



Iterations of CCCs and their reception by the European Commission

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Introduction

Climate City Contracts (CCC) are an innovative governance tool that is central to the EU Mission “100 Climate-Neutral and Smart Cities by 2030”. As of May 2025, 92 cities have received Mission Labels for their CCCs, following a process described in the note “Review Procedure of Climate City Contracts and Award of the Mission Label”. As stated in that note, obtaining the Mission Label should not be the only goal of cities working on CCCs. There is great value in the **CCC as a process** to rally all actors behind a common plan. This is why cities are strongly encouraged to carry on improving their CCC and expanding stakeholder involvement after its submission and throughout the lifetime of the Mission. It is only through such an **iterative approach** that the full benefits of the process can be reaped. Mission Cities have embraced the iterative nature of CCCs, which is reflected in their CCCs documents. Most cities expressed the intention of updating their CCC yearly or every two years.

The following sections expand on the concept of iterations, the link with monitoring, evaluation and learning (MEL), their potential to develop the CCCs as an innovative policy instrument and the **handling of iterations by the Mission Platform and the European Commission**. Annex 1 contains guidance on iterations produced by the Mission Platform, “Climate City Contract Iterations”. Annex 2 lists the data points that will be considered in the iteration analysis, while Annex 3 provides a case study on the example of CCC iterations in the Swedish national context.

Iterations and monitoring, evaluation and learning (MEL)

As the CCCs move from the design to the implementation phase, new insights emerge, necessitating continuous stock-taking, re-alignment, and amplification. Maintaining an iterative approach will result not only in the most up-to-date and fit-for-purpose plans for cities, but will also inform the refinement of CCCs as an innovative policy instrument with the potential of reaching far beyond the initial 112 Mission cities. Crucially, the iterations are

about building on momentum, strengthening the shared ownership of the CCC and celebrating milestones.

In their CCCs, cities have committed to ambitious targets for reducing their emissions and have set up plans for monitoring their progress towards these targets. As cities implement their plans, the **Monitoring, Evaluation and Learning (MEL) framework** will provide insights into the progress towards their goals. These insights form the basis for the iterations. In this sense, MEL and iterations should be seen as two separate, but interlinked processes.

Whereas the initial CCC submission laid out the plans for the cities' journeys towards climate neutrality, the iterations offer opportunities to adapt these plans as needed and to reinforce the local mandate for the CCC. Iterations also allow new mayors to take ownership of a CCC that they have perhaps inherited from a previous administration, ensuring the CCC remains an active and living governance instrument in the city administration.

Along with the Mission Label, cities received **recommendations**¹ from the European Commission outlining possible areas of further work going forward. The iterations are an important step in aligning the plans with the recommendations provided. At the same time, it is important that the iterations are of value to the cities. Therefore, **it is up to the cities to set their ambitions with the iteration**. It is, however, recommended to iterate CCCs every two years.

From the perspective of the Mission Platform and of the European Commission, the iterations allow for continuous tracking and evaluation of the CCCs as a process and instrument. On a practical level, iterations will help adjust the support provided to Mission cities, including from the Mission Platform and the Capital Hub. In addition, iterations will help develop the CCCs as an instrument to fit a larger cohort than the 112 Mission cities, looking at the cities as experimentation and innovation hubs that will prepare the ground for all European cities to reach climate neutrality.

Review process

Cities will submit their iterations in accordance with the guidance given in the annexed document (Annex 1). As the Mission Labels have been awarded in batches, the submission of iterations will also be spread out.

Figure 1 below explains the workflow of the iterations. On the basis of the submitted iteration and insights from the track chosen by the city as outlined in the guidance document, the Mission Platform will produce a **short report** that highlights key findings from the iterated CCC. This report should contain the following elements:

- A description of how the city has responded to the recommendations that accompanied the Mission Label per sector

¹ The feedback consists of a one-page summary of main points addressed to the Mayor and a separate longer technical feedback document with comments on each section of the CCC, which is shared with the technical team in the city by their City Advisor.

- Indications on a few data points (see *Annex 2*) related to the monitoring and implementation of the CCCs
- Any major developments in the city as regards their climate action since the time of the CCCs, positive highlights and/or challenges
- How/if the city is engaging in a national platform
- Recommendations for further support (within the Mission Platform and beyond)

The report should be compiled by partners of the Mission Platform that have not been involved in supporting the city in developing the iteration of the CCC in question.

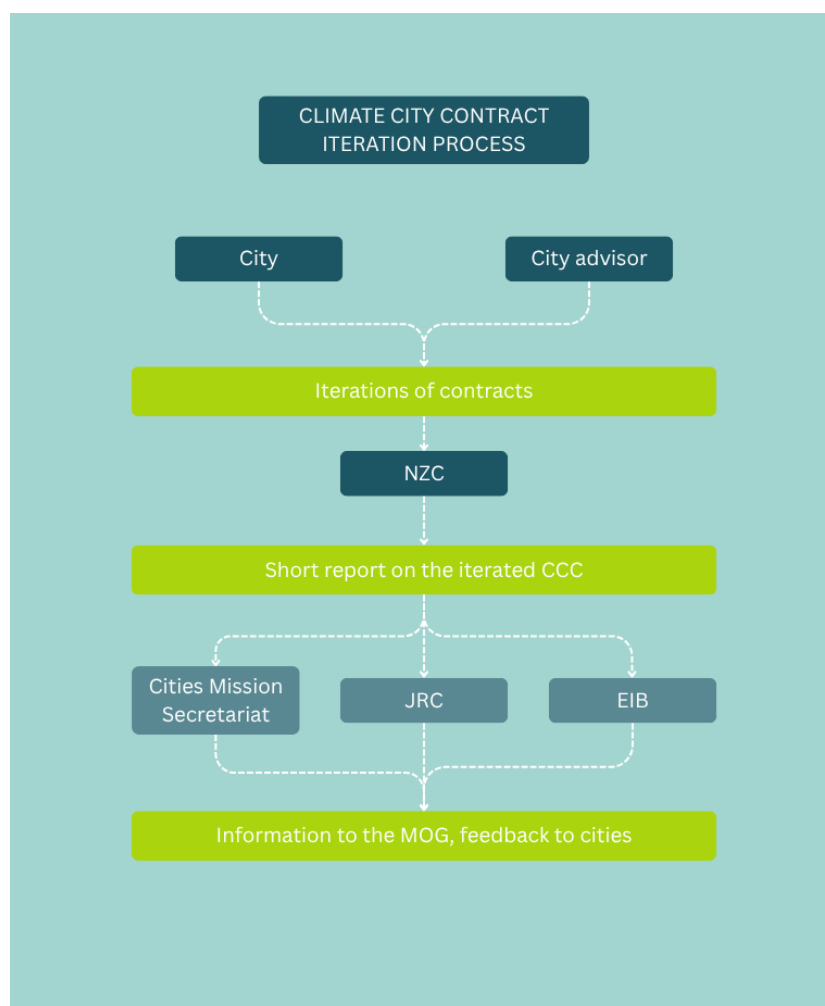


Figure 1 Workflow - Climate City Contract Iteration Process

In contrast to the initial CCC submission, the review of iterations is not about approving the content for a Mission Label but should be focused on the **progression of the instrument** as such. The **Cities Mission Secretariat**, the **Commission's Joint Research Centre (JRC)** and the **European Investment Bank (EIB)** will take note of the reports and may add comments. The reports and any additional comments will be shared with the members of the **Mission Owners Group** within the European Commission and with the **Mission Board**, who may also add comments. The report and any additional comments will be shared with the city concerned.

Use of findings

In addition to the purposes outlined above, the iteration review is also a possibility to look at the CCCs as a collective. What groups of cities are emerging? How can common challenges for cities in different localities and with different conditions be strategically addressed? For this, there is great potential in leveraging national platforms. National platforms can provide strategic direction, consolidate needs and mediate between the local and national levels of governance.

An opportunity to give visibility to the iterations is the **Cities Mission annual event**, where highlights and progress can be shared. It is also an opportunity to share possible joint actions or challenges stemming from the CCC iterations. The Swedish case illustrates the benefits of highlighting the iteration process and allowing for communication between individual CCCs for joint action (see Annex 3).

Annex 1

D1.20 Resource Pack 3.0: Climate City Contract Iterations



**NET
ZERO
CITIES
SGA-NZC**

Climate City Contract Iterations

Resource Pack 3.0

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Acronym	Description
CCC	Climate City Contract
LGD	Local Green Deal
MEL	Monitoring Evaluation and Learning
NZC	NetZeroCities

Introduction

I. The Climate City Contract as an iterative process

From their inception, Climate City Contracts (CCCs) were designed as iterative tools to guide cities toward climate neutrality. Conceived as dynamic, demand-driven frameworks, CCCs function as “live contracts” that evolve over time, allowing cities to report progress, refine strategies, integrate new measures, and expand commitments.

Drawing from learnings of existing EU initiatives such as the Green City Accord, Local Green Deals, and the Covenant of Mayors, CCCs were designed to address the technological, governance, and political uncertainties inherent in the journey to climate neutrality. They also recognise the diverse starting points of cities, shaped by local conditions. By enabling an exploratory approach, CCCs help cities learn through action, adapt to changing circumstances, and tailor strategies to their specific contexts. To navigate these challenges and support long-term progress, CCCs function as iterative frameworks that emphasise continuous stock-taking, realignment of actions, and strengthened commitments.

II. Mission Cities are committed to an iterative process

Mission Cities have embraced the iterative nature of CCCs, which is reflected in their documents. Most cities expressed the intention of updating their CCC yearly or every two years. As one Mission City representative stated in an interview, “[the] CCC needs to be an iterative process”¹.

Additionally, many cities have already identified key areas for future development while working on their first CCC documents. Among the first two cohorts of submitted CCCs, the most frequently cited priorities include refining indicators, further detailing investment plans by specifying funding and financing sources and expanding efforts to address residual and Scope 3 emissions. The most mentioned priorities for the 3rd and 4th cohorts were creating or updating their systems for monitoring, evaluation and learning, involving additional stakeholders, and elaborating or adding to the actions outlined in their action plans. A full breakdown of iteration priorities for the 92 Mission Label cities can be found in Figure 1.

¹ Dorst, H., Doci, G., Tjokrodikromo, T., Hillen, S., Tengvard, M., Cartron, E. (2024) The CCC as an Instrument for Climate Governance in European Mission Cities, NetZeroCities D1.11, Contract Number: 101036519

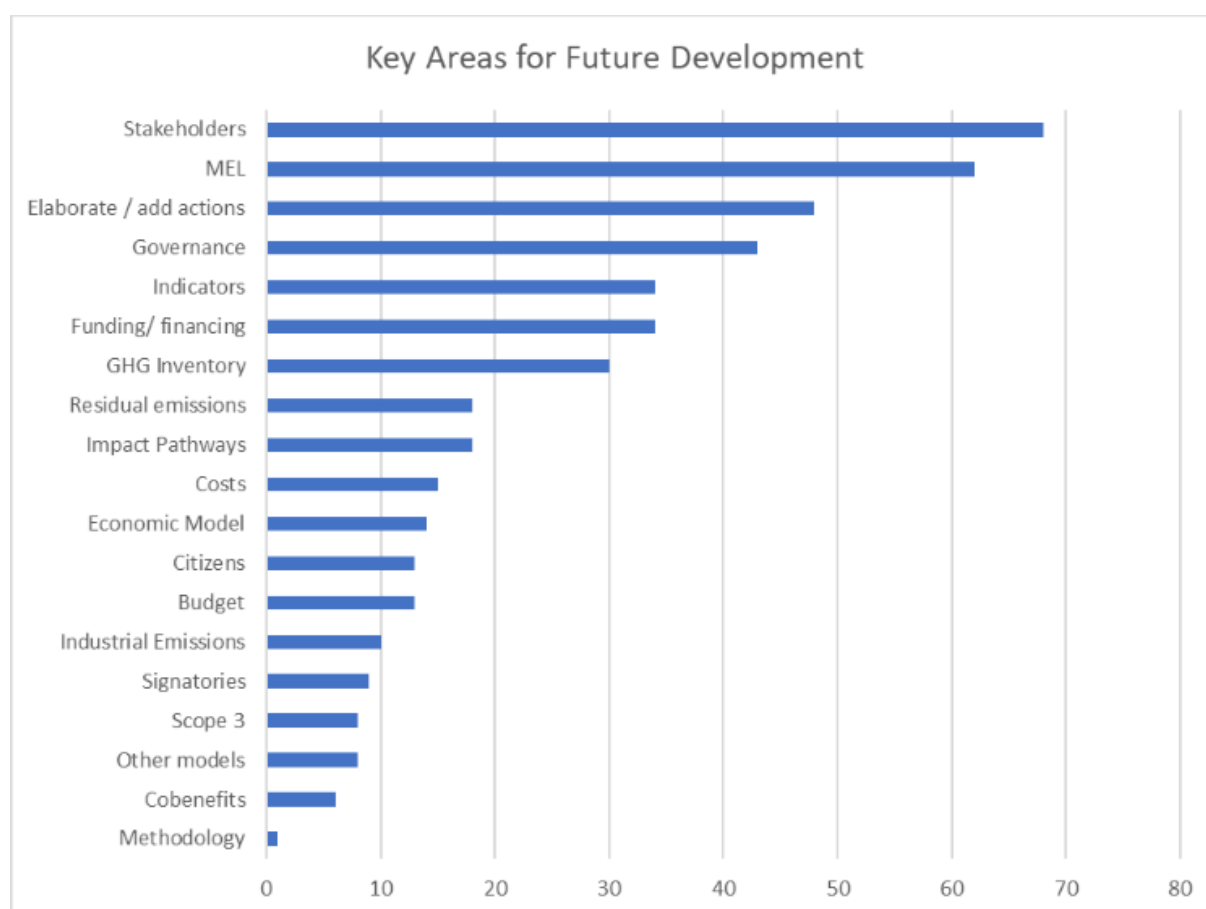


Figure 1 Key Areas of Iteration Identified for 92 CCCs

The CCC review and the Mission Label recognition are also built around the CCCs' iterative nature. The European Commission strongly encourages cities to refine and improve their CCCs after the initial submission, as “only through such an iterative approach that the full benefits of the process can be reaped”².

