NET ZERO CITIES

Report on capacity & capabilities building approach for systemic transformation in pilot cities

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NetZeroCities - Contract Number: 101036519

Project officer: Mirjam WITSCHKE

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Number of pages	30
Document type	Deliverable
Work Package	WP6
Document number	D6.4
Issued by	DML BV
Date of completion	2023-02-27 12:34:10
Dissemination level	Public

Summary

Radically reducing greenhouse gas emissions requires urgent transformative and collaborative action at scale. Quick technological fixes are not enough. Cities account for roughly 70% of global CO_2 emissions, and are often vulnerable to its direct and indirect effects. The problems cities face in mitigating and adapting to climate change are complex, and are often reinforced by the economic, financial, governance, organisational, political, and cultural systems in place. Inherited structures - such as deeply ingrained organisational models, policy frameworks, individual practices or institutional mindsets - can reinforce the status quo and prevent the necessary transformations. Accelerating emission reductions thus means building the institutional infrastructures, capacity and capabilities in local government to lead such a transformative agenda to unlock new pathways towards climate-neutrality. This report builds on insights from interactions with the 112 cities of the European 100 Climate-Neutral and Smart Cities by 2030 Mission (in the NZC Cities Needs Assessment and NZC City Advisors? direct work with these cities) as well as the work of multiple expert organisations (in NZC WP6-10) to identify what this capability gap is and orient European, national and local decision-makers? attention to their respective role in closing this gap. Cities are diverse entities, in the size, population, density, economic activity and culture. A deep understanding of local systems is necessary for emission reduction. In this, it is critical that we build this understanding with the perspective of connecting climate actions in whole-city cross-sectoral portfolios (as opposed to focussing purely on municipal actions) and intentionally collaborating with many actors - locally and across all levels of governance. To work in such transformative ways, changes have to quickly make their way into local government organisational structures: building new forms of collaborative governance, developing agile learning and innovation practices through what we call Transition Teams. Many cities already understand this and have begun to shift their approaches. They need to orchestrate a collaborative transition at speed: to take charge of the alignment and coordination of necessary local actors across sectors and their actions to achieve a climate-neutral future. To do this, a range of skills and competences become essential, ranging from transition leadership and ecosystem collabor...

Approval

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2023-03-01 10:10:39	Mr. Thomas OSDOBA (CKIC)

Leading systemic transformation in cities

A capability building approach for systemic transformation in NetZeroCities' Mission and Pilot Cities

Deliverable D6.4

Version N°1

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Document Information

Grant Agreement Number	101036519
Project Title	NetZeroCities
Project Acronym	NZC
Project Start Date	01 October 2021
Related Work Package	WP6
Related Task(s)	Task 6.4
Lead Organisation	Dark Matter Laboratories
Submission Date	27 February 2023
Dissemination Level	Public

History of reviews

Date	Submitted by	Reviewed by (Name & WP)	Version

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Abbreviations and acronyms

Acronym	Description
NZC	NetZeroCities
CCC	Climate City Contract
SNAP	Support and Needs Assessment
PCP	Pilot Cities Programme

Summary

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This report builds on insights from interactions with the 112 cities of the European *100 Climate-Neutral and Smart Cities by 2030* Mission (in the NZC Cities Needs Assessment and NZC City Advisors' direct work with these cities) as well as the work of multiple expert organisations (in NZC WP6-10) to identify what this capability gap is and orient European, national and local decision-makers' attention to their respective role in closing this gap.

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To support such structural changes at the core of cities' functioning - in local government and beyond - NetZeroCities is deploying ways to support learning journeys. We present this approach to building systemic transformation capabilities and capacity in cities in this report, attracting local, national and European policy-makers' attention to 3 dimensions where their respective support is essential:

1. **Accompanying change in Local government:** Our approach aims to support a new core function at the centre of local ecosystem relationships: the Transition Team. It is critical to enable this group to gradually build a local ecosystem of key actors, to work effectively in a

multi-actor and multi-level governance context and to diffuse new ideas and practice through their daily activities.

2. **Leveraging national and regional networks**: This local government shift is best supported when leveraging network dynamics and specifically connections with national platforms. These platforms have a crucial role in embedding change durably in their specific context and gradually extending the ecosystem of change to relevant national and regional actors, mobilising complementary communities of practitioners.

3. **Aligning European initiatives**: To support this effort across 112 cities and beyond, a broad, but above all, aligned European community of supporters and coaches will also be essential. This will ensure the support cities receive from different initiatives is coherent and based on a common language and in line with the overall mission.

Keywords

Climate-neutrality; cities; capability building; systemic transformation; governance; learning

Introduction

Despite severe warnings of consequences, GHG emission reductions across Europe remain slow (see Figure 1). Action might be heading in the right direction but its pace is still largely insufficient to trigger the necessary transformation of high-emitting sectors. Drastic acceleration is required and for this a U-turn in approach, from incremental to transformational change, is necessary.

Representing 70% of global CO2 emissions and key influencers of the way we collectively live and work, cities are in a prime position to spearhead this acceleration of emission reduction. Having pledged to lead on climate action, the European Union has launched the mission *100 Climate-Neutral and Smart Cities by 2030* to support European cities in accelerating their transformation towards climate-neutrality. The Mission, supported by NetZeroCities (NZC) in practice, recognises the need for cities to **develop new strategies and capabilities to enable such acceleration**, to enable systemic transformation.
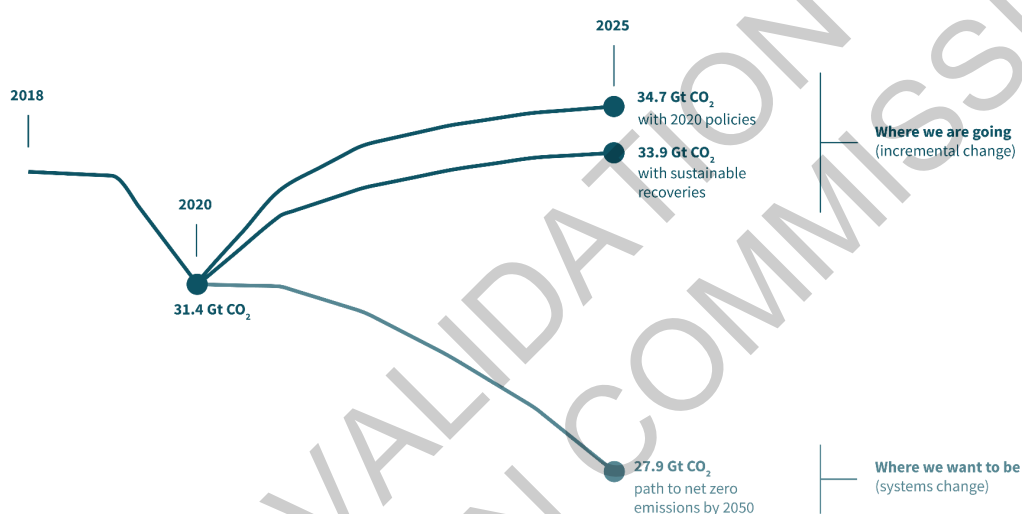

Figure 1 : Global gigatons of CO2, The Guardian adapted from IEA, 2021

Climate change, pollution and biodiversity loss are manifesting themselves more and more clearly in natural biological and chemical systems. Achieving climate-neutrality thus requires rapid technological changes shifting the way our current society impacts these systems. But the current crises are also powered by our economic and financial systems, power dynamics and the way they are institutionalised, manifested and replicated in human behaviours and values. What may seem like quick technology wins are frequently elusive and complex changes whose implementation is hampered by the way we organise. If cities' approach to change is blind to these institutional, organisational and cultural barriers the necessary scale and pace of transformation needed is unlikely to happen.

> "***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***." – Proposed Mission:100

Procurement rules, hierarchies of responsibilities, multi-level regulation, outdated data tools, among many others, all contribute and reinforce this problem. This issue is compounded by the fact that none of these structures of local governments were established to support transformation of the scale now needed to reach climate-neutrality by 2030. Rather, local European public administration was developed to provide stability and public services in the industrial era. Just like many other barriers such as budgeting strategies or top-down relationships with citizens, these practices now impede cities' progress. These practices too require innovation, alongside technological innovation, if we are to reach climate-neutrality by 2030.

