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CIVIC ENGAGEMENT MAPPING APPROACH

Deliverable D8.5

Version N°3

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Abbreviations and acronyms

Acronym	Description
WP	Work Package
D	Deliverable
NZC	NetZeroCities

Summary

Mapping civic environments is the first step to visualizing various individuals, groups and organizations, their roles, relationships, influence and impact on the city's climate transition journey. It is by this process, that cities can make informed decisions on whom to engage in a strategic manner. To enable cities in carrying out this process and move beyond the usual suspects, it is important to empower them with simple intuitive mapping tools and effective guidance on the dos and don'ts to establishing a systemic and inclusive mapping approach.

This report (D.8.5.), provides the guidance to select, implement and mainstream mapping in city climate neutrality planning processes. This guidance called "Companion Guide" is delivered as a package with D.8.4. Civic Engagement Map, which provides a range of curated civic environment mapping canvases and a synthesized NZC mapping tool which Transition Teams in the Mission Cities can implement in both physical and online workshop settings. Together, D.8.4. and D.8.5. make up the 'Civic Environment Mapping Service' which is available on the NetZeroCities Portal.

Keywords

Civic environment approach, Mapping stakeholders, System thinking, Stakeholder participation

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1. Executive Summary

Unlocking concrete and effective pathways toward climate neutrality requires systemic insights drawn from diverse experiences and perspectives. As such, tools and interactions to develop and execute systems thinking skills, such as systems mapping, are essential.

This is especially true for civic environment mapping, which enables the identification, inclusion, participation and collaboration between diverse stakeholders. Their perspectives, experiences, and influence can inform concrete and effective pathways cities can take and enlist in their efforts toward climate neutrality. Mapping as a process enables cities to create a visual understanding of their civic and urban stakeholder ecosystems and leverage them to engage key stakeholders, including citizens, more effectively.

> *" Mapping is a process through which a collective narrative is created that makes visible a way of relating to a territory. All maps are ideological representations, by engaging in mapping we can build new relations, imagine and implement new models."*

> *"La Aventura de Aprender, 2017*[1]

Mapping civic and urban stakeholders is the first step to engaging urban stakeholders in a sustained, meaningful participation towards climate neutrality. This step is crucial in order to then engage urban stakeholders in a sustained manner with meaningful participation. Mapping as a process also has significance as an interactive process that can facilitate discussions and reflections between participants, which can be instrumental in uncovering unseen connections and moving beyond the usual suspects.

This report (D.8.5. Civic Engagement Mapping approach) presents the design process of a "Companion guide for civic environment mapping" and how it is delivered as a service to cities. It builds upon previous work ([Desktop research report on engagement](#)) carried out by WP8 (specifically Task.8.1. & Task.8.2), which has already identified various cases on how to effectively engage citizens and urban stakeholders in a meaningful manner.

Additionally, this report is delivered as a part of the combined 'Civic Environment Mapping Service' together with D.8.4. Civic Engagement Map, which provides a curated set of canvases as a toolset for cities. Together, this two-part service provides practical tools (canvases) and concrete guidance (the Companion guide) as a progressive and holistic way of mapping civic environments.

On a user-experience level, the Civic Environment Mapping guidance and tools are available as a [collection of resources in the NetZeroCities Knowledge Repository](#), so that cities can access both the mapping canvases (D8.4) and the guidance on how and when to use them (D8.5) in one place.

We hope that the Civic Environment Mapping Service will encourage and allow early-stage municipal teams and Transition Teams to gain an enhanced understanding of civic environment barriers and opportunities the benefits that can be reaped from their mapping and to cultivate wide and inclusive networks and coalitions for action toward climate neutrality.

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[1] http://laaventuradeaprender.intef.es/documents/10184/67475/Como-hacer-un-mapeo-colectivo

2.   Scope of this deliverable

NetZeroCities supports the EU's Mission of "100 Climate-Neutral and Smart Cities by 2030" under the Horizon Europe programme. The NZC consortium acts as a service-oriented platform and provides support to the 112 Mission Cities that are striving to become climate neutral by 2030.

New and existing tools, resources and expertise have been developed and are being promoted via the Mission Platform, which are now available to the cities. Within WP8 – 'Engaging citizens and urban stakeholders' of the NetZeroCities project, dedicated services are being designed in response to cities' needs to engage stakeholders in an inclusive manner.

As part of Task.8.2. Engaging the whole city, this Deliverable 8.5. produced a "Companion Guide for Civic Environment Mapping" that is meant for teams within cities that are working on climate neutrality, including Early-Stage Municipal Teams and Transition Teams (see Annex 2). Together with the toolset of canvases produced in D.8.4, the Companion guide forms a global and straightforward service for civic environment mapping that cities can make their own easily.

This deliverable also compliments D.8.1. Desktop research on engagement, where several civic engagement tools, methods and case studies have already been identified and documented by T8.2, T8.3 and T8.4. D.8.5. hence focuses on mapping approach to provide guidance to select the right mapping tools at the right moment in the Climate Transition Map as prerequisite to applying more elaborated engagement methods identified in D.8.1.

3.   Design Process (Methodology)

3.1.   Understanding the mapping needs of the users

The starting point of the 112 Mission Cities regarding climate action varies greatly from city to city. The same is true for each city's experience with civic engagement and stakeholder context mapping.

At the very outset of the design process, there was a collective understanding that for municipal and transition teams to be able to embed a civic engagement mapping approach to their work, they need:

1.   Guidance on why and how they should approach civic environment mapping and
2.   State of the Art Methods on how to execute civic environment mapping in their city contexts

Reflecting on the above, the team has developed D.8.5. Civic Engagement Mapping approach, which provides the guidance mentioned above, while D.8.4. Civic Engagement Map provides cities with a selection of intuitive canvases that enable them to action civic environment and engagement mapping in their local contexts.

The guidance and methods have responded to needs raised in previous needs assessments carried out within NetZeroCities, through city and City Advisors' interactions and through City Panels, during which testing sessions have been performed. Additionally, these reports have been aligned with the Climate Transition Map and will reinforce the processes that cities are carrying out in developing their Climate City Contracts.
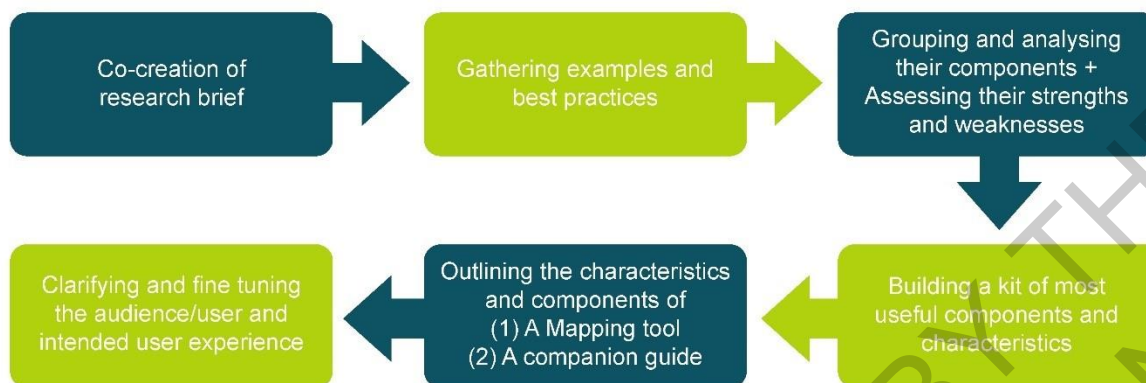
3.2. Design Research and Concept Ideation Process

Figure 1: Design process flow

Our design work started with the co-creation of a research brief, followed by independent research conducted by partners on examples and best practices of stakeholder frameworks, ecosystem maps, mapping processes and/or research on stakeholder engagement/network building, which had specific components that could help:

1. Identify interconnections and barriers between stakeholders,
2. Enable stakeholder relationships and networks to be built.