III. Organising your CCC iteration process

In your Climate Neutrality journey as a Mission City, you are deploying innovative interventions that generate rapid and tangible effects. As your implementation progresses, insights will emerge that were not possible to predict up-front. Therefore, a process of continuous stock-taking, re-alignment, and maintaining momentum will be needed:

- Addressing feedback and recommendations from the CCC reviews.

² Krogh, A. K., & Romana, J. (2020). *Proposed Mission: 100 Climate-Neutral Cities by 2030 - by and for the Citizens: Report of the Mission Board for Climate-Neutral and Smart Cities*. Brussels: European Commission.

- Taking stock of progress to date as an individual city, but also in the context of a changing political and physical environment. Understanding progress over time, pinpointing challenges as they occur, and identifying support needs.
- Updating strategies and actions to adapt to changing conditions. Refining and sharpening implementation.
- Strengthening commitment by widening the range of stakeholders engaged at all governance levels, including regional and national, as well as deepening citizen engagement and the shared sense of ownership of the CCC.

This process may result in a need to update your CCC to better reflect the insights you gained from your progress, changing conditions, and growing commitment. The goal of CCC iterations is to enable you to move more effectively towards your climate neutrality target by incorporating learnings, and to maintain the momentum by building on the CCC intermediate outcomes and by celebrating milestones. Mission Cities preparing to undertake a CCC iteration process are invited to consider the steps outlined below. The invitation targets cities around the 2-year mark from their initial CCC submission but is open to cities who aim to undergo a CCC iteration process earlier.

Step 1. Discuss your CCC iteration plan with your City Advisor.

Your CCC iteration is the outcome of a process that builds on the feedback your city received on its first CCC version, as well as on monitoring, (self)-evaluation and learning (MEL) to adapt to change and accelerate climate action. This process may benefit from external expertise and support. Your City Advisor will reach out to you to inquire about your city's iterations intentions every 2 years. Alternatively, should you decide to update your CCC earlier, we encourage you to first get in contact with your City Advisor to discuss eventual needs for support and the most useful CCC iteration approach for your city.

Step 2: Determine the appropriate CCC iteration support for your needs

Each Mission City is unique, with its own context, challenges, and opportunities shaping how it approaches its CCC. To maximise progress along their climate neutrality pathways, CCC iterations should be tailored to reflect each city's specific needs and context.

In some cases, CCC iterations are guided and strengthened by National Platforms, fostering collective processes, mutual exchanges, and shared learning. In others, cities may independently initiate iterations, drawing on their own local resources.



Regardless of the approach, all Mission Cities can access tailored support through the NetZeroCities platform. To meet diverse needs, the platform offers two distinct support tracks, both incorporating monitoring and self-reflection support — two critical processes designed to help cities evaluate whether their existing climate neutrality plans and strategies are on the right track or require updates.

Together with your City Advisor, you can determine which support track best aligns with your city's context, needs and current stage of progress.

A) Monitoring and self-reflection track,

B) Monitoring, self-reflection and learning track.

Components of the CCC iterations tracks

Components	Monitoring and self-reflection track	Monitoring, self-reflection and learning track.
Monitoring support	✓	✓
Self-assessment support	✓	✓
Peer-to-peer learning facilitated by the NZC platform		✓
Feedback exchange and alignment dialogue	✓	✓

MONITORING SUPPORT

Continuously monitoring your implementation progress will be a central source of insights for CCC iterations. It will enable you to reflect on the effectiveness of your climate neutrality process in relation to your local context, as well as reconsider the strategy and the actions of the CCC, considering the progress achieved, new available knowledge and expertise, and the latest technological or financial opportunities. In addition, it will allow you to communicate and engage stakeholders and actors around the transition, creating shared ownership. NetZeroCities offers guidance and tools to design, develop, and implement monitoring frameworks and plans.

If there are gaps in the indicator framework your city compiled in the first iteration for your Climate Neutrality Action Plan and Investment Plan, consider addressing them. Ensure that, at a minimum, direct impacts (GHG indicators) are covered for each city and are in line with the CCC target boundaries, and that the baseline values of these indicators are systematically captured, along with any successive values reflecting your city's progress. Some cities find that to successfully engage local and global stakeholders in their transition, they need to revise their choice of indicators. This can help them attract investment and financing, or to mobilise specific groups. Indicators refinement and redefinition can thus be an important aspect of CCC iterations.

SELF-ASSESSMENT SUPPORT

A city self-assessment process supported by NZC will build on your first CCC submission, your city's monitoring insights to explore additional support needs, as well as strengths that your city can leverage when undertaking a CCC iteration.

Based on the self-assessment, your city will receive recommendations for NZC support opportunities and guidance on how to approach the next steps in the iterations process, including CCC updates and resubmission.

PEER-TO-PEER LEARNING FACILITATED BY THE NZC PLATFORM

The self-assessments will enable the NZC platform to identify each city's strengths, as well as challenges and support needs. These will underpin the peer matching for cross-city mentoring and learning. The NZC platform will facilitate online workshops where cities will have the opportunity to showcase their implementation progress and discuss their challenges, as well as proposed adjustments that will lead to further or accelerated implementation progress and to addressing barriers. These workshops will follow a preset methodology that will determine the number of discussion rounds, of breakout sessions and their composition, and the focus of the discussions.

FEEDBACK EXCHANGE AND ALIGNMENT DIALOGUE

An in-person workshop will summarise lessons learnt, as well as receive expert input. Each city participating in one of the two tracks will receive structured feedback from peer cities, NZC experts, and will have the possibility to interact with the European Commission's Team.

Step 3: CCC update and submission on the NetZeroCities Platform.

Following their engagement with monitoring support, self-assessment, and peer-to-peer learning, cities will review the feedback received, decide how to incorporate it, and update their CCCs accordingly. Please note that your city may also choose to update its CCC without engaging with NetZeroCities through the steps outlined above, but the submission of the updated documents needs to follow the procedure below:

When uploading your updated CCC to the NetZeroCities Portal, your city representative will be prompted to add a version tracking template (available for download on the page) for each updated CCC section (Commitments, Action Plan, Investment Plan). These templates aim to highlight your changes to the original CCC version (at a minimum, they must highlight the page where changes occur). Once ready, your city representative submits everything using the "Send My New CCC Version" button. [A detailed tutorial for uploading CCC iterations to the Portal can be found here.](#)



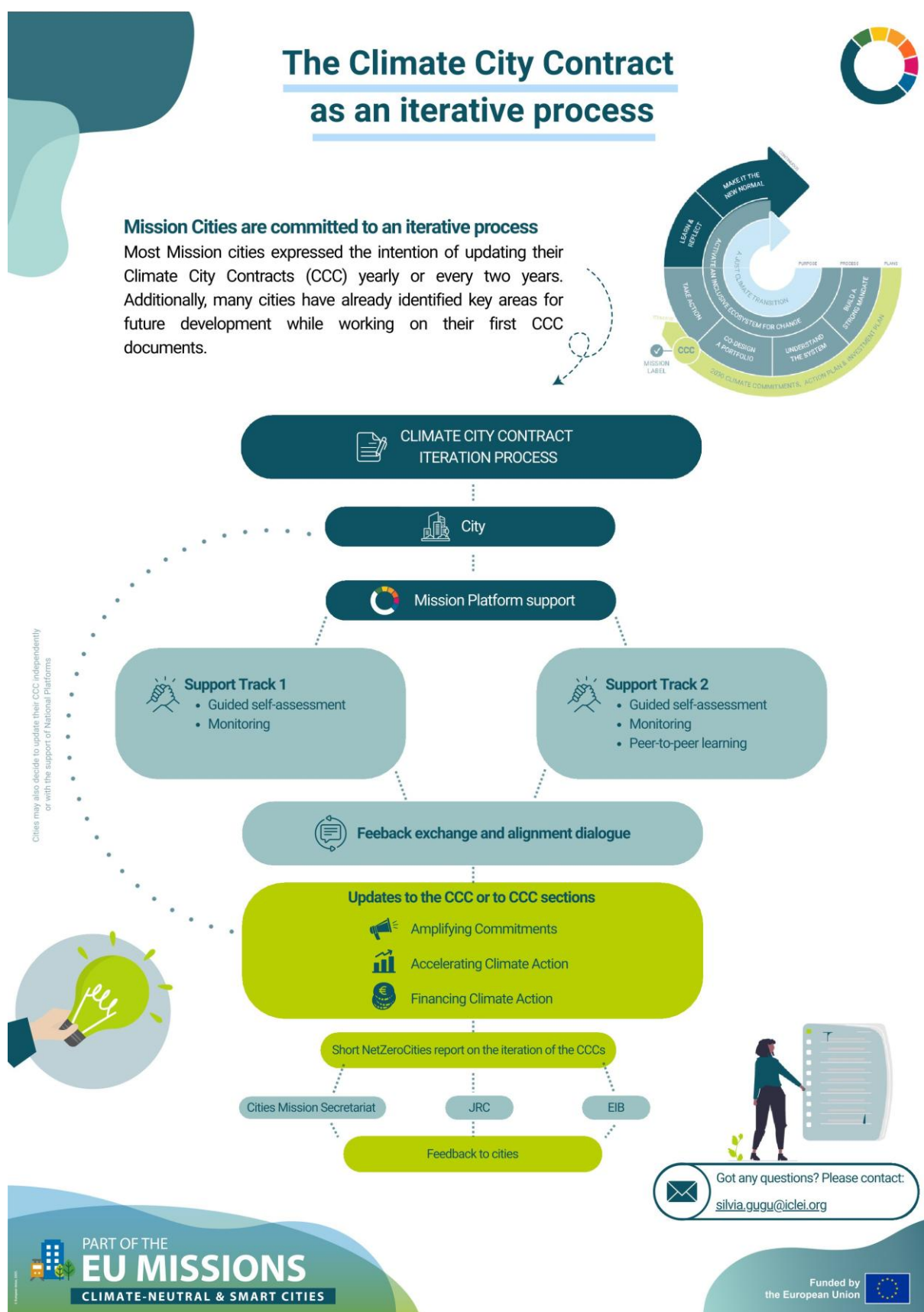


Figure 2 The overall CCC iteration process

1. Amplifying commitments

For most cities, each new iteration of their CCC is a valuable opportunity to refine and expand their climate neutrality commitments. More than just reaffirming goals, the iterative process enables cities to enhance their climate neutrality targets by integrating a broader perspective, whether by including previously excluded sectors, areas of the city, or by deepening their understanding of mutual benefits. By highlighting the interconnected social, economic, and environmental co-benefits of climate action, cities expand the scope of discussion and open new avenues for collaboration with a diverse range of actors. The CCC iteration also serves as a moment for cities to review and realign their strategic priorities, ensuring that their journey to climate neutrality remains relevant and impactful. Additionally, it provides a chance to revisit and refine methodologies and collaborative processes used to design and implement the CCC, taking into account renewed underlying principles and lessons learned. Finally, this process enables cities to amplify engagement with the ecosystem of actors involved, broadening participation and securing new commitments, including additional signatures, to strengthen collective ownership and accountability in the journey towards climate neutrality.

1.1. Refining the climate neutrality goal

In this section of the CCC, your city summarised its 2030 climate neutrality target. When you are undertaking a CCC iteration, any changes in the administrative territories included in the city's 2030 target, or the excluded districts or emission sources, sectors or gases within these administrative boundaries, should be documented here. Furthermore, updating this chapter presents an opportunity to highlight progress on strategies to tackle residual GHG emissions, which are detailed later in section 2.7, *Strategy for residual emissions*.

An updated version of this CCC section may also include new references to the co-benefits that the city will experience from increasing climate action and reducing its reliance on fossil fuels. Identifying and highlighting co-benefits of climate action allows municipalities to explore mutual gains with stakeholders, fostering stronger collaboration and engagement. *Section 2.8 Indicators for Monitoring, Evaluation and Learning (MEL)* provides further guidance on linking co-benefits to climate action and leveraging them in the Climate Neutrality Action Plan. Municipalities can align climate goals with the interests of businesses, communities, and policymakers by demonstrating how climate initiatives contribute to economic growth, public health, social equity, and resilience. This approach helps:

- Strengthen stakeholder buy-in and investment by showcasing tangible benefits beyond emissions reduction.
- Build cross-sectoral partnerships by aligning climate efforts with social and economic priorities.

