SI methodologies for designing, prototyping, testing, monitoring

Deliverable D9.2

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Abbreviations and acronyms

Acronym	Description
CCC	Climate City Contract
NZC	NetZeroCities
SI	Social Innovation
WP	Work Package
PPP	Public Private Partnership
CTM	Climate Transition Map

Summary

Social innovation is perceived to be one of the building blocks deemed essential for cities in their efforts to work towards reaching climate neutrality. This deliverable describes the activities conducted in NetZeroCities project tasks T9.2 *Methodologies and tools for social innovation design/prototyping and testing*, and T9.3 *Methodologies for scaling bottom-up social innovations*. It describes the *Social Innovation Pathway and Toolkit*, along with primary tools and methods that are associated with the different phases of the pathways as well as the development of the *Social Innovation Actionable Pathway* tool.

Keywords

NetZeroCities, climate neutrality, social innovation

1. Executive Summary

In order to effectively reach climate-neutrality, cities will need to engage and activate ecosystems for change. The Cities Mission cannot be accomplished by the local government alone or with technological solutions; instead, a wide range of stakeholders will need to buy-in to the mission and align their value propositions, working practices, social practices, lifestyles and norms to achieve climate neutrality. Social innovation (SI) stands to play a decisive role in helping cities attain the goal of net zero emissions by 2030 by accelerating the pace of change through inclusion and the activation of a wider range of resources.

Social innovation is a collaborative, systemic and human-centered approach to innovation, which is often initiated from the bottom up. Its focus on tackling complex, wicked challenges – such as climate-neutrality – through quick, collaborative experimentation and inclusivity makes it a transversal component of NetZeroCities' (NZC) Climate City Contracts (CCC) and the broader transition journey. In this context, SI contributes in three primary ways:

- Lever of Change: As an innovation tool for broader and effective change, investing in and amplifying SI as a strategic part of a city's portfolio of actions can strengthen a city's effort to achieve a just transition;
- Platforms for Action: By creating enabling pathways and access points for diverse stakeholders to take part in climate action and in the transition – e.g. participatory budgeting, superblocks, city labs, etc.–, SI offers cities, its citizens and urban stakeholders the opportunity to make achieving the mission a truly distributed social accomplishment;
- Solution-building: Social innovation responds agilely to the emerging needs of different communities resulting from the transition – e.g. policies that include vulnerable populations in renewable energy schemes, new business models such as bike-sharing models or energy communities, new organizational models such as citizen cooperatives, public-private partnerships (PPPs), etc. As the transition continues and systems change, SI will respond more and more to emerging needs coming from people "inconvenienced" by the transition (i.e. those who benefitted from the challenge persisting) – e.g. through fiscal benefits and/or financial tools, such as subsidies, tax breaks, financing, etc. that help, for instance, companies switch to climate-neutral or -positive working practices or homeowners run climate-neutral or -positive homes.

Social innovations are often context-dependent, built on the specific social needs of the local community and on the resources available. When initiated bottom-up, they can depend on the initiative of an individual, yet more often on a group of highly motivated individuals to bring it forward. Regardless, SIs flourish in ecosystems that provide the enabling conditions for innovation (capacity building, access to funding, access to markets, network support, etc.). Cities can support social innovators and amplify their collective impact in several ways: (1) creating and nourishing a robust ecosystem for SI in specific emission challenges; (2) acting as ecosystem orchestrators in these ecosystems; and (3) contributing to these ecosystems by removing barriers and/or filling gaps – e.g. by creating SI policies that support their growth and development, and eventually amplifying their impact through scaling/replication mechanisms.

The current report focuses on both levels of social innovation: the "on-the-ground" level where innovators are building solutions, and the "city level" where transition teams are finding measures to help social innovations flourish and create opportunities for greater collective action. It is divided into two parts, focusing respectively on the main outputs of the two related tasks, T9.2 and T9.3. The first part begins by presenting a Pathway for social innovation development with tools and methods to help innovators and cities along the way – the core objective of T9.2. The second 'chapter' discusses scaling strategies that cities can

adopt (core objective of T9.3) and the Social Innovation Actionable Pathways tool that will be available on the NZC portal. The tool will support cities in assessing their current ecosystem and in finding appropriate actions to strengthen their social innovation ecosystems for climate neutrality. Due to the high level of connection between the design process and scaling measures, it was deemed to be of topical importance to create a deliverable with a clear and unified message.

This deliverable is to be read in conjunction with Deliverable D9.3.

2. Methodology

The main objective of Task 9.2 was to take stock of relevant tools and methodologies for implementing SI and to organize them according to a development model and design process (See Figure 1-A for design and development process followed). The Social Innovation Pathway – a design-based learning framework for SI development (See Section 3) – was developed together with T9.5 partners in several working sessions. All T9.2 partners were a part of T9.5 so the collaboration was quite simple. The pathway was relevant to T9.5 in regards to the coaching service to support cities in planning for an SI experimentation programme. The specific service underwent some modifications (as explained in D9.5) as a result of other activities happening in the consortium and to align with evolving actions and services across WPs. The specific output of T9.2 was the collection of tools and methods to accompany the pathway, which took shape as NZC's SI Toolkit. The pathway accommodates two user pathways: for transition teams and for social innovators, with the objective of supporting cities to create strategic SI programming as well as increasing the capacity of its social innovators. The toolkit walks users through the different phases of the pathway, providing tools and methods to obtain the specific objectives of the stage. Section 3 provides an in-depth explanation of the phases, the tools and methods and their usage by the two user groups.
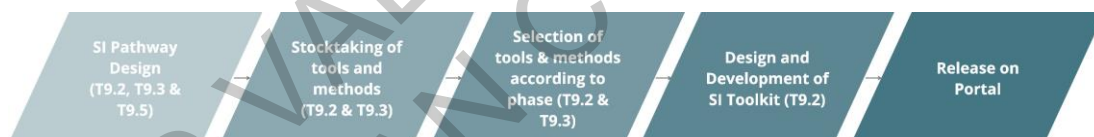
Figure 1-A. Design and Development Process

While the main objective was to collect tools and methods for SI Development, the first step was to define a development pathway together with T9.5. This process was carried out through a review of existing frameworks, approaches, methods and tools for SI implementation, consulting both scientific and grey literature coming from think tanks, research centers and other intermediary organizations. The review was done by presenting partners with different SI frameworks (Murray, Caulier-Grice & Mulgan, 2010; Neumeier, 2012; Bates, 2012; Brown & Wyatt, 2010; Rizzo et al., 2017; Elsbach & Stigliani, 2018) and allowing for discussion on the most appropriate model upon which to base our own framework. The design-based learning framework developed by Rizzo et al. (2017) was chosen and then iteratively adapted to best suit the needs of NZC and the Cities Mission. It was selected based on the following criteria:

- Human-centered and based on the principles of co-design and co-production;
- Accounts for learning goals and incorporates learning through experimentation (de-risking innovation and building buy-in);
- Highlights the open-ended nature of the innovation process;
- Affords flexibility for contextualization and different user types; and
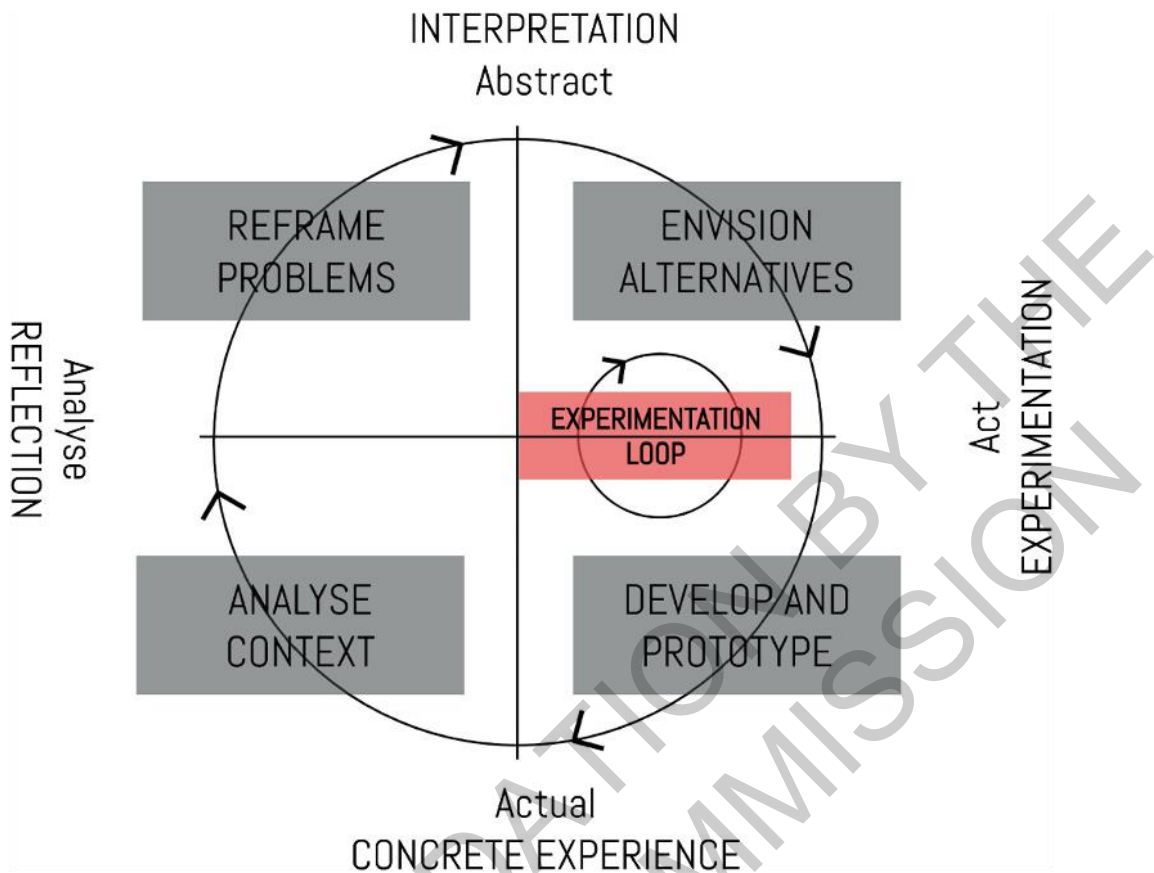- Focuses on non-linearity and iteration.

Figure 2-A. Design-based Learning Framework for Social Innovation Experimentation (Rizzo et al., 2017)

At the same time, partners were asked to contribute references to tools and methods useful for SI development to a shared database with NZC's WP08 of tools and methods for stakeholder engagement, participation and SI. Thanks to this communal database, existing knowledge on related topics (e.g., Citizen Engagement, Public Sector Innovation, Design Thinking, Service Design, Open Innovation, Organizational Learning, Participation Design, etc.) was collected and reviewed. In terms of grey literature, previous EU-funded projects were given specific attention (e.g. SIMPACT, SIC, SISCODE, SI-DRIVE, BENISI, TEPSIE, etc.) as well as resources coming from the intermediary system (e.g. Nesta's DIY toolkit, IDEO.org's resources, Ashoka, etc.).

Following this review, the partners met to collectively determine the most appropriate tools and methods to assist cities at each phase, keeping in mind different local needs, resources and actor networks, and user pathways, namely transition teams and social innovators. The ultimate goal was to design a holistic framework that facilitated both a top-down perspective of ecosystem setting and impact amplification (transition team) as well as a bottom-up perspective of solution-building (social innovators). While the SI pathway will be explained in the next section of the report, the model and its adaptation to NZC is further explained in D9.5. The focus here remains on the selection of tools and methods and the development of the Social Innovation Toolkit. The criteria used to select tools and methods were as follows:
- Helps users understand/accomplish the objectives of the phase;
- Ease of use;
- Useful for both SI programming and bottom-up SI Development; and finally,
- Previous experience of partners – tools and methods already championed by partners were given preference over others.

The toolkit was developed by assigning tools and methods that support users implementing each phase of the SI pathway. It includes canvases for those tools that required it and lists other tools and methods available on the NZC Knowledge Repository for each phase. At present, the tools and methods are available on the NZC Knowledge Repository and as pdf downloads for canvases. While the original intent was to digitalize the tools in an interactive pathway on the portal for the cities, the action has been put on hold due to technical constraints that have been thoroughly discussed with NZC's WP3. As things progress with the NZC-SGA 1 (Specific Grant Agreement), how these tools could be made more interactive will be seen based on feasibility and validity.

3. Social Innovation Pathway and Toolkit

As described in Section 2, NZC's Social Innovation Pathway is based on an iterative, learning-based design process guiding two user pathways towards the implementation of SI initiatives: cities' Transition Teams and social innovators. A Transition Team has been defined by NZC as "a team spanning across traditional organizational and sectoral boundaries, to create a favorable context for collective action and alignment between local actors" (See the Transition Team Playbook). Social innovators, on the other hand, are individuals that work to implement new ideas that meet social needs, create social relationships and form new collaborations (EU Commission, 2023). These individuals – citizens – are often quite close to the particular social need, either through direct experience or direct proximity to affected parties. They can work 'alone' to bring the idea to life but more often work together with a group of individuals and a network of stakeholders. The two user pathways were designed to provide tailored support to the "on-the-ground" and bottom-up initiated SIs led by social innovators responding to emerging needs and to cities' Transition Teams engaged in supporting SI development and amplifying impact through SI Programming. By the latter, we mean that it aims to support city practitioners in amplifying and scaling social innovation impact, that is, in supporting innovators - within the public administration but also all local stakeholders - in bringing their ideas to life through the means of social innovation.

Figure 3-A. The Double Diamond design process is a visual representation of the design process. The process has four phases of alternating divergent and convergent phases: discover, define, develop and deliver (Design Council, 2023).