A change in organisational structures, practices and cultures is needed in cities and their local government, moving from a top-down single actor form of leadership towards deep collaboration; from fragmented plans and interventions towards portfolios of actions, and from isolated emission analysis towards systems understanding (see Figure 2). This shift is what the *100 Climate-Neutral and Smart Cities by 2030* mission is looking to unlock, it is what NZC calls systems innovation. This shift is necessary to enable a long term strategic process of mobilisation across society to achieve climate neutral and sustainable cities by 2030.
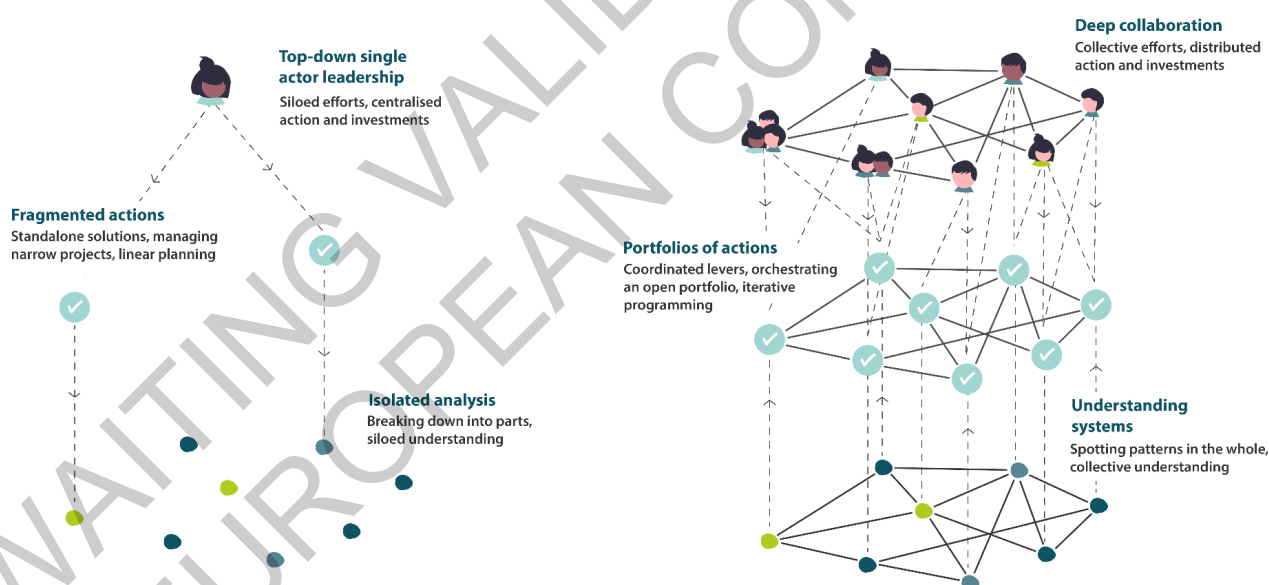
Figure 2 : Systems innovation: a shift in practice

This report builds on insights from interactions with the 112 cities of the European *100 Climate-Neutral and Smart Cities by 2030* Mission (captured in D13.1 NZC Cities Needs, Drivers and Barriers for climate-neutrality and in NZC City Advisors' direct work with these cities through T13.2) as well as the work of multiple expert organisations (in NZC T6.2, T6.3, T8.1, T9.6) to identify what this capability

gap is. We aim to orient European, national and local decision-makers' attention to their respective role in the approach which will be deployed by NZC to support cities in closing this capability gap.

We flesh out what it means to achieve a shift to transformative action and systems innovation (section 1): what new capabilities need to be developed to enable systemic transformation? What capacity do city governments need for this change to be possible? We explore the nuances that come with building new capabilities and capacity in a long-term process (section 2), and present the NZC content framework for doing so (section 3) which will be deployed in the coming months, through the deployment model presented in D3.2.

Note on definitions, as introduced by D3.2:
Capability refers to what a person can do – is capable of - in his or her daily environment, using their skills and expertise for instance.

Capacity refers to what a person can do within (and using) their institutional environment.

To enable transformational change, both are essential. This distinction between capability and capacity highlights the importance of not only focusing on the skills and knowledge of an individual, but also on the institutional, organisational and working environment of that individual. For change to take place, the different levels of an organisation also need to be open to that change.

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1 What are systemic transformation capabilities?

A shift towards collaboration and collective action, towards coherent portfolios of actions based on a cross-sectoral understanding of the emission situation requires changes in three dimensions:

(1.1) having an organisational structure enabling change, with relevant team structures, necessary resources for innovation and learning processes;

(1.2) having the relevant skills to operationalise the new paradigm and

(1.3) having the necessary institutional mental model to support such a new paradigm in the long-term process of the mission.

1.1 Creating organisational capacity for transformation

The need for cross-silo and cross-sector structure: the Transition Team
Leading a city to climate neutrality by 2030 means spearheading radical changes across multiple sectors and domains of actions - energy, mobility, waste and resource flows, construction but also procurement, regulation, and public finance, among others. The collaboration and coordinated action required by this type of change is unprecedented and goes beyond current practices. New modes of collaboration and collective action - of governance - are the real challenge at the heart of the transition to climate neutrality. In NZC assessment of cities needs, drivers and barriers (D13.1), most

cities in the European Mission cite organisational issues and the difficulty of working across organisational and departmental silos, as one of their key barriers and support needs.

For city governments to collaborate with local actors to accelerate these transformations, and thus decarbonisation, it helps to deploy a skilled group with the necessary mandate and capability at the heart of these relationships to orchestrate the process. The role of orchestration and of this team is to **create a favourable context - collaboration and alignment between actors - to justly and collaboratively drive emissions down to zero and achieve co-benefits** such as better quality of life, improved health, job creation or increased community resilience.

In some cities, there are already people, groups or organisations that play at least part of this role. In others, there is a need to establish and develop this strong orchestration capability with a dedicated team spanning across traditional organisational boundaries. In NZC, we call this team a **Transition Team** and seek to accompany cities looking to create such a cross-functional team, starting with our guidance in the Transition Team playbook.

Cities that have already developed this new type of governance structure - a Transition Team - have identified the roles of this group and so the multiple benefits establishing it brings in accelerating change:

- The Transition Team is an **intermediary** to coordinate actors and actions. This intermediary can take the lead and build trust between city government and local actors in diverse sectors.
- This group helps the gradual development of a **long-term financing and governance model** for decarbonisation at scale and at speed.
- It is essential in co-creating **momentum and direction** for work, fosters trust and brings about alignment between actors step by step .
- It allows cities to formulate **cross-sectoral goals**, understand root causes better and tackle complex emission challenges across value-chains and sectors, realising co-benefits and increasing coherence between sectors.
- It enables cities to develop strategies and projects that involve the knowledge, skills and **perspectives of different disciplines and actors** from the civil and private sector as well as academia and media.
- It helps cities with limited budgets and capacities to implement their goals more efficiently by **pooling resources and investing strategically** in a concerted effort with other stakeholders.

The form and members of such a Transition Team vary city by city according to the specific context and local needs. However, it is essential that the team works to enable rapid, focused action to accelerate the transition by the local ecosystem in the long term. This means that the position of the Transition Team **at the heart of the coalition of actors they orchestrate**, closely connected to the city government, is key for it to become an influential new institution permeating organisational boundaries in the transition ahead (see Figure 3).
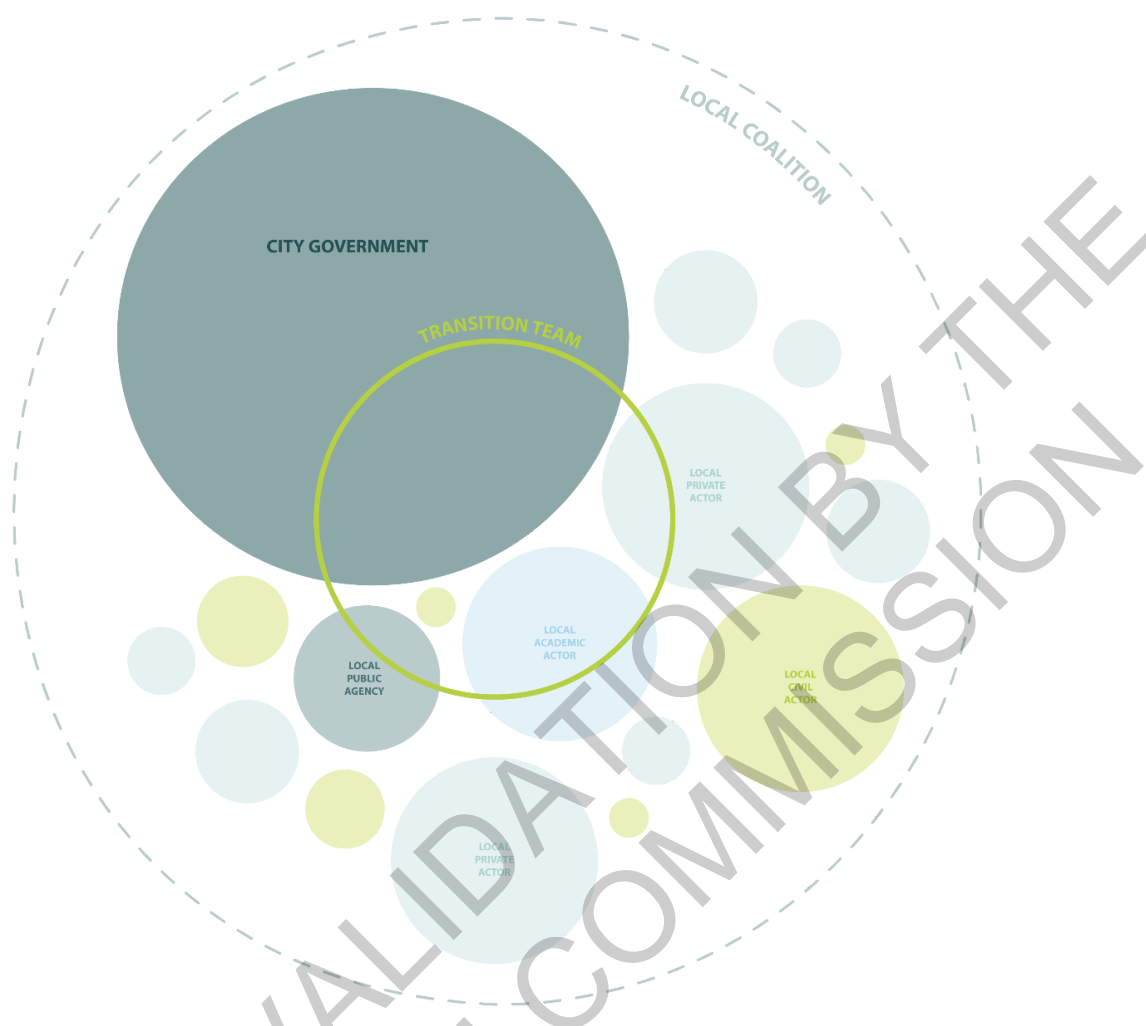
Figure 3. Illustrative example: Transition Team positioning in a local ecosystem.

