



**NET
ZERO
CITIES
SGA2-NZC**

Gap analysis of the Capability Building programme

Deliverable D1.10

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Abbreviations and acronyms

Acronym	Description
CTM	Climate Transition Map
MCs	Mission Cities
NMCs	Non-Mission Cities (cities that answered the Needs Assessment Survey launched in April 2024)
NZC	NetZeroCities
WP	Work Package
SGA 2	Specific Grant Agreement n°2

Summary

The European Commission's Mission for "100 Climate-neutral and Smart Cities by 2030" is designed to accelerate climate action across Europe, supporting 112 European cities to become climate-neutral by 2030. To achieve this goal, a Learning Programme has been developed to equip the 112 cities with the knowledge, skills, and collaborative spaces necessary to develop and implement Climate City Contracts (CCC) and advance their climate action strategies. As the project progresses into a new phase under the Specific Grant Agreement 2 (SGA2), resources will be expanded to reach and support additional cities aiming for reaching climate neutrality by 2050.

This document provides an assessment of the current learning offerings under the NetZeroCities programme and identifies capability-building gaps that would inform the development of the new Learning Programme for cities. The report reviews the current Learning Programme offerings, provides an overview of existing learning programmes and digital platforms that foster effective learning, as well as identifies gaps in the current support provided within the existing programme. To understand the unique needs and gaps faced by cities across Europe pursuing climate neutrality, the report also presents the findings from interviews conducted with 16 cities across Europe and proposes a series of recommendations for expanding and refining the Learning Programme.

The report is meant to inform the Learning Programme design and development, which will involve translating learning goals and principles into an actionable and impactful learning experience that addresses the identified needs of city representatives across European cities.

Keywords

Mission Cities, Capability-Building Programme, T-Shape Model, Gap Analysis

1 Introduction

The D1.10 Capability Building Gap Analysis is a pivotal deliverable within the broader framework of the NetZeroCities (NZC) project, which is part of the European Commission's Mission for "100 Climate-neutral and Smart Cities by 2030", designed to accelerate climate action across Europe, aiming to make the continent the first climate-neutral region by 2050.

In the context of this ambitious goal, the NZC consortium has developed a first Learning Programme to support Mission Cities in accelerating their journey toward climate neutrality. This programme has traditionally focused on 112 Mission Cities, providing them with a framework of in-person intense reflection and training activities (seasonal schools), tools and knowledge resources hosted in an extensive knowledge repository, interactive services available on the NZC portal, but also peer exchanges (national workshops) and expert sessions (thematic sessions) on key areas such as systems transformation, stakeholder engagement, and transition finance.

As the project enters a new phase under the Specific Grant Agreement 2 (SGA2), there is an imperative to expand the reach of the Learning Programme to a broader group of cities that aspire to the Mission's ambition. The Capability Building Gap Analysis (D1.10) serves as a critical input to this expansion effort. It aims to identify the gaps in the current Learning Programme and provide a roadmap for enhancing the programme to meet the diverse needs of these new cities.

The primary objectives of the D1.10 deliverable are to:

1. **Develop a rich understanding of other cities' needs for a Learning programme:**
 - Leverage D1.1 *Non-Mission City Needs & Pathways - First Report* to extract cities' needs, challenges and preferences relevant for the Learning Programme;
 - Identify missing necessary insights and carry out interviews with other cities to build an understanding of their motivations and constraints for learning;
 - Understanding the current forms of support and learning cities have access to and their strengths and weaknesses in their eyes.
2. **Identify gaps, opportunities and expectations:** Compare the unique needs and preferences of other cities with the existing content and delivery mechanisms of the Mission Cities Learning Programme to identify needs that are not addressed in the current framework, and to determine necessary areas of improvement.
3. **Provide strategic recommendations:** Develop a set of recommendations that will inform the redesign and scaling of the Learning Programme, ensuring it is fit-for-purpose for a wider and more diverse audience.

This analysis will be instrumental in shaping the future direction of the Learning Programme, ensuring it effectively supports all cities in their quest for climate neutrality, regardless of their current status as Mission Cities or other cities interested in climate neutrality. The insights generated will directly influence the design and implementation of enhanced learning modules, thereby playing a crucial role in the broader NZC initiative.

2 Overview of the Current Learning Programme for Mission Cities

The current Capacity and Capability Building Programme in NZC is designed to support the 112 Mission Cities in their journeys toward climate neutrality. The NZC Learning programme is designed to support cities in accelerating their climate transition through capacity building, peer collaboration, and knowledge exchange. Its scope and purpose can be summarised as follows:

- **Capacity Building:** The learning programme aims to build the capacities of city stakeholders — civil servants, policymakers, citizens and urban stakeholders — by offering structured online learning modules, exercises, webinars, and co-design workshops. The programme is focused on delivering professional development for city officers, ensuring that they are equipped with the necessary tools to design and implement climate action plans and pathways to climate neutrality.
- **Peer Learning and Collaboration:** The programme promotes peer-to-peer exchanges through facilitated online groups, study visits, and mentoring/twinning programmes. This approach allows cities to learn from each other's successes and challenges, fostering cross-city collaboration and replication of best practices.
- **Systemic Transformation Focus:** The learning programme supports cities in addressing key themes such as building transition teams, designing impact pathways, citizen engagement, and identifying appropriate technological solutions. It includes both explicit and implicit learning strategies, emphasising the exchange of knowledge on governance, systemic transformation, and innovation.

2.1 Current Learning Programme Objectives

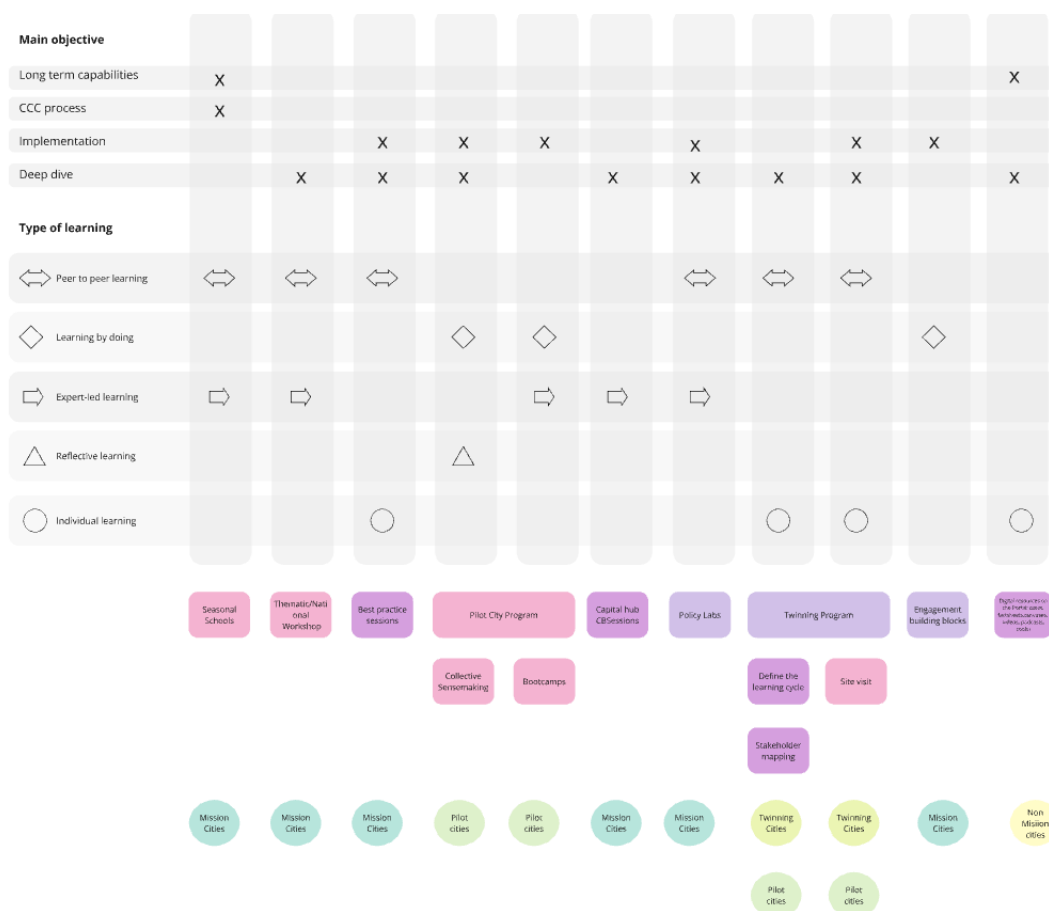
The main objectives of the Learning Programme for Mission Cities are to provide:

- An **adaptive learning process**, so that the learning programme can be responsive to cities' evolving needs and capability gaps, ensuring that the learning process adapts as cities' contexts change;
- Learning offerings that **build the capabilities required for systemic innovation and orchestrating the climate transition**, enabling cities to implement climate neutrality in their specific contexts;
- Enable **monitoring, evaluation and sensemaking processes**, contributing to extracting and capturing knowledge and insights to support the effective implementation of the mission-oriented approach.

2.2 Current Learning Programme Offering

As Mission Cities are shifting from developing their CCC into their implementation, the learning offer is also changing to adapt to the new needs and challenges of cities.

Figure 1. Analysis of the current learning offer



Mission Cities currently have access to a diverse range of learning offers, from in-person to virtual workshops, courses and peer-learning opportunities:

Seasonal Schools

Seasonal Schools provide a **2.5 day in-person intensive learning experience** for Mission Cities. The current focus of the seasonal schools is to support cities in monitoring and implementing their CCC. They also provide an entry point for cities to engage with the NZC Capability Building Programme, while building peer-to-peer relationships, and networking among city representatives and facilitators. Four seasonal schools have taken places between June 2023 and April 2024.

By participating in the Seasonal Schools, cities benefit from:

- Sessions that are adapted and tailored the demands and challenges participating cities would like to address.
- Peer-to-peer exchanges for sharing strategies, tools and methodology that could help them overcome various barriers in their CCC implementation.
- Gaining a deeper understanding on financing, social innovation, developing a portfolio of actions, establishing a transition team and citizen engagement.
- Networking and building relationships with City Advisors and City Support Groups experts in person

Best Practice Sessions

Best Practices sessions are **online 90-minute sessions**, meant to supporting cities in sharing the successful strategies, governance processes, and solutions presented by cities participating in the Seasonal Schools with a broader audience, particularly with other cities that were not able to attend. These sessions promote reflexive learning, analyse the effectiveness of best practices within the CCC

framework, and support cities in iterating their CCC. After each session, they are uploaded on the NZC Knowledge Repository. Four best practices sessions took place between January and May 2024, covering the topics of stakeholder engagement, urban mobility and transport, energetic renovation as well as the CCC process as governance innovation tool.

Best practice sessions offer the opportunity for cities to exchange experiences. However, these sessions have experienced low attendance, and closer coordination with City Advisors and City Support Groups would be helpful in designing sessions that appropriately address city needs.

Thematic Workshops

Thematic workshops in the **national language** are in-person sessions that aim to provide cities with **in-depth learning opportunities** on emerging topics related to the development and implementation of CCC. The workshops focus on participating cities identifying and address key barriers, fostering collaboration, and promoting knowledge sharing among cities at the national level. Three thematic workshops have taken place in 2024, one for Italian cities and two others in Poland.

The thematic workshops were appreciated by the participating cities, while they expressed the need for more specific and practical tools, as well as more focus on building better communication strategies for engaging the local ecosystem.

Capability Building Modules

The Capability Building modules on the NZC portal were designed to provide **structured learning journeys for Mission Cities** and support them in building the capabilities required for navigating the climate transition. Six different modules were launched: 1) Building a Shared Understanding; 2) Activating Ecosystems for Change; 3) Setting up a Baseline for Action; 4) Experimenting with a Portfolio of Actions; 5) Building a Strong Economic Case and 6) Developing a Financing Strategy. The modules are currently paused, as they faced challenges due to low engagement, lack of capacity from partners to develop content and community management capacity issues.

Policy Labs

Policy Labs are **2-hours bi-monthly session** (virtual and in-person) aimed to support Mission Cities in understanding EU climate policies, and address policy challenges. The sessions focus on co-creating concrete policy recommendations to EU and national policy makers to address local, national, and European policy challenges that impact cities' climate neutrality efforts. Through the Policy Labs, cities work on real-world policy challenges and collaborate with peers to develop actionable policy recommendations for EU and national decision-makers.

Twinning Learning Programme

The Twinning Learning Programme facilitates **knowledge transfer between Mission Cities and other cities interested in pursuing climate neutrality**. The programme runs for 20 months and is divided into three modules, with both in-person and virtual activities. Mission Cities are matched with other cities through an open call, ensuring diversity in city size, type, geography, and climate neutrality ambitions.

The cities participating in the Twinning Learning Programme have access to:

- **Facilitated peer learning:** Cities engage in a deeper, semi-structured peer learning experience, building the foundation for long-term knowledge sharing;
- **Focus on replicability of solutions:** Cities work together to assess the replicability of successful solutions and strategies;
- **Tailored support:** Cities are matched based on their expertise and learning needs, ensuring a personalised peer-learning experience.

Pilot City Programme

The Pilot City Programme supports selected European cities (but only 4 are not Mission Cities) in **testing and scaling innovative solutions** for achieving climate neutrality. The cities serve as experimentation hubs, implementing systemic approaches across challenges related to energy, mobility, buildings, and urban infrastructure. The programme provides resources, expertise, and networks to help cities overcome barriers and accelerate their climate transition efforts.

