



# **Proposed Mission: 100 Climate-neutral Cities by 2030 – by and for the Citizens**

Report of the Mission Board for climate-neutral  
and smart cities

Independent  
Expert  
Report



Research and  
Innovation

## Proposed Mission: 100 Climate-neutral Cities by 2030 – by and for the Citizens

### Report of the Mission Board for climate-neutral and smart cities

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EUROPEAN COMMISSION

Proposed mission:  
**100 climate-neutral cities  
by 2030 – by and for the  
citizens**

*Report of the Mission Board for climate-neutral  
and smart cities*

This document is the Mission Board's proposal to the European Commission for a mission on climate-neutral and smart cities.

2020

Directorate-General for Research and Innovation  
Clean Planet

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## **THIS IS THE MISSION OF OUR TIMES!**

*The introduction of a Climate City Mission is a radical new way of achieving climate neutrality – and of doing so faster, by 2030. The Mission aims to promote system innovation across the value chain of city investment, targeting multiple sectors such as governance, transport, energy, construction and recycling, with support from powerful digital technologies. As such, it requires a change in regulations, approaches and instruments combined with the willingness to go beyond existing schemes and habits. The Mission also demands a change of attitude towards practical aspects of implementation, but also as concerns people and organisations working together: citizens, local governments, central and regional governments, and European institutions. We expect citizens, city administrations and political leaders to show commitment, imagination and determination. We expect you to implement this Mission with the same determination as the Americans did with their Moonshot. The climate-minded transformation of cities goes far beyond the idea of the Man on the Moon. This is The Mission of our times!*

*Hanna Gronkiewicz-Waltz, Chair of the Mission Board for Climate Neutral and Smart Cities*

## 1 EXECUTIVE SUMMARY

- 1 **Why a mission on climate neutral cities?** Mitigating climate change at a global scale is a huge challenge and the time for the necessary societal transformation is short. Cities cover about 3% of the land on Earth, yet they produce about 72% of all global greenhouse gas emissions. On top of that, cities are growing fast; in Europe, it is estimated that by 2050 almost 85% of Europeans will be living in cities. Therefore, the climate emergency must be tackled by cities – and by citizens.
- 2 **The Climate City Mission.** After consultations with citizens across many European cities, the Mission Board proposes the following mission: “100 climate neutral cities by 2030 – by and for the citizens”. Its aim is to support, promote and showcase 100 European cities in their systemic transformation to climate neutrality by 2030, making these cities innovation hubs for all cities. The Mission is much more than a traditional R&I programme. It is a challenging and ambitious endeavour where cities commit to transformation and engage in it for the benefit of Europe’s quality of life and sustainability.
- 3 **A new model of city governance.** The main obstacle to climate transition is not a lack of climate-friendly and smart technologies, but the capacity to implement them. The present silo-based form of governance, designed and developed for traditional city operations and services, cannot drive an ambitious climate transition. Therefore, a systemic transformation is urgent, accompanied by a more strategic, holistic and long-term climate investment approach, together with a new city governance for climate action. The transformation will be based on three principles: (1) a holistic approach to foster innovation and deployment, (2) a matrix of integrated and multi-level governance, and (3) a deep and continuous collaboration between all stakeholders. This model requires a strong commitment from cities and their political leadership to innovate the administration and to bring all stakeholders, business, academia and civil society on board.
- 4 **A new role for the citizens.** Pivotal for the mission’s success is the involvement of citizens in their different roles as political actors, users, producers, consumers or owners of buildings and transport means. In the consultations with the Board, citizens have given priority to mobility, energy, urban infrastructures/buildings, circular economy and behavioural change.
- 5 **A Climate City Contract as a new delivery mechanism.** The Mission Board proposes to introduce a Climate City Contract as a new mechanism to deliver EU support to cities in the form of more innovation, better regulation, and integrated financing. It will be signed by the Mayor on behalf of the local government and local stakeholders, by the Commission, and by national or regional authorities. A precondition for a Climate City Contract is that citizens are given a new active role, new platforms to act and better resources to play their role. At least 1% of the funding granted by the EU to cities through a Climate City Contract should be devoted to support citizens and their platforms for the development and implementation of climate actions.
- 6 **A new role for innovation, experimentation and learning.** The 100 cities signing the Climate City Contracts will develop and implement a new innovation concept: system innovation in governance, transport, energy, construction and recycling, supported by powerful digital technologies (i.e. system innovation in the whole value chain of city investment). These cities will spearhead the leveraging of the synergies of Europe’s twin green and digital transformations. They will also work together to address common challenges and create economies of scale. In the process, they will serve as Innovation Hubs for other cities, meaning that hundreds of European cities will be inspired by, learn from and replicate the ideas and solutions emerging from the Mission.
- 7 **A new form of funding and financing.** To make the most of the European Green Deal, the Multiannual Financial Framework (MFF) and the EU Recovery and Resilience

Facility, all investments should have a multiplying effect on the economy as well as a transformative effect towards climate sustainability. Investment in city climate transition does fulfil both these two conditions. The Mission Board suggests a new integrated form of funding and financing for city climate investment plans:

- a Lending & Blending Facility for Climate Cities as 'a financial umbrella: in cooperation between the EU Commission, the EIB and national climate funding and financing facilities, and with resources for R&I as a core element;
- the Commission and Member States make the funding of Climate City Contracts an overall priority of the investment strategy of the new Recovery and Resilience Fund;
- up to 10% of resources for climate action under the next EU MFF to be allocated to climate actions geared towards the objectives of the Climate Cities Mission;
- Structural and Investment Funds' operational programmes 2021-2027 should earmark projects to fund the Mission;
- a one-stop-shop in the form of decentralized negotiation platform run by the EIB offices in Member States;
- a "mission label" awarded to every mission city, to allow preferential access to technical support and financial instruments;
- green budgeting as a tool to benchmark climate investments against their targets and to align public finances with environmental objectives.

**8 Climate cities as new drivers for sustainable growth – and export.** By taking the lead in the urban transition to climate neutrality, Europe will strengthen its role as a global driver of sustainable growth, creating new investment opportunities and new and better jobs. The Mission Board suggests to set up of a Global Knowledge Centre on Cities and Climate that could facilitate and create synergies between European and international climate initiatives and stakeholders.

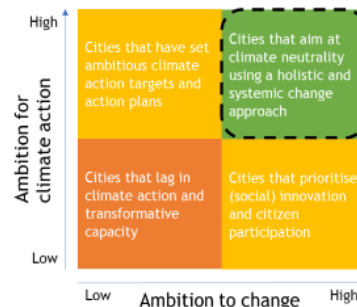
**9 The selection of cities.** The main criteria will be ambition, commitment, capacity and citizens involvement. In addition, inclusiveness will be an overarching principle, taking into account a balanced geographical representation as well as differences in the preparedness levels of cities. The application process will include three steps: (a) the co-creation of the application, (b) the co-creation of the Climate City Contract and (c) the implementation of the Contract. Reporting, monitoring and evaluation will be based on the methodology of the Covenant of Mayors, already used by many European cities.

1

## 2 WHY CITIES?

Cities cover about 3% of the land on Earth, yet they produce about 72% of all global greenhouse gas emissions. On top of that, cities are growing fast; in Europe, it is estimated that by 2050 almost 85% of Europeans will be living in cities<sup>1</sup>.

Cities are also the melting pot where decarbonisation strategies for energy, transport, buildings and even industry and agriculture coexist and intersect. As the density of use and infrastructure is higher in cities, there is also a higher potential for cross-sectoral integration and for complex infrastructures such as



<sup>1</sup> [https://ec.europa.eu/knowledge4policy/foresight/topic/continuing-urbanisation/developments-and-forecasts-on-continuing-urbanisation\\_en](https://ec.europa.eu/knowledge4policy/foresight/topic/continuing-urbanisation/developments-and-forecasts-on-continuing-urbanisation_en)



smart grids<sup>2</sup>. In addition, cities have access to more capital and know-how and can create the economies of scale necessary for the piloting and scaling up of new ideas and concepts. *"When it comes to climate action, no one is doing more than cities, but no one is doing enough. We are entering a make-or-break decade for the preservation of our planet and environmental justice for every community"*<sup>3</sup>.

The climate emergency must be therefore tackled in cities. Equally important, it must be tackled by engaging citizens who are not only political actors in a governance structure, but also users, producers, consumers and owners. In these capacities, they can have a huge impact on the environment and take an active role in their local urban areas, associations and homes, thus driving the climate transition and improving the economy and the environment. For the Mission to succeed, citizens and the civil society must be given more substantial roles, new platforms for action and better resources.

The European Commission has recently presented a strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050<sup>4</sup>. The European Green Deal<sup>5</sup>, using the 'man on the moon' example, makes the case for a *mission-oriented R&I* component in the Horizon Europe programme. The question is **"How can Europe help cities become climate neutral as fast as possible?"**

### 3 MISSION AIM AND OBJECTIVES

The aim of the Mission is to:

- Support, promote and showcase 100 European cities in their systemic transformation towards climate neutrality by 2030 and make these cities into experimentation and innovation hubs for all cities, thus leading on the European Green Deal and on Europe's efforts to become climate neutral by 2050.

Its objectives include:

- Build a multi-level and co-creative process formalised in a Climate City Contract that, while adjusted to the realities of each city, will aim at the shared goal of the mission;
- Promote citizens to become agents of change through bottom-up initiatives and innovation and through new forms of governance;
- Help cities access the financial means to achieve the Mission through Horizon Europe, the European Structural and Investment Funds, the Connecting Europe Facility, the Just Transition Fund, the mechanism for Important Project of Common European Interest, InvestEU, the Next Generation EU instrument and other EU funds;
- Foster a just transition, via the implementation of the Agenda 2030 and its Sustainable Development Goals, to improve citizens' health and wellbeing;
- Bring many co-benefits e.g. improved air quality, job creation, healthier lifestyles, stimulating the positive effects of new sustainable mobility concepts;
- Identify European, national, regional and local policy gaps as well as R&I priorities to contribute to the goals of the European Green Deal;
- Support the development of drivers of transition under five key enablers:

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<sup>2</sup> Final report of the High-Level Panel of the European Decarbonisation Pathways Initiative, p.112: [https://ri-links2ua.eu/object/document/667/attach/ec-18-002-decarbonisation\\_booklet\\_27112018.pdf](https://ri-links2ua.eu/object/document/667/attach/ec-18-002-decarbonisation_booklet_27112018.pdf)

<sup>3</sup> Eric Garcetti, C40 Chair & Mayor of Los Angeles

<sup>4</sup> [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en)

<sup>5</sup> [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en)

- o A model for the transformation of cities to **innovation hubs**;
  - o New forms of participative and innovative **city governance**;
  - o An economic and **funding/financing** model for climate action;
  - o An '**integrated urban planning**' model;
  - o **Smart** systems and data platforms.
- Create synergies with and between existing European climate initiatives and stakeholders such as the Covenant of Mayors, the EIT and its relevant KICs, the Green City Accord, the European Green Capital Cities, the SET-plan and the 100 PEDs initiative, the EIP-SCC and the lighthouse projects, CIVITAS;
- Align with other missions and initiatives that support the Green Deal to ensure complementarity, in particular with the mission on *climate adaptation* and its work to adapt Europe – and its urban areas – to the actual or expected climate and its effects;
- Collaborate on innovation with the European business to enhance the competitiveness of European industry in the global markets.

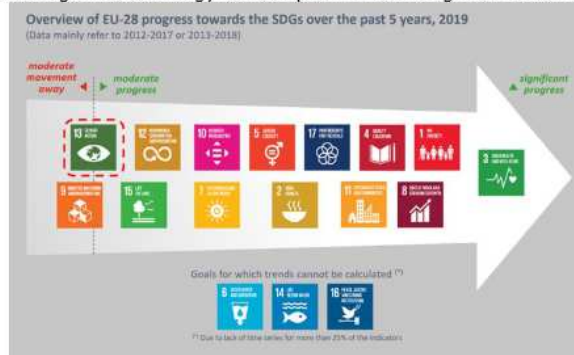
Given the multiple typologies of European cities and the difficulty to deliver the Mission in under a decade, the Board proposes that – under special circumstances – applicant cities may limit the scope of their application to a specific area – see Chapter 13 on the selection process. However, such limited application should be accompanied by an ambitious strategy for climate neutrality for the larger urban area.

