportunities. Including small funding for developing pilots in cities." (Tartu)* - *"A need is to have tailor-made support to develop business plans for investments. Cities do not have the expertise to do it by themselves." (Eindhoven)*
More funding for pilot projects	Some cities reported a need to have access to more funding instruments for pilot projects in cities. - *"One need is financial support dedicated to cities to develop pilot projects related to climate neutrality". (Krakow)*
Knowledge exchange and peer to peer learning opportunities	Learning from the experience of other cities facing similar problems was reported as a measure needed to advance cities climate agenda. Knowledge exchange and peer learning will help cities to have the knowledge to implement new practices. - *"There is the need to make synergies with other cities with the same problems and situations." (Thessaloniki)*
Training and capacity building	Cities expressed a need to increase capacities within the municipality to support their climate actions and to receive training in stakeholder engagement. - *"Knowledge to attract private sector (trainings) and experiment new ways to engage stakeholders and improve behavioural change." (Milan)*

Cities' barriers

Identified cities' barriers	
Fragmentation of responsibilities within the municipal administration	Cities reported that the fragmentation on responsibilities within the municipal administration is a barrier for the implementation of climate actions in the Mobility and Transport area. New governance models that allow for systemic approaches and changes are still lacking at the city level. Cities identified the fragmentation as a lack of communication between departments and, in some cases, a lack of designated departments for climate goals was mentioned. For example:

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	- *"In Thessaloniki, the Public Transport System is under the Public Transport Authority, and not the Municipality. There is coordination, but actions don't come from the Municipality." (Thessaloniki)*
Finance gaps for climate neutrality	There is consensus that financing is a barrier, due to the lack of solutions that support investing in climate neutrality actions. Some cities expressed that municipalities can't finance all the actions to reduce emissions and that finding sources for financing is difficult. - *"Cities need energy infrastructure around the new buildings to achieve the high standards. Cities cannot financially cover it." (Eindhoven)*
Lack of engagement with the private sector	Engaging the private sector is a common barrier for cities. This is important when public funding is limited to achieve climate ambitions, improving the collaboration with the private sector is key for cities. Private-public partnerships were discussed as part of a wider debate between the role of the private sector vs municipalities loosing public influence.
Law barriers to set new climate measures	Cities observed that is difficult to set new financial actions due to existing legislative barriers. For example, the delivery of green bonds in Italian cities is not possible due to current fiscal regulations. - *"There are no taxes concerning renewable sources of energy. The law does not allow to put in place some financial actions (such as taxes)." (Krakow)*
Resistance of citizens to adopt new measures in mobility and transport	Cities consider that citizens resistance to adopt new behaviours is a barrier to transition to active modes of transport. Sometimes, new measures raise opposition. Cities identify that the resistance may come from a lack of trust in the decision-making process. *"The city of Milan has a good public transport offer. Elderlies, families, etc do not see active mobility as an option and shop owners perceive the pedestrianization as an economic damage." (Milan)* - *"A barrier to Stakeholder engagement is the lack of trust between citizens and politicians and policy makers. Fake news is also a problem to achieve deeper citizen's engagement." (Krakow)*
Management of data in mobility and transport	A barrier for innovation and digitalization is related to the management of data. In some cases, it was reported that in the municipality there is a lack of dedicated capacities to manage mobility and transport data. Lack of technology was mentioned also by some cities.

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Cities' drivers

Identified cities' drivers	
Make sustainable modes of transport attractive	There is consensus that improving the mobility and transport strategy is key to change behaviour towards more sustainable modes of transport. Making these modes of transport more attractive will contribute directly to reducing emissions. Most cities reported to have in place different measures. - "Pushing to constantly improve the mobility strategy of the city….Support pedestrian mobility, 15 min city strategy, limited traffic access areas. There are several actions happening to reduce GHG." (Milan) - "By creating intermodality areas to change rapidly between microelectro vehicles and public transport. The attempt is to better connect all the existent modes, to make the sustainable choice easier and more attractive." (Milan)
Creating sustainable transport solutions	Cities are carrying different actions that contribute to the creation of more sustainable transport solutions. Approval, validation and reviewal of Sustainable Urban Mobility Plans are taking place to contribute to the reduction of private cars. This is a key driver to reduce emissions in the transport sector. - *"SUMP updated, approved and validated, including several actions to promote SUM and reduce private car use. The implementation started in 2021 and will be finalized in 2030.Monitoring transport system within the city can also improve the reduction of GHG due to the knowledge acquired, allowing to create more sustainable solutions." (Thessaloniki)*

5 Other relevant topics or issues emerged

- Cities discussed that most of the time, existing city platforms offer generic solutions and generic advice is not very useful for their ambitions. Concrete and tailor-made advice to their context is what they need.
- Four of the cities shared having applied to the EoI to become one of the 100 cities in the Mission: Zagreb, Tartu, Milan and Thessaloniki.
- All cities mentioned that the transport domain is a priority in the GHG emission reductions and that several actions are in place.
- Some cities updated their climate ambitions and plans:
    - Zagreb in a city's assembly made the decision in June 2019 for a 40% reduction by 2030.
    - Thessaloniki launched the Sustainable Energy Action Plan in 2014 and in 2017 reviewed for a 40% reduction by 2020.

6 Evaluation and remarks

- A MIRO board was used to showcase important information to participants and to guide the discussion during the session. The board was used also for note taking and collection of

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feedback from participants. During the session, cities were asked a set of questions, followed by a time of reflection and an open discussion on their answers.

- The session had a good level of participation and active engagement from cities. The interventions were equal among the participants and participants showed a noticeable desire to discuss their answers.

- The length of 2 hours was considered adequate to structure a meaningful discussion with cities.

7 Results from Pre-Meeting Survey

- The level of response from invited cities was very limited, particularly from initially approached Eastern European cities. This might have to do with a lack of awareness about the NetZeroCities and the Cities Mission. One city declined the invitation explaining the goal of reaching climate neutrality by 2030 was simply too ambitious for them.

- A total of eight cities responded the pre-meeting survey. These cities are: Tallin, Milan, Eindhoven, Thessaloniki, Madrid, Krakow, Zagreb, and Tartu.

- All respondents reported to have some type of governance arrangements in place (e.g., climate officer, climate department and climate responsibilities shared across different departments) in regard to their plans to achieve climate neutrality. The climate agenda sits in a variety of departments, like the strategy planning office, green and Environment department, resilient office and the office for economy and sustainability.

- Most cities have an approved plan or strategy for a city-wide climate change action in place (e.g., Sustainable Urban Mobility Plan, Sustainable Energy and Climate Action Plan, Sustainable Energy Action Plan). One city is expecting to approve their Climate Action Plan by spring this year.

- Five cities have a climate neutrality or net zero target in place for 2040 - 2050, two for 2030 and one city does not have a target yet.

- For all cities the priority sectors for GHG emissions reduction are mobility and transport, built environment and energy systems.

- The most relevant barriers for GHG emissions reductions are very high investment cost, fragmented responsibilities and siloed governance structures as well as a lack of an enabling policy at the national/federal level.

- Listed co-benefits of becoming climate neutral by most of the surveyed cities included the improvement of public health and quality of life, reduced risk of natural and climate hazards and enhancement of attractiveness of the city

- Most cities use consultation on strategies and policies, co-design of strategies, and panels and assemblies to engage with citizens and different stakeholders.

- Resistance and fear from communities and lack of awareness on the content and issues of climate change are the main barriers cities face to engage stakeholders and citizens.

- Lack of funding for capital costs is the most funding gap for cities recognise. Follow by the lack of mixed funding models and funding for operation and maintenance costs. Lack of funding for project preparation and lack of seed funding for experimentation are also recurrent. One of the cities added the difficulty in identifying right funding sources as a gap.

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Focus Group 8 | Circular economy and strategic planning

General information	
Date	26. January 2022
Leading Partner	ICLEI Europe
Thematic area	Circular Economy
Number of cities represented	11
Participating Cities	Maribor (SI), Malmö (SE), Prague (CZ), Ghent (BE), Burgas (BG), Wiltz (LU), Turku (FI), Seville (ES), Porto (PT), Grenoble Alpes Metropole (FR) and Apeldoorn (NL). Prato (IT) did not finally attend.

1 Summary

The focus group on Circular Economy included 11 cities from all over Europe. It lasted a bit more than 2 hours. The focus group took the form of a guided discussion with open questions along the core topics as prompts:

- Ambition and strategy,
- Governance,
- Sectors and material streams,
- Monitoring and indicators,
- Stakeholder engagement,
- Funding and financing.

Key takeaway messages

1. **Funding** - Cities highlighted funding for circular solutions and infrastructure as their most pressing need, with often insufficient funding streams from national and EU levels. It also appeared that, once secured, EU funding can be a catalyst for local policy making, while Green Bonds are seen as a way to diversify financing sources and as a way to secure better loans from banks. Crowdsourcing has also been explored to leverage better loans from banks. A challenged seemed to be to secure long-term funding - beyond project initial investment.
2. **Policy alignment and Integrated management** – The lack of policy alignment has been described as a major obstacle for cities. There is a need to invest into linking different actions plans to one overarching environmental strategy (timely or organisation disconnects), while multi-level governance can certainly be a driver for local policy-making.
3. **From strategy to implementation** - Although strategy can be a driver for action, implementation is what actually delivers change. There is the need to align strategy making and implementation, to fit objectives and measures to the operational reality.
4. **Monitoring and data collection** - Cities need monitoring frameworks to measure progress made, results and impacts and in the end evaluate public policies. It is crucial to have a good understanding of the baseline. Furthermore, there was the need expressed to develop new indicators linking climate neutrality and CE but as well co-benefits such as biodiversity. It was also stressed that new approaches to data collection and visualisation were needed, while frequency of reporting needs to be manageable. Social innovation and organisational innovation – CE and the target of climate neutrality needs beside

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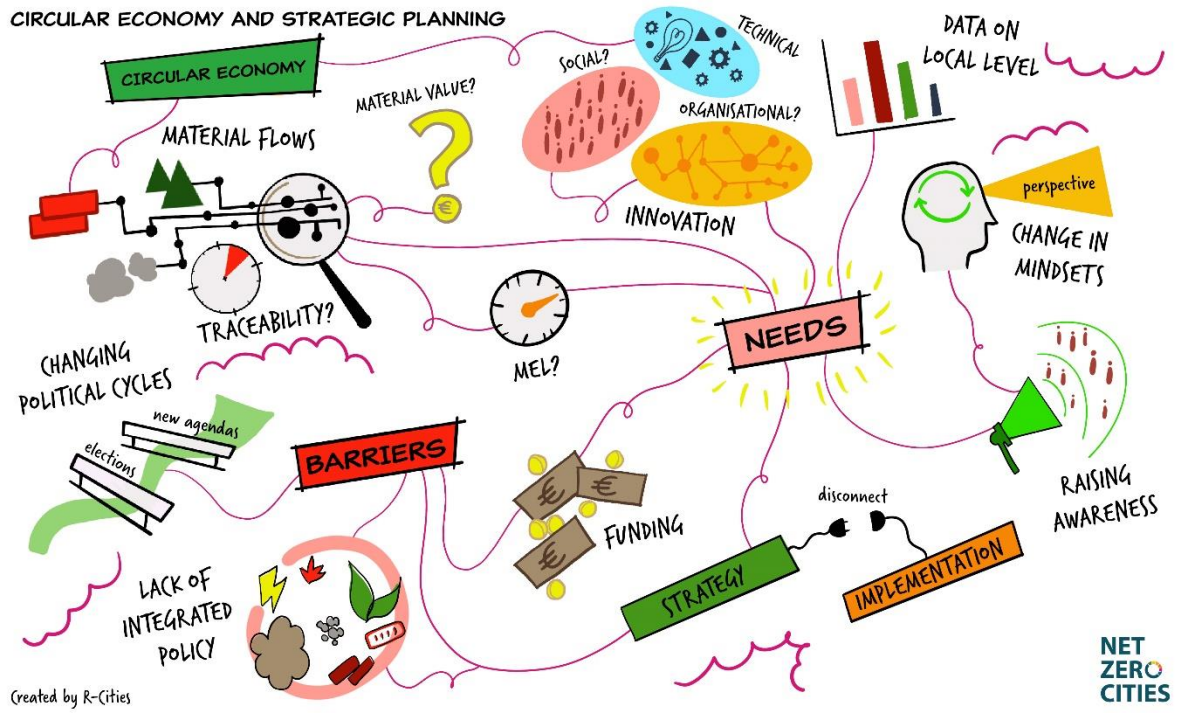
technological innovation social and organisational innovations. Missing data to inform policy-making at local level is perceived as a major obstacle by cities.