NetZeroCities Portal

The NZC portal hosts a wide range of **resources and tools** for supporting cities in their journey towards climate neutrality. It offers modules, trainings and other learning opportunities designed to build capacity and address specific challenges faced by cities. The portal also facilitates collaboration, knowledge sharing, and access to best practices. Currently, the portal is being redesigned in order to provide a more streamlined and accessible experience for users.

2.3 Opening learning opportunities to more cities

The existing learning offering for Mission Cities plays a critical role in supporting Mission Cities on their path to climate neutrality, by providing targeted guidance, resources, and opportunities for peer learning. Recognising the importance of extending these benefits beyond this initial group of cities, **the programme will now be expanded to be open to more cities**, helping a broader range of urban areas across Europe accelerate their climate action efforts. This expansion aims to empower more cities with the tools, knowledge, and collaborations necessary to meet their own climate goals.

This report explores what it would take to expand learning activities beyond Mission Cities currently known by NZC presenting our user research into this new segment of cities and outlining some design specifications for the new extended learning programme that will address these new city users, fostering inclusivity and innovation across a wider European urban landscape.

3 Learning Programmes Benchmark Approach

Research was conducted to identify existing learning programmes and benchmark learning standards across various sectors. This review provided a foundational understanding of **current learning best practices**. The findings were then synthesised to develop a set of criteria. This multi-faceted approach ensured that the resulting benchmark framework was both evidence-based and practically applicable across diverse learning environments.

3.1. Benchmark of existing learning programmes outside NetZeroCities

In this section, we discuss various existing learning programmes available for sustainability and climate-related training, as well as innovation and systemic thinking. This section also highlights the strengths and challenges of asynchronous, synchronous, hybrid, and in-person learning methods, while identifying how these approaches can support cities' capacity-building needs for embarking on their climate neutrality journey.

Asynchronous Learning Programmes

There are several **online, pre-recorded, asynchronous courses** that could be accessed by city stakeholders. They are hosted on various platforms (edX, FutureLearn, Coursera etc.) or on dedicated city platforms (Urban Shift Academy, or our own Net Zero Cities portal). They require high upfront cost for creating pre-recorded content but offer the benefit of then scaling up to an unlimited number of participants. Sometimes they are accompanied by additional webinars or live sessions or several self-directed and self-facilitated community building elements. They require learners to be highly motivated to complete the learning and to embed it. The best results seem to be achieved when teams follow the same asynchronous learning together and set their own deadlines, while setting up small discussion groups at work. One important drawback of pre-recorded content is that it is difficult and expensive to iterate and update and it can quickly become irrelevant.

[Coursera](#) is an online learning platform that provides courses, specialisations, and degrees from a large number of universities and organisations worldwide. Registered users have access to a wide range of topics, allowing them to learn new skills, earn certificates, and advance their education or careers. A course on the NetZero topic is available, created by Viable Cities through the University of Lund, named "[Cities, Climate and Change: Pathways and Opportunities](#)" (14 hours of training material), which includes videos and podcasts on NZC.

[Urban Shift Academy](#) is an educational online platform focused on urban development and sustainability. It offers eight courses and various resources designed to support and empower individuals and communities to create more sustainable and resilient cities. The courses are designed for flexible learning, allowing users to access the courses at their own pace.

Asynchronous learning offers several strengths, including scalability, accommodating a large number of participants without additional costs, flexibility, allowing learners to complete courses at their own pace and cost-effectiveness over time, with minimal running costs after the initial investment. It can also be enhanced with additional elements such as webinars and community-building activities, further enriching the learning experience.

At the same time, these type of learning programmes also present several challenges, including high initial costs for creating quality content and keeping content up-to-date, which can be difficult and expensive. Other factors, such as keeping learners engaged and motivated, could be addressed by employing gamification methods, such as quizzes and interactive challenges. Additionally, the best results are achieved when city teams coordinate their learning efforts.

Synchronous Learning Programmes

Synchronous learning includes both **interactive live sessions** (e.g. AimHI) and **facilitated sessions** (e.g. Terra.do, RegenIntel). AimHI is a best practice example of one-2-many, low effort and low commitment learning, which supports broad employee engagement across a company or a municipality. It can be, however, slightly simplistic for practitioners focused on implementation. Here, elements from programmes like Terra.do can be relevant such as 1-1 attention, strong community building elements, mentorship access, assignments with deadline to keep people on track, requirements to complete the course, certificates for additional motivation, and offering practical deep dives on industry and policy specific topics. This mix achieves excellent learning results, but it requires higher time commitment which is not always suitable for city stakeholders.

[AimHI](#) is an online education platform that offers live, interactive classes focused on environmental education and climate action. The platform's goals are to equip learners with the knowledge and tools necessary for addressing environmental challenges by providing engaging, science-based learning experiences.

[Terra.do](#) is an online climate school that provides immersive, cohort-based learning programmes on climate action and sustainability. The programme connects learners with experts, industry professionals, and a global community, providing education and career pathways for those looking to work on solutions to fight against climate change.

[RegenIntel](#) provides courses as well as consulting and advisory services for facilitating climate and regenerative solutions for the well-being and resilience of ecosystems, economies, and communities. Their course is based around a “climate quest”, a 12-week project designed for being implemented in the real-world, while course facilitators have expertise from a variety of sectors, such as built environment, agriculture or health.

The benefits of synchronous learning programmes are that they are interactive, as live sessions promote engagement and allow for personalised attention from facilitators. They also provide structured learning with clear deadlines, assignments, and certificates, helping participants track their progress and stay motivated. Additionally, they encourage community building, fostering stronger connections among participants, and are well-suited for deep dives into industry-specific topics.

However, these programmes also require a more significant time commitment from participants which may lack the flexibility required to adapt to their agenda. They also require facilitators for the sessions, and tend to be more expensive than asynchronous alternatives, with greater logistical effort and coordination to manage.

Hybrid Learning

Hybrid programmes (e.g. Kaos pilot courses) are highly valued by city practitioners who got to experience these programmes, particularly for **peer-to-peer learning**, prompts in between and before sessions which keep people on track, **self-designed learning curriculum**, mix of different forms of engagement, and incorporating various resources for learning loops (coaching, mentoring, 1:1s, learning groups, full-days deep reflection cycles). They can also include embodied, sensorial experiences to analyse the same topics from multiple lenses and dimensions. As such, these types of courses are very impactful but can be quite time consuming and expensive to both run and attend. However, some relevant best practice inspiration includes helping participants set their learning questions (one example for this is Huddlecraft) and ideas for keeping people engaged and on track. These can be adapted to both online and in person settings.

[Kaospilot](#) is a Danish education provider and facilitator of learning experiences for individuals, communities and organizations. Their programmes provide learning in the fields of leadership, business design, process design and project design, with a focus on personal development, value-based entrepreneurship, creativity and social innovation.

[Huddlecraft](#) is a collaborative learning framework that brings together small groups, or “huddles,” to tackle challenges, share knowledge, and achieve common goals. It emphasises peer-led learning, where participants learn from each other’s experiences and perspectives, fostering a community-driven approach to problem-solving and skill development.

[School of System Change](#) The School of System change is an educational initiative designed to help individuals to develop skills and the mindset needed to tackle complex systemic changes. It emphasises the need to think about the underlying systems that drive behaviours in society, addressing areas such as climate change, inequality, and sustainability. The School offers various courses, such as the “Delta” programme, which introduces learners to systemic frameworks and tools to understand and intervene in complex systems. In addition to teaching sessions in group, participants can access 1:1 coaching with an experienced systems facilitator to deepen their practice.

Hybrid learning offers several benefits, as it **combines the strengths of both asynchronous and synchronous methods**, while including coaching, mentoring, and opportunities for deep reflection. It promotes peer-to-peer learning, encouraging collaboration and support among participants, and leverages a variety of engagement methods and learning experiences to enhance the learning process. They also allow for self-designed curriculums and providing comprehensive support.

Challenges associated with the hybrid approach are that it is more time-intensive for both participants and organisers, while also coming with increased costs due to the combination of multiple formats. It also requires complex implementation and careful coordination to manage all elements effectively and maintain participant engagement.

In-Person Learning

In person learning experiences are an increasingly popular form of learning and engagement for executives and senior stakeholders. Many of them are tailored and organised specifically for companies and organisations in partnership with a service provider and an education institution like a university. They often take place in unusual locations and involve a lot of site visits and learning by doing and by visiting projects, sites, factories, processing plants, repair centres, farms, building sites, and generally spaces that senior stakeholder influence. There are some potential inspirations and learnings from expeditions that could be incorporated in the seasonal schools as these get iterated or for any in person learning offerings for cities.

One example of those could be the learning expeditions organised by [ChangeNOW](#), a social enterprise organising a global summit and providing a platform that brings together innovators, entrepreneurs, and leaders to address urgent environmental and social challenges

[Kaospilot](#) also provides in-person learning experiences, focused on experiential learning, leadership, and creative problem-solving. These events usually involve a mix of workshops, group activities, reflection sessions and hands-on learning.

The benefits of in-person learning modalities include offering an **immersive experience**, while providing hands-on, engaging, real-world learning. It also allows for a deep, practical understanding of concepts through activities such as site visits and can be tailored to meet the specific needs of executives and senior leaders, resulting in highly impactful learning outcomes.

However, in-person programmes also present drawbacks, as they are often expensive due to costs related to travel, accommodation, and logistics, and are logistically challenging to organise and execute. They also demand a considerable time investment from participants and are less scalable compared to digital learning formats.

3.2 Benchmark of external digital platforms

This section outlines digital platforms that can provide inspiration for the design of learning programme, as well as a catalogue of digital features¹. These examples offer valuable insights into interactive tools and engagement strategies that can support success of opening the Mission Platform to new cities. Below are five key examples from the benchmark of platforms that offer insights into successful design and implementation that could serve as inspiration for the NZC platform:

[Coursera](#)

As previously mentioned in section 3.1, [Coursera](#) provides courses, specialisations, and degrees through an online learning platform. Registered users have access to a wide range of topics published by universities and organisations from around the world. The technologies applied within this platform that might inspire similarly successful innovation within NZC includes their AI-driven personalisation

¹ The benchmark has been crafted with the contribution of Politecnico di Milano students of the Master's [course](#) in Digital and Interaction Design

which recommends learning paths according to individual need outlined on the users' profiles, their effective mobile optimisation, and interactive learning tools.

Are.na

Are.na is a collaborative online platform designed for creative thinkers to organise and share ideas. It functions as a networked space where users can collect, curate, and connect content in a visually structured way. The unique aspect of this platform, which may be considered for the NZC platform, is the linking of visual organisation. Any type of media may be given a visual marker and connected across workspaces for inspired associative learning. Furthermore, the collaborative aspect of workspaces being made public promotes a collective sensemaking and transactive learning style. Lastly, and most simply: this platform is fun and enjoyable to use, with interfaces and UX interactions that are reminiscent of Pinterest or Tumblr.

Trainual

Trainual self-describes their platform as a *playbook*, with a methodical approach to training within an organisation. They guide documentation, delegation, onboarding processes to systematise teams undergoing change from scaling. Their mutual learning features are key for sharing knowledge among participants. For the sake of the NZC portal development, this platform is useful to analyse because of the focus on organisational change and employee onboarding. The visual clustering is based on existing and aspiring competencies and promotes mutual learning features among peers.

Core 77

Core77 publishes articles, discussion forums, an extensive event calendar, hosts portfolios, job listings, a database of design firms, schools, vendors and services. Core77 provides a gathering point for designers and enthusiasts alike by producing design competitions, lecture series, parties, and exhibits. The value of this platform for NZC portal designers is the interface choices made for their discussion forums, which are easy to access and navigate for users to seek answers amongst themselves for any questions which arise during their learning.

MIT OpenCourseWare

MIT OpenCourseWare (OCW) is a free, web-based publication of nearly all MIT course content, including lecture notes, exams, and videos. It is designed for self-paced learning and does not offer interaction with instructors or other students. The materials are organised in logical sequences to support independent study. The independence enabled by this platform is a point of aspiration for the NZC team, and in this case their self-study abilities replace the need for interaction with instructors. The NZC portal will include peer learning and expert-guided teachings, but it will benefit the longevity of these lessons if the materials from live learning events can remain useful for future users, even after these events are concluded. Additional examples of digital platforms are listed in **Annex 3**.

4 User Insights from the interviews

This chapter provides an overview of the needs, challenges, and preferences of cities that are interested in the Mission and aiming for climate neutrality. It highlights the diversity in **demographics** and **climate ambitions**. It also identifies the **key transition and skills challenges and barriers** the cities interviewed face.

The chapter also highlights the **preferred learning formats and approaches**, what **constraints and limitations** they have in either accessing or participating in learning opportunities, but also implementing

the climate transition. We also define the **success metrics** cities aim for, including practical outcomes and policy improvements and compile **feedback and suggestions** from city representatives for developing a learning programme that effectively meets their needs.

A total of 16 interviews were conducted, involving 28 participants overall.