Case study 1: the Helsinki Smart & Clean foundation

Keeping global warming below 1.5°C requires urgent and extensive emission reductions as well as lifestyle changes. The changes required are so comprehensive that individual actions or projects are not sufficient to change societal structures and our lifestyles quickly enough. Change requires several simultaneous and coordinated actions from smart regulation to technology solutions and behavioural change.

The Helsinki Metropolitan Smart & Clean Foundation was a five-year 'step change' project with 29 public-private partners. The Foundation is an example of a multi-actor governance structure - a form of Transition Team - orchestrating impactful climate solutions for systemic urban challenges in transport, energy, construction, and the waste and water sector. The approach of the foundation thus focussed on:

- *Using a data driven leadership approach that uses all available levers for change*
- *Setting a shared goal for all actors*
- *Working through a portfolio of mutually supportive shifts including changes in business models, procurement, investments, regulation and incentives as well as acting across*

multiple domains, understanding that the interdependencies between those actions are critical (creating a coherent and strategic portfolio of interventions)

Success factors of the foundation were:

1. ***Climate crises as a shared challenge for all****: taking ownership can not be the responsibility of one sector (public or private) but needs an orchestrator (neutral broker/connector) that can look at the impact of shared actions and think about collaboration models*
2. ***Commitment of participants****: financial co-commitment / co-ownership paired with decision-making power & responsibility for all partners*
3. ***Setting and visualising goals*** *and the process very clearly so that all partners have a common understanding of the level of ambitions, interdependencies of everyone's contributions and responsibilities and the overall system*
4. ***Use of data****: driving change with evidence based goal setting*
5. ***Trust among partners****: trust needs be built with open processes & open access to initiatives and projects*
6. ***Using all levers of change****: regulation, financing, procurement, innovation, new business models, citizen participation*
7. *Expecting the partners to fully use the tools they have and to **innovate and improve their processes** for the success of the shared goal*
8. ***Long-term thinking****: influencing financing models and funding of initiatives and projects as well as change of policies behaviours and norms to support moving away from pilots and test labs and create the new normal*

Becoming an innovative organisation

Dealing with complex societal challenges also requires public organisations to be innovative and to change their own capacities and ways of working in order to develop approaches to the challenges they are facing (Meijer, 2019). The ability to do so is called innovation capacity. Innovation capacity refers to the human, financial and institutional resources and set-up that can catalyse, implement and promote innovative, collaborative, long-term bottom-up solutions; it is the set of factors that enable or actively encourage innovation (OECD, 2019; Lewis et al. 2018). Innovation capacity also refers to the competencies that public sector organisations need to mobilise resources for the development and implementation of innovations (Timeus & Gascó, 2018).

Five factors are essential for innovation capacity. These elements are: leadership, organisation, knowledge management, network and learning. These are the main elements in which city governments and their Transition team should increase their capacities to become an innovative organisation and ecosystem for the benefit of climate-neutrality.

- **Leadership**
  Transformational, connective leadership plays an important role in the realisation and institutionalisation of innovations. Important aspects are: having an innovation vision and strategy, inspiring, motivating and supporting (administrative) leaders, and political support in favour of innovation.

- **Organisation**
  An innovative organisational climate is important for developing innovation capacity. Public organisations are often risk averse, while it is key they mobilise sufficient resources for innovation and experimentation. Furthermore, strong internal communication horizontally and vertically will increase the innovation capacity**.**

● **Knowledge management**
Municipalities with a free flow of knowledge and data are better able to increase their innovation capacity. They should be sharing knowledge across organisational boundaries and have structures in place to embed the knowledge within the organisation.

● **Network**
The presence of strong internal and external networks has a positive influence on innovation capacity. This includes cooperation with various actors outside the public sector and to gain trust within those networks.

● **Learning**
Innovation cannot take place without learning. Learning is a continuous process of action and reflection through which knowledge is acquired, combined and applied (Gieske et al., 2016). The most successful organisations are those that are not afraid to fail and prioritise learning, growing and developing those experiences. Municipalities need to create an environment suitable for idea sharing and discussions that enable idea generation (OECD, 2019). Moreover, it is crucial that organisations strive to create a learning environment by continuously experimenting and embedding new ways of working into existing processes.

Case study 2: Next City Rotterdam

The municipality of Rotterdam wants to change their way of working, especially with regards to developing and applying policies. The city is interested in how different transitions and changes influence each other and how to experiment in a way that supports these transitions whilst learning and understanding the impact of the associated changes.

Next City works on these topics and has come up with the classification 'yellow' and 'blue' to address the innovative and experimenting side of the organisation versus the standing organisation and its existing structures. Dealing with these transitions and developments, changing the way of working is necessary and the need to allow more 'yellow' in the 'blue' processes is highly recognised.The collaboration between Next City and the Dutch organisation for applied scientific research (TNO) focussed on scaling and normalising 'yellow' within the municipal organisation. TNO has developed an analysis framework to assess the innovation capacity within the municipality. The insights from the analysis are translated into suggested 'Yellow to Blue strategies' for scaling and normalising yellow in the organisation.

The research brings forward some very important boundary conditions that need to be in place for innovative processes, strategies and ways of working to succeed within the organisation. From a more strategic perspective these are:

● *Political will*
● *Seeing innovation as a needed investment*
● *Creating a culture for innovation*
● *Accepting a level of risk*
● *Continuous communication with stakeholders (internal and external)*

Support towards the working environment to embed this way of working requires further effort, as well as development of (new) skills and capabilities, such as:

● *How to develop a network*
● *How to approach scaling/normalising as part of the process*
● *How to build political support*
● *How to reflect/learn from pilots*

- *How to find funding*
- *How to communicate (across silos and with stakeholders)*

To empower people and the organisation to work on innovation three strategies on how innovation can be stimulated, implemented and embedded in the organisation and its ways of working have been identified. These three strategies can co-exist, be combined and are not exhaustive since there is no "one way" for innovation.

- **Empowering innovation**
  Innovation is a normal part of daily business, on all levels. Focused on changing mindset and framing - give room to innovate, experiment and learn.
- **Formalising innovation**
  Formalising innovation as part of policy, regulations, standards and/or programs.
- **Normalising innovation**
  Allow room for innovation within the standing organisation (local scale leadership) and incentivise innovative behaviour.

1.2 Building an orchestrator skillset

The shift towards collaborative action through coherent portfolios of actions based on a cross-sectoral understanding, structurally enabled by the creation of a cross-functional Transition team with innovative and learning capacity, also requires the development of new skills for this governance structure to be effective in its role. We call this *orchestration* skills.