- Enhance policy integration by embedding climate action into broader urban development strategies.

Municipalities can create more inclusive, effective, and widely supported sustainability initiatives by framing climate action around shared benefits. This relation can be further showcased when outlining strategic priorities and underlying principles in the following sections.

Did you know?

In the first version of their CCC, Mission Cities committed to climate neutrality while focusing on achieving other co-benefits, with an emphasis on highlighting public health, citizens' wellbeing, economic, and environmental co-benefits, particularly in relation to mobility and transport and built environment measures. Other categories that stood out were co-benefits in social inclusion, innovation, democracy and cultural impact, economic co-benefits and resource efficiency. Some cities referenced alignment with UN's Sustainable Development Goals when defining the co-benefits of their climate action plans. If useful, cities can align with or get inspired from one or more of the existing taxonomies published to support them in selecting and measuring co-benefits, for example, the EC's [Green City Accord monitoring framework](#), C40's [Urban Climate Impact Framework](#), ICLEI's [Climate Neutrality Framework](#), or the World Bank's [Urban Sustainability Framework](#), among others.

1.2. Reviewing strategic priorities

As mentioned in the introduction of this document, monitoring your city's CCC implementation process will be a central source of insights for CCC iterations. It allows your city to examine the progress made and assess the quality and efficiency of its climate neutrality approach while re-evaluating strategies and planned actions in light of newly available knowledge and expertise, and of the latest technological or financial opportunities.

1.3. Reviewing the process and underlying principles

The Mission Cities' climate neutrality targets and strategies are based on strong principles that guide both the planning and implementation phases of the CCC. In their first CCC submissions, cities have adhered to principles such as co-creation, open innovation, transparency, sufficiency, or just transition, leaving no one behind. In their CCC iterations, cities see an opportunity to translate these principles into concrete actions, ensuring that climate policies and initiatives are not only ambitious but also inclusive, equitable, and effective.

Did you know?

The city of Lyon has strategically integrated the principle of sobriété (sufficiency) into the development of its CCC, aligning with its broader commitment to climate neutrality. This approach is embedded in its Climate, Air, and Energy Plan and the Lyon 2030 initiative, which emphasize reducing energy consumption, resource efficiency, and fostering a cultural shift towards sustainable living. Sufficiency was

selected as the top priority by the Agora Lyon 2030, the participatory governance body that was set in place to develop the city's climate neutrality strategy.

Lyon is addressing sufficiency principles in concrete actions. For example:

- The city's Climate, Air, and Energy Plan (2023-2030) introduced eco-conditionality for municipal subsidies, meaning funding is linked to sustainability commitments from organizations.
- Public procurement has been structured to favor low-impact suppliers and circular economy initiatives.
- The city adopted an Energy Moderation Plan in 2022, reducing municipal energy use and integrating renewable energy sources.
- Digital responsibility and low-carbon urban logistics have also been targeted under sobriety-focused policies.

Lyon's approach to integrating sobriété within its CCC is an example of how to select a core principle through a participatory and inclusive process and how to elaborate it into concrete actions. By embedding sufficiency into strategies, policy, and public engagement, the city ensures that resource-conscious living becomes a cornerstone of its path to climate neutrality.

For example, both Spanish and Swedish municipalities decided to base their CCC iterations on the principle of Just Transition. A Just Transition in cities calls for aligning climate action with broader social and economic objectives to ensure that decarbonisation efforts are equitable and inclusive. This begins with a strategic vision that frames climate policies not as burdens but as opportunities, highlighting co-benefits like job creation, cleaner air, and reduced living costs. Effective communication and a compelling narrative are key to building public support, especially when communities are involved in shaping locally tailored strategies. Cities must recognise the unequal contribution to and impact of climate change and develop policies that hold high emitters accountable while prioritising the needs of vulnerable populations.

Inclusive governance models are central to delivering on this vision. Cities can foster broader engagement by creating participatory structures like citizen assemblies and local councils, ensuring that marginalised voices are heard and empowered. Cross-sectoral planning should integrate social indicators and redistributive policies, ensuring that climate benefits are fairly distributed. Implementation on the ground must include access to low-carbon solutions, such as affordable renewable energy and housing. Financial planning, too, plays a crucial role: tools like income-based energy tariffs, participatory budgeting, and compensatory funding help distribute resources equitably and repair environmental and economic injustices, reinforcing a transition that leaves no one behind.

Did you know?

During their 2024 CCC iteration, Swedish cities recognized the need to strengthen their commitment to the principle of Just Transition. Key considerations for Swedish

municipalities in reinforcing the Just Transition principle in their CCCs included the following dimensions, each guided by a corresponding set of questions:

Integrating Social Justice into Climate Strategies.

- Alignment with sustainability agendas: How is Just Transition integrated into climate strategies and Agenda 2030 efforts?
- Data disaggregation: How is gender, socio-economic, and consumption-based data used to ensure fairness?
- Focus on vulnerable groups: What measures protect and equitably distribute benefits to those most at risk?

Disaggregate the justice principle in its multiple dimensions.

- Justice as recognition: Which communities or groups are most at risk or disproportionately affected by climate change and the transition? What specific challenges do they face?
- Procedural justice: How can we ensure inclusive participation where all voices are acknowledged, understood, and genuinely considered in decision-making?
- Distributive justice: Who gains from the benefits of the transition, and who shoulders the burdens? How can we ensure an equitable distribution of these impacts?
- Restorative justice: What measures can be taken to compensate and support those who have been harmed by past or current climate actions? How can we prevent similar injustices in the future?

Identify and prioritise climate transition initiatives that can contribute to multiple benefits and synergies.

- Identifying synergies: What approach do you use to recognize initiatives that offer multiple benefits within the municipality? How do you prioritize these initiatives?
- Best practices: Can you share specific examples of projects that have created multiple positive impacts? What benefits have been observed in areas such as the environment, public health, local economy, and community resilience?
- Assessment and continuous improvement: What tools and methods do you use to track and evaluate the effectiveness of projects in delivering multiple benefits? How do you ensure these positive outcomes are sustained over time?

Further readings

Further analysis and description of the work done by Swedish cities to integrate the Just Transition principle into their CCC is available on this interactive website: [Accelerating Cities Just Transitions: Insights for Cities and National Platforms](#)

To find out more about Mission Cities' engagement strategy, you may be interested in this report: [Desktop research report on engagement](#). Case studies and a guided methodology for citizen and stakeholder engagement are available on the Mission Portal: [Citizens and urban stakeholders](#).

1.4. Amplifying engagement and including additional signatures

Reaching climate neutrality requires more than the efforts of city governments alone. It calls for active collaboration across the entire local ecosystem. One of the most frequently cited barriers in the CCCs elaborated by Mission Cities is the fragmentation of responsibilities over emission domains, particularly in terms of both horizontal and vertical governance integration³. The city of Mannheim illustrates this challenge by explaining that only one-third of the necessary measures for climate neutrality fall directly under municipal control, while national and EU-level frameworks influence another third, and the remaining third depends on private capital, businesses, and citizens⁴.

Recognising the importance of building a strong mandate and fostering shared ownership in implementing climate actions, Mission Cities have demonstrated a remarkable ability to engage external supporters for their CCCs. Around 3000 CCC signatories have been counted so far in their CCCs, expressing support from actors across various sectors, including multiple levels of government, businesses, knowledge institutions, service providers, and civil society organizations.

CCC iterations offer cities a valuable opportunity to both expand and deepen these commitments, enhancing the collective impact of their transition efforts. On the one hand, updating your CCCs allows for the inclusion of new actors. On the other hand, it can be leveraged to call for the strengthening of existing commitments, by encouraging signatories to describe in concrete terms how they will support your climate neutrality.

1.4.1. Amplifying engagement with other levels of government

National and regional authorities are key in accelerating climate action and achieving climate neutrality by 2030. In the first iterations of CCCs, cities secured commitments from national and regional levels in five main areas: policy and governance (ensuring regulatory alignment and multi-level collaboration), financial mechanisms (providing funding, grants, and investments), technical and capacity-building (offering expertise, training, and monitoring), infrastructure and mobility (investing in sustainable transport, energy, and urban planning), and research and innovation (fostering partnerships and private sector engagement).

As your city updates its CCCs, it may consider pursuing further multi-level engagement to ensure that each iteration of your CCC becomes more robust, impactful, and aligned

³ Palmia, F. & Meskovic, E. (2024). CCC Highlights – Barriers to Climate Neutrality. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4464>

⁴ The Mannheim CCC is available in the Knowledge Repository on the Mission Portal: <https://netzerocities.app/resource-4069>

with other relevant governance levels. Below are some examples of how actors at various levels of government can strengthen or formulate new commitments.

COMMITMENTS PROPOSING CONCRETE ACTIONS

Concrete commitments outline specific actions, projects, and support measures with clear timelines, expected outcomes, and success indicators. To strengthen these commitments, authorities could:

- Establish a national mission for climate-neutral cities, aligning with the EU Cities Mission.
- Allocate resources to create a national platform for collaboration among governments, businesses, and civil society.
- Provide targeted support, such as project funding, assistance overcoming legislative barriers, or expert guidance.
- Address regulatory or policy barriers that slow down cities' progress, exploring innovative solutions like regulatory sandboxes.
- Help cities secure funding from national and regional sources.
- Develop new funding programs or dedicated funds to support climate neutrality efforts.

HIGH-LEVEL COMMITMENTS

A high-level commitment outlines national or regional programs, initiatives, and actions that support cities' climate goals. These commitments can be improved by:

- Providing details on the national or regional authority's role in implementing the EU Cities Mission.
- Listing existing programs and mechanisms that help cities advance their climate efforts.
- Ensuring future climate plans and policies integrate the Cities Mission approach.
- Supporting knowledge exchange between Mission Cities and other municipalities.
- Encouraging the scaling up of successful climate solutions and initiatives.

By strengthening these forms of engagement, national and regional authorities can provide essential support to cities, ensuring a more effective and coordinated transition toward climate neutrality.

HIGH-LEVEL ENDORSEMENTS

A high-level endorsement expresses general support for a city's climate neutrality ambition and its CCC. Endorsements can be strengthened by:

- Clearly recognising the EU Cities Mission's role in achieving climate targets at all levels.
- Highlighting the city's leadership and its potential to inspire other cities.
- Stating how national or regional authorities will support the city's efforts toward climate neutrality.
- Connecting national or regional climate objectives with the city's CCC goals.
- Emphasising the need for stronger multi-level governance and collaboration.

Did you know?

In Finland, the national government has shown strong support for Mission Cities. The Ministry of Economic Affairs and Employment and the Ministry of the Environment issued a joint commitment document outlining how the state will support the six Finnish Mission Cities in their journey towards climate neutrality. The Finnish government will support the Mission Cities with several measures, such as national strategies, funding mechanisms and cooperation networks⁵.

Policy Support:

- National Medium-Term Climate Plan – Currently under renewal to align with national sustainability targets and cities' needs.
- Energy and Climate Strategy Guidelines – In development to guide future climate actions.
- Circular Economy Program (KISU) – Strengthens resource efficiency and innovation.
- Circular Economy Knowledge Network – Facilitates expertise sharing on circular economy solutions.
- Ecosystem Contracts – Support sustainable urban development through local collaboration.

Direct Funding:

- Municipal Climate Solutions Programme – Funded 150 climate projects, concluding in 2024.
- Energy Aid Program – Supports renewable energy investments and energy efficiency improvements.
- MAL Agreement – Ensures coordinated planning of land use, housing and transport between local, regional and national authorities. The national government contributes up to 30% of the investment needed to implement the planned measures.

⁵ The national commitment for all Finnish mission cities can be found in the Turku CCC in the Mission Portal's knowledge repository: <https://netzerocities.app/resource-4223>.

Collaboration & Networks:

- Hinku (Carbon Neutral Municipalities Network) – Promotes peer learning and best practices.
- Fisú (Finnish Sustainable Communities) – Facilitates co-development of climate solutions.

1.4.2. Amplifying engagement with the private sector

Mission Cities have made remarkable progress in their initial CCC iterations by effectively engaging businesses and industries within their local ecosystems. Among the first 33 CCCs recognised with a Mission Label, 36% were signed by firms primarily focused on transport, energy, the built environment, and housing. In alignment with the Cities Mission's goal of fostering synergies with existing initiatives, several Mission Cities have adopted the Local Green Deal (LGD) framework as a tool to operationalise their climate neutrality target into clear collaboration agreements with local actors.

The LGD approach can be an effective mechanism for fostering city-business collaboration towards climate neutrality. By providing a structured framework, LGD agreements help operationalise CCCs, clearly defining roles, responsibilities, milestones, and financing needs. Their strength lies in a multi-stakeholder approach that promotes continuous collaboration and long-term commitment through formalised accountability. Additionally, their action-oriented design ensures that agreements translate into tangible results, facilitating collaborative action through improved regulation, financing, and innovation. By establishing a clear and practical framework for partnerships, LGDs serve as a crucial tool for translating climate ambitions into structured, impactful action, ensuring long-term progress toward a sustainable future.