5. **Stakeholder engagement** – Engaging with multiple stakeholders is key for the circulation transition, including citizens and "triple helix" stakeholders. Especially at the start of a new initiative campaigning and incentives are needed, to align individual agendas. Some cities successfully engaged with local stakeholders and constituted local networks to support and foster the transition. CCC were mentioned (by Malmö) as an instrument to successfully engage stakeholders and align agendas.
6. **Material streams -** Better traceability of products and materials is a necessity to kickstart the circular transition. Behavioural change is difficult to induce in regard to product consumption, as well since virgin materials are still cheaper than recycled materials. Understand of incoming and outgoing material flows needs to be supported by an assessment of the current stock of material "encapsulated" within the city limits and its build environment.



2 Structure and Agenda

Timing (CET	Content
10:00 – 10:10	**Introduction from ICLEI** Short introduction from all cities
10:10 – 10:30	**Introducing NZC and the Mission** (10') Q&A (10')
10:30 – 10:50	**Part 1 – Focus on the strategic level** - Ambition and strategy - Governance
10:50 – 11:00	*Short break*
11:00 – 11:50	**Part 2 – Circular Economy and climate neutrality in practice** - Sectors and material streams - Monitoring and indicators - Stakeholder engagement - Funding and financing

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	- Other needs, obstacles and drivers - Further recommendations
11:50 – 12:00	**Wrap up**

3 Participating Cities

Participants came from the following cities: Maribor (SI), Malmö (SE), Prague (CZ), Ghent (BE), Burgas (BG), Wiltz (LU), Turku (FI), Seville (ES), Porto (PT), Grenoble Alpes Metropole (FR) and Apeldoorn (NL). Prato (IT) did not finally attend.

They are all signatories of the Circular Cities Declaration or involved in the CityLoops project, coordinated by ICLEI. CityLoops receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 821033.

Most cities were medium-sized already engaged in the topic of the circular economy, except a small town, Wiltz, and Prague, a capital city. The municipality of Grenoble was approached but delegated the invitation to Grenoble Alpes Métropole, responsible for waste management policies. Seville was represented by its waste management agency, LIPASAM.

Consortium members:

- Simon Gresset, ICLEI: main facilitator and organizer
- Nikolai Jacobi, ICLEI: facilitation and chat
- Monika Heyder, ICLEI: notes taking and project introduction
- Raquel Lopez Fernandez, CARTIF: observation – WP10

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
SUPPLY CHAINS - Traceability	There is a strong need for a **better traceability of products and materials to kickstart the circular transition**, as circular value chains become more complex and material cycles become longer due to resources being kept within the economy. This applies to basically all products and materials and to every valorisation option (reuse, repair, refurbishing or recycling). More generally, traceability matters because it guarantees that the system is transparent and can then be trusted by all actors, consumers, businesses and administrations alike. The current lack of visibility on products / materials composition, origin and environmental impact severely limits valorisation options. In relation with the "Material flow analysis" item (following), traceability would also greatly contribute to collecting better data at local level. - *Traceability is crucial for CE, if waste is not traced, nothing can be done.* (Grenoble Alpes Metropole)
GOVERNANCE - Social and organizational innovation (vs technology)	The circular transition – and more generally all areas of environmental policy-making – **requires social and organisational innovations more than new technologies**, as opposed to what is generally presented. Often technical solutions already exist and are known by cities, what they need is guidance

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	for implementing them and making them acceptable. On a different note, participatory planning approaches as well as methods for successfully engaging with stakeholders – i.e. social innovation – are also needed by cities in order to gather momentum and embark upon a systemic transformation at city-level. **Integrated approach** to the interlinked topics is needed. - *Mainly because of organizational obstacles both at administrative and political levels.* (Grenoble Alpes Metropole) - *Organizational engineering is also needed, as we want to bring a number of local actors together in a cooperative to reach a critical size.* (Grenoble Alpes Metropole)
MONITORING - Monitoring framework and indicators	**Cities need monitoring frameworks to measure progress made, results and impacts and in the end evaluating public policies.** Monitoring relies on a baseline assessment and will measure results and impacts of any circular actions, through a set of predefined indicators. Some cities are working on developing their own monitoring framework while other are using frameworks developed by other cities, consultancies or international organisations. Monitoring frameworks need to accurately reflect what is going on, yet they have to be simple and ideally understandable by different stakeholders. Annual monitoring is made harder with the multiplication of data sources and indicators. - *Data and monitoring are key in order to make strategic choices in the context of local gov.* (Ghent) - *What is important about the monitoring framework is that we all understand what the mention is of the description. What we do see now is that we all have difference meaning about the definition of indicators. The challenge is, can we keep it short and simple, but explainable?* (Apeldoorn) - *Within Circular Turku, we are developing a monitoring framework and are looking at what the best indicators could be.* (Turku) - *The same indicators can be monitored differently. Given the high number of indicators required – an annual reporting is not always possible* (Porto). Carrying out impact assessments as well as evaluating circular policies makes it **necessary to have a good understanding of the baseline** through a baseline analysis. This exercise and resources to carry it out are needed by cities. - *Tools or instruments to support base-line review would be really helpful.* (Apeldoorn) Additionally, **new indicators are needed** on topics including but not limited to waste prevention or the sharing economy. Furthermore, **co-benefits** are being investigated, such as the link between biodiversity and CE.

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	- N*ew indicators are needed, e.g. on other items of the waste hierarchy, such as preventing/minimizing waste or on sharing economy - pilot at the moment - more data driven approach in those topics is needed, data and indicators are lacking.* (Malmö) - *Turku has a new procurement strategy that aims to take the circular economy, climate, and biodiversity into account. The criteria are developed in the near future. There's a connection with the monitoring and indicators.* (Turku)
MONITORING - Material flow analysis	While monitoring frameworks are relevant for any public policy, the transition to a Circular Economy - i.e., to put it simply reducing resources extraction and waste production - **makes it necessary for cities to understand incoming and outgoing material flows and also to assess the stock of materials "encapsulated" within the city limits and its build environment.** This can be done through Material Flow Analysis or other Urban Metabolism studies and it is particularly relevant for the construction sector. - *Data on material flows and stocks but also on impacts (e.g. biodiversity, climate) are needed - this can help us using the city as a resource for new materials. (*Ghent)
FUNDING - Funding for circular infrastructure	All cities quoted funding as their most fundamental need. **Closing the loop in different material streams requires large scale solutions and thus significant investment from cities, in terms of land, infrastructure, equipment and so on** – CE has been described as a capital-intensive industry. Examples included a plot of land/warehouse to stock secondary raw materials between, a biogas plant and so on. - *We need huge warehouse/storage space or area for reclaimed raw materials but it is too expensive for the city.* (Ghent) - *Also, funding is needed for setting up an industrial plant and investing in the right equipment (which would be mutualised) - this represents a huge investment.* (Grenoble Alpes Metropole) - *CE is a capital-intensive industry, funding for land and equipment is needed and we don't get so much funding from neither national gov nor the EU. This is big obstacle for us, it would be great to improve this.* (Grenoble Alpes Metropole)
STAKEHOLDER ENGAGEMENT - Awareness raising and behaviour change	**Awareness-raising and behaviour change are seen as necessary by a number of cities, especially when it comes to waste management.** Separate collection of bio-waste relies for instance on residents sorting their waste. To do so they need to be convinced and to understand the value of it - i.e. behaviour change. This change is hard to achieve, even in cities that have implemented separate collection for a couple of years. Best practices here include ongoing communication campaigns, incentive programs and so on.

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	- *The most challenging part will be about engaging with residents for separate waste collection and not about the infrastructure. For other waste streams - 24 stations/collection points where people can bring their waste for recycling, should be close to residents, easily findable online, along with an incentive program.* (Burgas) - *BW has been collected for many years already, everybody needs to sort out their BW or to compost at home in Turku, including smaller households. (...) It is difficult to engage with citizens, we need many campaigns for that, such as the 1.5° lifestyle campaign* (Turku). - *Bio-waste segregation is a pending subject with the 2023 regulation. We have started recently 2017, but quality of BW collected is not as good as expected. We are trying to reinforce the campaign to raise awareness. (…) The principal barrier is to engage with citizens to participate actively with the system.* (Seville)
TECHNOLOGY - Identifying the right technology and scaling it up	**A few cities mentioned that in some cases they did not have the adequate technology or infrastructure for treating waste while current treatment plants were obsolete.** In some cases, the technology already exists but it is either not available yet to local authorities at commercial scale or competing standards make it difficult to choose the right solution. - *On top of engaging with stakeholders - technical and funding issues are other problems, for instance the current treatment plant is now obsolete and we not only need to find better technology and also to scale it up.* (Seville)