While the orchestration involves many tasks traditionally associated with project management, such as project and operations planning or coordination, there are at least four critical aspects in which it differs from this *business-as-usual* practice:

- **Process focus instead of project focus:** Our context of transition is marked by uncertainty including constant rapid changes, stemming from the interconnectedness and complexity of the challenge we face. Ever emerging needs and opportunities make it necessary to move beyond linear planning towards more flexible, evolving and adaptive processes.
- **Portfolio approach instead of project approach:** The transition to climate neutrality requires overcoming multiple interconnected challenges, from behavioural change to renewable energy generation to regulatory innovation. To address these challenges, the Transition Team's approach aims to connect existing and new climate actions (policies, regulatory and organisational changes, programmes, projects, investments) and thereby create what we call *portfolios* of coordinated actions. The portfolio approach is dynamic (it's not just 'a list of projects') and deliberately looks to involve multiple actors, and to unlock synergy and co-benefits between actions and across sectors.
- **Network governance instead of traditional governance**: The Transition Team needs to take a supportive, facilitator role, building capacity across the local ecosystem of public, private and civic actors so that they can (co-)develop climate actions and co-implement them. This is not a traditional leadership role with top-down authority over a group of subordinate actors; the challenge here requires an added level of trust, alignment and openness.

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The Transition Team thus develops a specific approach to transition leadership. Rather than making or implementing decisions, a skilled orchestrator **supports and enables a local ecosystem of actors** - including those with political decision-making power, financing capacity and implementing actors. Orchestration thus requires interconnected practices and ongoing attention different from usual city government practices. These skills emerge continuously along the way, rather than sequentially, in what is essentially the core task of stewarding the city's full journey towards climate-neutrality (see Figure 4).
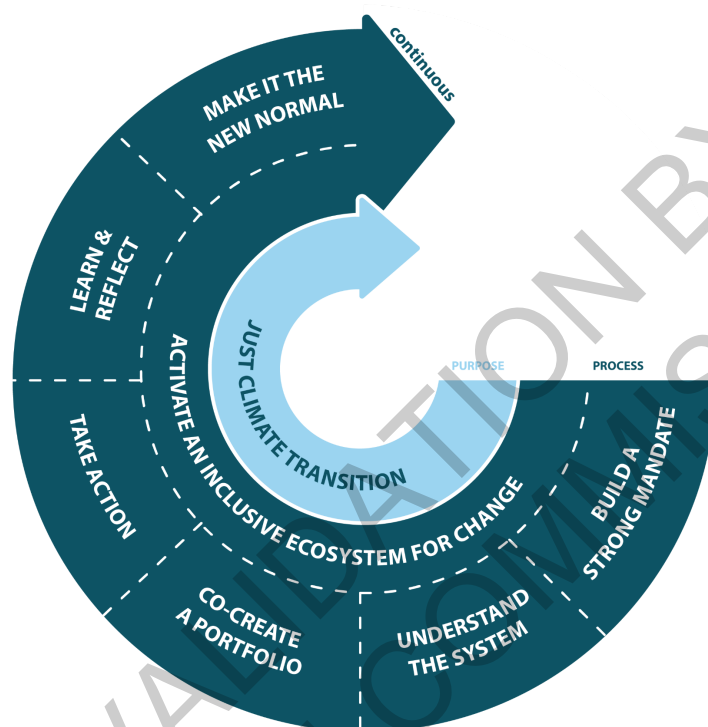

Figure 4. Climate Transition map: the process stewarded by the Transition team to accelerate the journey towards climate-neutrality

While local context and human resources, no two Transition teams look alike, but certain essential skills and roles can enable successful orchestration and so systemic, transformative work. The following skill sets do not necessarily represent individual positions but rather the careful balance of capabilities in the team that can truly set up a city for success:

Leading and Storytelling

To create the necessary pace and momentum for transformative impact, the Transition Team supports the creation of a strong mandate for local climate action, whether by developing strong relationships at a senior strategic level and at an operational level in internal city government teams, by acting as a rallying point between city ecosystem actors or by concentrating and aligning political and regulatory needs with regional, national, EU stakeholders. The Transition Team creates the space for a new narrative to emerge, validating high ambitions, flagging potential risks and understanding the power balance of the actors involved in order to inspire a common direction. It constantly works on the alignment of actors and stakeholders, and the alignment of all interventions and investments across the ecosystem.

Skills mobilised: Great storytelling abilities, inspiring others to speak about what might be possible and why it is important, building a case for change with empathetic arguments. Achieving buy-in from all levels and having the tenacity to persevere and see things through. Keeping a long-term vision and stewarding a collective direction while demonstrating short-term results, providing guidance while enabling autonomy. Balancing compliance and the need for flexibility to adapt to changing contexts.

Connecting and Convening

To leverage all necessary actions for the local transformation, the Transition team mobilises actors across sectors (public, private, civic, academic, media…), creating the inclusive settings necessary for current and new change makers to contribute. The Transition Team works to build and maintain trust and strengthen relationships between actors in the ecosystem. It facilitates distributed leadership to ensure that a meaningful collaboration creates the input and buy-in necessary for positive and sustained impact. The Transition Team also facilitates and fosters co-creation, collects and disseminates learning among actors of the ecosystem and interventions of the portfolio to accelerate knowledge sharing and impact. The team interacts with experts from all domains (energy, mobility, waste, construction, digitalisation, design, culture and creative areas …), thus leveraging its ability to work with interdisciplinary teams, communicating across disciplines and expertises.

Skills mobilised: *Excellent facilitation and communication skills. Building strong, local relationships while mobilising unusual suspects and marginalised communities. Creating spaces and the necessary trust for diverse people to come together, contributing to building a bigger movement. Facilitating collective sensemaking, co-creation and learning which enables collective decision-making. Working in interdisciplinary teams, with empathy across disciplines and transversal thinking.*

System Thinking

To create a transformative portfolio of actions, the Transition Team builds on collective intelligence and multiple sources of data locally to create a shared overview of the scale and scope of change required, both in terms of actions and capital. It reveals the dynamics of the local emission system, including interdependency patterns, power, resource flows, needs, risks, lever opportunities and barriers. The Transition Team and the wider ecosystem of actors can then work on the curation of a comprehensive portfolio of actions focusing on a range of connected interventions across multiple levers of change for a just transition, including policy and regulatory change, investments, new finance instruments and technological or social innovation.

Skills mobilised: Seeing the connections between different issues and the bigger picture, allowing the mapping of complex problems based on interdependencies. Moving across silos and between different scales, from the micro to the macro and bridging them. Transdisciplinary investigation and experimental capabilities and a thirst to understand power dynamics, complexity and why things work the way they do - or why they don't. Multi-lever, cross-sectoral thinking to co-develop an impactful portfolio of actions and articulate synergies and co-benefits of potential approaches. Learning new technical knowledge quickly, connecting specialists from different spheres.

Operationalisation and Making

To implement collective decisions, foster co-creation and operationalise the common vision for transformation, the Transition Team aggregates information and data to evaluate with all relevant actors how potential actions contribute to the city's achievement of its just climate neutrality goals. It turns a systemic understanding of the situation into tools for decision-making, by developing scenarios with available data. The Transition Team enables ongoing, transparent learning, continuously generating shared insights with both quantitative and qualitative indicators. It works on adapting portfolio actions to meet context-specific needs and respond to recent learnings, reevaluating

developments to progressively strengthen the pathway to decarbonisation, and to enable changes in the right direction when goals are at risk of being missed.

Skills mobilised: Technical and creative skills to get to work, make things happen and trigger collective action. Putting to practice the power of design, innovation, agile methodology and data tools into action. Measuring complexity and qualitative signs of change to understand progress and adjust trajectories and decisions. Modelling scenarios to navigate future possibilities and building economic cases for change.

