Report on Systemic City Transformation Methodology

Deliverable D6.1.

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Abbreviations and Acronyms

Acronym	Description
WP	Work Package

Summary

This report details the creation of the NetZero Cities systemic city transformation methodology, including considerations on the user journey. It outlines the methodology's unique combination of holistic thinking and replicability for city transformation, drawing on the most effective comparable methodologies from across Europe and utilizing multiple levers of change from WP7-10. Additionally, the report highlights WP6's contribution to WP1 and WP4 (the pilot call).

Keywords

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1 Description of Systems Innovation and its Role for Achieving Climate-Neutrality in Cities

1.1 Context for this Report

This report is written 19 months after the NetZeroCities contract between CINEA, and the implementing consortium was signed. It summarizes the work of WP6 (Systemic Innovation) but was co-created with strong involvement of other work packages and feedback from cities.

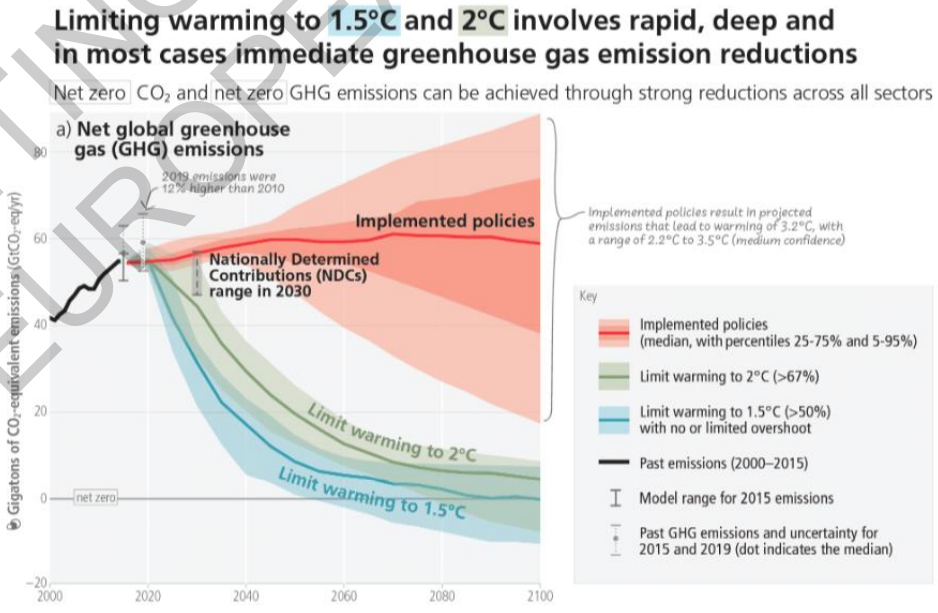
The Cities Mission is comprised of 112 cities, varying in size and level of advancement in their climate action. This diversity is a key feature of the Mission, and presents a context in which NetZeroCities needs to approach the design and delivery of tools, support, and services. Each of these cities would require support at different stages of their transition, and thus, there was no one-size-fits-all approach for NZC. The experience of each city would be unique and differ even among individuals within a city. Therefore, it was clear that a “user journey” would always have to be flexible and take multiple starting points into account. Additionally, most cities already had pre-existing climate initiatives, and a rigid, linear approach would not be appropriate.

The challenge was to develop a methodology that was both tailored and adaptable, catering to the specific needs of each city while maintaining transferability and flexibility.

Concurrently, the City Advisors' role was defined, WP6-10 services were established, and the portal and impact framework were being developed. The methodology had to integrate all these aspects cohesively and meaningfully while providing optimal support to the cities.

1.2 Why Do We Need Systems Innovation?

The IPPC report published in March 2023 showed once again that current policies and strategies are by far not enough to limit warming to 2 degrees. To the contrary, we are currently heading towards a range between 2.2- and 3.5-degree global warming, which would have terrible consequences for life on earth.



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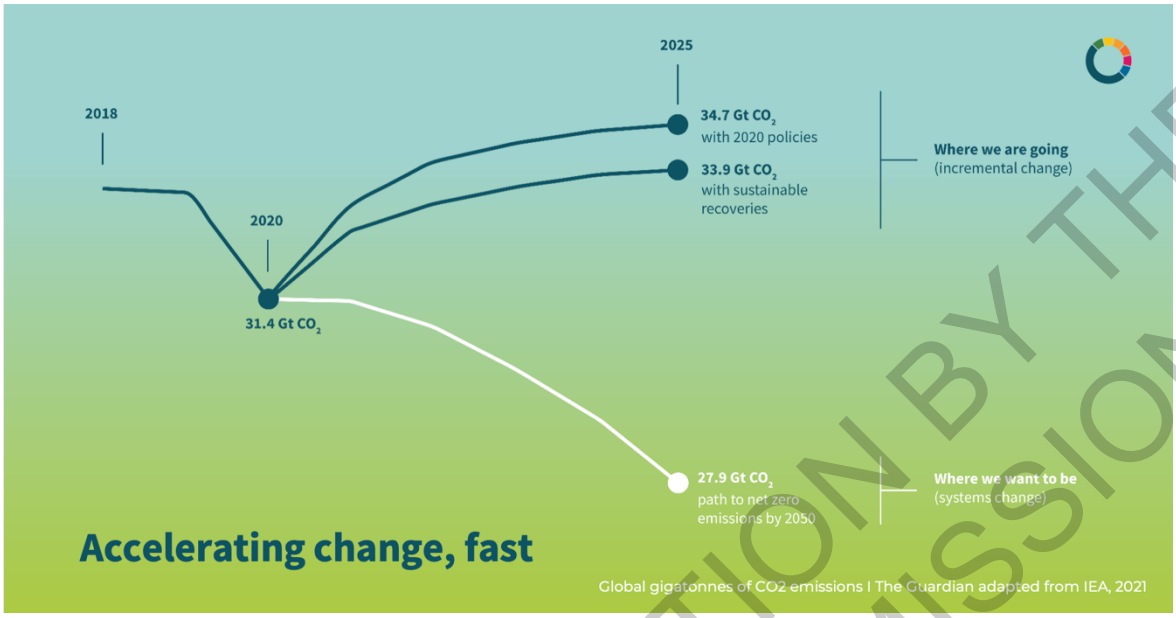
The graph above illustrates a significant contrast between the green/blue and red lines, representing a profound shift in approach. This shift is referred to as "systems change," which requires us to rethink everything we do in accordance with lessons learned from systems, complexity, and learning theories.



While it may be more convenient to execute NetZero Cities as a typical project as a typical project where all the outputs and deliverables are already pre-determined without much room for adjustments.

However, given the urgency of our situation, it is clear that the business-as-usual approach is not producing the desired outcomes.

1.3 Defining Systems Innovation

There is no single, definitive definition of "systems innovation" that has been agreed upon by all scholars and practitioners. However, the concept generally refers to the development of new ideas, approaches, and solutions that address complex problems by taking the interconnectedness and interdependence of different components of a system into account.

At its core, systems innovation involves a shift in thinking from a reductionist, linear approach to problem-solving to a more holistic, systems-based approach that considers the broader context in which problems arise. It emphasizes the importance of collaboration and co-creation, recognizing that solutions to complex problems often require the input and involvement of multiple stakeholders across different sectors and disciplines.

In NZC, we have defined "systems innovation" as "intervening across existing systems, in a coordinated way, to unlock pathways towards climate-neutrality. To do this, a deep understanding of local systems is necessary, as well as connecting climate actions in whole-city cross-sectoral portfolios and intentionally collaborating with many actors - locally and across all levels of governance."

1.4 Key Characteristics of a Systemic Approach

Systems theory has distilled the elements that are necessary for this systemic transformation that we need. Translating it into a local context is never easy and straight forward, but nevertheless the way we need to go.

A systemic approach is a way of thinking and problem-solving that emphasizes the interconnectedness and interdependence of different parts of a system. It is a holistic approach that considers the whole system, rather than just its individual parts or components. Some of these key characteristics include:

- **Holistic perspective:** A systemic approach views problems as part of a larger system or ecosystem, rather than as isolated events or phenomena. It recognizes that everything is

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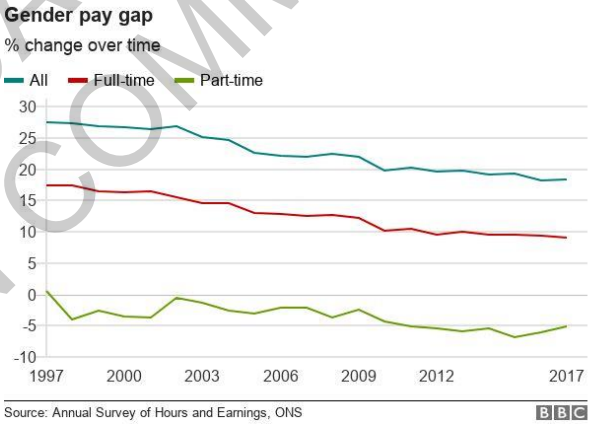
interconnected and interdependent, and that understanding the relationships and feedback loops between different components of a system is crucial to finding effective solutions.

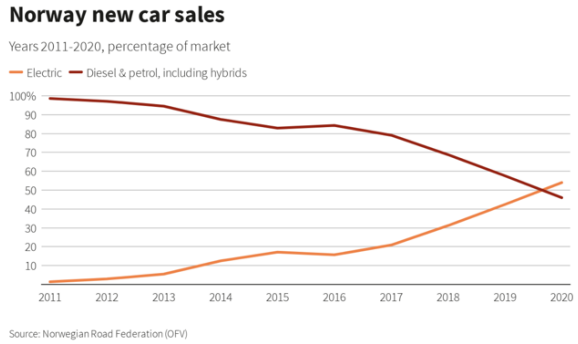
- **Emphasis on feedback loops:** A systemic approach recognizes that actions taken within a system can have unintended consequences and feedback loops, which can amplify or dampen the effects of those actions. As such, it emphasizes the importance of monitoring and managing feedback loops to ensure that interventions do not inadvertently create new problems.
- **Multi-stakeholder engagement:** A systemic approach recognizes that no one individual or organization has all the answers or resources to solve complex problems. As such, it emphasizes the importance of engaging multiple stakeholders across different sectors and disciplines to co-create solutions that are more inclusive and sustainable.
- **Iterative and adaptive approach:** A systemic approach recognizes that solutions to complex problems are rarely straightforward or linear. As such, it emphasizes the importance of iterative and adaptive approaches that allow for continuous learning, experimentation, and course correction.
- **Long-term perspective:** A systemic approach recognizes that complex problems often require long-term solutions that take into account the needs of future generations. As such, it emphasizes the importance of sustainability and resilience in all aspects of problem-solving.

1.5 Examples of Systemic and Incremental Change

To give examples, we have added graphs on the Gender Pay Gap in the UK and Norway's new car sales below. The graph on the Gender pay gap shows clearly that change is incremental and slow. The gender pay gap between men and women only decreased slightly between 1997 and 2017. No matter whether employed part-time or full-time, on average women earned significantly less than their male colleagues in the given timeframe.