After gathering these examples and analysing them together, we built a kit consisting of the most useful components, which cities can use to construct their own tactical civic ecosystem mapping process or stakeholder engagement approach.

The analysis consisted of:

● grouping elements of the examples in the following categories: 1) Stakeholder Framework, 2) Ecosystem Maps, 3) Mapping Processes, and 4) Other Research Findings,
● assessing the relative strengths and weaknesses of each example and their components, i.e., the steps, process, tools, elements of the framework, etc., as well as their capacity to enable:
  1. identifying interconnections and barriers between stakeholders,
  2. cultivating stakeholder relationships and networks.

We were then able to reorganise the insights to outline the characteristics and components of:

● A general/modular mapping tool,
● A companion guide.

In addition, we specified what should be included in the design of the final product and service as well as what should be avoided, giving the learnings of prior failures. The exercise enabled us to define key design principles and constraints for both the Mapping Tool and the Companion guide, identifying:

1) What they should enable (i.e., their components as a service or tool), which was for the Companion guide:

• Enables an understanding of the tool
• Enables shared language for doing this work across all cities
• Enables clarity about any abstract concepts embedded into the tool

- Encourages contextual reflection
- Enables the practical use of the tool
- Enables users to easily find relevant material / guidance
- Offers step-by-step instructions/guidance
- Offers grounded examples
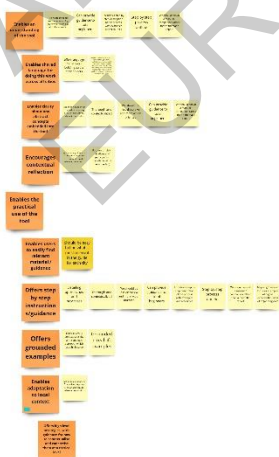- Enables adaptation to local context

2) How they should enable, for whom and under what circumstances (i;e, their characteristics), which was for the Companion guide:

- Allows individuals / teams of any experience level -beginner to expert - to productively gain from engaging the mapping tool / process
- Allows teams of any size to design how they use the mapping tool / process to fit their needs
- Allows individuals / teams with any level of resource to design how they use the mapping tool / process to align with their resource levels
- Allows individuals and teams of any language to gain instruction and map in their native language
- Available in multiple languages.
- Demands use of the tool in ways that are highly actionable.
- Requests that user leverage multiples values/uses of the tool and process, including: full mapping, cultivating a network, and/ or getting a clearer picture
- Discourages overly silo'd use of the mapping tool / process
- Encourages users to situate their use of the tool / mapping process within conditions that can enable 'success'
- Encourages users to find what is most relevant in the guide specifically for them
- Encourages a step-by-step process that begins wherever each city is at
- Practical - No jargon, this is the 'how to'!
- Visually compelling
- Ideally, it should be highly visual (sketches, schemes...) rather than highly textual - avoid information to get lost in translation
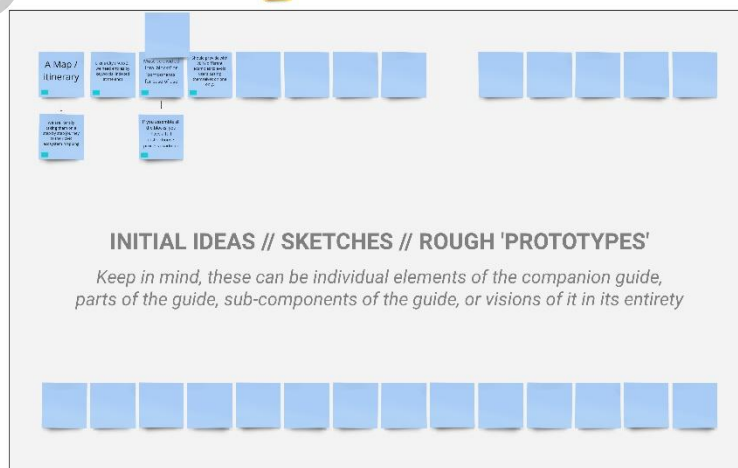
Figure 2: Design principles and constraints of the Companion guide

Collectively, we then decided we needed to clarify and fine-tune the audience/user and intended user experience, before we could adequately move forward with a robust product and service production. We crafted a more thorough Design Brief, which laid out in detail what needed to be resolved, for whom and how, to successfully enable cities to map effectively.

This design brief led directly to the development of our two products (Mapping Canvases and Guidance), which can be delivered in concert as a coherent, effective, and impactful civic environment mapping service.

Annex 1 of this report "Summary of User Research, Synthesis, and Initial Concept Ideation Process" provides the complete design process documentation.

3.3.   Testing with NZC City Practitioner Panel

In January 2023, the Civic Environment Mapping Service was presented to, and tested with, the City Practitioner Panel.

Panel members unanimously agreed that the format of the service was easy to grasp and useful for all urban and climate projects that the city is working on. The main attributes of the mapping tool and service that City Panel members valued were:

- Mapping as a process, next to creating a visual picture of the city's civic stakeholder environment, is also an opportunity for interaction and co-creation processes,
- Mapping processes bring together varying perspectives, and when done in a diverse, interdisciplinary group of participants, can lead to rich conversation and a deeper understanding of the complexities and interdependencies.

However, it was raised by the panellists that mapping processes are limited to the knowledge of the participants, and hence, ensuring that mapping is carried out by a variety of actors (from the Transition Team. including members of the municipal team, and other external stakeholders invited to the mapping process) is crucial to ensure that a broad variety of perspectives is represented and enrich the process.

Additionally, the panellists mentioned that mapping processes must also facilitate discussions on the inclusion of marginalised and vulnerable groups who are often left behind. These fundamental principles of mapping have been integrated into the Companion guide.

The City Practitioners Panel also recognised the strengths of this service being actionable both in physical and online settings. In the latter case, online platforms such as Miro[2] have been an effective medium to organise virtual mapping workshops. In both cases, the resultant 'maps' are also crucial living documents for the city, allowing users to continue to add, revisit and engage with the maps, thus, refining on an ongoing basis their overview and understanding of the evolving local context.

Given that the service brings together existing methods from different sources, and comes in an easy-to-use format for most cities, the panellists agreed that this increases the uptake and application. The advantage of this service, as flagged in the testing process, is that it brings together a pre-selected combination of tools and guidance as a one-stop ready-to-use service for the cities.

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[2] The platform's website: miro.com