The SI pathway (See Figure 3-B below), based on the typical design process, was adapted for the SI lifecycle as follows: analyze context, reframe problems, envision alternatives, prototype and experiment and evaluate and scale, loosely following the double diamond design process (see Figure 3-A above). The broad flow of the process can be described as follows:

1. The process of implementing a social innovation initiative starts with a divergent discovery phase that explores the challenge in context, from the needs of the local communities, to the stakeholders that could be involved and the resources available.
2. This is followed by a convergent phase that (re-)defines the challenge according to the insights found in the discovery phase. After this first stage of divergence and convergence in defining the existing challenge (the first "diamond" in the double diamond process) comes a second round to define the solution (the second "diamond").
3. The next divergent phase envisions a range of different solutions for the challenge – services, products, organizational models, network formations, etc. –.
4. It is followed by a second convergent phase that selects ideas or prototypes and tests them for validity, feasibility and impact.
5. Finally, the last phase is dedicated to evaluating and scaling the solutions. While the entire process is iterative and non-linear, this last phase is a continuous activity that creates synthesis but also strategic insight for future development of the initiative.
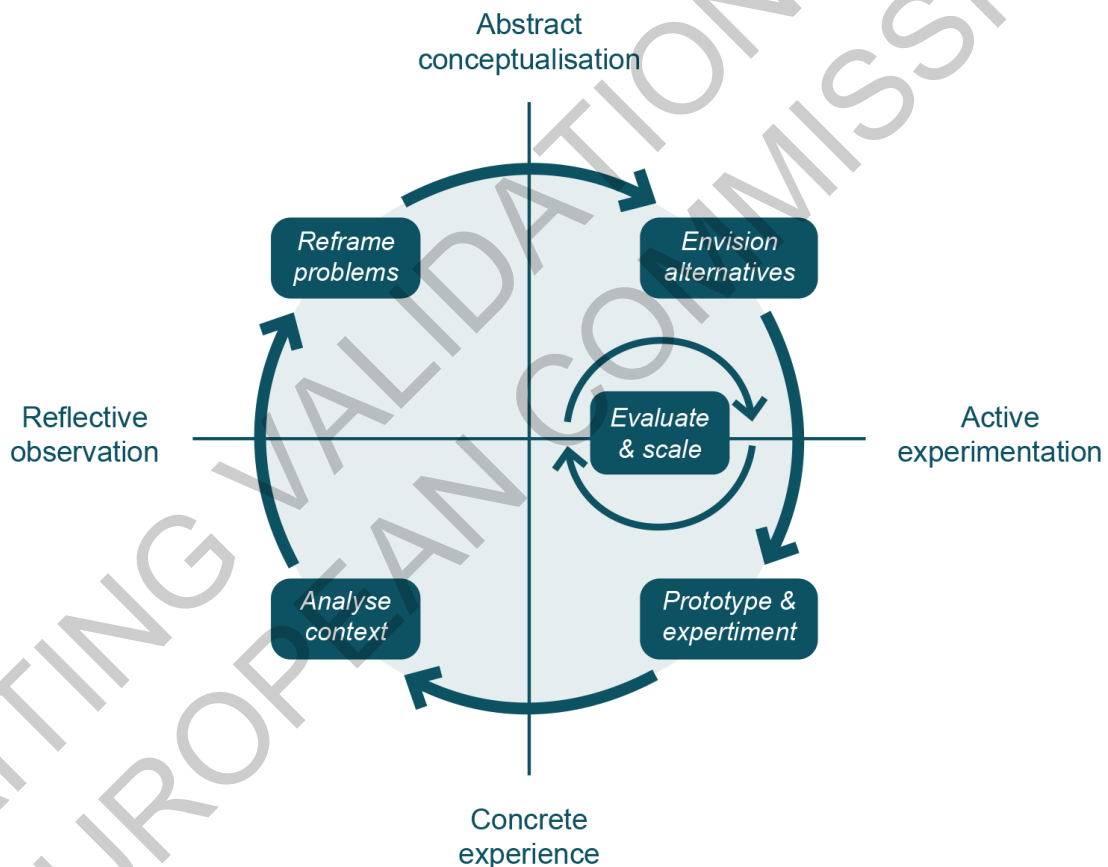

Figure 3-B. NZC's Social Innovation Pathway, based on Rizzo et al. (2017) and Kolb (1984)

Furthermore, learning is a critical part of the journey to climate-neutrality for Mission Cities. As such, it was important that the framework be learning-oriented. The SI pathway, whose development pathway follows Kolb's (1984) model of experiential learning, is compatible with the Climate Transition Map (CTM) and its phases can be matched (See Section 3 sub-sections). Kolb's model was chosen for two main reasons: (1) learning-by-doing is an innate part of the design process, often making design an implicit agent of change; and (2) the urgency to act, which is common to most 'wicked' challenges, often requires fast action and

to learn while trying to solve the problem in a quick and iterative fashion. Basing the framework on Kolb's (1984) model of experiential learning – or rather "the process whereby knowledge is created through the transformation of experience" (pg. 41) – encourages both social innovators and cities to learn through experience and reflect while acting (Schön, 1983). Similar to the design process described above, Schön's model passes through four stages, alternating between two realms: that of theory and that of experience, as in other models (Owen, 1998; Argyris & Schön 1978, 1996). These phases are namely: concrete experience (Prototype and Experiment), reflective observation (Analyze Context), abstract conceptualization (Reframe Problems) and active experimentation (Envision Alternatives). Evaluate and Scale is an underpinning activity of the entire pathway, but specifically takes social innovators and cities from the concrete experience of testing solutions through prototypes to envisioning new alternatives based on the feedback and insights gained from experimentation. In designing the framework, the objective is to encourage cities and social innovators to act and to build knowledge through experience, while also responding to their need of urgency.

The five phases of the SI pathway are explained in Sections 3.1 - 3.6 below in further detail along with the accompanying tools and questions that can be answered in each stage. Once again, as an iterative process, cities and social innovators may enter at any phase and can always be redirected to go back to previous stages based on emerging insights.

In the Social Innovation Toolkit (See Annex) – the collection of tools and methods for implementing the SI Pathway –, each phase starts with a broad question to serve as an entry point for users. The Social Innovation toolkit was created to help cities design solutions that are inclusive of: (1) everyone's needs, both current and future; (2) the lived experience of each system actor; and (3) voices from the margins as an essential means towards designing for all. This is also accomplished by designing for the constraints, by: (1) recognizing the difficulties of changing ingrained social practices; (2) reaching the hard-to-reach; and (3) accounting for system barriers.

The SI toolkit, overall, was designed for cities committed to accomplishing the daunting task of achieving climate neutrality by 2030 and for the social innovators seeking to help them in their task. At its core, cities are a collection of people: individuals, groups, collectives and organizations. Each acting in their own, or collective, life-world. In simple terms, a life-world is how we experience the world in our day-to-day life. It is subjective and includes all the social and cultural experiences, activities, perceptions and contacts that make up everyday life. This experience can run in contrast with the objective world as analyzed by the sciences.

Getting everyone on board for the mission and making sure that everyone is included in the transition to net zero emissions means providing the means for everyone's life-world to be in line with the Cities Mission. This is where Social Innovation comes in.

The toolkit supports cities and its social innovators in the following ways:

1. **Provide tools that allow for a human-centered approach to transition projects:** By focusing on social needs and putting people at the center of solutions, cities can improve the efficacy of climate mitigation strategies.
2. **Offer a process to engage diverse actors in the mission:** Through an iterative, design-based learning and development process, equipped with participatory and service design tools, cities can explore local ecosystems, get to the core of the challenge, envision new alternatives, prototype for validity and impact, evaluate for effectiveness and scale meaningful solutions for broader transformation.
3. **Cue cities to the value of activating enabling ecosystems for transformative change:** Cities will be prompted to reflect and act in an iterative cycle of divergent

and convergent phases, affording them opportunities to engage with different actors and find value creating opportunities for systemic change that align bottom-up initiatives with larger objectives or vice versa.

3.1 Analyze the Context

An important step towards building solutions and strengthening ecosystems is understanding the context, both in 'hard' terms – the infrastructure of people, organizations, companies, spaces, norms and regulations, etc. – and 'soft' terms – i.e. the practices, routines and beliefs that inform everyday life and the choices we make. This phase explores these contextual factors, their inter-relationship and how they influence the challenge space. Social innovations respond to unmet social needs; this requires understanding the need from multiple perspectives. This stage can help cities respond to the following questions:

- What elements inform the challenge space?
- What is my city already doing in Social Innovation for Climate Neutrality (e.g. policies, funding programs, training centers, etc.)? How is the need currently being met?
- What are the specific needs of citizens and other actors, particularly the marginalized, in the transition to climate neutrality?
- What resources are available?
- Which actors could be engaged in my climate goals?
- Which actors gravitate around the need?
- What resources are available to those in need or for other service providers?

In their journey to climate-neutrality, cities will need to identify priority emission reduction challenges. Social Innovation is a lever of change to address these challenges. Cities will need to onboard diverse communities of stakeholders with different needs, priorities and capacities to act. To properly scope the challenge – i.e. the affected communities, the barriers, gaps and impact – cities will need to understand and map the ecosystem of actors and resources that gravitate around these challenges in order to mobilize them successfully around the mission. The phase fits into the "Understand the System" phase of the CTM and when done well can also act as a strategic step of drafting an effective CCC that can truly engage diverse stakeholders and activate multi-actor collaborations by building a shared value proposition upon which different stakeholders and platforms can align.

Name of Phase	Relation to CTM	Use for Transition Team	Use for (citizen) Social Innovator(s)
Analyze the Context	Understand the System	Transition teams can use the tools and methods in this phase to map the stakeholders in the emission challenge domain – with primacy on the affected communities – and their connections to each other; to visualize the resources and services currently available in order to understand gaps, barriers and opportunities; and to understand the systemic underpinnings of the challenge. The knowledge built here is also useful for replicating SIs or for scaling their impact by identifying the contextual elements that led to their success.	Social Innovator(s) can use the tools and methods to understand better the context of the specific social need emerging from the transition by gaining a systemic understanding of the current ecosystems of actors, resources and solutions. As context-dependent solutions, social innovators can also use these tools to understand how to replicate solutions found elsewhere in their own city or neighborhood or in other cities.

Table 3.1. "Analyze the Context" user pathway

List of Tools and Methods

Primary tools and methods:

1. Context Map Canvas

The Context Map is a framework used to help understand the context. The template can map out trends and different perspectives. This brings out drivers outside the organization and the forces that could shape the project now and in the future. The context map is primarily for an internal understanding amongst the project teams and might not necessarily involve stakeholders. After the canvas is filled out, the entire team then deliberates on the data gathered and builds on it, also identifying blind spots. Key drivers that need to be focussed upon can be chosen in the end, things that, positively or negatively, have the biggest potential to impact the project in the near future. This map can be left available so that team members may keep adding onto it for further synthesis.

2. Ethnographic Fieldnotes

Ethnographic fieldnotes are a tool to organize different observations, types of analysis, emerging questions and reflections, as well as ideas for future action. Ethnographic fieldnotes are a useful tool to make sense of complex interactions and processes taking place in response to challenges such as climate change. They are structured, written observations done in physical and social proximity to a community or to the daily lives of a particular city. They can reflect not only the context in which a problem is being addressed and observed but also the links to citizens' views. They can be a critical means to understand one's positionality, as well as the routines, challenges and conditions in which communities face ecological and governance challenges.

3. Ethnographic Interview

Ethnographic interviews are a method used to deeply understand the actions and motivations of people behind a theme or topic of research. This process relies on a close connection between the researcher and the community they are working in. In creating connections the researcher is able to get a more rich understanding of how the community functions and what their motivations towards climate actions are for example, which is reflected in interviews with stakeholders. While it is not likely to help on technical challenges, it will be crucial for community issues and 'why' questions.

4. People and Connections Map

The People & Connections Map is a visualization tool used to identify stakeholders you are trying to reach and how. It is a tool for mapping actors that surround you that could potentially become your partner, user or supporter. These might include people, communities, funders, networks etc. All of them can represent a resource to your innovation and link to your group goal or your innovation. The tool helps to focus attention on all actors in the product- service (eco)system. In doing so, it sheds light on actors and their possible role in the solution's design and implementation. It also provides insight on those affected by the challenge, ensuring that marginalized voices are included. By mapping actors, services can be (re-)designed based on value creating relationships and improved based on user (actor) research. The tool is a first step towards a stakeholder map which defines these roles in greater strategic detail. As a first step, it also starts shedding light on the replicability of other SI ideas in the local context (from a reverse engineering perspective).

5. PESTEL

A PESTEL analysis is a strategic tool coming from marketing used to identify external forces in the environment that faces an organization. By completing the tool, the team analyzes the Political, Economic, Social, Technological, Environmental and Legal forces that make up the external environment. The exercise provides a situational analysis that allows organizations to anticipate threats and opportunities, gain contextual awareness and process external trends. In order to be an active and strategic operative tool, internal assessment needs to be done to translate the insights into actionable strategies for the organization's future opportunities and operation. The insights coming from this analysis are useful towards a SWOT analysis as well as in activities regarding future scenarios and strategic direction. The tool aims to help teams get aligned on the context of innovation in order to better design solutions that can be effective, feasible and long-term. It helps to visualize and bring to the surface also the tacit knowledge that each member has of the specific challenge area.

6. **System Map**

System maps (also referred to as stakeholder maps) are schematic representations of the main actors of a given (service) system, from the point of view of the main service-providing organization. The actors are made up of those surrounding and those internal to the organization, including users, staff, departments, and external providers. Typically, the maps make use of pictograms or other visual representations, and lines and arrows connect the different actors representing the different relationships and flows among the various actors. Stakeholder maps and system maps are useful for identifying the boundaries of service systems, core service performances, and the different kinds of flows, both existing and aspirational. Systems maps come in many shapes and forms; what you will be using it for, and the questions you want to answer with it will determine which type of systems map to use. It's important to strike a balance between mapping the detailed complexity and making it simple enough to be useful, at the right time to use it. Remember, it's a living map (not a static one) and will change over time. The activity is best done with stakeholders who have a close proximity or lived experience relative to part of the system. Each stakeholder can inform the system mapping process to enable the system map to more accurately reflect the dynamics, interactions, and relations with other actors.

7. **Observation of Context**

Observation of context is a qualitative research tool to help understand context and to show what people do. This tool involves collecting data using one's senses. It is about getting a perspective or opinion on what is happening, what's going on, who you'd like to spend more time with. This is a guide for an individual researcher or a group of researchers to use within their chosen setting (e.g. a town, organization or group). It is likely to take more than one observation to get a complete picture and observations may change as more is learned about the group/ place being observed.

Other relevant tools found in other phases:
- Empathy Map
- Influencing Factors Matrix
- Personas
- Customer Journey

3.2 Reframe the Problem

Complex problems, such as mission challenges (Mazzucato, 2018), are often experienced and understood in different ways by different actors. Translating larger mandates into local contexts and needs requires pooling together different actors to reframe the challenge. The process not only deepens understanding of the challenge, but also provides insight on the current system and how it can be improved, generating several insights for innovation on

different time horizons. Sometimes it is helpful to look at the present from the perspective of the future to ensure that what we are doing now will fit into the future we want. These future scenarios and visions also work to include the voice of future generations into the solution-building process.

Reframing the challenge, in the design process, is a phase of convergence, where all knowledge and experience of the challenge are synthesized into insights that inform the creation of a more refined challenge(s). This may come from activities that analyzed the context (See Analyze the Context phase) or from built up knowledge and experience on the specific challenge. Social innovators, for example, in practice, often skip the stage of need analysis and user research since they possess in-depth knowledge and (personal) experience with the challenge (Deserti et al., 2017).