Examples from Cities

- **Burgas** has set up 24 stations/collection points where people can bring their waste for sorting and recycling. Collection points are located on a map and are therefore easily findable online, and are connected to an incentive program. In Burgas this helps engage with the public and have them effectively sort their waste.
- To raise awareness on climate action and circular economy and to change behaviours, **Turku** has launched the 1.5° lifestyle campaign, including but not limited to a carbon footprint calculator, a report, a communication campaign and a video competition. https://www.turku.fi/en/carbon-neutral-turku/15-degree-life
- On the topic of monitoring, **Turku** is developing a set of indicators on biodiversity, to measure how CE can contribute to preserving local biodiversity.
- In line with targets set at national level, **Malmö** has developed guidelines on bio-waste collection for households: https://www.vasyd.se/-/media/Dokument_ny_webb/Broschyrer-foldrar/Avfall/Matavfall-Engelska.pdf
- **Malmö** uses a tool developed by Material Economics and Climate-KIC for assessing the baseline in different projects: https://materialeconomics.com/eit-climate-kic-healthy-clean-cities-understanding-the-economic-case-for-decarbonising-cities.pdf?cms_fileid=bd49619c8f9dbb6f5616fa72737bcd56
- Le Pôle R / Fabricanova - In an effort to improve resource efficiency and close the loop in a number of strategic waste streams, **Grenoble Alpes Métropole** has the ambition to develop and structure the local circular economy value chain. As such, it is actively supporting all kinds of reuse, repair or recycling activities, for instance setting up a cooperative called Fabricanova - bringing together all actors part of the ecosystem in order

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to scale up and "industrialize" their activities - and the Pôle R - a dedicated site with 8,000m² of buildings that will house a range of facilities for reuse, repair and recovery of materials, along with an incubator for circular start-ups.
- **Porto** is developing a new Public Procurement Policy, in co-creation with members of staff and suppliers, that aims to integrate more sustainable and circular criteria in tenders and further mobilize stakeholders for a systemic and sustainable change. Social and environmental impacts - LCA - will be considered.
- **Porto** launched a circular ideas contest – FoodLoop (within the CityLoops project) - for innovative ideas that promote the circular transition in biowaste and more broadly in the food system and to encourage, support as well as empower entrepreneurs, citizens and social institutions to turn environmental and social challenges into circular business opportunities. More at: www.foodloop.pt

Cities' barriers

Identified cities' barriers	
GOVERNANCE - Uncertain and disruptive political cycles	**Political cycles can raise the uncertainty on cities' political commitments and negatively affect long-term planning.** As such they often appear as obstacles for cities in the circular transition and/or for achieving carbon neutrality. Examples included a newly-elected mayor that reconsiders a carbon neutrality commitment or an area of policy-making that ceases to be a priority for electoral reasons. • *...within 2 month we will have elections. Perhaps after the elections the point of view will change.* (Apeldoorn)
GOVERNANCE - Lack of policy alignment and coordination	**The lack of policy alignment has been described as a major obstacle for cities**, first within a city administration and between several departments/areas of policy-making, and then between different tiers of government. This absence can reduce the reach of circular actions or projects or can even render them useless. - *Policy alignment is necessary at city level first between all areas of policy intervention, then at a higher level (regional, national…).* (Apeldoorn) **A concrete example was put forward with the frequent contradiction between local economic development and environmental policy.** As such, subsidies and fiscal incentives granted by local authorities to businesses generally do not take into account their social and environmental impact. Subordinating grants to environmental and social impacts could however be unpopular for small businesses. Those impacts could also be taken into account in procurement strategies. • *Link is needed between public funding allocated to businesses and their impact on climate and society, in order to incentivizing. The public procurement is a way to engage with market - cultural, used to found economic actors, difficult to ask them results on CE or climate for years.* (Grenoble Alpes Metropole) • *We are project focused. We don't have a strategy on CE, since we are only starting on CE. Links to climate change are missing, a topic in which we are more advanced.* (Apeldoorn)

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	Furthermore, cross-department collaboration – albeit needed - is time and resource consuming. • *No dedicated department in Burgas, there is a division that works on CE and climate and strategics development - works with other departments, like construction for energy efficiency, waste management is also included in the same department. This requires a lot of coordination between departments and experts.* (Burgas) • *Although existing a vision and strategy for a circular economy, it is difficult to manage differences in the availability, visions and backgrounds between the different municipal organic units for a common path towards a circular economy city. As so, it takes time to consolidate and mature the ideas from the different stakeholders to build a common ground, mobilize services to include circular principles on strategic actions and plans and get into action.* (Porto) • *(…) there is a lack of internal human resources focused only on the circular economy strategy and opportunities.* (Porto) As Circular Economy and climate policy often lie in different departments, **they also rely on different skill sets, which makes collaboration and the integration of climate objectives, tools and indicators more difficult** in the absence of proper policy alignment. While climate action is more related to energy policy, circular economy – due to the emphasis put on waste and recycling - is closely linked to waste management. This means for instance that indicators such as avoided GHG emissions are often not integrated in circular projects due to the incapacity to measure them. - *CE and climate expertise are quite different. For me it is difficult to be part of the climate discussion, because my experience and skill set are more related to waste management. [...] In Grenoble we try to relate to GHG emissions, but it is not so easy and requires a really different expertise from the one we have.* (Grenoble Alpes Metropole) - *Our governance is mostly sectoral, CE is part of waste management, and as such is separated from climate. Some changes have been made, we try to look at a more integrated approach, but still, climate colleagues are more into energy topics than into waste and so on.* (Apeldoorn)
GOVERNANCE - Disconnect between strategy making and implementation	While cities acknowledge that having a strategy provides a shared vision and a framework for action, **they argued that in some cases there is a disconnect between strategy making and implementation, with objectives and measures not really fitted to what is happening on the ground.** This tends to occur when different departments are in charge of strategy-making and implementation. It can be mitigated by adopting a bottom-up approach to strategy development that includes a dialogue and frequent iterations with services in charge of implementation. **Cities also stress that, although strategy can be a driver for**

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	action, implementation is what deliver changes. The challenge is translating overarching and broad strategies into the working reality of the people on the ground. **The sequence does not necessarily need to be strategy-> action plan -> implementation.** Focus rather could be rather on the action plan followed by a detailed and well-designed implementation plan. • *We don't have a specific strategy for CE, which makes it difficult to identify the difficulties related to implementation sometimes. Close dialogue is needed to identify issues on the practical level and find solutions to them. Needs for connecting strategic level and operational level, the implementation is crucial. The strategy is not necessarily the most important part in the circular transition. Strategic objectives become much stronger when they are based on thorough analysis of difficulties and possibilities from a ground level. Work with such analyses can be started within relevant departments of the city, while the more strategic work - roadmaps etc - is still being formed - as in the case in Malmö.* (Malmö)
GOVERNANCE – Citizen/stakeholder involvement	Especially in the biowaste sector the cities underline that in the beginning of a new collection scheme there are difficulties to engage the citizens and obtain a good quality product. • *Our biggest challenge – getting business and citizens to take part. Convincing businesses to participate and as well sooner than later in recycling actions.* (Burgas) • *Bio-waste is the only starting containers that have been distributed in 2017. Quality is not as good as expected. New campaigns are needed. Bio-waste has additionally been collected form households. Main clients are citizens, engaging them as active agents in the system is challenging.* (Seville)
SUPPLY CHAINS - Lack of circular value chains	**Value chains remains predominantly linear and a number of activities that are necessary to close the loop do not exist at industrial scale.** Closing the loop in specific material streams imply the creation of new activities and new processes often from scratch – e.g. a textile refinement plant. If cities can support the creation of new activities, other pieces of the value chain can be missing – e.g. a distribution and retail network for clothes made of recycled fabric. In some other cases, those activities exist but are carried out by social enterprises, with limited to none ability to scale up. In the end, supporting the circular transition in a specific value chain makes it necessary to support the entire ecosystem including adjacent activities like storage, distribution, retails activities and so on - and not only the production itself. In a context of insufficient funding, this represents a significant burden for local authorities. • *On textile - same waste management companies, textile refinement plant, we have received funding for a full-scale plant in Turku, treating the whole textile waste from all Finland - making sure that good material is not going to this plant - but so far, we don't have a sufficient distribution network to sell clothes made out of reclaimed fabric, we rely mostly on small shops.* (Turku)

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	• *We are looking at scaling up circular and local loop for municipal waste at industrial level, but we are facing organisational problems, and we need to upgrade and professionalize the social economy sector on which we rely and that is operating a really small scale at the moment. It is not easy to gather them and to scale up.* (Grenoble Alpes Metropole)
SUPPLY CHAINS - "Linear" regulatory framework and consumption patterns	**Current legislation and regulations are still encouraging linear modes of production and consumption.** For consumers, businesses and public administrations alike, it is still easier and cheaper to buy new products or virgin materials rather than reusing or using secondary raw materials. Tax incentives and new procurement rules could support the necessary transition to a circular economy. • *The habit of buying new products is hard to break, while virgin materials are often still cheaper. Legislation is not fully in place either.* (Malmö) • *Individuals' and companies' consumption patterns are still based on buying new and at lower price, and not on circular criteria, generally not considering the life cycle of products and materials.* (Porto)
MONITORING - Lack of data at local level	**Missing data to inform policy-making at local level is perceived as a major obstacle by cities.** On the one hand, data is generally produced and aggregated at national level - by national statistics bureaus. It is used by national governments for different purposes that do not really fit the needs of local authorities. If some of this data is accessible at local level or can be reliably downscaled, most of it isn't. As a result, local authorities often do not have the internal capacity to collect reliable data while key areas for local-policy making are completely deserted. Additionally, cities stress how difficult to collect private sector data and to engage with businesses for data collection. • *Unfortunately, data is really bad today, no clear view of material flows at city-level, companies are not opening their data but at the same time they are asking for some innovation - something we can only deliver if we have reliable data. Good data sets are crucial.* (Ghent) • *The fact that data doesn't exist at city scale is a challenge and makes analyses more complex - sometimes is needed to downscaling statistical data to broader scales running the risk of working with estimates instead of real data. Therefore, it is essential to promote the articulation and cooperation between Statistics National Institutes and organizations with statistical data for new approaches that respond to these challenges. This is something that Porto is experiencing in the CityLoops project.* (Porto)
MONITORING - Over-monitoring	If a number of cities doesn't have a proper monitoring framework, others **highlighted the fact that having to monitor and update a large set of indicators was time-consuming and difficult to**

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	achieve, especially when data collection systems are not standardised across services. • *We are preparing the 1st Voluntary Local Review on SDGs, developing a transversal monitoring framework and a set of indicators to monitor the city progress. It is yet needed to ask indicators to different services or external organizations and it is not functional to monitor so many indicators or they have not regular update. It is really important to consolidated a key data set and data sources. (some data is open source and some is not). Despite Porto having launched the open data platform, there is still a lot of work to do.* (Porto)
FUNDING - CE activities often not profitable and risky	**Another obstacle cities are facing comes from the fact that circular economy often relies on the social economy, with a number of activities not being profitable yet – or at all – thus relying on public money.** Project investment is covered but the subsequent operational costs are often not. Additionally, even if potentially profitable, new activities are inherently risky, dissuading private investors and requiring additional public money to mitigate the risk. • *The main problem remains the economic model of these activities, which remains often not profitable - are not necessarily viable on the long run - risky activities and only the public sector can address this market failure.* (Grenoble Alpes Metropole) • *Besides the stakeholder engagement funding is an issue. Modernisation is needed, funds need to be accessed. Increase performance to increase the yield.* (Seville)
FUNDING - Competing measures (for funding and resources) within the municipality agenda	In some cases, **it was noted that ambitious municipal agendas could lead to some competition between measures for their implementation.** This also applies to the indicators used to measure progress and impacts. • *Involving other services is not easy - the municipality's agenda is huge with sometimes competing measures or priorities.* (Porto)
FUNDING - No funding for operations (vs investment)	An obstacle that several cities raised was that, on top of not having sufficient funding, funding programmes from both the EU and national governments tend to be project-based, with **no funding streams attached for continuing activities and maintenance, which have to be funded by local authorities or in some cases abandoned**. • *We agree with the point on risk. On EU funding - how to do once the project is finished? How to overcome this problem (investment to maintain circular initiatives)? For example, on textile and construction we looking for funding opportunities. Some primary initiatives on these sectors, as in the food system, have some funding from the municipality but needs bigger investment on each sector. - BW collection expansion is now supported by EU funding but then the municipality will have to fund it itself.* (Porto)