4. Companion guide for civic environment mapping

4.1. The city's journey through the service

Together with the toolset of canvases, the Companion guide forms a global and straightforward service for civic environment mapping that cities can make their own easily.
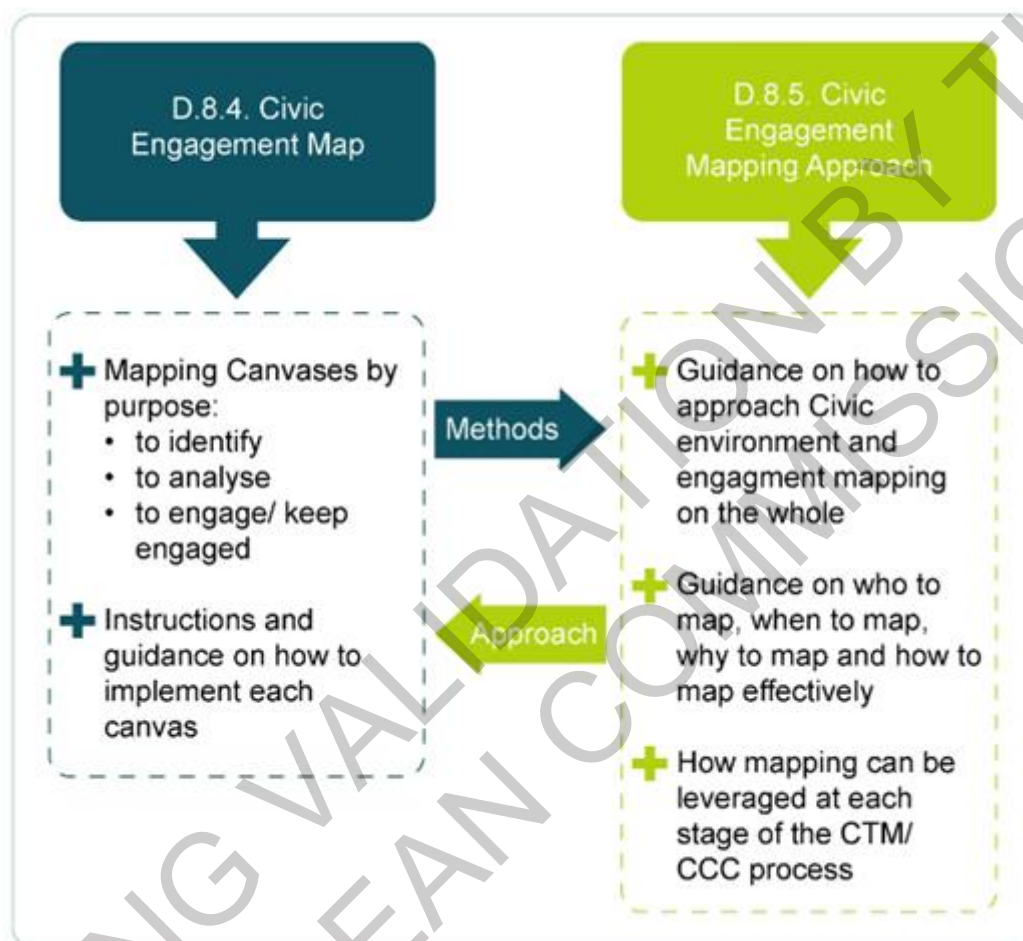

Figure 3: Civic Environment Mapping Service logic

The companion guide is meant for teams within cities that are working on climate neutrality, including Early-Stage Municipal Teams and Transition Teams. In addition, the service encourages users to invite citizens and stakeholders - beyond the Transition Team - to the mapping activities, whenever it makes sense, thus making the service inclusive by design.

We acknowledged that users might have different degrees of familiarity with civic environment mapping exercises. The service can give support to both beginner or more advanced cities, who can use it (depending on where they start):

- to learn (more) on how to approach civic environment mapping for engaging citizens and local stakeholders, in the context of their trajectory towards climate neutrality,
- to identify leverage points of civic environment mapping at each stage of the Climate Transition Map and Climate City Contract process,
- to get deeper insights on who to map, when to map and how to map effectively

Cities and transition teams with previous experience in civic environment mapping can use our mapping approach to observe and question their current mapping practices and, if needed, align them further to their climate neutrality ambition. In the spirit of sharing among the NetZeoCities community, all users can contribute actively to the service deployment and future improvements by sharing about their mapping activities and outcomes as well as their reflections and learnings along the process.

The team has identified the moments in the Climate Transition Map when mapping needs occur to users. Mapping the civic environment - to engage citizens and stakeholders, and activate an inclusive ecosystem for change -, is essential to:

1. **build a strong mandate** and new models of governance, including the creation of a multi-stakeholder transition team,
2. **understand the local ecosystem**, levers of change and key obstacles, and
3. **co-create** - and increase buy-in in - **an inclusive and multi-stakeholder portfolio** of actions.

No other mapping needs were identified in the following steps of the Climate Transition Map (Take action, Learn and reflect, and Make it the new normal), but the way cities and Transition Teams will have mapped their civic environment at the precedent stages will of course directly influence what actions they undertake, with whom and how. In return, the intermediary and progressive results of their climate actions will help the users **learn from and reflect on** stakeholders' engagement. This will create occasions for the users to review their mapping results and adapt them to the evolving situations and systemic changes, in an iterative process. By doing so, users - individually or as a team - can develop and execute new systems thinking skills, where the use of mapping tools and approaches becomes progressively a **new normal** and they can combine the best of these with other tools and methods for engaging the whole community.
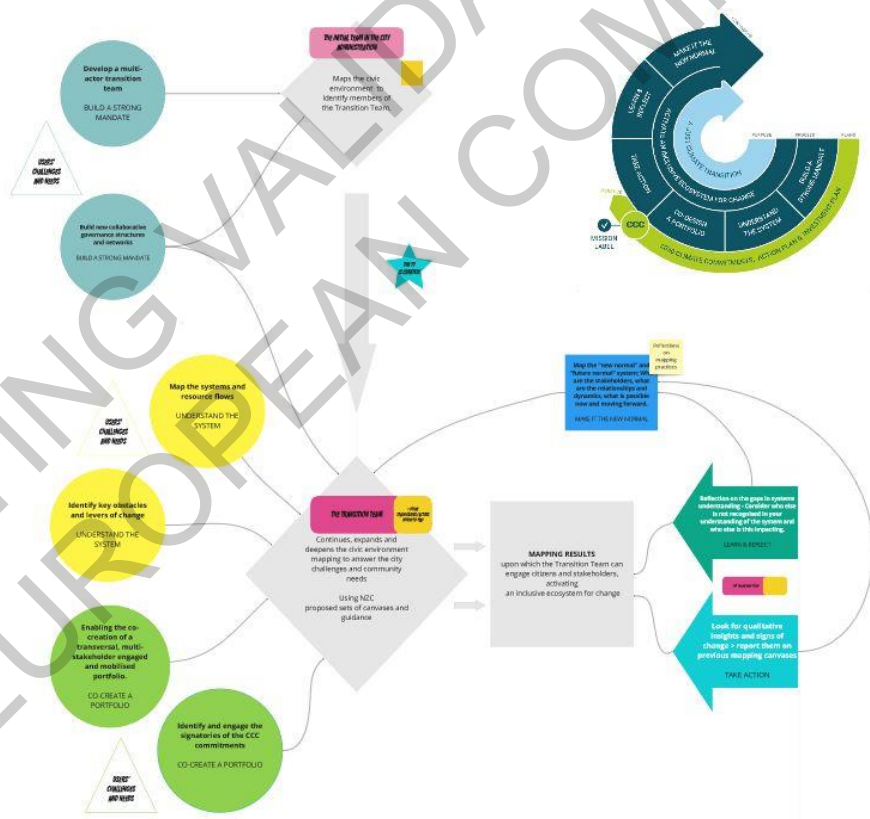

Figure 4: Users' journey and mapping needs through the Climate Transition Map

4.2. How NZC delivers the service

The service is available for users through:

- **A collection created in the NZC Knowledge repository**
  The "Companion guide for civic environment mapping" has been made available for cities on the knowledge repository of the NZC portal and included in a collection of resources together with all related D8.4 mapping tools. In this way, cities and all members of the portal can access in one single place both a mapping toolset and guidance on when and how to use it. Filters and tags will be created so it is easily accessible within the repository.
- For use in online workshops, **a <u>Civic Engagement Mapping Canvas and Guide Miro Board</u>** has been set up to enable cities extract their chosen canvases for use onto their own online whiteboard tools such as Miro and Mural. The Companion guide is also accessible through this Miro board.
- **Ad hoc support by City Advisors**
  City Advisors, as part of the working process with Mission Cities, are facilitating several workshops where this service can be applied. Additionally, the city team may disseminate the mapping canvases and companion guide within their internal organizations.
- **Dissemination through the NZC website and social media handles**