On the other hand, Norway managed, with a combination of subsidies and taxes that electric vehicles (EVs) are cheaper to buy than petrol cars. Together with other supporting policies, this appears to have activated a tipping point in consumer preference learning to more EV than petrol card being sold in 2020. EVs comprise over half of Norway's new car sales now, which is *around 10 times their market share in most other developed countries*. If the trend continues, EV's will compromise a majority of the car market in Norway soon. Comparable interventions have shown that price alone is often not enough to shift consumer preferences. Hence, this is a good example of where a range of interventions has led to a tipping point in society.



Given the development of GHG emissions globally it is clear that we need to find similar intervention points everywhere.

With a specific focus on cities, the following two examples show what we mean with systems change.

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- In Helsinki, the Closed Plastic Circle initiative aims to reduce by 60–70 % the amount of plastics in circulation in the city to reduce GHG emissions linked to their production and disposal. Involving the whole value chain - from manufacturing to collection and logistics to consumer behaviour - the initiative acts on multiple levers across the system, as a portfolio. It also influenced policies to favour recycled products via city procurement criteria and construction site regulations, as well as national and EU level regulation on producers' responsibility for recycling.
- Madrid has embraced a new systemic way of working. Creating an ongoing multi-actor collaboration, it is an entire local ecosystem that supports the city's Roadmap for Climate Neutrality, providing greater legitimacy for climate action. Creating an atmosphere of trust and radical collaboration between council and a network of local actors (including university, local designers…), this has increased the city's capability to develop and coordinate complex portfolios of actions such as Madrid Compensa or Bosque Metropolitano which open pathways towards emission reductions.

2 Developing the NetZero Cities Methodology

2.1 Approach

The methodology's development took place in stages and was frequently a collaborative effort involving partners and work packages. It was constructed by examining scientific literature and emerging practices, with a particular emphasis on urban areas.

2.2 Connections to Other Work Packages

The process of developing a methodology for NetZero Cities inherently involves working across work packages and task structures. Section 4 of our report will specifically address the connections to the CCC concept and pilot activities, which deserve special attention.

In developed methodology also serves as backbone for other activities in NZC such as the BootCamp and Capability Building Approach. As these are recent developments, they can be found in section 5 "Ongoing further work and task".

It is worth noting that the development of the methodology presented below occurred concurrently with numerous other activities within the consortium. For instance, the Impact Framework helped us understand how change can manifest and unfold within cities. During co-creative sessions focused on the Impact Framework, WP6 analyzed the necessary changes required for each theme. These overarching patterns and steps ultimately contributed to the methodology summarized below.

To provide an example, we have included an impact framework focused on democracy and participation below. This framework highlights the necessary steps for achieving impactful change within this specific domain.

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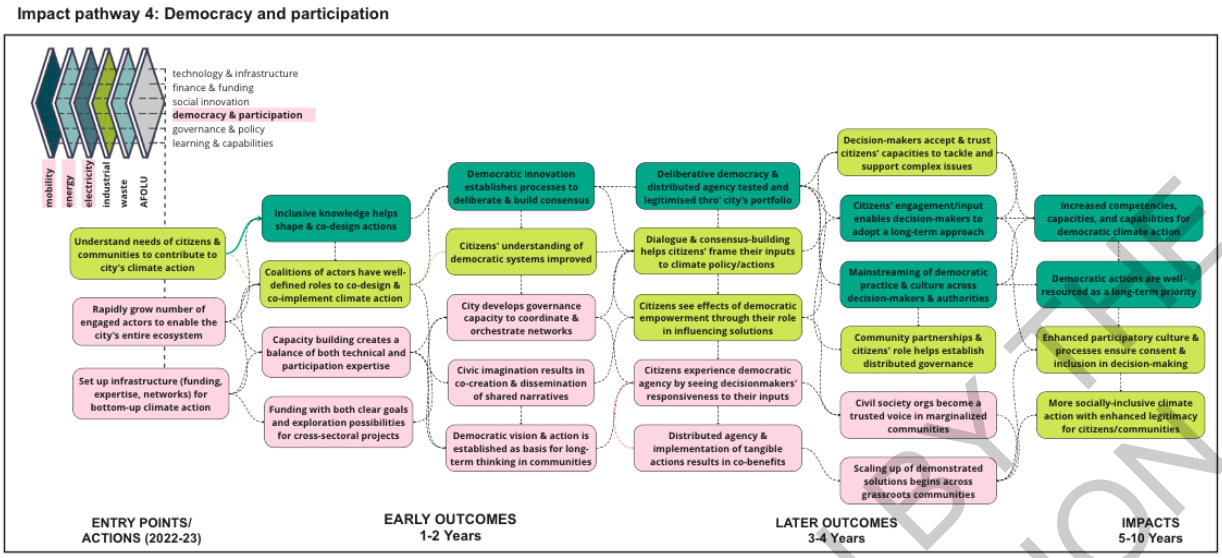
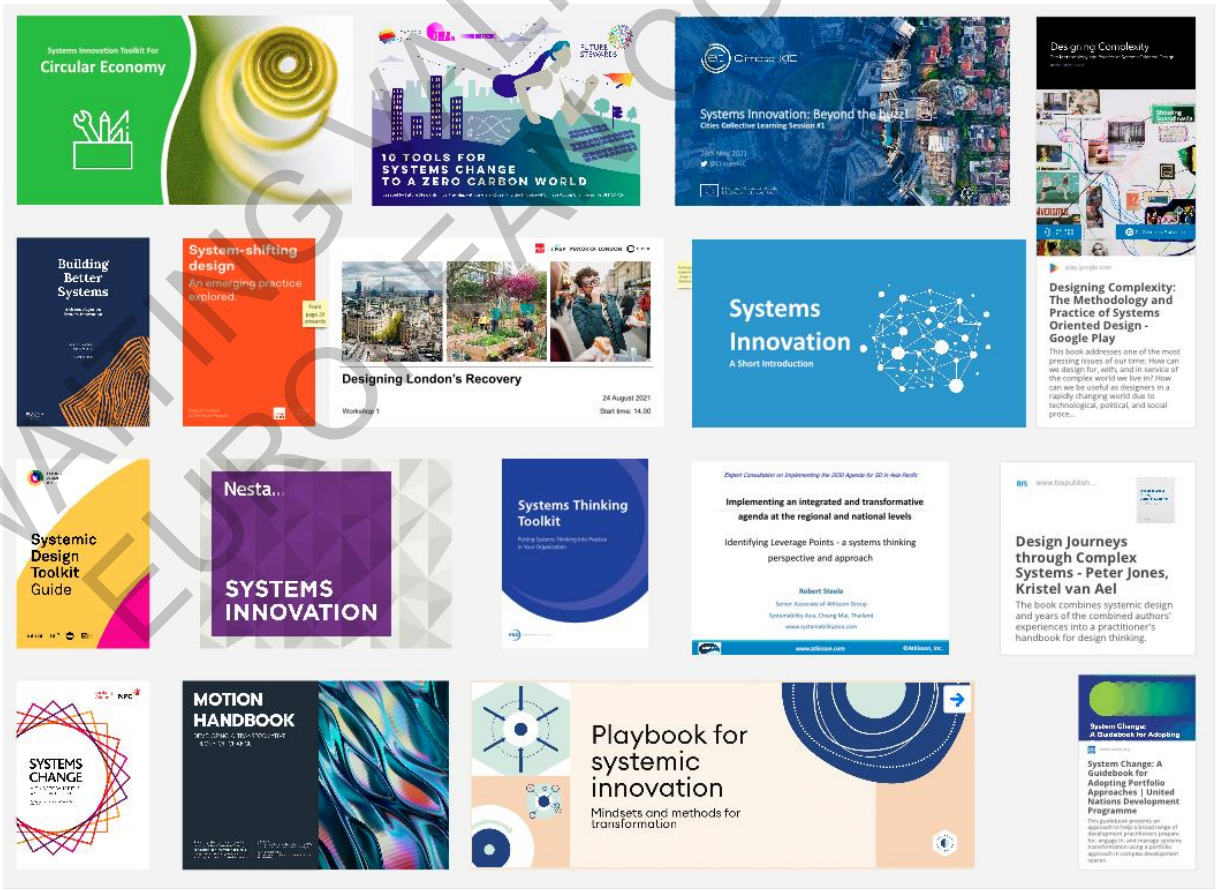


2.3 Review of Literature, Comparable Methodologies and Learnings between Partners

The consortium responsible for implementing NetZeroCities is comprised of a large number of partners, which can present challenges in terms of coordination. However, one significant benefit of this diverse group is the opportunity to draw upon and further develop Europe's most promising emerging systems innovation approaches. Additionally, to reviewing literature and comparable methodologies (see selection below and an extended list in the bibliography) we therefore dedicated time to comparing methodologies and distilling key learnings.



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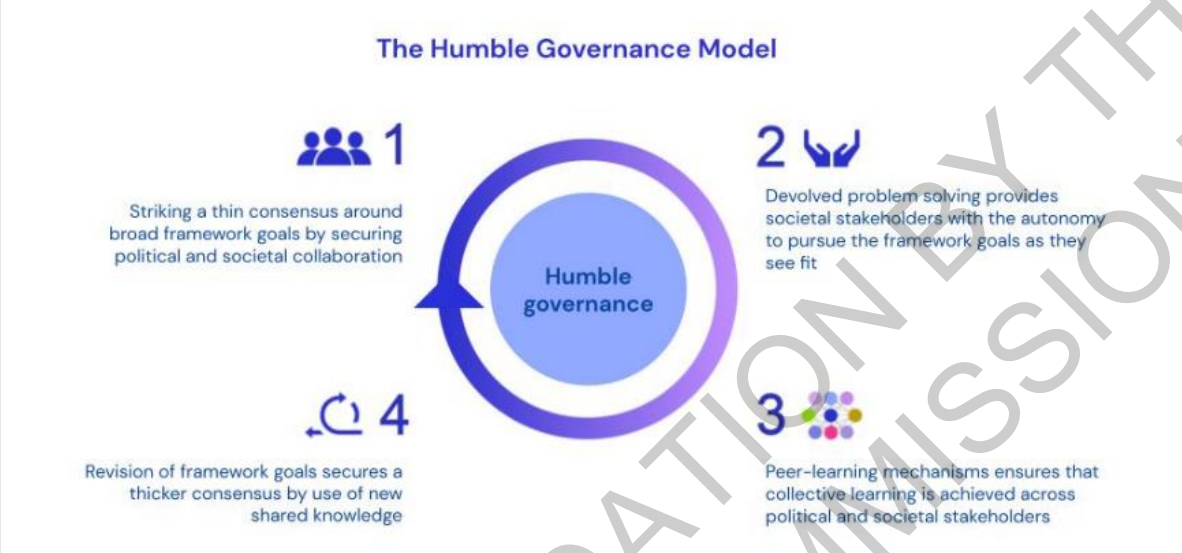
Each partner brings unique perspectives and experiences to the table, having approached past projects from different angles. For instance, some may have worked closely with national governments or specific city departments, while others have focused on particular sectors or the city as a whole. It is also important to recognize that what may have proven successful in Sweden, for example, may not be applicable to southern Europe. While we will only highlight a few of these in our report, they are nonetheless significant in shaping our approach to NetZeroCities.