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Examples from Cities

- To improve circularity in the construction sector and to preserve precious heritage construction materials, **Porto** has set up a Material Bank with secondary raw materials from heritage buildings in 1987 and the bank is now open as a museum since 2010.
  ○ http://nws.eurocities.eu/MediaShell/media/Porto_Bank%20of%20materials_30062015.pdf
  ○ https://museudacidadeporto.pt/estacao/banco-de-materiais/
- **Turku** has set up a large-scale textile refinement plant that will be able to valorise textile waste coming from all Finland in order to close the loop in the textile stream. https://poistotekstiili.lsjh.fi/en/2022/01/10/end-of-life-textile-refinement-plant-receives-funding-from-business-finland/
- Similarly, **Malmö** has set up Siptex, an automated textile sorting unit, on its public waste handling company premises, which also includes a waste-to-energy plant, Sysav.
  ○ https://www.youtube.com/watch?v=aJ4ON4aZHJA
  ○ Welcome to Sysav | Sysav – tar hand om och återvinner avfall

Cities' drivers

Identified cities' drivers	
GOVERNANCE - Integrated management and cross-department collaboration	**For a number of cities, integrated management and cross-department collaboration appears as a notable driver for both the circular transition and for achieving climate neutrality**. In some instances, one department oversees all environmental policy (including climate and CE) while in some others a culture of collaboration made this integrated management possible. **In both cases, a strong political backing makes those governance arrangements possible**. • Both *climate action and circular economy - along with other areas of environmental policy - are overseen by the Environment and climate transition council. Departments and internal stakeholders are closely integrated, with a strong political buy-in from our Mayor. Then there is no specific department on climate, nor on Circular Economy - with the municipality, the Porto Ambiente agency and LIPOR, the public waste management company all involved. CE is seen as a way to contribute to climate change adaptation and mitigation. (*Porto) • *We have a dedicated unit - Central management, climate and env policy unit - where I work and where climate and energy planning is done - CE is steered by both this unit and with the Business Welfare and Competence Unit - Turku business Region organization, which has a strong interface with regional companies.* (Turku) • *Thanks to the Environment Programme, our work is co-created and mission oriented. The idea is to understand the common goal in connection with a baseline, including the needs and in broad cooperation with all actors.* (Malmö) Integrated management goes beyond cities' administration and also includes **regional public agencies and public companies** controlled by municipalities.

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	• *We don't have a dedicated department, the Wcycle Institute prepared the first strategy, and has since been merged with the regional dev agency, owned by Maribor and which has close working relationship with the administration. Local economic development focus as a result.* (Maribor) Cities added that the adoption of integrated management approaches **can be driven by national agencies with reward schemes or certification frameworks,** e.g. ADEME (French Environmental and Energy Agency) with the **"Climat-Air-Énergie"** approach or **Pacte Climat** in Luxembourg, both aligned on the European Energy Award scheme. However, **the multi-level governance was less prominent** in the discussion than the city level governance.
GOVERNANCE - Setting-up a network of local stakeholders	**Some cities successfully engaged with local stakeholders and constituted local networks to support and foster the transition.** This proves to be a significant driver, creating a common culture and vision of the local transition, a long-term involvement through co-creation and frequent collaboration opportunities. • *The waste management company is owned by Turku and other surrounding municipalities. We manage a strong network of over 200 different professionals that has really been a driver for the roadmap – for sharing info, collaboration opportunities and so on.* (Turku)
STAKEHOLDER ENGAGEMENT - Climate City Contracts	**City Climate Contracts were mentioned as a way to successfully engage with external stakeholders**, notably SMEs, and to enrol them in the transition. • *We have started to develop and sign CCCs with stakeholders, not focusing on large companies, joint strategy process 20 contacts. CCCs connected to the various transition areas, 7 priority areas, one is circular industry and society. (*Malmö)
ECONOMY - Rising cost of electricity - Pandemic	A few cities noted the economic situation and in particular external shocks - such as the pandemic or soaring energy prices – could be used to raise awareness and engage with local stakeholders or the wider public. **For instance, recent disruptions of global value chains helped local authorities to engage with businesses and adopt resilience strategies aiming to decrease the reliance on imported products and materials.** - *Rapidly rising cost of electricity in Bulgaria, this helps to raise awareness on climate and this is an incentive to look at saving energy savings and efficiency, in connection with CE.* (Burgas) - *Same with the pandemic, people realized how value chains were globalized and how dependent we were from other parts of the world, this has raised awareness on the lack of resources, and has a result the involvement of business and industrial actors has changed, they are*

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	more aware and more willing to be involved, and in different ways has changed. (Grenoble Alpes Metropole)
FUNDING - EU funding as a catalyst	If funding coming from higher tiers of government and from the EU was generally seen as insufficient, **it was also acknowledged that EU funding once secured could act as a catalyst for the circular transition at local level.** - *The council can be supportive if funding comes from the EU (...).* (Burgas)
FUNDING - Green and social bonds	**Green Bonds are seen as a way to diversify financing sources and as a way to secure better loans from banks. Crowdsourcing** has also been explored to leverage better loans from banks. - *No separate funding stream for this, green bonds are explored in the city and also social bonds - one tool to secure better credits/loans. We are currently revisiting the framework, possibility to bring in more CE initiatives in the framework, our "internal bank".* (Malmö) -
MONITORING - Data visualisation	In line with monitoring frameworks, indicators and data collection, data visualization can be used to engage with stakeholders, notably with the public. - *Visualization is key for collaboration between stakeholders.* (Ghent) - *Each project contributes to overall indicator collection.* (Porto)

Examples from Cities

- **Wiltz**' council has adopted a Commitment Charter for the circular economy in 2018. The aim is to orientate all activities of the municipality in such a way that they have a positive impact on the health of the citizens, the natural environment and the local economy.
  - A circular economy department has been set up within the administration in 2020 to support other departments and integrate Circular Economy in other policy-making areas (urban planning, construction, local economic development and so on).
  - Since 2015, Wiltz has been involved in ***Pacte Climat***, an initiative aligned on the **European Energy Awards and led by Luxembourg's national government**. Within this initiative, guidance and technical support are provided to local authorities, in order to reach a number of targets on different topics related to climate action. Recommended measures to reduce GHG emissions now include circular economy. This commitment and associated requirements have contributed to further connect circular economy with climate action in Wiltz. https://klimapakt.naturpark.lu/fr/communes/pacte-climat-parc-naturel-de-la-haute-sure/commune-de-wiltz/
- The Environmental Programme for the City of Malmö 2021–2030 was adopted by **Malmö** City Council in April 2021. This is the city's overarching framework for sustainability transitions and it includes a number of goals related to either climate or circular economy – e.g. **Goal 2 "The City of Malmö's organisation has net-zero emissions" and Goal 12 "Increased resource efficiency"**.
  - The Environmental Programme is relevant for the whole city administration, including municipal companies. Every board and committee should include activities related to the plan in their yearly planning.

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  - The Environment Department's role is to support and coordinate the city's work with the programme and has started to look systematically at connection between climate and CE.
  - To engage with local stakeholders, the municipality has started to develop and sign **Climate City Contracts**, connected to the various transition areas, including circular industry and society.
  - Malmö is also calculating GHG-emissions from the City Administration's purchases according to a method developed by a national department (the **Procurement** Department): https://www.upphandlingsmyndigheten.se/om-hallbar-upphandling/miljomassigt-hallbar-upphandling/analysera-inkopen-med-miljospendanalys/
  - Malmö uses the **ClimateView** software to collect data related to the sustainability transitions and to guide both decision-making and action planning: https://www.climateview.global/about
  - Malmö is updating its framework for Green Bonds. The previous edition can be found at: https://malmo.se/download/18.3bf12ae215f9d265979db3f3/1511166814294/City%20of%20Malmo%20Green%20Bond%20Framework%20final.pdf
- **Porto** offers another example of integrated management and of policy integration. Circular principles and initiatives are fully included in the city's Sustainable Energy & Climate Action Plan, while the roadmap to make Porto a circular city by 2030 also recognizes the contribution of circular economy to deal with climate change and reduce carbon emissions.
- **Porto** launched the *Pacto do Porto para o Clima* (Porto Climate Pact - https://pactoparaoclima.porto.pt/) to bring together all stakeholders and achieve more ambitious goals with regards to carbon neutrality. Within this initiative, circularity is seen as a necessary shift to reduce carbon emissions and is as such integral to climate neutrality. https://www.porto.pt/en/news/porto-climate-pact-aims-at-mobilizing-all-members-of-society-to-achieve-more-ambitious-goals
- On a different note, **Turku** produces heat out of wastewater for the district heating network, and is considering recovering heat from drinkable water for district heating.

5 Other relevant topics or issues emerged

As participants are all circular economy practitioners and NZC focus is on climate, the discussion's underlying topic was the connection between circular economy and climate action – and the frequent disconnect between the two.

At the individual level, all participants acknowledged that circular economy can contribute to reducing GHG emissions. This connection also exists at city level, but the link is not always formalized in planning documents and strategies. In some cases, cities have adopted overarching strategies that encompass all aspects of sustainability transitions effectively connecting climate with CE. In these cases, CE might be the mean to achieve climate targets. In some other cases, different strategies or plans are in place for different sustainability areas and are closely intertwined. In other cases, again the plans haven't been adopted yet but the connection is made by a human liaison e.g. a municipal officer or by the political representatives e.g. mayor / the council's committee in charge of sustainability.

However, this relative integration of climate (mitigation) targets within circular economy policy doesn't prevent a number of disconnects at different levels. If the link between the two is generally acknowledged, policy objectives can in some cases be contradictory - for instance when the emphasis is put on the economic dimension of CE, on local growth rather than on sustainability. Additionally, in many instances it is assumed that CE effectively contributes to reducing GHG emissions, but in practice this is rarely backed by evidence; indicators to monitor the impact in terms of GHG emissions are rarely used. We assume that this shortcoming is mostly due to a lack of data and of adequate resources at the local level. There is a clear need for further research that could help cities link the different strategies. Lastly, in a number of instances the disconnect is due to organizational failures and to limited cross-department collaboration.

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6 Evaluation and remarks

Overall, the meeting went really well. Participants were keen on taking part in the meeting – most of them responded positively - and were eager to share their experiences on Circular Economy and climate action. They engaged in a lively discussion which enabled moderators to identify needs, barriers and drivers and to further collect insights on linkages between circular economy and climate action. A number of interesting examples and best practices were shared between participants, starting a peer-to-peer learning process.