4.1 Demographics of interview participants

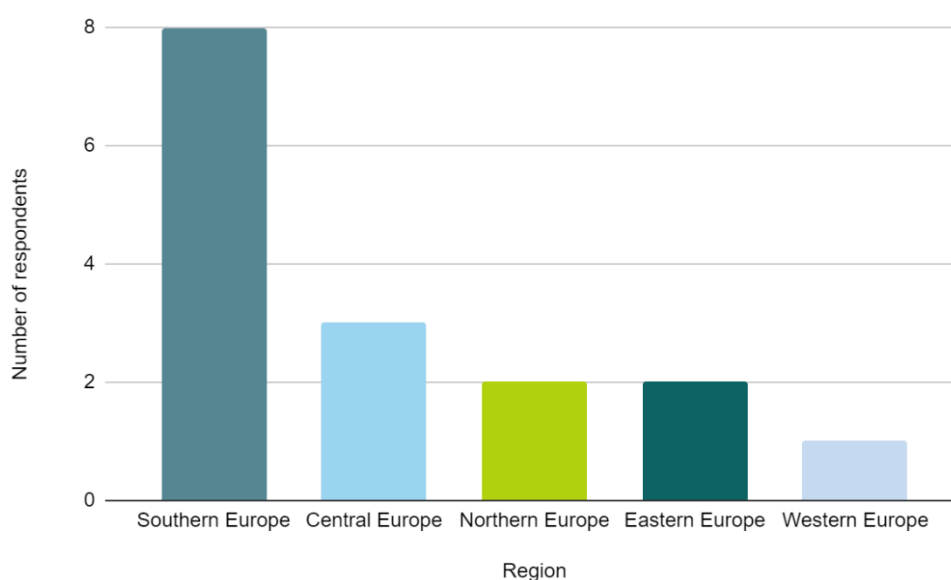
This section describes the geographical distribution of the cities that participated in the interviews, as well as city population sizes, respondents' roles and influence levels, and the varying climate ambitions of the different cities. It also highlights the diversity of city sizes, different leadership roles, and the range of climate neutrality targets.

Geographical distribution

The geographical distribution for city representatives that participated in the research was classified into five separate regions: Northern Europe, Southern Europe, Central Europe, Western Europe, and Eastern Europe.

The demographic breakdown of the interviews shows a clear **overrepresentation of respondents from Southern Europe**, with 8 participants from this region, 2 of them (25%) representing cities in Turkey. This suggests that the insights gathered may be heavily influenced by the perspectives of Southern European cities and city representatives, potentially impacting the overall balance of the findings across different regions.

Figure 2. Number of interview respondents per region



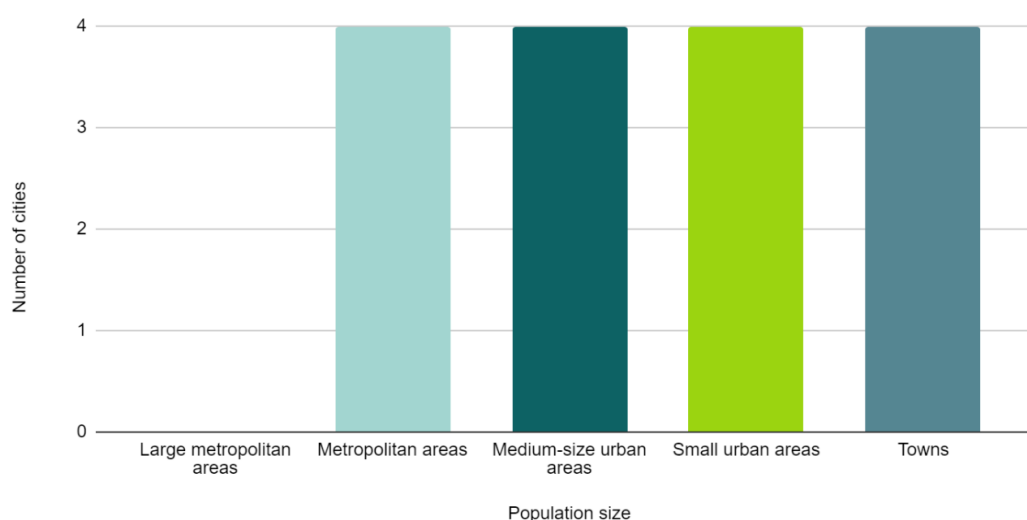
Population

The following categories were considered when analysing population size:

- **Large metropolitan areas:** 1.5 million or more inhabitants²;
- **Metropolitan areas:** 500 000 - 1.5 million inhabitants;
- **Medium-size urban areas:** 200 000 - 500 000 inhabitants;
- **Small urban areas:** 50 000 - 200 000 inhabitants;
- **Towns:** 0 – 50 000 inhabitants.

None of the cities participating in the research have populations of 1.5 million or more, suggesting that the new cities joining the learning programme are more likely to be smaller regional hubs rather than major global centers. The 16 cities are evenly distributed across the remaining four categories: four metropolitan areas, four medium-sized urban areas, four small urban areas, and four towns. This even distribution highlights the diversity in population size among the participating cities.

Figure 3. Number of participating cities vs. population size



Interview Respondents' Role and Influence Level

While 16 interviews were conducted, 28 persons participated in the interviews, as several of these included participation from 2 to 4 city representatives. Based on the job titles provided by the participants, the different categories based on their areas of focus and responsibilities are:

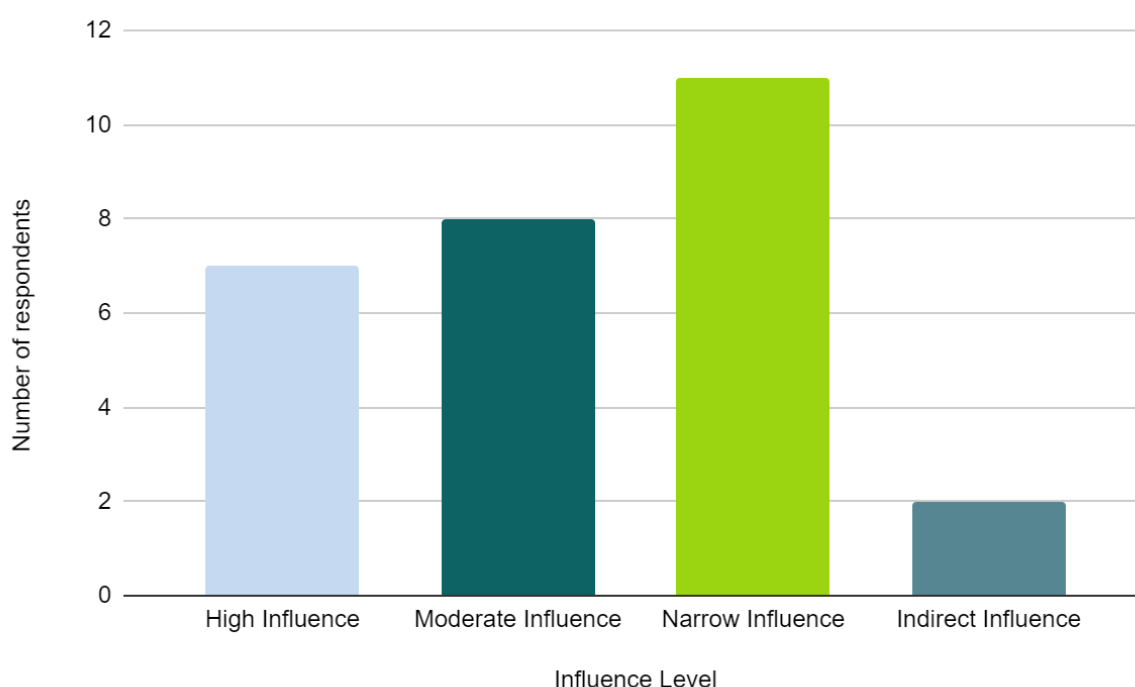
- **11 of the city representatives have Technical or Specialist Roles:** These persons work as Climate, Environmental or Design Specialists, their positions focusing on implementing climate-related policies, managing environmental projects, and ensuring compliance with sustainability goals.
- **8 have Upper Management roles:** These roles include Project Managers and Coordinators and involve the management and coordination of specific projects related to urban development, sustainability, and innovation, including the coordination of cross-departmental collaboration, building partnerships with external stakeholders or integrating innovation into urban development and climate action.

² [The population category mentioned in this report differs from the categorisation of cities mentioned in Deliverable 1.1, where the large metropolitan areas and metropolitan areas were merged into a single category.](#)

- **6 persons in Executive Leadership roles:** These roles include Deputy Mayors, Council Members and Department Directors, and are focused on leadership and decision-making within the city government, often involving strategic oversight, policy direction, and high-level coordination across various departments.
- **2 people work as External Consultants:** These persons bring external expertise and provide strategic advice and specialised expertise related to the implementation of climate neutrality at the municipal level.

While all roles play an important role in advancing climate neutrality efforts, the level of influence they hold varies. Executive Roles, such as Department Directors or Deputy Mayors, typically hold a higher level of influence as they are responsible with making strategic and financial decisions, and setting political and policy direction for climate initiatives. Those in upper management roles (project managers and coordinators) hold a moderate level of influence by bridging the gap between strategy and implementation, through executing policies and coordinating projects. However, technical and specialist roles are focused on providing technical expertise or driving operational tasks, holding more narrow levels of influence over the direction of climate initiatives at the municipal level. At the same time, external consultants hold indirect influence, as the adoption of their recommendations depends on the city leadership and management.

Figure 4. Number of interview participants vs. Influence level



The majority of interview participants hold **moderate and specialised influence roles**, while only 25% of them hold Executive Leadership roles. This is an important factor to consider, as orchestrating the climate transition, especially when working within city administrations, would benefit from the involvement and leadership of representatives with higher levels of influence and strategic abilities. We noticed that in those cases where both an Executive Leader and either a Project Manager or Specialist joined the interview together from the same the city, the two participants complemented each other by being able to understand the interconnected complex challenges they are facing in implementing climate initiatives, as well as contribute with various perspectives, needs and capabilities.

Climate Ambitions

The 16 cities interviewed are in different stages of their climate neutrality journey. Six of the participating cities state that they **do not yet have a climate neutrality target**, with many expressing that they are struggling to understand where to start. The other 10 cities state that they are either aiming for climate neutrality by 2030, 2040 or by 2050, or are committed but believe they need to better understand what the transition entails in order to commit to a specific date.

The six cities that have not yet committed to a climate neutrality target are also more likely to have a more project-focused perspective on what it means to reach climate neutrality instead of a holistic approach and perspective. Four of these cities are located in Southern Europe, one in Eastern Europe, and one in Central Europe. There is no further correlation between geographical position and climate ambitions among the other 10 participating cities.

4.2 Interviewed Cities' Needs and Challenges

The interviews conducted with representatives of interview responders and city experts reveal a clear **diversity in the needs and challenges that cities face** in their journey towards climate neutrality. The cities' path to achieving climate goals is greatly shaped by local circumstances, including economic conditions, organisational structures at the municipal level, national policy environments and culture contexts.

The interviews reinforce the fact that while climate neutrality might be a common objective, **the strategies employed and the obstacles faced vary significantly** from one city to another. These aspects highlight the need for allowing for context-specific approaches to learning rather than one-size-fits-all solutions, with a focus on developing learning offerings that support cities in addressing the complexity of designing and orchestrating the climate transition at the local level.

Key Transition Challenges

According to the urban experts and the city representatives that participated in the interviews, the main transition challenges faced by cities are related to:

- **Public-private collaboration:** Improving engagement and collaboration with the private sector is a major concern of participating cities. Cities are interested in understanding how to develop projects and strategies that include knowledge and perspectives from the private sector, how to build common understanding, as well as how to better align their climate goals with those of the local private companies. Cities understand that reaching their climate goals would require collective action as well as a shared responsibility for reducing carbon emissions.
- **Investment planning:** Many of the cities' representatives that participated in the interviews mention being concerned with optimising financial planning, as well as improving processes for understanding how to best allocate and manage financial resources to maximise impact and make strategic decisions.
- **Funding and financing:** Another challenge mentioned by the interview participants, also related to managing financial aspects, includes obtaining the appropriate funding for the climate-related projects they aim to implement. In particular, some of the respondents from certain Southern and Eastern Europe mention that low availability of funding from the national level has a major effect on climate action implementation.

- **Building a strong mandate for climate transition inside the organisation:** Better coordination between departments and integrating climate neutrality into the operations of the municipality are mentioned as a key concern for interview participants. In particular, research participants are concerned with the low levels of information sharing, lack of common strategy and siloed work within their institutions.
- **Multi-level governance:** Another aspect that was mentioned by several city representatives is the need to align their climate goals with regional and national priorities, policies and regulations. Participants mention that city climate goals do not always align with those at the regional level, which pose challenges in the implementation of climate mitigation and adaptation initiatives. While some cities are interested in implementing climate neutrality as soon as possible, regional governments are not always aligned, with one interviewee stating that “*..we are not going to sign the 2050 climate neutrality commitment yet because we have been advised not to do so by our regional government.*”
- **Internal capacity:** City representatives, especially those from Southern and Eastern Europe, mention that their organisations lack administrative capacity and human resources necessary to implement climate action at the local level. This aspect also impacts their participation in relevant learning programmes and networking activities that would build knowledge and capacity to take action.
- **Monitoring and learning:** Several cities have mentioned that they lack access to comprehensive data on various aspects related to climate and energy, as well as the effective mechanisms to monitor and analyse impact. Improving this aspect would help them adapt better to changing conditions and be able to use data as a decision-making tool.

It is important to mention that according to the *D1.1 Non-Mission Cities Needs and Pathways report*, cities that answered the survey (which overlap greatly with those interviewed) also state that coordination between different levels of government is lacking or insufficient, that citizen engagement practices such as co-creation and co-design are less commonly used by cities than consultative practices, and only 27% of the cities that responded to the survey engage with the private sector in developing their climate neutrality goals.

Skills gaps

As a result of the conversations held with city representatives, several skills gaps have been identified.