Did you know?

Both Cork and Kalamata have developed synergies between different Commission initiatives by integrating the LGD approach into their work on CCCs.

As part of their involvement in the European Commission's Intelligent Cities Challenge, **Cork** developed an LGD agreement with AIB Bank to enable progress against the city's CCC while facilitating the company's decarbonization objectives. Through the LGD agreement, the company commits to implementing climate action measures across energy, waste management, transport, and community engagement, with clear targets and reporting milestones. Specifically, measures include achieving a full corporate electric fleet by 2027, as well as achieving 100% energy requirements from certifiable renewable sources by 2030. In turn, the Municipality commits to provide expert advice for the implementation of measures, fundraising support, peer learning and networking opportunities, as well as promotion as a contributor to Cork's climate neutrality journey. This is only one of the several LGD agreements Cork signed with organizations in their business community, and it represents a great example of business engagement for territorial decarbonization.

The W.A.T.E.R. LGD in **Kalamata** is a strategic initiative, developed as part of the city's involvement in the European Commission's Intelligent Cities Challenge, aimed at reducing plastic waste and promoting sustainable water consumption. This agreement between the Municipal Water Supply and Sewerage Company of Kalamata (DEYAK) and the Municipality of Kalamata introduces refillable water stations across the city to provide free access to clean tap water while decreasing reliance on single-use plastic water bottles. The Municipality will distribute at least 500 reusable bottles to citizens to encourage usage. The initiative aligns with Kalamata's commitment to climate neutrality under the European "Mission" of 100 Climate-Neutral and Smart Cities by 2030. The W.A.T.E.R. initiative is expected to make a significant environmental impact by reducing plastic waste, with an estimated annual savings of up to 30 million plastic bottles. By encouraging the use of refill stations, the project will also help lower the city's carbon footprint, preventing approximately 2,484 tons of CO₂ emissions per year. In addition to its environmental benefits, the initiative will promote public awareness through education campaigns on water conservation and sustainability. Furthermore, the installation of smart IoT water meters will enhance urban infrastructure by providing real-time data on water usage and environmental impact.

Further readings

An overview of the key principles, links to European policies and initiatives, and core elements of LGD can be found in the [Local Green Deals a Blueprint for Action](#). A step-by-step methodology with lessons learned from LGDs implemented by the cities of Aalborg and Amsterdam is available here: [Local Green Deal working Methodology. Collaborative Local Impact in Aalborg and Amsterdam](#). In addition, an online course for local government administrators and business stakeholders on how to use the LGDs as collaborative agreements to accelerate transformative sustainability action is available here: [Local Green Deals: A Governance Innovation to Accelerate the Twin Transition](#).

1.4.3. Amplifying engagement with civil society

First CCC versions demonstrated that Mission Cities are interested and successful in engaging civil society organisations. Civil society actors constitute the second-largest group of CCC signatories, with strong participation from business associations, community groups, including neighbourhood organisations, youth and cultural associations, as well as charity groups. Other contributing groups, such as trade

unions, foundations, and sports clubs, further underscore the diverse spectrum of non-governmental actors committed to advancing climate action⁶.

Building strong collaborations with local associations and community groups is crucial when developing a shared climate-neutral vision for the entire city using a whole-of-society approach. While local communities bring grassroots knowledge and innovation, local governments provide essential resources, infrastructure, and policy support. By working together, these actors enhance civic engagement, accountability, and transparency, fostering more democratic urban governance. Additionally, such collaborations enable cities to reach underrepresented groups, ensuring that climate action is both inclusive and sustainable in the long term.

CCC iterations present an opportunity to both expand the number of signatories and deepen existing collaborations. This process involves⁷:

- **Testing ideas against the shared vision:** As stakeholders across the ecosystem generate ideas, these should be evaluated to ensure alignment with the co-created vision. Careful consideration is needed to balance priorities and sustain collective momentum.
- **Identifying new opportunities:** Advancing climate neutrality requires continuously exploring emerging opportunities—whether in the form of new partnerships, innovative projects, or strategic investments. Proactively seeking and integrating these opportunities strengthens the collaborative ecosystem.
- **Advocating for the shared vision:** Champions within the ecosystem must actively promote the common narrative, reinforcing trust and commitment across diverse stakeholders. This shared understanding serves as both an anchor for decision-making and a guiding principle for collective climate action.

Through this iterative approach, CCCs can broaden their coalition of engaged actors, nurture long-term partnerships, and accelerate impactful climate solutions.

⁶ Palmia, F. & Meskovic, E. (2024). CCC Highlights – A diverse Ecosystem of Supporters. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4265>

⁷ Silvertown, S. (2024). [Partnering up for sustainable and just cities: lessons from and for local governments and community-led initiatives](#). Urban Community for Sustainable and Just Cities, ICLEI Europe, Robert Bosch Stiftung.

2. Accelerating climate action

2.1. Greenhouse Gas (GHG) accounting

2.1.1. Updating the baseline inventory

A GHG baseline inventory is a critical component of climate action planning, serving as the reference point for setting emissions reduction targets.

The updated baseline inventory should:

- Cover all major greenhouse **gases** (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃)
- Include emissions from the following key **sectors**: Buildings, Transport (*including ports and airports*), Waste, Industrial Processes and Product Use (IPPU), and Agriculture, Forestry, and Other Land Use (AFOLU).
- Be based on a **single year's** total GHG emissions, as recent as feasible, to ensure relevance and accuracy.
- Include clearly defined information on the **methodology** and **emission factors** used.

Some cities have found it useful to measure against a 2030 Business-as-Usual (BAU) scenario as the baseline. If this is the case, it should also be included.

More detail on the inventory requirements can be found in the [Mission Info Kit](#). If the allocation of subsectors does not match the Info Kit, please indicate as such.

Ensure data sources remain up-to-date and consistent with the methodology used in the baseline inventory. Reliable data is crucial for assessing emissions trends and informing mitigation efforts. If the methodology has evolved due to new city processes, or data for previously unincluded sectors, scopes or gases has been collected, provide some detail on this process. Your city can also consider in this case if it is possible to retroactively update their past inventories for increased utility.

2.1.2. Reporting successive inventories

In addition, to track progress effectively, cities are encouraged to update their GHG inventory at least every two years, allowing for an iterative approach to climate action planning. This regular reporting ensures that cities can assess trends, provide evidence for adjusting policies, and aligning strategies with evolving climate goals.

European cities commonly track GHG emissions using the **CDP-ICLEI Track** and **MyCovenant** platforms, both of which have a data-sharing agreement with the NZC

Portal. These platforms facilitate efficient reporting and data-driven decision-making by aligning city reporting processes with broader climate initiatives.

CDP-ICLEI TRACK: This online system enables cities to submit their GHG inventory and monitor progress toward emissions reduction targets. It provides structured questionnaires and a dashboard for tracking trends and performance. Questions in the questionnaire most relevant to Mission Cities are directly tagged as such, in collaboration with NZC.

- [Reporting for Mission Cities on CDP-ICLEI Track](#)
- [General Reporting Guide](#)

MYCOVENANT: This platform supports cities in developing Sustainable Energy and Climate Action Plans (SECAPs) and submitting periodic reports to track progress. It emphasises the importance of local policy frameworks in achieving climate neutrality. The platform has adapted its reporting template to align with the Cities Mission's requirements, expanding to include sections on AFOLU, IPPU and negative emissions.

- [Reporting for Mission Cities on MyCovenant](#)
- [General Reporting Guide](#)
- [SECAP Monitoring Guide](#)

Both platforms share data with the NZC Portal, creating a streamlined process that reduces redundancy and ensures consistent reporting. However, any city that wishes to directly upload their inventory to NZC Portal instead of using one of the platforms can do so. If choosing this option, spreadsheet formats are preferable to PDFs for ease of data extraction and processing.

Gathering the data on the Portal enables cities to benefit from centralised data access, improved analytics, and a clearer understanding of their climate impact. Insights from the aggregated data can be explored using the [NZC Barometer](#). Making emissions data publicly accessible fosters accountability, encourages stakeholder participation, and strengthens community engagement in climate action efforts.

Cities can leverage support from the NZC Reporting Helpdesk, which provides online resources, webinars, FAQs, and tailored technical assistance for emissions inventory updates.

2.1.3. Integration of scope 3 emissions

Apart from emissions from waste management, emissions created outside of the city's boundary due to activities from within the city are not required for inclusion in the CCC inventory. However, several cities have nonetheless begun or expressed interest in

including strategies for addressing these emissions. We therefore provide an introduction to doing so here.

UNDERSTANDING SCOPE 3 EMISSIONS

Scope 3 emissions occur outside a city's boundaries but are driven by its activities. These include emissions from supply chains, waste management, imported goods, food systems, and transport. Unlike Scope 1 and 2 emissions, which are tied to direct and energy-related emissions, Scope 3 provides a more comprehensive view of a city's total climate impact. Addressing these emissions is crucial for cities aiming for true climate neutrality, especially in high-income regions where consumption patterns significantly drive global emissions.

ACCOUNTING FOR SCOPE 3 EMISSIONS

Measuring Scope 3 emissions requires different methodologies from traditional inventories. A common approach is consumption-based accounting, which tracks emissions from all goods and services consumed within a city, regardless of where they were produced. This can involve Multi-Region Input-Output (MRIO) models, life cycle assessments (LCA), and national emissions inventories. Cities can align their reporting with frameworks such as the Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC) to maintain consistency and comparability. While data challenges persist, cities can begin by estimating emissions for key sectors such as construction, food, and waste, refining their inventories over time as more granular data becomes available.

ADDRESSING SCOPE 3 EMISSIONS

To effectively reduce Scope 3 emissions, cities must adopt policies that extend beyond their geographic boundaries. Sustainable procurement policies can prioritise low-carbon materials and suppliers, while circular economy strategies can minimise waste and enhance resource efficiency. Public engagement campaigns can drive behavioural changes in consumption habits, encouraging residents and businesses to make sustainable choices. Additionally, cities can collaborate with regional and national partners to develop regulatory frameworks that incentivise emissions reductions across supply chains. By setting clear targets, integrating Scope 3 into climate action plans, and fostering systemic collaboration, cities can take a leadership role in reducing their broader environmental impact.

Did you know?

Valencia has become the first city worldwide to measure the carbon footprint of its tourism sector, incorporating Scope 3 emissions through a data-driven collaboration between Visit Valencia, a foundation supported by the City Council, and the Global Omnium group. Since the city government does not have direct authority over various tourism-related sectors, such as hotels, event planning, and transport services, which largely contribute to Scope 3 emissions, this partnership leveraged advanced big data tools to assess the impact. By categorizing these emissions into ten sectors, including transport, food services, and public utilities, the analysis

identifies the most carbon-intensive activities, allowing for more precise mitigation efforts. Using these insights, the initiative is introducing a blockchain-based digital system that monitors emissions in real time, helping businesses reduce their environmental impact (UN Tourism, 2021).

2.2. Current policies and strategies assessment

2.2.1. Emissions gap

For their first CCC iteration, Mission Cities were expected to evaluate their current climate policies and strategies and then use this analysis to see what level of additional actions would be required to meet their Mission target ambitions. This difference between the city's greenhouse gas emission reduction target and emissions reduction accomplished through existing action plans was called the "emissions gap". Future iterations can be an opportunity to update and validate the models that went into projecting emissions reductions for the purposes of the Action Plan. Updates can include

- Ensure there is no double-counting of actions
- Quantifying emissions impacts of actions that previously had no impact estimate
- Inputting new or collected data into the model used for estimating impacts

2.2.2. Systemic barriers and opportunities to 2030 climate neutrality

In conjunction with the GHG inventory and the multi-level policy baseline analysis, in their first CCC iteration, cities were asked to carry out a systems and stakeholder mapping aimed at identifying systemic barriers and opportunities.

As cities update their CCCs, improving the mapping of barriers and stakeholders can strengthen the coherence between identified challenges and planned actions. The first CCC version provided a strong foundation by identifying institutional, technological, and behavioural barriers, yet gaps remain in linking these challenges to actionable measures and ensuring collective ownership across the urban ecosystem.

STRENGTHENING INSTITUTIONAL ALIGNMENT

Institutional barriers, particularly regulatory challenges and fragmented governance, were the most frequently cited challenges by Mission Cities in their CCCs⁸. Many of

⁸ Palmia, F. & Meskovic, E. (2024). CCC Highlights – Barriers to Climate Neutrality. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4464>

these challenges are not within cities' jurisdiction, and therefore overcoming them requires collaborative approaches. To address this, Mission Cities described different lines of action:

- Engaging proactively with national climate governance bodies and advocating for regulatory frameworks that support local climate action.
- Leveraging collective action with peer cities to enhance multi-level governance mechanisms and ensure alignment between local, regional, and national climate policies.
- Engaging in strategic partnerships with intermediary organisations, such as climate networks and regional development agencies, which can help bridge alignment gaps.