The objective of the phase is to re-define the challenge questions to ensure that real and existing needs are being effectively addressed. From the city perspective, policy ecosystems are often built around single-user mentality based on population averages rather than being crafted on specific user groups or segments. The dilemma between representation and validity in serving populations in need is a common struggle for city administrations. As such, it is an opportunity for cities to engage social innovators and to amplify their solutions to deliver effective and more tailored solutions to citizens. Reframing the challenge is a key step in creating more tailored solutions for affected communities of stakeholders. The phase connects the Understand the System and Co-design a Portfolio phases of the CTM, as it transforms knowledge from the context into insights that can inform cities in building portfolios that respond to multiple needs and represent diverse populations. It can help cities respond to the following questions:

- Does the challenge respond to real needs?
- How does my city plan to achieve net zero emissions in a systemic, inclusive and anticipatory manner?
- What is the societal challenge being addressed?
- How can my city respond to the specific needs while achieving climate goals? How can SI contribute to co-benefits of net zero emission?
- Are my climate goals future-fit?
- How can existing social innovations be useful towards the city's climate goals?

Name of Phase	Relation to CTM	Use for Transition Team	Use for (citizen) Social Innovator(s)
Reframe Problems	Understand the System; Co-design a Portfolio	Transition teams can use the tools and methods in this phase to define more tailored challenge questions that reflect the needs of affected communities of stakeholders; identify areas where social innovators can be engaged and/or innovation areas whose impact should be amplified; and how to create future-fit strategies that are inclusive and effectively respond to real needs (current and emergent).	Social Innovator(s) can use the tools and methods to further refine their challenge statement and solution to provide more effective services or to update their current services to better reflect current and new needs; to understand new user segments; align value propositions to be future-fit; and to amplify their current offer to diversify their impact.

Table 3.2. Reframe Problems user pathway

List of Tools and Methods

Primary tools and methods:

1. Frameboard

The Frameboard tool is a canvas/template developed by Guido Stompff in 2018 with the aim of enabling both the visualization and communication resulting from the exploration of a frame. A frame is intended in this case as a certain temporary perspective on a problem or challenge being explored. Since the Frameboard focuses on a frame – formulated as a temporary perspective on a determined issue – it is particularly useful to quickly explore the situation and iteratively envision alternatives or ideas to address the problem(s). The Frameboard is applicable in diverse fields and offers the opportunity to visualize and understand a given problem by building an (iterative) overview of different frames. These frames are alternative ways of examining the situation, with different problems, ideas, and solutions. The frames are explained in slightly different ways to grasp the nuances for envisioning a comprehensive course of action.

4. Problem Definition

The first stage in developing an effective and efficient response is defining the problem, as what may initially seem to be the problem may be a symptom of an underlying, and potentially larger, issue. The Problem Definition tool enables groups to comprehend what these potential underlying causes are and contextualize the problem to reframe it in a more focused and direct way. The Problem Definition can be used when in need of describing and elaborating on the underlying cause(s) of a targeted issue. To that extent, this tool can be adapted to diverse kinds of interventions. With the help of the Problem Definition tool, it is possible to zoom in on a core issue that can be acted or improved upon after first gaining a comprehensive picture of the numerous complex and interconnected issues that influence it.

5. Empathy Map

An empathy map is a collaborative visualization used to articulate what is known about a particular type of user. It externalizes knowledge about users in order to create a shared understanding of user needs, and aid in decision making. It helps synthesize observations and draw out unexpected insights. Empathy maps provide a glance into who a user is as a whole through a study of what they speak, think, do and feel about an activity.

6. Scenario-building with backcasting

Scenarios are a method for exploring future uncertainties in the operating environment. They depict alternative futures on society and pathways through which those futures can be attained and emancipate stakeholders to action. Backcasting scenarios are being constructed from the distant future towards the present. Their purpose is to discover alternative pathways through which a desired goal can be met.

7. 5W Technique

The 5W technique is an analysis tool consisting of a series of questions that probe the core qualities and characteristics of a given situation. The 5Ws are who, what, where, when, and why (a sixth component, how, can be sometimes added to the list).

8. Defining the Challenge with Challenge Map

Challenge mapping helps to understand the barriers to innovation within a certain thematic area / challenge / societal mission and to indicate the most promising routes towards overcoming the barriers. The challenge map is a tool to engage with a certain community of experts to build this understanding and discuss the routes towards solutions. A ready

challenge map provides a good overview of how different aspects are interconnected and where the 'sore points' are vs. what 'the cure' can consist of.

9. **Futures Table as a component in scenario building**

The Futures Table method serves as a crucial component within a larger scenario process that facilitates contemplation of diverse and alternative futures. Futures Table provides a systematic framework for analyzing the potential evolution of different variables within trends or change signals into the future. Typically employed as a participatory process, the Futures Table engages multiple stakeholders in crafting diverse images of alternative futures. Its aim extends beyond immediate considerations, encouraging a profound, forward-looking perspective in intricate matters like achieving a zero-carbon society.

Other relevant tools found in other phases:
- People & Connections Map
- Designing the challenge
- How might we
- Influencing Factors
- Motivation Matrix
- Personas
- Service Blueprint

3.3 Envision Alternatives

Faced with the challenge of reaching climate-neutrality by 2030, cities will need to find alternative ways of doing things and measures to stimulate multi-actor collaboration across sectors. This means breaking away from silo mentality and working practices, whether that be within the city administration or between sectors or clusters. Co-creating a shared vision for the city can be a useful and strategic action to onboard urban stakeholders. Aligning value propositions to implement the vision is a natural consequence of this commitment and requires creating different pathways of collaboration and development. This can lead to the creation of new solutions, or crafting new combinations or formations of existing offers. Equipped with a deep understanding of context and the challenge, the phase is dedicated to generating new ideas based on previous reflection, dialogue and insights of the challenge.

Envisioning alternatives is not only about ideation in terms of new solutions but also new governance models, economic models, ecosystem arrangements and constellations of actors, etc. Having mapped the emission challenge's ecosystem of actors and current solutions, cities can find new ways to empower existing solutions (e.g. through new policies, creating knowledge sharing platforms, creating new connections, etc.), to serve new stakeholder categories or deliver existing services more effectively.

As a divergent phase in the design process, the step explores all possible solutions, typically with lesser concern for the feasibility of the idea. The phase ends in a moment of synthesis where the most promising ideas based on their impact and feasibility are selected to move on to the prototyping phase. Envisioning alternatives connects the Co-design a Portfolio and Take Action phases of the CTM as it can offer new solutions – services, products, organizational models, governance structures – to integrate in a city's portfolio and can help cities answer the following question:
- Can the challenge be solved or approached in novel ways?
- What new solutions are needed to bring my city on an inclusive and effective path towards net zero emissions?
- How can the city ideate new ways to align interests around decarbonization goals?

- How can the city design policy frameworks for climate targets that include the specific needs of its citizens and the city's other actors?
- How can the city empower multi-actor collaboration through new governance models or ecosystem support?
- What new combinations of existing solutions could contribute to greater collective impact?
- What network formations could empower more effective collaboration and action?

Name of Phase	Relation to CTM	Use for Transition Team	Use for (citizen) Social Innovator(s)
Envision Alternatives	Co-design a Portfolio; Take Action	Transition teams can use the tools and methods in this phase to create new solutions to include in their portfolio of actions that serve new user segments; find new mechanisms to align multi-stakeholder interests; ideate policy actions/programs that is inclusive and enabling; define new governance models to achieve the mission; and find new combinations to empower more effective collaboration and action.	Social Innovator(s) can use the tools and methods to ideate new solutions to fill impact gaps or meet emerging needs; discover where powerful alliances can be made; and improve service offer to align with the mission's value proposition.

Table 3.3. Reframe Problems user pathway

Primary tools and methods:

1. Designing the Challenge

Designing a challenge is a first step in putting together an innovation competition. In order for the innovation competition to be successful and attract enough audience, a team of organizers should define the main challenge of the competition, how to select winners, judges, what is the selection process along with other details. Intentionally designing the challenge can enable you to systematically design open innovation events and reveal innovative ideas worth developing. Designing the challenge allows you to set the ambitions and constraints of a challenge for an innovation competition. By doing so, you can help ensure the responses to the innovation competition will be fit-for-purpose to take on the challenge at hand. Additionally, these kind of constraints can help innovation competition applicants think creatively within the bounds of what would be helpful.

2. Idea Card

The Idea Card tool helps to organize and detail an idea in only one page. It requests detailing the needs and challenges addressed, how the solution works and who is involved. It can help elaborating initial ideas more in detail to then present it to others to receive preliminary feedback. In a group the Idea Card may spark discussions on how initial ideas can be implemented pointing out key factors, barriers and opportunities while further developing a concept.

3. Impact and Feasibility Analysis

The impact-feasiblity matrix helps teams prioritize and ultimately decide which ideas/projects are worth moving forward, on what timeline and with what effort. By mapping ideas according to how much they are in line with and can achieve set goals (impact) and whether current organizational resources can support them (feasibility), teams can sort ideas

between: quick wins, major projects, busy work and resource drains. In short, the matrix can help teams prioritize projects/tasks, maximize efficiency and impact and align goals by visualizing how specific tasks or projects advance the set goals.

4. How Might We

The "How Might We..." (HMW) method is a user-centered problem-solving approach widely used in design thinking and social innovation. It empowers teams to reframe complex challenges as open-ended questions, fostering empathy, creativity, and collaboration. By shifting the focus from problems to the people impacted by them, HMW questions inspire diverse solutions. This method encourages an iterative process, where teams continuously refine their questions and ideas based on insights and feedback. HMW is applicable across a range of fields, from product design to addressing societal issues, and it often incorporates visualization and storytelling to communicate solutions effectively, making it a versatile tool for innovation and problem-solving. In short, to apply the How Might We method, start by framing your challenge as open-ended "How Might We _____" questions. Generate a few ways of framing what you are aiming to accomplish since each framing might spur different ideas in response. Then, brainstorm solutions, prioritize the most promising ideas, create prototypes for testing, iterate based on feedback, and implement the refined solution, all while maintaining a user-centered and collaborative approach. However, use of the How Might We method may obscure or create challenges when the "we" involved with attempting to solve a problem does not include the "we" - people, communities, organisations, etc. - who experience the problem. In addition to considering "how might we…" also consider asking "who should we consider talking to / getting involved in this problem solving process."

5. KJ Ideation

KJ Ideation is a brainstorming technique, or 'idea-generating' method developed by Japanese anthropologist Jiro Kawakida (from which its name derives) to collect, sort and find meaning in qualitative data. As such, it facilitates abductive reasoning that provides rigor to the process of sorting out chaotic ideas and insights to form a hypothesis to confirm or reject. While mostly used in Western countries as an ideation tool, it has been used in Japanese companies as a method for collective decision-making. By creating an open and collaborative method for collective brainstorming, the tool helps challenge owners bring in different perspectives and knowledge of the issue in order to push past the symptoms and get to the root of the problem. This is done not only through collaboration but is also accompanied by ethnographic research and observation during the inspiration and discovery phase. The process thereby facilitates collective decision-making and will formation, while addressing specific challenges (whether external to the organization or internal). The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by a small group or project leader who consults with different actor groups through interviews and ethnographic observation. The activity has the potential to create new relationships and connections (of mental models) between actors while working.

6. Value Motivation Matrix

A motivation matrix is an exercise that helps facilitators and designers measure what motivates people. The assumption around the motivation matrix is that people perform actions because they are triggered by motivations. The matrix is composed of six core motivation factors: incentive, achievement, social acceptance, fear, power, and growth. After using the motivation matrix, facilitators of the exercise should have a better idea of the motivation behind each individual. This exercise helps make informed decisions. The six core types are: incentive, achievement, social acceptance, fear, power, and growth: - Incentive: any type of reward-oriented motivating factor; can be monetary or not monetary; - Achievement: the kind of motivation that's propelled by the drive for competency; - Social Acceptance: essentially the need to belong to a group and not feel ostracized; - Fear:

motivation that is based off of wanting to avoid certain outcomes or consequences; - Power: motivation that is derived from the need to be autonomous or to gain and maintain control over others; - Growth: intrinsic motivation that encapsulates wanting to become a better version of oneself.

7. Personas

Personas represent typical users and their goals. Personas can be defined by dimensions that characterize and distinguish customer segments from one another. Persona dimensions are selected to inform the product or service experience under exploration. To this end, they may include demographic information, attitudinal information (key drivers, triggers, or motivations), behavioral information (habits and practices, barriers, experiences sought, needs and desires), and information about desired outcomes or associated trends. Analyze the types of potential users and organize them according to sets of shared attributes to define personas. It can be helpful to think of a persona as a personality type. A limited number of such personas should be created and considered as representing the target users for the project. This range of selected personas frames the opportunity space so that innovation teams can focus on them for building concepts. Concepts are built to address the needs of these personas and to fit with their context. In order to accurately create personas, without merely wishful thinking, it is important to rely on in-depth qualitative (and quantitative) research.

8. Pugh Chart

Pugh charts can support comparing a variety of options directly and weighing their different characteristics against each other. By giving weight and importance to the variables, the Pugh Chart considers the specific needs and values of an initiative and can help to make the best decision in a specific situation. Ranking the criteria keeps the team's focus and reveals the best opportunities at an early stage. It can be used to evaluate different product- or service directions as well as a series of funding opportunities or similar.

9. Value Proposition Canvas

The Value Proposition Canvas is a fairly simple tool that allows you to establish a logical starting point for building and testing a product or service. It is done to create products and services that meet the needs of people. In order to do that it is important to keep track of the target market's pains, gains, and to-do's – which are all opportunities for providing value to them. A value proposition can be made for any products, service or even project.More than just being a description of the project or service – it's the specific solution it provides and the promise of value the end-user can expect from it. Value propositions are one of the most important conversion factors, to convince the market audience to believe in your project. Just envisioning a project or service is not sufficient for it to be able to fully benefit the intended end-user. The Value Proposition Canvas helps intersect the service with the end user's wishes and expectations. When done right, it illustrates the match between what is being offered and what is being actively received.

10. Motivation Matrix

A motivation matrix is an exercise that helps facilitators and designers measure what motivates people. The assumption around the motivation matrix is that people perform actions because they are triggered by motivations. The matrix is composed of six core motivation factors: incentive, achievement, social acceptance, fear, power, and growth. After using the motivation matrix, facilitators of the exercise should have a better idea of the motivation behind each individual. This exercise helps make informed decisions. The six core types are: incentive, achievement, social acceptance, fear, power, and growth: - Incentive: any type of reward-oriented motivating factor; can be monetary or not monetary; - Achievement: the kind of motivation that's propelled by the drive for competency; - Social Acceptance: essentially the need to belong to a group and not feel ostracized; - Fear:

motivation that is based off of wanting to avoid certain outcomes or consequences; - Power: motivation that is derived from the need to be autonomous or to gain and maintain control over others; - Growth: intrinsic motivation that encapsulates wanting to become a better version of oneself.