With the aim of leaving no one behind, the 100 cities will be encouraged to include partner cities in their Climate City Contracts, in particular partner cities with significant structural challenges who will receive support towards achieving climate neutrality after 2030.

#### 4 CONTRIBUTION TO SDGS

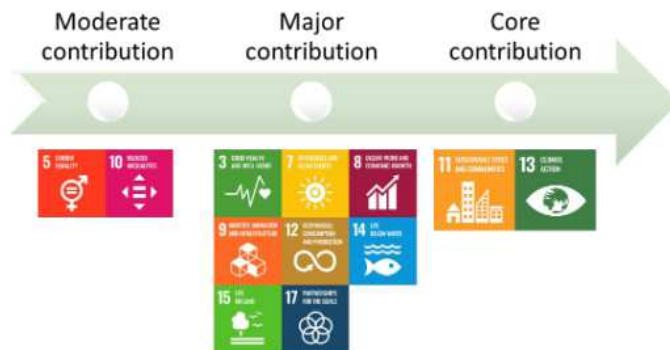
The UN Agenda 2030 for Sustainable Development provides a global policy framework for ending all forms of poverty, fighting inequalities and tackling climate change in a socially inclusive manner.

Eurostat data shows that the EU made progress towards almost all the 17 Sustainable Development Goals (SDG)<sup>6</sup>. It also singles out SDG 13 'Climate Action' as one of the areas in need of more and faster progress. Looking at the indicators for SDG 13, the main reason for EU's moderate advance is the need to reduce energy consumption in all its forms. An integrated approach, such as the one proposed under the mission, can contribute to mitigating this challenge where energy consumption is at its highest: urban areas.



<sup>6</sup> <https://ec.europa.eu/eurostat/web/sdi/key-findings>

A holistic and transformative mission for climate neutral cities, based on citizen participation and social inclusiveness, can contribute and help EU progress towards multiple SDGs.



## 5 THE EU CLIMATE FRAMEWORK AND THE MISSION

To achieve in ten years what Europe plans to achieve in 30 years is a huge challenge that requires a systemic transformation of European cities. Still, this is both necessary and feasible. It is necessary for acting on the global climate emergency and for delivering co-benefits that will improve the health, wellbeing and prosperity of citizens. It is feasible because technologies and innovative solutions for sustainable energy, transport, food, water and material systems already exist – and more options will be available in the years to come due to Horizon Europe and national R&I programmes<sup>7</sup>. Based on a comprehensive impact assessment, analysis of the National Energy and Climate Plans<sup>8</sup>, and considering stakeholder contributions received to the public consultation<sup>9</sup>, the Commission will propose a new EU ambition to reduce greenhouse gas emissions by 2030. By June 2021, the Commission will also review and, where necessary, propose to revise all relevant policy instruments to deliver additional greenhouse gas emissions reductions. In early 2021, the Commission will adopt a new, more ambitious EU strategy on adaptation to climate change in order to strengthen efforts on climate-proofing, resilience building, prevention and preparedness, ensuring that businesses, cities and citizens are able to integrate climate change into their risk management practices. With framework conditions on a positive path, the big challenge is the lack of capacity and commitment for change. Moreover, the EU Commission is currently developing taxonomies for the financing of sustainable growth, climate change mitigation and climate change adaptation.

Climate neutral cities must also address climate adaptation and resilience through assessment of risks and vulnerabilities, as a basis for adaptation plans. The inclusion of adaptation in the Climate City Contracts will be elaborated in collaboration with the mission on climate adaptation.

<sup>7</sup> [https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme\\_en](https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en)

<sup>8</sup> [https://ec.europa.eu/info/energy-climate-change-environment/overall-targets/national-energy-and-climate-plans-necps\\_en](https://ec.europa.eu/info/energy-climate-change-environment/overall-targets/national-energy-and-climate-plans-necps_en)

<sup>9</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12265-2030-Climate-Target-Plan/public-consultation>

The Mission is based on two main pillars:

- The **MFF 2021-2027<sup>10</sup>** and **Next Generation EU<sup>11</sup>** proposals that will impact the European and national frameworks for the funding of climate action, including the **Horizon Europe** programme<sup>12</sup> where the Mission is anchored in terms of objectives, R&I agenda, and societal challenges and priorities;
- The **European Green Deal<sup>13</sup>** which sets an unprecedented level of policy ambition and reach for climate and environmental action and for the financing and inclusiveness of the transition.

The two-fold response of the Next Generation EU and the MFF 2021-2027<sup>14</sup> to the coronavirus pandemic should help repair the economic and social damage brought by the crisis and mobilise the necessary investments. Similarly, the Mission is designed as a flagship initiative that complements and blends with these pillars, aiming to set new standards for climate and urban agendas and for their implementation while contributing to Europe's recovery.

While connected to a wide range of European policies and strategies (e.g. the Climate Law<sup>15</sup> & the Climate Pact<sup>16</sup>, the EU plan for circular economy<sup>17</sup>, the European long-term strategy for 2050<sup>18</sup> and the National Energy and Climate Plans, the Urban Agenda for the EU<sup>19</sup>, the European Digital Strategy<sup>20</sup>, the Smart Specialisation Strategies<sup>21</sup> and platform, the Smart and Sustainable Mobility Strategy<sup>22</sup>), the Mission will also connect these policies and strategies to the local level.

As innovation hubs and national, European and global forerunners, the participating cities will inspire additional urban areas, and eventually the whole of Europe, to accelerate their policies for climate action and transition. The Mission will therefore bring great added value to a climate neutral Europe.

## 6 A STRATEGY FOR CLIMATE NEUTRALITY

For over a decade, European cities have been leading Europe's efforts to implement ambitious climate action. More than 10.000 cities have signed the European Covenant of Mayors while

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<sup>10</sup> [https://ec.europa.eu/commission/future-europe/eu-budget-future\\_en](https://ec.europa.eu/commission/future-europe/eu-budget-future_en)

<sup>11</sup> [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_940](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940)

<sup>12</sup> [https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme\\_en](https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en)

<sup>13</sup> [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en)

<sup>14</sup> [https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/recovery-plan-europe\\_en](https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/recovery-plan-europe_en)

<sup>15</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12108-Climate-Law>

<sup>16</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12219-European-Climate-Pact>

<sup>17</sup> <https://ec.europa.eu/environment/circular-economy/>

<sup>18</sup> [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en)

<sup>19</sup> <https://ec.europa.eu/futurium/en/urban-agenda>

<sup>20</sup> <https://ec.europa.eu/digital-single-market/en/content/european-digital-strategy>

<sup>21</sup> <https://s3platform.jrc.ec.europa.eu/>

<sup>22</sup> [https://ec.europa.eu/transport/themes/strategies/news/2020-02-03-commissioner-valeans-speech-eu-strategy-mobility-and-transport\\_en](https://ec.europa.eu/transport/themes/strategies/news/2020-02-03-commissioner-valeans-speech-eu-strategy-mobility-and-transport_en)

an important number of cities work with other important initiatives<sup>23</sup>. In the Covenant of Mayors, signatory cities pledge action to support the implementation of the EU 40% greenhouse gas reduction target by 2030 and the adoption of a joint approach to tackling mitigation and adaptation to climate change.

The Mission for climate neutral cities aims to boost these efforts in two ways: by setting the greenhouse gas reduction target by 2030 at 100% and by promoting a systemic change and transformation of cities, including via the adoption of the 'by and for the citizens' way of thinking and working.

A city's strategy for climate neutrality should explain the starting point in its societal, economic, ecological and political dimensions. It should include the climate action baseline of the city: its existing climate pledge, strategy and action plans for 2030, all these most probably in the form of the city's SECAP<sup>24</sup> for the Covenant of Mayors. This will allow for an assessment of the city's 'climate policy deficit': *"what more do we need to do compared to what we are currently doing in order to become climate neutral by 2030?"*

A participating city should be able to deliver a credible climate strategy and action plan for reaching carbon neutrality by 2030 (areas of intervention, milestones and timeline) and to identify the challenges and corresponding process through which the local partnership aims to address them. Methodologies such as 'decarbonisation pathways' and the 'theory of change' are expected to be valuable tools in the formation of a credible and realistic strategy. In addition, the principles of 'integrated urban planning' should be instrumental in the description of a climate strategy and action plan that can be transformative and agile enough given the complexity of reaching carbon neutrality in such a short time.

Important issues that the strategy should tackle include:

- the connection with the local/regional or national strategy for climate neutrality by 2050;
- the 'cross-border' issue: the participating city should ensure that measures taken will not be physically unconnected or stop working at the borders of the selected site<sup>25</sup>.

The experience of the COVID-19 crisis has made the inclusion of resilience an imperative in any long-term strategy of a city. It has also highlighted the connection between air quality and well-being to health crises. Design principles and operation rules need to be reconsidered in areas such as urban planning, public transport, health services and urban food logistics. Moreover, all social services and support - especially for those more in need - must be evaluated and shielded against such extraordinary events.

## 7 THE CLIMATE CITY CONTRACT

To address the challenge of climate neutrality and help better deliver EU policies, the Mission proposes **a multi-level co-creation process** through the introduction of a **Climate City Contract**. The purpose is to:

- express the ambition and commitment of all involved parties to the Mission objectives;

<sup>23</sup> For example, European cities that signed the Compact of Mayors, now part of the Global Covenant of Mayors of the more than 1.500 cities, work with the European Energy Award to implement effective energy and climate policy.

<sup>24</sup> Sustainable Energy and Climate Action Plan (SECAP)

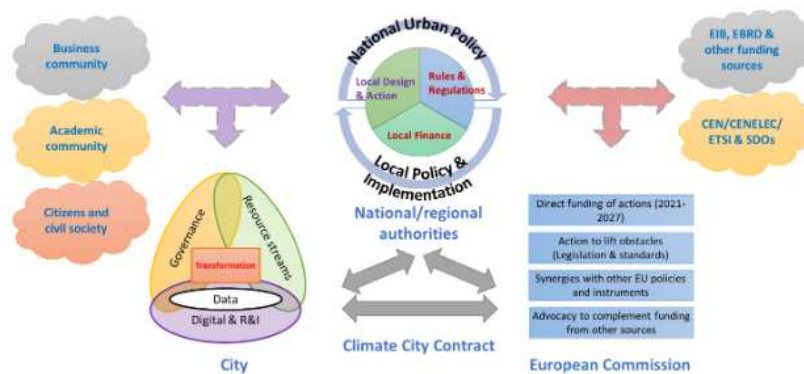
<sup>25</sup> Examples could include physical infrastructure (e.g. cycling paths not connected with the rest of the network) or digital infrastructure (e.g. applications or services that stop working outside an area)



- b) identify the policy and implementation gaps as a basis for a strategy for transition;
- c) coordinate stakeholders and empower citizens in the city around a common climate goal;
- d) coordinate the national/regional and EU authorities to deliver the necessary legal, governance and financial framework conditions to support each city;
- e) create a one-stop-shop for multi-level negotiations to facilitate city action for transition.

Adapted to the specific circumstances of each city, a Climate City Contract will include the goal and targets, specify the strategy and the action plan for transition, and identify stakeholders and responsibilities. The Contract is not meant as a closed document that only binds a city legally to a course of action up to 2030. Instead, it emphasises the high ambition, the participatory approaches and the multi-level governance collaboration that will trigger innovation and change towards climate neutrality. The main idea is to create a demand-driven, live document that puts the cities at the centre of the transformation process and determines – in the form of local ecosystems – their scope, activities and timeline.

A central part of a Climate City Contract should be about unlocking the drivers to transformation. The Mission prioritises five main drivers: new forms of participatory and innovative governance, a new economic and funding model, integrated urban planning, digital technologies and innovation management.



## 8 THE PARTNERSHIPS UNDER THE CONTRACT

The Climate City Contract will be a politically binding document that covers all the elements of the mission. Since multi-level governance is an indispensable ingredient for the mission's success, the Contract will be signed ideally by:

- the **city/metropolitan government**, which will play a strong leadership notably through the role of the Mayor, and will decide, together with all stakeholders, on the best way of organizing and innovating its local form of governance around the Mission. City stakeholders like business, academia and civil society could be encouraged to take a formal part in the contract;
- the **European Commission**. Since it is difficult to identify which specific entity representing the European Commission could sign the contract, it will be key to develop options that would ensure the institution's commitment, both for the policy and funding sides of its role. In Annex IV the Board proposes to give this coordinating

- role to the EIB as one option<sup>26</sup>;
- the respective **national or regional authorities**. Relevant regional or national stakeholders (e.g. regional transport companies, national energy producers, national research institutions, etc.) could be encouraged to join formally the contract by the relevant regional or national signatory. The regional Smart Specialization Strategies and their connection to EU Cohesion Policy can serve as a model on how to set up multi-sector governance models with strong R&I and funding policy components.