The Humble Governance Approach, which was developed by Demos Helsinki in partnership with the Prime Minister's Office of Finland and Prof. Charles Sabel from Columbia Law School, reaffirmed us on the kind of attitude we would want to incentivize.

The model – based on Prof. Sabel's experimentalist management theory – starts with a simple assumption that has many important implications: to restore their capacity to solve collective problems in times of political anxiety and uncertainty, governments need to learn how to be humble.

Humility entails both a willingness to listen to different opinions and a capacity to review one's own actions in the light of new Insights. By abandoning the pretense of infallibility, governments then boost their capacity to engage in effective long-term problem-solving (see Annala et al 2021).

Moreover, **Metabolic**, a consultancy focused on the circular economy using a systemic approach distilled their learnings from a couple of projects, including the Ceuvel in Amsterdam which is a fully circular part of a district that, depending on the weather conditions, also produces more energy than it consumes. These key recommendations based on their learnings were:

- **Encourage long termism**: Cities can often struggle with short termism as they often shape initiatives based on mayoral time frames. We need to look out for and encourage opportunities that enable long term, committed action.

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- **Breakdown Silos**: Cities and municipal departments are often silos and fragmented which can breed a breakdown in communication, knowledge sharing, measures for success, financial investments, and practical action. Departments become islands. Find internal actors that can inspire deep and dynamic connections.
- **Bottom Up not Top Down**: Certain decisions, targets and guidance are being made at the EU and/or national level without open engagement with cities and their local communities -leading to a sense of irrelevance or impracticality at the local level. A bottom-up approach is key for driving systemic change that is contextually relevant.
- **Get Practical**: Systems thinking, and systemic innovation is often perceived as abstract which can have a high barrier to engagement. Be systemic, but also practical - build things in the real world that make tangible the type of systemic change you're after.
- **Navigate the public/private divide**: The absence of the private sector in many city-level systemic solutions (especially those that come out of EU projects) leads to solutions dying out in the early stages and not getting adopted at scale. While cities are good at kick starting initiatives and piloting innovative solutions, it's largely the private sector who has the finances required for scaling. Help cities to bridge this divide.
- **Connection**: Committed connections that build deep understanding, personal trust, and mindful communication is key.

Of course, we also collectively had a closer look at **Viable Cities' methodology and approach**, given that they had been working with 8 cities on the systemic transformation towards increased climate action from 2019 onwards and scaled to 23 by 2021. In a nutshell, their key recommendations and learnings were:

- Co-creation and co-ownership of the process.
- Be in tune and humble to city contexts.
- Create a movement of many actors and processes for aligning efforts with the mission.
- Ensure legitimacy not least at the political level of the cities.
- Citizen engagement, digitalization, and new investment logics are key.
- Do-learn-do-learn! Things will not go as planned!
- This is challenging and hard!

We also took the time to review the methodology employed in the **Healthy Clean Cities Programme** and engaged in collective reflection sessions with our partners to identify opportunities for improvement. This programme, implemented by EIT Climate KIC, Democratic Society, Dark Matter Labs, and BwB, aimed to facilitate systemic transformation towards accelerated climate action, and was implemented prior to the start of NetZero Cities. As such, it provided an excellent foundation for collaborative work and served as a valuable starting point for our efforts.

The screenshot below depicts the visualized methodology and learnings that we collected through our review and reflection process. Key aspects include:

- **Expectation Setting:** Communicating systemic change and what it takes in practice is not always easy. It was identified that things could have been done better in some cases on the Healthy Clean Cities Programme and hence underlined that communication and setting the right expectations would be key on NetZeroCities.
- **Connected Teams with the right competencies:** It was identified that those cities performed best that had teams across the municipality with engaged partnerships/alliances from across the ecosystem and national government. Moreover, the key individuals processed certain skills

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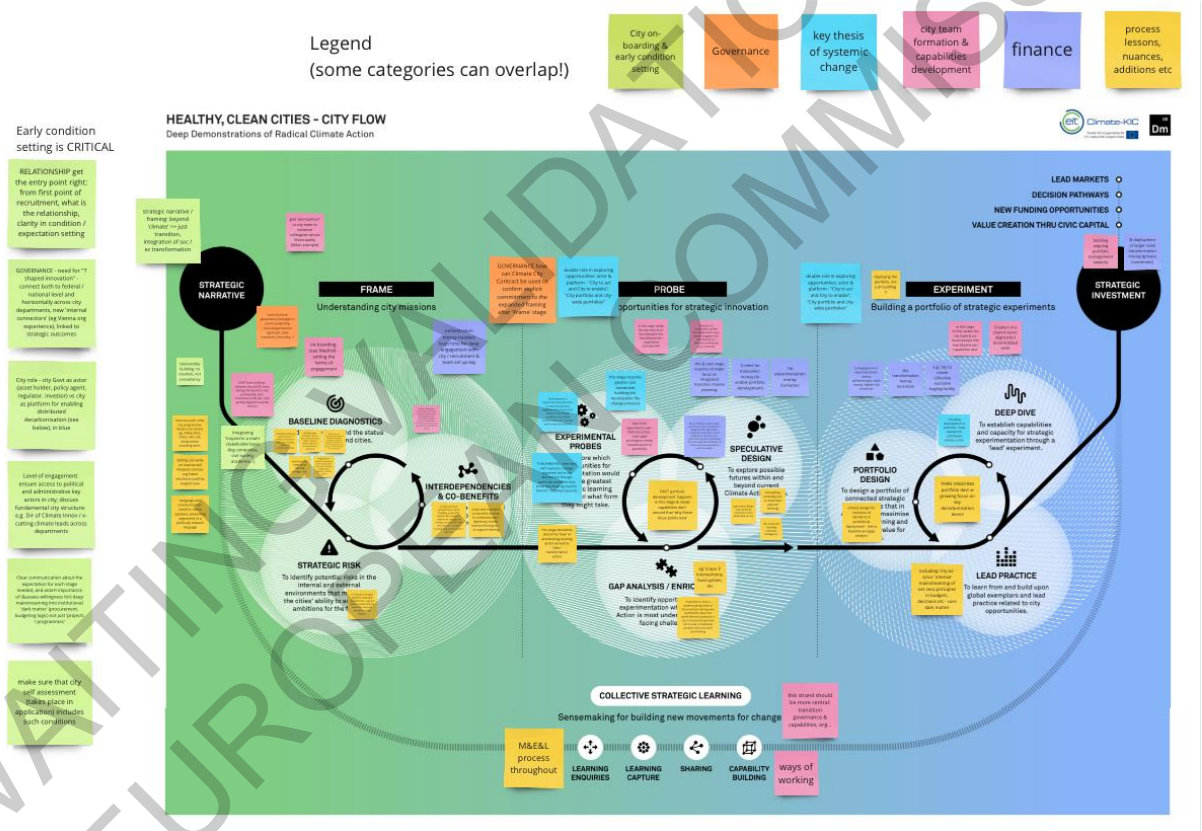
and competencies, which can also be found in The Climate Democracy Model of Democratic Society (see below). These learnings were fundamental for the Transition Team Playbook.

- **Orchestration:** Funding for cross-project orchestration – an essential part if wanting to work systemically - is too tight on all levels, which is likely to also apply to Transition Teams in cities. Working with national governments and ideally incentivizing them to support their cities with additional funding was noted. Equally this consideration was taken on board for the pilot city call criteria.
- **Ways of Working:** The (systemic) ways of working in cities and continuous learning and sensemaking had been weakly communicated in Healthy Clean Cities. It was noted that it needed to be more central in NZC.
- **Finance:** Innovation funding for the phase "speculative design and experimentation" and "building the portfolio" could increase the impact significantly. At the same time the funding strategies of interventions need to be considered earlier on.

By building on the foundation laid by the Healthy Clean Cities Programme, we have been able to refine our approach and identify new strategies for achieving our goals within the context of NetZeroCities.



Based on previous work and experience, **Democratic Society also developed the Climate Democracy Model**, which summarizes DemSoc's view of what we need to mitigate climate change and build climate resilience in our cities and regions in a democratic way. It consists of practical, interconnected tools for a city or region to assess and analyse its progress towards climate resilience through democratic means. The full tool can be found here.

For NZC we particularly looked at the competences needed for a just, democratic climate transition. These were distilled from the experiences on multiple projects but in particular Healthy Clean Cities. These distilled competences observed in city counterparts that successfully lead transformative interventions were:

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- Skilled in active listening and facilitation, guiding collaborative learning in co-design workshops and online meetings.
- Active and respected member of local knowledge and influence networks with ties to cross-sector actors, distributing and applying knowledge within the network.
- Experienced in participatory approaches to strengthen democracy, including participatory planning and evaluation activities.
- Has lived experience in the local community and understands its culture, geography, and infrastructure.
- Takes a practical and open approach to challenges and decision-making, with quick judgement and relational leadership.
- Experienced in influencing changes in public policy on climate at various levels, with expertise in public policy and planning preferred.
- Displays self-awareness, reciprocity, humility, and trust, and embraces new forms of governance emerging from collaborations on more local levels.
- Possesses subject-matter expertise relevant to community and climate resilience, whether technical or based on lived experience in the community.

Together with experience from other partners this led to the understanding that we would have to work with Transition Teams in cities. Details on this can be found in the Transition Team Playbook.

Once we had reviewed other relevant case-studies and methods of partners (more can be found in the annex) we started working on synthesis. The visualization below shows one of the many intermediary steps aiming to understand the issues and connections on a deeper level, distilling the typical necessary steps to reach climate-neutrality for a city and common barriers.