Case study 3: Orchestrating Innovation in Public-Private Ecosystems

*The major societal challenges we are facing today and tomorrow transcend the boundaries of innovation and entrepreneurship of individual organisations. These large-scale changes involve many parties, with different interests. That raises the question: how can these parties together build a well-functioning innovation ecosystem, in which all these relationships and dependencies come together to create impact? Aligning all these interests requires **steering by an expert** who can interact with governments as well as citizens and private sector parties. This requires someone to **drive cooperation** at the right time and in the right ways for innovations to develop and succeed. But it also calls for n**ew ways of organising these kinds of ecosystems** that make operational, financial and business aspects successful.*

This is why TNO and the Erasmus Centre for Entrepreneurship have teamed up to create a programme that helps professionals further develop their capabilities needed in orchestrating and building innovation processes. Key learning objectives for innovation orchestrators, which are supported by this four-day course, are:

- *To gain insight into **'the innovation hub' as a concept** and why it requires a different approach.*
- *To gain insight into prerequisites for **actor networks** and to be able to analyse actor networks in an ecosystem.*
- *To be able to i**ntegrate analysis from actors, knowledge and networks** in an ecosystem.*
- *To be able to formulate the **shared vision and goals in cooperation with key stakeholders** based on an ecosystem analysis.*
- *To be able to **operationalise added value in services and activities** of a public-private innovation hub. What are priorities? What should we do and what should we not do?*
- *To gain insight into the **various business models** of a large-scale public-private partnership: what services are needed to promote innovation in the ecosystem and what **forms of financing** are possible?*
- ***Exploration on monitoring, organisation and decision-making**: how can development be monitored, who has what mandate and how can agreements and contributions best be agreed upon?*
- *To gain insight into formal and informal ways of **activating, connecting and convincing** people and organisations.*
- *Exploration of the **types of leadership** in the complex context of Orchestrating Innovation and other roles that are necessary in the set-up and operation of a public-private innovation ecosystem.*
- *Insight on how to ensure **internal commitment** in your own organisation.*

1.3 Developing transition leadership in city government

New mental models for city government

The virtues of industrial-era governance encompassed fairness, predictability, and accountability. These virtues are obviously still relevant and valuable yet the civil service would need to evolve as the operational context, hence societal realities, is drastically different compared to the time when the civil service in its current structure was created. With their emphasis on stability, they do not suffice anymore and have to be complemented by virtues that help us navigate change and rapid transition. To effectively unlock and steer collective climate action we need a shift into a transformative mode of local governance. Its virtues include **collaboration and learning** as well as **devolved problem-solving**. It aims at gradual trust and consensus building and exploring workable solutions in an iterative way.

Local governments need **new mental models** to deal with domains such as climate change, marked by great complexity and uncertainty. It may be painful for any government, including municipalities, to acknowledge that it does not know all the answers needed. Yet this should not prevent the city from taking a lead in collaboratively finding them out. We can call this governance approach **'humble'**, as it abandons the illusion of top-down steering being the answer and adopts a networked model with developed problem solving instead. The precise definition of challenges, let alone the best way to respond to them, can be unknowable at the outset - and that is not necessarily a problem as long as there is enough agreement, i.e. a *thin consensus* on the direction. The mission-oriented attitude brough by the European Cities Mission can help enable this kind of consensus and directionality, whilst recognising not all solutions are known or knowable yet. This enables city governments and multi-actor coalitions to move forward through a humble approach that is both action-oriented and learning-focussed.

Being humble includes the ability to acknowledge one's fallibility, to be collaborative and proactive, instead of working in a centralised and reactive manner. Humility entails both a willingness to listen to different opinions, and a capacity to review one's own actions in light of new insights. This means that the Transition Team needs to find ways to catalyse and incentivise collaboration and learning. Following the humble approach, would mean:

- Cultivating **devolved problem-solving** with a growing arena of multi-actor participants that are motivated to act and have first-hand knowledge of the challenge at hand;
- Establishing **peer-learning processes** that secure continuous learning and feedback loops between the participating actors;
- Providing collaborators with the **mandate and the incentives** to develop solutions autonomously, and,
- Commit to **continuous revision** of the framework goals and implementation based on learnings gathered in a co-creative process.

Instead of requiring high levels of trust and thick consensus from the outset, humble governance (see Annala et al. 2021) actively builds trust and consensus as byproducts of the policy-making process.

Becoming a learning organisation

Traditional governance models, based on managerialism and compliance, procedural systems and adherence processes, have historically been grounded in linear prediction of the future through centralised oversight. Decision-makers often project the future and provide the solutions from what they know. Moving toward the forecasted future, technological development and abundant data enable certainty to increase by diminishing the predictable risks. When the range of risks is identifiable and predictable, this model can effectively achieve the goal by controlling variables and managing risks.

However, in a situation like the climate crisis, characterised by its complexity, uncertainty and continuous adaptive nature, a centralised and linear structure can hardly provide the necessary ability to adapt at speed and is likely to become fragile and vulnerable over time. This type of situation requires constant evolving reactions, it requires a solid learning model.

Learning organisations and ecosystems have in place the necessary conditions to enable the learning of their members. They have a continuous ability to create their future and are able to make the most of rapid change and high complexity (Senge, 2006). For them, **learning never stops**, it is a continuous activity that never ends. They are fundamentally **creative in their approach:** learning does not solely mean consuming a continuous flow of new information and data but also putting it into action.

This learning orientation is realised through both individual and team learning cycles and an organisational architecture and culture enabling such cycles. Some key factors of a learning architecture and culture are:

- **Purpose and strategy**: a clear shared intention across actors, informed by multiple perspectives, shifting innovation drivers from supply (led by few authorities with preconceived solutions) to demand (driven by multiple emerging desires).
- **Open documentation and learning forums**: building practices from failure and shared knowledge improves the quality of decision-making. Gather collective learnings and sensing from ongoing experiences across actors, such structure builds distributed capacities of actors and sectors.
- **Shared data with coherent protocols**: cross-sectoral data sharing provides opportunities for longitudinal analysis and a growing understanding of interdependencies. Evidence of shifts in data makes it possible to sense narrative changes and measures impacts across the system to inform new action.

It needs to be recognised that a structural orientation towards learning is often seen as resource-intensive and unaffordable by resource-constrained organisations like municipalities. However, across Europe cities are taking a proactive approach to learning, as is for example manifest in the rapid evolution of Helsinki's climate strategies after previous strategies were deemed to be insufficiently impactful; in Valencia's 'Mission Fridays' that convene a cross-departmental group of people to both articulate purpose and learn together; and in the cross-city multi-day 'transition labs' approach that Viable Cities in Sweden and the CitiES network in Spain (also see 2.2) are creating as a learning offer to cities in their countries, which are seeing great take-up by cities.

2 How to embed capacity and capabilities in context?

The scope and speed of change in capacity and capabilities discussed here is significant. Such structural and cultural forms of organisational changes are some of the hardest efforts to lead. Too often, no matter how well intended these efforts are, they can be derailed by a wealth of obstacles, the first of which is underestimating the task at hand. Developing transformative capacity in cities takes a lot: working across multiple and very different audiences (2.1), embedding changes in what is a specific local context (2.2), adapting to how new practices can be adopted by individuals depending on the situations (2.3).

2.1 Diffusing change in cities

As highlighted already, a city's capacity to achieve systemic transformation relies on multiple types of change: developing new individual skills and practices, creating new structures for collaboration, innovation and learning, as well as shifting mental and operational models. In practice, this means developing durable and resilient transformation capacity require to work with several connected but distinct audiences.

Individual, organisational and ecosystem audiences

With organisational and cultural context affecting individuals and teams' ability to produce change, three different groups emerge as important audiences for a sustainable transformation capacity:

- **Individuals at operational level**: without the operational capacity to enact changes and make things happen, transformation is an illusion. While having a consistent rhetoric of transformation is important, daily action and activities are at the heart of change. Individual collaborators, and their ability to be innovative, collaborative and learning-oriented in their roles, are a core component of capability building for systemic transformation without which change might remain superficial.

- **Key decision-makers**: an organisation's capacity to lead change only goes as far as its key decision-makers enable it to go. Power dynamics mean the potential to unlock change is unequally distributed and identifying key influential individuals across local government departments and structures is an essential step in ensuring action is supported and enabled by these actors. Building the ability to talk about and lead change of these actors with different horizons and roles is an integral part of creating the necessary conditions, the capacity, for operational teams to enact such transformation.

- **Actors in the broader local ecosystem**: with the type of action and collaboration needed going well beyond a city government's organisational boundaries, it is the capacity of a whole local ecosystem that needs to be developed. Specifically, a shared capacity for collective sense-making and decision-making seem to be a cornerstone of any effort for transformation at a city scale. Engaging a large number and broad diversity of actors across the public, private, civil, media, academic worlds in a new dynamic is integral to building the necessary muscles to achieve climate-neutrality. But pragmatically, it is difficult to bring all these actors in a room together to build this muscle to begin with.

Capacity diffusion and train-the-trainer model

Diffusing change at speed and at scale across multiple audiences (operational teams, key officials across government levels and the diversity of ecosystem actors: private and civic organisations; other 'quintuple helix' players like the media) is a complex effort which may require leveraging what we call social tipping points. A socially positive tipping point is a sensitive period in time where a system proves ready for significant and accelerated change, in our case towards net zero. The mechanics of social tipping points are based on a series of cascades that positively influence each other - across policy, business models, organisational and collective or individual behaviour, and cultural narratives. New practices and ideas are reinforced through cascading dynamics such as:

- **Social contagion**: information spreading between individuals like pathogens (see Hodas & Lerman, 2014),
- **Network effects**: the value of an idea or a practice increasing with the number of users of said idea or practice (see Shapiro, 1999),

- **Information cascades**: multiple individuals making a similar decision in a sequential fashion (see Bikhchandani, Hirshleifer & Welch, 1998)

Bringing together coalitions of 'prime movers', people and entities with the necessary local influence to change the flows of investment and activity, is typically a way to trigger such change at scale and speed.