11. Call for Ideas

The "Call for Ideas" social innovation method is a participatory approach that engages a diverse group of individuals, organizations, or communities to solicit creative solutions to pressing societal challenges. It begins with a clear and open invitation for people to submit their innovative ideas, often using various communication channels such as websites, social media, or community events. These ideas are then reviewed and evaluated for their feasibility, impact, and alignment with the identified problem. The method fosters collaboration and crowdsourcing, encouraging a wide range of perspectives and expertise to contribute to the innovation process. Successful "Call for Ideas" initiatives often lead to the development of novel solutions and can serve as a catalyst for positive social change.

12. Idea Rating/Selection

After coming up with lots of ideas on how to solve a previously identified problem, it can be difficult to know where to start and which idea to develop. The Idea Selection tool helps mapping out ideas according to their originality and feasibility. With the tool, ideas are divided into 4 quadrants following two axes: • ideas that are original and feasible = ideas that will make an impact • ideas that are ordinary and feasible = standard ideas • ideas that are original and not (yet) feasible = save it for later • ideas that are ordinary and not (yet) feasible = trash these ideas

Other relevant tools found in other phases:
- People & Connections Map
- System Map
- Frameboards
- Empathy Map

3.4 Prototype and Experiment

As 'wicked' challenges, mission challenges are hard to solve because of the highly interconnected and systemic nature of the problems. Testing solutions to complex challenges can often mean creating system-level prototypes that require high investments of time and capital. The tools in this phase are meant to help prototype certain features or specific interactions happening at different 'touchpoints' of the solution, helping to ensure that the solutions are purposefully built around life experience and concrete needs to provide real value. Prototyping also helps de-risk innovations by not only attempting to work out problems preemptively, but also by learning by doing and building up the knowledge needed to implement the innovation. After prototyping, agile piloting and experimentation can take the solutions a step further.

On a more macro-scale, SIs can be seen to act as small-scale experiments and prototypes of scaled solutions (Rizzo et al, 2017). In practice, the innovations act as 'boundary objects' for diverse stakeholders to come around (Star & Griesemer, 1989; Dorst, 2015). This increases buy-in and facilitates implementation. The insights coming from this important phase feed into future re-framing of the challenges and the co-evolution of the solution (Dorst, 2019) until the best 'fit' is found between the challenge space and the solution space. This is an important phase of the process that pushes for iteration and double-loop learning (Argyris & Schön, 1978, 1996), asking the city administration or organization to question the assumptions, norms, principles and values that underpin its current operation.

The phase connects the Take Action and Learn and Reflect phases of the CTM, as it asks cities and social innovators to actively implement parts or scales of the solution to test for validity, impact and feasibility and to learn from the insights to either refine the solution or to question the original frame of the challenge space. This could provoke a second iteration of the solution or push the team to return to previous stages of the process, e.g., Section 3.2 Reframe the Problem. The stage helps cities answer the following questions:

- How can new solutions be tested for validity and effectiveness?
- How can the city test social innovations before scaling and making large infrastructural changes?
- How can specific features be more effective and people-centered?
- Does the service/product really satisfy the needs of the target user?
- How can the city experiment with social innovation ideas?
- What assumptions, norms, practices and/or values are put into question as a result of the prototype?

Name of Phase	Relation to CTM	Use for Transition Team	Use for Social Innovator(s)
Prototype and Experiment	Take Action; Learn and Reflect	Transition teams can use the tools and methods in this phase to test new solutions, organizational models, and/or network formations by implementing certain features or testing specific 'touchpoints' of the solution; to gain insight on the effectiveness and impact of solutions before full implementation; to set up emission domain ecosystems; and to engage in double-loop learning unlocking potential opportunities for transformational change.	Social Innovator(s) can use the tools and methods to test solutions for validity, impact and feasibility; to gain buy-in and commitment from stakeholders and potential users; to test different pathways of development; and test for impact.

Table 3.4. Prototype and Experiment user pathway

Primary tools and methods:

1. Customer Journey

The customer journey map is a representation describing each step of the interaction that a user or customer has with a service, product, organization or system taking the perspective of the user. It is stated what the actions, the touchpoints with the service, product or system and the emotional state of the user for each of the steps. It can function as a planning- and strategic tool to keep the focus on the final users for the final development and the prototyping of a new solution. It can be also used to map existing systems to highlight pain points and opportunities for improvement The tool has both the potential to develop new, user-centered solutions as well as improving existing services and systems by highlighting pain points and issues. The Customer Journey is applicable in varied fields and serves the purpose to create an overview of the interaction of users with a product, service or system mapping their emotional state, touchpoints and needs across the journey. It helps to better understand critical points or opportunities, get in the users' shoes and understand the

effective use of touchpoints throughout the journey to deliver functioning and effective systems and services.

2. Experiment Canvas

An experiment canvas allows for a team or individual to create an experiment for the current time and test out their ideas about a certain issue/topic. This is done through hypothesizing the current riskiest assumption there is about an experiment, then a falsifying hypothesis. It is a clear and easy way to create an experiment.

3. Service Blueprint

The Service Blueprint is an operational tool that provides a holistic viewpoint of an organization's operational processes, e.g. key activities, products, services and points of interaction with the intended audience, stakeholders and beneficiaries. As such, it is a strategic tool useful for planning or improving a service as it demonstrates what is happening along the service line and who is doing what through what means. The Service Blueprint can be used to understand cross-functional relationships and align front-stage and back-stage processes. It is a diagram that displays the entire process of service delivery, by listing all the activities that happen at each stage, performed by the different roles involved. The resulting matrix illustrates the flow of actions that each role needs to perform along the process, highlighting the actions that the user can see (above the line of visibility) and the ones that happen in the back-office (below the line of visibility). Roles can be performed by human beings or other types of entities (organizations, departments, artificial intelligences, machines, etc.).

4. Social Business Model Canvas

Visualizing the business model of your idea in a canvas is an effective step towards advancing the concept. It provides the big picture on the processes that ensure that value is created, delivered and captured. The tool is a precursor to drawing up a complete business plan and is useful for formulating in a more rapid and cost-efficient manner the business model behind the idea for the initial phases. The tool addresses in a single canvas the different parts of the feasibility plan. It is a great way to explore how value will/can be created, by whom, for whom and through which channels. In doing so, different issues of how to implement the solution are addressed and resolved, including: how to finance the solution, how to maintain relevance and support, how to maintain collaboration between actors, and how to scale impact (scaling up or out). The tool aims to catalyze thought on the different aspects involved in implementing a solution and organizes processes in a visual way that shows linkages and flows. The visualization not only helps as a planning tool but also as a communication tool to garner support and feedback. The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by project leaders and with other actors and stakeholders in consultation. In subsequent iterations, different actor groups can be informed, consulted or engaged in refining specific parts. The activity has the potential to create new relationships and connections (of mental models) between actors while working on the model.

5. Desktop Walkthrough

Desktop walkthrough is a well-known service design technique: a miniature environment is developed to simulate the experience on a small scale, for example with toy figurines, cardboard or Lego bricks. The purpose is to have a mock-up simulation of the user experience for co-designing and testing a service and different scenarios.

The relevant output is not the model of the map but the experience of simulating the service experience step by step. The desktop walkthrough helps to make tangible the experiential process of a service. Desktop walkthroughs allow service concepts to be iterated at a much faster pace. New ideas can be instantly identified, tried, and tested. The service concepts get refined quickly.

This method is suitable to be used with citizens and other stakeholders, to have feedback or co-design the service experience. It can be applied to any field and it seems particularly useful to design and test innovative service concepts, for instance when a city is planning a new service for car sharing or circular economy such as re-using or recycling. The path to climate neutrality will require behavioral changes: as it is difficult to predict people's behavior for novel services, the Desktop Walkthrough method supports designing user-centered services.

6. **Experience Prototype**

Experience Prototyping is a method of "research through design." (Wikström, 2015). It is the act of developing "any kind of representation, in any medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system [you] are designing." (Buchenau, 2000). This might include design prototyping techniques such as physical prototypes, immersive spaces/installations, immersive theatre, storyboards, scenarios, sketches, videos, etc. "all of which certainly add value by communicating elements that make up an experience." (Buchenau, 2000).

Other relevant tools found in other phases:
- Ethnographic field notes
- Ethnographic interview
- System Map
- Frameboards
- Motivation Matrix
- Pugh Chart
- Value Proposition Canvas
- Funnel of Experience Sharing

3.5 Evaluate and Scale

While evaluation is often thought of as a post-implementation activity, it is useful to know how to evaluate solutions from the beginning to design truly impactful solutions. Measuring impact becomes a strategic asset for understanding effectiveness and knowing what, when and how to adapt the solution for a better fit or to scale the solution for wider impact.

Questions that can be answered in this phase:
- How are you implementing, sustaining and scaling social innovations?
- How can the city evaluate current social innovation initiatives as prototypes to be scaled?
- How can social innovations be scaled up?
- How can social innovation be evaluated?
- Does the social innovation fit all the user criteria?
- What solutions already exist that could be scaled or empowered through policy?

The tools and methods for evaluation are discussed in this section. However, the tools and methods for scaling social innovation will be discussed in D9.3 (the second part of this deliverable), as this deliverable is dedicated to this topic.

Name of Phase	Relation to CTM	Use for Transition Team	Use for Social Innovator(s)
Evaluate and Scale	Make it the New Normal	Transition teams can use the tools and methods in this phase to evaluate social innovation	Social Innovator(s) can use the tools and methods to evaluate themselves and find

		initiatives and explore ways to support them to scale up.	suitable strategies or methods to scale up their initiatives.

<div align="center">Table 3.5. Evaluate and Scale user pathway</div>

Primary tools and methods:

1. Funnel of Experience Sharing

The Funnel of Experience Sharing consists of a template which is useful for structuring and reflecting on experiences during a project. It suggests categories for discussions as well as templates that can be used to collect input (knowledge sharing and documenting). The experiences are structured along two dimensions: the phases of the project plan (plan, execution and closing), and activities (actions, outcomes and learnings). Completing the template results in the funnel being populated with input from the top (actions and outcomes), which is then distilled into the learnings at the bottom.
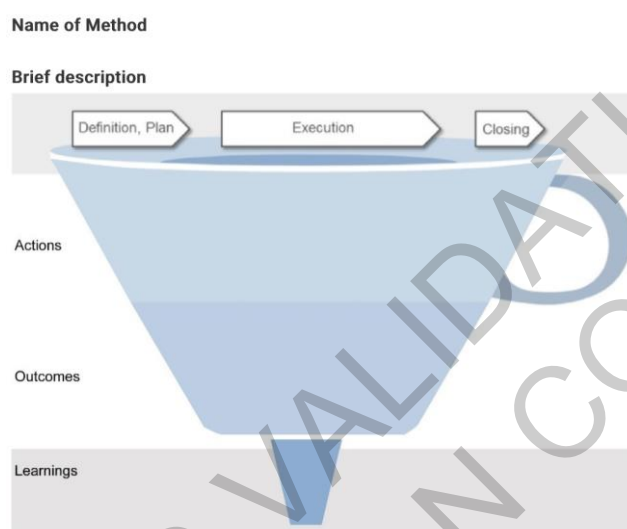
<div align="center">Figure 3-C. The Funnel of Experience Sharing template.</div>

2. Cultural Probes

Cultural probes are a design research method, which are particularly well suited to conduct research with participants on sensitive topics and in personal contexts. They are intended to encourage participants to look beyond relatively well understood needs, into the fuzzier realm of their beliefs, desires and cultural preferences. Unlike direct observation (like usability testing or traditional field studies), the technique allows participants to self-report. A cultural probe pack comprises various elements, which can include interactive materials like maps, postcards, cameras, photos, etc. Participants use these interactive materials to record elements of their daily lives, which offer insights and inspiration for a design/innovation team. Examples of how cultural probes have been tailored to suit personal settings include investigating people's values in the home environment, understanding the design space of assistive living technologies for older people, and exploring user needs in a range of care settings.

Cultural probes serve as an extremely useful tool for gaining insight into how certain social systems operate, why participants feel certain ways (trusting or distrusting), and how certain services are currently experienced/might be offered in more fitting ways. As such, they are a helpful tool to understand how and why a tool should be designed to overcome certain barriers. They are appropriate when you need to gather information from participants with

minimal influence on their actions, or when the process or event you're exploring takes place intermittently or over a long period. Additionally, when a topic or context might be too sensitive or personal to gain insight into, Cultural Probes offer a less intrusive way to learn about participants beliefs, desires, and cultural preferences. Furthermore, if the central research topic is one that a participant may find challenging to describe clearly, cultural probes can be creative, non-verbal communication methods for participants to provide insight into what the issue is.

Typically, a pack of easily reproducible and low-cost cultural probes are provided by researchers directly to participants with instructions for how participants can or should use the cultural probes. This might include asking participants to use a disposable camera to take photos of anything that relates to the topic, to keep a daily journal about their experiences with the topic, to write a postcard to a friend about a daily experience, etc. It is important to offer participants clarity about what they are expected to do with the Cultural probes without overly determining exactly what they will record. Participants should be encouraged to do as much as they feel comfortable with and to use whatever means of expression they wanted.

3. Field Experiment

By utilizing an experimental design, such as A/B testing, users (i.e., citizens) are randomly exposed to different options, then results are compared. The aim is testing which solution is best. For example, when utilizing a service, half of the users are provided one version of the service (intervention A), while the other half of the participants are provided a different version (intervention B). Performance and other data are collected for all users for the two conditions: the best performing solution is then adopted for all. Field experiments can be applied to test not only 2 but multiple options, in a specific setting or over time, and can take into account the effect of moderating variables (such as cultures, expertise, age, etc.). Randomized controlled trials, a top methodology utilized in policy making, are a specific form of experiments in which the users/population receiving the (policy) intervention is chosen randomly from the eligible population, and a control group is also chosen at random from the same population. By utilizing an experimental design, such as A/B testing, users (i.e., citizens) are randomly exposed to different options, then results are compared. The aim is testing which solution is best. For example, when utilizing a service, half of the users are provided one version of the service (intervention A), while the other half of the participants are provided a different version (intervention B). Performance and other data are collected for all users for the two conditions: the best performing solution is then adopted for all. Field experiments can be applied to test not only 2 but multiple options, in a specific setting or over time, and can take into account the effect of moderating variables (such as cultures, expertise, age, etc.). Randomized controlled trials, a top methodology utilized in policy making, are a specific form of experiments in which the users/population receiving the (policy) intervention is chosen randomly from the eligible population, and a control group is also chosen at random from the same population.