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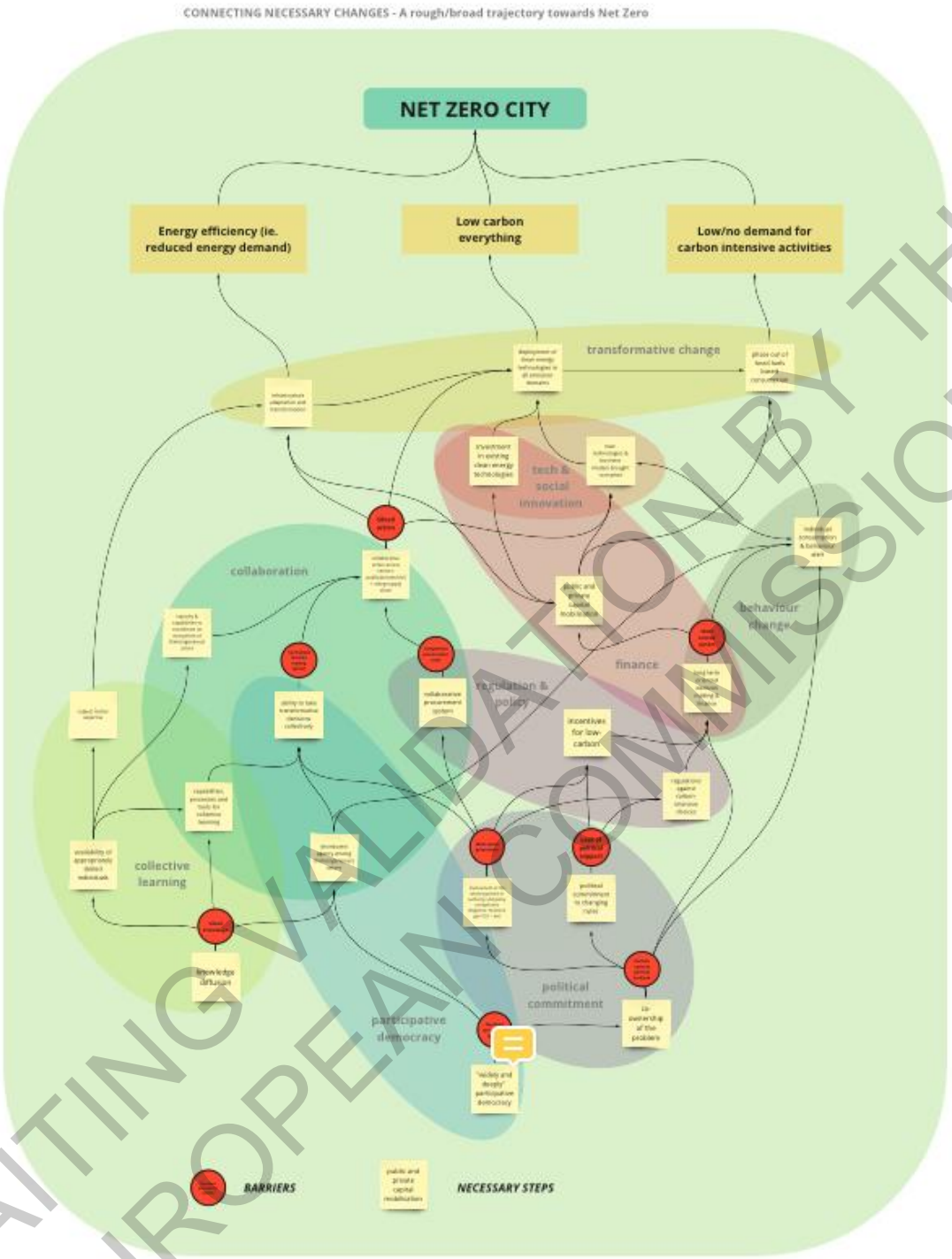

This work allowed us to determine the key areas that would have to be represented in a methodology. Together with the learnings from systems theory and the review of the leanings form partners this led to the visualization below. As one can see it already uses the key themes mandate setting, systems analyses, defining a portfolio, acting, learning, institutionalizing and working with the ecosystem throughout on coalition building that can also be found in the final Climate Transition Map.

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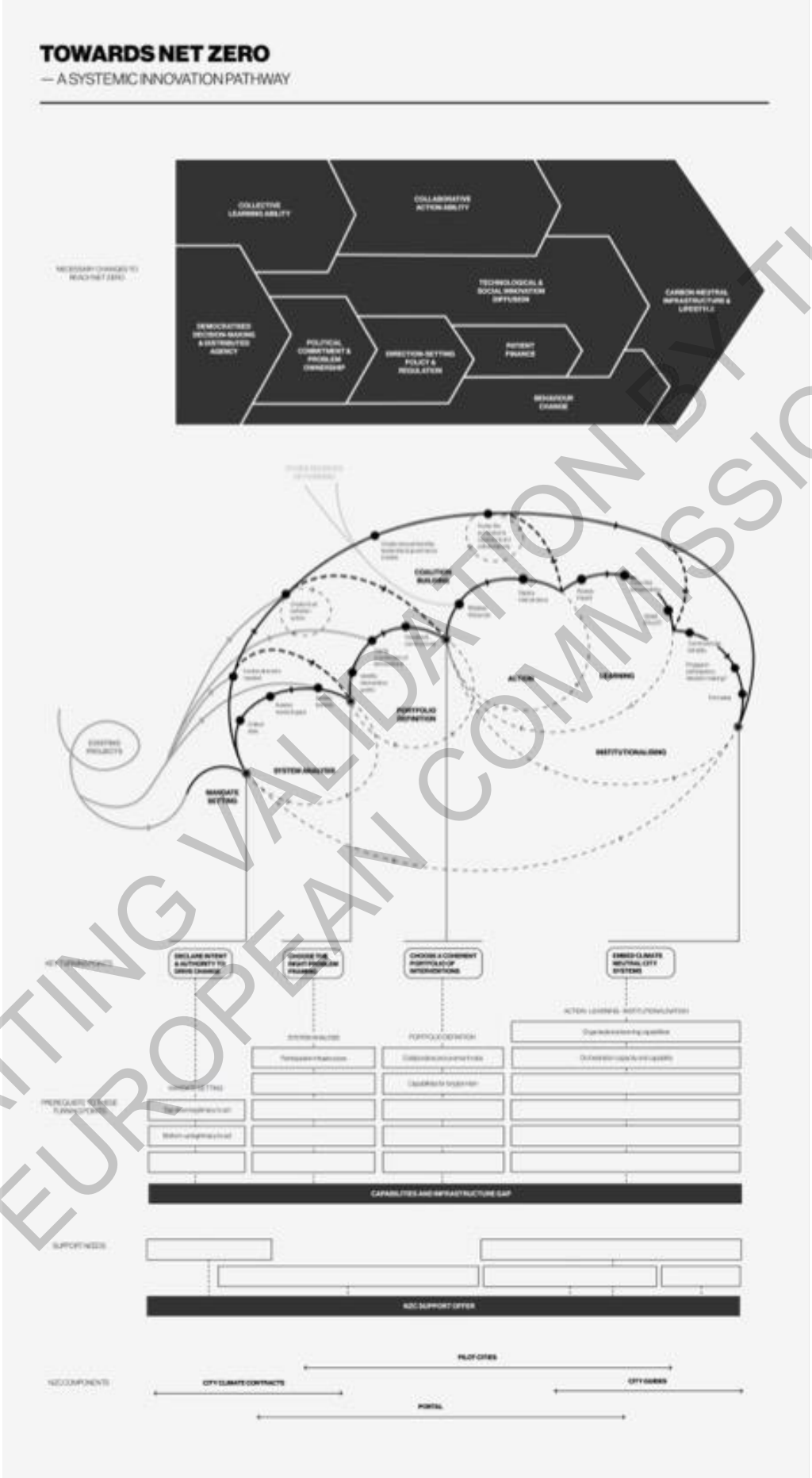

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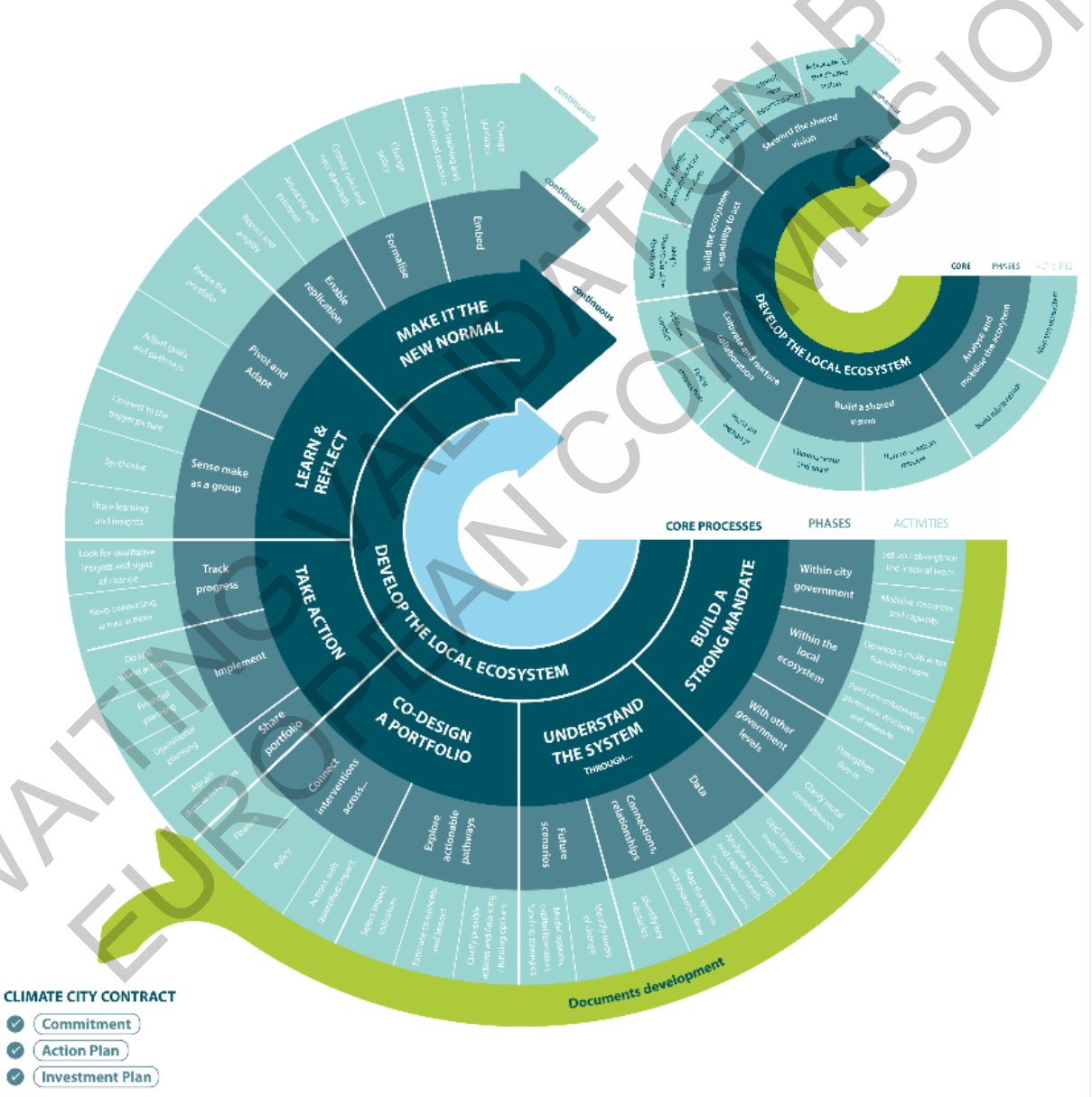
3 Published Visualized Methodology of NZC

In close consultation with WP1 (the CCC) and WP3 (Portal) we then decided to restructure the above into a more structured format. The result is the so-called “Climate Transition Map” which can be found below. It is the methodological backbone of NetZero Cities.