A train-the-trainer model is a particularly relevant theory of change for triggering tipping points and capability building at scale and speed. This type of framework traditionally aims at training specific subject-matter experts and practitioners to give them the necessary practical understanding of a subject so they can train others around them. Based on said cascading dynamics, social contagion, network effects and information cascades, this type of model works best when "trainers" are influential individuals at the heart of multiple relationships, so they can diffuse their knowledge and practice across a full network in the most impactful way. This is exactly the role of the Transition Team. Part of the aim of creating a Transition Team (see section 1.1) is exactly to empower an initial group of individuals to orchestrate relationships with multiple actors across organisations and sectors. The role of this group is essentially to become trainers and be an efficient diffusion mechanism for new ideas, practices: to trigger social tipping points. Targeting Transition Teams for capability building, should their position in their local ecosystem be central-enough, aims to support capacity and capabilities changes in the much larger group in which it is embedded.

2.2 Leveraging networks around cities

The role of platforms and national / regional communities

Cities across Europe (and their networks) are already mobilising to increase the pace towards climate neutrality. Many cities are ambitious in their climate transition work and have developed and amassed a vast array of skills and knowledge. Several cities even offer to exchange with other cities around them on their lessons learned.

Although city contexts may differ, learning from what is out there and learning from practice are key aspects of a learning process. Next to international exchange, integrating local knowledge and connecting to local or national actors is essential for effective and structural change that enables the acceleration of the transition process in all cities. Local and national practitioners, partners and knowledge networks are therefore key resources to support cities with skills and knowledge.

Several countries are setting up national platforms to **support accelerated learning among the cities in a country and create the conditions and structures at the national level to enable the transition to climate neutrality by 2030**. Working with existing networks and groups should stimulate (inter)national exchange among local Transition Teams and an active exchange with local practitioners, partners and knowledge networks. The former to learn from practice, the latter to translate the skills or knowledge to the national or local context.

Case study 4: Spanish national platform

The Spanish national platform CitiES emerged to support Spanish cities and their ambition to achieve the EU Mission Mission "100 Climate-Neutral and Smart Cities by 2030". Part of Spanish cities' needs are capability building needs. Therefore, capability building is part of the services offered by the Spanish national platform. Supported and encouraged by the national platform, cities are working on joint sectoral projects called "multi-city projects". These projects require specific capabilities to develop, which are also services offered by the national platform.

In Summer 2022, the CitiES organised a four-day intensive course. The main objective of the course was to introduce in depth the EU Cities' Mission to several representatives from the municipalities of the selected Mission Cities in Spain. The course provided a wide range of speaker presentations to inform the attendees about key topics around the Mission, complemented by workshop sessions to tackle practical issues through dialogue between the attendees.

This Summer School provides several interesting reflections and insights on the value of such National Platforms and events. First, they create momentum: National Platforms, the city Transition Teams and their partners can work together, exploring new topics that can be further fleshed out in smaller groups. Second, they support the creation of a collaborative journey by taking the time to create a common starting point for all involved and incorporating sufficient time to network and get to know other participants working in other sectors. Last is the opportunity of speaking one's own language as a participant, the recognition of the local culture and the ability to compare with practices and practitioners that have to deal with similar national policies or regulations.

A Community of practice for cohesive support

Supporting hundreds of cities in their transformation for climate-neutrality is a challenging exercise in both the scale and depth it involves. Just like cities cannot achieve alone the type of change required and need to count on a local ecosystem, initiatives like NZC cannot support this transformation alone and need to be embedded in a broader coalition of transformation supporters and coaches.

Multiple initiatives and actors across Europe - such as CapaCities or the New European Bauhaus to name a few - are mobilised around climate-neutrality and cities. With the EU *100 Climate-Neutral and Smart Cities by 2030* Mission, we have an opportunity to align these efforts in a cohesive mission-oriented community of practitioners dedicated to supporting cities. Aligning support offers around a common language and understanding of what is to be done is a powerful way of better supporting cities in their transformation and the development of transformative capacity and capabilities.

2.3 Change and learning triggers

Change resistance and change fatigue are two critical barriers faced when trying to bring new practices and models to an organisation. Unless the purpose and value of new capabilities and structures value are clear to all, it is hard to embed them durably. In addition to motivating change with a clear value, this means transformational change also requires a solid understanding of how new habits and attitudes are adopted, of how or when learning happens. There are several approaches to continuous learning and to embedding new practices, skills and structures locally for the long term. Combining these learning approaches, and so multiplying the entry points through which new practices can be adopted, is essential to the success of any capability building effort.

Learning from and for action

Focusing on creating practical actions and solutions to real challenges is a key way for new capabilities' value to be demonstrated by creating real impact. This type of 'social learning involves learning by doing and learning from existing local practices. In addition to some more fundamental changes, many small changes in daily activities are key to success. These range from changes at the individual to the team and organisational levels. Acquiring new capabilities thus requires the flexibility to be connected as much as possible to a specific local context, as this will guide and support the

immediate task at hand. Learning should be based on the daily activities and responsibilities of the participating group. This can help to map out how incremental capabilities changes can result in a successful whole city pathway to climate neutrality. It can initiate and stimulate changes in local teams' daily practices to reach the 2030 goals.

Mission cities have shown their ambitions and current plans to reach their 2030 goal. Each city has their own unique starting point for going climate neutral, operates in a different context and has varying capabilities and responsibilities, depending on, among others: their national context, ability to support the needed investments or already acquired knowledge from previous projects aiming for climate neutrality. This means that developing new capabilities must start from the needs and demands of cities to reach their climate neutrality goals.

Learning with and from others

Learning from peers through group dynamics is more fruitful, where multiple lived experiences and viewpoints can be presented and assumptions challenged. Understanding others' viewpoints is key to and foster change within and beyond individual organisations. Examples of existing capacity building programmes (see Case study 2 Spanish national platform for example), showed that there is a clear advantage of creating spaces for networking, peer-to-peer connection, exchange and collaboration. This enables moments to pause, discuss and exchange with peers, reflect, learn and adapt for practitioners.

The Summer School organised by the Spanish National Cities Mission Platform CitiES illustrates how creating momentum fosters collaboration, cooperation or co-ownership with partner organisations. This means having more informal spaces and activities to generate deeper personal connections between city representatives and civil servants across municipal departments. These spaces allow every city to have a better understanding of the situation of the other cities, and assess where they find themselves comparatively. They also provide occasions for cities to discuss their challenges closely with each other. This helps cities get new insights on how other cities are dealing with specific challenges within a similar range of national and regional regulations, constraints, and cultural idiosyncrasies. Finally, networking spaces generate a feeling of cohort and solidarity, which is essential in fostering the willingness to move towards the Mission.

3 A NetZeroCities framework for capability building

Within the EU Mission for *100 Climate-Neutral and Smart Cities by 2030*, NZC accompanies 112 cities across Europe in their journey towards climate-neutrality, and thus in their journey to developing local systemic transformation capacity. Two frameworks, each with different but complementary aims, are deployed to support this outcome: a Mission cities programme (developed across T6.4, T7.2, T8.1, T9.6) and a Pilot cities bootcamp (developed in T6.3 in connection with WP4 principles). Both programmes are based on the principles laid out above.