Through this channel, the service will reach a wider audience of researchers and practitioners who will be able to implement the methodologies.
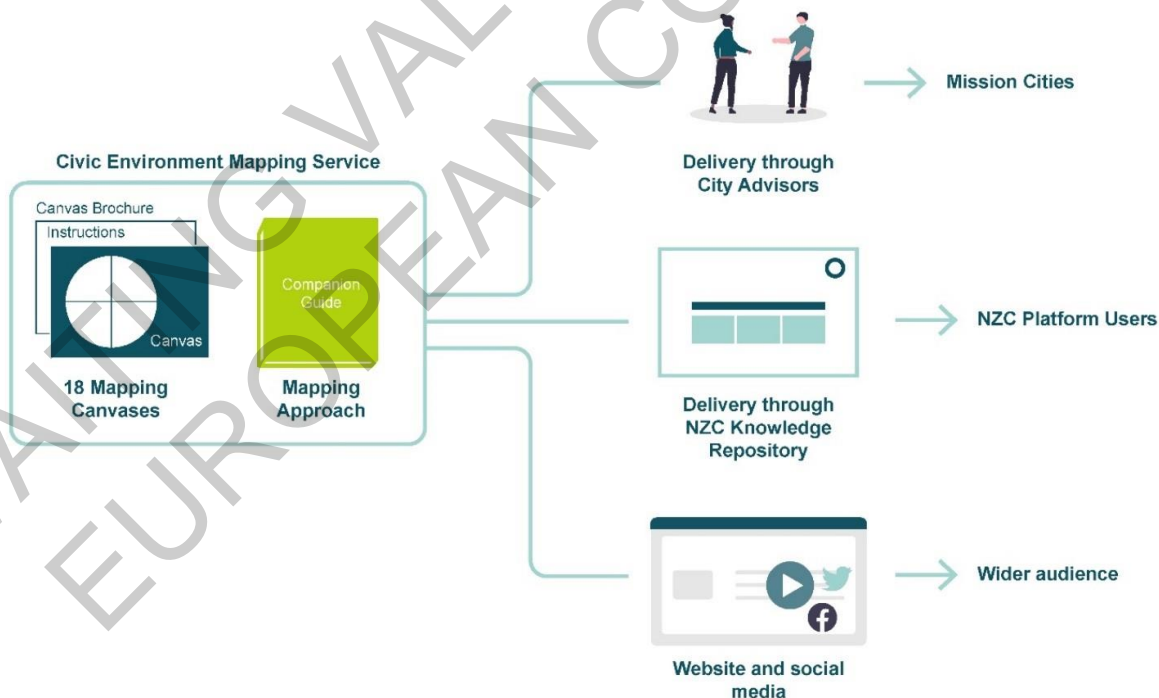

Figure 5: Civic Environment Mapping Service Delivery

5. Next Steps

Throughout the last 18 months, the team has designed, developed, and tested a Civic environment mapping service, consisting of mapping tools and guidance, that is now available on the NetZeroCities portal and ready to be used by all interested cities.

Although the service is delivered to cities in an easy-to-use format, it was raised in the City Practitioner Panel that service delivery often requires specific support. For Mission city teams to fully uptake the service, this support will be brought:

- through City Advisors working with them,
- through training programmes and capacity-building sessions delivered by NetZeroCities.

In addition, a space could be created in the NetZeroCities portal, enabling cities to share experiences and results in applying the service. This would help municipal, and Transition Teams find inspiration and learn from each other, in a learning community from which the NetZeroCities consortium partners could also learn for fine-tuning the service.

In a broader perspective, it will be also key to further seek for and develop synergies between Civic environment mapping services and:

- the other NetZeroCities services for citizen and stakeholder engagement, especially Spaces for encounters (as, for example, collective mapping sessions could be held in this spaces) and NetZeroCommunities digital space (for the opportunity they have to inform and leverage each other),
- other services developed by WP6 Systemic innovation and WP9 Social innovation (because of their common fields of research and practice).

6. Conclusion

To be able to create and activate the inclusive ecosystems for change required to achieve the objective of Climate neutrality in 2030, cities need to be equipped with useful resources, tools, methodologies and guidance, facilitating their effort for engaging deeply citizens and urban stakeholders in a meaningful and co-created portfolio of actions. To support cities in their objectives, NZC WP8 partners have designed and developed several services for citizens and urban stakeholders' engagement, among which task 8.2 "Engaging the whole city" has focused on inclusive civic environment mapping tools and approaches.

In this framework, this report "Civic engagement mapping approach" describes the methodology and design process of a Companion guide to civic environment mapping, as well as the way it is delivered to cities in a comprehensive and easy-to-activate Civic environment mapping service, together with a set of mapping tools described in D84 Civic engagement map.

Now available for all cities as a collection of resources in the NetZeroCities knowledge repository, the service will be promoted through NetZeroCities communication and dissemination channels and brought to Mission cities through their City Advisors as well as through training and capacity-building sessions.

We hope that climate transition teams in cities will leverage this service and that users - individually or as a team – will execute and develop new system thinking skills and progressively integrate mapping as a new normal practice in their daily work.

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7.   Bibliography

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ANNEX 1 Summary of User Research, Synthesis, and Initial Concept Ideation Process

The team began by creating a research brief, which enabled our team to source important insights. The brief was for each partner to:

> "Please identify 2-3 examples of stakeholder frameworks, ecosystem maps, mapping processes, and/or research on stakeholder engagement / network building. Please try to find examples which have specific components of parts of the framework, map, process, or research insights that can help:
>
> 1. Identify interconnections and barriers between stakeholders
> 2. Enable stakeholder relationships and networks to be built.
>
> These examples will help us rebuild a kit of parts and instructions based on the most useful parts of these frameworks, maps, and processes, which cities can use to construct their own tactical civic ecosystem map(ping) process / way to engage stakeholders."

In response to this brief, partners conducted independent research and returned as a group to co-synthesise the examples and findings that were discovered.

- Findings were initially colour coded according to the following categories: (1) Stakeholder Framework, (2) Ecosystem Maps, (3) Mapping Processes, and (4) Other Research Findings.
- Then, the key elements of the colour coded findings were coded to assess relative strengths and weaknesses of each example and the components of each example, i.e., the steps, process, tools, elements of the framework, etc., according to each examples capacity / capacities to enable:
    - Identification of interconnections and barriers between stakeholders; and
    - Cultivation of stakeholder relationships and networks.
- A major insight from this initial coding of best practices on civic environment mapping was that cities need both modular tools to conduct modular mapping exercises as well as clear and concise guidance for (1) how to conduct variations of mapping processes and (2) more generally, how to think strategically and in action-oriented ways about their mapping processes.

With our coded research insights and the major insight about cities needs, we were able to reorganise the insights to outline the characteristics of:

1. A general/modular mapping tool
2. A companion guide

This included specifying what we ought to ensure is included in the design of our final product and service as well as what we should be mindful of avoiding, given learnings from prior failures.

We then synthesised these characteristics into Design Principles and Constraints and began to ideate initial ideas of what kind of product / service could achieve these principles and constraints.

The key design constraints we identified were:

- Tools we offer should downloadable and usable on the NZC Portal
- Our mapping offering should mesh and be interoperable with other mapping guidelines and services from the NZC platform.
- Our mapping offering should offer language accessibility.
- The tools should allow for facilitated and independent use.