On the downside, the format – an hour and a half discounting the 30-minute introduction on NZC - was slightly too short and did not allow to fully cover the different aspects of the topic. In the future, we would recommend dedicating 2 full hours to the discussion itself. That would mean the events should be scheduled as a 2.5 h event.

As always not all participants contributed equally to the discussions. We tried to anticipate this by asking direct questions to participants.

7 Results from Pre-Meeting Survey

- Total 9 respondents to the survey (75 %)

Below a selection of relevant questions and responses from the survey that informed the Focus Group facilitation.

Q3 - Does your city have any of the following governance arrangements? (Select what is applicable)

- 62,5%Climate Department and Climate responsibilities shared across diff departments

Q6 - In which department(s) does the climate-neutral agenda sit in?

- Spatial planning
- Environmental Planning and Management Department
- Urban Planning Department
- Porto's Energy Agency
- AREA TRANSICION ECOLOGICA. AGENCIA DE LA ENERGIA
- Development Projects and Investments Service – Project Office, technical service and administration department

Q7 - Does your city have a climate neutrality, net zero or similar target?

- Yes, with a timeline range of 2040 - 2050 = 37.50%

Q8 - What have you identified as your priority sectors for GHG (Green House Gases) emissions reduction? (Select a maximum of 3 options)

- Built environment - 37.50%
- Energy systems - 50.00%
- Mobility and transport - 75.00%
- Industry - 12.50%

Q9 - What are the main barriers & gaps your city faces to reduce GHG emissions? (Select a maximum of 3 options)

- Insufficient administrative and operational capacity - 50.00%
- Very high investment costs - 50.00%
- Limited technological interventions that reduce/ eliminate emissions - 25.00%
- Lack of support from the relevant industries - 25.00%
- Lack of circularity - 25.00%
- Lack of support from the relevant industries - 25.00%

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Q10 - Does your city take into account the principle "do not significant harm" (DNSH) in climate policy initiatives?

- Yes - 62.50%

Q11 - What are the co-benefits for your city by becoming climate-neutral? (Select a maximum of 3 options)

- Improved public health and quality of life - 50.00%
- Increased participation and awareness among citizens - 37.50%
- Economic growth and boosted local businesses - 37.50%

Q14 - Do you apply tools or frameworks provided by these platforms to monitor, evaluate and report emissions?

- Yes - 83.33%

Q16 - In what ways does your city engage with different stakeholders and citizens for climate action (or climate-neutral) policies?

- Consultation on strategies & policies - 71.43%
- Co-design of strategies with stakeholders & citizens - 57.14%
- Reciprocal climate commitments by stakeholders - 42.86%
- Neighbourhood information events/ sessions - 42.86%

Q20 - Please add any relevant links/titles description of successful methods/initiatives of engaging stakeholders and citizens.

- Maribor
- Malmö (Local city districts' climate contracts, Developers' dialogue, Local Roadmap for Climate Neutral Building Industry)

Q21 - What kinds of barriers do you face in trying to reach stakeholders and citizens to engage on climate neutrality? (Select a maximum of 3 options)

- Lack of on-ground partners - 37.50%
- Resistance/ fear from communities to change business as usual - 37.50%

Q22 - What are the funding gaps you have recognised?(Select a maximum of 3 options)

- Lack of funding for project preparation - 50.00%
- Lack of funding for operation & maintenance costs - 50.00%
- Difficulty in identifying right type of funding - 37.50%

Q24 - Does your city have any of these budgetary allocations for climate action?

- Circular economy budget - 50.00

Q43 - Which sectors within circular economy is your city currently working on/ planning to work on?

options	answers
None of the above	**0.00%**
Food systems	**50.00%**
Water systems	**83.33%**
Solid waste & recycling	**83.33%**
Industrial waste	**33.33%**
Material & construction	**100.00%**

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My city does not/has not worked with the Circular Economy approach	**0.00%**
Responses **Other (please specify)**	**50.00%**
Total Respondents: 6	

Q44 - Does your city have experience and examples in linking circular economy and climate neutrality?

- Porto: Porto Municipality considers circular economy as a model that contributes to reducing carbon emissions and, consequently, to climate neutrality, concerning the circular principles to make the most and extend the life cycle of the resources and materials, and to close loops. Circular principles and initiatives are also considered in Porto's Sustainable Energy & Climate Action Plan and in Municipal Master Plan to mitigate and adapt to climate change. And similarly, the roadmap to a Porto circular city by 2030, also recognizes the contribution of circular economy to deal with climate change and reduce carbon emissions.

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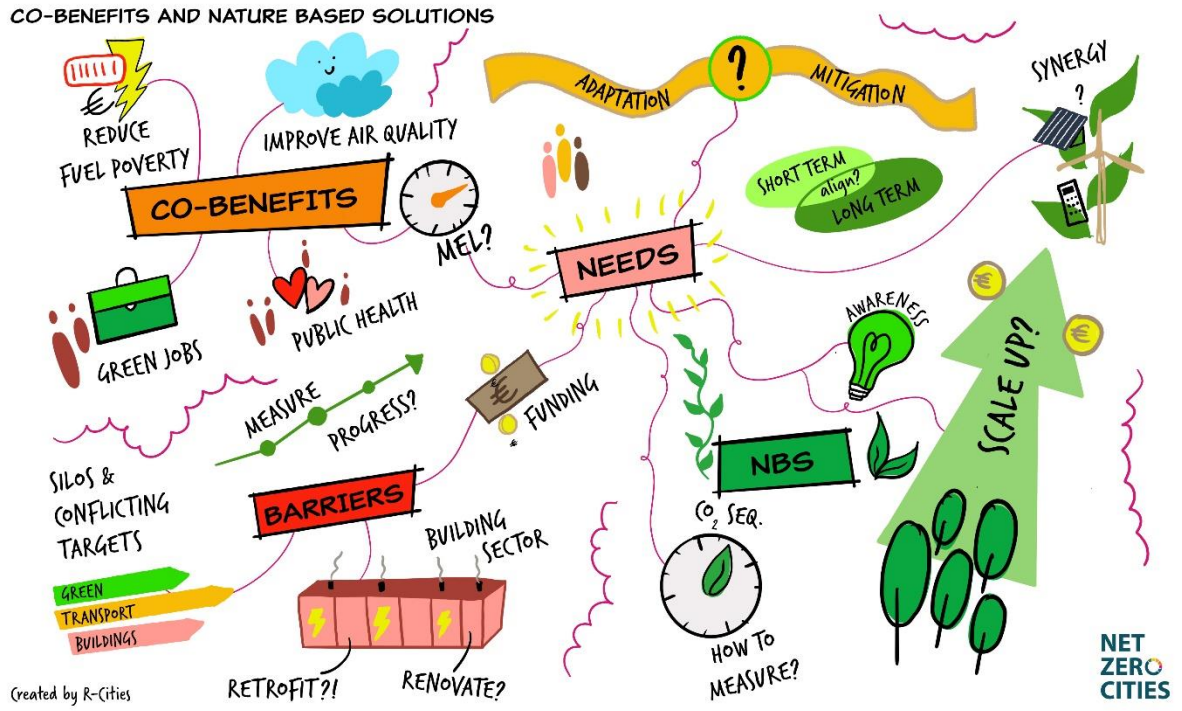
Focus Group 9 | Co-benefits and nature-based solutions

General information	
Date	16 December 2021
Leading Partner	Resilient Cities Network
Thematic area	Co-benefits and Nature-based Solutions
Number of cities represented	10
Participating Cities	Athens, Barcelona, Belfast, Greater Manchester, Milan, Paris, Rotterdam, The Hague, Thessaloniki, Vejle

1 Summary

Key takeaway messages

1. Co-benefits are considered main **drivers** to reach climate neutrality. Recurrent co-benefits cited in this discussion were creation of green jobs, improving air quality, and reduction of fuel and energy poverty.
2. **Cities need** to develop capacities, access methods and tools to calculate and quantify carbon sequestration and co-benefits of climate mitigation and nature-based solutions.
3. Climate adaptation and mitigations are not fully linked yet. For example, in the case of NBS, cities use these to improve adaptation capacity and spatial quality, without consciously quantifying the emissions reduction potential.
4. Silos, lack of coordination and funding are considered main **barriers** to reach climate neutrality.
5. Building sector is critical to reach climate neutrality and presents several challenges. Building retrofitting and renovation was cited as a **key challenge** in this sector.



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2 Structure and Agenda

The Focus Group on the **co-benefits of climate neutrality and nature-based solutions** was structured in four parts. The first two were considered preliminary and served to set the ground for the discussion on the specific two themes. These parts are briefly described below:

1. Expression of Interest (EoI): preliminary discussion about the EoI, with the goal to identify cities' motivations or resistance to engage with the EU Mission for climate neutral cities.
2. Existing policies: understanding cities' ambitions and commitments to reach climate neutrality based on their existing targets, plans and policies implemented.
3. Co-benefits: discussion about the identification of co-benefits of climate mitigation (or mitigation as a co-benefit), their assessment and quantification, as well as their integration among different city departments.
4. Nature-based Solutions: focus group to understand local implementation of NBS projects and discuss opportunities to advance the Net Zero Agenda through the development of NBS.

Agenda	
30 min.	Presentation of the NZC initiative and discussion on the Expression of Interest
15 min.	Discussion on Cities' current commitments and policies for net zero
30 min.	Discussion on Co-benefits of carbon neutrality
45 min	Discussion on Nature-based Solutions and their role in advancing the Net Zero Agenda

3 Participating Cities

10 cities were represented in the meeting (Athens, Barcelona, Belfast, Greater Manchester, Milan, Paris, Rotterdam, The Hague, Thessaloniki, Vejle) all members of the Resilient Cities Network.

The cities were represented by 1 or 2 people per city the majority of them were from the Climate Action departments of their municipalities and directly responsible to prepare the EoI for becoming a Mission City, in some cases they were also accompanied by the respective Chief Resilience Officer of their city.