Most of the policy frameworks, rules and regulation, and standards that cities will need for the complex technical, financial, and social endeavour of reaching climate neutrality will come from regional/national or European levels. The funding and financing of the effort towards climate neutrality will also depend on these governance levels. Close collaboration with the city will maximise the possibilities of securing the resources for the transition to a climate neutral economy and society. Moreover, national and regional authorities can play a pivotal role in knowledge transfer and replication efforts as they share, understand and largely define the common conditions in all cities of a country or region.

Multi-stakeholder governance across cities will also be encouraged. With the help of the Mission's framework and facilities, this should take two forms:

- A systematic *clustering* of cities that have signed a Climate City Contract, share the same conditions, and want to solve common challenges or create economies of scale;
- Teaming* with cities that have not signed a Climate City Contract, meaning the hundreds of European cities that want to be inspired, learn from and replicate the ideas and solutions that will come out of the mission.

## 9 TOWARDS A NEW CITY GOVERNANCE – BY AND FOR THE CITIZENS

Modern urban development is a complex process involving many stakeholders with varying ambitions and interests that are not always compatible. The Mission proposes a systemic transformation that goes beyond the usual top-down approach. Instead, it uses a horizontal coordination of the stakeholders and citizens in a city who jointly agree on a vision, targets, interventions and synergies to share and reduce their climate impact. This process is particularly important for the shaping and implementation of climate policies and therefore of our mission.

The involvement of citizens in their different roles as political agents, users, producers, consumers or visitors is particularly pivotal for the mission's success – hence the title "by and for the citizens". In these capacities, citizens have a huge impact on the environment and climate, and they can take an active role to drive the transition to climate neutrality as co-designers, co-creators, co-implementers and co-beneficiaries. For example, in several remote consultations with the Board organized by cities across Europe, citizens have given priority to mobility, energy, urban infrastructures and buildings, circular economy and behavioural change.

The Climate City Contract will therefore give citizens and civil society an active role and, as a pre-condition, will provide them with new platforms and better resources to design and implement climate actions – hence the need for a clear governance roadmap in the climate city contract. Moreover, social inclusion will be a particularly important element of the contract as it will ensure that all residents can participate in the co-creation process. In this

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<sup>26</sup> This option should be considered knowing that the EIB does not have an office in every Member State

respect the selection criteria for cities to embark in the Mission will include active citizen involvement, with the indicator of social inclusion as a strong necessary element.

The Board proposes that at least 1% of the EU funding granted to cities in the framework of a Climate City Contract should be devoted to supporting citizens and civil society platforms to effectively engage citizens in the development and implementation of climate actions.

A new city governance model able to push a systemic transformation to climate neutrality should also encourage the concerned public administration to evolve from its traditional silo-based working culture and organisation to a more strategic, cross-cutting, integrated, citizen-driven way of working. Without a clear political and organisational evolution in this direction, such transformation will not be possible.

That is why evolving to a new city governance model is critical both for managing the Mission and facilitating climate transformation in all cities across Europe. Although such a general model will need to take into account and be adapted to the specific circumstances and traditions of each city, some key principles can be shared across Europe: (a) a holistic approach fostering systemic innovation instead of the present silo based and fragmented approach – leading to integrated planning, (b) a multi-level governance and (c) a deep and continuous collaboration with citizens and between all stakeholders. Besides, innovating the governance as such is a necessary ingredient to deliver on the three principles.

The principles imply that all local, regional, national and European stakeholders can take part in the negotiation and networking processes (fig. 1) around the Mission – as stated in Chapters 7 and 8. Collaboration between the various stakeholders is not limited to traditional partial systems (policy, administration, economy, society) and it is focused on resolving certain problems.

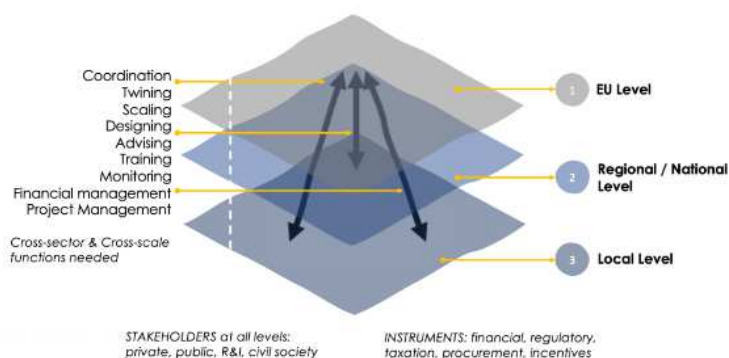


Figure: Multi-governance approach for the cities mission

The transition to climate neutrality requires changes across the entire policy spectrum as well as a collective effort of all sectors of the economy and society, as illustrated by the Commission in its Communication 'The European Green Deal'. As citizens and communities have a powerful role to play in driving forward the transformation towards climate neutrality, strong public and social engagement on climate action should be facilitated. This could be done through innovative instruments such as the "climate alliances" in the city<sup>27</sup>. Cities shall engage with all parts of society to enable and empower them to take action towards a climate-neutral and climate-resilient society. The Commission shall facilitate an inclusive and

<sup>27</sup> Some examples are available under the "climate alliance" webpage: <https://www.climatealliance.org/home.html>. They only constitute examples, not something that is mandatory for the cities mission.



accessible process at all levels, including at national, regional and local level, identifying actions to contribute to the decarbonisation goal.

An innovative city governance requires a strong city leadership with a clear political drive and a local authority that invests in innovating itself. Innovation is inherently a bottom-up process, and so national governments (and Europe) need to invest in greater innovation at local level, with freedom to experiment as well.

The holistic approach, as opposed to the silo approach, will require a change of habits and style of management.

The main capabilities/competences that should be assured at the city level are as follows:

- Organizational capabilities, including orchestration; connection with regional, national and European initiatives; and political support
- Technical capabilities, including capacitation; learning by experimenting; advising; financial and project management
- Design and monitoring capabilities, including designing; strategic and evolutionary evaluation; and KPI monitoring

The required paradigm shift should lead to the adoption of integrated urban planning practices that approach the city holistically, promote multi-benefit solutions and break the traditional silos in urban projects. This type of urban development and projects can yield solutions that make efficient use of resources and provide significant benefits for cities, their citizens and the economy.

A common understanding on how integrated urban systems are planned, built and run still needs to be developed and implemented for all cities in Europe. The Mission can be a catalyst in this direction. The point where clean and sustainable urban mobility, near-zero or positive energy buildings, green energy production and the use of tools such as the 'digital twin cities' meet is an example of a starting point on the way to 2030.

## 10 A STRATEGY TO SECURE FUNDING AND FINANCING

The cities mission is part of the greater objective of modernising and decarbonising the EU's economy that will stimulate significant additional investment. Today around 2% of GDP is invested annually in our energy system and related infrastructure. This would have to increase by 40% to a 2.8% of the EU GDP to achieve a net-zero greenhouse gas economy. Additionally, there is investment needed for the modernisation of mobility systems, resource recycling systems, and food systems.

The Mission Board has commissioned an independent analysis based on information from cities all over the EU to get an indication of what additional investments are needed, compared to a business as usual trajectory<sup>28</sup>, roughly 10.000 € per citizen, to reach zero scope 1 and scope 2 emissions. The analysis, which includes transportation, heating, buildings and electricity, also indicates a net positive economic case for society at 26 billion €, including co-benefits such as air quality, increased physical activity, noise and accidents.

The overwhelming part of this funding and investment will have to come from private asset holders, an array of investors (from commercial banks to private equity funds and institutional holdings), and from public sector sources at the local, regional and national level. However,

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<sup>28</sup> According to a report prepared by Material Economics, the additional investment is estimated to be of EUR 96 Bn for 100 European cities by 2030, each having an average population of ~100,000 citizens, but producing a net positive economic case for society at 25 billion EUR (cumulated benefits of 121 billion EUR on the period 2020-2050, including co-benefits such as air quality, increased physical activity, noise and accidents)

there is still a funding gap that must be filled through public funding or innovative business models to secure the highest climate standards.

The current system for the funding and financing of climate innovation and investment at city level is too fragmented. A new approach with appropriate instruments for a coordinated stream of public and private funding for innovation and infrastructure are needed to facilitate a systemic transformation to climate neutrality.

The Mission Board proposes such a coordinated approach of creating synergies among EU programmes and fostering financial and capital innovation across Europe. The Mission Board recommends the following actions:

- a financial umbrella in the form of a **Lending & Blending Facility for Climate Cities**, working in cooperation with national climate funding and financing facilities with the R&I resources as a core element;
- up to **10% of the resources allocated to climate actions in the next MFF** are geared towards the objectives of the Cities Mission;
- **Structural and Investment Funds'** 2021-2027 operational programmes should earmark projects to fund the Mission;
- the Commission and Member States make funding of Climate City Contracts an overall priority of the investment strategy of the new **Recovery and Resilience Facility**;
- a **"mission label"** to every mission city allowing a preferential access to technical support and available funding and financial instruments;
- a **one-stop-shop** in the form of decentralized negotiation platform run by the EIB offices in Member States

On top of public investments, a strong effort should be done to find business models for the key sectors that should be transformed to become climate neutral. Moreover, to achieve the decarbonization goal, the Mission should also foster a change in the market structure via multi-level policy innovations.

The investment needed for achieving climate neutrality by 2030 will differ between Member States and between cities. This is due to national and local circumstances, including what has already been achieved and what will be defined in the co-creating process for CCCs. Investment will also depend on the efficient use of allocated resources. The Climate City Contract must include a realistic strategic planning, analysis of the business-as-usual scenarios, complemented by an economic appraisal to ensure that any financial support is well invested and efficiently planned throughout the whole timeline of action. Low-hanging fruits would be particularly effective to reduce the first 15-20% of CO<sub>2</sub>e emission as this may only require low to very low investments. They may also catalyze additional investments and unlock economically unattractive measures, within a larger portfolio with deeper impacts.

## 11 ECONOMIC TRANSITION

The limited resources and boundaries of our planet force us to seek new ways of producing and consuming. The EU already has a track record on modernising its economy while reducing emissions. Between 1990 and 2018, greenhouse gas emissions decreased by 23% while the economy grew by 61%<sup>29</sup>.

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<sup>29</sup> [https://ec.europa.eu/commission/presscorner/detail/en/fs\\_19\\_6720](https://ec.europa.eu/commission/presscorner/detail/en/fs_19_6720)

There is significant potential in the global markets for low-emission technologies and for sustainable products and services. Likewise, the circular economy offers great potential for new activities and jobs. However, the transformation is taking place at a slow pace. One of the aims of the European Green Deal is to support and accelerate the transition of EU's industries to a sustainable model of inclusive growth.

The transformation towards a sustainable and circular economy contributes to addressing these challenges. When combined with behavioural changes, such a transformation has the potential to contribute to the mission's objectives and to reduce the need for investment for low and zero-carbon solutions. On the other hand, we should expect and address the challenges and risk of having gains towards climate neutrality cancelled out by 'rebound effects' due to behavioural or other systemic reasons.

To this end, cities via their participatory ecosystem will need to discuss, develop and experiment with ideas and proofs of concept for combining behavioural change and new economic models in order to open the road to climate neutrality and a circular economy.

The Mission will strengthen markets and deployment for new technologies and R&I. Through testbeds, urban living labs, upgrades in the existing residential areas or the construction of new city districts, the Mission will create business opportunities, support city development and spur economic progress. In addition, the Mission will make a strong business case for transforming the way products are designed, produced, used and recycled in the EU. Overall, by taking the lead in the urban transition to climate neutrality, Europe is expected to create new investment opportunities and jobs<sup>30</sup>.

## 12 A MISSION THAT PROMOTES INNOVATION

### The role of digital technologies

As city populations grow, the demand for services and the pressure on resources increase. This demand puts a strain on energy, water and mobility services, which are fundamental to a city's prosperity and sustainability. At the same time, cities and communities are undergoing a digital transition process which needs to be appropriately implemented.