An experiment canvas allows for a team or individual to create an experiment for the current time and test out their ideas about a certain issue/topic. This is done through hypothesising the current riskiest assumption there is about an experiment, then a falsifying hypothesis. It is clear and easy way to create an experiment.

4. Most Significant Change

Most Significant Change (MSC) is a participatory monitoring and evaluation method without indicators that consists in collecting stories of change from the field. The stories help understand the complexity and reality of the project in the field and offer a more in-depth picture of progress. More precisely, the method helps identifying relevant field stakeholders, gathering their stories (through interviews, focus groups, or fact sheets), selecting significant ones with precise criteria until higher-level stakeholders identify the most significant changes. Many stakeholders from different levels are involved in identifying change and

analyzing data. This method focuses on learning rather than accountability. It provides information to help people manage the project and its outcomes are useful to assess the overall performance of a project. It has been used to monitor, evaluate and improve social changes, as for instance, to evaluate a German-Indonesia bilateral climate change program (FORCLIME). It contributed to the learning process of the project and partners, helped review and improve it. The method also enabled the communication of achieved impacts to partners through voices of beneficiaries and stakeholders closest to the action.

The method is well-suited in contexts where conventional monitoring and evaluation tools may not provide sufficient data to make sense of impacts and foster learnings (e.g. complex projects that produce diverse and emergent outcomes, projects focused on social changes, large projects with multi stakeholder levels, etc.). It can provide a structure for learning from project experiences by providing discussion categories and a template to collect input (knowledge sharing and documenting).

The process provides a simple means of making sense of a large amount of complex information collected from many participants across a range of settings, as well as identifying unexpected changes. It is a participatory form of monitoring that does not require expert knowledge or skills, consisting of collecting stories from various stakeholders on changes occurring during the project, It s easy to implement, enables communication across cultures and can deliver a rich picture of what is happening and can be used to monitor and evaluate bottom-up initiatives that do not have predefined outcomes.

5. **Outcome Harvesting**

Outcome harvesting is a method to identify, formulate then analyse and interpret the outcomes (positive and negative, intended or not) of an initiative. The process is stakeholder-centered and includes 6 steps that are helpful to collect evidence of what has changed for project stakeholders or beneficiaries and work backwards to evaluate whether and how the project has contributed to these changes. It is particularly adapted to evaluate dynamic and uncertain situations when it is difficult to precisely define objectives or actions to take, like with social innovations. This tool can be used for monitoring and evaluating projects. It goes beyond changes tracking to support learning about them: it is well-suited to get insights on the effectiveness of a project (rather than efficiency) as well as to understand the process of change and how each outcome is contributing. It has been used to evaluate and improve social innovations: the World Bank for instance drafted a case study of Outcome Harvesting being used in a solid waste management project in Bosnia and Herzegovina.The method helped local teams identify how to advance in their own reforms, uniquely adapting solutions to address institutional changes that were blocking improvements, and improving communication and relations among stakeholders along the way.

There are 6 key steps in the outcome harvesting process: Step 1: design the outcome harvest; Step 2: gather data and draft outcome descriptions; Step 3: engage with informants in formulating outcome descriptions; Step 4: substantiate; Step 5: analysis and interpretation of validated outcomes; Step 6: support use of findings

6. **Impact Metrics**

Pioneered by Patton (2010), the concept of developmental evaluation is based on insights from complex dynamic systems, uncertainty, nonlinearity and emergence, and therefore unlike other evaluation approaches, can feasibly be applied to evaluating social innovation as a process. Developmental evaluation suggests constant movement back and forth between problem and solution. This is because the destination and pathways for social innovations are emergent and cannot be defined in advance.

4. Conclusion[1]

In conclusion, Tasks 9.2 and 9.3's shared objective was to support cities in developing, implementing and scaling SI, as well as nourishing and maintaining a robust SI ecosystem for change. This was accomplished by developing the following:

- SI Pathway and Toolkit to guide cities and local, citizen social innovators through a development pathway that supports strategic SI programming or idea generation to maximize collective impact (Section 3);
- Scaling Strategies to support cities in scaling successful, small-scale experiments for bigger impact; and
- SI Actionable Pathways Tool to assess a city's current SI ecosystem and identify 'corrective' actions to strengthen certain areas of concern.

While these resources are meant to support cities, the impact relies on proper knowledge sharing mechanisms between the city and local urban stakeholders and an active and well-represented Transition Team (See Playbook for more information.).

WP09 was designed in such a way that the first three tasks (9.1-9.3) were content producing, while the latter three (T9.4-T9.6) operationalized the content in strategic and meaningful services (See Figures 6-A and 6-B). Overall, WP09 services were designed to support cities to navigate the CTM (See Figure 4-A below), as well as to complement other services and products developed across WP09 tasks. This work was supported by the Work Package lead and also through overlapping partner involvement in different tasks. For this reason, deliverables are highly interrelated.
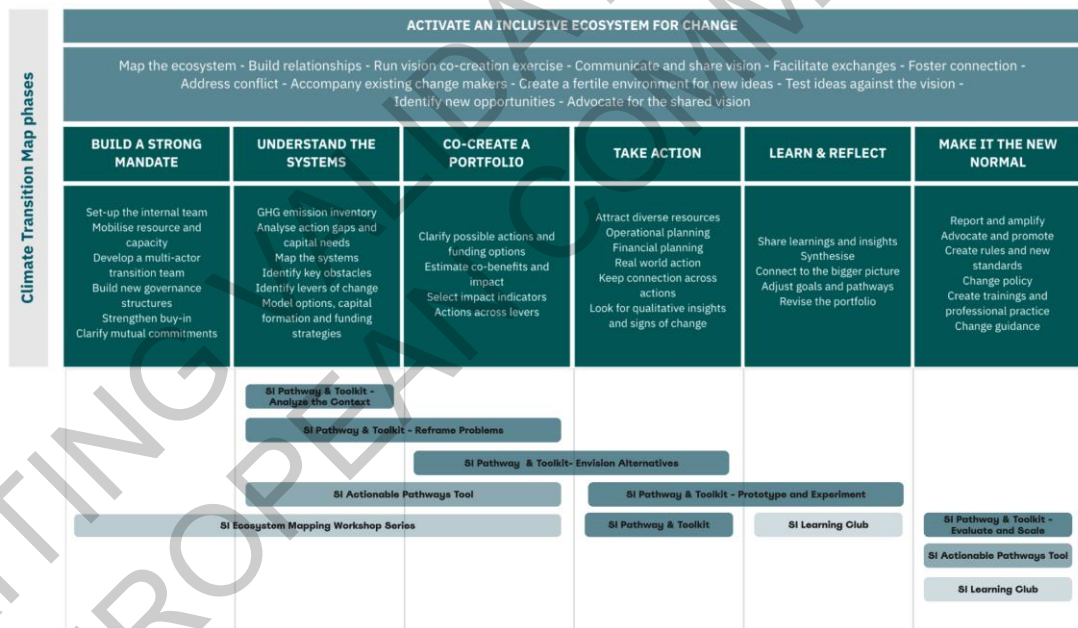
Figure 4-A. WP09 Services across the CTM

As a whole (See Figure 4-B), the services designed in WP09 can be broadly divided into:

- City Support Services that help cities learn about SI, define how to activate SI in their journey to climate-neutrality, implement SI initiatives and develop strategic SI programming; and
- Ecosystem Support Services that assist both: (1) cities in creating the enabling conditions for SI development and in activating local SIs in the city's Action Plan; and

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[1] Repeated in D9.3. While the deliverables are meant to be read together, the conclusion was brought here as well for document closure.

(2) local innovators in developing inclusive and responsive solutions for climate-neutrality.

The services and resources can be accessed from a single starting point in the SI Learning Club (See D9.4) and in the Activating Ecosystems for Change Module of NZC's Capability Building Program (See D9.6).

WP 09 Services

*Services that support cities learn about SI, define how to activate SI in their journey to climate-neutrality, implement SI initiatives and develop strategic SI programming.

**Services that support both: (1) cities to create the enabling conditions for SI development and activate local SIs in the city's Action Plan; and (2) local innovators to develop inclusive and responsive solutions for climate-neutrality.

Figure 4-B. WP09 Services

5. Bibliography

Argyris, C. and Schön, D., 1978. Organizational learning: A theory of action perspective. Reading, Massachusetts: Addison-Wesley.

Argyris, C. and Schön, D., 1996. Organizational learning II: Theory, method and practice. Reading, Massachusetts: Addison-Wesley.

Bates, S. (2012). The Social Innovation Imperative: Create winning products, services, and programs that solve society's most pressing challenges. McGraw Hill.

Bresciani, S., Rizzo, F., & Deserti, A. (2022). Toward a Comprehensive Framework of Social Innovation for Climate Neutrality: A Systematic Literature Review from Business/Production, Public Policy, Environmental Sciences, Energy, Sustainability and Related Fields. Sustainability, 14(21), 13793.

Bresciani, S., Tjahja C., Komatsu T., Rizzo F. (2023a). Prototyping for Policy Making: Collaboratively Synthesizing Interdisciplinary Knowledge for Climate Neutrality .Eksig conference proceedings. Milan, 19-20th June 2023.

Bresciani, S., Tjahja C., Komatsu T., Rizzo F. (2023b). Social innovation for climate neutrality in cities: actionable pathways for policymakers. IASDR conference proceedings, Milan 9-13th October 2023.

Brown, T., & Wyatt, J. (2010). Design Thinking for Social Innovation. Stanford Social Innovation Review, Winter 2010.

Chaudhary, N., Hawkins, P., & Alvial Palavicino, C. (2022). NetZeroCities Theory of Change. Deliverable 2.14. NetZeroCities EU H2020 Grant Agreement n°101036519.European Union, Brussels.

Deserti, A., Rizzo, F., & Komatsu Cipriani, T. (2017). A case-based analysis of the social innovation process in real life. ISPIM Conference. Vienna.

Design Council. (2023). The Double Diamond. https://www.designcouncil.org.uk/our-resources/the-double-diamond/

Dorst, K., (2015). Frame Creation and Design in the Expanded Field. She Ji: The Journal of Design, Economics, and Innovation, 1 (1), 22–33.

Dorst, K. (2019). Co-evolution and Emergence in Design. Design Studies, 65(5),

Elsbach, K. D., & Stigliani, I. (2018). Design Thinking and Organizational Culture: A Review and Framework for Future Research. Journal of Management, 44(6), 2274–2306. https://doi.org/10.1177/0149206317744252

European Commission. (2023). Social Innovation. Internal Market, Industry, Entrepreneurship and SMEs.

Kolb, D. A. (1984). Experiential Learning: Experience as the Source of Learning and Development. Prentice-Hall, Inc.

Liakou, L et al. (2022). Report on City Needs, Drivers and Barriers Towards Climate Neutrality. D13.1. NetZeroCities. EU H2020 Grant Agreement n°101036519. European Union, Brussels.

Mazzucato, M. (2018). Mission-oriented innovation policies: Challenges and opportunities. Industrial and Corporate Change, 27(5), 803–815. https://doi.org/10.1093/icc/dty034

Moore, M.-L., Darcy Riddell, & Vocisano, D. (2015). Scaling Out, Scaling Up, Scaling Deep Strategies of Non-profits in Advancing Systemic Social Innovation. The Journal of Corporate Citizenship, 58, 67–84. https://doi.org/10.9774/GLEAF.4700.2015.ju.00009

Mureddu, F. & Bresciani, S. (2022). Report on Indicators & assessment methods for social innovation action plans. Deliverable 2.7. NetZeroCities EU H2020 Grant Agreement n°101036519. European Union, Brussels.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). The Open Book of Social Innovation (Social Innovation Series: Ways to Design, Develop and Grow Social Innovation., pp. 1–219). The Young Foundation, The Lab and NESTA.

Gabriel, M. (2014). *Making it Big: Strategies for Scaling Social Innovation.* London: NESTA.

Neumeier, S. (2012). Why do Social Innovations in Rural Development Matter and Should They be Considered More Seriously in Rural Development Research? – Proposal for a Stronger Focus on Social Innovations in Rural Development Research. Sociologia Ruralis, 52(1), 48–69.

Owen, C., 1998. Design research: building the knowledge base. Design Studies, 19, 9–20.

Patton, M.Q., 2010. Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use. Guildford Press: New York, NY

Rizzo, F., Deserti, A., & Cobanli, O. (2017). Introducing Design Thinking in Social Innovation and in the Public Sector: A design-based learning framework. European Public and Social Innovation Review, 2(1), 127–143.

Romero, S., Sànchez, T., Komatzu Cipriani, T. & Rizzo, F. (2023). Social Innovation for Climate Neutrality. D9.1 NetZeroCities. EU H2020 Grant Agreement n°101036519. European Union, Brussels.

Schmidt-Thomé, K., Päivänen, J., & Tynkkynen, O. (2021). *Helpommin sanottu kuin tehty—Kokemuksia skaalauksen toimintamallin rakentamisesta kunnille.* Kestävä Kaupunki. https://kestavakaupunki.fi/-/helpommin-sanottu-kuin-tehty-kokemuksia-skaalauksen-toimintamallin-rakentamisesta-kunnille

Schön, D. (1983). The Reflective Practitioner: How Professionals Think in Action. Basic Books.

Schwab Foundation for Social Entrepreneurship & World Economic Forum (2013). Breaking the binary: Policy guide to Scaling Social Innovation. Schwab Foundation for Social Entrepreneurship, Cologne/Geneva.

Star, S.L. and Griesemer, J.R., 1989. Institutional Ecology, `Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. Social Studies of Science, 19 (3), 387–420.

Waud, A., Jacobi, N., Colom, A. O'Phelan, A. (2022) Identified city needs for MEL, metrics, indicators- D2.3. NetZeroCities. EU H2020 Grant Agreement n°101036519. European Union, Brussels.

Westley et al. (2014). Five Configurations for Scaling Up Social Innovation: Case Examples of Nonprofit Organizations From Canada, The Journal of Applied Behavioral Science, 50(3)

World Health Organization. (2010). Nine steps for developing a scaling-up strategy. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/44432/9789241500319_eng.pdf

6. Annex

5.1 SI Tools and Methods for Scaling SI

5.1.1 Phase 1 - Analyze the Context

Context Map Canvas
Overview

Name of Method	Context Map Canvas
Type/Level of Method (FF)	☐overall approach ☐ method x tool
Brief description	The Context Canvas is a framework used to help understand the context. The template can map out the trends and different perspectives. This brings out drivers outside the organisation and the forces that could shape the project now and in the future.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges x Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] x Financial limitations *eg. Insufficient resources* x Specific climate-related challenges *eg. City industry or location* x Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* x Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short term thinking *eg. Difficulty in policy planning beyond election cycle* x Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* x Historical legacies and institutional distrust *eg. Low public trust in city govt* x Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* x Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* x Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* x Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* x Other [Narrow definition or inadequate overview of the problem to be addressed] This includes the context from demographic, technological, economical, environmental perspectives and well as that of law and public need. Hence it may be applied to study a wide range of challenges.

Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] x Urban Governance, Policy Development, CCC x Innovation Management and Digitization x Stakeholder/ Community engagement and capacity building x Financing, Funding and Partnerships x Peer to peer learning, and replication, upscaling x Built environment *eg. Building renovations* x Energy systems *eg. Energy generation* x Mobility and transport *eg. Public transport, bikes* x Green industry *eg. Environmentally friendly manufacturing or agriculture* x Circular economy *eg. Initiatives to eliminate waste or reuse materials* x Nature-based solutions *eg. Green roofs, ecological restoration* x Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box] Depending on the nature of the project, it's context can be mapped based on the major indicators, hence it can be applied in a wide range of fields.
Problem, Purpose and Needs (text)	When most teams begin to unpack the context of their project or organization, they take a myopic point of view that is rooted in the here and now. The context canvas helps a team expand their thinking beyond the boundaries of their project, services and organisation, to have a deeper conversation about what is relevant in the world and the foreseeable changes that will affect the project in the future.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☐medium term x long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium x high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium x high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem*

	☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* x evaluation, oversight and monitoring *eg. Holding authorities to account* x Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture x Organizational structure x Network Mapping ☐Network Collaboration x Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) x Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer x Political and administrative awareness ☐Leadership x Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> x Self assess ☐Declare commitment x Define problem/s ☐Craft question ☐Select portfolio x Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> xMission City ☐Climate City Contracts xPilot City xTwin City ☐Other This method can help correlate the project aims with actual needs of the city
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion x collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics]

	x Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] x small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities x Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The context map is primarily for an internal understanding amongst the project teams and might not necessarily involve the stakeholders.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment x other - if required for the "needs" section
Interaction between participants (FF)	[how do people typically interact with each other during the process?] x Express preferences only ☐ Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining x Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] x Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype

	□Experiment □Assess social innovation readiness □Scale □Evaluate
Scope	[Which objective/activity does the tool/method support] x ecosystem analysis x environmental scanning □negotiation of commitments x stakeholder engagement □knowledge transfer x feasibility plan x brainstorming □prototyping □impact assessment x agenda setting x problem framing □policy legitimization / amplifying □policy formulation □policy implementation □policy evaluation □financing plan □accountability plan □other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials □Software or other tech □Funding □Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] x Can be run internally □Requires input from independent or external organisers □Both □Not Applicable

How does it work: step by step

Time commitment (text)	The deliberation process within the team can take over multiple days. The canvas starts to add real value after it has been revisited a couple of times. The first time using the canvas will serve to capture the top-of-mind external environment trends. As it is revisited - and used in conjunction with other strategy tools - it becomes easier for team members to add evidence for trends, or to actively hunt for trends that were not identif the first time.
Typical duration (FF)	□one-off □recurring x continuous □other [text box]
Step by Step (text)	The best way to use this Context Canvas is to break the team up into smaller sub-teams, and to assign each team a couple of sections of the canvas. Each sub-team has a deep meaningful discussion about what is going on in the world regarding the assigned section(s). Once all sub-teams are finished discussing and capturing drivers for their sections, they may add it to the common canvas.

Evaluation (text and links)	After the canvas is filled, the entire team then deliberates on the data gathered and builds on it, also identifying blind spots. Key drivers that need to be focussed upon can be chosen in the end, things that, positively or negatively, have the biggest potential to impact the project in the near future. This map can be left available so that team members may keep adding onto it for further synthesis.
Connecting Methods (links and text)	The Context Map Canvas is often used with the Business Model Canvas to understand the business model in the context of the external environment it operates in.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	RichInsights! - Wacom Europe GmbH https://studiolab.ide.tudelft.nl/studiolab/contextmapping/files/2013/01/RI10-body.pdf

Make it Your Own

Flexibility and Adaptability (text)	Mapping the context is relevant for any project in any field, and the key section of the standard canvas encompasses a wide range of sections, making this tool effective in any scenario.
Existing Guidelines and Best Practice (links)	[-]
Available Services from NZC (links)	☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://www.thegrove.com/grove-tools https://www.businessmodelsinc.com/about-bmi/tools/context-canvas/

Ethnographic Fieldnotes
Overview

Name of Method	[Ethnographic Fieldnotes]
Type/Level of Method (FF)	☐overall approach ☐ method X tool
Brief description	[Ethnographic fieldnotes are a tool to organize different observations, types of analysis, emerging questions and reflections, as well as ideas for future action (POLIMI, 2020)]
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges x Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations eg. Insufficient resources X Specific climate-related challenges eg. City industry or location X Resistance to climate action from vested interests eg. Previous initiatives met with resistance from powerful actors X Resistance to climate action from public eg. Previous initiatives met with public backlash X Short term thinking eg. Difficulty in policy planning beyond election cycle

	☐ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* X Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* X Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* X Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☐ Other [ ] TEXT: [Ethnographic fieldnotes are a useful tool to make sense of complex interactions and processes taking place in response to challenges such as climate change. They are structured, written observations done in physical and social proximity to a community or to the daily lives of a particular city. They can reflect not only the context in which a problem is being addressed and observed but also the links to citizens views. They can be a critical means to understand one's positionality, as well as the routines, challenges and conditions in which communities face ecological and governance challenges.]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] X Urban Governance, Policy Development, CCC ☐ Innovation Management and Digitization X Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships X Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	[The main aim of ethnographic fieldnotes is to understand how complex processes and challenges develop in communities' daily lives.]

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☐ medium term ☐long term X Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium X high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐ medium X high
Governance and Empowerment	
Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☐ co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐ systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* X evaluation, oversight and monitoring *eg. Holding authorities to account* X Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐ Network Mapping ☐ Network Collaboration X Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance X Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A

Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ==LEAVE BLANK== ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐ collective will formation ☐collective decision making X implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] X Public report ☐Mass media ☐Dedicated website X Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500 ☐500-1000 X no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations X Academia ☐Science or technology research communities ☐Organizational staff ☐ Social innovators X Other [Observed communities.]
Actors and Stakeholder Relationships (text)	[The actors being observed carry on their daily lives and routines.]

Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election X invitation or appointment X other [Observation of citizens does not require them to become participants]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐ Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions X Other [Daily social interactions]
Format (FF)	[in which formats can this method take place?] ☐ online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] X Analyse Context X Reframe Problems X Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale X Evaluate
Scope	[Which objective/activity does the tool/method support] X ecosystem analysis ☐ environmental scanning ☐negotiation of commitments X stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment X agenda setting X problem framing X policy legitimization / amplifying ☐ policy formulation ☐policy implementation X policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] X Human Labour ☐ Materials

	☐ Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally X Requires input from independent or external organisers ☐ Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[Depends on researcher and familiarity with the context being observed]
Typical duration (FF)	☐ one-off ☐recurring X continuous ☐other [text box]
Step by Step (text)	[Immerse yourself in a specific social context in order to understand it. Type your observations based on your own reflections and positionality, emerging questions, and ideas for the future.]
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated]
Connecting Methods (links and text)	[]

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[]
Existing Guidelines and Best Practice (links)	https://www.siscodeproject.eu/repository/tools/ethnographic-fieldnotes
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://www.paas.org.pl/wp-content/uploads/2014/07/OPTIONAL-Emerson-Writing-Ethnographic-Fieldnotes.pdf

Ethnographic Interview
Overview

Name of Method	Ethnographic Interview

Type/Level of Method (FF)	☐overall approach x method ☐ tool
Brief description	Ethnographic interview is a method used to understand deeply the actions and motivations of people behind a theme or topic of research. This process relies on a close connection between the researcher and the community they are working in. In creating connections the researcher is able to get a more rich understanding of how the community functions and what their motivations towards climate actions are for example, which is reflected in interviews with stakeholders. While it is not likely to help on technical challenges, it will be crucial for community issues and 'why' questions.
Keywords (FF)	<mark>LEAVE BLANK</mark>
Barriers and Issues	
Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges <mark>x</mark> Has been implemented to deal with climate challenges ☐Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short-term thinking *eg. Difficulty in policy planning beyond election cycle* ☐ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* <mark>x</mark> Historical legacies and institutional distrust *eg. Low public trust in city govt* <mark>x</mark> Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* <mark>x</mark> Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☐ Other [Narrow definition or inadequate overview of the problem to be addressed] TEXT: Ethnographic interviews can help create in-depth case studies and solutions for community problems, which in turn aids issues of representation as well as giving context and understanding for why participation and distrust occur in certain places. This method acknowledges that there will be different experiences and issues throughout smaller and wider contexts.

Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐ Innovation Management and Digitization x Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships x Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	Solutions tend to be placed onto communities without real context or understanding od the different situations. The main aim of ethnographic interviews are to provide this missing context so solutions will be actually applicable to communities and give understanding to experts about how to contribute to identified barriers.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term x medium term x long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium x high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low x medium ☐high
Governance and Empowerment	
Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE x co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* x co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* x collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes*

	☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* x Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐ Network Mapping ☐ Network Collaboration x Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research x Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] x empowering inclusion ☐ collective will formation x collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] x Public report ☐Mass media

	☐Dedicated website ☐Social media x Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] x small groups – up to 10/15 x up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers x Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations x Academia ☐Science or technology research communities ☐Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Generally the stakeholders and actors form a close relstionship due to the nature of ethnographic interviews
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election x invitation or appointment ☐other [text box] They are usually picked according to what you are researching - not random
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only x Deliberate or discuss x Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] x Analyse Context x Reframe Problems ☐Envision Alternatives ☐Prototype

	☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] x ecosystem analysis x environmental scanning ☐negotiation of commitments x stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐ agenda setting x problem framing ☐policy legitimization / amplifying x policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally x Requires input from independent or external organisers ☐ Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	This is a time intensive method, as it requires the researcher/s to establish a relationship with the interviewees and observe practices before interviewing subjects. This would take 2-4 weeks, however, the benefits of the process means connections with various communities and rich in quality data about problems and solutions. However, if there is a time constraint open-ended interviews that allow for exploration are ok to do at the beginning instead of the end
Typical duration (FF)	☐ one-off ☐recurring x continuous ☐other [text box]
Step by Step (text)	Select stakeholders to participate in interviews, depending on what the aim of the project is, e.g. understanding a particular community's needs to reach climate neutrality. Participate in and get to know the community. In doing so, conduct open-ended and

	exploratory interviews with the community to understand the issues they perceive related to the topic. Through open-ended questioning, new topics that were not considered by the stakeholder may be opened.
Evaluation (text and links)	N/a
Connecting Methods (links and text)	Data analysis of the interviews such as coding will help unearth core themes that can be compared to other communities/cities.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] <mark>LEAVE BLANK FOR NOW</mark>

Make it Your Own

Flexibility and Adaptability (text)	[There is no one-fits-all model for preparing ethnographic interviews. Questions and answers emerge according to how stakeholders respond
Existing Guidelines and Best Practice (links)	http://www.geo.mtu.edu/volcanoes/06upgrade/Social-KateG/Ethnographic%20Methodology.htm
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] <mark>LEAVE BLANK</mark> ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	[https://www.science-practice.com/blog/2015/01/15/challenge-mapping/ https://demoshelsinki.fi/wp-content/uploads/2018/05/demos-try-out-www-1.pdf]

People and Connections Map

Overview

Name of Method	People and Connections Map
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The People & Connections Map is a visualization tool used to identify stakeholders you are trying to reach and how. It is a tool for mapping actors that surround you that could potentially become your partner, user or supporter. These might include people, communities, funders, networks etc. All of them can represent a resource to your innovation and link to your group goal or your innovation.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how]

	☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☒Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: The tool helps to focus attention on all actors in the product-service (eco)system. In doing so, it sheds light on actors and their possible role in the solution's design and implementation. It also provides insight on those affected by the challenge, ensuring that marginalized voices are included. By mapping actors, services can be (re-)designed based on value creating relationships and improved based on user (actor) research. The tool is a first step towards a stakeholder map which defines these roles in greater strategic detail. As a first step, it also starts shedding light on the replicability of other SI ideas in the local context (from a reverse engineering perspective).
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☒Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture*

	☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The map seeks to encourage initial thought on the actors involved both directly and indirectly in the challenge space and their potential role in its solution. As such, it is useful for mapping relationships between actors and different facets of the challenge and identifying who to create value for, who can participate in the creation of the value (and when) and who is engaged in its delivery. It also sheds more light on aspects of the challenge that need to be researched and on narrowing in on specific elements of the challenge that address specific targets. It can also help in planning the co-creation process.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒low ☒medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☒partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account*

	☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☒Network Mapping ☒Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☒Access to markets ☒Access to finance ☒Access to training, education and research ☐Knowledge development and transfer ☒Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool is a great mapping exercise to narrow in on different aspects of the challenge and the different actors engaged and their relation to each other. Adequate time should be given to this as a preparatory step towards other phases of the co-design process (e.g. context analysis, stakeholder engagement, value proposition, etc.).
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☒Public report ☐Mass media

	☒Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The tool can be completed by the project team but is best completed with representatives from the challenge ecosystem to ensure that all actors are mapped and their possible connections. It is important to ensure that the marginalized and other unusual suspects are included to guarantee inclusion and work towards a just solution.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☐Reframe Problems

	☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ecosystem analysis ☒environmental scanning ☒negotiation of commitments ☒stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The time the activity takes is dependent on the level of detail desired, but at its most essential, will take 1 hour. The time needed to prepare the activity is minimal and mainly regards the time spent on making a list of representatives to include in the mapping activity, inviting them for the workshop and organizing it.
Typical duration (FF)	☐one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	Start from the center point of the tool by listing your target audience (beneficiaries, users, customers) who can benefit from your idea. Then work towards the outer layers and list stakeholders that surround you or are somehow related to the work you do. The

	closer they are positioned to the center point the stronger their influence or value is. Once you fill in the worksheet, revise the input, one by one, and reconsider possible repositions together with your team. By reviewing the stakeholders you will encourage team discussion and gain better understanding of relationships and connections you are trying to build. When finished, you will get a clear, visual stakeholder graphic to help you highlight and communicate the main focus of your work.
Evaluation (text and links)	The map should be presented to different actors for further input and revisions.
Connecting Methods (links and text)	The map is a good precursor to a more detailed and strategic stakeholder map. It can also be useful as a first mapping of actors and their roles in the project – useful in fleshing out a business model.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The tool is already quite simple and flexible. Further detail can be added to contextualize it in the specific area or thematic focus. It should be translated into the local language.
Existing Guidelines and Best Practice (links)	SIC's SI Learning Repository: canvas and steps https://www.silearning.eu/tools-archive/people-and-connections-map/ SISCODE Learning Hub: canvas and steps https://www.siscodeproject.eu/repository/tools/people-and-connections-map Nesta DIY toolkit: canvas, steps and video tutorial https://diytoolkit.org/tools/people-connections-map/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	SIC. (2020). SI Learning Repository: Business Model. Retrieved from https://www.silearning.eu/tools-archive/business-model/