HIGHLIGHTING SOLUTIONS AND CONTINGENCY MEASURES TO CHALLENGES AND BARRIERS

Identifying and mapping barriers to climate action is a crucial first step in addressing them within your city's proposed initiatives. To make this process more effective, developing a structured approach to categorising barriers based on their impact across different climate action domains and their potential interactions can be beneficial. In your impact pathways, consider which levers—such as policy adjustments, stakeholder engagement, or financial instruments—you can activate to implement contingency measures that help overcome these barriers.

Did you know?

To enhance the coherence between stakeholder mapping, barrier analysis, and actionable climate measures, the city of **Bologna** adapted its Action Plan template to align with the insights gained from its stakeholder and systemic barrier mapping⁹. This approach ensured that the identified challenges and opportunities were directly linked to the actions outlined in the CCC, fostering a more integrated and actionable roadmap toward climate neutrality.

Stakeholder Mapping for Targeted Engagement

Bologna conducted a comprehensive stakeholder analysis, distinguishing between internal and external actors based on their influence on the city's climate mission. Within the municipality, stakeholders were categorized as:

- Key stakeholders, whose functions have a direct and measurable impact on greenhouse gas (GHG) reductions.
- Systemic stakeholders, whose roles do not directly affect emission reductions but are essential for enabling a just and sustainable climate transition.

⁹ The Bologna CCC is available in the Knowledge Repository on the Mission Portal: <https://netzerocities.app/resource-4437>

For external stakeholders, the city employed a progressive engagement strategy, starting with an initial mapping of interested parties, followed by 1:1 meetings and broader public events to explore their potential contributions to the city's climate neutrality objectives. This approach ensured that both institutional and community actors were meaningfully integrated into the planning process with a tailored and targeted engagement strategy.

Mapping Systemic Barriers and Opportunities

Bologna systematically analysed sectoral barriers (e.g., buildings, mobility, waste, industrial processes, land use) and transversal barriers impacting its climate agenda. Each barrier was contextualized within the city's carbon neutrality pathway, including:

- A description of how the barrier hinders progress,
- A "Breaking the Barrier" section, outlining the necessary changes to overcome the challenge,
- A direct reference to specific actions in the Action Plan designed to address the barrier.

Beyond identifying challenges, the city also mapped opportunities and co-benefits linked to its climate transition, highlighting governance improvements, public health benefits, education opportunities, and economic growth areas such as market expansion and job creation.

The city of Bologna committed to ensuring consistency between identified challenges and proposed solutions. Each action, detailed in Modules B and C of the CCC, was explicitly linked back to the corresponding responsible stakeholders, barriers and co-benefits, reinforcing the logic of the city's climate strategy and strengthening the accountability of implementation efforts.

Through this integrated approach, Bologna not only enhanced the clarity and effectiveness of its Action Plan but also ensured that stakeholder engagement and barrier analysis were not stand-alone exercises, but fundamental pillars shaping the city's climate actions.

2.3. Impact pathways and portfolio design

The [impact pathways](#) template for CCCs were designed to include 'Early Outcomes,' which are expected to appear 1-2 years into the implementation phase and provide the opportunity for early evaluation and sensemaking of the outline actions. At the stage of your second CCC iteration, analyse the significance of the Early Outcomes of your Impact Pathways. Observe which Actions led to these achievements and which were less successful and why. Look ahead and adjust the implementation strategies accordingly, with a focus on conditions which will enable the Impact Pathways to aspire to.

Cities participating in the Pilot Cities Programme are familiar with the 'Sensemaking' process. The principles of sensemaking as a structured process of understanding

complex, dynamic environments to enable adaptive decision-making are very applicable to iterations of the Impact Pathways and Action Portfolio. We summarise some of the guidance for capturing Learnings and Insights here, as they are easily applicable to the CCC iteration process:

LOOKING BACK

This section relates to your experience since the start of your CCC action plan activities. Think of the governance set-up & coordination mechanisms (i.e., getting the right partners on board or reaching the right stakeholders) as well as implementation of priority activities. You may also reflect on getting the indicators, data, or monitoring practices set-up.

The following guiding questions could help you consider and complete this section. These questions are indicative only and can be changed based on the context of your specific AP activities or on how you would like to best describe your progress, outcomes achieved, and the insights/learnings gained from this experience.

Table 2.1- Looking back

Focus area	Key questions
Early Outcomes, quick wins and successes	What are the most significant changes or Early Outcomes that have emerged from setting up, getting started with, and delivering your climate actions? Which stakeholder or group of stakeholders has shown noticeable changes, and who is benefiting from these Outcomes?
Challenges, areas for improvement and lessons learnt	What are the recurring challenges emerging from your interactions with stakeholders (internally or externally) through your implementation process? What did not work well or could have been done differently, and why?
Insights on process and good practices	What key insights has CCC gained from this process so far and how have these lessons influenced the next steps? What worked well in your city's context?

LOOKING AHEAD

This forward-looking perspective is about further elaborating on your current insights, how they are actionable, and what their implications are for the future of your CCC activities. It adds a practical dimension to the Sensemaking process and connects it to the decision-making on what to do next based on your learning so far.

You may also think of the climate actions already well underway and delivering tangible results – what is planned to be achieved, building on these Early Outcomes, and what are the possible avenues to maximise the impacts of these plans/activities? Think of the missing capacities/capabilities or gaps that still need to be tackled, and the most ambitious activities that you hope could be addressed – what potential obstacles do

you anticipate in achieving these objectives? Additionally, you may also reflect on the creativity and innovation needed for long-term systemic outcomes and impacts.

The following guiding questions can be helpful in framing this section. These questions are indicative only and can be changed based on the context of your specific activities, or based on how you would like to best describe your expected progress for the remainder of the Mission.

Table 2.2 – Looking ahead

Focus area	Key questions
Future planning and impact	What key enabling factors are important in the upcoming stages of your climate actions? How will they contribute to achieving long-term outcomes and impacts? What emerging needs have you identified that will require dedicated action during the next stages of your pilot's implementation?
Future opportunities	What synergies or opportunities have you identified, either within your team or through external partnerships?
Problem-solving and risk management	How can your current understanding of the challenges help overcome barriers or risks?
Strategic alignment and policy integration	How can the actions plan contribute to other policies and plans, perhaps at other levels of governance?

2.3.1. Integrating adaptation measures

The EU's Climate-Neutral and Smart Cities Mission and the EU Mission on Adaptation to Climate Change are closely linked, particularly through initiatives like the Capital Hub. The hub aims to support cities in finding financing solutions for both mitigation (reducing emissions) and adaptation (adjusting to the impacts of climate change) projects.

If they have not done so in their first submission of their CCC, cities may use the iteration process to include adaptation measures, provided these are clearly marked as 'adaptation' to ensure budget traceability.

2.3.2. Strategy for residual emissions

To achieve net-zero emissions by 2030, all GHG emissions within the city must be fully mitigated or compensated for through carbon removal activities, following the European Climate Law, which emphasises reducing emissions at the source while acknowledging that some removals will be necessary for sectors that are difficult to

decarbonise. In the context of the Mission, these “difficult” areas are called residual emissions.

A strategy for the compensation of cities' residual emissions has been identified as a high-priority area for CCC iterations. The strategy should identify their sources, justify why further reductions are not feasible, and outline their approach to compensation. It should prioritise long-term carbon storage, with explanations for how to manage potential emissions reversals from any temporary solutions.

Residual emissions can be addressed through natural or technological carbon sinks within the city or by purchasing certified carbon credits associated with carbon removal activities. Note that credits that fund projects which reduce or avoid future emissions, typically called offset credits, still involve new GHG emissions and thus should not be used in the Cities Mission. Since creating negative emissions will likely be required for reaching net zero emissions, cities should assess their anticipated residual emissions early and integrate a clear plan into their CCC Iteration.

In December 2024, the Carbon Removals and Carbon Farming Regulation was published, creating the first EU-wide voluntary framework for certifying carbon removals, carbon farming and carbon storage in products across Europe. Information and updates on EU support, methodologies and funding on this topic can be found [here](#). In addition, detailed guidance on negative emissions for cities will be published by JRC in the first quarter of 2026.

Did you know?

Cities often mention that improved residual emissions strategies will be a priority for CCC iterations in coming years. More robust estimates of emissions reductions in climate action plans and progress implementation tracking will support better quantification of residual emissions, while stronger partnerships with key network stakeholders will lead to more detailed plans. For example, several cities are partnering with academic and research institutes or entering dedicated initiatives to better quantify, cost, implement, and certify their residual emissions strategies.

Ljubljana's CCC is one that stands out for its clear strategy on residual emissions (the document can be consulted on the NZC portal). It estimates the residual emissions in each sector and provides clear explanations why these emissions cannot be reduced by 2030. This information is complemented by an array of concrete measures to be implemented, including estimates of how much CO₂ these measures could remove. The city also provides the cost estimates for these measures.

2.4. Monitoring, evaluation and learning

To ensure effective climate action, cities must regularly assess whether they are on track to meet their targets and whether their indicators accurately reflect progress.

Choosing and monitoring effective indicators plays a key role in capturing and sharing progress whether direct emissions reductions or co-benefits such as social equity, economic development, and environmental improvements. Analysis of indicators outlined in CCCs and the Pilot City Programme show a large variety in the types of indicators important to Mission Cities at both project and portfolio scale. This highlights the need for cities to critically evaluate their indicator frameworks together with their stakeholders, ensuring they track meaningful progress and remain adaptable to evolving climate policies and strategies.

A strong MEL system allows cities to effectively learn from and respond to data, ensuring that climate action remains impactful and evidence-based. Successful cities develop systems that support organisational learning, capacity building, and strategic adaptation. Key components of an effective MEL system include:

- Organisational processes and policies that ensure continuous data review and integration into collaborative learning for decision-making. These include clear assignment of roles and responsibilities
- Skills & capabilities within city teams to gather, analyse, and interpret data.
- Data management systems that ensure consistency, accuracy, and accessibility, including dashboards and other digital tools
- Stakeholder collaboration to leverage external expertise and community engagement, for example, in data gathering, visualisation, evaluation, and verification.
- Strategic planning frameworks that allow for iterative improvements based on MEL insights.

Without a robust system in place, cities may struggle to act on the insights their MEL plans provide, leading to ineffective climate strategies.

Did you know?

NetZeroPlanner is a free, online tool to support cities in the creation of their Climate Action Plans and Investment Plans and track progress against those plans. It is available to all cities on the [NZC portal here](#). The city of **Barcelona** created their Climate Action Plan and Climate Investment Plan using the NetZeroPlanner model in 2023 and received their mission label in early 2024. Since then, they have been implementing the actions described in their climate plan. By keying 20 Key Performance Indicators into NetZeroPlanner, they can estimate with high accuracy the actual annual GHG emissions in the city and compare it to their original plan by sector. The tool also allows them to drill down into each sector to understand what is causing GHG emissions in each sector to gain insights into what climate actions are working well and which actions need more focus.

Barcelona uses the analysis provided by NetZeroPlanner to monitor, evaluate, and learn what is working and what is not in their climate plan so they can adjust to

ensure they stay on track to achieve their climate goals. By analysing their results by year, Barcelona found that GHG in the city was higher than planned due to higher than anticipated emissions in the transport sector. Digging deeper, they found that Barcelona residents were driving more than they expected and sales of electric cars was not at the level they had hoped. With this insight, they went back to the actions in their Climate Action Plan to see if there were any adjustments in the transport sector that might get them back on track. Barcelona may also find that they need to update their original plan as part of the CCC iteration process. Barcelona's approach is an example of how cities across Europe are using online tools to structure their planning, track their progress, and manage their implementation for net-zero success by the year 2030.

Did you know?

To support the drafting of its CCC, the city of **Torino** developed CLICC—an interactive digital platform designed to assess the impacts and costs of climate actions and pathways. CLICC enables city decision-makers to simulate different policy options and identify the most effective combinations for achieving climate neutrality. It serves as the foundation for a broader strategy, including the creation of a digital twin of Torino, which will integrate environmental, building, transport, energy, waste, and social behavior models to assess transition pathways in a holistic, multidimensional way.

The platform supports “what if?” scenario analyses, tracking the city's progress toward sustainability goals over time. Developed in collaboration with the Politecnico di Torino, EST@energycenter lab, CLICC is user-friendly and tailored to various stakeholders: technical staff, municipal officials, utility providers, and citizens. While experts can manage and test specific interventions, the platform also offers accessible insights for the public, helping to build awareness and support for the city's transition. CLICC is a key tool in Torino's effort to combine data-driven planning with inclusive governance, ensuring that sustainability strategies are both effective and widely supported.

2.4.1. Indicators and co-benefits

Cities should assess whether their current selection of CCC indicators provide a clear picture of progress and identify areas where refinements or new metrics might be needed. Cities are invited to reflect on:

- What (new) indicator sets could improve reporting and communication of progress? Think of: technical indicators of progress (e.g. number of heat pumps installed), financial indicators (e.g. Euro invested per tCO₂e avoided), social indicators (e.g. number of citizens engaged per group), co-benefits indicators (e.g. air quality improvements, noise reduction, urban green). Think of the audience and use case for each indicator set.