- **Employing a systemic approach:** The cities interviewed are starting to observe the complex interdependencies between existing sustainability goals and cultural, organisational and financial contexts. However, many of them still see climate action solely from the perspective of addressing challenges such as improving traffic and sustainable transport, implementing sustainable energy sources or addressing deforestation. By better understanding how to employ system thinking and mapping these interdependencies, cities could develop more effective strategies, anticipate unintended consequences, and overcome barriers to achieve substantial emission reductions.
- **Building a strong mandate:** Cities are eager to develop better relationships with local stakeholders and engage them in building a mandate for climate transformation. They understand that the transition will be successful if collaboration with the local ecosystem improves, and they are most interested to bring the private sector and citizens on board. However, they are also aware they need to build the skills in order to facilitate collaborative action.
- **Citizen engagement:** City representatives are interested in improving citizen participation in climate initiatives and building trust. Some believe building better awareness of their climate strategies and goals would be effective, however many of the respondents were aware that there are other efficient avenues, such as citizen assemblies for climate or developing more

collaborative, multi-actor governance structures for transforming decision-making processes and build more engagement.

- **Finance and Investment:** Interview participants state that they would like to improve their skills in accessing relevant funding. In countries located in Eastern and Southern Europe, national and regional funding can be unreliable, therefore cities from these regions are particularly interested in accessing funding from other sources, so they can better navigate financial challenges and follow through on implementation.
- **Building the narrative around climate neutrality:** Cities are concerned with how they communicate and build common understanding with external stakeholders. They see improving communication and building stronger narratives around climate action as having a major impact in implementing climate neutrality, confirming the results of the Non-Mission Cities Needs and Pathways Survey.
- **Cross-departmental collaboration:** From the conversation with the 16 cities, it became apparent that one of the skills that would support them in implementing their climate goals would be enhancing their alignment, information sharing and collaborative decision-making across departments. Some cities do this well already, while others state that building alignment on climate action is particularly difficult, as "*there are administrative burdens because (...) every department has its own rules.*"
- **Adapting and pivoting:** Although only some of the cities interviewed explicitly state that they believe they need to expand their adaptive capabilities, many express difficulties in effectively responding to changing conditions and translating insight into actionable strategies. They find it challenging to constantly adjust their policies and interventions based on real-time data and evolving circumstances.

Notably, most of the interview participants mentioned that participating in transnational programmes and networks, as well as being already involved in various climate initiatives has been essential in further building communication and stakeholder engagement skills, as well as exposing them to systemic perspectives and approaches. This confirms the results of the *NMCs Needs and Pathways Survey*, where cities report that participating in international programmes are useful and appreciated for providing inspiring content, networking opportunities, funding, and access to toolkits, which help cities adopt or plan to adopt GHG reduction targets.

4.3 Interviewed Cities' Motivations and Goals

The most common motivations and goals of interviewed cities striving for climate neutrality are centered around **collaboration and engagement**. Some of the aspects mentioned by cities as driving their climate ambitions are **enhancing collaboration with the local ecosystem, building better governance structures within the municipality and with local stakeholders**, as well as **developing stronger engagement processes with the private sector and citizens**. The cities interviewed believe that achieving climate neutrality would only be possible if they build more efficient collaboration with the local ecosystem and within the municipality.

Another major motivation is **being able to build the climate transition upon existing climate action frameworks**, such as the Sustainable Energy and Climate Action Plans (SECAP) **as well as various other local climate strategies and initiatives** they are already pursuing, such as Sustainable Urban Mobility Plans, Climate Adaptation and Mitigation Plans or Integrated Urban Development Strategies

In terms of engagement with the NZC platform and the Capability Building Programme, interview respondents are highly motivated by **the opportunity to build partnerships and foster long-term collaborations** with other cities that face similar challenges in their climate journeys. They are also keen

to **connect to a diverse network of peers** with varied expertise, providing valuable insights and knowledge exchange. Users are also particularly interested in **learning from the innovative pilot projects of Mission Cities**, through practical examples. Additionally, they consider essential to be able to **engage in peer-to-peer exchanges** with cities within the same region or those with similar geographical and cultural contexts, which they state that it would support them in applying the lessons learned to their local contexts and challenges. The respondents state their interest for knowledge-sharing environments that would enable cities to leverage collective experiences and accelerate their progress toward climate neutrality.

4.4 Preferred Learning Approaches of Interview Respondents

The learning needs and preferences identified through the interviews reveal a strong inclination towards a **hybrid learning approach**, that offers facilitated online learning as well as in-person exchanges. There is a clear demand and need for **challenge-based learning approaches**, as the city representatives interviewed express the challenge of translating theoretical knowledge and case studies into context-specific actions and real-world problem-solving. At the same time, **site visits and peer-to-peer opportunities** with cities dealing with similar challenges and contexts are highly valued.

Being part of a **community of peers** and **access to a network** is also considered very important by interview respondents. These aspects enable cities to share knowledge, good practices, and innovative solutions. Collaboration in peer networks also provides cities with valuable insights from others facing similar challenges and encourages a sense of shared responsibility in their climate transition.

At the same time, transnational projects were highlighted as key sources of significant learning, providing exposure to diverse practices and strategies across different regions. City representatives find transnational projects useful for learning for several reasons:

- Being exposed to other cities' challenges and approaches, which can lead to gaining new perspectives and methods.
- Access to connecting with international experts and organisations, gaining access to resources and specialised knowledge that is not always available locally.
- Access to a network of peers and collaboration opportunities, which supports collectively developing solutions and ideas for common challenges. This is also helpful for building partnerships with other cities in the long-term.
- Developing new skills, more specifically being able to manage and address complex projects and challenges.

The cities representatives interviewed emphasise the need for interactive, collaborative, and contextually relevant learning experiences.

The responses from the interviews differ slightly from those provided in the *NMCs Needs and Pathways Survey*, where respondents have chosen case studies, study visits, online sessions, short courses, multimedia resources and formal certification as main learning formats preferred. More specifically, interview respondents emphasised that case studies from cities that are very different can be intimidating and difficult to use as examples, one city stating that " *We need case studies from cities that have the same problems as us so we can learn from each other. For example, we cannot learn from Oslo, they are organised differently and have different challenges*".

4.5 Interviewed Cities' Constraints and Limitations

The interviews revealed several significant challenges cities face in building the skills and resources needed for sustainability and climate action.

The **most mentioned constraint** experienced by cities when approaching capability learning programmes is **language**, posing a significant obstacle, restricting access to resources and participation in learning opportunities. When educational materials, tools and capacity-building programmes are available solely in English, it prevents relevant city representatives from fully engaging with the entirety of available content, understanding complex concepts, and sharing experiences with peers. As a result, these language barriers can hinder effective knowledge transfer and reduce the overall impact of learning initiatives. Addressing this issue through multilingual resources and translation services is essential to ensure that all cities have equitable access to the information and support needed for urban transformation.

Another major challenge in accessing meaningful capability building programmes, but also in getting started in implementing climate action, is the **overwhelming abundance of options and resources available**. This challenge impacts cities' decisions when it comes to navigating tools and prioritising pathways effectively. Interviewees have access to platforms and programmes such as the [NetZeroCities portal](#), [Covenant of Mayors for Climate and Energy](#), [ICLEI – Local Governments for Sustainability](#), [C40](#) or [The European Climate Adaptation Platform Climate-ADAPT](#) and others. However, they find it **challenging to know which one to choose for their specific needs**. One city expert states that *"...they have a sense of support fatigue. It can be overwhelming with all these support structures that are available. It can sometimes be overwhelming where we're all trying to reach out to them and support them."*

Additionally, the **lack of time and/ or human resources** limits the time available for engaging in learning activities, but also for implementing climate projects and initiatives. Cities from Southern and Eastern Europe mentioned that they find it difficult to employ qualified personnel, that have the knowledge and capacity to participate in climate programmes and implement complex initiatives. Other cities mentioned they have small climate-focused departments, which might mean that *"there are not enough hands for everything that needs to be done"*.

City representatives also mention the fact that capacity and availability for **learning is often hindered by overwhelm with their current workload**. Oftentimes, participating in courses or transnational projects becomes the responsibility of one city representative, who needs to disseminate the learnings back to the team. This creates additional burdens for one person and could lead to the knowledge and insights being lost if the person leaves the institution or is transferred to another department. This challenge could be approached by ensuring that at least two delegates per municipality participate in the learning programme.

Organisational **support for learning varies widely** from city to city, impacting the effectiveness of capacity-building initiatives. Some cities have allocated budgets for learning, allowing employees to choose which types of training and learning activities they can attend. Others, such as Spanish cities, provide access to local and national learning opportunities, supporting capacity-building in climate and sustainability and requiring these types of courses for career advancement. However, there are also cities where learning is not encouraged nor supported, and employees need to be self-motivated to find and participate in learning opportunities. At the same time, over half of the interview respondents mentioned that attending courses or learning opportunities depends on internal motivation. Paired with the heavy workload that many city representatives experience results in limited time and pursued opportunities for learning.

One other aspect mentioned by interview participants is the fact that **procurement and costs** can also restrict access to necessary tools and learning programmes. In the case of some Eastern European

cities, covering costs for the course and travel to in-person events through their workplace requires lengthy procurement processes, adding to the employee's workload.

4.6 Interviewed Cities' Success Metrics and Impact

The interviewed cities consider that their engagement with the NZC platform and learning programme would be a success if, as a result of their participation, they will achieve:

- Increased capabilities for:
 - **Citizen and stakeholder engagement**, recognising that the success of climate initiatives relies heavily on inclusive community participation and co-creation, as well as on the support and collaboration of the private sector.
 - **Building a more compelling narrative around climate neutrality** and effectively communicating the importance and benefits of climate efforts, making the concept more relatable and actionable for a variety of stakeholders#
 - **Building a cohesive and shared climate neutrality vision across their municipality**, ensuring that all departments and stakeholders are aligned in their approach and implementation
 - **Change behaviours and address cultural challenges**, such as the pervasive fear of failure and the presence of silos that can often hinder collaboration and innovation within institutions.
- Improved collaborations and knowledge exchange through:
 - **Building partnerships with cities facing similar challenges**;
 - **Having access to a network of peers** with diverse expertise and insights;
 - **Learning from the experience of Mission Cities**, with a particular interest in the implementation of pilot projects, as well as understanding how Mission Cities in their macro)regional and national context navigate regulatory and cultural challenges;
 - **Peer-to-peer exchanges**, particularly with cities in the same region or those with similar geographical and cultural contexts.

Achieving practical, tangible results and seeing the real-world impact of their participation, such as measurable reductions in emissions, successful pilot projects, or enhanced policy frameworks. One other aspect mentioned by several participants was the need to **involve local stakeholders in the learning journey**, ensuring that their insights and buy-in are an integral to implementing climate initiatives in the long-term.

4.7 Interviewed Cities' Feedback and Suggestions

The feedback provided by city representatives as well as city experts has highlighted several critical areas that could guide the design of the Learning Programme, ensuring that it addresses the diverse needs and challenges of cities aiming for climate neutrality. Below are the main suggestions provided:

- **Connecting to existing National Platforms:** cities expressed the need to exchange with and learn from Mission Cities in their particular region and country. This can be achieved by ensuring that the learning programme is better aligned with existing national platforms in countries where these are already established. Alternatively, cities would like to participate in facilitated exchanges at the national and regional levels, in order to connect with peers sharing similar cultural and contextual challenges.

- **Resources available in national languages:** one of the most frequently mentioned challenges was the language barrier, which limits access to learning resources for non-English speaking city representatives. Interview participants emphasised the importance of having resources, tools, and learning materials available in their local languages. This would significantly improve engagement and accessibility, allowing more cities and city employees to join the learning programme and apply the knowledge to their unique contexts.
- **Guidance on existing resources and how to use them:** many cities stated that they have access to a large number of resources. However, they find it difficult to navigate how and when to use them, or sort through the most useful options. They suggested receiving guidance on aligning specific tools or learning modules with their current needs, making the process straightforward and action oriented.
- **Actionable knowledge and toolkits:** city representatives emphasised the need for practical, actionable knowledge that can be immediately applied to their work at the local level. They suggest that toolkits designed to offer step-by-step guidance would be valuable in helping them take concrete actions toward climate neutrality.
- **Flexible learning formats:** as capacities and time constraints vary from city to city, research participants would like to have flexibility in participating in the learning offer. Cities expressed a preference for a mix of self-paced online modules that allow them to learn according to their schedules, as well as synchronous sessions where they can interact and collaborate with peers.
- **Peer-to-peer exchanges and site visits:** while they appreciate flexible learning formats, cities also express the need to have access to peer-to-peer learning and in-person exchanges. They highly appreciate the opportunity to learn from and with others who are navigating similar challenges. They state that in-person interactions enable trust-building and long-term collaboration.
- **Access to a community of peers:** one aspect interview participants consider highly important in their learning journey is belonging to a network where they can share knowledge and collaborate with other cities to solve collective challenges, as well as having access to various types of expertise.
- **Learning from Mission Cities' pilot projects:** some of the city representatives participating in the research expressed an interest in learning from the pilot projects being implemented by Mission Cities. This perspective could be a result of their experiences with the Twinning Learning Programme, but could also apply to other concrete projects implemented in Mission Cities. Cities are most interested in connecting with Mission Cities from their countries and regions, as they believe that they would gain insights into practical similar challenges.

5 Findings: Gaps and Opportunities

This chapter presents a comprehensive **synthesis of the findings** derived from a multi-faceted research approach presented in the previous chapters. The objective of this research was to **identify gaps in the support offer** of the existing NZC learning programme and to develop **targeted recommendations** to better support cities that are new to the platform in their pursuit of climate-neutrality.