With this in mind it is evident that making our cities and communities climate neutral and smart is an absolute need for achieving the 'twin green and digital transformation' in the EU. The diffusion of ICT is essential for stimulating economic development and boosting economic activity in cities. Europe's digital policy and initiatives (such as the new Digital Europe programme) will support and accelerate the transition to sustainability for cities and communities through digital, in particular by building high quality connectivity infrastructure, developing a digital environment that empowers end-users, respects European values and norms, encourages the development of skills, and brings long-term growth opportunities across all sectors of the European economy.

Estimates<sup>31</sup> indicate that ICTs could deliver approximately 7.8 GtCO<sub>2e</sub> of emissions savings, representing around 15% of total emissions in 2020. Examples of projects that could have a great impact include stability, effectiveness and safety of low (zero) carbon electric grids, automated disassembly and separation of waste using AI and robotics. On top of these processes, ICT can also help prevent significant damage arising from disruptive weather patterns and phenomena, through climate impact modelling for optimal mitigation and adaption. This will allow for a wide collection and better access to the wide range of environmental "big" data and also help engage with citizens using digital tools.

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<sup>30</sup> [https://ec.europa.eu/clima/sites/clima/files/docs/pages/vision\\_4\\_economic\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/docs/pages/vision_4_economic_en.pdf)

<sup>31</sup> <https://www.theclimategroup.org/sites/default/files/archive/files/Smart2020Report.pdf>

In particular, ICT-based solutions could reduce commuting by 15–20% and cut greenhouse gas emissions by 10–15% (McKinsey Global Institute, 2018<sup>32</sup>), while urban digital twins could significantly improve cities' ability to simulate or model policy outcomes, given that today only 12% of city data is analysed and used for decision making and management (Forrester, 2014<sup>33</sup>). An increasing amount of data is also being collected by various ICT and social media technologies that could support the cities' and communities' transformation. To this end, the planned creation of common European dataspace, in particular the Green Deal dataspace, will be an important step to develop the digital ecosystem of the environment. One of its early deliverables will be the creation of a data ecosystem for climate-neutral and smart communities, which will facilitate the access, share and re-use of locally-relevant data (in areas such as mobility, energy, climate and zero pollution) and as such can serve as the underlying digital infrastructure for the cities supported by the Mission. While the cities to be supported through the Mission have their own challenges and particularities, recent studies (Erasmus Centre for Data Analytics, 2020<sup>34</sup>) indicate that these challenges could be more efficiently addressed by implementing interoperable, urban digital platforms (using a common set of standards) on the one hand and helping cities access, share and use cross-domain data, on the other hand.

Therefore, the Mission will need to be powered by a proper framework and by digital solutions that (i) allow the management of cross-domain data (interoperable platforms and mechanisms for data sharing) and (ii) also help cities pursue their digital transformation their own way, i.e. by preserving their security, flexibility as well as their data and technological sovereignty when adopting technological solutions.

An example can be found in the 'Join, Boost Sustain' political Declaration<sup>35</sup>, a new initiative that aims to strengthen the European way of digital transformation in cities and communities and boost the efforts to use digital solutions to create places where people enjoy living and working

The following initiatives can be of interest to the Mission:

- Future spending under the Digital Europe Programme in the area of Smart Cities and Communities to support the digitalization of urban areas in order to adopt AI-based services for green purposes;
- Work with Digital Innovation Hubs to help smart cities and communities in their use of advanced digital technologies such as Artificial Intelligence;
- Work with the COP-CITIES community to engage smaller cities and support them in scaling up digital solutions;
- Work towards the creation of a smart communities' dataspace with an agreed governance structure and collaboration mechanism to access, share and re-use all kinds of data from different sources with relevance for cities and communities.

Other key areas to be addressed and incentivised to work on new solutions include:

- **Energy efficiency, aiming at zero emissions** to reach the full potential of energy efficiency - especially in the buildings sector that accounts for 40% of energy demand;
- **Deployment of renewables and use of electricity to fully decarbonise Europe's energy supply** - as calculated by the Commission<sup>36</sup>, an electricity supply that is fully

<sup>32</sup> <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/smart-cities-digital-solutions-for-a-more-livable-future#>

<sup>33</sup> <https://www.forrester.com/report/The+Forrester+Wave+Big+Data+Hadoop+Solutions+Q1+2014/-/E-RES112461>

<sup>34</sup> [https://discovery.rsm.nl/articles/436/?tx\\_rsmdiscovery\\_detail%5Bpreview%5D=0&cHash=b3db1ad9420ab59b47ad1d7d12af3dad](https://discovery.rsm.nl/articles/436/?tx_rsmdiscovery_detail%5Bpreview%5D=0&cHash=b3db1ad9420ab59b47ad1d7d12af3dad)

<sup>35</sup> <https://living-in.eu>

<sup>36</sup> [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en)

decarbonised by 2050 must come approximately 80% from renewable generation;

- **An efficient mobility for all**, clean, safe and accessible including carbon free and alternative fuels, promotion of public transport, walking and cycling, smart multi-modal solutions such as mobility as a service (MaaS), and automation;
- **Integration of the circular economy approach** that employs reuse, sharing, repair, refurbishment, remanufacturing and recycling in a close-loop system for minimising the use of resource inputs and the creation of waste, pollution and carbon emissions;
- **Reaping the full benefits of bio-economy and create essential carbon sinks** since both global and European assessments confirm that a net-zero emissions economy will require increasing amounts of biomass compared to today's consumption;
- **Optimizing the carbon footprint of Gigabit society** as the latter becomes an increasingly important part of the society and economy.

#### **A model for the transformation of cities to innovation hubs**

Besides the traditional supply- or demand-driven approaches, the Mission adopts a challenge-based and objective-driven approach to city innovation. This will ensure that activities are in line with the ambition of the mission. In addition, the Mission considers city innovation as pertaining not only to technology-based innovation, but also to the social, creative, organisational and financial innovations needed to transform cities.

In its activities and projects, the Mission will go beyond traditional R&I calls for proposals, engaging a wider public and enabling faster replication and dissemination of innovation. To this end, cities will test new ideas, technologies, solutions and methodologies. They will also be encouraged to adopt management roles or structures that will act as catalysers of innovation across departments and traditional silos.

#### **Global Knowledge Centre**

The design and implementation of the Mission and of Climate City Contracts will benefit from research, innovation and deployment activities supported under various EU programmes. The Mission will also take inspiration from ambitious climate goals and initiatives put forward by individual cities and will learn from successful innovation projects and full-scale investments.

It is important to ensure that no positive result or knowledge is wasted or must be re-invented. To this end, the Mission will encourage, monitor and evaluate the scaling-up and replication of good practices and of effective technologies for the benefit of cities and of the European economy at large.

These activities may lead to the setup of a Global Knowledge Centre that could facilitate and create synergies between European and international climate initiatives and stakeholders. The centre would serve cities as well as citizens, academia and business.

## **13 ESTABLISHING THE PROCESS**

### **Selection of cities**

The selection of cities will be open and transparent, with a clear process organised in phases and criteria published before the beginning of the process. The target of 100 cities should not be read as an upper limit. Moreover, as some cities might fall short of the 2030 target, this scenario should be expected (and tolerated, if not welcomed) in an ambitious experimentation of this scale.

The Mission should attract and select cities of all sizes, contexts, types and level of preparedness (see figure below) as long as they demonstrate high ambitions.

All cities with 50.000 citizens or more should be welcome to apply to become a Climate Mission City. In Member States with 5 or less cities above 50.000 of citizens, the threshold of 10.000 should be applied.

Given the multiple typologies of European cities and the difficulty to deliver the Mission in under a decade, the *Mission considers the notion of a 'city' as applicable to different scopes:*

- City district, neighbourhood, or zone of special interest of a city<sup>37</sup>.
- City represented by a government unit (e.g. municipality).
- Conglomeration or a functional area composed of several neighbouring cities or government units, represented by the respective government units.

This plurality takes into account the diversity of European cities in terms of size, spatial context, governance, budget and ability to mobilize the necessary financing, and the current level of climate action. It also ensures an open process where *any city with enough ambition may successfully bid* to be among the first 100 selected cities.

It should also achieve the best geographic coverage and representation of all European countries, with at least three cities from each member state entering the co-creation of the Climate City Contract phase, and ideally at least two cities from each member state entering the implementation of the Climate City Contract phase.

The selection will be done via an open competitive process following different phases and based on eligibility and selection criteria, all described in detail in Annex V.



The process of delivering the Mission will start with an **open call for expressions of interest**, where cities will be invited to become climate-neutral by 2030 and express their interest in entering the Mission process. In this phase cities will be asked to perform a self-assessment of their preparedness level and declare themselves to be at one of the three Beginner, Experienced or Fronrunner levels. The application should be submitted directly by the city/metropole authority or by a legal entity representing it in case they already started the implementation of climate strategy and established a legal entity for this purpose.

The process will continue through **three further phases** of work for the city and its Mission partnership:

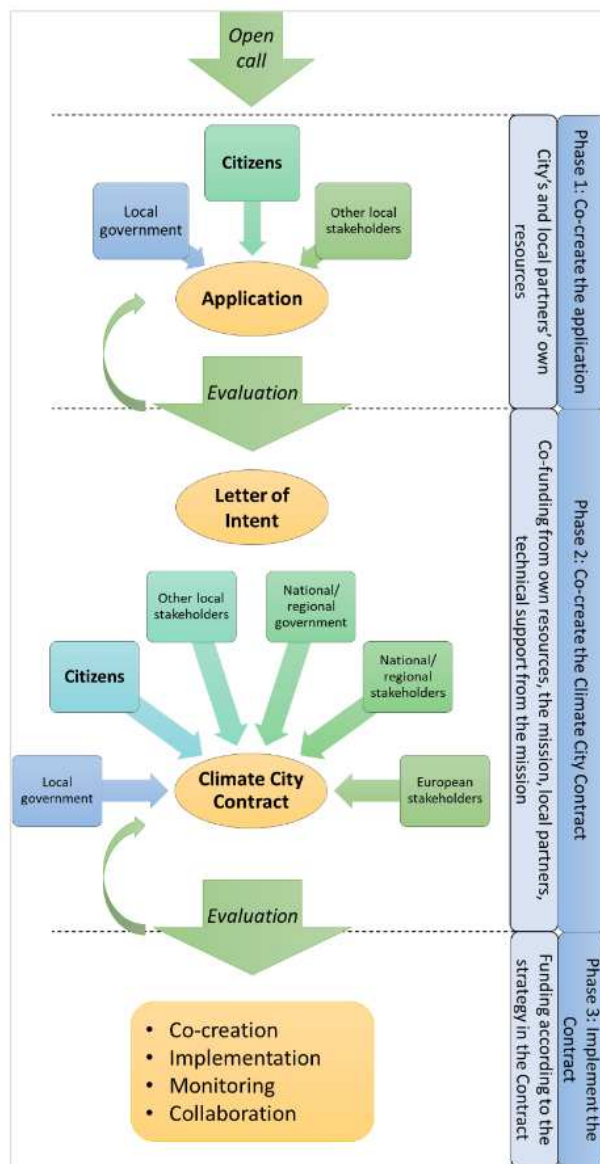
- the **co-creation of the mission application**: After a successful eligibility check of

<sup>37</sup> Examples include airports, ports, university towns and business districts. To be defined what minimum size or minimum number of inhabitants/users these areas should have to be eligible to participate in the mission.



the expression of interest, cities will be invited to prepare the application for a Climate City Contract. The process should be performed in co-creation with citizens, local authorities and relevant stakeholders. As not all cities will start from the same level of preparedness, it is expected that Beginners will need more time to enter phase 2 than Frontrunner cities. The criteria here include a clear level of commitment in terms of climate goals and ambitions, of citizens engagement and mission partnership, sufficient human resources and European scope of action. Successful applicants will be invited to submit a letter of Intent to start the following phase;

- the **co-creation of the Climate City Contract**, with the objective to develop a fully-fledged Climate City Contract. Cities will receive different types of support, in particular to develop their strategy. The latter will be evaluated together with all the chapters of the contract. Criteria in this phase include the barriers faced; a clearly defined governance, structure, roles; the investment strategy; the innovation approach; measurable KPIs and clear benefits for citizens.
- the **implementation of the contract**: in this phase cities will implement the Climate City Contract, including in terms of its governance, investment strategy, and the deployment of technologies. Support will be provided to cities by several sources and will be required to share their expertise with other cities through eg mentorship, twinning or teaming (phase 3 cities).