- Do current indicators adequately measure both GHG reductions (direct impacts) and wider co-benefits (indirect impacts)? Think of which international methodologies and references could be relevant or useful in your context, for example, several cities align their indicators to SGDs or other ESG-related frameworks, and the EC's [Green City Accord monitoring framework](#) is already used by over 100 signatory cities, many of which are also Mission Cities.
- How to action-level and portfolio-level indicators align and integrate? How do they support communication of the vision and narrative for the city transformation?
- Are there gaps in data collection that hinder comprehensive evaluation?

By systematically refining their MEL indicators, cities can better track systemic changes, ensuring their climate action plans remain effective and transparent.

Did you know?

Leuven is developing an innovative impact framework to better understand and quantify the co-impacts of its climate breakthrough projects across all emission domains. Where possible, these co-impacts—such as improved health, reduced flooding, or increased well-being—are expressed in monetary terms to complement financial business cases. The early version of the framework includes selected indicators and automated calculation methods, tested on a small set of projects, and received positive feedback from financial stakeholders.

Through its Climate City Contract, **Leuven**—alongside Leuven 2030 and over 30 partners—has launched 86 breakthrough projects aimed at rapid CO₂ reduction and systemic transformation. Each project has concrete commitments from stakeholders and is supported by a financial strategy outlining investment needs and mechanisms for a socially just transition. While projects in energy often yield clear financial returns, others, like mobility or depaving, require valuation of social and environmental benefits to demonstrate their worth.

To support all necessary projects, **Leuven** is exploring a transition fund that combines profitable initiatives with those less financially viable, creating a balanced investment portfolio. Quantifying co-benefits not only strengthens business cases but also fosters broader support for a healthier, more equitable, and climate-resilient city.

Cities are increasingly finding political and financial value in measuring and communicating co-benefits of climate actions. To varying degrees, these can also be reported on the designated platforms. MyCovenant offers dozens of indicators around the topic of Energy Poverty, with the following also being covered in the NZC Comprehensive Indicator Framework:

- Heatwave incidence

- Fuel poverty
- Energy consumption per household

The CDP-ICLEI Track questionnaire offers the ability to report on the following co-benefit indicators covered by the NZC Comprehensive Indicator Framework:

- Green space
- RES production
- Fuel poverty
- Modal split
- Waste
- Air quality

The EC's [Green City Accord monitoring framework](#) includes a set of 15 indicators on air, water, biodiversity, waste and noise, for triennial reporting by signatory cities. With 119 cities signed up to the GCA, 37 of which are also Mission Cities, this offers useful synergies for monitoring of the Climate City Contracts, particularly regarding co-benefits.

Did you know?

In **Cluj-Napoca**, the MEL system is rooted in co-creation and citizen engagement. The city collaborates with academia, the private sector, NGOs, and residents using its Civic Innovation and Imagination Centre platform to define and refine indicators. This participatory approach ensures policies are shaped by both expert insights and public input.

The city prioritizes real-time monitoring, expanding its sensor network to track air quality, congestion, and green space. Citizen engagement is central, with surveys, digital platforms, and public consultations feeding directly into decision-making. Looking ahead, the Cluj 2030 platform will centralize all MEL data for public access, enhancing transparency and accountability. By balancing quantitative and qualitative data and continuously refining indicators, **Cluj** ensures its climate policies remain effective, inclusive, and investment-ready. This dynamic MEL framework positions Cluj as a leading example of data-driven, participatory urban sustainability.

The NZC [Comprehensive Indicator Framework](#) is a thorough guide with suggested indicators, providing a structured approach for cities to monitor, evaluate, and learn from their climate action plans. It defines required and recommended indicators across key areas ensuring cities can track progress towards climate neutrality. By integrating Theory of Change principles, the framework helps cities assess whether they are on track with emissions reductions and whether their indicators accurately reflect the state of implemented actions. Additionally, it supports institutional learning by guiding cities

in improving data management, organisational processes, and stakeholder engagement. The framework also emphasises flexibility, allowing cities to refine indicators, address gaps, and enhance their MEL systems for more effective decision-making. This resource is valuable for cities seeking to evaluate their climate actions, adjust strategies, and improve transparency in tracking their climate commitments.

Additionally, the [Methodologies and Tools for GHG & Economic Accounting](#) document provides essential guidance for monitoring and reporting, ensuring alignment with global reporting frameworks such as CDP, MyCovenant, and the NZC Portal. The document emphasises the integration of standardised reporting methodologies to enhance comparability and transparency while allowing for local adaptations. Cities can leverage this guidance to refine their monitoring frameworks, ensuring that key indicators effectively track GHG reductions and co-benefits. Furthermore, it supports institutional learning by promoting robust data governance, stakeholder engagement, and the development of adaptive strategies. For cities seeking to strengthen their MEL systems, this document offers a structured approach to identifying gaps, refining indicators, and enhancing decision-making processes for long-term climate neutrality.

Chapters 3 and 4 of [Lessons Learnt from Application of the Methodology and Tools for GHG and Economic Accounting](#) also provides critical insights into indicators for cities refining their MEL frameworks. A key finding from the evaluation of standardised and customised co-benefit indicators submitted by 40 pilot cities in Cohort 1 is the emergence of distinct trends in how cities track climate action impacts.

By learning from the experiences of other cities and refining their MEL approaches, cities can build more adaptive, data-driven climate action plans that effectively guide them toward climate neutrality.

Did you know?

Porto has developed a robust MEL framework, centred around its integrated urban data platform, managed by the city's digital services company, Porto Digital. This platform aggregates real-time data from municipal operations, such as transit emissions and waste management, to provide a holistic view of climate action progress. Porto Digital also ensures data standardization and integration across different sectors.

The city's Energy Agency leads technical monitoring, tracking greenhouse gas emissions and evaluating climate action effectiveness. Its Energy Observatory provides real-time data on municipal energy use, feeding into broader MEL efforts. However, a key challenge remains obtaining consistent data from private stakeholders. To address this, the Carbon Neutrality Directorate acts as an intermediary, helping businesses report climate data in a standardized way. Additionally, **Porto** launched the A Plus Class initiative to improve data governance, interoperability, and coordination across stakeholders. In essence, Porto is refining its MEL system architecture so that data flows from all sources, both public and private, are smoother and more reliable.

2.5. Enabling climate neutrality by 2030

2.5.1. Consolidating and showcasing governance innovation interventions

As your city prepares for a CCC iteration, you may want to showcase the changes in your governance and policy approaches. Cities progressing in their CCC implementation efforts accelerate and scale up impact through multiple approaches:

DEVELOPING MECHANISMS OF INTEGRATION AND COLLABORATION

Cities develop integration and collaboration mechanisms by coordinating across sectors, engaging stakeholders, and aligning with national and EU policies. Interdepartmental climate committees, like those in Amsterdam's Circular Economy strategy, ensure transport, energy, and urban planning departments work together to reduce waste and emissions. Multi-stakeholder platforms, such as Cork's Local Green Deal example (see chapter 1.4.2 Amplifying engagement with the private sector), involve businesses in committing to shared responsibilities for carbon neutrality. Additionally, cities align their policies with national and EU frameworks, while providing adequate capacity building to support this alignment, as seen in Turku's approach to climate budgeting by embracing the EU Taxonomy.

Did you know?

Over the past two decades, **Turku's** climate unit expanded from a single member to a team of 20 experts. In parallel, the city has embedded a range of multi-level governance frameworks into its daily operations, including the Sustainable Energy and Climate Action Plan framework (SECAP), the EU Taxonomy for Sustainable Activities in its Climate Budget, and CCC framework under the EU Cities Mission. This rapid expansion and the integration of complementary multi-level frameworks required new knowledge and capabilities across the administration.

In response, the City of **Turku** has launched a programme of internal capacity-building and training, covering relevant topics such as mainstreaming the application of the EU Taxonomy for Sustainable Activities. This initiative aims to equip municipal staff, urban planners, and key stakeholders with the necessary expertise to implement climate policies effectively and align investments with sustainability criteria.

REVIEWING AND UPSCALING PILOTS

Cities systematically assess pilot projects to determine their effectiveness, scalability, and adaptability to different contexts. This involves analysing key performance indicators, stakeholder feedback, and potential barriers to expansion. Successful pilots can be integrated into broader policy frameworks, supported by regulatory adjustments, financial incentives, and cross-sector partnerships.

Recently, Paris has implemented measures such as taxing high-polluting vehicles and expanding bike lanes, resulting in a 40% pollution reduction since 2011. These initiatives have been progressively expanded to support the city's goal of achieving carbon neutrality.

REPORTING, INSPIRING, AND ADVOCATING TO ENABLE REPLICATION

Cluj-Napoca, as one of Romania's selected cities in the EU Mission for 100 Climate-Neutral and Smart Cities by 2030, has played a pivotal role in scaling up climate action initiatives, culminating in the establishment of the national platform, Mission Mirror Cities Hub Romania (M100). This platform aims to support Romanian cities in their green transition by facilitating access to European funding and accelerating efforts to mitigate climate change. Additionally, M100 launched a Mirror Mission to support ten other Romanian cities on the path to climate neutrality by 2035.

FORMALISING EXPERIMENTAL APPROACHES BY CREATING RULES AND STANDARDS

Standardisation serves as a useful governance tool for cities striving for climate neutrality by providing a structured and coordinated approach to addressing climate change and digital transformation. Without standardised frameworks, cities often tackle these challenges in a fragmented manner, leading to inefficiencies and missed opportunities for collaboration. By establishing common guidelines and methodologies, standardisation helps cities implement low-carbon strategies, enhance climate resilience through improved infrastructure and water management, and streamline risk prevention and emergency responses¹⁰.

Standardisation also plays a key role in amplifying the impact of research and innovation, particularly in urban initiatives supported by the European Commission, such as the Cities Mission. By embedding sustainable development goals into standardised practices, cities can set ambitious low-carbon targets while preserving biodiversity and adapting to climate change. Additionally, in areas such as land-use planning and digital governance, standardised approaches ensure that urban development aligns with sustainability principles, supporting smart city initiatives that prioritise resource efficiency and the well-being of citizens over excessive surveillance. Through active participation in shaping standards, European cities can promote and defend their models, reinforcing their leadership in the global green and digital transition. The following case studies show examples of how Mission Cities are already participating in this process.

¹⁰ <https://ec.europa.eu/docsroom/documents/64914>

Did you know?

Aarhus's municipal agency, ITK, steers several initiatives, combining ICT and data-driven approaches to urban planning and asset management. Besides being a Mission City, Aarhus is well integrated into several initiatives and networks to support the transformation. The established IoT infrastructure blends in-house and market solutions and feeds into the digital twin. Aarhus is aiming to apply for the pilot call on dataspace in DS4SSCC.

Another Mission City, **Kranj**, runs one of the two pilots on Data Spaces supported by DS4SSCC, with work on the transformative pathway starting in 2019. The work relies on implementing a data platform, ensuring the municipality's data sovereignty. Digitalization includes new ways of corporations and concepts: 1) supported by a transport card working together with VISA and 2) establishing a non-fungible token (NFT) (blockchain). Translating the CCC into an action and implementation plan, the climate transition team is guided by the Office of Development and Smart Community, ensuring a sustainable integration of smart and climate-neutral ambitions.

2.5.2 Social Innovation Interventions

Social innovation is a key lever of change in socio-technical transformations: promoting social innovation at urban level can empower communities in shaping sustainable behaviour and collective action to tackle climate change. Social innovations, defined as innovations that are social in the means and in the ends, are proliferating in cities to support climate neutrality goals. In particular, social innovation initiatives led by citizens and local organisations that aim to lower emissions, from sharing assets to creating energy communities, and from developing peer-to-peer education on reducing energy consumption at home, to developing certifications of climate-friendly business approaches

Did you know?

As part of its climate policy, **Mannheim** established a city lab under the EU Horizon project [SONNET Mannheim](#) to engage Neckarstadt-West residents in energy transition efforts. With language barriers posing challenges, the project introduced mobile participation containers, app-based gamification, and initiatives like energy role model flats and a neighbourhood crowdfunding fund. Despite disruptions from Covid-19, the city secured additional funding from the German development bank KfW, enabling some activities to continue. The project's main impact was fostering social dialogue and community engagement rather than achieving direct emission reductions.

The social innovation actionable pathways is a visual framework aimed at supporting

public administrations and policymakers in making informed decisions on how to deploy social innovation for sustainability, composed of ten categories of actions: (1) Public administration capacity building in social innovation; (2) Social innovation task force and strategy making (3) Funding for social Innovation initiatives; (4) Citizens' capacity building; (5) City social innovation mapping; (6) Co-creation platforms and environments; (7) Social innovation policies; (8) Incubating and accelerating social innovations, (9) Co-creation and cross-sector partnerships, and (10) Systemic innovation approaches which include social innovation¹¹.