4 Synthesis of discussion

Cities' needs

Identified cities' needs	
More funding	Funding is considered a priority by almost all the cities and a necessary condition to address a compelling and urgent challenge such as climate neutrality. Cities are developing several plans and initiatives but they lack enough fundings. Cities often have to rely on national funding. - *"The major struggle is funding and the certainty of funding. We have a lot of plans to implement but we do not have funding for these." (Rotterdam)* - *"Receiving an increased amount of funding is a key issue, weather we rely on national government funding or we look for alternative funding methods" (Greater Manchester)*

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Establish effective funding and business models	Private sector seems to be interested to invest and willing to risk, but not all the cities have established effective financial models that work. - *"Private sector is interested and willing to risk investments, there is interest but we need to build new financial models that work" (Belfast)*
Measuring and quantifying carbon sequestration and co-benefits	Very often cities do not have capacities nor the tools to measure and quantify the reduction of carbon emissions or carbon sequestration. Cities often lack capacity to do it within city's departments (sometimes they have some collaborations with institutions such as universities). Despite the lack of quantitative information and capacities to assess the co-benefits of climate mitigation, cities are very keen to receive support and collect more empirical evidence. - *"The quantification of co-benefits is one of the key aspects where we would like to receive support. It is very difficult, but it would really help to get political parties onboard. It contributes to create strong and compelling stories and arguments to get everybody onboard" (The Hague)* - *We would like to account for carbon reduction, but we do not have the calculation. For instance, we do not have calculations for heat island effect. (Paris)* - *"We have not built the capacity to calculate the emission reductions on our own. For instance, we had the participation of universities in specific projects" (Athens)*
Scaling-up NBS projects	Many cities are implementing various NBS projects at the local level, therefore they have pilot projects. They do not particularly need to develop new pilot projects. The main challenge is scaling-up these projects. This is considered a gap where cities are interested in doing better. - *"We strongly believe on NBS and we have realized several projects on NBS, but these are all at the small scale (i.e., urban water buffer). We have done all the pilots and we are really looking to scale everything up and we would like to receive support from the Mission on this." (The Hague)*
Synergy between various technical solutions and NBS	Cities expressed need for support in ways to integrate NBS with other technical solutions. - *It could be interesting to have more figures about the combination of technologies and NBS" (Paris)*
Awareness on NBS	Cities often face difficulties in proving the relevance of NBS to its citizens. Given that NBS requires regular maintenance and care, cities are quick to shelf these interventions when they encounter difficulties.

Examples from Cities
- Paris' 15-minute city initiative results in system level innovation which can have a positive impact on emission reduction, but this has not been examined in detail.

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- Barcelona is developing green corridors with bike lanes and tree planting. However, mitigation co-benefits are not considered, hence not monitored either.
- The Hague is implementing different projects on NBS but all at the small scale (i.e., urban water buffer). The city has already developed several pilot projects, but the challenge remains scaling up NBS.

Cities' barriers

Identified cities' barriers	
Conflict between short term expectations and long-term implementation of policies	Policies often need time to be designed and implemented and this represents a limit considering the short term to implement the Net Zero Agenda by 2030. Cities do not need just innovation and knowledge sharing, they also need solid regulatory and financial agreements. Moreover, cities have to consider people's preferences and decisions. - *"Policies take a lot of time to implement and they need to be tailored to the local circumstances" (Rotterdam)*
Interventions in the building sector	Cities generally consider the mission of climate neutrality very challenging especially in the building sector, due to the difficulties in achieving tangible results in the short term. Interventions on the housing stock usually take time. - *"It will take a lot of time to make all houses and buildings carbon neutral, especially for central district heating" (Rotterdam)* - *"Our challenge is really in buildings: we have a huge tendency on fossil fuel for heating on buildings" (Belfast)*
Competition between available solutions	Limited space in cities often implies that green and energy interventions (like solar) are often competing with each other. - *"Green roofs are competing with solar energy. We also have a competition between trees for shading and solar canopy. (Barcelona)* - *"We have a competition in the use of roofs: shall we use roofs for renewable energy or shall we do green roofs?" (Paris)*
Coordination with other levels of government	Cities consider the difficult coordination with the policies at the national level one of the main challenges. In fact, national policies are considered not tailored enough to the local context, and sometimes even contradictory (e.g., energy security by fossil fuel supported economic activities). - *"Silos are not only inside the city council, but there are also contradictory policies at different levels, such as constructing new gas pipelines at the national level and ships coming to the harbour of the city" (Barcelona)*
Bridging climate mitigation and adaptation	Cities observe that climate mitigation and adaptation are not integrated yet and they tend to be seen as different approaches.

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	- *"There is a risk in mitigation and adaptation, because mitigation targets are more tangible than adaptation targets" (Belfast)*
Sectoral silos	The problem of sectoral silos still persists widely as major barrier for cities. City departments tend to set their own targets and goals in a non-integrated way (sometimes conflicting). For example, the target of the mobility sector is not integrated with the energy sector. - *"Each department tries to do their best technically but they can have negative impacts on other areas, making wrong assumptions, or not taking into account other departments' goals. They set their own targets and these might not be enough to reach climate neutrality." (Barcelona)*
Maintenance of NBS projects	Responsibilities in maintenance of NBS projects need to be clearly defined otherwise it might lead to conflicting situation (i.e., green roof maintenance). - *We implemented a program of 15 green roofs in schools, but we had an issue with the maintenance. Schools were expecting the green department to support them, and some of these green roofs died" (Athens)*

Examples from Cities
- Many cities specifically mentioned fuel poverty as one of the key challenges to address (Paris, Greater Manchester, Belfast). On the other hand, demand for air conditioning is expected to increase significantly in the next years. Cooling buildings and public spaces is becoming a stress affecting people' health and well-being. - The city of Barcelona indicated sectorial silos as one of the major problems in climate mitigation and adaptation. For instance, new infrastructure is developed to support energy security through fossil fuels. - Long-term maintenance of NBS projects is critical and represent an important component for the successful implementation of the projects. The city of Athens mentioned examples of difficult maintenance of green roofs in schools due to the unclear allocation of responsibilities between city department and the schools.

Cities' drivers

Identified cities' drivers	
Co-benefits (Public health, fuel poverty, air quality and job creation)	"Transition is possible if there are co-benefits". Most of the co-benefits of climate mitigation are well known to cities, and they can contribute to create more compelling narratives and to get political support. Public health, fuel poverty, air quality and job creation are some of the most mentioned and considered co-benefits. - *"We believe that all the transitions we need to make to become climate neutral, these transitions are only*

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	possible if there are co-benefits. The co-benefits are obvious and they are drivers for action at the local level". (The Hague)
Cooperation and stakeholder engagement	Cooperation at all administrative levels and involvement of local communities, institutions and stakeholders can foster the transition to carbon neutrality. - *"We need cooperation from all parties: municipality, citizens, universities, experts, institutions etc." (Thessaloniki)*
Synergies between technology and NBS	Combining NBS and other technological solutions can contribute to achieve better impacts and results. For instance, they could be combined in green roofs and in improving energy efficiency. - *"Synergies between solutions could provide better impacts and results, both reducing emission and producing renewable energy" (Paris)*

Examples from Cities
- 1 million trees initiative in Belfast: grassroots movement in which citizens first indicate desire to have a tree in their neighbourhood/garden/street which is then investigated by the Municipality before a tree is planted and maintained. - Milan will plant 3 million trees in the coming years in the greater metropolitan area (project ForestaMi).

5 Other relevant topics or issues emerged

- Many cities acknowledged the difficulties to implement the Net Zero Agenda and reach climate neutrality by 2030. Cities did not express concerns about the implications of not achieving the expected targets from the Mission, but they pointed out the importance of supporting the expected commitments with technical credibility.
- Most of the cities have already set in place targets and commitments to significantly reduce carbon emission in the next years. Most of the cities set 2050 as timeframe, often with intermediate goals to reach by 2030.
- Nature-based Solutions is nowadays considered a quite popular and successful field across local communities and citizens.
- Cities expressed interest in linking Nature-based Solutions with other sectors (for instance linking NBS with circular economy, defining mandatory NBS specifications for new building constructions).

6 Evaluation and remarks

- Miro was used as support during the discussion, useful to showcase relevant information and collect some notes.
- Good level of participation and active engagement, with a balanced distribution of interventions among participants.
- The length of the Focus Group (2h) was considered adequate

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7 Results from Pre-Meeting Survey

- A total of 7 cities responded.
- Most cities have at least one commitment like SECAP, Resilience Strategy etc. 4 out of 7 cities have a net-zero target already. The timelines vary between 2030 to 2050.
- Built Environment, Energy Systems and Mobility/Transport sector were the most chosen sector for GHG emissions reduction.
- Administrative barriers, lack of investment and hurdles in building effective partnerships were the most recurrent barriers identified by the cities.
- The co-benefits were of particular interest to this meeting. Four co-benefits stood out as clear drivers for net zero for the cities. These are reduced risk to climate hazards, improved public health and quality of life, increased participation and awareness, and economic growth and boosted local businesses.
- Another area of interest for this meeting was the NBS approach in cities. 5 cities had experience in implementing NBS in their cities. The challenges identified were the asymmetries between short term expected results and long tern benefits of NBS, inadequate financial resources, and gaps in knowledge, quantification and coordination. Nearly all cities look towards NBS for improving greening and biodiversity in their cities, while the other identified scopes of NBS were water management, improving urban spatial quality and carbon sequestration.

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Focus Group 10 | NZC Portal Design Exploration & Feedback Session

General information	
Date	21 February 2022
Leading Partner	EuroCities, Metabolic, LGI
Thematic area	NZC Portal Design (WP3)
Number of cities represented	16 cities – some had two participants, so there were 22 participants in the focus group
Participating Cities	Bologna Bonn Braga Budapest Copenhagen Gothenburg Grenoble Malmö Mannheim Münster Nantes Reykjavik Stockholm Tallinn Turku Vienna

1 Summary

Key takeaway messages

1. Cities were very positive about the overall Platform design proposals we presented. We have an endorsement to proceed with our current approach.
2. We must focus on minimising administration time from cities and avoid duplication of efforts between the NZC portal and other portals they are already using (e.g. CDP, ClimateView, Convenant of Mayors, ICLEI). Ease of use is critical.
3. All participants had been directly involved in writing the Mission City Expression of Interest. This required lots of work and they want us to use the EOI to support the Portal Introduction & Onboarding tool, so it generates bespoke services for them.
4. A majority of participants were Climate Strategy officers and many act as coordinators across city departments. They are our 'point of entry' for other colleagues, who will largely come to the Platform if led there by their Climate Strategy teams.
5. Some of them will also be acting as translators of English content from other staff. So they would potentially organise a P2P Collaboration group in their native language and translate key messages from other portal resources within that P2P space.
6. The main value of the Dashboard and Barometer for cities is a political communications tool. If we can use data they currently report to CDP and Covenant of Mayors and present it in a clear and visually-appealing way, which is designed to help storytelling, it will be a great external and internal comms tool.
7. Within NZC we need to meet across the city networks on administration of the P2P Collaboration Space. Planning of admin rights, animation and moderation can be directly informed by NZC members who have direct experience of facilitating these kind of spaces.
8. The call for Pilots in September could drive widespread use of the Portal, if linked to the Onboarding process. Many participants indicated they would personally lead on the Pilot application and would divide up work in sections across colleagues. They would use the Portal to manage this if the service was automated, easy to use and linked to resources.