### Monitoring the progress

The European Commission has identified the endpoint against which success will be measured. Carbon neutrality, namely mitigating and offsetting<sup>38</sup> all GHG (in CO<sub>2</sub>-eq) within a

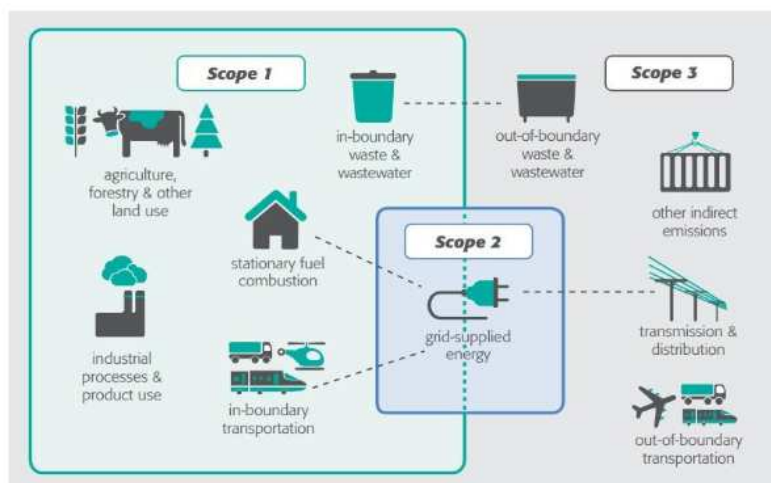
<sup>38</sup> A maximum percentage of offsetting will be later defined since the objective of the mission is to encourage real energy efficiency, transition and transformation and not accounting of emissions



city is the target of the mission<sup>39</sup>. The timelines of participating cities should converge to achieve this target by 2030, thus paving the road for a wider transformation in European urban areas and Europe in general by 2050.

The Mission will establish a robust, transparent, yet simple monitoring process to measure and evaluate (HGW) progress towards the mission goal, ensure accountability of the participating cities, and give credibility to the mission results. Three indicators are proposed<sup>40</sup>:

1. **Scope 1 GHG emissions** for the city within the geographic boundary (mandatory from the beginning of the mission). This indicator will be calculated based on the emissions from *buildings, industry, transport, waste treatment* (solid waste and wastewater), *agriculture and forestry* and from *other activities*<sup>41</sup>.
2. **Scope 2 GHG emissions** for the city (mandatory from the beginning of the mission). This indicator will be calculated based on the emissions from *indirect emissions due to production/consumption of grid-supplied electricity within the geographic boundary* and *indirect emissions due to production/consumption of grid-supplied heat or cold within the geographic boundary*.
3. **Scope 3 GHG emissions** for the city (recommended, to be adopted by 2030). This indicator will be calculated based on the emissions from *out-of-boundary emissions from treatment of waste produced within the geographic boundary, out-of-boundary emissions from transmission and distribution of energy consumed within the geographic boundary, out-of-boundary emissions from transportation of citizens living within the geographic boundary, out-of-boundary emissions from consumption made within the geographic boundary (food, clothes, furniture, materials, etc.) and other indirect emissions*.



via certificates. To this end, the mission will also advocate for the better and stricter regulation of the voluntary market for emission certificates.

<sup>39</sup> The European Covenant of Mayors is an example of this approach

<sup>40</sup> Source of the graph: Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories

<sup>41</sup> Like in the European Covenant of Mayors, it will be recommended not to include emissions from installations that fall under the EU emissions trading system (EU ETS)

The goal of the Mission is to transform the city. To evaluate the feasibility of such a radical transformation, a **qualitative indicator** is proposed: *the selected decarbonisation pathway to climate neutrality and the associated transformation drivers to be unblocked.*

Additional indicators could be included such as those related to 'citizen participation', 'integrated urban planning', 'creation of ecosystems', 'sustainable urban development' and 'co-benefits' such as air quality and jobs. Some examples are as follows:

- Citizen engagement (number/type of interactions with citizens on climate neutrality);
- Modal split, urban transport GHG emissions, congestion, accessibility and affordability of public transport<sup>42</sup>;
- Decrease of energy use in buildings (kWh/m<sup>2</sup> or kWh/person/year);
- Percentage of green space mixed with % growth of green space;
- Percentage of green energy (production within city limits mixed with green energy consumption);
- Final energy consumed per inhabitant (heating, electricity, fuel);
- Percentage of buildings renovated to improve energy performance;
- Money spent in EUR per inhabitant for climate-related investment.

Reporting will follow a biennial cycle of reports of progress. One way to work on the baseline and progress reporting is to use the 'deep decarbonisation pathways' approach that combines transformative and objective-oriented solutions, collaborative approaches and transparent reporting with the local context and realities<sup>43</sup>.

The biennial reporting cycles will provide the opportunity for technology-neutral pathways that, each time and for each city, can take stock of all developments in the areas of policy, research and market conditions. If a city is already reporting its progress to an initiative such as the Covenant of Mayors, its reporting for the Mission may follow the same cycle.

The compliances of selected cities will be monitored and evaluated based on the biannual reporting. A lack of compliance with the CCC will be signalled in order to adjust to the accepted commitments as soon as possible.

### Overall timeline

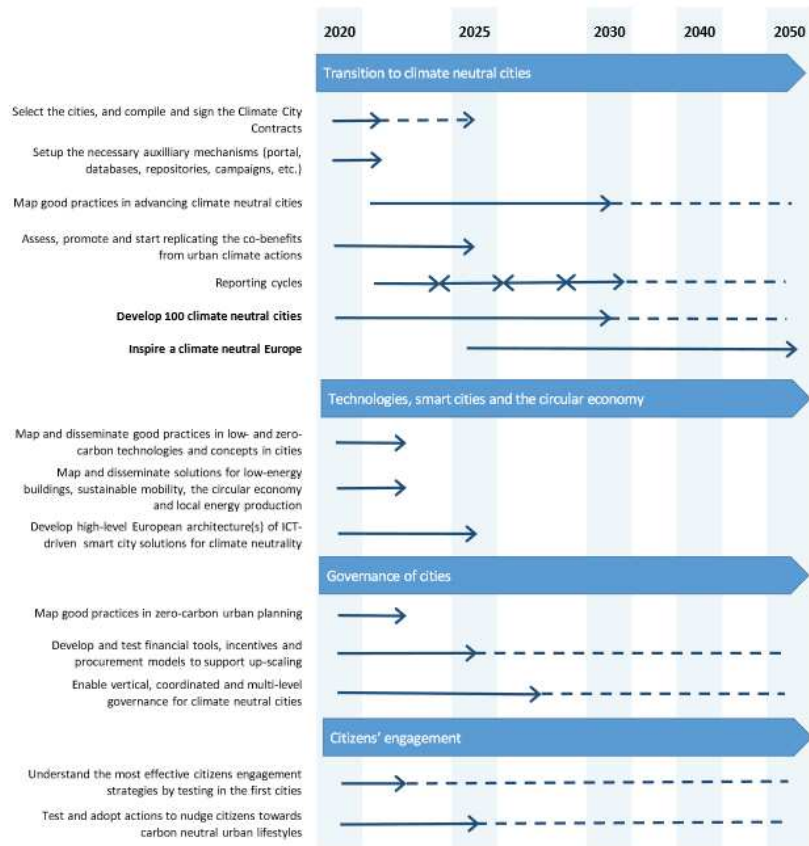
The high ambition of the Mission and its short time horizon demand that the planning, research and implementation must span many sectors in parallel. Three phases can be identified:

1. An **early delivery phase in 2020-2022** that will set the foundations of the Mission and of its facilities to help the participating cities;
2. The **main phase in 2022-2030** during which the main body of cities will implement their strategy towards transformation and climate neutrality;
3. The **period after 2030 and up to 2050** when the Mission will have hopefully created the momentum for a climate neutral Europe.

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<sup>42</sup> [https://ec.europa.eu/transport/themes/urban/urban\\_mobility/sumi\\_en](https://ec.europa.eu/transport/themes/urban/urban_mobility/sumi_en)

<sup>43</sup> Examples of deep decarbonisation pathways at the national level can be found on <http://deepdecarbonization.org/countries/visualization-of-country-scenarios/>



## **ANNEX I: ENGAGEMENT WITH CITIZENS AND STAKEHOLDERS**

There is increasing recognition across the EU, nationally and at regional level that citizens have a crucial role to play in decision-making for public policies and in their implementation processes, as seen with the launch of citizen engagement strategies and participatory movements.

The Missions are public policy instruments where research and innovation (R&I) set the direction and provide a first and substantial impetus. However, the scope of Missions goes well beyond R&I as they require a broader involvement across a spectrum of actors and policy areas for increased relevance to society and impact. A meaningful engagement of citizens is therefore necessary throughout all stages of the policy cycle, from the identification and conceptualisation of Missions to their implementation, deployment and impact assessment.

To be effective, citizen engagement has to be inclusive, deliberative, and influential. These three basic criteria put it in a different league compared to other ways in which we reach out to society such as communication, public consultations or stakeholder debates.

Citizens bring original perspectives to R&I and policymaking, and their engagement helps bridge the gap between science, markets and society. This is especially important in fundamental transformations – e.g. the transition to climate neutrality – that require not just innovation in technologies, but also profound changes in lifestyles and behaviours, along with innovative governance models. Such transformations cannot be imposed from the top: they need to be embraced and shaped by the citizens themselves.

Moreover, citizen engagement enhances the legitimacy of public policymaking. Many citizens no longer feel represented and have limited faith in governments, political parties or public institutions. This is a threat to democratic stability and social cohesion. A more direct involvement may help tackle these problems, aside from improving the quality and societal relevance of policymaking as such.

In the midst of the global Covid-19 pandemic, initial plans for in-person citizen engagement events had to be reconsidered and adapted. As a consequence, events took place virtually, via a number of online platforms, integrating different methodologies of collaborative exchanges. In hindsight, the logistical challenges of virtual events may actually have contributed to broader participation and greater engagement of participants. The Member States, the Assembly for the Mission on Cities and the local city partners played a key role in the organization of these sessions, as they know the local reality best.

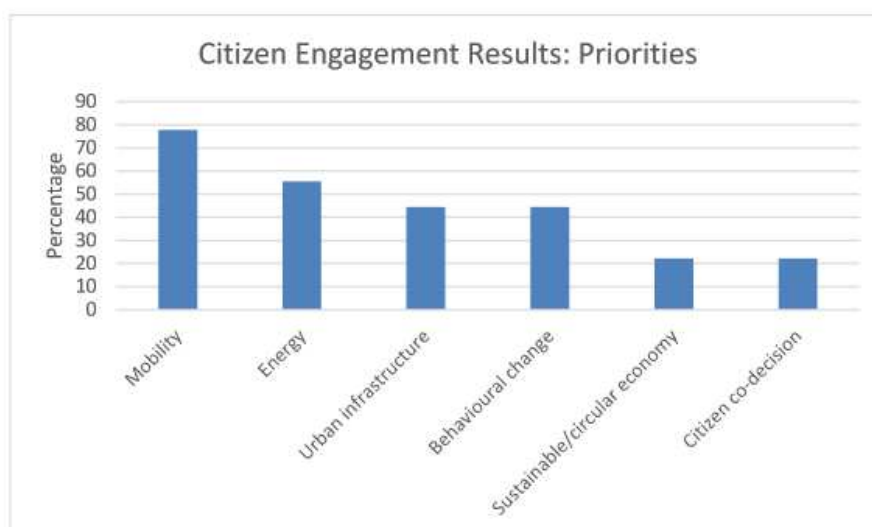
### **Citizen engagement events**

In total, thirteen citizen engagement events took place with the participation of Mission Board or Assembly members. Two of these events (Gdansk/Poland, Le Havre/France) were part of a pilot project across all five Horizon Europe missions. The aim of the pilot was to engage with selected participants that constitute a representative sample across geographical, gender, age and professional categories. This should allow for comparisons of citizen engagement efforts between missions.

These events featured identical questions about the key priorities of the participants for making their respective cities climate-neutral by 2030. The three most frequent answers per city were collected (see image below), allowing for a broad overview of people's most frequent top priorities.