The data for this research was gathered from various sources, including responses to the Non-Mission Cities Needs & Pathways survey, the D1.1 *Non-Mission City Needs & Pathways - First Report*, semi-structured interviews with city representatives and experts, and a thorough analysis of existing learning programmes and digital platforms. This diverse data set provides a broad understanding of the current learning needs of cities across Europe, showcasing the wide-ranging challenges and support required by cities at different stages of their climate-neutrality journey.

The insights from this research are instrumental in shaping the future direction of the NZC Learning Programme, ensuring it meets the evolving needs of cities. By summarising and integrating the findings of our research, we aim to identify how the NZC Learning Programme can be refined and expanded to effectively support new cities in their climate action efforts.

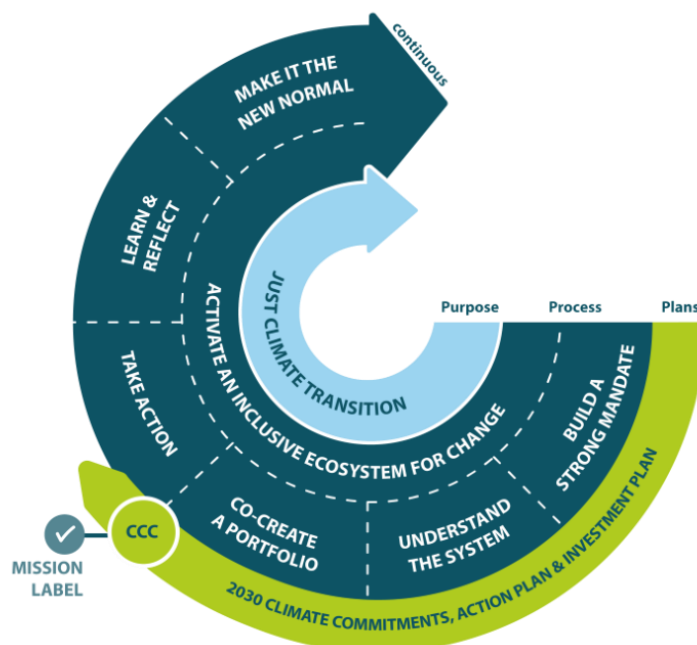
5.1 Analysis of existing NetZeroCities Support and Gap

In this section, we start by outlining the **methodology employed to analyse the existing Learning Programme** provided by NZC and to compare it against the identified needs of new cities striving for climate-neutrality. The methodology is divided into two key phases: the analysis of the NZC Learning content using the Climate Transition Map (CTM) framework and the subsequent comparative analysis to assess alignment with the needs of other cities identified in D1.1 *Non-Mission City Needs & Pathways - First Report*.

Framework Alignment: Climate Transition Map (CTM)

The Climate Transition Map (see Figure 5) is central to our analysis, offering a **structured framework to capture where needs are and what learning content focuses on**. The CTM is initially designed to capture the diverse phases of system transformation that cities undergo, from building a mandate for action to embedding new practices. By categorising NZC's learning content under these phases, and categorising needs and challenges under these phases as well, we can systematically assess the coverage and relevance of the Learning Programme through comparison.

Figure 5. Climate Transition Map



Development of Keywords

To ensure precise mapping of NZC learning content, a comprehensive keyword framework was developed for each phase of the CTM. These keywords were identified to reflect the core activities, tools, and support mechanisms associated with each phase. These keywords are used to **facilitate the categorisation of NZC learning resources** through a rigorous textual analysis of the description of each learning item, ensuring that each item was accurately mapped to the appropriate phase of the CTM.

Categorisation of NZC Resources

Using the developed keyword framework, NZC resources were systematically categorised under the relevant phases of the CTM. This involved a detailed examination of each resource within the Learning Programme, mapping it to one or more CTM phases. This categorisation allowed us to **identify which aspects of the climate transition are currently well-supported by NZC** and which phases might require further development or additional resources.

To visualize the distribution of NZC resources across the CTM phases, we generated a heatmap. The heatmap's colour intensity reflects the concentration of resources available for each phase, with darker shades indicating higher resource availability. This visual representation is a crucial tool for identifying potential gaps in support distribution and ensuring that all critical phases of the CTM are adequately supported.

Figure 6 Distribution of NZC resources across the CTM phases
(phases with many learning offers are green, phases with few learning offers are red)



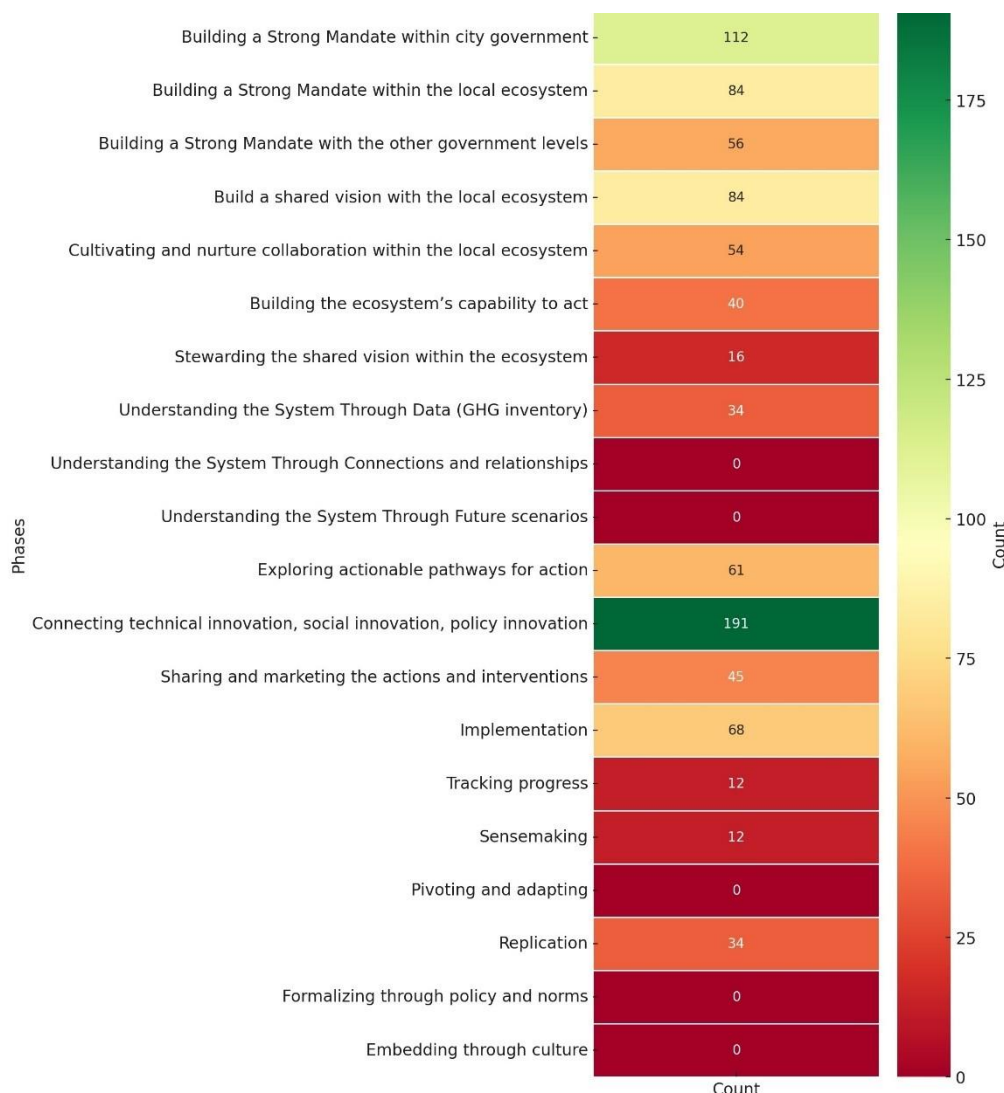
Categorisation of NMCs existing activities and support, of NMCs Learning Needs

To determine which essential components of climate transformation other cities are currently supported with or are able to work on, and thus which parts of the work they are not and needs support with, we used data from D1.1 *Non-Mission City Needs & Pathways - First Report*, particularly a number of questions relating to their current work and the support they currently receive through NZC in the form of resources and learning offerings.

We mapped the survey responses to the CTM, categorising each response under the relevant categories using the previously developed keywords. This allowed us to systematically align the cities' reported activities and support with the phases of the CTM. For each category within the CTM, we quantified the number of times cities mentioned related activities or support. This step provided a **quantitative measure of how active or supported each phase of the CTM is within the surveyed cities**.

Similar to the analysis of NZC resources, we generated a heatmap where the colour intensity reflects the level of activity or support mentioned in the survey responses for each CTM category. This heatmap served as a critical input for the subsequent comparative analysis, highlighting areas of strong activity and support versus areas where cities lack support and have greater needs.

Figure 7. Distribution of NMCs existing support across the CTM phases
(highly supported phases are green, phases in need of support are red)



Comparative Analysis of Cities Learning Needs and NZC Learning Offer

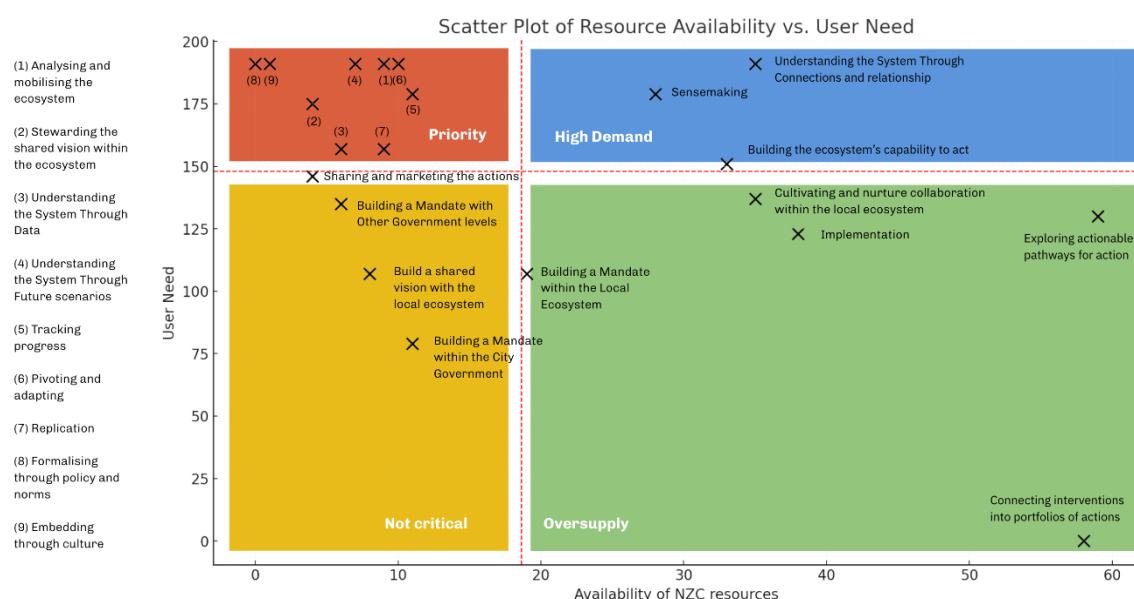
The final phase of the methodology involved comparing the focus of NZC resources against the areas where new cities are lacking support and action. We plotted CTM phases on a scatter plot, with "Availability in NZC Learning Programme" on the x-axis and "New Cities Lack of Support / Needs" on the y-axis (an inverted function of the results obtained at the previous step to highlight the phases where support was lacking). This comparative analysis provides a clear view of the alignment with cities' needs and highlights specific **areas where the NZC Learning Programme could be improved to better support cities** in their journey towards climate-neutrality.

The scatter plot (see Figure 8) was segmented into four quadrants using the mean values of both axes. This segmentation allowed us to categorize the CTM phases and corresponding resources into:

- **High Resource Availability, High User Need:** Phases with resources that are in high demand by new cities and well-supported by NZC.

- **Low Resource Availability, High User Need:** Phases with resources that should be prioritized for a Learning Programme.
- **High Resource Availability, Low User Need:** Phases where resources might be already in oversupply in the current Learning Programme.
- **Low Resource Availability, Low User Need:** Phases with resources that are not currently critical and may require less focus in the iteration of the Learning Programme.

Figure 8. NZC existing support vs. new cities Learning Needs



New cities needs and challenges

In this section we summarise and integrate all the findings presented above. On the one hand we aim to create a comprehensive overview of all the insights that have been collected throughout this research. On the other hand, by integrating the findings from the analysis of the existing Learning Programme provided by NZC and its alignment with the needs of new cities, the benchmark research on existing learning programmes and digital platforms (Chapter 3) and the insights from the User Research among city representatives (Chapter 4) we aim to extract the most recurring needs and challenges and preferred learning approaches of new cities to be able to create a basis for the development of a curated support offer in the new Learning Programme.