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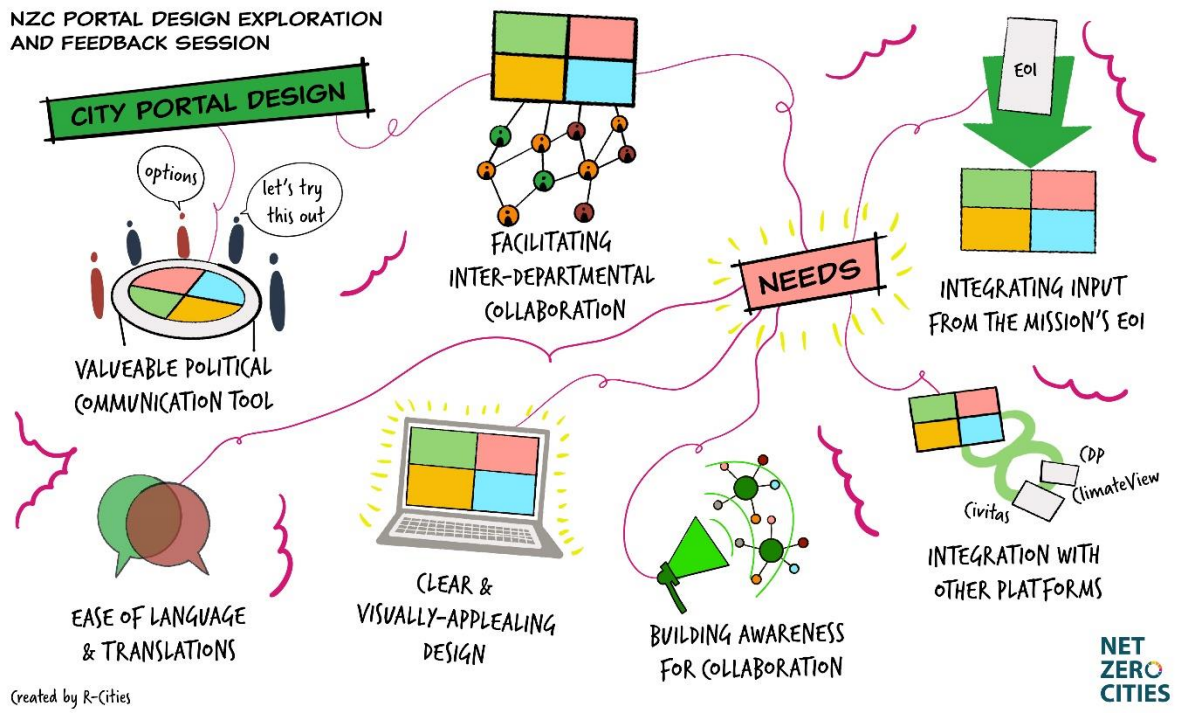
9. Hence, we should design the Grant Management module to link via the Onboarding Tool, Knowledge Repository, and P2P Collaboration Spaces, so the Pilot (and Twin) application process creates an incentive for new users from other departments to join the Portal and go through a light-touch version of our onboarding process.
10. Whilst linking the Grant Management tool to other resources was welcomed, they also want to know that any application form/survey can be extracted into a pdf easily, so they are not dependent on a more sophisticated IT tool which can go wrong.



2 Structure and Agenda

The focus group was hosted by the team developing the Mission Platform, which will help deliver the EC Mission on 100 Climate Neutral and Smart Cities by combining resources, tools and expertise in a one-stop-shop to help cities find the support and solutions they need to achieve climate neutrality:

- Nick Rendle, Eurocities
- Liz Corbin, Metabolic
- Maya Almaki, LGI

The team facilitated a hands-on two-hour session, where they worked with city representatives to explore how the Platform could deliver services in a high-value way. The team also provided an overview of two proposed module designs:

- How the proposed Self-Assessment & Induction module could provide the best introduction to NZC services, in a way which is engaging, inspirational and prompts cities to immediately access the resources, tools and conversations which are most relevant to their needs
- How the proposed Peer-to-Peer Collaboration and Social forums could best facilitate dynamic discussion, learning and co-design between cities.

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Agenda	
15 min.	Round robin introduction of all focus group participants (incl: name, city, department)
10 min.	Introduction to the NZC project and the platform • NZC project mission • Purpose of the NZC One-Stop-Shop Platform
10 min.	Introduction and tour of the NZC Digital Portal
30 min.	NZC Digital Portal Q&A
25 min.	Introduction & On-Boarding Tool • Purpose and functionality • Feedback, Q&A
25 min.	P2P Collaboration Space • Purpose and functionality • Feedback, Q&A
5 min.	Wrap Up & Next Steps

3 Participating Cities

16 cities were represented in the meeting, with a spread across Europe, although German and Swedish cities were over-represented:

- Bologna, Italy
- Bonn, Germany
- Braga, Portugal
- Budapest, Hungary
- Copenhagen, Denmark
- Gothenburg, Sweden
- Grenoble, France
- Malmö, Sweden
- Mannheim, Germany
- Münster, Germany
- Nantes, France
- Reykjavik, Iceland
- Stockholm, Sweden
- Tallinn, Estonia
- Turku, Finland
- Vienna, Austria

The cities were represented by 1 or 2 people per city. We had 22 partipants in total. 13 worked for the Climate Strategy or Environment department, 8 worked for the International affairs or EU office, and 1 department was unknown.

Most participants had been the lead officer with direct responsibility for preparing the EoI for becoming a Mission City.

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4 Synthesis of discussion

Cities' needs

Identified cities' needs	
Seamless alignment with existing portals/platforms	Cities already spend a great deal of time and resources of a pre-existing set of online platforms (Civitas, ClimateView, CDP/ICLEI, Covenant of Mayors, etc). Its important the NZC portal does not as them to duplicate their efforts but instead re-uses it via APIs, etc.
Ability to engage many departments and team members in various languages	A city's climate team often plays a central coordination role in collecting insights, data, and decisions from a multitude of departments and teams. Often this is done in a native language (not English). Its key that any surveys, questionnaires, etc. which the NZC portal expects city reps to complete is provided in a form that is easily translated into native languages.
Maximum value from EoI Process	Cities have commended a number of times that the NZC EoL process took a significant amout of time. Its critical the NZC portal leverages the insight provided within the EoI form rather than asks cities to duplicate that work again. Its also ideal if the NZC portal can ease the efforts required for completing the EoI process (for pilots and twins).

Cities' barriers

Identified cities' barriers	
Language	Many city representatives and local intermediaries will not be comfortable working in English. Its critical the NZC portal is designed in such a way that city reps can move between English and native languages.
Collaboration With Others	Cities mentioned it was not always easy to collaborate with other cities -for example Copenhagen cited its not easy to collaborate with a city just next-door to them. This posses questions around how NZC portal designers consider the value of the P2P collaboration space -further investigation will be required and more feedback from cities to specify what P2P collaborations will be useful between representatives from different cities.

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Cities' drivers

Identified cities' drivers	
Communication	Most city representatives cited that a lot of modules in the portal – for example the city dashboard and NZC barometer – would be very useful for city-wide communications. How can the insights, summaries, results, and graphics housed within the NZC portal be easily exported/downloaded for use by local city reps in local/city-wide communication?
Inspiration	Most city representatives cited they use online portals the most when searching for inspirational use cases and solutions. Knowledge repository were seen as a key driver for use of an online platform.

5 Other relevant topics or issues emerged

- All attendees had been directly involved in writing and submitting an Expression of Interest to become a Mission City. This created an enormous amount of work from them. We have to use their EOIs to drive the Introduction & Onboarding tool, so it generates bespoke services for them and colleagues.

- We need to go back to NZC colleagues across the city networks and talk with them about the practical administration of the P2P Collaboration Space and Social Network. The discussion around admin rights, animation and moderation can be directly informed by all the city networks who have direct experience of facilitating these kind of spaces. We need to reach out to colleagues in EuC/ICLEI/Resilient Cities etc and get more insights from them.

6 Evaluation and remarks

- Miro was used as support during the discussion, useful to showcase reference portals/platforms and collect feedback from participants.

- Good level of participation and active engagement, with a balanced distribution of interventions among participants.

- The length of the Focus Group (2h) was considered adequate.

7 Results from Pre-Meeting Survey

All 13.1 focus group participants were asked two questions about the platforms they currently use. The findings are summarised on two charts below.

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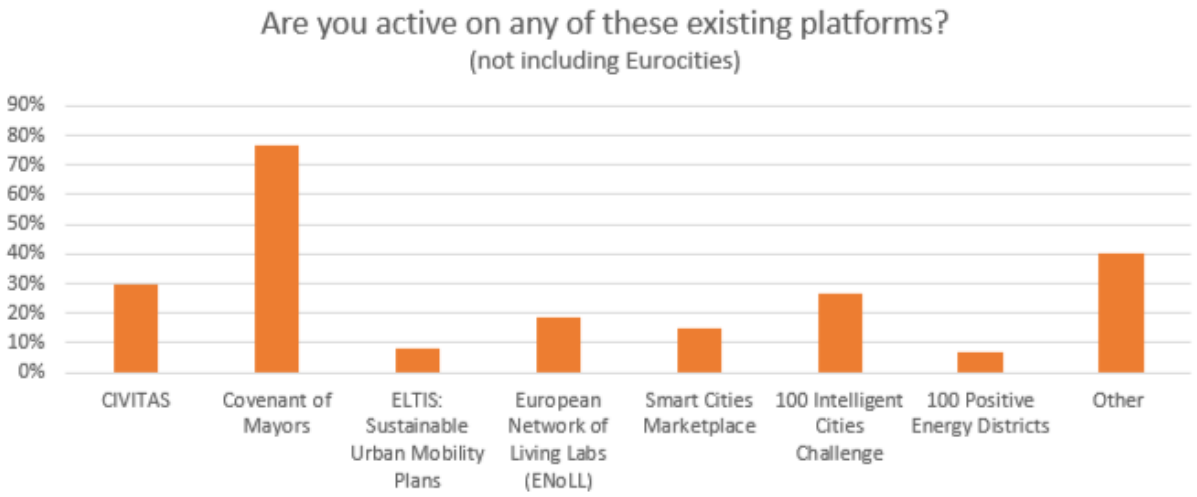

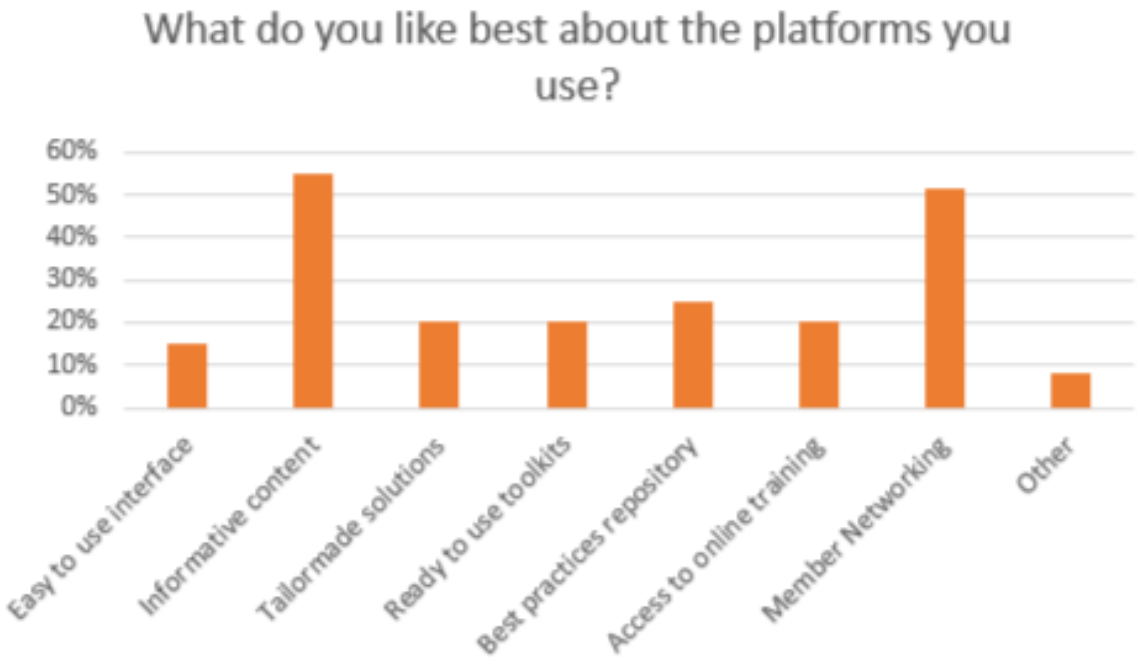

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Annex 2: Survey Questions

Urban Governance

Does your city have any of the following governance arrangements?(Select what is applicable)

- Climate Officer (or equivalent)
- Climate Department (or equivalent)
- Climate responsibilities shared across different officers
- Climate responsibilities shared across different departments
- Other (please specify)

How many municipal employees are working specifically on climate change action?