The key design principles we identified for the **Mapping Tool** were:

What It should Enable:
- Enables mapping of (eco)systems:
 Doesn't have to map the entire system all at once, but does need to situate the mapping in a systemic way
  - Builds a model / map around a specific focus
  - Maps actors / stakeholders
  - Maps "assets"
  - Maps Connections / Relationships
  - Maps barriers and opportunities
- Enables a de-emphases of seemingly irrelevant / neutral data
- Enables "Leverage Points" to be revealed / recognised
- Enables visualisation of complex information

How it should Enable, For Whom, Under What Circumstances

- Demands a systems approach
- Demands a participatory / co-design mapping approach (which links to broader participatory processes)
- Requests evaluation and appreciation of information in context
- Demands an action oriented approach to mapping
- Demands consideration of the limitations of "models" / modelling ("all models are wrong, but some are useful)
- Encourages intuitiveness and creativity
- Encourages iterative process
- Encourages resilience, i.e., failing, learning, and trying again.
- Allows equitable use regardless of mapping experience / city resources (See "Consider accessibility at every turn).
  - Allows each city to use the tool, regardless of where they are already at.
  - Offers flexibility for how to use + degree of complexity taken on + amount of time invested
  - Practical: Make the complexity accessible and practical; it should serve a purpose and feel understandable and useful
- Allows for adapting to different time frames in different cities
- Encourages taking sufficient time: While not everyone has infinite time to work on this, encourage users to still invest sufficient time to garner genuine benefits of process
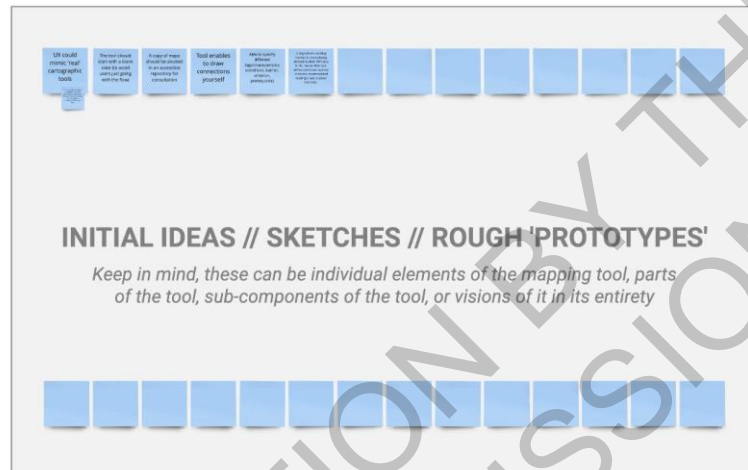
The key design principles we identified for the **Companion Guide** were:

What It should Enable:

- Enables an understanding of the tool
- Enables shared language for doing this work across all cities
- Enables clarity about any abstract concepts embedded into the tool
- Encourages contextual reflection
- Enables the practical use of the tool
- Enables users to easily find relevant material / guidance
- Offers step-by-step instructions/guidance
- Offers grounded examples
- Enables adaptation to local context
  - Offers high level strategies, with guidance for how to contextualise and concretise them at a tactical level

How it should Enable, For Whom, Under What Circumstances

- Allows individuals / teams of any experience level -beginner to expert - to productively gain from engaging the mapping tool / process
- Allows teams of any size to design how they use the mapping tool / process to fit their needs / capabilities
- Allows individuals / teams with any level of resource to design how they use the mapping tool / process to align with their resource levels
- Allows individuals and teams of any language to gain instruction and map in their native language
  - Available in multiple languages.
- Demands use of the tool in ways that are highly actionable.
- Requests that user leverage multiples values/uses of the tool and process, including: full mapping, cultivating a network, and/ or getting a clearer picture

- Discourages overly silo'd use of the mapping tool / process
- Encourages users to situate their use of the tool / mapping process within conditions that can enable 'success'
- Encourages users to find what is most relevant in the guide specifically for them
- Encourages a step-by-step process that begins wherever each city is at
- Practical - No jargon, this is the 'how to'!
- Visually compelling
- Ideally, it should be highly visual (sketches, schemes...) rather than highly textual - avoid information to get lost in translation

Collectively, we decided we needed to clarify, precisely, details about the audience/user and intended user experience before we could adequately move forward with thorough product / service production. So,working together, we crafted a more thorough Design Brief, which laid out in great detail the needs we needed to resolve, for whom, in which kinds of ways to successfully enable cities to map effectively. This document was co-created in such a way that we were able to identify, name, and respond to open questions.

DESIGN BRIEF: NZC Civic Ecosystem Mapping Tool(s)

I. A specific **Civic Ecosystem Mapping Template**/ canvas/ visual framework
II. A "**Guidebook**" to inform/ enable / encourage effective execution of civic ecosystem mapping and synthesis and use of P2P Space

DESIGN BRIEF: NZC Civic Ecosystem Mapping Tool(s)

Open Questions:

Purpose:
What does the city do with this output?
What are the cities expected to learn in the process of making this map

Audience:
Why / When will this tool be used and how will that affect who uses it and how they use it?
Does working on the map require any specific skills or knowledge?
Are different roles needed within the team undertaking the mapping?
Given why, when, and how these tools are expected to be used, who is the expected lead to put the map to use?
Who/what motivates this audience? De-motivates them?
What kind of emotions should this project make the audience feel?

Artefact(s)
What do the outputs look like?
Format(s)

Risk Mitigation
What is the best case scenario of applying this map and How will we measure success for this project?
What are the risks and worst case scenario of applying this map
Considerations/ Connections with other WPs and outputs that are being produced there

Design Principles and Constraints
Components | What it enables:
Characteristics | How it enables, for whom, under which circumstances:

1

This brief led directly to the development of our two products (Mapping Canvases and Guidance), which can be delivered in concert as a coherent, effective, and impactful civic environment mapping service.

ANNEX 2 - Companion Guide for Civic Engagement Mapping

EU CITIES MISSION

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COMPANION GUIDE FOR CIVIC ENGAGEMENT MAPPING

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> ❝ *Mapping is a process through which a collective narrative is created that makes visible another way of relating to a territory, producing other forms of knowledge, other ways of accessing it and, in short, challenging the dominant narratives. Every map is an ideological representation, by engaging in mapping we can build new relations, imagine and implement new models.*

Vivero de Iniciativas Ciudadanas in "Cómo hacer un mapeo colectivo"

> ❝ *All models are wrong, but some are useful.*

George E. P. Box

INTRODUCTION

In order to accelerate their transition to climate neutrality, cities need to cooperate with their full local ecosystem of actors - including citizens, civic groups and stakeholders from the private and public sector – who need to be positively engaged in the challenge as a broad coalition of actors joining their forces. Together, they will need to build new governance models, reflect on and co-create new solutions, co-decide upon and embrace climate actions for change, as a whole community and in a systemic civic environment. As far as citizen and stakeholder engagement is concerned, not all cities start from the same point. Some have already adopted a culture of engagement and established strong partnerships with their local stakeholders, be it on climate or other issues. Others are less advanced and will need to do more work in this area.

One of the starting points for achieving such a transformation in governance models is to take a fresh look at the actors in the community, to identify them more broadly – including vulnerable groups or the ones that are usually left out of the conversation –, and to understand better their needs, resources and motivations, as well as how they interact together, including which dynamics enable or block change in the city journey towards climate neutrality.

Mapping civic environments is the process by which cities can make informed decisions on whom to engage in a strategic manner. This guidebook describes how the use of simple and intuitive civic environment mapping tools, as well as a better understanding of mapping approaches and key principles, will help cities and Transition Teams develop the necessary system thinking skills to navigate the richness and complexity of their local ecosystem.

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INTENT OF THE COMPANION GUIDE

WHO IS THIS COMPANION GUIDE FOR?

This guide is intended for Transition Teams in cities, as they work on exploring and understanding better their civic environment and ecosystem of actors, to activate – and engage with - an inclusive and multi-stakeholder coalition for change. It will guide them at the initial phases of the Climate Transition Map and in the elaboration of their Climate City Contract, providing them with key insights on civic environment mapping as an approach, and specific recommendations on how and when to use a collection of mapping canvases accessible in the NetZeroCities knowledge repository.

NetZeroCities points of contacts in cities and core municipal teams can also use this guide, as their work on creating their Transition Team, as described in the NetZeroCities Transition Team Playbook, as the same approach and mapping tools can be used in this objective.