PESTEL
Overview

Name of Method	PESTEL
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	A PESTEL analysis is a strategic tool coming from marketing used to identify external forces in the environment that faces an

	organization. By completing the tool, the team analyses the Political, Economic, Social, Technological, Environmental and Legal forces that make up the external environment. The exercise provides a situational analysis that allows organizations to anticipate threats and opportunities, gain contextual awareness and process external trends. In order to be an active and strategic operative tool, internal assessment needs to be done to translate the insights into actionable strategies for the organization's future opportunities and operation. The insights coming from this analysis are useful towards a SWOT analysis as well as in activities regarding future scenarios and strategic direction.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☒Financial limitations *eg. Insufficient resources* ☒Specific climate-related challenges *eg. City industry or location* ☒Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☒Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] The tool addresses in a single canvas the different environmental factors that can drive or hinder the development of a social innovation. As a mapping activity, it highlights different elements that factor into tackling specific challenges, highlighting insufficiencies, barriers and threats, but also available resources, drivers and opportunities. It is a great way to map the ecosystem and current context within which social innovations will develop and to align them with strategic directives and on the basis of different prospective threats or opportunities. It is also a great horizon scanning tool for scenario building and futures work. For this

	purpose, there is also a values element that has been added to the environment analysis.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The tool aims to help teams get aligned on the context of innovation in order to better design solutions that can be effective, feasible and long-term. It helps to visualize and bring to the surface also the tacit knowledge that each member has of the specific challenge area.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem*

	☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☐Organizational structure ☒Network Mapping ☒Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☒Access to markets ☒Access to finance ☒Access to training, education and research ☐Knowledge development and transfer ☒Political and administrative awareness ☒Leadership ☒Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool can be useful for quickly assessing the fit of a solution to local needs and strategic directions before further investment.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics]

	☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [The canvas usually remains open internally for consultation, feedback and iteration. It is also used as a communicative tool for different stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by a small group or project leader who consults with different actor groups through interviews. In subsequent iterations, different actor groups can be informed, consulted or engaged in refining specific parts. The activity has the potential to create new relationships and connections (of mental models) between actors while working on the model.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person

	☒asynchronously
	☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☒environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☒problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The time needed to complete the activity depends on the level of detail and thoroughness desired, as well as how many actors are involved in the task. It can take anywhere from 2 hours and upwards.
Typical duration (FF)	☐one-off ☒recurring

	☐continuous ☐other [text box]
Step by Step (text)	The first step is to gather together a working group of key actors across the organization to brainstorm ideas and conduct the research. The team should work together to map out the trends in each area of the matrix (political, economic, social, technological, environment/values, legal), starting a reflection and discussion on how these trends frame their current activity and open up possibilities of different future horizons of development. Based on the initial mapping, ethnographic, field and/or action research strategies (e.g. interviews, focus groups, immersive observation, etc.) should be used to gain further insight of each focus area from the perspective of key stakeholders (See Stakeholder mapping tool). Next, the group should collect evidence for each insight to then evaluate and score based on 'likelihood' and 'impact': how likely it is to happen and what kind of impact it could have on the organization (similar to impact and feasibility analysis tool, substituting feasibility for likelihood). In the final stage, the group should refine insights and make strategic recommendations on a path forward.
Evaluation (text and links)	The tool should be shown to relevant actors (beneficiaries, customers, supply chain actors, employees, etc.) for feedback and iteration.
Connecting Methods (links and text)	The canvas can serve to conduct a SWOT analysis, as well as Scenario Building with Futures Table and Backcasting. The activity can be completed with information and insights coming from other tools, namely: stakeholder map, ethnographic interview, ethnographic field notes, and observation of context. These tools can provide content for the model, but are not necessary for the completion of the canvas.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The canvas could be translated into the local language. More context-specific terms and questions could be used in the supportive text and questions in each box.
Existing Guidelines and Best Practice (links)	Witcher, B.J. & Chau, V.S. (2010). *Strategic Mangement Principles and Practice*. UK: Cengage Learning EMEA. Issa, T., Chang, V., & Issa, T. (2010). Sustainable Business Strategies and PESTEL Framework. *GSTF International Journal on Computing*, 1(1), 73-80.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Witcher, B.J. & Chau, V.S. (2010). *Strategic Mangement Principles and Practice*. UK: Cengage Learning EMEA.

Issa, T., Chang, V., & Issa, T. (2010). Sustainable Business Strategies and PESTEL Framework. *GSTF International Journal on Computing*, 1(1), 73-80.

System Map

Overview

Name of Method	System Mapping
Type/Level of Method (FF)	☐overall approach ☒ method ☐ tool
Brief description	System maps (also referred to as stakeholder maps) are schematic representations of the main "actors" of a given (service) system, from the point of view of the main service-providing organization. The actors are made up of those surrounding and those internal to the organization, including users, staff, departments, and external providers. Typically, the maps make use of pictograms or other visual representations, and lines and arrows connect the different actors representing the different relationships and flows (of information, financial, physical, or labor based) among the various actors. Stakeholder map and system maps are useful for identifying the boundaries of service systems, core service performances, and the different kinds of flows, both existing and aspirational.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☒ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)*

	☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] Systems maps come in many shapes and forms; what you will be using it for, and the questions you want to answer with it will determine which type of systems map to use. It's important to strike a balance between mapping the detailed complexity and making it simple enough to be useful, at the right time to use it. Remember, it's a *living* map (not a static one) and will change over time.
Thematic Areas (FF)[*]	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [System understanding, Service Development, Policy development]
Problem, Purpose and Needs (text)	Systems mapping is a process for understanding, diagramming, and prioritising intervention opportunities in a city. By individually— or, more ideally, using participatory methods--charting the relationships, dynamics, and interactions between different actors in a system, actions can be taken to affect change that has

	systemic rather than isolated impact. To have as robust and precise a sense of a system, however, it is advantageous to involve many stakeholders and citizens who have both conventional and marginalised experiences. This means systems mapping can be a one off exercise, but offers the most opportunity and usefulness when conducted iteratively with varying participants.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☐ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒ systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☒ partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☒ Network Mapping ☒ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness

	☐Leadership ☒ Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool could be useful to analyse a context and frame a problem before contracting.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☐ implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [It usually remains internal to the design team. When used as a tool of experimentation, it is shared also with the relevant stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public

	☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done with stakeholders who have a close proximity or lived experience relative to part of the system. Each stakeholder can inform the system mapping process to enable the system map to more accurately reflect the dynamics, interactions, and relations with other actors.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐ self-selection ☐ random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐ Deliberate or discuss ☐Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☐Ask and answer questions ☒ Other [Participants interact with each other as they help to inform the shape and contents of a system map. The System mapping process enables these different stakeholders to interact and inform each others sensibilities of what the system looks like and how it affects different stakeholders in different ways.
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒ asynchronously ☒ synchronously
Development Stage	
Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context ☒ Reframe Problems ☐Envision Alternatives ☐ Prototype ☐ Experiment ☒ Assess social innovation readiness ☐Scale ☐ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☒ environmental scanning ☐negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan

	☐brainstorming ☐ prototyping ☐impact assessment ☐agenda setting ☒ problem framing ☐policy legitimization / amplifying ☐policy formulation ☐ policy implementation ☐ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☒ Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* The time commitment of System Mapping depends on the degree to which it is planned to be participatory and/or iterative. If it is planned to be both, it can take approximately a 1-2 months to plan, invite, coordinate, execute, and iteratively repeat the process. If it is planned as a one-off exercise with participants, it can take 2-3 weeks to plan, invite, coordinate, and execute. If it is planned as a one-off exercise with a small internal team, it can be planned and executed within a few days or less. The actual act of System Mapping—as an exercise in and of itself—can take 2-4 hours. This amount of time will depend on how many stakeholders are participating and the number of different ways of mapping the group attempts.
Typical duration (FF)	☒ one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	**1) Identify the challenge statement** Write down the challenge statement for your complex problem in the centre of a worksheet/flipchart. Try to be concise, but not too narrow in your description (defining the right problem scope is important in not going too broad or too narrow).

	You can refer to the 'Challenge Statements' section to assist you with this process. **2) Identify key issues** Brainstorm and describe the key issues that affect/contribute to that challenge. Make it concise. **3) Identify potential drivers** Discuss what the drivers are behind each key issue. Write each driver down on the map. **4) Team discussion** Discuss the relationships between key issues and drivers with your team, by drawing lines and linkages between them. Drivers can be linked to multiple issues. Identify any possible sub-issues that contribute to your problem but are not on the map yet. Write them down on the map and connect them with key issues and/or drivers. Try to be clear on how certain you are about the relationships and linkages, how strong (and resistant to change) they are.
Evaluation (text and links)	Involving more and different stakeholders in multiple iterations of system mapping can be an excellent way to test the initial insights.
Connecting Methods (links and text)	Issue Maps, Mind Maps, Actor Maps, Journey Maps, Service Blueprints, Value Chain Maps, Causal Loops Diagrams, Stock and Flow Diagrams.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The tool should be translated into the local language. If needed, additional features and elements can be added.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://mars-solutions-lab.gitbook.io/living-guide-to-social-innovation-labs/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	MaRS. (n.d.). *Defining systems mapping*. Systems Mapping - Living Guide to Social Innovation Labs. Retrieved March 31, 2022, from https://mars-solutions-lab.gitbook.io/living-guide-to-social-innovation-labs/seeing/understanding-the-problem-systems-and-complexity/systems-mapping#defining-systems-mapping Penin, Lara. 2021. *Designing the invisible: ǂan ǂintroduction to service design*. London [etc.]: Bloomsbury. Meadows, Donella H., and Diana Wright. 2015. *Thinking in systems: a primer*. Meadows, Donella H. Leverage Points: Places to Intervene in a System. https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

Observation of Context

Overview

Name of Method	Observation of Context
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	[aims and nature of the method | *50-100 words*] Observation of context is a qualitative research tool to help understand context and to show what people do. This tool involves collecting data using one's senses. It is about getting a perspective or opinion on what is happening, what's going on, who you'd like to spend more time with.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☒Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: [outline how this method helps to address these barriers]

Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☒Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have] This is a guide for an individual researcher or a group of researchers to use within their chosen setting (e.g. a town, organisation or group). It is likely to take more than one observation to get a complete picture and observations may change as more is learned about the group/ place being observed.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes*

	☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report

	☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	[how are different stakeholders involved or work together?]
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☒random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐Deliberate or discuss ☐Observe as spectators ☒No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☐online ☒in person ☐asynchronously ☐synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype

	☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ecosystem analysis ☒environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☒Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☒Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	Each observation is likely to require at least one researcher and a minimum of two hours of time
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	[what are the main phases of this method? Describe briefly] Use the ethnographic observation template to take notes of the observation process. This includes: The space: Layout of the physical setting. Other observation such as location, time of year, temperature, etc. • Actors: Observation of people involved.

	• Activities: The various activities of the actors. • Objects: Physical elements. • Acts: Specific individual actions. • Events: Particular occasions. • Time: The sequence of events. • Goals: What actors are attempting to accomplish. • Feelings: Emotions in particular contexts.
Evaluation (text and links)	Not applicable
Connecting Methods (links and text)	Connected to other SI Development Stage

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] Not applicable
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] Not applicable
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☒Mission cities [links to Tailored advisory service, for detailed support] ☒Pilot cities [links to expertise to design and support pilots] ☒Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://www.siscodeproject.eu/repository/tools/obversation-of-context

5.1.2 Phase 2 – Reframe the Problem

Frameboard
Overview

Name of Method	Frameboard
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The Frameboard tool is a canvas/template developed by Guido Stompff in 2018 with the aim of enabling both the visualisation and communication resulting from the exploration of a frame. A frame is intended in this case as a certain temporary perspective on a problem or challenge being explored.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges

	☒Has potential to deal with climate challenges
Challenges (FF and text) *	☐Financial limitations *e.g., Insufficient resources* ☒Specific climate-related challenges *e.g., City industry or location* ☐Resistance to climate action from vested interests *e.g. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *e.g. Previous initiatives met with public backlash* ☐Short-term thinking *e.g., Difficulty in policy planning beyond election cycle* ☐Existing governance structures *e.g., Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *e.g., Low public trust in city govt* ☒Inadequate public participation *e.g., Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities e.g. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *e.g. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *e.g., Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *e.g., Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] Since the Frameboard focuses on a frame – formulated as a temporary perspective on a determined issue – it is particularly useful to quickly explore the situation and iteratively envision alternatives or ideas to address the problem(s).
Thematic Areas (FF)*	☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *e.g., Building renovations* ☐Energy systems *e.g., Energy generation* ☐Mobility and transport *e.g., public transport, bikes* ☐Green industry *e.g., Environmentally friendly manufacturing or agriculture* ☐Circular economy *e.g., Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *e.g., green roofs, ecological restoration* ☐Digital solutions *e.g., Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose, and Needs (text)	The Frameboard is applicable in diverse fields and offers the opportunity to visualise and understand a given problem by building an (iterative) overview of different frames. These frames are alternative ways of examining the situation, with different problems, ideas, and solutions. The frames are explained in slightly different

	ways to grasp the nuances for envisioning a comprehensive course of action.
Impact Goals (FF)	☒short term ☒medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	☒low ☒medium ☒high
Issue Polarisation (FF)	☒low ☒medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	<mark>OPTIONS SUBJECT TO CHANGE</mark> ☒co-creation *e.g., Development of new or added value through collaboration with affected stakeholders* ☒co-design *e.g., Collaborative, and participatory design and development processes with affected stakeholders* ☐co-production *e.g. People using the service are involved in design and implementation* ☐systems thinking *e.g., Approaches specifically designed to effect systemic change* ☒collaborative governance *e.g., Affected stakeholders and communities working together on a problem* ☒deliberative approaches *e.g., Structured dialogic processes* ☐partnership approaches *e.g., long term partnerships that challenge traditional boundaries* ☐evaluation, oversight, and monitoring *e.g., Holding authorities to account* ☒Social innovation approaches *e.g., Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	☒Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☒Context fit (i.e., Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education, and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool explicitly orients toward frames, seen as working hypothesis or temporary solutions. To that extent, a Frameboard allows for envisioning ideas and structure approaches in a quick and iterative manner. It serves the purpose to provide a visual and textual support to communicate, materialise and reflect on different frames that include both a holistic overview of the problem and a translation into solutions.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?]