**Table of events**

Citizen engagement events					
#	MS	City	Date	Format	Language
1	Romania	Cluj-Napoca	04 03 2020	Physical meeting	RO
2	Finland	Espöo	24 03 2020	Microsoft Teams	FI
3	Spain	Madrid	29 04 2020	Zoom + youtube	ES
4	Estonia	Tartu	05 2020	Online survey	EE
5	Romania	Iasi	08 05 2020	Cisco Webex	RO
6	Netherlands	Groningen	19 05 2020	Microsoft Teams	NL
7	France	Lille (MEL)	28 05 2020	Cisco Webex	FR
8	Italy	Venice	24 06 2020	Cisco Webex	IT
9	EU-wide (youth)	N/A	30 06 2020	Zoom	EN
10	Belgium	Brussels	10 09 2020	Physical meeting	EN
11	Poland	Gdansk	11 09 2020	Zoom	PL
12	France	Le Havre	16 09 2020	Zoom	FR
13	France	Pau	06 11 2020 (tbc)	Virtual meeting	FR

**Participants' priorities towards climate neutrality in their city by 2030****Stakeholder events**

Beyond citizen engagement events, the Mission Board members organised a number of stakeholder events, bringing together local, regional, national and



European stakeholders, from climate associations, student groups, NGOs working for the rights of vulnerable and disenfranchised people and business associations.

Stakeholder events					
#	MS	City	Date	Format	Language
1	Austria	Vienna	21 01 2020	Physical meeting	DE
2	Romania	Iasi	05 05 2020	Virtual meeting	EN
3	Netherlands	Eindhoven	11 06 2020	Virtual meeting	NL
4	Portugal	N/A	16 06 2020	Zoom	PT
5	Belgium	Leuven	26 06 2020	virtual meeting	EN
6	Greece	N/A	07 07 2020	Zoom	EL
7	Slovakia	Kosice	05 09 2020	Virtual meeting	SK
8	Belgium	Ghent	XX 09 2020 (tbc)	Virtual meeting	EN
9	Greece	Athens	9-10 10 2020	Virtual meeting	EL
10	France	Nantes	09 10 2020	Virtual meeting	EN/FR

**Next steps:** An essential step in the citizen engagement process, though all too often forgotten, is the follow-up phase. Citizens must receive feedback on how their input was used and contributed to the design of the Mission. To this end, a dedicated online session with citizens will take place on 22 September 2020 during the European R&I Days. Citizen representatives who took part in the sessions organised between March and June 2020 will have the chance to share their experience and motivate other citizens to engage in the mission process.

## ANNEX II: RECOVERY FROM THE COVID-19 CRISIS

### Context

Europe is facing an unprecedented crisis. In an effort to contain the coronavirus pandemic, governments imposed emergency laws and restrictive measures not seen in decades. As European countries emerged from lockdowns, they experienced the full magnitude of the socio-economic ramifications of the crisis and of the containment measures. In a context where the pandemic and restrictive measures are still ongoing, the journey to rebuild Europe's economies and societies will be extremely difficult, bumpy and long.

### The role of 'Green Europe'

Europe's socio-economic challenges due to COVID-19 are significant, but putting in place the short-to-medium-term recovery measures could also double as a way to reach a better trajectory for the European economy and society in an uncertain future. This is why the European Commission President set out as an ambition a recovery that ensures a resilient, green and digital Europe.

At the same time, the global climate crisis is around the corner, with many scientists estimating that the point of no return on global warming exceeding 2°C will be reached in ten years. It is therefore essential to consider the longer-term climate effects of the recovery measures: greening our economy will also make it more resilient for the future.

Finally, we must recognise that the COVID-19 context has changed citizen behaviour and expectations in relation to climate action. It also shifted the perception of governments, businesses and individuals on what can and should be achieved. For example, cities are reassessing urban planning, businesses are rethinking physical sales and distribution systems, people appreciate the cleaner city air and reduced traffic noise/congestion, and employees have rising expectations for forms of telework that avoid tiresome commutes. Such emerging trends can be harnessed not only to prevent a resurgence in the spread of the virus, but also to ensure a more exponential approach towards climate neutrality.

### **Climate neutral cities as a means to recovery and build forward**

Besides being more severely affected by COVID19 health impacts, cities are the centres for economic activity, now in urgent need of a restart, and the centres of Europe's climate challenge. They will be the decisive test of Europe's ability to achieve the twin objectives of short-to-medium term economic recovery post-COVID and longer-term climate neutrality. To achieve both, there is a requirement to maximise the synergies between these objectives.

Investing in the greening of infrastructure systems (energy, water, waste, buildings, transport, etc) should be a priority. In parallel, digital connectivity, applications and services should be accelerated, thereby supporting the demand-side of the economic and environmental transition. This will improve the efficiency of green infrastructure systems and accelerate the greening of economic activities.

To make the most of the new EU Recovery Fund, investments should have both a multiplying effect on the economy and a transformative effect towards climate sustainability. Such an investment strategy can build on the Mission for climate neutral cities – see Annex IV. Cities that will engage in and promote the Mission will act as innovation hubs and as national, European and global forerunners. They will inspire other urban areas to embark on the same process, inspiring Europe to accelerate their policies for climate action and transition.

There is significant potential across global markets for low-emission technologies, sustainable products and services, and for circular economy systems – and they all have great potential to stimulate new activities and new jobs. The implementation of this Mission will bring together new technologies and innovation in testbeds and urban living labs, in upgrades for residential areas and in the construction of new city districts. By connecting and aligning existing and new instruments and initiatives, EU policies will have not only more impact, but also a systemic impact. This contributes to a central objective of the

European Green Deal: to support and accelerate EU's industry transition to a sustainable model of inclusive growth.

## **ANNEX III: SUPPORTING EVIDENCE**

### **Studies and experts support**

A dedicated Foresight on Demand study was undertaken in support of the Mission on Climate-Neutral and Smart Cities. The study was done by a team of experts from the Austrian Institute of Technology/University of Vienna, the Finland Futures Research Centre/University of Turku, and the Institute of Studies for the Integration of Systems (ISINNOVA-IT). It aimed to support the reflections of the Mission Board with foresight processes and forward-looking evidence, helping to identify and evaluate the potential of different directions for concrete missions. The main findings of the study are the following:

- Due to their densities, cities will be increasingly affected by the impact of climate change, be it directly through natural disasters such as more frequent extreme weather events, or indirectly, via migration flows. External disruptive shocks such as the current Covid-19 pandemic will also affect pathways for reaching smart and climate city targets. The macroeconomic shock of the crisis may lead to underinvestment and postponement of private research and innovation investments as well as to a surge in motorised mobility which may need to be at least partly offset by public policy investments. On the other hand, alternative pathways for commuting traffic, working lifestyles, and use of roads can be more easily incentivised and established in a sustainable manner.
- Frontrunners and several national and EU programmes such as SCC-01 Lighthouse projects demonstrate that substantial energy savings and GHG reductions, in the range of the EU's 2030 targets, are achievable. However, it is unclear to what extent the inclusion of consumption-based GHG accounting might alter this picture.
- Technology alone will not do the job. Crucial for any transition to climate-neutral cities is co-evolution of technological innovations, knowledge and capacity building with city administrations and businesses, large-scale public and private investments in physical infrastructures, new business models inducing behavioural change, and incentive systems next to climate-neutrality promoting regulations at national level for each domain.
- City administrations have to orchestrate the transition towards climate-neutral cities, and need businesses, citizens and academia to co-produce this change. However, for many cities, this requires a big change in mindset.
- A systemic, holistic approach focusing on the medium to long term is a key to achieve the aims in an effective way, especially since windows of opportunity and possible synergies are otherwise easily missed.
- City Contracts are a good means to bring about the desired change in 100 cities, but need to be accompanied by the right incentive mechanisms and instruments. Furthermore, they need to reflect different realities and



contexts across Europe to be able to fulfil the role of accessible, recognisable beacons of change.

### **Other evidence provided to the Cities Mission Board**

The Mission Board members have consulted with Member State ministries, NGOs, regional and city authorities, and with citizens and stakeholders about the proposed City Climate Contract as a means for cities (or city districts) to become climate neutral. Insights from these consultations are incorporated in the report.

In addition, the Mission Board has received presentations and support from the European Investment Bank, think tanks such as the Jacques Delors Institute, networks and funding organisations such as ERRIN, the European Institute of Technology's Knowledge Innovation Communities (KICs), the European Cooperation in Science and Technology (COST), and the following Commission services: DG CLIMA, DG REGIO, DG JRC, DG ENV, DG ENER, DG CNECT, DG EAC, DG MARE, DG MOVE, DG ENER, DG GROW, DG HOME and DG RTD.

## **ANNEX IV: FUNDING & FINANCING FOR THE MISSION**

This Annex aims at developing proposals on the funding and financing of the investments needed for the 100 cities to achieve climate neutrality.

### **Climate City investment: contributing to recovery and climate transformation**

To make the most of the EU Green Deal, the 2021-2027 MFF and the EU Recovery Fund, all investments should have a transformative effect towards climate neutrality while having a multiplying effect on the economy.

The Mission Board's proposal to support and promote "100 European cities climate-neutrality by 2030, by and for the citizens" is fully in line with political priorities of the Green Deal and the EU Recovery Fund. The establishment of a 'Climate City Contract' was identified by the Mission Board as a new delivery mechanism for innovation, funding and legal support to cities, promoting multi-level co-creation and, where appropriate, coordination with the national/regional and EU authorities.

### **The role of public funding of city climate investment plans**

The Mission is part of the greater objective of modernising and decarbonising the EU's economy that will stimulate significant additional investment. Today around 2% of GDP is invested annually in our energy system and related infrastructure. This would have to increase by 40% to a 2.8% of the EU GDP to

achieve a net-zero greenhouse gas economy. Additionally, there is investment needed for the modernisation of mobility systems, resource recycling systems, and food systems. This means considerable additional investments compared to the baseline<sup>44</sup>.

For this Mission, in order to support 100 European cities towards their deep transformation to become "climate neutral by 2030", both the public and private sectors will have to be prepared for massive investments with the potential to revitalise key economic sectors and create new and sustainable jobs (i.e. construction, mobility, circular economy etc.).

As a rough and first approach, the Board has considered an estimation, based on several benchmarks, of an average investment of 10,000 € per citizen in the 10-year period (2021-2030) for a city to become climate neutral.

It was considered necessary to complete this first estimate with an independent analysis, performed by Material Economics<sup>45</sup>. The additional investments needed, compared to a business as usual trajectory, to reach zero scope 1 and scope 2 emissions for 100 European cities by 2030, each having an average population of ~100,000 citizens<sup>46</sup>, are estimated to be of EUR 96 Bn. The sectoral estimations account for EUR 52 Bn in buildings, EUR 9 Bn to decarbonize heat generation, EUR 24 Bn for transportation, and EUR 11 Bn to decarbonize electricity generation. Furthermore, the total societal economics of reaching climate neutrality indicate a net positive economic case for society at 26 billion EUR (cumulated benefits of 122 billion EUR on the period 2020-2060, including co-benefits such as air quality, increased physical activity, noise and accidents).

Due to the amount needed, as assessed by Material Economics, and to the long maturity (40 years) for a return on investment, the overwhelming part of this funding and investment will come from private asset holders, an array of investors (from commercial banks to private equity funds and institutional holdings), and from public sector sources at the local, regional and national level<sup>47</sup>. More and more of climate related investments are becoming profitable

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<sup>44</sup> EU Commission Communication

<sup>45</sup> Material Economics is a management consultancy firm specialized on sustainability and resource strategy topics. It advises management of companies and public institutions on how to improve environmental performance while also improving economics. Material Economics is a working partner to EIT Climate-KIC in working with 15 of the most ambitious mayors, municipalities and city communities in Europe to drive transformation across all city systems – from mobility to waste to energy to health and the built environment. More information at: <https://materialeconomics.com/home/startpage>

<sup>46</sup> The study demonstrates that the measures taken would mitigate all the average city emissions, estimated at a level of 390 kt CO<sub>2</sub> per year, for 100 000 inhabitants.

<sup>47</sup> EU Commission Communication, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018DC0773&from=EN>

due to new price relations between the old fossil economy and the new green economy, driven by innovation and new policies/regulations. This is evident as the measures in Clean Energy for all Europeans now are under implementation<sup>48</sup>. These measures are highly relevant for climate transition of cities.