3.1 Mission cities learning journey

3.1.1 Objectives of the Mission cities learning journey

Mission cities are 112 cities across Europe selected to become climate-neutral by 2030 and be supported by NZC in this journey. They have now been engaged for several months in Support Needs Assessment Process (SNAP) discussions with their respective City Advisor. These SNAP exchanges identifying cities' needs inform our approach to building local capacity for leading transformation, and act as entry points for cities into the Mission cities learning journey, identifying which modules might be most beneficial to any given city. The learning journey will be operationalised as a key element of the NZC platform and deployed on the NZC portal via the **Learning Journeys** model (presented in D3.2). This learning journey is a learning experience shared by several cities in a **cohort**, guiding them through several modules which allow new attitudes, skills and ideas to be developed locally through action. It is based on cities' real experience of climate action and developing their Climate City Contract (CCC)
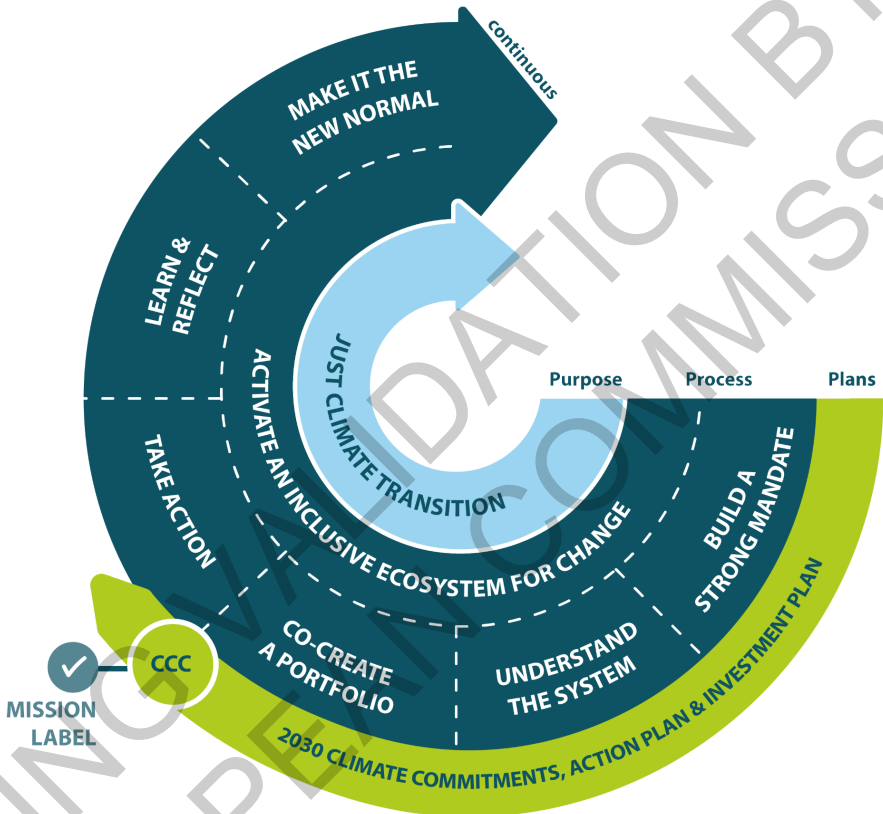

Figure 5. The CCC (in green) and its Commitment, Action Plan and Investment Plan in the journey towards acceleration climate action.

Mission cities are currently engaged in a **Climate City Contracting process** (see Figure 5), looking to create a local governance system including local stakeholders - across public, private, civil, media and academic sectors - supported by official commitments and the shared vision-setting Action Plan and Investment Plan for climate-neutrality. This CCC process in which cities are engaged is fundamentally a learning process, moving city governments step by step from a traditional top-down vision of climate action to a collaborative ecosystem-wide approach as iterations of the CCC are created. New capabilities and capacity are currently being developed or will need to be developed along the way, as part of the iterations in this process. The development of a long term CCC process is thus a promising vehicle for capability building: a programme of support attached to iterative CCC development would

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not only accompany cities in what is a difficult process but also directly embed new capabilities and capacity in the making of their local transition governance system.

The learning journey developed by NZC is thus an integral part of Mission cities' CCC endeavour. It aims to support the development of the local capabilities and capacity needed to accelerate a city's transition to climate-neutrality.

3.1.2 Mission cities learning journey

The Mission cities learning journey accompanies cities with an experience divided in 7 blocks. Each of the 7 blocks of the journey aims at not only building a city's CCC process (they are building blocks) but also at enabling the development of key capacity and capabilities on the way. At the core of the sequence, all of these blocks lead the city to progressively activate its local ecosystem, building along the way all the necessary relationships and collaborations to be able to advance toward the next step of the journey. At this stage of the development of the framework, these 6 modules are:

- **BLOCK 1: Building a common understanding**
  This learning block aims to lay a strong foundation for the work ahead by creating a common understanding of key transformation concepts and defining the value of the CCC journey for each city.
- **BLOCK 2: Creating the emission inventory**
  This learning block would lead each city to creating the baseline of their economic model for emission reduction, with data gathering and the definition of impact pathways.
- **BLOCK 3: Planning for 2030**
  This learning block uses the economic model as a tool for each city to articulate a portfolio of actions while assessing impact and engaging the ecosystem of actors.
- **BLOCK 4: Understanding action costs and benefits**
  This learning block intends to develop a detailed vision of the investments and benefits (including co-benefits) balance for all actors of the ecosystem.
- **BLOCK 5: Developing the funding strategy**
  This learning block aims to define a funding strategy and finance instruments to implement the designed portfolio of actions.
- **BLOCK 6: Capturing the process in Commitments, Action Plan and Investment Plan**
  This learning block allows each city to capture the portfolio, funding strategies and multi-actor commitments developed previously in the three CCC documents (Commitments, Action Plan, Investment Plan)
- **BLOCK 7: Formalising the approach**
  This learning block creates the space for signature and officialisation of the outcomes of the CCC process.

This sequence aims to support the local iteration of the CCC, as well as cities Mission activities over time. Each block comprises several modes of interaction and learning, based on masterclasses, workshops and coaching sessions in which cities can take part in flexible ways, depending on their specific contexts, needs and where they are in the journey. The sequence of blocks voluntarily enables cities to engage in self-led work during the programme to directly advance local climate action, supporting the Transition Team and others in cities in developing and reflecting on their practices as they advance. Even though they will need learning in multiple settings (see 2.2), this framework will be a key delivery mechanism for cities, framing the necessary changes they face in constructive ways and practically accompanying them over time.

This framework is intended to evolve in the next few months, as NetZeroCities and City Advisors refine with cities the next frontiers and priorities they are to explore through the Support and Needs Assessment Process (SNAP). This learning offer will thus be adapted over time as needs get crystallised in collaboration cities

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BLOCK 6
Capturing the process
- Commitments
- Action Plan
- Investment Plan

BLOCK 7
Formalising the approach
- Signing
- Officialising

BLOCK 5
Developing the funding strategy
- Building a case
- Financial instruments

masterclass   coaching   workshops

BLOCK 3
Planning for 2030
- Levers for emission reduction
- Scenarios
- Portfolio development

masterclass   coaching   workshops

BLOCK 4
Understanding actions' costs and benefits
- Investment projection
- Benefits and co-benefits projection

masterclass   coaching   workshops

BLOCK 2
Creating the emission inventory
- Data gathering
- Baseline
- Impact pathways and theory of change

masterclass   coaching   workshops

BLOCK 1
Building a common understanding
- Key concepts
- CCC as an orchestration process
- CCC outcomes
- Success stories