- Less than 5
- 5 - 10
- Sprinkled throughout the municipal administration
- No dedicated city staff, but we have hired external consultant(s)
- Other (please specify)

Do you have any approved (signed by City Council) plans or strategies for city-wide climate change action in place?

- (Select what is applicable)
- Sustainable Energy Action Plan
- Sustainable Energy & Climate Action Plan
- Sustainable Urban Mobility Plan (SUMP)
- Climate Action/ Climate change mitigation Plan
- Resilience Strategy
- Others (please specify)

In which department(s) does the climate-neutral agenda sit in: _____

Does your city have a climate neutrality, net zero or similar target?

- Yes, with a timeline range of up to 2030
- Yes, with a timeline range of 2030 - 2040
- Yes, with a timeline range of 2040 - 2050
- Yes, with a timeline range of >2050
- No, but we have an intention of committing
- No target yet
- Other (please specify)

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What have you identified as your priority sectors for GHG (Green House Gases) emissions reduction? (Select a maximum of 3 options)

- Energy systems
- Built environment
- Mobility and transport
- Industry
- Have not identified yet
- Other (please specify)

What are the main barriers & gaps your city faces to reduce GHG emissions? (Select a maximum of 3 options)

- Insufficient administrative and operational capacity
- Lack of know-how and skills
- Slow approval or authorization process
- Lack of enabling policy at the EU level
- Lack of enabling policy at the National/ Federal level
- Limited technological interventions that reduce/ eliminate emissions
- Fragmented responsibility & siloed governance structure
- Too many bureaucratic hurdles
- Few/limited collaborations with private & public partnerships
- Lack of digitalisation
- Lack of circularity
- Uncertain or unclear regulations and taxation
- Very high investment costs
- Lack of monitoring, reporting and verification procedures
- Lack of support from the relevant industries
- Lack of political leadership
- Lack of support/awareness by citizens
- Other (please specify)

Does your city take into account the principle "do not significant harm" (DNSH) in climate policy initiatives?

- Yes
- No
- Other (please specify)

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What are the co-benefits for your city by becoming climate-neutral? (Select a maximum of 3 options)

- Reduced risk of natural and climate hazards
- Poverty alleviation
- Improved public health and quality of life
- Ecosystem/biodiversity preservation
- Improved access to services (i.e., public transport, energy)
- Enhanced social cohesion and social justice
- Better education, knowledge and capacity building
- Increased participation and awareness among citizens
- Economic growth and boosted local businesses
- Enhanced attractiveness of cities
- Other (please specify)

Innovation Management

Are you active on any of these existing platforms & initiatives (Select what is applicable)

- Example of an online platform is a digital service that can facilitate interactions between different users and
- provide access to information, tools & technologies.
- 100 Intelligent Cities Challenge
- 100 Positive Energy Districts
- CIVITAS
- Clean Energy for EU Islands Initiative
- Covenant of Mayors
- Eltis: European Platform on Sustainable Urban Mobility Plans
- European Network of Living Labs (ENoLL)
- Smart Cities Marketplace
- Other (please specify)

If yes, what do you like best about the platforms you use? (Select what is applicable)

- Easy to use interface
- Informative content
- Tailormade solutions
- Ready to use toolkits
- Online repository of best practices

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- Access to online trainings/MOOC
- Networking/ member space
- Other (please specify)

Do you apply tools or frameworks provided by these platforms to monitor, evaluate and report emissions?

- Yes
- No

If yes, which tools or frameworks are you using to monitor, evaluate and report your emissions? _____

Stakeholder Engagement & Capacity Building

In what ways does your city engage with different stakeholders and citizens for climate action (or climate-neutral) policies? (Select what is applicable)

- Consultation on strategies & policies
- Panels & assemblies
- Co-design of strategies with stakeholders & citizens
- Reciprocal climate commitments by stakeholders
- Neighbourhood information events/ sessions
- Other (please specify)
- None of the above

How would you rank the importance of stakeholder and citizen engagement in your city's current approach? (scale 0 -10)

What actions is your city taking to ensure social justice, inclusivity in stakeholder and citizen engagement processes? _____

19. Which groups have you engaged in climate action projects? (Select what is applicable)

- Civil society groups
- Residents
- Building owners
- Social workers
- Associations
- Public institutions like schools, cultural organisations
- Researchers
- Activists
- Entrepreneurs & business owners
- Local industry

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- Energy suppliers
- Utilities
- Health sector
- Other (please specify)

Please add any relevant links/titles description of successful methods/initiatives of engaging stakeholders and citizens. _____

What kinds of barriers do you face in trying to reach stakeholders and citizens to engage on climate neutrality? (Select a maximum of 3 options)

- Lack of communication channels
- Lack of on-ground partners
- Lack of awareness on the content and issues of climate change
- Lack of feedback mechanisms between communities and decision makers
- Limited frameworks or methodologies for engagement
- Complexity of the issue at hand and limited simplified communication material
- Resistance/ fear from communities to change business as usual
- Local policies that block inclusive decision making
- Influential gatekeepers of communities and/or political barriers
- Low buy-in from local businesses
- Other (please specify)

Funding and Partnerships

What are the funding gaps you have recognised? (Select a maximum of 3 options)

- Lack of seed funding for project identification
- Difficulty in identifying right type of funding
- Lack of funding for project preparation
- Lack of seed funding for experimentation
- Lack of funding for capital costs
- Lack of funding for operation & maintenance costs
- Lack of mixed funding models
- Other (please specify)

Which type of financial instruments does your city have experience in managing? _____

Does your city have any of these budgetary allocations for climate action? (Select what is applicable)

- Allocations to finance new climate actions or a way to access the funds dedicated to assessing the climate

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- friendliness of actions already planned.
- Climate mitigation budget
- Climate adaptation budget
- Circular economy budget
- Green mobility budget
- Building decarbonisation budget
- Energy efficiency budget
- Renewable energy budget
- Other (please specify)

Peer to Peer learning and Upscaling

Have you ever cooperated with other cities in your country or across Europe for peer-to-peer learning?

- Yes
- No

If yes, which city or country have you cooperated with?_____

What is/was the motivation for your city to join this peer-to-peer learning programme? (Select what is applicable)

- Research Project
- National programme
- Voluntary knowledge participation
- Other (please specify)

Which cities are you currently looking towards for inspiration on climate-neutral policies and actions? _____

What do you think are the most useful resources for city to city exchange and peer learning? (Select what is applicable)

- Reports and publications (eg. case studies)
- Podcast
- Videos
- Apps
- Webinars
- One-to-one discussions
- City visits
- Workshops
- Other (please specify)

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How often would you prefer to access these resources? (Quarterly, Monthly, Weekly)

Have you tried to reproduce or replicate actions (of any sort, such as new regulation, procedure, technology, etc.) carried out in another city to your own city, as a result of peer-to-peer learning programmes? _____

If yes, please give examples._____

Sectoral Themes

NATURE BASED SOLUTIONS

Has your city previously worked with Nature-based Solutions?

- Yes
- No
- Other (please specify)

If yes, what types of Nature-based Solutions have you worked with? (Select what is applicable)

- Bio-swales
- Urban Forests
- Wetlands
- Large urban parks
- Pocket gardens
- Community gardens
- Street trees
- Green roofs/ green walls
- Green pavements
- Retention ponds
- Other (please specify)

What are the challenges to implementing Nature-based Solutions in your city? (Select a maximum of 3 options)

- Lack of coordination among municipal departments
- Unclear allocation of tasks and responsibilities
- Balancing possible trade-offs
- Asymmetry between short-term expected results and long-term benefits of NBS
- Involvement of local communities and public acceptance
- Knowledge gaps, lack of technical expertise and lack of trainings
- Identification and quantification of benefits and co-benefits
- Insufficient instructions for maintenance and monitoring

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- Lack of financial incentives
- Inadequate/ tight financial resources
- Lack of political committment
- Other (please specify)

What is the purpose of using Nature-based Solutions in your city? (Select what is applicable)

- Disaster risk reduction
- Carbon sequestration
- Water Management
- Improving micro-climate
- Improving greening & biodiversity
- Quality of life of residents
- Improved urban spatial quality

B. ENERGY SYSTEMS (ELECTRICITY & HEAT) & BUILT ENVIRONMENT

Does your city have a target for renewable energy production?

- Yes
- No

To what extent can your city make decisions about industries within municipal limits on policy/ regulation/ engagement?

- A great deal
- A lot
- A moderate amount
- A little
- None at all
- Not applicable

Which of the following schemes are provided by your city? (Select what is applicable)

- Energy subsidies & incentives for building owners (e.g., landlords)
- Energy subsidies & incentives for industries
- Energy programmes for building users (e.g., live-in home owners, renters)
- Other (please specify)

Does your city support bottom-up energy sector initiatives? (e.g., energy communities)

- Yes
- No

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C. MOBILITY AND TRANSPORT

Does your city have policies and targets related to public transport?

What is the level of involvement of citizens in sustainable mobility initiatives? (Select what is applicable)

- Consulted during the strategy process
- Participate in the design of policies
- Participate in the delivery of initiatives
- Other (please specify)
- None of the above

Does your city support bottom-up transport initiatives like shared mobility? (Bicycles, Scooters,

- Mopeds, Cars)
- Yes
- No
- Other (please specify)

D. CIRCULAR ECONOMY

Which sectors within circular economy is your city currently working on/ planning to work on? (Select what is applicable)

- Food systems
- Water systems
- Solid waste & recycling
- Industrial waste
- Material & construction
- My city does not/has not worked with the Circular Economy approach
- Other (please specify)
- None of the above

Does your city have experience and examples in linking circular economy and climate neutrality? _____

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