It is important to note that the timeline and starting point of this journey depend on each city's constraints and goals, past efforts and local dynamics.

Moreover, it is an iterative process. Cities engaged in the Mission for 100 climate-neutral and smart cities by 2030 are pioneers, and learning is crucial to accelerate progress towards the climate-neutrality goal in each city. Co-creation and testing are the only way to discover the way forward when it is not clear. Quick wins and experimentation are both necessary to refine and evolve strategies towards the necessary full decarbonisation.



The text on the portal, and here we worked closely with WP3, explains that it needs a systemic approach to reach climate-neutrality. It also notes that the Climate City Contract is a key instrument for Mission

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Cities to launch and accelerate this approach and mentions the Pilot Cities Programme is a tool to explore particular innovation needs and opportunities on this journey.

Key themes that recur across this journey include governance structures, democratic participation, finance, learning capabilities, and social innovation. Together, these enable a systemic transformation across domains and sectors that can shift society towards climate neutrality.

The following section summarizes the key thinking behind each section of the Climate Transition Map, which was the outcome of intensive work across WP6-10 and others.

3.1 Activate an Inclusive Ecosystem for Change

A climate transition demands more than what a city government alone can provide. It requires the positive commitment, passion, creativity, and drive of all local stakeholders. It requires everybody's diverse experience and expertise, resources and investments.

As such, it's important to mobilise the city's ecosystem in all its diversity: knowledge institutions, innovative companies and start-ups, as well as grassroots organisations and civic innovators. Leverage one's own and others' initiatives. Create conditions for all actors to have the capacity to act.

Within this inclusive ecosystem, a Transition team can enable powerful collaborations. It can allow the exploration, deliberation and debate of needs and risks. This collaboration can ensure new opportunities for possible solutions and new alternatives are discovered. This type of concerted and inclusive action matches the climate ambitions and, importantly, secures a healthy and just future for all.

An inclusive ecosystem for change has profound impacts on the effectiveness of the entire climate transition process. Activating this kind of ecosystem requires consistent awareness and consideration of citizen and stakeholder participation and engagement. How insights, decisions, and actions are carried out – with or without others – will determine how inclusive and ready for change your local ecosystem will be.

How to Activate an Inclusive Ecosystem for Change

Analysing and mobilising the local ecosystem
Cities need to engage and activate the ongoing participation of actors and stakeholders spanning sectors and reflecting the diversity of the population, including age and gender dimensions. While cities have well-established mechanisms for engagement, the Mission seeks to identify additional actors and include non-traditional voices alongside those close to city climate action.

That means:

- **Map the ecosystem:** To map the ecosystem effectively, it is important to map with others. Each actor who participates offers unique experience and additional, relevant information. This diversity of perspectives forms a more comprehensive understanding of the ecosystem and the interdependencies, power dynamics, and relationships, that contribute to the challenges and offer opportunities for solutions.
- **Build relationships:** Purposely build relationships. Achieving climate-neutrality depends as much on informal relationships and networks as it does on formal structures, resources and processes. Nurture the development of new collaborations, new relationships of trust, and new networks for partnerships and alliances.

Co-creating a shared vision
Having a shared vision across a diverse ecosystem reflects an effective effort to develop a unifying narrative and sense of direction. To develop this, engage with actors across the ecosystem to understand the height of ambitions, explore possible options and flag potential risks. Co-create new narrative together which speak to the shared understandings and intentions that emerge from this inclusive engagement and collaboration process. This can broaden what is seen as possible (and necessary) in the local ecosystem.

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That means:

- **Run a continuous vision co-creation process:** Imagine positive perspectives on the co-benefits of climate action with the whole ecosystem. This process serves to build stronger connections and unite stakeholders, embracing their diverse perspectives and challenges. Actors can align their efforts to the development of the common vision for the city's future.
- **Communicate and share the vision:** Share this collaboratively created vision. Use language – simple, visual, relatable and concrete – that is understandable by all to spur all toward collective action.

Cultivating and nurturing collaboration
Strengthen relationships between actors in the ecosystem. Build and maintain trust. Trust-based, collaborative relationships across a local ecosystem are essential to be able to take difficult decisions, concerted actions and stay on course over time. To enable these relationships to develop over time, hold and curate space - physical, digital, and otherwise - in which stakeholders from across the ecosystem can begin to interact and collaborate. Cultivate and nurture collaboration built on shared, distributed leadership toward the climate-neutrality goals.

That means:

- **Facilitate exchange:** Collaboration requires cities to invest in the conditions, the settings and spaces in which a plurality of actors can engage, learn and collaborate. Such conditions aim to foster a culture of shared purpose, participatory governance and distributed leadership in alignment with expectations and efforts.
- **Foster connection:** Create and nurture opportunities for relationships to develop between diverse people, organisations, and institutions. Enable connections between those whose experience, imagination and understanding of problems differs from those most commonly involved in decision making.
- **Address conflict:** Disagreements happen. Conflict may occur. Recognise and validate the experiences, fears and determination that underpin each other's convictions. Demonstrate how to thoughtfully propose and accept compromises that serve the ecosystem's shared understanding and vision.

Building the capability of the ecosystem to act
As the transition towards climate neutrality evolves and action is taking place, the diverse actors in the ecosystem will be dealing with complex and evolving challenges, but also with potential windows of opportunity. Create the conditions and promote spaces for stakeholders across the ecosystem to exchange, learn, reflect and work together on their challenges and opportunities. Recognise the possibility to help build individual stakeholder's capabilities to act as well as the cumulative capability of the ecosystem as a whole.

That means:

- **Accompany existing change-makers:** Create shared, safe spaces and conditions for interaction, dialogue and experimentation with existing change-makers from across the local ecosystem. This can help these actors manage conflicts, dilemmas, stagnant situations, power dynamics and tensions as they continue their efforts, as well as catalysing bottom-up social innovations.
- **Create a fertile environment for new ideas:** Support and enable the development of new individual and organisational capabilities. Foster creativity, exploration, co-creation, collaboration and facilitate the integration of multiple perspectives into transformative action with social innovation.

Stewarding the shared vision
Work constantly on the alignment of stakeholders and of all interventions and investments across the ecosystem. It can be difficult to really coordinate in detail the actions of all actors. But it is important to facilitate the necessary relationships, interactions and awareness of actors' interdependency to guarantee overall coherence and enable synergies and collaboration. Where necessary, keep realigning

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actions and connections, re-evaluating trajectories for action so they stay in line with the previously co-created shared vision and related impact.
That means:

- **Test ideas against the vision:** As ideas are generated by stakeholders across the ecosystem, test them against the shared vision. Consider whether they privilege certain elements of the vision over others. Invest energy, time and relational effort into ideas that can achieve the co-created shared vision, as determined by all those involved across the local ecosystem
- **Identify new opportunities:** Achieving climate-neutrality necessitates learning when previously unknown opportunities arise. Whether these are opportunities to involve new actors in collaboration, test out new ideas, invest in new processes or otherwise, stay diligent in pursuit of identifying potential for action.
- **Advocate for the shared vision:** Be a champion of the co-created shared vision. This shared narrative and understanding can serve both as the foundation for trust and commitment across the local ecosystem as well as the necessary north star to guide collective action(s).

3.2 Building a Strong Mandate

A strong mandate for accelerated climate action ensures alignment of all actors around the actions and investments needed to achieve climate neutrality by 2030. It protects the city's dedication to change, which entails consistent prioritisation through changes in political leadership and building urgency among established stable administrative leaders.

Citizens' concern regarding climate and willingness to make it a priority has not become a clear direction for practical transformative action in cities. By signing up to the 2030 ambition through the Cities Mission, cities showed a first level of commitment. Now, this needs to be translated into a practical and cross-departmental commitment to climate action.

The full local ecosystem of actors in the city - including citizens, civic groups and the media alongside the private and public sector - needs to be positively engaged in the challenge. Creating a dedicated Transition team to align these multiple actors is key. It enables meaningful collaboration, involving the knowledge, skills and perspectives of the different disciplines and actors across the city for the Mission. Communication, radical collaboration and positive engagement across the political spectrum, including with other levels of government will enhance mandate at city level.

How to Build a Strong Mandate

Building a strong mandate within city government

Create (or strengthen) an internal team in the city government, with strong relationships at a senior strategic level and at an operational level across key departments (e.g. the finance and economic team). Such strong connections can be challenging to create but they support internal city teams in building your mandate for strong climate action. It contributes to securing stronger internal commitment, shared responsibility for achieving the Mission and practical mobilisation of resources.

That means:

- **Set-up or strengthen an internal team:** Promoting the climate transition requires time, resources and capacities. It is therefore necessary to create a space for structuring, engaging and visualizing the pathway towards the transition. Ideally, this internal team involves municipal personnel from as many departments as possible.
- **Mobilise information, resources and capacity:** The climate transition does not start from scratch. The municipalities already have capacities, resources and information that are important to advance the transition. However, these might be left in specific departments and remain unknown to the rest of the municipality. For this reason, it is very important to identify and mobilise the resources and capacities.

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Building a strong mandate within the local ecosystem
Develop and champion relationships, networks and new governance models to build a mandate and momentum for the Mission across the city. This puts collaboration with the local ecosystem of local actors – such as the public and private sector, academia, civil society and citizens and the media – at the core of all climate action. A multi-stakeholder Transition team, alongside the internal city team, is necessary to enable collaboration in the ecosystem. Over time, such a cross-stakeholder mandate enables the development of consensus around accelerated action, compromises for the collective good and commitments for the Climate City Contract. This facilitates pathways for collaborative action, greater innovation, and joined-up investment.

That means:

- **Develop a multi-actor Transition team:** Since a climate transition exceeds the capacities of any single actor, the team that coordinates the transition cannot be made up solely of personnel from the city government. A Transition Team made up of local actors (from the public, private, academia and civil sector) makes it possible to join forces, resources and capacities to activate the transition.
- **Build new collaborative governance structures and networks:** Networked governance encourages the sharing of responsibilities by all the actors involved. It entails engaging the ecosystem of local actors in new structures such as the Transition team but also setting up new mechanisms for collective accountability. This type of governance benefits from collective assets and collaboration, thus reducing the risks associated with dependence on particular actors.

Building a strong mandate with other levels of government
Strengthen contacts between the municipal level and regional, national and EU stakeholders around the Mission. This enables the building of a shared understanding of how to coordinate action towards Mission outcomes: for example, around investment, policy alignment, areas of specialisation or common challenges, data infrastructure, knowledge sharing and peer learning, or regulatory issues. This can happen through national Mission platforms or networks between the cities.

That means:

- **Strengthen buy-in:** The climate transition extends beyond political cycles and city limits, since the programs and policies at the city, national and European levels need to be aligned and coherent. Collaboration across political parties, with other cities or administrative levels (regional, national governments) can be essential to legitimize the transition locally.
- **Clarify mutual commitment:** Achieving climate neutrality requires cities to implement actions that need the support of the regional or national government (for example, defining instruments that promote the supply of 100% renewable energy). Continued interaction between local, regional and national governments is crucial to jointly assume mutual, transparent commitments recognized by all administrative levels.