Additionally, private industrial actors of the city perimeter will take operational measures to decrease their carbon footprint or will use mechanisms such as voluntary carbon credits (VERs). Nevertheless, such mechanism should be regulated if the measures are to be recognized as part of the effort done to comply with the Mission's objectives.

However, there is still a "funding gap" between business as usual investment and investment to eliminate the climate policy deficit. This gap must be filled through public funding or innovative business models to secure highest climate standard. The EU has taken the lead in the climate transition and will do what it takes to drive this process through legal and financial instruments<sup>49</sup>. The European Green Deal's Investment Plan - the Sustainable Europe Investment Plan - will mobilize public investment and help to unlock private funds through EU financial instruments, notably InvestEU, which would lead to at least €1 trillion of investments.

Currently, EU funding and financing instruments are extensive, mostly through sectoral support towards cities decarbonisation, acting at different levels (i.e. national, regional and local etc.) and providing different services (technical advice via Advisory Hub and/or investment platforms). The **Mission Board proposes a coordinated approach creating synergies among EU programmes** such as all Cohesion Policy funds, the Digital Europe Programme, Connecting Europe Facility, the Just Transition Fund, InvestEU, and others, **and fostering financial and capital innovation across Europe.**

### Financing the Cities Mission

#### Lending & Blending Facility for climate cities

Between 2012 and 2018, the EIB estimated having achieved already around EUR 152 Bn in urban lending, out of which nearly EUR 26 Bn were invested on climate mitigation actions in urban areas. A wide number of the existing investment platforms backed by the EFSI are directly related with the Mission objectives (focusing on digital, transport, energy and environment). A new opportunity is offered to cities by InvestEU and its five windows, notably the one on 'Sustainable Infrastructure'.

**The Mission Board proposes a 'Lending/Blending Facility for climate cities.** This facility should be a **Joint effort between the EU Commission**

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<sup>48</sup> Available at [https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans\\_en](https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en)

<sup>49</sup> The European Green Deal

**and the EIB<sup>50</sup>.** The aim is to create a holistic platform that could effectively support the Mission and its delivery mechanism, the Climate City Contract. It should work in cooperation with national climate funding and financing instruments, catalysing and enabling relevant autonomy through Member States and regions conditioned to a clear trajectory toward climate neutrality to help innovation at the city level. Such a facility should be set up with the R&I resources for Climate City Mission as a core element with the aim of pooling grants from other EU Commission instruments and loans from the EIB as well as grants from Member States<sup>51</sup>.

### **The role of the European Investment Bank**

The EIB has got a new mandate to serve as the EU "Climate Bank". It will increase its share of financing dedicated to climate and environmental action to reach 50% by 2025 and to increase its investment in these areas to one trillion euro from 2021 to 2030<sup>52</sup>. This is a huge financing capacity, both in terms of the overall "envelope" and in terms of the share allocated to climate action and environmental sustainability. The EIB energy lending will support energy-efficiency projects, including a new European initiative for building renovation, decarbonisation of the energy supply to help Europe achieve its target of at least 32% of all energy consumption coming from renewable energy, electricity grids to help connect new sources of low-carbon energy and innovation in energy production, storage and use – for example in electric cars.

Through its lending, **the EIB would serve as climate investor of last resort and the guarantor of highest climate standard.** By mixing loans and grants to cover the climate funding gap, the risks will be reduced and the capital costs will be manageable. All the EIB initiatives **could be fostered at the national level using the EIB offices** that are located in most of the EU countries.

### **The role of the EU Commission**

As previously said, EU funding instruments are extensive, intervening at different levels, and providing different services. For the next long-term budget, it is expected that there will be €320 Billion euro available in the next Multiannual Financial Framework (MFF)<sup>53</sup> to contribute to climate action. To serve the proposed Mission objectives, the system must become more integrated or coordinated to work effectively with cities in the development of

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<sup>50</sup> EU Com paper, Draft discussion paper on investment strategy v. 25.06.2020

<sup>51</sup> An interesting example, just for inspirational purposes, is provided by the Connecting Europe Broadband Fund, where the EIB is providing EUR 140 million of which EUR 100 million are guaranteed by the EFSI; the CEF provides EUR 100 million; the German, Italian and French National Promotional Banks KfW, Cassa Depositi e Prestiti and Caisse des Dépôts provide EUR 50 million each, and further EUR 30 million come from private investors.

<sup>52</sup> <https://www.eib.org/en/about/priorities/climate-and-environment/climate-action/index.htm>

<sup>53</sup> EU [https://ec.europa.eu/clima/policies/budget/mainstreaming\\_en](https://ec.europa.eu/clima/policies/budget/mainstreaming_en)

climate investment programs. The Mission, which has been developed as a part of Horizon Europe, the new Framework Programme for Research and Innovation, will draw resources from Horizon Europe to support its Research and Innovation component. Up to 10% of the second pillar of the Horizon Europe Programme should be allocated to the five Mission areas, including the one for Climate Neutral and Smart Cities. However, as the objectives of the Mission go well beyond Research, it is expected that other EU programmes including the Structural and investment funds and the financial instruments provided by the EIB as a way of example will be geared to support its implementation. Since the Mission is cutting across many of the Union programmes addressing climate actions, it is recommended that **10% of the financial resources** available under all relevant programmes support the objectives of the Cities Mission. In addition, **a dedicated cities platform**, in which all thematic areas - such as energy, transport, recycling, digital and social inclusion - are covered, including capacity building and technical assistance, should be considered in order to achieve an effective support mechanism for the Cities that sign the Cities Climate Contract.

### **The Role of the Recovery and Resilience Facility**

The new Recovery and Resilience Facility - with €310 billion for grants and €250 billion in loans - will offer new opportunities for cities to finance climate transition plans. The EU climate law proposed by the Commission in March 2020 sets out the strategic climate objectives and targets. Furthermore, the Commission has identified three areas of climate action of high priority to be supported by the Fund: (a) Improving the energy efficiency of public infrastructures, (b) Promoting the circular economy, and (c) Reducing carbon emissions. Member States are now invited to deliver their investment plans and to specify the impact of the measures on the reduction of greenhouse gas emissions, share of renewable energy, the energy efficiency and the electricity interconnection.

On the basis of these priorities and taking into account that cities are causing more than 70% of CO<sub>2</sub>-emission, the Mission Board suggests that the Commission and Member States make the funding of Climate City Contracts an overall priority of the Fund's investment strategy.

### **A "mission label" for cities to get support**

To allow the Mission cities a preferential access to all funding and financial instruments mentioned in this document and to the instruments created during the process, **the Mission will give every city a "mission label"**. This label will allow cities to receive training and support, enabling them to design or have access to mechanisms suited for the mission.

### **Leverage effect of public funding**

Based on the experience of existing programmes **one EUR from the EU budget can generate several EUR of financing**. This is the case when a subsidy from an EU programme is "blended" with a debt-based programme. Another way to achieve a leverage effect would be to offer a guarantee covering

the first loss piece in a debt transaction where the EIB Group would not approve to give a loan because the risk is too high compared the standards of the EIB Group. This **de-risking mechanism** could leverage around EUR 10 for each EUR coming from the EU Budget<sup>54</sup>.

### Financial engineering

A strong effort should be done **to find business models allowing housing units deep retrofitting to limit financial burden on the inhabitants**. Innovative models should be explored such as those explored under the H2020 "Grow Smarter" project<sup>55</sup>. Another innovative approach is to put in place specific revolving funds, with a mechanism of subsidy retention, i.e. the owner does not pay for the renovation cost but, upon selling (disposal) of the property, he pays back the original financial contribution plus an additional premium calculated on the basis of the added value of the house at the moment of selling<sup>56</sup>. This approach is part of the recommendations made by the Task Force "Buildings Energy Renovation" to the French government<sup>57</sup>. Such a financial instrument can be based on long maturity financial instruments. It is therefore consistent with the financing mechanism designed for the EUR 360 billion loan of Next Generation EU, which should be reimbursed with a very long maturity until 2058, by the means of innovative taxation sources.

Ideally, the Commission should encourage Member States to use part of this facility to create local instruments capable to finance deep retrofitting through long term maturity loans attached to properties. Moreover, to achieve the decarbonization goal, the Mission should also foster a change in the market structure via multi-level policy innovations<sup>58</sup>.

### Climate City Contracts

#### Financial planning

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<sup>54</sup> EU Com paper, Draft discussion paper on investment strategy v. 25.06.2020

<sup>55</sup> The H2020 project called "grow smarter" tried innovative solutions that are currently being implemented in Barcelona, Stockholm and Cologne like the private-public investment fund for retrofitting of highly energy intensive buildings in Barcelona (more info at: <https://grow-smarter.eu/home/>)

<sup>56</sup> [https://www.uia-initiative.eu/sites/default/files/2020-03/Ghent\\_ICCARus\\_Journal.pdf](https://www.uia-initiative.eu/sites/default/files/2020-03/Ghent_ICCARus_Journal.pdf)

<sup>57</sup> [https://www.contexte.com/article/energie/info-contexte-plan-de-reliance-les-pistes-du-groupe-de-travail-missionne-par-le-gouvernement-sur-la-renovation-energetique-emmanuelle-wargon\\_118715.html](https://www.contexte.com/article/energie/info-contexte-plan-de-reliance-les-pistes-du-groupe-de-travail-missionne-par-le-gouvernement-sur-la-renovation-energetique-emmanuelle-wargon_118715.html)

<sup>58</sup> For instance, changing the structure of the energy markets, with European and member state support via enabling policies, and shift the decision point so that cities can move to upgrade energy performance (across infrastructure, buildings, distributed technologies) at a scale consistent with the need for portfolio-level capital structures and project financing and the imperative to achieve carbon neutrality.



The investment needed for achieving climate neutrality by 2030 will differ between Member States and between cities due to national and local circumstances including what has already been achieved and what will be defined in the co-creating process for Climate City Contracts. It is also due the efficient use of allocated resources. The Contract must include a realistic strategic planning and an analysis of the business-as-usual scenarios, complemented by an economic appraisal<sup>59</sup> to ensure that any financial support is well invested and efficiently planned throughout the timeline for action. Low-hanging fruits would be particularly effective to reduce the first 15-20% of CO<sub>2</sub>e emission, possibly requiring low to very low investments but catalysing additional investments and unlocking economically unattractive measures within a larger portfolio with deeper impacts.

### Green budgeting

A dedicated investment strategy should include a financial planning interlinked with the CO<sub>2</sub> emission reduction planning and the direct cost savings and co-benefits associated<sup>60</sup>. Many cities worldwide are recognising the **added value of introducing green budgeting as a step in planning an efficient and effective allocation of resources**. Such an approach is promoted by the European Green Deal<sup>61</sup> as well as the OECD<sup>62</sup> to improve alignment of public finances with environmental objectives.

The key element is the account of climate impacts at every step of their financial and budgetary planning. The coupling of such green accounting and financial budgeting offers a tool to benchmark climate investments against their targets. The constant annual (or multiannual) revision allows for continuous adjustments. A further step could be to correlate such data with job and value creation, allowing cities to contribute to the national green budgeting exercises promoted by the European Green Deal, and reporting on advancement on international climate commitments (such as the COP 21 Paris Agreement). Energy Cities offers a description of the lifecycle of the classical municipal budgeting with the inclusion of the green budgeting<sup>63</sup> in the sense of the 2017 final report of the European Commission on how to climate mainstream the EU budget in preparation of the multiannual financial framework. In particular, it suggests the introduction of a "traffic-light system" as a tool to analyse the

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<sup>59</sup> <http://reports.eib.org/eib-group-sustainability-report-2018/sustainable-finance/overlay/standards-and-due-diligence/>

<sup>60</sup> Although cost savings and additional benefits are generated in a longer time period compared to investments.

<sup>61</sup> European Green Deal Communication, [https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)

<sup>62</sup> <https://www.oecd.org/environment/green-budgeting/2nd-Green-Meeting-Summary-Note.pdf>

<sup>63</sup> [https://energy-cities.eu/wp-content/uploads/2019/01/climate-mainstreaming\\_budgets.pdf](https://energy-cities.eu/wp-content/uploads/2019/01/climate-mainstreaming_budgets.pdf)

different EU programmes and their budgets in order to determine which ones are capable of delivering significant climate contributions in the short and long-term.