This guide can also be of interest for citizens and local stakeholders who would like to know more on the topic of mapping and can contribute to open and participative mapping sessions with Transition Teams members.

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WHAT IS THE INTENT OF THIS COMPANION GUIDE?

For city teams to be able to embed a civic engagement mapping approach to their work, they need guidance on why and how they should approach civic mapping and how to execute civic environment mapping based on a state-of-the-art methodology. To that end, this guide provides detailed guidance on the preconditions required for mapping and the types of stakeholders, resources and relationships that need to be mapped.

This guide intends to increase confidence and capacities of city administrations and Transition Teams in designing their own approaches for civic environment mapping and undertaking mapping activities adapted to their own local context. It provides guided access to a collection of tools for mapping, which is not exhaustive but aims to cover different mappings needs in different situations.

HOW SHOULD THIS COMPANION GUIDE BE USED?

As is the case across this Mission, there is not one size fits all - but there is much that we can learn together on how to map city civic environments.

This also means that this guidebook is designed as a working document - as opposed to a finalised report - to be iterated and completed collaboratively with cities embarking on the Mission to climate neutrality. We very much welcome feedback from cities and other actors and stakeholders across society, so that we can evolve and improve this document over time, as the Mission progresses and we continue to learn together. Please share your thoughts, learnings and questions via the NetZeroCities platform or through missioncities@netzerocities.eu.

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KEY PRINCIPLES AND BENEFITS OF MAPPING

Mapping is a never-ending and always incomplete process. Because local ecosystems are complex and living, changing fabrics of interacting actors, it is not possible to capture and describe once and for all, all elements and dimensions of this complexity. This may seem daunting at first sight, but each mapping exercise can nevertheless yield incredibly useful, yet incomplete, understandings of your environment. Thus, there is tremendous value in conducting multiple different mapping approaches and iterating the same mapping approach multiple times. By doing so, mapping processes and results will co mplete and enrich each other and progressively bring more and more useful insights.

Mapping enables visualization of complex information. Through mapping you will be able to see better how stakeholders interact in your civic environment and to uncover power dynamics at stage. It will help you establish connections, link agents and initiatives, federate people's needs, expectations and capacities to act.

Mapping is a powerful means of interaction. It supports dialogue and common reflection around specific problems, objectives, or challenges. Inviting external stakeholders and citizens to participate in collective mapping sessions, where they can bring their own and unique perspective to the discussions, will enrich both the process and results. These collective sessions can be run online, or even better, during in-presence gatherings!

Mapping is a means of collecting and communicating information. Through mapping, you will gather precious knowledge and experiences of multiple stakeholders and uncover so far unknown barriers and opportunities for change. Mapping results are important documents to keep record of, as they can meaningfully inform shared decision-making.

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DEFINING YOUR CIVIC ENVIRONMENT MAPPING APPROACH

Defining the intent

You will need to first define the central challenge or question that you are trying to answer. Once you have your challenge or question and have decided on an entry point you can start mapping the elements within that approach.

For example, let's imagine you want to map the civic ecosystem of a neighborhood in relation to a retrofit initiative. You might want to start by mapping the environmental conditions of that neighborhood and include information about housing types, energy efficiency, ownership, etc. After that, you might want to map the stakeholders, from homeowner associations, energy companies, social housing agencies or community organizations to businesses and public entities. Lastly, you might want to complete the map considering the financial, human, knowledge, networking, and technology resources that are available.

Defining the mapping team

You will then need to define who will take part in the mapping exercises. Depending on your central challenge or question, it will be of great interest to invite some actors who hold critical information on the topic, including your colleagues from other departments in the municipality who might not be part of your Transition Team. As a same mapping can be iterated several times, some groups of participants can complete the mapping in later stages, but keep in mind that mapping together will nurture dialogue and help different actors reach a sense of shared understanding.

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Defining the process

Finally, you will need to define if the mapping process will be carried out in person or online. This will depend on how one or the other way will impact participation and how participants are able to engage. You will also need to define who will facilitate the process, how information will be shared and captured, and how you will keep record of the mapping results.

Key questions that might guide you in the mapping process

- Who is most affected by climate change in your city?
- Which voices don't normally get heard? How can you extend mapping to the unusual suspects?
- To what extent have you integrated perspectives from outside the municipality?
- What resources do other organizations have, that might be accessible? Who do you need to convince to get additional resources?
- Who are your allies inside and outside of the city?
- Who are the most powerful actors when trying to transition to climate-neutrality in your city?
- Who are the biggest CO2 emitters in your city?
- Who are your frontrunner citizens or civil organisations?
- What groups, like energy communities or food cooperatives, have experience with transformative innovation?

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THE NETZEROCITIES COLLECTION OF CANVASES FOR CIVIC ENVIRONMENT MAPPING

PRESENTATION OF THE COLLECTION

This NetZeroCities collection consists in a synthesized NZC Civic Engagement Mapping Tool, which you can start with, and an additional range of 15 curated mapping canvases that you can use in complement. All canvases can be used in both physical and online workshop settings.

A. Identifying and exploring stakeholders

This category of canvases will help you map broadly stakeholders in your civic environment and should be used in the first steps of your mapping processes. They will help you visualize stakeholders by sectors, who are your potential allies, audiences and influencers, what are their level of engagement, as well as their interdependencies and interactions. These processes are relatively easy to execute and provide a basic impression of relevant urban stakeholder mixes to be considered in the given project, initiative or action. As the results of these mappings will feed the following ones, you must try, at this stage, to be as inclusive as possible. To do so, don't hesitate to repeat the exercise multiple times with different type of stakeholders contributing to the process. As new insights are gathered and the context evolves, you might want to update your maps to include new stakeholders or changing roles.

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B. Analysing Interest and Motivation of Stakeholders

Once you have mapped your stakeholder ecosystems, the canvases in this category can help you dive deeper into the characteristics of the identified stakeholders: how they are impacted by the measures, what are their roles and responsibilities, what power they hold, what are their interests, needs, and motivations to join the collective effort towards climate neutrality. These canvases also help identify key entry points for engaging with stakeholders in the next steps.

C. Engaging Stakeholders and keeping them engaged

After analysing your stakeholders, you are ready to start your engagement or take your existing efforts to the next level. The canvases in this category will help you structure and map out actions to realise this engagement.

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The collection of canvases is accessible in the NetZeroCities knowledge repository and on this Miro Board. All the canvases can be used online or in person. If you want to use them during online workshops, accessing them through Miro will enable you to copy-paste them in your own boards, and then run interactive mapping sessions with participants. In this way, you can also easily keep track of the results.

To use the canvases during in person workshops, you can print them, draw them on paper boards or reproduce them on bigger supports that can be used during events in public spaces. Let your creativity speak! Moreover, as the canvases contain a reduced amount of text, you can easily translate their contents into your local language, to avoid any language barrier to users.

These canvases were initially created by different organisations or projects and are either in open source or under Creative Commons licenses. We propose them here in their original versions, but you can modify and adapt them following your own purposes, needs and local context. We are curious to know how you will use these tools and perhaps make them evolve. Please share your learnings and ideas via the NetZeroCities platform or through missioncities@netzerocities.eu.

WHAT'S IN A CANVAS: FORMAT AND CONTENT

All mapping canvases in the NetZeroCities collection are presented in the same 2-pager format. One page is the canvas itself and the other page provides detailed and clear instructions on how to use it. This includes:

- The purpose of the canvas
- Its advantages and shortcomings
- Recommendations on when to apply it in the Climate Transition Map
- Links to other associated or complementary canvases in the collection
- Practical instructions for use (estimated duration, needed material, group size)
- A step-by-step implementation process

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STAKEHOLDER POWER CATEGORIES (Canvas)
Preparations and Instructions

Map based on stakeholder impact and interests | Map based on stakeholders roles | Map based on city priority areas and project themes | Map certain stakeholders or target groups in detail

Overview
- **Developer:** The Mitre Corporation
- Link to original template

Purpose
After a comprehensive overview has been created of relevant stakeholders, this canvas will help to categorize and prioritize those stakeholders in terms of power and impact. Use methods listed below before applying this canvas.