3.3 Understanding the System

Understanding the challenge at hand *from multiple perspectives* and learning from past actions has real potential to accelerate the impact of climate efforts. The issues cities face in mitigating and adapting to climate change are not straightforward, so uncovering the deep barriers and root causes that block necessary changes is crucial to enable transformation.

As noted above, the sections of the Climate Transition Map – a visualization for a systemic transition pathway – are not to be considered linear. Efforts to understand the system need to be taken at the beginning of an intervention and continuously while aiming to transform it.

This means moving across value chains, sectors and scales, from the micro to the macro to uncover key interdependencies between challenges. Leading this work, a data-driven Transition team strives to actively engage stakeholders across the city in an honest collective reflection on the successes and

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difficulties of climate action so far. What is required to close the gap between what current policies can achieve and what is needed for climate neutrality? Turning this evolving understanding into future scenarios of what change might tangibly look like can also help inform the different actors about what is possible and what choices entail.

How to Understand the System

Data

Work with all actors across the city to aggregate information and data. This is essential in order to create a shared overview and understanding of the required scale and scope of change, both in terms of all the necessary actions and corresponding investments. Bring together the different perspectives, experiences and lessons of existing climate strategies and efforts, to identify gaps and make sense of the city's emissions as a connected system. This is the necessary baseline for a solid Climate City Contract **Action Plan and Investment Plan** including the commitments and actions from the municipality as well as other stakeholders.

That means:

- **GHG emission inventory:** It will be necessary to assess social, economic and environmental drivers to ensure acceptance as well as technical and financial feasibility of the transition towards climate neutrality. To develop a comprehensive approach towards carbon accounting, it is advised that cities, in complement to tracking of scope 1 and 2 emissions, also start identifying and gather data for scope 3 emissions
- **Analyse action gaps and capital needs:** A comprehensive analysis of the city's current gaps for achieving climate neutrality by 2030 based on existing documentation / information is a good place to start. Reflect on current climate ambitions and policies (local/regional/national), their inadequacies and successes. Analyse existing GHG reduction targets and the progress towards achieving them so far. Collect existing cross-sectoral or sectoral strategies as well as action and financial plans relevant to climate change, mitigation or GHG emissions reduction to characterise action and capital needs.

Connections and relationships

Build on the data gathered to map – i.e. connect - the various systems at play (technological, institutional and organisational, regulatory, financial, political, social and behavioural systems). This is important to turn data and information into a shared understanding about key challenges and opportunities. This process should be participative, including diverse stakeholders and communities. The success of this process relies on the ability to ask the questions that reveal the dynamics of the systems at play: what are barriers to change, local strengths and opportunities, relationships and interdependency patterns, resource flows and risks.

That means:

- **Map the systems and resource flows:** A current state analysis facilitates a strong understanding of the systems, their interconnections, impacts and key patterns. Assessing flows (natural, financial, human...) and interdependencies sheds light on major dynamics at play, such as vicious cycles. This assessment highlights dynamics which block change. This mapping of social-cultural, environmental and economic factors can thus guide the necessary reconfiguration of urban structures, especially when it includes the perspectives of citizens, public and private actors.
- **Identify key obstacles:** Assessing critical gaps, barriers and challenges faced is key to achieve climate neutrality by 2030. General governance issues or knowledge gaps, sector-specific gaps and assistance needs, local specificities of climate policy development and implementation, gaps in funding or financing capacity, among many others, are likely to be highlighted by the mapping of systems. These barriers all contribute to building a full picture of the situation.

Future scenarios

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Turn system maps into a practical tool for decision-making by developing scenarios: how possible starting points in the system unfold for transformation (optimal intervention acceptance scenario, pessimistic acceptance scenario for example). Scenarios provide lesser or greater degrees of detail depending on what is currently possible locally. Scenarios identify synergies and co-benefits, but also risks and trade-offs of interventions. They illustrate whether various starting points - or levers of change - and policy mixes create plausible pathways towards transformation, specifying interdependencies, impact (quantitatively and qualitatively) and funding strategies.

That means:

- **Identify levers of change:** Levers are mechanisms or strategies for change. Explore how various levers of change (such as technology; governance, policy and regulation; finance and business models; culture, citizen participation and social innovation; capacity and capability building) can help address gaps and barriers previously identified.
- **Model options, capital formation, funding strategies:** The development of future scenarios starts from the identification of levers of change. Scenarios model how these various intervention points impact the city as a whole and its trajectory toward net zero. Scenarios specify decarbonisation impact and trade-offs (quantitative and qualitative), including where capital originates and funding needs.

3.4 Co-create a Portfolio

Achieving the Mission's 2030 climate neutrality target, as well as generating important environmental, economic and social co-benefits, can only be achieved through coherent interventions using multiple levers of change. Isolated solutions and multiple but uncoordinated roadmaps do not trigger the type of transformation reaching climate-neutrality requires.

The co-creation of a portfolio, facilitated by the Transition team, is an ongoing process that brings together existing policies, actions and programmes with new or accelerated interventions in a set of transformative actions to achieve the 2030 goals. A portfolio of transformative interventions brings together efforts across departmental silos and diverse stakeholders. It assembles a set of coherent initiatives which can strengthen each other and strengthen the connections between the multiple actors needed to co-design and enact such portfolio. The portfolio co-creation process itself can help overcome obstacles and enable positive synergies. Ensuring the integration of the portfolio's actions to create pathways for transformation, co-benefits and learning is challenging though and will require specific attention when taking action.

How to Co-Create a Portfolio

Exploring actionable pathways

Organise the evaluation of the various scenarios created when understanding the system. Evaluating different scenarios helps decision-makers identify which sets of interventions would create real pathways toward climate-neutrality. To assess scenarios, pay specific attention to barriers and synergies that may arise, as well as to climate impact, funding options and actions for capital mobilisation. Clarify the expected early outcomes of interventions sets, which will be the necessary conditions to achieve later long-term outcomes. Clarifying this "impact logic" will help generate insights on which actions are working (or not), and for whom, to create a pathway to target. Exploring pathways to change assists the creation of the **Action Plan and Investment Plan** over time (including future iterations of these documents).

That means:

- **Clarify possible actions and financing / funding options:** Identify actions that not only can have the greatest impact and create a pathway towards climate neutrality, but that also those are the most viable, especially financially (for example, because funding is already available or

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because the actors of the city have the knowledge and capabilities to implement actions toward this pathway).

- **Estimate co-benefits and impact:** Actions to mitigate and adapt to climate change can generate significant co-benefits for citizens in other domains such as health, economic activity, resource management or social inclusion, among others. However, interventions can also generate negative impacts such as lack of affordability, displacement of population etc. For this reason, estimate actions' co-benefits and impact to prioritise them.
- **Select impact indicators:** Having a clear and coherent understanding of how an impact pathway and its co-benefits would unfold will support cities in selecting the most useful indicators for Monitoring, Evaluation and Learning (MEL) of actions. Know which quantitative or qualitative data is required to evaluate whether actions are successful enough to actually unlock the targeted pathway to change. This will avoid unnecessary data collection later and support continuous extraction of insights and learning.

Connecting actions

Create and coordinate a comprehensive portfolio of actions out of the identified interventions in collaboration with decision-makers from all the involved stakeholders. Bring together interventions across multiple levers of change (policy and regulatory change, investments, new finance instruments, technological or social innovation) and emphasise how these interventions connect to create pathways toward decarbonisation. A coherent portfolio includes visible early wins, that lead to significant early impact towards the climate-neutrality goal (readily available technologies for example). It also includes experiments, to test innovative options that create insights for future decisions. Where available solutions are currently less clear, new ideas need to be tested to produce additional understanding of what works.

Detail progressively the portfolio's actions in the successive iterations of the **Action Plan** and connect the set of actions to the necessary resources to finance this portfolio in the iterations of the **Investment Plan**.

That means:

- **Actions with quantified impact:** Include interventions whose contribution in the portfolio will accelerate the realisation of the ecosystem's shared vision for change and decarbonisation.
- **Policy:** Build into the portfolio policies that enable the creation of safe spaces for innovation experimentation (e.g. innovation labs, regulatory sandboxes). They are crucial to designing new actions overcoming barriers to decarbonisation.
- **Finance:** Incorporate in the portfolio interventions that reroute existing public investment streams and leverage private or participatory finance (city-sustainability bonds, participatory budgeting, climate budgets for example). New financial instruments are enabling actions necessary to the portfolio's coherence and its implementation viability.

3.5 Take Action

Implementing a portfolio of transformative actions for the transition towards climate neutrality is not a linear path. Practical application can be confronted with many operational or financial uncertainties. These difficulties are eased when a city experiments with new collaborative ways of working.

Ongoing communication is critical to combine efforts across the local ecosystem and attract a wide range of resources from the public, private and civic sector. Taking action also requires great strategic commitment and detailed planning, including investment planning. Action involves a high degree of tactical flexibility and experimentation, where needed.

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Experimentation makes it possible to explore new technological solutions, new partnerships and ways of resourcing and investing, as well as behavioral and cultural changes (values, attitudes, perceptions, assumptions). Understanding and tracking why some approaches and alternatives work, and others do not, contributes to determining the portfolio's ongoing feasibility, impact and social acceptability.

How to Take Action

Sharing the portfolio

Promote and communicate the emerging portfolio of transformative actions across stakeholders, citizens, and society at large. This communication builds momentum and strengthen the local ecosystem that contributes to the portfolio's creation, delivery and its evolution over time. This generates new narratives, evidence and credibility that will lead to in-depth changes in the mindsets, interaction, and involvement of stakeholders vis-à-vis the Mission's climate-neutrality goal and the portfolio.

That means:

- **Attract diverse resources:** Leverage the portfolio and the dynamic local ecosystem as attractors of talent and investment, of further action and learning. Creating attractivity around the portfolio and local ecosystem mobilises new actors, investors, partnerships and more diverse actors around the transition.

Implementing

Local governments, utilities, large corporate organisations, SMEs, households, residents and community groups all play an essential role in the implementation of the portfolio. Enabling strong connections and a shared understanding of priorities between stakeholders makes the portfolio of actions viable. The level of commitment and engagement with the portfolio of actions will depend on the mandate and capacity of each actor. Therefore, it is crucial to anchor implementation in inclusion, intersectionality and social justice for a just transition. The Transition team coordinates this implementation across different organisations and groups, creating reviewing opportunities for greater synergies and co-benefits across the city. In some cases, it might be helpful to link impact indicators to the city budget to increase commitment and ensure efficient, orchestrated implementation of actions.