The examination of 445 actions proposed by 53 cities in NZC Pilots Cohort 1, spanning 21 countries, highlighted a significant emphasis on cross-sector partnerships and collaborative approaches (Category 9) as well as initiatives aimed at fostering and scaling social innovation (Category 8). These categories indicate a strategic focus among cities on leveraging diverse stakeholder involvement and systemic solutions to address climate challenges effectively. Secondly, the geographical distribution of SI efforts across Europe illustrates varying levels of engagement and strategic focus among countries. Western and Northern European nations demonstrate higher involvement in social innovation, potentially influenced by stronger policy frameworks and institutional support compared to Eastern counterparts.

Further readings

An extensive list of resources on how cities can use social innovation for climate neutrality is available in the NetZeroCities Knowledge Repository: [Social Innovation for Climate Neutrality: full collection of resources, cases and methods](#). In addition, a toolkit and sample templates for cities to integrate social innovation in their path to climate neutrality are available in the Mission Portal: [NZC Social innovation toolkit](#). Academic literature developed by NetZeroCities partners can help you as a city to put social innovation practices into a broader perspective. An edited book published by Springer Cham collects examples of [social innovation projects that support cities in achieving their climate neutrality goals](#).

¹¹ Bresciani, S., Tjahja, C., Komatsu, T., and Rizzo, F. (2023) Social innovation for climate neutrality in cities: actionable pathways for policymakers, in De Sainz Molestina, D., Galluzzo, L., Rizzo, F., Spallazzo, D. (eds.), IASDR 2023: Life-Changing Design, 9-13 October, Milan, Italy. <https://doi.org/10.21606/iasdr.2023.403>

3. Financing climate action – investment plans

As Mission Cities progress in their climate neutrality pathways, updating the Investment Plan becomes a strategic step in aligning ambition with actionable, finance-ready roadmaps. Investment planning is not a one-off effort, but rather a living exercise that reflects evolving actions, updated costing, and financing strategies. A focused update of key sections in the Investment Plan can allow cities to recalibrate funding priorities, explore capital mobilisation opportunities, and demonstrate enhanced maturity in investment readiness.

The development of Climate Investment Plans was a significant undertaking for municipalities, and lots of time and hard work were committed to ensuring these plans were coherent, credible, and—as such—received the Mission Label. Cities are strongly encouraged to consider an update to their CIP when committing to iterative CCCs, though it is recommended to focus on a small subset of the CIPs more closely related to the next steps and implementation of the plan.

To support an effective but manageable update process, this chapter proposes revisiting and updating five foundational tables related to capital-intensive projects, capital planning, finance indicators (for monitoring, evaluation and learning), policy change and stakeholder engagement. The latter two are recommended only if there have been changes or further developments in each element since the initial CCC. Each of these tables holds a unique role in tracking the direction and coherence of climate investments, offering critical visibility into past allocations, future needs, and capital mobilisation progress.

3.1. Actions and investment pathways

In the initial iteration of their Climate Investment Plans, cities provided a costing of their climate actions, including the potential for cost savings, co-benefits (both quantitative and qualitative) and the emission reduction potential of each project. An iterative CIP should identify which projects are now in development and identify any additional projects that have been added to the action plan since the initial submission.

PRIORITY PROJECTS

Cities are encouraged to list their priority projects and associated information in any updated CIP. This could take the format of Table 1 below. Whilst there is no limit to how many projects can be included in this format, the aim should be to include projects where there is significant municipal involvement and the project has reached pre-feasibility stage.

Table 3.1 – Priority project example

Fields of Action	Action Indicator	/				
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Mobility and Transport	New Tramway	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO _{2e})	Investment (Split by Stakeholders)
		600 €m	20 €m p/a	16,000 EUR/tCO _{2e}	30% National Funding 20% Commercial Bank Lending 50% DFI Loan
		Project Description : This project aims to launch a new form of public transit within the inner city, encouraging the modal shift from private vehicles. The initial line has been approved by the municipal council following development of a pre-feasibility study and stakeholder consultations. It is estimated that the first tram line will extend for 17km with 9 stops and could support ~240,000 journeys per month. Bus routes will be reconfigured to support citizens accessing the new higher speed tram network, which frees up capacity and results in a reduced need for new busses. A new intergrated revenue collection process will be established to seamlessly link to all forms of public transit and e-mobility solutions within the city.			

This table should focus on capital-intensive projects and should be seen as an opportunity to showcase shovel-ready or high-priority investments. These projects often require external support, whether through national funds, EU-level grants, or blended financing. Cities updating this table can refine their funding asks, update project timelines or delivery structures, and potentially develop new bankable propositions. This is especially useful when preparing for strategic engagement with funders or partners. Real best practice has evolved from cities that filled out this table exhaustively, since this would be the most important in the next chapter of the finance journey, which is making projects bankable and implementing these projects within the targeted timeline.

FUNDING GAP

A second key aspect which cities are encouraged to consider in their iterative submissions is the existing funding gap within cities and the implementation of climate action plans. Whilst it is anticipated that Mission Cities will have a part to plan in the financing of a Net Zero transition, research indicates that other actors (including citizens, private corporations and private finance providers) have a significant role to play in the financing of action plans. It is therefore important for cities to update on the expected financing pathways for climate actions identified in their existing and iterative CAPs and CIPs. Some considerations for this component are as follows:

Table 3.2 – Funding gap

Focus area	Key questions
Existing Actions	Has there been any developments on existing actions identified in the CIP, and any new options for financing the project? Are there new or strengthened private sector relationships that will support the implementation of climate actions in the municipality? To what extent have existing actions begun the process of implementation? Have cost estimates updated now that a project is in development?
Future Actions	What new opportunities have you identified, either within your team or through external partnerships? Do these supplement or replace any existing arrangements? Is there a clear financing pathway for these developments?
Finance Optimisation	Is the city well-resourced to fund the municipal investments required within the CIP? Are these funds confirmed and ring-fenced for the project or subject to budgetary approval? (and what percentage of both?) Does the city have an understanding of the alternative financing solutions available for specific projects and is there anything that the Climate City Capital Hub could do to support this?
Strategic alignment and policy integration	How can policies and partnership from external stakeholders support the implementation of these actions? What is the status of this project and is this on track to achieve ambitions for 2030?

Whilst thinking about the above, it is recommended to utilise a format similar to Table 2 to outline all of the changes and developments in this iteration of the CIP. Cities can use this as a good exercise to update on the progress of their action and investment pathways as established in the original CCC.

Table 3.3 – Funding gap example

Field of Action	Action Indicator /	Cost to Municipal ity € (%)	Cost to Other € (%)	Other	% of Municipal Covered	% of Other Covered
Mobility	New Tram Line	300m (30%)	700m (70%)	EIB & National Funds	100%	20%
Mobility	Electric Busses	0m (0%)	95m (100%)	Private Operator	N/A	100%

Built Env	Municipal Retrofit	210m (100%)	0m (0%)	None	65%	N/A
Energy	PV Rooftop Solar	0m	80m (100%)	Private contractor (PPP)	N/A	100%

As mentioned above, this table zooms in on capital planning from the perspective of the municipality. It helps assess the internal share of project costs and the degree to which financing gaps persist. An update here enables cities to understand the financial commitment they must make and where supplementary capital (e.g., private, philanthropic, or supranational) is still needed. In this sense, the table offers a key insight into local fiscal capacity and investment leverage.

3.2. Monitoring, evaluation and learning in finance

Whilst the development of an iterative CCC that includes new and existing projects is a good exercise on its own, the ability to monitor, evaluate and learn from implementation of climate actions is critical to future successes and development. As such, it is recommended that all cities interested in the development of an iterative CIP adopt a robust monitoring framework that is consistent across Mission Cities. Cities are encouraged to incorporate their own indicators into this framework, but it is recommended that cities also adopt the indicators listed below which are consistent with the NetZeroCities Indicator Guide.

Table 3.4 – Finance and investment indicators

Indicator	Unit of Measurement	Calculation
Capital Invested in Climate Action Projects	EUR Million	Annual Spend on Climate Action Projects
Budget Assigned to Climate Action Projects	% of City Budget	Annual Budget Assigned to Climate Action Projects ÷ Annual Municipal Budget
Capital Invested in Climate Action Projects per Capital	EUR Thousand	Annual Capital Invested in Climate Action Projects ÷ Estimated No. of City Residents
External Capital Invested into Climate Action Projects	EUR Million	Annual Capital Invested into Climate Action Projects from External Finance
Coverage of Climate Finance Gap	% of Capital Deficit Covered	Annual External Finance in Climate Action Projects ÷ Finance Gap between Required Investment and Municipal Spend
Emission Return on Invested Capital	EUR Million	Total Capital Invested ÷ kT CO ₂ e Reduction

If cities are unsure how to capture this data and would like support in developing a monitoring framework that includes data collection, monitoring and evaluation, they are encouraged to reach out to their City Advisor who is positioned to provide support and can also involve members of the Capital Hub team (inclusive of City Finance Specialists) who will be able to advise and provide assistance.

3.3. Policy and stakeholder engagement

Enabling conditions provide the foundations for furthering climate investment within cities, leading directly to the fulfilment of the Climate Action Plan and its associated targets. Both policy and engagement with local stakeholders play a significant role in the decarbonisation of cities and are critical to a successful outcome.

POLICY FOR CAPITAL FACILITATION AND FUNDING

When developing iterative Climate Investment Plans, Mission Cities are encouraged to consider any new or emerging policy developments that can directly support additional funding for the city's climate budget and capital investments, as well as policies that facilitate further capital flows. For example, this could be new legislation that allows a city treasury to collect new revenues from parking fares to support climate actions, or even a loosening of national fiscal policy to allow municipalities to issue green bonds. Sometimes these could be significant overhauls of policy, other times they may be small, but all are relevant and critical to supporting the implementation of CIPs. Table 3 is a useful guideline to follow, though this should only cover new or emerging policy trends rather than a historical analysis. If none exist, it is okay to omit this table from any iteration.

Table 3.5 – New and upcoming policy for capital facilitation and funding

Climate Policy	Policy Status	Description of the Policy and Intended Outcome
Low Emission Zone	Enacted	The city has implemented a Low Emission Zone within the city centre in order to reduce the number of private vehicles actively entering the city (supporting modal shift) and also raise additional funds for the city's climate budget.
Local City Commitment Fund	Drafting	The city intends to develop a city fund for local private organisations that are unable to decarbonise. Private corporations will pay contributions in line with their emissions which will be used to fund additional climate activity in the city.

STAKEHOLDER ENGAGEMENT

In addition to advancements in policy, cities are encouraged to develop stronger relationships with relevant stakeholders that can support the implementation of their CAPs and CIPs. This should cover local universities, banks and other financial institutions, but also the private sector and corporations that impact the emissions reduction potential of the city (e.g. any corporations that own emitting assets). Cities are encouraged to consider new and evolving relationships when developing their iterative CIPs. Documenting how these relationships have developed since the initial submission of CCCs is both a milestone to show progress since receiving the Mission Label, but also a useful benchmark to demonstrate how the city is joining forces with local organisations to tackle decarbonisation and achieve the city's Net Zero aspirations. As with the guidelines for policy above, this should only cover recent developments in stakeholder engagement and relationships, since the initial submission of the CCC, as opposed to a historical analysis (although cities are welcome to provide this in addition if they so wish). If there have been no significant developments in this area since the original CIP development, cities are encouraged to omit this table from their iteration.

Table 3.6 – Stakeholder engagement developments

Stakeholder	Engagement Description
CityBank	The city has been working with locally based CityBank to discuss the opportunity to launch green mortgages and loans for supporting residents with retrofitting of their homes for energy renovation purposes. Discussions are ongoing but CityBank are open to exploring the idea.
InvestorFund	A national investment fund has committed to exploring the opportunity to develop a city fund for financing of local climate actions and SMEs. This collaboration is ongoing with InvestorFund sitting in advisory meetings to co-create the fund.

3.4. Balancing impact and effort

These five tables are deliberately selected to balance impact and administrative feasibility. Unlike a full Investment Plan overhaul, revisiting these core elements can yield high analytical and strategic value without placing an excessive burden on city administrations. Their update can be informed by:

- Progress tracking from ongoing implementation;
- Updated cost data from pilot projects or procurement rounds;
- Stakeholder consultations (e.g., with local utilities, mobility providers, or finance departments);
- Inputs from city advisors or national platforms supporting investment readiness.

Moreover, these tables complement each other in providing a holistic yet focused picture: Highlighting transformative opportunities, financial feasibility and enabling

conditions to support the transition. Together, they tell a concise but powerful story about a city's evolving investment logic and readiness to deliver.

MAKING UPDATES COUNT

For many cities, climate neutrality ambitions hinge not only on policy or technology but on the ability to mobilise and align capital. Updating the selected investment planning tables can serve several strategic functions:

- Strengthen credibility: Demonstrate maturity and coherence in investment planning to partners and funders.
- Facilitate learning: Use the updated data to refine the city's understanding of what is financially feasible or needs external support.
- Support iteration: Align investments with updated Action Plans or priorities derived from monitoring and self-assessment processes.
- Enable prioritisation: Identify where climate action momentum is already building and where additional capital is needed most urgently.

Cities are encouraged to treat this update not just as a reporting task, but as a chance to anchor climate ambition in financial practices, enhance coordination between departments, and improve the quality of dialogue with external financiers.