Advantages and shortcomings
- Advantage: the canvas can map and make explicit the power relations between the stakeholders involved
- Shortcoming: discussing power openly can be uncomfortable for some people
- Shortcoming: the canvas maps power, but not power relations between the stakeholders. Furthermore, it is static and not dynamic, making it a snapshot of the current situation

Recommendations on when to apply in the Climate Transition Map
- Understanding the System
- Co-design a portfolio

The mapping of the power and impact of particular stakeholders can help understand the position and interests of these stakeholders, which can be used as a basis to approach and/or involve them in the process.

Other associated canvases
- Community map
- Stakeholder map & matrix
- Stakeholder power categories
- Quickstarter Stakeholder Engagement

CIVIC ENGAGEMENT MAPPING CANVASES

Instructions
- **Duration:** 60+ minutes
- **Materials:**
  - Blank Canvas – printed or online (see note)
  - Post-its and pens
- **Group size:** 3-5 people

Note: This tool can be used during virtual meetings to organize an online collaborative exercise. The canvas can be uploaded in an online collaborative whiteboard platform (such as Miro, Mural...) or in a Google sheet and participants can then fill in the map thanks to virtual sticky notes.

Process
Step 1: Start on the left side of the canvas and identify the set of stakeholders by using methods such as Stakeholder Identification Canvas

Step 2: From this comprehensive list, categorize the stakeholders into the four quadrants in the middle section. Those who hold little power, but will respectively be highly or lightly impacted, will be put into the 2 left quadrants. Those who hold much power, but are highly or lowly impacted, will be put in the 2 right quadrants.

Step 3: After categorizing the stakeholders into the four quadrants, proceed to the right side of the canvas, and answer the questions (in any order), which reflect on the distribution and to what extent the team itself is impacted.

Step 4: In the final assessment, at the bottom of the page, select which stakeholders to prioritize, based on the analysis made previously and formulate concrete steps what action can be taken for specific stakeholders.

View on NetZeroCities Knowledge Repository

Figure 1A Example of a canvas: The stakeholder power categories

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Figure 1B Example of a canvas: The stakeholder power categories

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FOCUS ON THE SYNTHESIZED 'NZC CIVIC ENVIRONMENT MAPPING TOOL'

This simple mapping canvas has been developed by the NetZeroCities team and captures all the essential elements to kick off your mapping process. It integrates key insights from the analysis of the other canvases, as well as elements from the NetZeroCities priority areas and levers of change that you will have defined as key entry points to your Climate City Contract process. We recommend therefore that you start with the 'NZC Civic Environment Mapping Tool', knowing that you can then make further connections to other canvases identified in the collection.

With this tool, you will be able to capture diverse stakeholder types, resources and degree of influence, all situated within a framework of urgency to engage them in the transition process. Key considerations for this canvas are to map across spatial and governance scales, map unusual suspects or vulnerable groups that may not seemingly have an influence as they are traditionally left out of conversations on climate policy, and to also make a distinction between those already engaged and those yet to be engaged.

You can use it as a base map to track your civic environment as well as compare results with other cities if necessary. The simplicity of this tool allows you to periodically update and iterate your mapped stakeholder environments and create more connections.

Link to the tool in the NetZeroCities knowledge repository.
Link to the tool on Miro.

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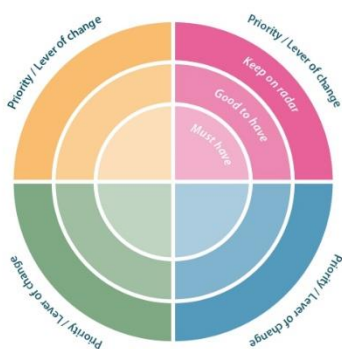**NZC Civic Engagement Mapping Tool**

Step 1: Select 4 priority areas or levers of change for this mapping exercise
Use the NetZeroCities levers of change as a reference. These could be the 4 priority areas/entry points defined for the city's CCC approach.

Step 2: Identify all types of stakeholders for each priority based on stakeholder types
Write this type next to the name of the stakeholder. Refer to the guidebook for more details on what each stakeholder group consists of. If you remember new stakeholders in the process, you can go back and add them in as necessary.

Leaders	Supporters	Drivers	Beneficiaries	Allies	Competitors	Blockers	Deniers	Avoid all together

Step 3: Map the resources that different types of stakeholders bring (use coloured dots for this step)
Reflect on the resources and their importance. Move stakeholders around after reflection on the important of resources that they bring. If you start to see connections, start grouping the stakeholders in clusters. You can draw lines in between to connect them as well.

Financial Resources	Knowledge Resources	Technological Resources	Human Resources	Networking Resources	Creating spaces for meetings & encounters

Step 4: Rank stakeholder powers & influence (use numbers for this step)
If you start to see connections, start grouping the stakeholders in clusters. You can draw lines in between to connect them as well.

1. High influence	2. Medium influence	3. Low influence

Step 5: Guided Discussion
- Identify the clusters. connections and groups that were created.
- Have these stakeholders been engaged already? What is the best way to approach them?
- Who can facilitate the communication? Are these stakeholders mapped as well?
- What are the next steps to engage the identified stakeholders?

Key considerations
- Are you mapping all relevant scales? What about different level of governance?
- Are you mapping vulnerable groups? Are those who don't have an influence or power mapped as well? Are you mapping also those who are affected by the city's climate plans?
- Are you mapping stakeholders that are yet to be engaged?

Figure 2

The NZC Civic engagement mapping tool

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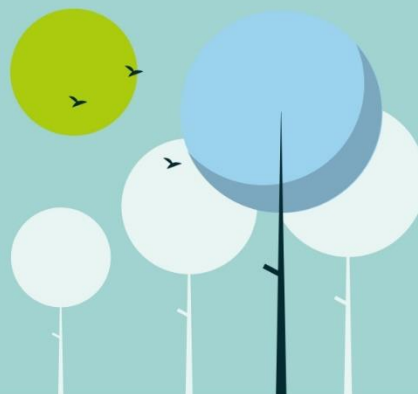**HOW TO CHOOSE THE RIGHT MAPPING CANVASES IN RELATION TO THE CLIMATE TRANSITION MAP**

Mapping your civic environment to engage citizens and stakeholders in a broad coalition for change is essential at the following stages of the Climate Transition Map.

TO BUILD A STRONG MANDATE AND NEW MODELS OF GOVERNANCE, INCLUDING THE CREATION OF A MULTI-STAKEHOLDER TRANSITION TEAM

Why it is important to map at this stage

A strong mandate for accelerated climate action ensures alignment of all actors around the actions needed to achieve climate neutrality by 2030.

To enhance mandate at city level, the full local ecosystem of actors - including citizens, civic groups and stakeholders from the private and public sector - needs to be positively engaged in the challenge. Mapping tools are therefore very useful at this stage, including for creating a dedicated Transition team to aligning these multiple actors. It will enable meaningful collaboration, involving the knowledge, skills and perspectives of the different actors across the city for the Mission.

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Which mapping canvases can help you do that?

The "Stakeholder Ecosystem map" is a good entry point to have an overview of the stakeholders at stake, their level of importance and decide what role they may have in designing the Transition Team. It can then be used by the Transition Team as first intention, to have an overall perception of the stakeholder ecosystem. To analyse further the identified stakeholders, you can use the "Stakeholder Power Categories" and the "Stakeholders Analysis Table"

See other recommended canvases in the summary table in figure 3.