That means:

- **Operational planning:** Mobilise necessary ecosystem actors for the implementation of the multiple interventions of the portfolio. Organise responsibilities and timelines while staying conscious of the need for continuous coordination and collaboration of these actors to stay on track. Having milestones that are responsive to the evolving context is essential.
- **Financial planning:** With the portfolio's actions and its purpose set out, analyse costs, risks and allocate capital. Plan risk mitigation strategies and risk monitoring. Capability building in the city government might be necessary to adapt expertise and administrative structures to the financial needs of the portfolio.
- **Do real world action:** Implement the portfolio's actions previously planned. The Transition team should here sustain coordination across the ecosystem as well as a feeling of ownership and commitment to action.

Tracking progress

Follow with all relevant actors how portfolio actions contribute to the city's achievement of its climate-neutrality goals and impact. Focus on ongoing, transparent learning and a culture of mutual accountability across all stakeholders through a practical data-driven approach. This means focusing continuously on obtaining signals of early outcomes advancing the city in the right direction. The aim is not just to see whether individual actions have had results, but to understand the underlying complementary shifts (in policy, regulation, behaviours) that may be needed to succeed. Such ongoing generation of insights is critical and supports the communication of hard-to-measure or hard-to-define co-benefits (such as enhanced participation and governance or improved population health).

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That means:

- **Keep connecting across actions:** The Transition team ensures the continuous coordination of portfolio's interventions and of actors of its implementation. Monitoring based on a set of indicators (KPIs) is usually effective to track diverse actions, coordinate them and quantify their outcomes. Consider monitoring activities during implementation: ongoing data collection and collective synthesis, use of pre-defined indicators and data sources.
- **Look for qualitative insights and signs of change:** Early signs of change are often qualitative impacts based on the perceptions or subjective understanding of a diversity of local actors. Therefore, it is important to develop a shared view on these systems-wide shifts (behaviour changes for example) with stakeholders. Towards this, use previously identified impact pathways (with early and later outcomes) to recognise shared learning goals, facilitate learning and sensemaking process and integrate qualitative and quantitative data for useable insights.

3.6 Learn and Reflect

Collective learning builds the shared knowledge and capabilities necessary to catalyse change at speed. In the current context, the way forward is not always clear and many of the steps towards climate-neutrality are yet to be discovered. It is thus critical to recognise and resource learning, reflexive practice and adaptive management, both within the municipality and between diverse actors.

The ability to generate data, information and knowledge about actions implies having processes of observation, stock-taking and sharing in place. These processes are the basis for a city's Transition team to facilitate sensemaking, reflection and synthesis with its multiple and diverse actors, in order to generate shared insights about where to go next. Acting upon these insights, in an ongoing manner, creates a learning loop which accelerates change by progressively and continuously moving towards the best possible pathway towards climate-neutrality. The continuous application of learning, through pivoting and adaptive decision-making, is what makes implementation resilient and impactful.

How to Learn and Reflect

Making sense collectively

Facilitate, collect and disseminate learning among actors of the ecosystem, about all the different actions of the portfolio. Taking a traditional approach of analyse, plan, deliver may harbour the risk that cities invest both time and money in solutions that are not viable under real-life conditions. This approach may also risk creating lock-in effects along unfavourable pathways and siloed actions that stray away from intended outcomes and impacts. To address this, taking a reflexive approach of test, learn, iterate, adapt helps build confidence in the direction and progression towards impacts pathways and ensures real-time and actionable insights to inform decision-making are generated. Such a learning-focused approach enables all relevant stakeholders to shape the work as it develops and course-correct along the pathways through continuous stocktaking and sensemaking.

That means:

- **Sharing learning and insights:** Peer-to-peer learning processes not only enable knowledge transfer and dissemination, but also build mutual trust in the local ecosystem. It creates a safe environment to deliberate upon barriers and failures. Ongoing sharing could potentially create a culture of course-correction based on actionable insights. These interactions, when happening between cities, also accelerate trans-local, regional and national collaborations, which could further accelerate the transition to climate neutrality through joint actions.
- **Synthesise:** Involve the whole ecosystem in discussions to surface learning. Sensemaking processes create a culture of challenging assumptions and identifying evidence of change. In turn this supports good governance and enables adaptive management. At the same time, the body of evidence generated enables the synthesis of impacts, resulting in positive shifts in engaging the local ecosystem and potential funders.

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- **Connect to the big picture:** Strategic learning strengthens new collaborations and organisational capabilities and aligns actions towards the long-term vision and not only discrete technical solutions or services. Learning cycles generate robust evidence and knowledge on scalability and transferability of actions & implementation across critical emission domains, levers and city contexts. In the long-term, sustain efforts and dedicated resources invested in learning activities to gradually transition the city's wider organisational practices, culture, and mindset.

Adapting and pivoting

Work constantly on adapting portfolio actions to the changing context and new insights. This makes it possible to adjust or shift efforts when necessary. Re-evaluate trajectories for action to progressively strengthen the pathways to decarbonisation and enable changes in direction when goals are at risk of being missed. In other cases, the original assumptions and rationale of the impact pathways may need to be revised, based on sensemaking insights and changing conditions in which implementation processes and actors operate. Create a culture in which pivoting needs and challenges in an evolving context can be signalled early and responded to in an agile manner. Learning & enhanced capabilities also bridge the gap between city's action, ambition and constant alignment with goals, which accelerates and increases probability of achieving of tangible impact & co-benefits.

That means:

- **Adjust goals and pathways:** MEL activities help focus attention on both what is within city's control (usually actions and outputs) and what it is contributing to outcomes and impact (other context-related effects). Use these insights to revise strategies and targets when conditions continue to change, this creates adaptive governance. Focus on generating information and insights as implementation proceeds, building evidence to adjust the trajectory towards transformative outcomes and ultimate impact.

- **Revise the portfolio:** Ensure flexibility and avoid fixing a set of highly rigid indicators and metrics at an early stage that cannot easily be revised later – a set and forget approach. If this happens, true learning is diminished and actions can go off track due to measuring irrelevant data. Frequently revisit the impact logic (expected early and late outcomes) and the portfolio interventions. Reframe actions by critically reflecting on implementation, sensemaking insights and stock-taking. Develop a culture of course-correction based on testing assumptions gained from learning and linking them to decision-making, policies, and leadership.

3.7 Make it the New Normal

To accelerate the transition to climate neutrality, cities need to embed new good practices that speed up inclusive decision making, improved multi-actor collaboration and enabled effective implementation. This can include anything from new budgeting and procurement practices to new ways of combining solutions or forming diverse, effective teams.

It is important to work towards a new culture of embedded practices by identifying new processes that make notable differences, fostering leadership, nurturing networks and trustful relationships. This new culture requires to change guidance and training in order to make new ways of working a joint capability and shared value of all involved actors. In the long run, new standards and processes need to be formalised and embedded in practice so that the local stakeholders can recognise how they can benefit from them. This supports a long-lasting resilient approach that can persist over time. Innovative regulations and policy contribute to establishing this new norm, sometimes enabling replication in other or larger urban contexts when involving multiple governance levels.

How to Make it the New Normal

Enabling replication

Organise the collection and aggregation of experiences and data across the local ecosystem. Communicating these learnings to diverse audiences strengthens shared awareness of the need for

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action. The knowledge transfer envisaged to support mutually beneficial collaborations between the societal players taking part in the city's activities showcases how it can be done and makes the value created and the co-benefits of transforming practices visible. The learning & reflection process will strongly feed into this in order to enable the replication to other portfolios and cities, always keeping in mind that local factors mean that 'scaling' is never easy. Replication is not about copy-pasting solutions, but contextualising and tailoring structures, processes and practices to the local ecosystem.

That means:

- **Report and amplify:** In relation to taking action and tracking progress, a MEL framework and dashboard will support the monitoring, reporting and communication of the progress made. Mechanisms put in place by cities to embed transition to climate neutrality within your local context, organisational structures, teams and processes will need to be amplified to demonstrate what change looks like in practice.
- **Advocate and promote** Thanks to a better understanding of the systems and development of the local ecosystem, key identified levers of actions/change will help determine the most adequate routes and ways to dedicate efforts to effectively advocate to make climate-neutrality the new norm and promote progress made by cities.

Formalising new practices

Use relationships built with stakeholders like regional or national networks to help formalise new practices developed through the portfolio - such as new participation or stakeholder coordination practices, budgeting and data approaches, project planning and investment methods, governance and organisational innovations, or regulatory tools. Many of these can be adapted in larger or different settings, and also benefit other policy fields. Cities can leverage the local ecosystem and community of practice to help with the adoption of new practices. This can mean setting new organisational structures within cities, across cities and advocating for the creation of new standards and policy change at regional, national and European levels.

That means:

- **Create rules and new standards:** For practices to be largely adopted by cities, a number of rules and standards will need to be agreed upon for these to permeate local institutions. To facilitate the adoption of new practices, a working group or taskforce can be set up to collectively propose these sets of rules, standards (management and technical) and mechanisms for broad adoption through the networks.
- **Change policy:** Supported by policy overview and stakeholder engagement, policy advocacy enables better policy transposition, cross-cutting policy dialogues, and governance innovation to accelerate the adoption of new practices.

Embedding new practices

Diffuse and embed successful practices developed in the portfolio through professional practice. This ensures that climate action is part of all decisions made across municipalities and other stakeholders, so that decision-making in a city means shared responsibility for reaching climate neutrality. Embedding in practice also ensures that innovations go beyond creating 'beautiful exceptions.' This entails learning from the Transition team, from the national platforms and from shared observations based on the range of experiences in different contexts and cultures. As part of this, senior leaders need to champion changes in organisational culture, norms, governance innovation and culture of systemic innovation through capacity building programme and guidance.

That means:

- **Create training and professional practice:** Link with the new capabilities, trainings and tools built under the NetZeroCities programme and the advice along the learning journey brought by Climate Neutral Cities Advisors. Beyond the lifetime of the NetZeroCities programme, it is

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important that mechanisms are established for the legacy of these professional practices and sustained by the broader community of practice.

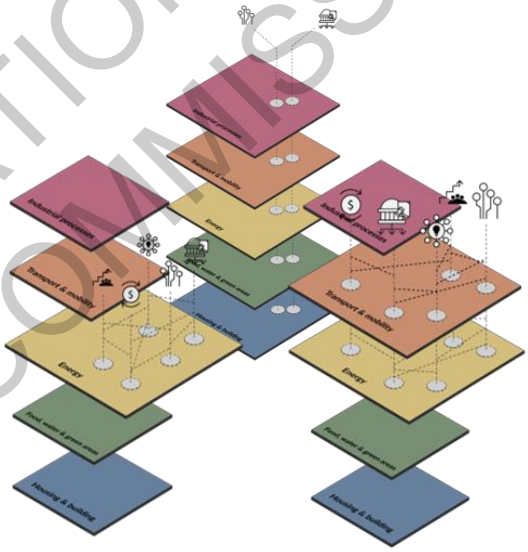
- **Change guidance:** Incorporate and scale social innovations and conduct change management campaigns. Providing illustrated examples of the challenges that were faced, how these were overcome and how they can be replicated in different contexts helps embed the transformative practices of these examples.