Whilst the above has been presented as a guide for cities in the development of their iterations, cities are most welcome to include additional content and further develop their CIPs. One recommendation for doing so, for example, could be to add timelines for investments and a schedule for the successful implementation of projects. Another could be the leveraging of CIP information and commitments to develop a green bond framework. As the Cities Mission continues and cities continue along their journey to Net Zero, cities are encouraged to be innovative and creative with their iterative CIPs and craft them into documents that can be utilised within the city's context.

Bibliography

Atelier itd, Dark Matter Labs, Viable Cities, Climate KIC. (2024). [Accelerating Cities Just Transitions: Insights for Cities and National Platforms](#). Online Webpage (last access: March 2025).

Barton, P., Prothi, N., Haseth, R., McManus, R., Conci, M., Chaudary, N., Verburg, T., Bresciani, S., & Mondal, R. (2024). [Methodology and Tools for Greenhouse Gas & Economic Accounting](#). SGA-NZC D4.10.

Barton, P., Prothi, N., Haseth, R., Vij, M., Conci, M., Chaudhary, N., Singh, A., Verburg, T., Mondal, R., & Kantorovitch, J. (2024). [Lessons learnt from Application of the Methodology and Tools for GHG and Economic Accounting](#). SGA-NZC D4.11.

Bresciani, S. (ed.). (2025). [Social Innovation Projects for Climate Neutral Cities](#). Springer Cham

Bending, R., & Eden, R. J. (1984). UK Energy: Structure, Prospects, and Policies. Cambridge, UK: Cambridge University Press.

Bresciani, S., Gomez, A. (2025). [Social Innovation for Climate Neutrality: full collection of resources, cases and methods](#). NetZeroCities, Knowledge Repository. Online webpage (last accessed March 2025). <https://netzerocities.app/resource-4074>

Bresciani, S., Rizzo, F., Mureddu, F. (2025). [Assessment Framework for People-Centred Solutions to Carbon Neutrality](#). Springer Cham

Bresciani, S., Tjahja, C., Komatsu, T., and Rizzo, F. (2023) Social innovation for climate neutrality in cities: actionable pathways for policymakers, in De Sainz Molestina, D., Galluzzo, L., Rizzo, F., Spallazzo, D. (eds.), IASDR 2023: Life-Changing Design, 9-13 October, Milan, Italy. <https://doi.org/10.21606/iasdr.2023.403>

Cipriani, T. K., (2023). [NZC Social innovation toolkit](#). NetZeroCities, Knowledge Repository. Online webpage (last accessed March 2025). <https://netzerocities.app/resource-3121>

City of Bologna. (2024) Climate City Contract of the City of Bologna. NetZeroCities, Knowledge Repository. Online webpage (last accessed March 2025). <https://netzerocities.app/resource-4437>

City of Mannheim. (2024). Climate City Contract of the City of Mannheim. NetZeroCities, Knowledge Repository. Online webpage (last accessed March 2025). <https://netzerocities.app/resource-4069>

CLIMAA Local Green Deals. (2023). [Local Green Deal working Methodology. Collaborative Local Impact in Aalborg and Amsterdam](#), Contract Number: 101074127

Dorst, H., Doci, G., Tjokrodikromo, T., Hillen, S., Tengvard, M., Cartron, E. (2024) The CCC as an Instrument for Climate Governance in European Mission Cities, NetZeroCities D1.11, Contract Number: 101036519

Durieux, E., & Hidson, M. (2023). [Local Green Deals a Blueprint for Action](#). Brussels: European Commission, Intelligent Cities Challenge

EU Academy. (n.d.). [Local Green Deals: A Governance Innovation to Accelerate the Twin Transition](#). European Commission. Online course (last access: March 2025)

Gugu, S., Barton, P., Palmia, F. & McManus, R. (2024). [CCC Resource Pack 2.1](#) NetZeroCities D1.9

Huberman, N., & Pearlmutter, D. (2008). A life-cycle energy analysis of building materials in the Negev desert. *Energy and Buildings*, 40(5), 837–848. doi:10.1016/j.enbuild.2007.06.002

Krogh, A. K., & Romana, J. (2020). Proposed Mission: 100 Climate-Neutral Cities by 2030 - by and for the Citizens: Report of the Mission Board for Climate-Neutral and Smart Cities. Brussels: European Commission.

Littek, M., Heyder, M., Grizans, J. (2022) Compatibility Framework and Operationalization, NetZeroCities D1.2, Contract Number: 101036519

NetZeroCities. (n.d.). A City Lab on Social Innovation for Energy Transitions - Mannheim. SONNET project. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-casestudy-2758>.

NetZeroCities. (n.d.). Torino Social Innovation. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-casestudy-4260>

Neumann, H.-M., O'Sullivan, C., & Etminan, G. (2024). Comprehensive Indicator Framework. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4120>

O'Phelan, A., Stearns, M., Bresciani, S., Amann, D. (2025). [Citizens and urban stakeholders](#). NetZeroCities, Online Webpage (last access: March 2025).

Palmia, F. & Meskovic, E. (2024). CCC Highlights – A diverse Ecosystem of Supporters. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4265>

Palmia, F. & Meskovic, E. (2024). CCC Highlights – Barriers to Climate Neutrality. NetZeroCities. Online, Knowledge repository (last accessed March 2025). <https://netzerocities.app/resource-4464>

Parry, L. (2022). [Desktop research report on engagement](#). NetZeroCities D8.1, Contract Number: 101036519

Silverton, S. (2024). [Partnering up for sustainable and just cities: lessons from and for local governments and community-led initiatives.](#) Urban Community for Sustainable and Just Cities, ICLEI Europe, Robert Bosch Stiftung.

Singh, A., Verburg, T., Carmi, E., Kennedy, E., Barnouw, A., Vij, M., Barton, P., Prothi, N., Botha, D., Galbano Moreno, A., & Rodriguez Alonso, C. (forthcoming). Scope 3 emissions for cities. SGA2-NZC D3.9.

Annex 2

CCC Iterations - key information/data points (to be compiled by NZC)

Topic	Purpose	Aspects to check	Data points to extract
Ambition/ target	Check if the ambition/target pursued as part of the Mission has changed	Change in the formulation of the ambition (commitment)	If yes, what is the new formulation
		Change in reduction %	If yes, what is the new reduction %
		Change in target year	If yes, what is the new target year
		Change in baseline year	If yes, what is the new baseline year
		Confirmation of target	Restate the complete target (based on the emissions gap table) [-XX% GHG/CO2 emissions by 2030 with respect to YYYY levels. Sectors included: Scopes included, Gases included; Geographical boundary.]
Stakeholder and citizen engagement	Evaluate the level and effectiveness of stakeholder engagement and commitments within the Mission.	Have there been any changes to the commitments of stakeholders included in the original CCC (e.g. increased or lowered ambition, additional actions)?	If yes, describe the changes.
		Has the number of stakeholders involved increased or decreased?	If yes, note the number of stakeholders added.
		Are stakeholders committing to	If yes, identify the stakeholders and describe their commitments.

		individual or quantified actions?	
		Does the iterated CCC reflect any changes in terms of citizen engagement?	If yes, describe the methods used, events arranged and results reached through citizen engagement.
Exclusions	Check if previously excluded or ambiguous sectors/sources/gases have now been included in the target.	Has the target boundary been extended, i.e. have previously excluded or ambiguous sectors/sources/gases been explicitly included?	If yes, note down the now explicitly covered sectors/sources/gases. If no, explain the reasoning
		Has the target boundary been restricted, i.e. have previously included or ambiguous sectors/sources/gases been explicitly excluded?	If yes, note down the now explicitly excluded sectors/sources/gases.
Emissions	Check if there was a change in the baseline emission inventory and the sources of emissions targeted through the Mission	Has the baseline emission inventory changed?	If yes, what has changed (gaps filled, methodologies changed, sectoral coverage change etc.)
			If yes, the new baseline emission inventory should be extracted (if not simultaneously made available through other channels)

		Has the level of residual emissions changed in magnitude?	If yes, what is the total?
			If yes, the new breakdown should be extracted (if not simultaneously made available through other channels)
		Has an updated inventory been included?	If yes, does it have the same format as the baseline inventory used for target setting (typically the emissions gap table inventory)
			If yes, extract the information (if not simultaneously made available through other channels)
Emissions gap table	Check if the emissions gap table has changed	Has the emissions gap table been updated since the last iteration?	If yes, describe the change in detail.
Action descriptions	Assess evolution of maturity of plans	Has the description of actions changed since the last iteration?	If yes, describe the change.
			If yes, has the extent of quantification of expected impacts increased?
			If yes, have additional actions been identified?
Smart city and digital solutions	Are smart city and digital components included in the plan?		
Residual emissions strategies	Assess the maturity of residual emissions compensation strategies	Has the strategy to address residual emissions changed since the last iteration?	If yes, describe the change (change in measures, quantification, etc.).
			Are the actions leading to negative emissions included in the action portfolio with an

			individual action description (or similar)?
			If identifiable, extract the total negative emissions associated with the carbon sinks and credits forming part of the residual emissions strategy.
Monitoring	Assess the maturity of monitoring frameworks and their suitability for overall Mission progress and impact monitoring	Have the indicators changed since the last iteration?	If yes, describe the change.
			If yes, have previously missing baseline and target values been added?
			If yes, have new indicators been added?
			If yes, does the CCC indicator set cover all required NZC indicators?
Progress	Extract information on progress since the last iteration	Is there an indication on emission reductions achieved since the last iteration?	If yes, extract the information (if not simultaneously made available through other channels) (reduction achieved, timeframe, in absolute and percentage terms)
		Is there an indication on progress at the level of individual actions?	If yes, has the implementation status changed?
			If yes, is quantitative information available on implementation results?
			If yes, is quantitative information available on reductions/sequestration/energy generation achieved?
Investment plan	Evaluate changes and	Has the CCC updated information on the	Extract updated fiscal information, any modified data

	developments in the investment planning for climate actions in the CCC iteration, focusing on quantitative updates.	municipality's fiscal situation, including any new data on debt limitations or borrowing arrangements since the last iteration?	about debt or borrowing arrangements, and revisions in related tables.
		Are there newly identified barriers to climate investment, or updates on potential solutions and stakeholders to overcome these barriers compared to the previous version?	Compile newly identified barriers, updated solutions, and any new stakeholders noted in related tables.
		Have the expected costs for the climate neutral transition been updated, including Capex and Opex data, and new assumptions or methodologies been introduced?	Highlight any updates or additions in Capex and Opex data, cost scenario methods, and new information presented in related tables.
Co-benefits / impacts	Examine the extent to which co-benefits and/or impacts of climate measures are	Are co-benefits and/or impacts of climate measures identified	If yes, is quantitative information available? Which indicators are being used? Is the city using the same indicators for other initiatives, eg the EC Green City Accord? If not would this be

	taken into account		considered (selected GCA indicators below)? • Air quality (PM/NO2 concentrations) • Waste/wastewater (% municipal waste generated per capita, recycling rate, household water consumption) • Nature/biodiversity (% of tree canopy cover, change in number of bird species) • Noise (% of population exposed to average day-evening-night noise levels ≥ 55 dB)
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Annex 3

Case study – iterations in the Swedish national CCCs

The strategic innovation programme, and national platform, Viable Cities, has supported Swedish cities' climate neutrality ambitions since 2017. In 2020 a first batch of nine cities signed a national climate contract, 'Klimatkontrakt 2030'. The document was signed by the cities' mayors, Viable Cities as well as several government agencies. The fundamental idea is that cities and the national level make commitments that create a form of reciprocity: the cities' high ambitions and new development needs should be supported by efforts at the national level. The contracts are iterated on a yearly basis and as the group of cities involved in the national platform has grown, so has the number of contracts. In 2021, 23 cities signed, and by 2025 48 Swedish cities will have climate contracts.

Klimatkontrakt 2030 has demonstrated strong potential for transformative climate action by securing high-level political support and legitimacy for ambitious transitions. Cities involved have adapted their organizations and climate transition teams, driving governance innovation. The main components, such as climate investment plans and digital tools, effectively link climate strategies with real actions, including impactful public procurements and investments. Government agency commitments establish formal channels for collaborative dialogues, enhancing the integration of local transition needs with policy synergies. This approach drives innovations in public sector management and supports capacity development for effective climate transitions.

The iterative approach, with a yearly signing event, European Viable Cities Day, has been key in allowing for the results of a continuous feedback loop and dialogue between the governance levels to be implemented in the instrument.¹² Ahead of the 2025 iterations, cities have collectively identified several focus areas³ that they will form joint commitments around. This allows for a more consolidated approach, gives opportunities for learning between cities at different stages of their journey, and provides the national level with a clear indication of concrete measures to take for advancing the climate transition in cities.

¹ [Swedish experiences with climate contracts contribute to EU initiatives | Vinnova](#)

² Lundin, Nannan. "From the normative to the implementational turn – A practitioner's perspective from Sweden's implementation of EU Missions".

³ The indicated focus areas: carbon storage, procurement, governance and leadership, citizen engagement, just transition, digital transition, and climate transition and adaptation, resilience and robustness.