From Figure 8 we can derive user learning needs that are high in demand with low NZC resource availability (see upper left quadrant), subsequently we can identify a gap in the learning offer in the following four phases of the CTM:

Build a strong mandate

- Analysing and mobilising the ecosystem
- Stewarding the shared vision within the ecosystem

Understand the system

- Understanding the system through data
- Understanding the system through future scenarios

Learn & reflect

- Tracking progress
- Pivoting and adapting

- Replication

Make it the new normal

- Formalising through policy and norms
- Embedding through culture

In addition to the Non-Mission Cities Needs & Pathway survey, city representatives mentioned several critical challenges in their climate transition efforts during the interviews. These key transition challenges include:

- **Public-private collaboration:** Cities struggle to engage the private sector effectively in aligning climate goals and fostering collective responsibility for emissions reduction. They seek strategies to build common understanding and improve partnerships with local businesses.
- **Investment planning and financing:** Optimising financial resources and securing adequate funding are major concerns, particularly in regions with limited national support. Cities aim to improve financial planning to maximise the impact of their climate initiatives.
- **Building a strong internal mandate for climate transition:** Poor coordination, siloed work, and lack of shared strategy across municipal departments hinder the integration of climate neutrality into city operations.
- **Multi-level governance complexities:** Cities face difficulties in aligning their climate ambitions with regional and national policies, which often leads to conflicting goals. This misalignment hinders the implementation of local climate initiatives.
- **Limited internal capacity:** Many cities, especially in Southern and Eastern Europe, lack the human resources and administrative capacity needed to implement climate action effectively. This also limits their participation in learning programmes and networking opportunities.
- **Monitoring and learning:** Cities lack access to comprehensive data and effective monitoring systems to track greenhouse gas emissions. Improving these tools would enable better decision-making and adaptation to changing climate conditions.

Additionally, the interviews with city representatives led to insight in some of the skills that they lack, but deem necessary to accelerate their progress:

- **Employing a systemic approach:** Understanding interdependencies, creating more holistic, adaptive strategies.
- **Building a strong mandate:** Increasing stakeholder collaboration, and strengthen buy-in
- **Citizen engagement:** Enhancing participation, building trust and awareness.
- **Finance and Investment:** Improving funding access, and better navigate financial challenges.
- **Building the narrative around climate neutrality:** Enhancing communication and creating a shared understanding.
- **Cross-departmental collaboration:** Improve alignment, information sharing and collaboration across departments.
- **Adapting and pivoting:** Expanding adaptive capabilities, responding to change effectively.

Learning Content Conclusion:

Bringing this all together, we can identify the following support needs as central to cities that are new to the Mission:

- **Build a strong mandate**
 - Guidance on **analysing and mobilising local ecosystems** for climate action.
 - Support for **stewarding a shared vision** among stakeholders to align efforts.

- Strategies to increase stakeholder collaboration and **strengthen buy-in**.
- Tools to **build a compelling narrative** around climate neutrality and to **foster a shared understanding, including at the political level**.
- **Understand the system**
 - Support for **identifying and leveraging connections and relationships** within the ecosystem.
 - Resources for employing a systemic approach to manage interdependencies and **create adaptive strategies**.
 - Guidance on **navigating multi-level governance complexities** and aligning local, regional, and national climate goals.
- **Learn & reflect**
 - Comprehensive tools for planning, **tracking progress** and **assessing effectiveness** of climate action measures.
 - Capacity-building programmes for implementing, **pivoting and adapting strategies** in response to new information or challenges.
 - Models for **replication** of successful climate initiatives.
 - Inspiration from existing **monitoring systems** for emissions tracking and decision-making.
- **Make it the new normal**
 - Support in formalising climate policies and **embedding climate-neutrality in municipal norms**.
 - Resources for **embedding climate action into organisational culture** to ensure long-term commitment.
 - Support to foster continuous engagement of local ecosystems (civil society, private sector, academia, citizens) into climate action.
- **Collaboration and Capacity Building**
 - Tools for fostering **effective public-private collaborations** to align climate goals.
 - **Engagement strategies** to improve citizen participation, trust, and awareness in climate action.
 - Capacity-building support to address **lack of internal resources and administrative capacity**.
 - Frameworks for improving **cross-departmental collaboration**, information sharing, and coordination within municipalities.
- **Finance and Investment**
 - Assistance in **optimising financial resources** and securing adequate funding.
 - Support in **navigating financial challenges**.
 - Tools for **enhancing investment planning** and aligning financial strategies with climate goals.

Preferred learning approaches

Next to researching the content and skills-based needs and challenges, we also explored the learning formats that cities are looking for. By benchmarking existing learning programmes across sectors, particularly in sustainability, innovation and climate-related training, in section 3.1 we highlighted the

strengths and weaknesses of four different learning approaches, which include: **asynchronous and synchronous learning programmes**; , **hybrid** and **in-person learning**. To get a better understanding of the cities wishes and needs, we again extract from the Non-Mission Cities Needs & Pathway survey (and the analysis thereof in D1.1) and the series of interviews with city representatives. In the Non-Mission Cities Needs & Pathways survey, the most selected learning formats were:

- case studies;
- study visits;
- online sessions (i.e. webinars, workshops and dedicated training sessions);
- short online courses;
- multimedia resources; and
- accredited training courses.

In the interviews, city representatives highlight the importance of interactive, collaborative, and context-specific learning experiences, expressing a clear preference to the following approaches:

- **Hybrid learning:** City representatives show a strong preference for hybrid learning, which combines facilitated online sessions with in-person exchanges. This approach provides flexibility while offering valuable face-to-face interactions.
- **Challenge-based, peer-to-peer learning:** Cities express a need for challenge-based learning, where theoretical knowledge is applied to real-world problems. Peer-to-peer learning allows cities facing similar challenges to learn from each other's experiences and develop context-specific solutions.
- **Site visits and practical knowledge exchange:** Site visits – activities in which participants visit each other's cities or a specific workplace/area – are highly valued by city representatives as they provide hands-on learning and opportunities to observe practical implementations. These visits support cities in gaining insights and strategies relevant to their own contexts.
- **Access to a community of peers and experts (trans)nationally:** Being part of a peer network is considered crucial, as it allows cities to share knowledge, innovative solutions, and gain exposure to diverse perspectives, methods, and resources. Collaboration within these networks fosters long-term partnerships and collective problem-solving.
- **Learning modules that requires teams or at least multiple people from a municipality attending:** Capacity for learning is often limited by workload, with the responsibility falling on a single representative. Involving at least two team members in learning programmes ensures that knowledge is retained and shared within the municipality, reducing the risk of information loss.

Learning Format Conclusion:

Summarising, we identify a need for a **hybrid learning programme** in which city representatives can partly go through a **(asynchronous) self-paced process online**, which uses a variety of formats such as: case studies, webinars, workshops, dedicated training sessions, and multimedia resources.

For the other part, we identify a strong preference for **in-person learning** and *real-life exchange* in the form of **challenge-based, peer-to-peer learning sessions**, in which cities collaboratively work on real-world problems, learn from each other's practical examples, and establish a transnational peer network.

5.2 Towards a new Learning Programme for cities interested in climate neutrality – learning from Mission Cities

From the analysis in the previous section we obtain insights into what is currently top of mind for cities, what they would like to learn more about, what they come against and how they would like to interact and receive information. While this is very valuable, we should also acknowledge that **cities face several significant constraints that complicate their efforts** to advance their journey towards climate-neutrality. City representatives face challenges due to **language barriers**, which limits their engagement with educational materials and peer exchanges, while the **overwhelming number of available resources and programmes available** creates confusion and "support fatigue". At the same time, **scarcity of time and human resources** further hinder cities' participation in learning programmes and their ability to effectively prioritize capacity-building efforts.

We argue, that taking these constraints into account when developing the Learning Programme is equally important for the success of the programme as the challenges, needs and learning formats. Therefore, we decided to work towards **learning goals and learning programme principles** that will be at the core of the NMC Learning Programme.

The reflection on these learning goals and principles, how they align with the Cities Mission and the purpose of the new Learning Programme will be discussed in the following chapter. Additionally, the next chapter will further specify the content and design principles of the new Learning Programme and set out the plan for further development thereof.

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6 Recommendations: Learning Programme Directions

This chapter specifies the learning goals and principles meant to **guide the design and development of the Learning Programme** for cities across Europe embarking on their climate neutrality journey. It also describes options for modes of learning that would support defining the structure, approach and learning materials.

In the process of designing the Learning Programme, establishing clear **learning goals** represents an essential first step for defining the direction of the programme. Additionally, **programme principles** were developed to guide the overall learning programme design and structure, and ensure an inclusive, user-centered learning experience that supports participants with gaining the skills and knowledge needed to drive the climate transition in their local contexts.

Five **modes of learning** are defined, along with seven supportive elements that can guide the program design phase. The learning modalities and supportive elements will be further developed and defined by task partners to determine the most effective and appropriate approach for the structure and design of the learning programme.

6.1 Learning Goals

Developing clear learning goals represents the first step into the design of the learning programme³. Learning goals are broad, overarching statement that describe the **desired outcome or achievement that the learning programme aims to accomplish**. They define **what learners should know, understand, or be able to do by the end of the educational experience**. They articulate what the learner will achieve, not what the faculty will teach, as they are learner/user-focused and derived from understanding the needs of the cities.

Learning goals will guide the design of the curriculum and activities as they provide the direction for the format and content of the learning programme. They ensure the programme can address the needs and challenges of programme users, in this specific case of cities and city representatives across Europe wanting to learn how to implement climate neutrality in their particular contexts. Learning goals also align the educational offers to the desired outcomes of the programme, providing the basis for creating relevant and effective instructional materials and content. They can also guide to establishing **clear criteria on measuring programme success** and evaluating the programme's impact.

As mentioned in Chapter 5, the learning goals were developed in collaboration with SGA 2 T1.4 partners. The goals that emerged were derived from the specific needs mentioned by the municipalities and city experts involved in the research, as well as the challenges and motivations they expressed related to implementing climate action. Although a total of 12 learning goals were co-developed by the workshop participants, three of the ideas describe learning principles, while three others are better suited as describing learning formats. Therefore, the following **four learning goals** emerged as relevant for the Learning Programme:

4 Programme Learning Goals:

1. **Participants will develop a clear understanding of where and how to get started to reach climate neutrality taking a 'Mission-inspired' approach.** This goal aims to ensure that learners will receive effective **onboarding to the NZC approach** and resources, and the learning programme. It also aims to support city users in understanding **what are key first steps in beginning their climate transition work**. The outcome of this goal is for city representatives to build an understanding around which skills and competencies they have, and which ones they will need to acquire to begin shifting their perspectives towards what is required to move towards climate neutrality.
2. **Participants will develop an understanding of the necessary skills for leading the climate transition in their local context and begin applying them.** This goal aims to support programme participants to **identify and address skill and knowledge gaps**, such as strategic planning, stakeholder engagement, and systemic thinking. Participants will also explore what are the **pre-conditions for taking action**, such as organisational capacity or political mandates, as well as which structural, cultural, behavioural and motivational barriers might need to be addressed. As they progress, participants will also start taking action on various aspects such as

³ Stanford University. (n.d.). *How to write learning goals*. Stanford Teaching Commons. <https://evals.stanford.edu/end-term-feedback/how-write-learning-goals>

stakeholder engagement and improving multi-level governance structures, based on the skills they gain.

3. **Participants will learn to identify and prioritise strategic actions needed to implement the climate transition in their local context.** This goal focuses on helping participants **recognise and implement key strategic actions** that are specific to their city's needs. It involves understanding which actions would lead to higher impact. This goal also supports learners to **develop processes that support them in developing a strategic portfolio of actions** based on local needs and conditions, and navigate political mandates to ensure stakeholder support and buy-in.
4. **Participants will develop skills to craft compelling and inclusive narratives about climate neutrality.** This learning goal is about developing **effective communication and narrative-building skills** around climate neutrality. It emphasises the importance of developing communication that engages a wide audience, from private stakeholders to the general public, and goes beyond technical language to integrate social and environmental perspectives. Additionally, programme participants will develop an understanding of **how to mobilise local ecosystems**, build momentum, and handle **counter-narratives or misinformation** that may arise during the transition process. This goal would also support identifying co-benefits and building the case around investment and financial planning needs.

The four learning goals presented above will be further refined through sense-checking with potential learning programme users, in order to ensure they match the learning needs of city representatives.

6.2 Capability-Building Programme Principles

Learning programme principles guide and shape the direction, structure, design and implementation of the learning programme. The principles are **core values that inform what type of content will be offered, how users will engage with the materials and resources, how outcomes will be achieved**, while ensuring the users' experience is aligned with the programme's goals.

As a result of the learning preferences and needs mentioned by interview participants, we have defined **seven programme principles** as essential for the development of an effective and engaging learning experience. The first three principles emerged from the workshop with partners held in September 2024, while the others are based on further insights from the user research:

7 Learning Principles:

- **User-Friendly, Accessible Portal Design:** Developing a portal that city representatives can easily navigate and find the information they need is essential to the effectiveness of the learning programme. This principle is meant to guide the development of the NZC portal, ensuring that it is intuitive and user-centric, and that the platform serves as an effective and supportive tool in the users' learning process.
- **Inclusive, Multilingual Learning Experience:** The learning programme should be accessible to diverse participants by providing resources and training in multiple languages. The aim is to reduce current language barriers, providing a more

inclusive learning environment and encourage users to engage and contribute. Users would also benefit from the increased diversity of perspectives from different cultural backgrounds.

- **Prioritise Efficiency and Engagement:** Creating high-impact learning experiences that respect the time constraints of the users could be achieved by offering flexible learning paths (so users can prioritise topics based on their needs and schedules), designing interactive and practical content and having clear learning objectives (so users can see the value of the content).
- **User-Centric Approach:** The programme should be designed taking into account the users' needs, contexts, and challenges, while ensuring that the content is relevant and practical. Providing learning experiences that match the diversity of participants in terms of climate goals, resources and barriers would also increase the value of the programme for users.
- **Challenge-focused learning:** Providing practical, actionable knowledge and skills is essential in supporting participants in applying them to their specific initiatives and challenges. The focus would be to ensure that the learning experience is not just theoretical but also provides participants with the skills, knowledge and tools to take concrete steps in overcoming the barriers and challenges specific to their climate goals. This principle could be implemented through challenge-based learning offerings, which would guide cities in working together on specific issues they are currently dealing with.
- **Collaborative Learning:** This principle would ensure that the programme is designed to promote collaboration and knowledge-sharing among users, while encouraging collective problem-solving. By designing for an environment where users can exchange ideas, share experiences, and co-create solutions, the programme would also encourage a sense of community among participants.