TO UNDERSTAND THE SYSTEM, INCLUDING RESOURCE FLOWS AND TO IDENTIFY LEVERS OF CHANGE AND KEY OBSTACLES

Why it is important to map at this stage

A current state analysis facilitates a strong understanding of the systems, their interconnections, impacts and key patterns. Assessing flows (natural, financial, human…) and interdependencies sheds light on major dynamics at play, such as virtuous or vicious cycles. This assessment highlights dynamics which enable or block change. This mapping of social-cultural, environmental and economic factors can thus guide the necessary reconfiguration of urban structures, especially when it includes the perspectives of citizens, public and private actors.

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Which mapping canvases can help you do that?

The System Map canvas allows you to visualize connections between the different actors that might otherwise not have been perceived. With this canvas, you can map out the flow of materials, energy, information and financial resources throughout the system. This allows you to understand where opportunities might lie to increase value and the system efficiency.

See other recommended canvases in the summary table in figure 3.

TO CO-CREATE AN INCLUSIVE AND MULTI-STAKEHOLDER PORTFOLIO OF ACTIONS

Why it is important to map at this stage

Co-creating the portfolio process with an inclusive activation of your local ecosystems is key to support and enable a strong portfolio of actions, such as those required for the Climate City Contract. A portfolio of transformative interventions brings together efforts across departmental silos and diverse stakeholders. It assembles a set of coherent initiatives which can strengthen each other and strengthen the connections between the multiple actors needed to co-design and enact such portfolio. The portfolio co-creation process itself can help overcome obstacles and enable positive synergies.

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Which mapping canvases can help you do that?

The RACI framework canvas can help you define decision making process in your city and map how certain projects and portfolios can be approved and implemented. It is an effective way of defining roles and responsibilities in decision making. Through this process, you can identify the key stakeholder that need to be engaged to build consensus and arrive at a decision in a participatory manner.

See other recommended canvases in the summary table in figure 3.

In the following steps of the Climate Transition Map – Take action, Learn and reflect, and Make it the new normal – there is no specific need to elaborate new mappings, but the way you will have mapped your civic environment at the precedent stages will of course determine what actions you take, with whom and how. In return, the intermediary results of your actions will help you learn from and reflect on the state of citizens and stakeholders' engagement in your city and will be occasions to review your mapping approach and results. By doing so, members of the Transition team can develop and execute new systems thinking skills, where the use of mapping tools and approaches become progressively a new normal and combine the best with other tools and methods for engaging the whole community.

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SUMMARY TABLE OF ALL CIVIC ENVIRONMENT MAPPING CANVASES

This table provides a complete overview of all canvases gathered in the NetZeroCities collection and shows when they can be used at different moments of the Climate Transition Map, as well as to which category they belong (see more on the different categories on page 9 "Presentation of the collection").

	Build a strong mandate	Understand the local ecosystem		Co-create an inclusive and multi-stakeholder portfolio
	Create a multi-stakeholder transition team	Map the system and resource flow	Identify levers of change and key obstacles	
	Synthesized 'NZC Civic Environment Mapping Tool' | See in the knowledge repository link | See on Miro link			
EXPLORE		Community Map link		
	Stakeholders Ecosystem Map link			
		Stakeholders Map link		
		Stakeholder Identification link		
			System Map link	
ANALYSE		RACI Framework link		
		Stakeholder power categories link		
		QuickStart stakeholder engagement canvas: Part I Analysis link		
		Stakeholder Visualisation link		
		Motivation Matrix link		
	Stakeholder Analysis Table link			
ENGAGE	QuickStart stakeholder engagement canvas: Part II Engagement link			
	Target group link			
	Strakeholder Map and Matrix link			
	Stakeholder Engagement and Dissemination Plan link			

Figure 3 Summary table of all NZC civic environment mapping tools

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MAPPING EXAMPLES

Concrete examples of Mapping exercises are not so easy to find as they are usually used as internal tools to help understand the local stakeholder ecosystem and rarely published. We identified 3 of them implemented in the framework of various initiatives related to climate or not. Even though they do not use the canvases gathered in the NetZeroCities collection, the final maps show that the visualization of stakeholder make it easier to understand the local stakeholder ecosystem and to build connections with actors that are not yet familiar.

Stakeholder Mapping for Climate Change Adaptation in Greater Manchester

This mapping exercise was completed in 2009 by the University of Manchester in the framework of the Eco Cities project which aim was to create a climate change adaptation blueprint for Greater Manchester based on the analysis of climate change scenarios and the proposal of appropriate adaptation responses. One of the project's objectives was to identify and involve an appropriate range of individuals and organisations, at all levels of governance possibly impacting the project, i.e.: supra-national, national, regional, and sub-regional levels, and considering the benefits for the project associated with their engagement, which were: learning and awareness raising, enhancing legitimacy, building stakeholder networks, resource savings and strengthening decision making.

Read more

The "Chain map" visualization tool in Veszprem County

This mapping tool was created in the framework of the Interreg Danube transnational project ISTER (ConnectIng hiSTorical Danube rEgions Roman routes) and has been implemented, among other project's partners, by the municipality of Veszprem County in Hungary. Part of a global stakeholder mapping methodology, this tool enables to visualise and set up a multi-layer stakeholder group in relation to the project policy challenge. After having created a vast preliminary list of all potential stakeholders, analysed their influence and interest, as well as their interrelations, the chain map tool enabled each project partner to create a unique map and visualise all previous analysis in a synthetic way.
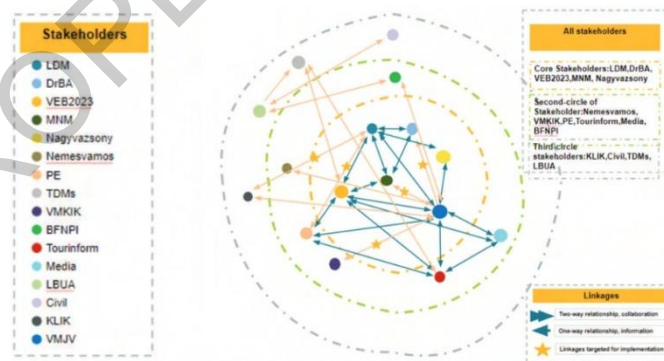

Figure 4 Municipality of Veszprem County's stakeholders chain map

As represented in figure 4, the identified stakeholders are placed in a range of circles depending on their interest and influence (the inner circle repre senting the core stakeholders), and two types of arrows show the linkages between stakeholders (the two-way arrows represent collaborations, while the one-way arrows represent informing relationships). The arrows marked with a star show the linkages targeted for the project implementation.

While the ISTER project focused on the valorisation of Roman heritage, similar stakeholder maps could be drawn in the NetZeroCities context, e.g., ab out the stakeholders of urban mobility transition or about the key actors of a local sustainable food system.
The final maps, when visualised for each stakeholder from their own perspective, can make it easier to understand one's place in the local stakeholder ecosystem and to build connections with actors that are not yet familiar.

Read more

Cómo hacer un mapeo colectivo (How to make a collective map) - A handbook by [VIC] Vivero de Iniciativas Ciudadanas, 2017

This handbook has been produced by [VIC] Vivero de Iniciativas Ciudadanas (Civic initiatives incubator), an open and collaborative cultural platform based in Madrid that aims at promoting critical processes, with special emphasis on the transfer to the territory and public space of the citizen innovation that occurs in our surroundings. The platform observes and maps citizen initiatives that represent this "other way of doing things", incorporating mechanisms based on social and citizen innovation. It studies their applicability to projects in the field of architecture and the urban environment that serve as a bridge between the different agents making up the network society we are building today. Through this platform, collective knowledge is built and shared in various workshops, meetings and open forums, generating up-to-date links in society that bring together theory and practice. The handbook provides valuable insights on how to run collective and public civic environment mapping sessions.

Read more

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