4 WP6's contribution to the Pilot City Programme and the Climate City Contract

4.1 Summary of Contributions to the Pilot City Programme

At the outset, prior to developing the call criteria, there was a query about what would constitute a successful systemic pilot. Considering the diverse range of cities applying and the numerous potential interventions, it posed a challenge to identify commonalities. In collaboration with WP4, we identified the crucial components and reached the following conclusions:

Good pilots…



- start from the recognition that, in the words of the Mission Board, "The main obstacle to climate transition is not a lack of climate-friendly and smart technologies, but the capacity to implement them. The present silo-based form of governance, designed and developed for traditional city operations and services, cannot drive an ambitious climate transition. Therefore, a systemic transformation is urgent."
- aim for systemic transformation by purposefully combining multiple levers of change to build capacity for accelerating impact. This effort could focus in one or several key emissions domains.
- are rooted in a local understanding and collaborative self-assessment of key barriers or opportunities for accelerating the climate transition that a city is facing. Hence the pilot cities focus on the key next steps a city should explore to reduce its harmful emissions, with input from multiple actors across society.
- will accelerate their own learning about how to achieve breakthroughs and overcome systemic barriers.
- show a diversity of pathways towards transition that other cities across Europe can learn from and adapt to their own context.
- unlock internal change at city councils creating stable cross-departmental structures connected with the top management of the cities.
- foster solid bonds among city stakeholders with a ‘quintuple helix’ logic: other public administrations (regional/national), private sector, academia, civil society, and mass media.
- reinforce urban climate neutrality endeavour at the member state level, through a ‘snowball effect’ connecting the pilots with the transformation of other cities in the same country.

Based on that overall assessment, the framing, communication, call- and assessment criteria were developed. Details on these can be found in the deliverables of WP4 (Open Call Process Guidebook; Text of Open Call and Related Communication). For the benefit of this deliverable, we highlight the contribution of WP6 by adding the slides used to induct the Independent External Evaluation Experts in the annex. It includes the overall framing of the pilots (slide 18-22), an overview of key themes (e.g.,

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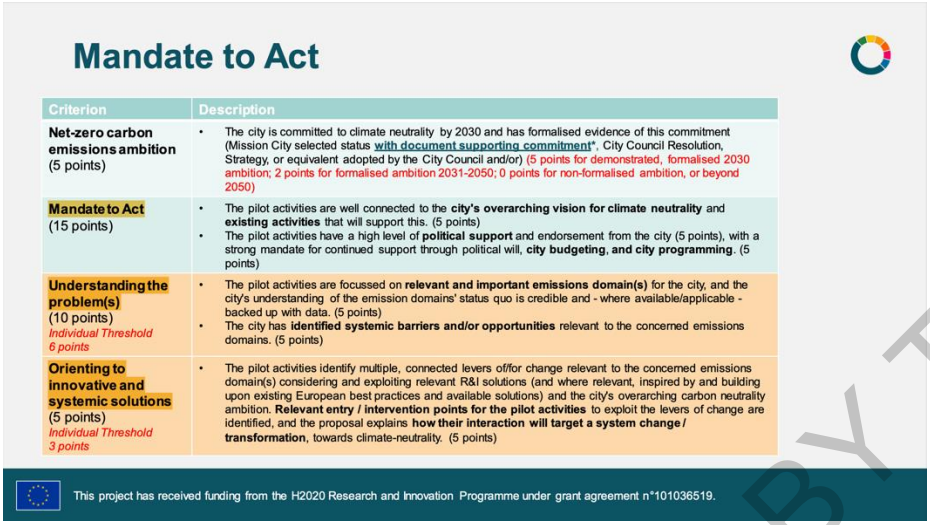
systems innovation; social innovation; citizens engagement, finance) and the evaluation criteria (slide 48-50). Additionally, we highlight key slides on the framing and evaluation criteria below:



Mandate to Act

Criterion	Description
Net-zero carbon emissions ambition (5 points)	• The city is committed to climate neutrality by 2030 and has formalised evidence of this commitment (Mission City selected status **with document supporting commitment***, City Council Resolution, Strategy, or equivalent adopted by the City Council and/or) (5 points for demonstrated, formalised 2030 ambition; 2 points for formalised ambition 2031-2050; 0 points for non-formalised ambition, or beyond 2050)
Mandate to Act (15 points)	• The pilot activities are well connected to the **city's overarching vision for climate neutrality** and **existing activities** that will support this. (5 points) • The pilot activities have a high level of **political support** and endorsement from the city (5 points), with a strong mandate for continued support through political will, **city budgeting, and city programming**. (5 points)
Understanding the problem(s) (10 points) *Individual Threshold 6 points*	• The pilot activities are focussed on **relevant and important emissions domain(s)** for the city, and the city's understanding of the emission domains' status quo is credible and - where available/applicable - backed up with data. (5 points) • The city has **identified systemic barriers and/or opportunities** relevant to the concerned emissions domains. (5 points)
Orienting to innovative and systemic solutions (5 points) *Individual Threshold 3 points*	• The pilot activities identify multiple, connected levers of/for change relevant to the concerned emissions domain(s) considering and exploiting relevant R&I solutions (and where relevant, inspired by and building upon existing European best practices and available solutions) and the city's overarching carbon neutrality ambition. **Relevant entry / intervention points for the pilot activities** to exploit the levers of change are identified, and the proposal explains **how their interaction will target a system change / transformation**, towards climate-neutrality. (5 points)

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On can clearly see the typical characteristics of systemic approaches (viewing and aiming to understand of the whole system, incorporating multiple perspectives, working in portfolios, mainstreaming learning etc.) as outlined in section 1.4.

4.2 Summary of Contributions to the Climate City Contract

WP6 played a crucial role in developing the Climate City Contract Templates by drawing on the insights gained from Viable Cities and other sources. Our team recommended a meta strategy that combines various roadmaps and plans from cities.

Moreover, we emphasized that the Climate City Contract must be relatively simple, straight forward, yet holistic and an iterative and co-created process involving all stakeholders in the city. This approach ensures that everyone has a say in the transformation process, leading to greater buy-in and successful implementation. Therefore, we suggested a modular, non-linear, and inclusive framework that allows multiple people to work on it.

Although funding from NZC did not allow us to create the ideal modular and interactive CCC, we integrated other essential aspects, such as the identification of systemic barriers and opportunities to achieve 2030 Climate-Neutrality (see section 3.3. in the Action Plan) and the use of a portfolio (see section 4.2. in the Action Plan).

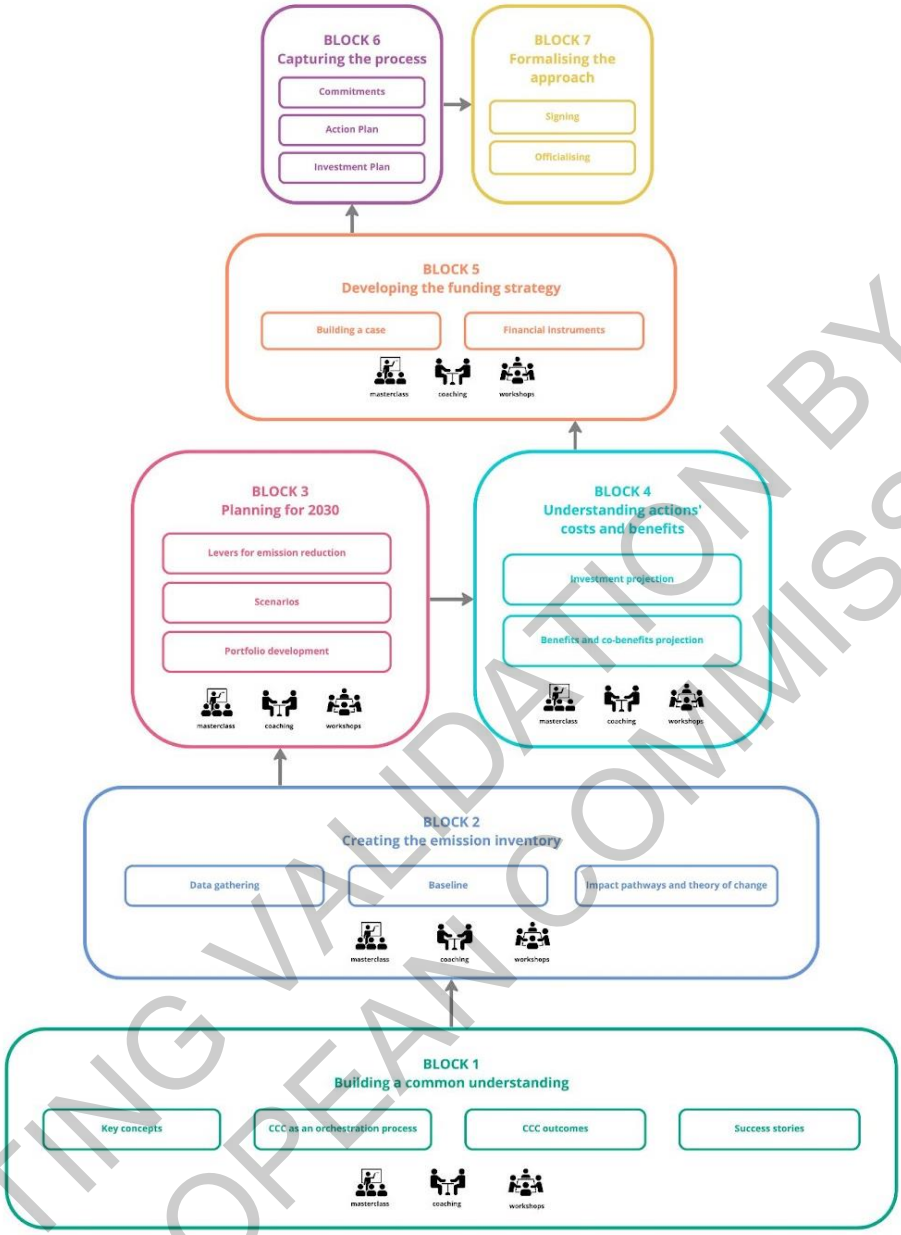
Following the development of the initial round of CCCs, we identified several areas for improvement in the templates, which we could undertake to create even better ones.

5 Ongoing further work and tasks ahead

The Climate Transition Map has also been fundamental to developing the capability building approach including the Bootcamp and Summer schools. A visualization of the capability building approach for the BootCamp can be found below. As one can see the main services – masterclasses, coaching and workshops – are built around the key journey undertaken by cities, rather than a stand-alone intervention. Purposefully connecting to the CCC process (and therefore the Climate Transition Map), and the activities that city counterparts will undertake anyhow was a conscious decision. More details can be found in the deliverable “Report on capacity & capabilities building approach for systemic transformation in pilot cities”.

Going forward it needs to be noted that the Climate Transition Map and all related pieces will be reviewed and improved regularly. The feedback and experiences from these events will, of course, be integrated

and used to improve the guidance given on the portal. Moreover, several services still need to be launched on the portal.



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