6.3 Options for the Learning Programme

In this section, we outline potential modes of learning meant to guide the development of the Learning Programme for European cities pursuing climate neutrality. The proposed options have been developed ensuring they align to the learning goals and principles listed in Section 6.1 Learning Goals and Section 6.2 Learning Programme Principles, as well as the objectives of the NZC programme. The development of these options is also informed by the extensive research on existing learning programmes presented in Chapter 3. Existing Learning Programme Benchmark Approach, being guided by best practices from across various industries. Being able to assess the different options would support SGA 2 Task1.4 - Capability Building Programme partners in collaboratively deciding how to best structure and implement the Learning Programme.

6.3.1 Modes of learning

Five modes of learning are presented below, representing the various methods that could be used for facilitating and delivering resources, learning experiences and opportunities to participating cities and city representatives. The various modes of learning also explain the different ways city representatives could engage with the learning material, how they would interact with instructors and/ or peers, and how they could apply the knowledge and skills gained.

1. **Facilitated Online Courses:** Synchronous online courses are facilitated by instructors or experts, and include live sessions, discussions, and interactive elements. The advantages of this learning modality include having a structured, interactive, facilitated learning experience, while allowing learners the flexibility to join online from anywhere in Europe and have access to real-time interaction with instructors and peers. Organising the learning offering into modular units allows participants to engage with the content at their own pace and according to their specific needs. This also enables users to select the topics most relevant to their challenges and build a learning journey that aligns with their goals and contexts. To keep learners engaged and motivated, each module could include assignments or specific requirements for completion.

One potential disadvantage of this approach is that user engagement might be impacted, as there would be less interaction between peers compared to in-person sessions. This would also require participants to commit to the time allocated for the live sessions, which might be difficult for city employees given their capacity constraints. It might also require a higher financial investment in terms of organisation, as opposed to asynchronous modules.

2. **Challenge-Based Facilitated Learning:** This method focuses on learning through tackling real-world challenges, with facilitators guiding learners through the process of addressing the challenges. For cities to participate in a challenge-based learning programme, they would be expected to apply with a clearly defined challenge on which they would work together with peers.

This learning modality would offer programme participants a blend of theoretical knowledge and practical application. The facilitated reflection sessions would foster deeper learning and collaborative work on shared challenges. In addition, they could be complemented by synchronous or asynchronous learning modules, based on transversal capabilities such as developing the transition team or designing a portfolio of actions. This would offer participants the benefit of learning to understand and intervene in their specific, complex local systems. The sessions could be implemented either through a synchronous online or a hybrid approach. By working together with peers, city representatives would also benefit from being part of a community and build networks with cohort participants.

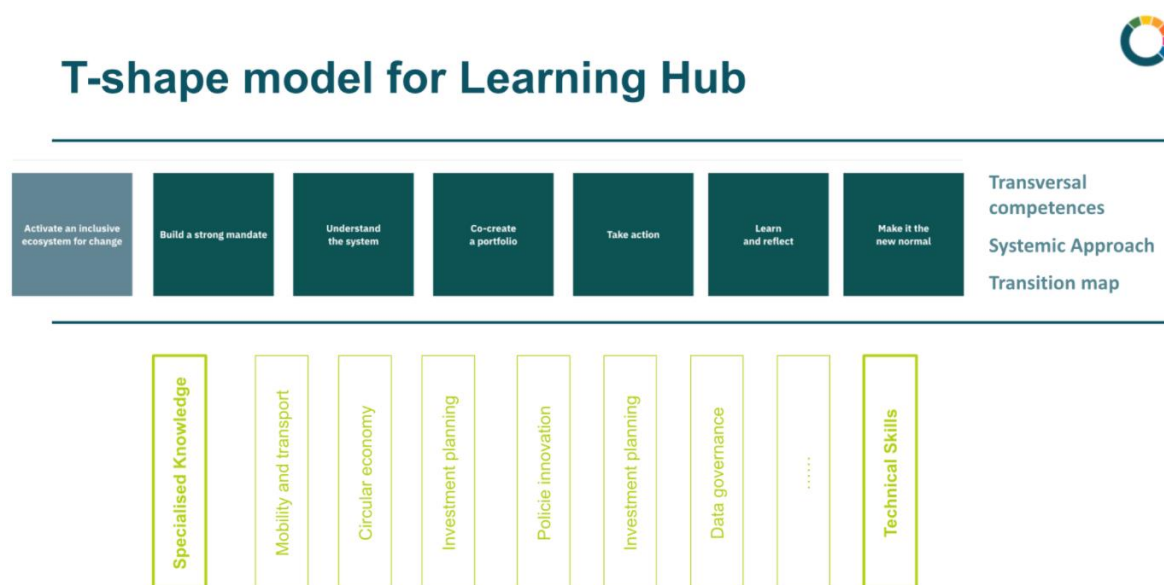
The advantages of this approach are that it would provide real-world application of knowledge by working on actual problems, which is an aspect that many of the cities participating in the interviews expressed a need for. This approach would also ensure that participants stay engaged, as they would be working on addressing challenges that are relevant to their specific municipality.

To give an example, this approach is already used in other activities of NZC, such as the Policy Labs, where groups of Mission Cities help another Mission to find a solution to their specific policy challenge, related to a sector or an area of work (ie. community energy, building renovation, integration of nature-based solutions) based on their own experience and knowledge. It is also the basis of the twinning learning programme that is currently implemented in NZC and SGA1.

This method would require tailored facilitation, relevant resources and support in order to guide learners effectively. The outcomes of the programme would also greatly depend on the participants' abilities to address and work together through the challenges chosen.

3. **Formal Executive Degree:** This option would offer formal academic credentials or an executive master to city representatives participating in the programme. One main advantage of executive degrees includes the fact that learners would receive recognised credentials while gaining in-depth knowledge and expertise in building and implementing the climate transition. This executive degree could be built based on the T-shape model already developed for the Learning Hub for Mission Cities. The T-Shape Model is based on the idea that deep, technical knowledge in specific fields would be complemented by broad skills across several multiple disciplines.

Figure 10. T-Shaped Model for the Learning Hub



Accreditation would be obtained through Politecnico di Milano and Universidad Politécnica de Madrid, both members of the consortium and the Online Capability Building task.

This format would require significant time investment from the learners, which might be difficult given the time constraints mentioned by research participants.

4. **Hybrid Learning Approach:** This option combines multiple modes of learning, such as online and in-person components, in order to provide a flexible and comprehensive learning experience. This approach would ensure that participants have access to asynchronous learning opportunities, to access in their own time, while including site visits and in-person sessions to boost engagement, collaboration and networking.

Kaospilot's approach could be used a good practice and insights on how to bring together different types of peer engagement and community building, along with facilitated sessions and reflection circles, while developing a highly interactive programme for participants. This method could also be structured on the T-shape model already developed for the Mission Cities Learning Hub.

This option might require higher costs as well as more complex coordination from the consortium partners, in order to provide meaningful interaction but also coordinate in-person sessions.

5. **Peer-to-Peer Learning:** This learning mode involves learning through interactions with peers, which can be facilitated through study visits, discussion groups or peer-exchange programmes, such as through discussion forums, study groups, or collaborative projects. NZC already offers peer-to-peer learning to cities across Europe interested in pursuing climate neutrality through

the Twinning Learning Programme, Study Visits and Online Discussion Group. The advantages of this mode of learning include knowledge exchange of diverse experiences, expertise and perspectives, as well as building relationships among participants. For this type of learning to be effective, facilitation would be required in order to provide structured peer exchange and support.

6.3.2. Learning support elements

Based on the feedback provided by interview participants, as well as from insights extracted from the conversations, several support elements have been identified. These elements could further facilitate engagement, community building and knowledge exchange among programme participants. They could also enhance the learning experience by providing opportunities for enhanced collaboration, inclusiveness in terms of language and cultural contexts, as well as local ecosystem engagement.

Community building: Being able to build relationships and belong to a community is one of the factors that research participants stated they find most valuable when participating in international programmes and networks. This aspect is mentioned as essential for developing long-term collaboration, knowledge-sharing practices and building a network of trusted peers. The Mission Platform already facilitates community building, however this aspect could be further strengthened and integrated more explicitly into the learning programme, encouraging learning that extends beyond the programme's formal structure and processes, particularly through challenge-based learning and networking opportunities.

1. **Connecting to National Platforms:** in countries where they are already established, National Platforms are already addressing language barriers, as well as work with cities with similar cultural and contextual challenges. NZCis also establishing connections with national partners in countries where these processes are not formalised, but national governments and stakeholders are providing support (or willing to) to cities towards climate neutrality. The cities participating in the research expressed that they face challenges in effectively learning from cities with very different regulatory, political and organisational structures and contexts. In countries such as Spain and Sweden, National Platforms already act as intermediaries between the NZC programme and cities, translating and adapting content into the national languages and bringing together cities working on common challenges. By connecting more effectively with existing National Platforms, as well as providing support to emerging National Platforms, the programme would ensure that learning becomes more accessible, relevant and actionable for learners from diverse linguistic and cultural backgrounds. For what concerns those countries with no established National Platform, a dedicated strand of work will focus on creating opportunities for connecting cities (including Mission Cities) and for linking with national frameworks and stakeholders.
2. **Participation in Seasonal Schools:** Opening participation to other cities across Europe to the Seasonal Schools already being offered to Mission Cities might support peer-to-peer learning and knowledge-exchange. These opportunities could be open to other cities following a list of criteria to be agreed on.
3. **Best practice sessions:** These sessions are online 90 minute seminars that condense practices presented by cities during the Seasonal Schools (solutions, governance processes, strategies, technologies), with the aim of bringing these experiences openly (online) to other cities, i.e. those that have not attended a specific Seasonal School. After each session, best practice videos have been uploaded to the [NetZeroCities knowledge repository](#).
4. **Involving multiple representatives from each city:** In order to encourage collaboration and knowledge sharing within municipalities, we suggest that the programme be open to at least two representatives from each city, as it is for example for the in-person peer learning

programme. This approach would support bringing together different perspectives and allowing for a deeper understanding of the city's challenges. By participating together, city representatives might be able to work on city-specific issues more effectively, while integrating both strategic and practical insights. At the same time, having multiple participants from the same city supports the dissemination of new knowledge and practices.

5. **Learning from similar cities through site-visits:** cities have expressed interested in learning from and with peers who face similar political, regulatory, cultural or organisational challenges and contexts. Site visits to Mission Cities could offer other cities the opportunity to exchange learning and knowledge based on real-world actionable ideas.

City Readiness Tool: developed by JRC, this tool will be developed to help cities identify their current climate readiness level and access tailored support pathways. By using the Climate Transition Map steps, the tool will direct cities to relevant resources for where they are in their climate neutrality journey, learning modules, and initiatives that complement the services offered by the NZC platform. The various learning modalities along with the supportive elements are possible building blocks to be evaluated by task partners in order to determine the most effective approach for scaling and implementing the programme in a way that maximises impact and inclusiveness for the cities involved.

6.3 Next steps: Design of the Learning Programme

Following the completion of the gap analysis, we move into a **programme design phase**. The shift into the programme design phase represents a critical moment in translating learning goals and principles into an actionable and impactful learning experience. In this phase, we will move from research and analysis to **design and development**, focusing on how to **build an effective learning programme** that addresses the identified needs of the target audience: civil servants across European cities.

As presented in table 1, during this phase, the work will include:

- **Course design:** creating the learner's journey — from onboarding to course completion — around the learning principles defined in this gap analysis. The flow should be logical and smooth, accommodating learning preferences and constraints discovered through the gap analysis.
- **Curriculum design:** ensure a system of modules that aligns closely with the specific learning goals derived from user insights. The selection of topics and experts should be highly relevant to needs identified and to pedagogical goals, making sure the experience is highly valuable.
- **Content development in co-creation:** develop content in multiple formats to accommodate the learning preferences and principles identified. This should leverage the user panel to pilot or test several portions of the curriculum.
- **Experience and platform design:** work with the portal team to integrate the online and live learning experience, ensuring the experience is accessible and intuitive.

This next phase will already prioritise the creation of two key deliverables in the medium term, and launch of the peer-learning programme:

1. **D1.13 – Design of Accredited Online Hybrid Course for Civil Servants:** This deliverable will detail the design of the programme, outlining the learning objectives, structure and journey tailored for civil servants.

2. **D1.11 – Summary Report on New Content for Capability Building:** This report will capture the new learning content developed during the programme design phase, emphasizing how it addresses the gaps identified in the current learning programme.
3. **The launch of the first cohorts of the online-peer discussion groups**, followed by study visits, in September 2024 and the launch of the **call for twinnings** in Spring 2025.