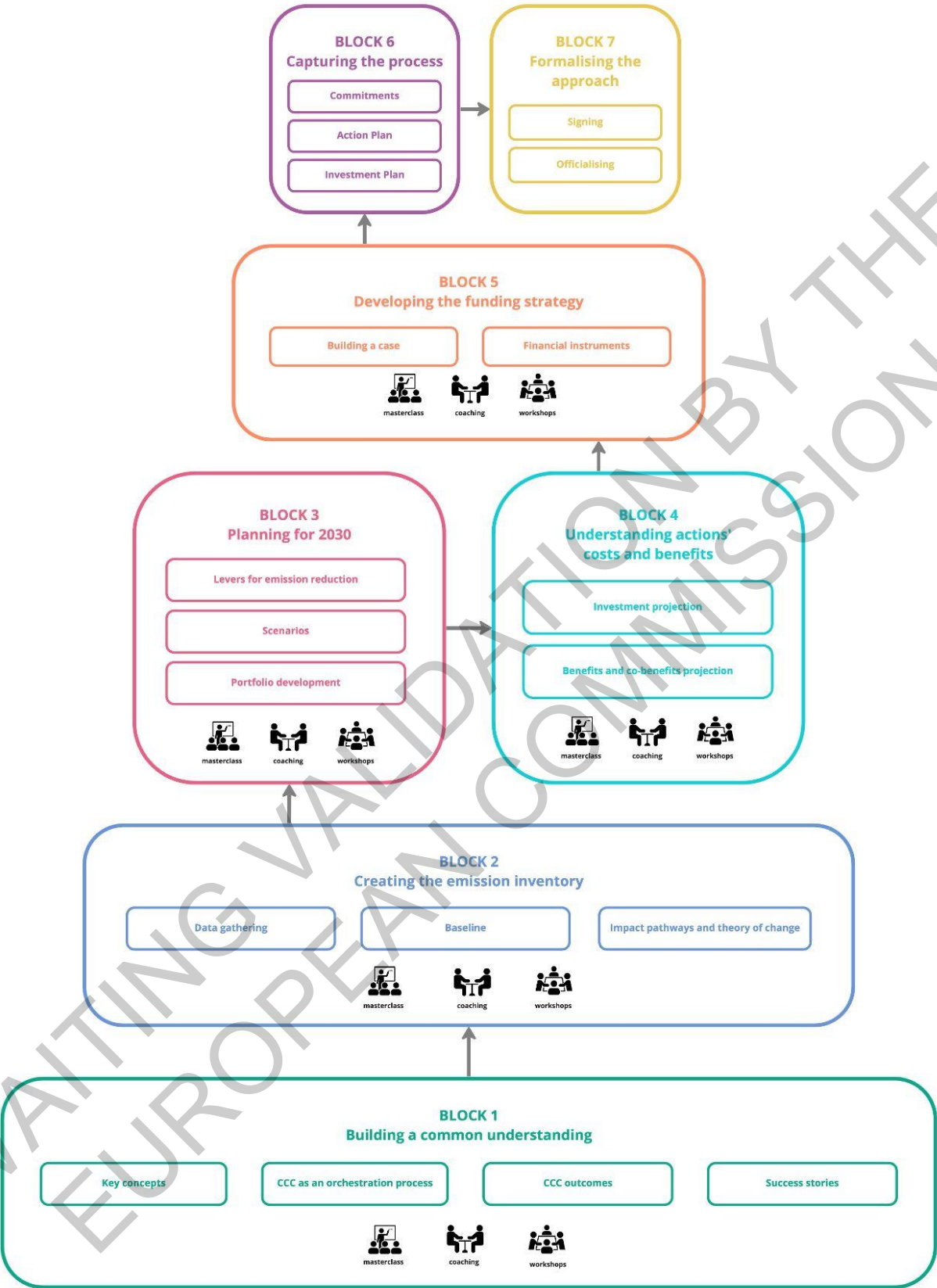masterclass   coaching   workshops

Figure 6. Simplified Mission cities learning journey: a 7 building blocks approach

3.2 Pilot cities bootcamp journey

3.2.1 Objectives of the Pilot cities bootcamp

Pilot cities are city-led teams which have submitted a successful application to the Call for Pilot Cities. In some cases, "Pilot cities" may actually be a consortium of several cities and their local partners. NZC will initially support 30 Pilot Cities located in EU Member States and Associated Countries, more than 100 in subsequent rounds of engagement, to achieve climate neutrality through large-scale, transformative pilots.

Selected Pilot Cities will embark in the Pilot Cities Programme (PCP), a groundbreaking programme that tests new approaches to reaching climate neutrality goals. As part of the EU Mission for *100 Climate-Neutral and Smart Cities*, the Pilot Cities Programme provides €32 million in grants and hands-on support to selected Pilot Cities.

The PCP will help cities as they **test out locally tailored actions towards a climate transition**. Selected cities will be provided with grants funded under Horizon 2020, the European Commission's 2014-2020 Framework Programme for Research and Innovation (R&I). Cities will receive such support in the amounts of € 0.5 million, € 1 million, or € 1.5 million in order to deploy and scale up R&I and systemic solutions.

NZC will also provide expertise and support services to the selected Pilot Cities and help them as they take an inclusive, systems-wide approach to climate neutrality. Cities' piloting activities are expected to be diverse, spanning social, cultural, technological, nature-based, regulatory, and financial innovations, as well as new approaches to business and governance.

As part of such dedicated support, selected Pilot Cities will begin their PCP in a Bootcamp for Pilot Cities which initiates the learning journey for pilot cities and continues and reinforces the learning journey of Mission cities. The Pilot Cities' Bootcamp is an intensive, approximately 1-month long, co-design process which aims to help selected applicants **increase the feasibility, ambition and impact of their proposals**.

The 30 selected pilot cities will have designed strong proposals. They will have already identified some of the key barriers they will need to overcome to achieve successful implementation. The NZC Consortium will work closely with them to help them address these challenges, spot others they may not yet have identified and, where relevant, strengthen or deepen their proposed approaches to result in greater positive impact and transferability to other aspects of their trajectory towards net zero.

As mentioned previously, the barriers and challenges cities face often relate to existing organisational models, individual practices or institutional mindsets that hinder the necessary transformations to accelerate emission reductions. Procurement rules, hierarchies of responsibilities, multi-level regulation, outdated data tools, excessive bureaucracy and limited capacity to collaborate, both across departments and across sectors, often impact a city's ability to unlock the profound transformation that is necessary to transition to net zero. Therefore, to support cities in overcoming critical challenges, the Bootcamp for Pilot cities will need to begin building the capacity and system innovation capabilities in local government to rethink economic, financial, organisational, political, and cultural systems in order to unlock new pathways towards climate-neutrality. Working with Pilot city teams, which may include both local officials and representatives from academia, the private and civic sectors, provides a unique opportunity to strengthen the capabilities of change makers to leverage systemic institutional transformation and cultural change through a cross-silo learning and organisational change management approach that connects directly with the practical realities of cities and their pilot proposals.

Throughout the bootcamp, the NZC Consortium will help Pilot cities develop these key capabilities while integrating practical changes into a refined version of their proposal that makes it more likely for them to achieve impactful outcomes. At the same time, teams will develop the institutional capacity, capabilities and process functions needed for accelerated climate action, empowering stakeholders to act long-term, holistic and systemic - beyond the Bootcamp and the PCP.

As a result, at the end of the bootcamp Pilot Cities will be able to sign their Grant Agreement with an amended version of their initial proposal.

3.2.2 Pilot cities bootcamp journey

Closely following the announcement of successful Pilot Cities, these will receive a Bootcamp Welcome Pack. This communication package will include a presentation explaining the Bootcamp objectives and an outline of the process with a timeline detailing each step. It will also include an overview of the cities' wider learning journey whether as Mission or non-Mission cities, including how the bootcamp connects to the CCC process, longer Pilot Cities Programme sensemaking and evaluation process, among others. Additionally, the Welcome pack will include an invitation to book the first one-on-one call with the Bootcamp team and save the date calendar invitations for all subsequent bootcamp sessions. At this time, Pilot Cities will be asked to provide their main contact for bootcamp communications. The Welcome pack will also highlight the key questions that will be addressed during the first call, including Pilot City team set up, bootcamp participants and what key barriers they are aware of, building upon what has been shared in submitted applications and other relevant documents.

Approximately two weeks later, individual one-on-one calls will be scheduled with Pilot Cities. The aim of these calls is to begin working with cities to define their particular learning journey through the bootcamp, understanding what critical capabilities and capacities they need to address in order to unlock maximum pilot impact.

Following these calls, a collective, online session will include expert presentations on relevant topics as identified through review of successful applications and one on one calls, followed by reflection exercises with pilot cities and a facilitated discussion for cities to start to think about how these issues apply in their context.

Through online exchanges, cities will be invited to reflect on learnings gained during the collective session, share their key questions, and select which tailored coaching sessions they are interested in attending to ensure the support responds to their concrete needs.

A combination of individual and collective thematic learning sessions will ensue. These will include both expert-led theory and working sessions in which participants will be able to explore how the shared material and insights apply to their particular case. Dedicated time in the form of calls or asynchronous input will be provided with thematic experts from across the consortium.

Throughout the process, participants will develop key organisational capacities for transformation -including leadership, organisation, knowledge management, network and learning- through working on the concrete challenges of their pilot proposals.

By combining expert-led thematic content sessions and practical application to their local scenarios in workshops, the Bootcamp participants will be able to develop both the technical and creative skills to address the specific realities of their local context an key orchestrator skills including leadership and inspirational storytelling, facilitation and convening, or system thinking nend mapping.

Strengthening and embedding all of these key capabilities in the Pilot City teams will support their transformation into learning organisations, capable of adapting at speed in contexts of complexity and uncertainty, and therefore, more likely to achieve the transition to climate neutrality.

As a result of this process, amendments will be integrated into the proposals and Grant Agreements will be signed. Conclusion and next steps will be shared in a final collective session that ends the bootcamp process and starts the wider Pilot Cities Programme learning and sense-making process.

Figure 7. Bootcamp Process outline diagram

Conclusion

To accelerate emission reductions to climate-neutrality by 2030, cities need to build the collaborative governance, learning and innovation practices and develop the orchestration skills necessary to act at speed and scale. This is a significant change which requires well-engineered support: at a local level with Transition teams acting as change diffusion hubs, at national level with national platforms acting as conveners and supporters and at European level with available initiatives aligning around a common vision for this governance, practice and skills shift in cities.

In the Spring of 2023, NZC will deploy its first learning journeys with cities, combining the functionalities of the NZC portal with the expertise of the NZC platform partners to accompany Mission and Pilot cities in developing necessary new structures, processes and approaches. This will be the opportunity to further refine what a shift to transformative action requires locally and how this can be supported by NZC. For this reason, our next report D6.3 Pilot cities systemic innovation needs, will specifically reflect on the first iteration of capability building in Pilot cities to identify the key obstacles cities are facing in practice and the next domains of action needed to close the gap to climate-neutrality.

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