### Negotiating the Climate City Contract

To strengthen the capacity of cities to develop and implement strategies for climate neutrality, the EU Commission and the EIB have to facilitate and simplify relations and negotiations with the cities. The ideal situation is that **all negotiations on Climate City Contracts could be run by one single EU entity, coordinating the different actors, "a one-stop-shop"**. There are two forms of such a platform to be considered:

- One is the existing form. Currently, technical advice is provided to municipal authorities through the EIB Advisory Hub services. The Urbis (Urban investment Advisory Platform<sup>64</sup>) is set up to provide advisory support to urban authorities to facilitate, accelerate and unlock urban investment projects, programmes and platform, in partnership with DG REGIO. Other advisory platforms as ELENA, JASPERS and more generally the EIB Advisory Hub complement the picture. The InvestEU Advisory Hub could provide the opportunity to the Mission to build on such platforms and (as an example) develop a tailored service or join the (revamped) Urbis<sup>65</sup>.
- An alternative – or a further development of the Urbis – is **a decentralised negotiation platform run by the EIB offices in the Member States with participation from the EIB Advisory Hub services and relevant DGs.**

## 2 Conclusions

The Board, taking into account an estimated financial need of EUR 96 Bn to achieve climate neutrality by 2030 for 100 European cities, each having an average population of ~100,000 citizens, recommends the European Commission to:

- Set up a financial umbrella in the form of **A Lending & Blending Facility for Climate Cities**, working in cooperation with national climate funding and financing facilities with the R&I resources as a core element;
- **Allocate up to 10% of the resources to climate actions** in the next MFF towards the objectives of the Mission and recognize its value within the **Structural and investment Funds'** operational programmes;
- Together with Member States, make funding of Climate City Contracts an overall priority of the investment strategy of the **new Recovery and Resilience Facility**;

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<sup>64</sup> <https://eiah.eib.org/about/initiative-urbis.htm>

<sup>65</sup> EU Com paper, Draft discussion paper on investment strategy v. 25.06.2020



- Grant a **“mission label”** to every Mission city allowing a preferential access to technical support and available funding and financial instruments;
- **A one-stop-shop in the form of a decentralized negotiation platform run by the EIB** offices in Member States;
- **Green budgeting as a city tool to benchmark climate investment against their targets** and aligning public finances with environmental objectives.

## **ANNEX V: SELECTION PROCESS AND CRITERIA**

### **3 Introduction**

As climate change knows no borders, the Mission must be as inclusive as possible, leaving no one behind, and taking into account differences in European cities and their preparedness to act. All cities with high ambitions must be afforded the chance to be part of the mission. Some cities have been working towards climate neutrality for years and will need backing and resources for deployment. Cities just starting their development will need assistance with raising awareness among city authorities and with carrying out research, setting goals and priorities, and understanding and adopting best practices. The process of the Mission must be flexible when it comes to assisting regions and cities most in need of EU guidance.

### **4 Preparedness Levels of Cities**

In order to allow cities at the beginning of the climate neutrality process to participate in the Mission, evaluation criteria must be distinct for the different levels of city preparedness. Cities should also be allowed to develop at their own pace, reflecting local circumstance. For instance, cities with experience in climate projects should have the opportunity to accelerate their efforts as soon as possible, and not be placed in a queue for other cities to reach their preparedness level. Processes should allow cities to be involved in the different development phases at the same time and must be flexible enough to allow different time periods for cities in different phases.

Cities should therefore be selected according to three preparedness levels, namely Beginner, Experienced and Frontrunner cities.



Cities across the three groups should have high ambitions to achieve climate neutrality. Beginner cities, which have performed some small-scale pilots and have some international experience, must still do extensive work to complete their climate strategy, build capacities and partnerships, and access appropriate financial means. They are expected to need more time for the first two phases of the process than Frontrunner cities. The latter will have to adjust their strategies to the mission, but they have already built strong capacities and partnerships, and are part of wide international networks, thus with the potential to enter the implementation of the strategy earlier.

## 5 The Mission Process

The Mission process consists of three phases: the co-creation of the application, the co-creation of the Climate City Contract, and the implementation of the contract. In addition to different preparedness levels, the flexibility of the process allows for different dynamics and intensity of activities. However, at the beginning of the third phase, all cities should start on equal footing.

## 6 Phase 0: Call for Expression of Interest

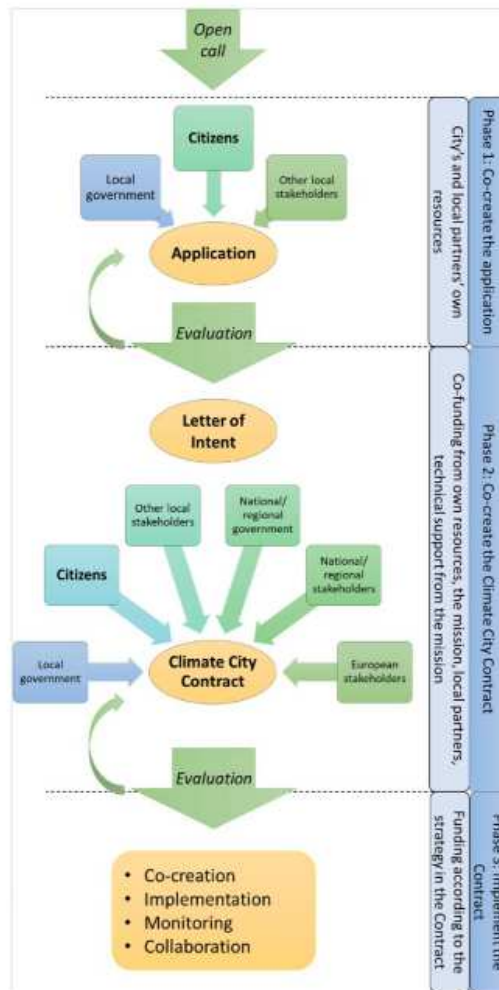
The Mission process would be kicked off with an open call for expressions of interest. Via this call, cities would be invited to become climate-neutral by year 2030 and express their interest in entering the Mission process.

The details of the call should be published on the Europa website of the Mission (and more widely), giving cities enough time to prepare the application. The deadline should be at least six months after call publication. Additional deadlines would be possible if the number of successful applicants and/or geographical coverage were insufficient.

The cities would need to demonstrate their commitment to the objectives of the Mission, according to the checklist in the call. They would need to specify their ambition and scope. They would also need to demonstrate the existence of climate data according to the methodology of the Covenant of Mayors, show commitment to citizen engagement, and define their climate goals (e.g. in the city climate plan). They would be asked to perform self-assessment of their preparedness level and declare themselves for one level: Beginner, Experienced or Frontrunner.

The application should be submitted by the city/metropole authority (or by a legal entity representing it in case the city already started the implementation of climate strategy and established a legal entity for this purpose).

The ambition to increase climate targets and achieve climate neutrality for Europe by 2050 demands openness, inclusiveness and cooperation rather than competition. All cities that fulfil the objective of the Mission and comply with the city definition would therefore be invited to start phase 1. To be most effective, Mission initiatives should seek to engage and encourage those cities taking only their first steps in the climate-positive transition. In this sense, applications should be as realistic and accurate as possible about the local barriers faced by Beginner cities.



## 7 Phase 1: Co-create Application

After a successful eligibility check, cities would be invited to prepare the application for a Climate City Contract. The process should be performed in co-creation with citizens, local authorities and relevant stakeholders.

With cities starting from different levels of preparedness, Beginner cities would need more time to enter phase 2 than Frontrunner cities. The maximum duration of this phase would be two years while the minimum duration for the best prepared cities would be six months.

Cities should receive support from a one-stop shop funded under the European Green Deal Call or other European initiatives. They should get basic information on the Mission methodology and receive support thanks to the sharing of knowledge and best practices, and through communication materials. They should also receive guidance for organising citizens and stakeholder engagement events.

Applications should be evaluated four times, every six months over two years. Inclusiveness as the overarching principle of the evaluation should be achieved through the different preparedness levels, and appropriate geographical balance. At least three cities per Member State should successfully end the phase 1 process and enter phase 2.

The main criteria in phase 1:

- Commitment presented by goals and/or climate plan;
- Ambition proven by the existing strategies, action plans, relevant projects and experience already undertaken, completed or still in progress;
- Citizen and stakeholder engagement;
- Capacity proven by sufficient human resources and established partnerships with NGO, ROs, business, etc;
- International cooperation and participation in EU activities (e.g. Covenant of Mayors).

The same evaluation criteria should be used for all cities, but different thresholds should be applied depending on preparedness level, barriers faced and asymmetries. The conditions and challenges that EU cities face when striving for climate neutrality are different. This should be taken into account when selecting cities, including as concerns:

- population size and demography;
- geography and climate;
- local and national economy;
- urban infrastructure;
- national, regional and local legal frameworks'
- planning culture;
- citizen engagement;
- social models.

The Commission would invite successful applicants to submit the Letter of Intent to start phase 2.

## 8 Phase 2: Co-create the Climate City Contract

Cities would enter phase 2 with the objective to develop a fully-fledged Climate City Contract. At the end of phase 2, all cities should be at the same level of readiness. This implies that the duration of that phase would depend on the preparedness of the city.

In phase 2, cities would receive different types of support. Specific support to develop climate plans into a strategy would be provided to the cities by the one-stop shop platform or other existing EU or national initiatives. Besides their own resources, they might be co-funded by the one-stop-shop platform, the mission, local partners, and through technical assistance. They would be supported also through collaboration with cities in phase 3.

In the evaluation process, the commitment of cities to collaboration/twinning and the commitment from local and national authorities should be reviewed, as well as active participation of citizens in the decarbonization processes, for example as prosumers, owners of buildings and transport means. All chapters of the Climate City Contract should be evaluated together with the implementation strategy. The technical criteria would include:

- barriers faced;
- clearly defined governance, structure, roles;
- investment strategy;
- digitalisation;
- innovation led approach, strengthening of competitiveness;
- sufficient resources;
- benefits for citizens;
- measurable KPIs, quality of measurable data.

Cities would remain in phase 2 until ready to sign the Climate City Contract. A positive evaluation would offer admission to phase 3 and the award of the Climate-neutral City label.

## 9 Phase 3: Implement the Contract

In phase 3, cities would implement the Climate City Contract, including the governance, investment strategy, and deployment of technologies.

Support would be provided to cities by the one-stop-shop platform, public or national financial instruments and by public investors. They would be supported by the financial advisory hub and the Lending and Blending Facility. They would get special support for collaboration with cities in phase 2.

Cities entering phase 3 would be required to share their expertise by collaboration between cities. Forms of cooperation may vary, for example mentor-mentee, twinning (phase 3 to phase 2 city), or teaming (phase 3 cities).

Progress on implementation would be measured regularly, through KPIs and external evaluation carried out mid-phase 2. This would allow time to consider the introduction of new measures addressing any emerging insufficiencies in the inclusiveness principles.

## 10 Reports to the Mission Board

The Mission Board<sup>66</sup> would be regularly informed about the Mission process. This would allow the expert group to perform its tasks on time, e.g. advise on work programmes and their revisions, propose adjustment actions.

Regular reporting to the Mission Board should include reports on outcome of the eligibility check, 6-month reports until the end of phase 1, and yearly reports during phases 2 and 3.

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<sup>66</sup> EU COM (218) 436 states that the Mission Board will advise the Commission on Horizon Europe's elements related to the missions, like the portfolio of R&I activities needed to support their objectives, their implementation and the wider policy measures required to secure the success of the missions.



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### OPEN DATA FROM THE EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

Reaching 100 climate-neutral cities by 2030 is the objective identified by the Mission Board for climate-neutral and smart cities. A Mission in this area would support, promote and showcase 100 European cities in their systemic transformation towards climate neutrality by 2030 and make these cities into experimentation and innovation hubs for all cities.

Cities are the place where decarbonisation strategies for energy, transport, buildings and even industry and agriculture coexist and intersect. The climate emergency must be tackled within cities and by engaging citizens who are not only political actors in a governance structure, but also users, producers, consumers and owners. Through a multi-level and co-creative process formalised in a Climate City Contract, adjusted to the realities of each city, the Mission is fully anchored on the European Green Deal Strategy to make Europe climate neutral by 2050.

*Studies and reports*