Table 1. Learning Programme High-level Delivery Plan

Period	Goal	Status
January 2024 - April 2024	Project and Task Launch Phase - Hiring - Task scoping and partner alignment - Work on deliverables this task depends on (e.g., T1.1)	Done
April 2024 (M4)	OUTPUT: Task plan (Shared Notion Space for collaboration)	Delivered
April 2024 - September 2024	User Research Phase - Evaluating current learning offering and benchmark - User insights collection: survey analysis, interviews - Synthesis of insights and definition of city users learning goals and learning principles to guide the design of the learning programme.	Done
September 2024 (M9)	OUTPUT: D1.10 Capability Building Gap Analysis , synthesising city users' needs from a learning programme, highlighting learning goals and learning principles	
October 2024 – June 2025	Programme Design Phase Course design (selection and refinement of learning options to create a user journey and blueprint) Curriculum design (curation of topics and faculty to best address learnings goals and principles) Content development in co-creation (development of learning content in co-creation with user panels to reflect city users' needs) Experience and platform design (adaptation of the platform and creation of the learner experience across online and offline channels)	Just beginning
June 2025	OUTPUT: Launch of the first version of the programme	
June 2025 – December 2025	Ongoing delivery of the first programme	Ahead of us
December 2025 (M24)	OUTPUTS: D1.13 Design of Accredited Online Hybrid Course for Civil Servants , detailing the course design. D1.11 – Summary report on new content for capability building , detailing the content created for the course.	
January 2026 – September 2026	Ongoing delivery of the programme and user research 2	Ahead of us
October 2026 (M36)	OUTPUT: Revised Gap analysis , detailing new insights about city users and needs for adaptation of the programme to these new insights.	

November 2026 – December 2027	Continuous delivery and iteration	Ahead of us
December 2027 (M48)	OUTPUT: Second Summary report on new content for capability building , detailing the content created for the course.	

While the programme will be continuously iterated, its learning goals and principles will be revised as a milestone Gap Analysis will provide a fresh perspective on European's cities gaps and opportunities for learning in October 2026.

7 Research Methodology

This section outlines the research design, data collection, and analysis methods used to conduct the Gap Analysis. A mixed-methods approach was used, aiming to obtain comprehensive insights about the current learning offerings and identify gaps of the existing Learning Programme for Mission Cities, in order to adapt and develop learning offerings that meet the learning needs of other cities, and provide appropriate support for cities aiming for climate neutrality.

The research design incorporated both qualitative and quantitative methods to capture a holistic view of the current Learning Programme's effectiveness and areas for improvement. Insights were extracted from responses provided by city representatives to the *Non-Mission Cities⁴ Needs & Pathways* survey, the *D1.1 Non-Mission City Needs & Pathways - First Report*, from semi-structured interviews conducted with city experts and city representatives, research on existing learning programmes and digital portals, as well as an analysis of the NZC portal usage.

The *Non-Mission Cities Needs & Pathways Survey* results and the analysis conducted for the *D 1.1 Non-Mission City Needs & Pathways - First Report* provide important insights on the capability building needs of Non-Mission Cities in reaching their climate ambitions. It also emphasizes once again the large diversity in city needs, but also where they are in their climate neutrality journeys.

The qualitative data obtained from the interviews offers a deeper understanding and context on the motivations, climate action focus, barriers and needs of cities across Europe in their climate neutrality journeys. The gap analysis looks at the above-mentioned sources to determine potential learning outcomes, learning goals and programme options, and develop targeted recommendations for enhancing the Learning Programme to better support the specific needs and challenges faced by Non-Mission Cities and Mission Cities alike.

7.1 Non-Mission Cities Survey Methodology

The Non-Mission Cities Needs and Pathways survey was launched by theNZC consortium in April 2024. This survey has been disseminated through the NZC consortium partners' networks, with a particular

⁴ The term Non-Mission Cities (NMCs) refers to the 62 respondents to the Non-Mission Cities Needs & Pathways survey. As explained in Deliverable 1.1, the survey results cannot be considered statistically significant or representative of other European cities.

focus on city networks and their communication channels. The survey was available for six weeks, and received responses from 62 cities from across Europe, with 19 of the responses coming from cities that have applied to become Mission Cities in 2021.

The survey consisted of 56 questions, divided into five sections and including: profiles of respondents; city profiles; climate targets; strategies, barriers, and needs for achieving climate neutrality; and engagement with the Mission Platform managed by NZC. Given the number of cities that have responded to the survey, the results might not be statistically significant or representative of other European cities.

7.2. Expert Interviews Methodology

To gain insights into cities' needs, motivations, and constraints, the research began with conducting 12 semi-structured interviews with experts working with cities across Europe committed to climate action, following a standardised interview guide (Annex 1).

The first step was identifying and selecting key professionals from the NZC consortium, Dark Matter Labs as well as other European organisations focusing on capacity-building for cities. The 12 professionals that have participated in the interviews have extensive experience and knowledge working with urban transformation in collaboration with a variety of European cities. The semi-structured format ensured that core topics were addressed while also giving room for the interviewees to elaborate on specific insights and experiences. Each interview followed a structured to maintain consistency across discussions, facilitating the comparison of responses and the identification of common themes. This approach enabled the gathering of both qualitative data and nuanced perspectives, providing a comprehensive understanding of the challenges and opportunities faced by Non-Mission Cities in their journey towards climate neutrality.

The interview questions focused on understanding the roles of the experts, the overall climate goals of the cities they work with, the types of support and training that proven effective for cities in other projects and initiatives, and any gaps in skills or resources to engage in learning programmes that the cities currently face, in their experience. The aim was to identify areas where learning and capacity-building programmes can support cities in achieving their climate goals. The interviews were conducted in English and transcribed using the Google Meet option.

7.3. City Interviews Methodology

A total of 16 semi-structured interviews were conducted with representatives from cities across Europe working to achieve climate transformation. A semi-structured interview guide was used for guiding the conversations, allowing interview participants to share detailed insights on their motivations, barriers and learning needs for implementing climate action at the local level (Annex 2). This method was used to ensure a diverse range of viewpoints and practices and enable a comprehensive analysis of the challenges faced by different cities in their pursuit of climate neutrality.

The survey invitations were sent to a total of 65 cities, 62 of the contacts being respondents to the *NMCs Needs and Pathways* survey launched by consortium partners in April 2024, as well as 3 other cities working on urban transformation and climate neutrality with experts across the NZC consortium. 16 cities answered the call to participate in the interviews.

This interview questions were aimed at collecting insights from participants about their roles, responsibilities and experiences with implementing climate action, as well as understanding which key

challenges they face in their work. The focus was also on understanding their operational and strategic decision-making processes and goals, as well as their learning habits and preferences, and the type of support they find meaningful and effective. Additionally, the interviews also looked to identify areas for improvement and potential support to be offered through the new Learning Programme.

As the interview invitations were accepted by a limited number of cities, the data collected may not be representative of all municipalities' needs. This selective participation introduces a potential sampling bias, as the insights gathered may reflect the perspectives and experiences of only a subset of cities. Additionally, potential biases from the data reported in the interviews and surveys must be acknowledged. Respondents might have emphasised certain aspects over others, which can affect the reliability and validity of the data collected and analysed.

7.4 Development of Learning Goals

To start this process, we invited SGA T1.4 task partners to a workshop in which we made an initial effort to further define the learning goals and principles of the programme. In this workshop – attended by 10 individuals from different partners across the consortium – we presented the results from this research and used the *1-2-4-All brainstorm method* (2 minutes individual reflection, 4 minutes pair discussion, 5 minutes group of four discussion, and 8 minutes discussion among all) to work towards a shared definition of the learning goals and principles we found most important. For this discussion we used a Miro board to collect all the input and probed participants with the following guiding questions:

- What do we want participants to learn as a result of this learning programme?
- What should participants be able to do after participating in the programme?

What knowledge or skills would be essential for implementing climate neutrality at the municipality level?

After the discussion among all, it was time to converge the ideas from the brainstorm by voting. All workshop participants were assigned 9 dots which they could use across the Miro board (see Figure 26). Every participant had 3 green dots to vote on their favourite learning goals, 3 pink dots to vote on the learning goals they found most critical for cities in their pursuit of climate-neutrality, and 3 blue dots for the most implementable learning goals (through the skills, knowledge and experience of the consortium). Based on this voting we derived the following overarching learning goals and principles:

- Learning how to get started
- Learning from practical cases
- Learning from/with similar cities
- Learning how to use the NZC portal
- Learning what skills are needed
- Learning in a culturally sensitive way
- Blocking time for learning
- Learning about strategic actions
- Learning to build the initial narrative
- Learning about NZC
- Learning from Mission Cities
- Learning to become local 'trainers'

Figure 9. Screenshot of Miro board with ideas on learning goals



8 Annexes

Annex 1: Gap Analysis Interview guide – City Experts

Category	Question	Follow up Question(s)	Notes (Observations)	Key Quotes (What People Said)
Roles and Responsibilities	In your own words, could you summarise what it is you do?			
	What cities do you work with and how long have you been working with them?			
Climate Transition Goals	What are the cities you work with trying to achieve in the area of climate action or climate transition work?	Do you have any insights on the type of support they receive for their climate transition work?		
		What has worked well in their climate transition journey and why?		
		What are some areas where you see cities struggling the		

		most in terms of climate transition work implementation?		
Learning specific	Might learning and training help with the cities' challenges or do they need to be addressed in other ways?	Which types of support do you think they need most?		
		Any skills you see that might be lacking?		
		Any examples of methods/ processes implemented or programmes the city was involved with that helped them overcome barriers?		
Learning specific	Are you aware of any learning/ capacity building programmes the cities are involved in? And if yes, do you know which they are?			
		Do you know how much time and resources the cities you work with invest in capacity building?		
		What does that mean in practice (courses, training the trainer, hiring consultants, internal learning platforms?)		

Annex 2: Gap Analysis Interview guide – City Representatives

Category	Question	Follow up Question(s)	Notes (Observations)	Key Quotes (What People Said)
Roles and Responsibilities	In your own words, could you summarise what it is you do?			
	What would a typical day look like for you when it comes to your work in terms of operations, planning, responsibilities? Prompt - <i>Think about the core activities you do in climate action programmes and transition work, how you do them and why.</i>			
Climate Transition Goals	What are you trying to achieve in the area of climate action or climate transition work?			
		What decisions do you have to make in your role in regard to climate action programmes implementation?		
	<i>Optional</i>	*Depending on levels of seniority, ask who briefs them, who they report to, how much power and agency they have when implementing climate transition activities.		
Learning specific	Do you directly use any learning resources in your job?			

	<i>Optional</i>	*Are you aware of any others?		
		How often do you do learning courses, programmes, activities? • annually • weekly etc.		
		How much time do you allocate to learning (courses, workshops, programmes)?		
		Does your organisation have assigned learning budgets/ L&D time? Prompt – think about within the organisation, is learning prioritised and how/ where/ when does it happen		
		Why do you do learning courses/ programmes? Prompt – what is the value? Does it save time/effort on anything in particular? What are your expectations?		
		Could you share with us what were the most useful learning courses/ experiences you had in your current role? Prompt – think about why		
Work Related Efficiency	In your opinion, what is working well in the area of implementing climate action programmes and climate transition			

	work that you are involved in? Prompt: What in particular is working well? <i>Think about:</i> • <i>Impact</i> • <i>Citizen engagement</i> • <i>Emission reductions</i> • <i>Systemic impacts</i>			
	In your opinion, what could be better in the area of implementing climate action programmes and climate transition work in your city? Prompt - <i>What in particular could be better?</i>			
	How do these challenges impact your daily activities and your role?			
Capacity building		How could new capacity building programmes support you in addressing some of these challenges? What type of learning programme would you be able and willing to prioritise? NOTE – <i>think about:</i> • <i>Time commitment</i> • <i>Online/ vs in person</i> • <i>Video content/ written content</i>		

		• <i>Self directed learning vs instructor led</i> • <i>Frequency</i>		
NZC portal specific	Are you familiar with the NetZeroCities portal?			
		If yes, which resources have you used and why?		

Annex 3 Benchmark of digital learning platforms

Google Arts & Culture

Google Arts & Culture is a non-commercial initiative. They work with cultural institutions and artists around the world with the aim to preserve and bring the world's art and culture online so it's accessible to anyone, anywhere.

Core 77

"Core77 publishes articles, discussion forums, an extensive event calendar, hosts portfolios, job listings, a database of design firms, schools, vendors and services. Core77 provides a gathering point for designers and enthusiasts alike by producing design competitions, lecture series, parties, and exhibits."

Domestika

"Domestika is the fastest-growing creative community where the best creative experts share their knowledge and skills through professionally produced online courses."

Digital Learning Platform Benchmark Item: Ideo U

"IDEO is an award-winning global design company that takes a human-centered, design thinking approach to help organizations innovate and grow. Through IDEO U, learn the methods and develop the mindsets that IDEO has practiced for decades to help organizations become more resilient, adaptable and innovative."

Blackboard

"Peer learning platform with features promoting self-expression and intuitive communication tools, fostering collaboration among peers. The virtual classroom solution enhances social learning."

Stack Overflow

"Stack Overflow is an online platform where users can post questions about programming problems and receive answers from the community. Questions and answers can be voted on by users to indicate their usefulness, and the questioner can accept an answer as a solution. Questions are tagged for easy search and navigation, creating a vast knowledge database accessible to all."

"Litmaps:

“Litmaps is a digital tool designed for researchers, helping them stay up to-date with the latest scientific literature. It uses visualization and mapping technology to track academic papers and identify connections between them, making it easier for researchers to discover relevant research and stay informed about developments in their field”

[Minecraft Education Lesson Toolkit:](#)

“A game-based learning platform that offers educators and students a transformative way to teach and learn. It leverages the popular sandbox game, Minecraft, to create an immersive educational experience that encourages creativity, collaboration, and problem-solving.”

[42 The network](#)

“**42** is the first computer programming school that is entirely free and available to students with or without degrees who are 18-years or older. Its teaching methods are based on peer learning: no teachers, no lectures, fully hands on. **42** allows students to free their creativity through project learning.”

Annex 4: Interview Notes

1. [Folder with notes from interviews with cities](#)
2. [Folder with notes from interviews with urban experts](#)