	<mark>LEAVE BLANK</mark> ☐Self-assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	☐empowering inclusion ☒collective will formation ☐collective decision making ☒implementation, monitoring, and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	☐Public report ☐Mass media ☐Dedicated website ☐Social media ☒Direct engagement with wider public ☒Other [It is often used and shared internally with relevant stakeholders]
Participation	
Participant Numbers (FF)	☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The tool is intended for collective use, and it works best in a group setting. The collaboration of diverse stakeholders supports the purpose of collecting different ideas and perspectives of the frames and allows for diverse viewpoints on the relationship between the problem analysed and the possible solutions. Finally, the Frameboard can also act as a support for guiding the discussion between the stakeholder and for communicating the outputs.

Participant Recruitment (FF)	☒self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	☒Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	☒Analyse Context ☒Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☒stakeholder engagement ☐knowledge transfer ☐feasibility plan ☒brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☒problem framing ☐policy legitimization / amplifying ☒policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify e.g., independent recruitment company, venue etc)
In-house (FF)	☒Can be run internally

	☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The activity requires about two to three hours. The time dedicated to the tool strictly depends on the level of detail required and on the dimension of the working team. Moreover, the tool allows (and encourages) to explore multiple frames and can be used iteratively throughout the early phases of a project, to act as a baseline for prototyping activities.
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	The template is divided into seven slots (six that can be filled with text: (i) description, (ii) value proposition, (iii) target – users, (iv) key problem(s), (v) solution approach, (vi) alternative ideas, and one – (vii) name and tagline – that can be drawn or sketched into). It is recommended that a minimum of six to ten distinct frames are explored to visualise and comprehend the issue in object at the early stages of a project. This will help to reach the best result possible. The frameboards will then allow for discussing different frames, with different views and types of solutions for the problems individuated.
Evaluation (text and links)	There is not a precise need for evaluating the activity in itself; however, since the purpose of the tool is to be discussed, adjusted, and iterated upon, it can serve as a basis for further analysis with relevant stakeholders and for presenting the outcomes of the activity.
Connecting Methods (links and text)	The tool can be linked to other tools such as Problem Definition, PESTEL analysis, SWOT. Moreover, employed as a tool for communicating, visualising, and reflecting on ideas can be used together with Idea Cards and Storyboards.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	To get the most out of the tool, it is recommended to translate it in the local language and to encourage participants to experiment with both text and visual representation such as sketching and drawing when filling it. It is a simple and clear tool that may be used to direct both the framing process and the way one visualises and speaks to others. Additionally, it aids in organising the design process, which is extremely iterative and alternates between problem and solution.
Existing Guidelines and Best Practice (links)	**Canvas and step-by-step instruction:** https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf (pp. 26-27) **Best Practice:** Köppchen, A. (2022). Cube Design Museum—Empathic Co-design for Societal Impact. In: Deserti, A., Real, M., Schmittinger, F. (eds) *Co-creation for Responsible Research and Innovation*. Springer Series in Design and Innovation, vol 15. Springer, Cham. https://doi.org/10.1007/978-3-030-78733-2_11 Stompff, G. (2018). *Design Thinking: Radicaal veranderen in kleine stappen.* Amsterdam: Boom Uitgevers.

Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access <u>different levels of services</u>; clicking this should link to relevant places] **LEAVE BLANK** ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Stompff, G. (2018). *Design thinking. Radicaal veranderen in kleine stappen.* Amsterdam: Boom uitgevers. https://siscodeproject.eu/labarticle/framing-framing-framing/ https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf

Problem Definition

Overview

Name of Method	Problem Definition
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The first stage in developing an effective and efficient response is defining the problem, as what may initially seem to be the problem may be a symptom of an underlying, and potentially larger, issue. The Problem Definition tool enables groups to comprehend what these potential underlying causes are and contextualise the problem to reframe it in a more focused and direct way.
Keywords (FF)	**LEAVE BLANK**

Barriers and Issues

Relevance to Climate Neutrality (FF)	☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text) *	☒Financial limitations *e.g., Insufficient resources* ☒Specific climate-related challenges *e.g., City industry or location* ☒Resistance to climate action from vested interests *e.g., Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *e.g. Previous initiatives met with public backlash* ☐Short-term thinking *e.g., Difficulty in policy planning beyond election cycle* ☒Existing governance structures *e.g., Existing setup makes collaboration across departments difficult, siloed governance* ☒Historical legacies and institutional distrust *e.g., Low public trust in city govt* ☒Inadequate public participation *e.g., Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities e.g., *Those affected by action are not well represented by/connected to existing elected officials*

	☒Poor existing services *e.g., The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *e.g., Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *e.g., Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] The Problem Definition can be used when in need for describing and elaborating on the underlying cause(s) of a targeted issue. To that extent, tool can be adapted to diverse kinds of interventions.
Thematic Areas (FF)*	☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☒Financing, Funding and Partnerships ☒Peer to peer learning, and replication, upscaling ☒Built environment *e.g., Building renovations* ☒Energy systems *e.g., Energy generation* ☒Mobility and transport *e.g., public transport, bikes* ☒Green industry *e.g., Environmentally friendly manufacturing or agriculture* ☒Circular economy *e.g., Initiatives to eliminate waste or reuse materials* ☒Nature-based solutions *e.g., Green roofs, ecological restoration* ☒Digital solutions *e.g., Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose, and Needs (text)	With the help of the Problem Definition tool, it is possible to zoom in on a core issue that can be acted or improved upon after first gaining a comprehensive picture of the numerous complex and interconnected issues that influence it.
Impact Goals (FF)	☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	☐low ☒medium ☒high
Issue Polarisation (FF)	☒low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	 ☒co-creation *e.g., Development of new or added value through collaboration with affected stakeholders* ☒co-design *e.g., Collaborative, and participatory design and development processes with affected stakeholders* ☐co-production *e.g. People using the service are involved in design and implementation* ☒systems thinking *e.g., Approaches specifically designed to effect systemic change* ☒collaborative governance *e.g., Affected stakeholders and communities working together on a problem* ☒deliberative approaches *e.g., Structured dialogic processes* ☐partnership approaches *e.g., long term partnerships that challenge traditional boundaries* ☐evaluation, oversight, and monitoring *e.g., Holding authorities to account* ☒Social innovation approaches *e.g., Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	☒Organizational processes ☒Organizational culture ☐Organizational structure ☒Network Mapping ☐Network Collaboration ☒Context fit (i.e., Ability to be embedded in the local/regional/national/etc. level) ☒Access to markets ☐Access to finance ☐Access to training, education, and research ☐Knowledge development and transfer ☒Political and administrative awareness ☐Leadership ☒Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ☐Self-assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other

Democratic Purpose (FF)	☐empowering inclusion ☒collective will formation ☐collective decision making ☐implementation, monitoring, and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	☒Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The tool can be used individually or in groups. However, it is best to complete it in groups since the exercise's goal is to approach the problem from several angles to better comprehend and characterise it. Another good practice is to involve all the relevant stakeholders in the procedure.
Participant Recruitment (FF)	☒self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	☒online ☒in person ☒asynchronously

	☒synchronously

Development Stage

Social Innovation Development Stage	☐Analyse Context ☒Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☒stakeholder engagement ☐knowledge transfer ☒feasibility plan ☒brainstorming ☐prototyping ☐impact assessment ☒agenda setting ☒problem framing ☐policy legitimization / amplifying ☒policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify e.g., independent recruitment company, venue etc)
In-house (FF)	☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	About one to two hours are needed to complete the task. However, the activity can be repeated several times to elicit different perspectives. Another factor that might influence the duration of the activity is the dimension of the group.
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	The Problem Definition tool is a worksheet that should be filled from left to right, and it presents five consecutive columns, each one with a leading question, namely: 1. What is the issue?

	2. Who is it a problem for? 3. What social/cultural factors shape this problem? 4. What evidence do you have that this is a significant problem? 5. Can you think of this problem in a different way? Can you reframe it? Examine the Problem Definition template for a specific individual or organisation in small groups, taking notes on a large sheet of paper. You can repeat the process multiple times to expose new viewpoints. Compare your versions and then discuss whether you are making the same assumptions and presenting the same information. Attempt to reframe the problem then.
Evaluation (text and links)	Its objective as a problem framing tool is to be reviewed, modified, and iterated upon by relevant stakeholders in the problem space. Therefore, there is no necessity to do an assessment of the activity itself, and it can be mainly considered as a tool for discussing and reflecting.
Connecting Methods (links and text)	The tool can be used parallelly or sequentially to other tools such as Frameboard, PESTEL analysis, and SWOT. The Problem Definition tool is often completed before the Value Proposition canvas.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The tool can be adapted to a variety of scenarios since its purpose is to grasp and challenge the nature of a problem. It is crucial to include those who have a strong understanding of the social problem as well as the environment in which the solution will be developed.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] **Canvas and step-by-step instruction:** https://www.silearning.eu/tools-archive/problem-definition/ https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf (pp. 24-25) **Best Practice:** http://www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://www.silearning.eu/tools-archive/problem-definition/ https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf http://www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf

Empathy Map

Name of Method	Empathy Mapping
Type/Level of Method (FF)	☐overall approach x method ☐ tool
Brief description	An empathy map is a collaborative visualization used to articulate what is known about a particular type of user. It externalizes knowledge about users in order to create a shared understanding of user needs, and aid in decision making. It helps synthesize observations and draw out unexpected insights. Empathy maps provide a glance into who a user is as a whole through a study of what they speak, think, do and feel about an activity.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges x Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* x Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* x Historical legacies and institutional distrust *eg. Low public trust in city govt* x Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* x Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* x Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* x Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* x Other [Narrow definition or inadequate overview of the problem to be addressed] Empathy mapping is a tool with multiple functions and

	can be used also for conflict/crisis resolution and development of shared visions by creating empathy towards others, broadening individual perspectives. It was also help synthesise, categorise and make sense of existing knowledge or qualitative research while also highlighting gaps in current knowledge and identifying the types of research needed to address it. For example, a sparse empathy map can indicate a need for more research.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC x Innovation Management and Digitization x Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships x Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* x Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* x Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* x Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	Empathy maps are needed to establish a shared understanding of the user and to understand and prioritise user needs. Generating empathy with the stakeholders highlights weaknesses in the project, uncovers user needs that the user themselves may not even be aware of, develops an understanding of what drives users' behaviours, and eventually be a guide towards meaningful innovation.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term x medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] x low ☐medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low x medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* x co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* x evaluation, oversight and monitoring *eg. Holding authorities to account* x Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure x Network Mapping x Network Collaboration x Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance x Access to training, education and research ☐Knowledge development and transfer x Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> x Self assess ☐Declare commitment x Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> xMission City ☐Climate City Contracts xPilot City xTwin City ☐Other

	This method can help identify needs of a city in a collaborative manner.
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] x empowering inclusion x collective will formation x collective decision making x implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] x Public report ☐Mass media ☐Dedicated website x Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] x small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers x Citizens or general public ☐Industry and innovation communities x NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☐Organizational staff x Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The stakeholders are either gathered together to discuss the 'anatomy' of the challenge or are interviewed individually or in groups to inform the team that visualises the empathy map
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment x other - based on general user personas
Interaction between participants (FF)	[how do people typically interact with each other during the process?] x Express preferences only ☐Deliberate or discuss ☐Observe as spectators

	☐No interaction ☐Negotiation and bargaining x Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] x Analyse Context x Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment x Assess social innovation readiness x Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis x environmental scanning ☐negotiation of commitments x stakeholder engagement ☐knowledge transfer ☐feasibility plan x brainstorming x prototyping x impact assessment ☐agenda setting x problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers x Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	Once the user personas are identified and interviews (or journeys mapped), the actual empathy mapping itself can be done in half a day within the standard template. Different visualisation and categorisation might need a bit more time commitment.
Typical duration (FF)	x one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	After user groups have been identified, interviewed and target personas have been established, the journeys and experience need to be reflected upon. What they said, thought, felt and did during the interactions need to be mapped out in order to create a canvas. This can further be analysed to bring out gaps in the project.
Evaluation (text and links)	When all the sections are complete, they need to be reflected upon. The participants can share by thoughts on the experience and how it changed their perspectives or if it produced new insights. The purpose of the exercise is to put the user at the centre of the participants' minds. If the exercise leaves a lasting impact on the people who participated, it can be considered a success.
Connecting Methods (links and text)	Empathy mapping is closely related to, but not the same as customer journey map or a user persona. Rather it is an additional extension of those two service design tools to get a deeper understanding of the user.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	Imagine 2050: Empathy Mapping for 'Climate impacts and concerns for young people' https://www.youtube.com/watch?v=xm3WK6OLr9k

Make it Your Own

Flexibility and Adaptability (text)	Various visual templates exist for empathy maps, but the core idea is conveyed in all of them. Say, Do, Think, Feel sections are standard, but additional sections of pain-points and how to relieve them can also be added to result in a more well-rounded graphic.
Existing Guidelines and Best Practice (links)	[-]
Available Services from NZC (links)	☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://www.amazon.com/Gamestorming-Playbook-Innovators-Rulebreakers-Changemakers/dp/0596804172?ie=UTF8&*Version*=1&*entries*=0 https://www.nngroup.com/articles/empathy-mapping/

Scenario-building with backcasting

Overview

Name of Method	Backcasting
Type/Level of Method (FF)	☐overall approach ☒method ☐tool
Brief description	Scenarios are plausible stories about possible future developments. Backcasting is a method to develop scenarios and

	explore their feasibility and implications starting from the future towards the present.
Keywords (FF)	LEAVE BLANK
Barriers and Issues	
Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: Visioning alternative futures in complex issues. Backcasting is a method that can help to imagine desired future states and actions needed to get to the desired state in complex issues. What institutional, organizational, and regulatory changes changes are necessary for achieving the future vision of zero-carbon society?
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes*

	☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [text box] Backcasting scenarios can be used to promote long-term transformation to carbon neutral society by turning these priorities into successful and sustaining action.
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have] Long-term transformation to carbon neutral society is unlikely to be attained through incremental change. Avoiding catastrophic climate change is a global priority that almost all cities agree on. Scenarios are needed if we want to turn these priorities into successful and sustaining action. Scenarios are a tool for exploring future uncertainties in operating environment. They depict alternative futures on society and pathways through which those futures can be attained and emancipate stakeholders to action. They show a logical chain of events that demonstrate how future events are linked. Scenarios help in building capabilities for strategic steps, identifying actors that should be prepared for change and finding right timing for action. There are two main types of scenarios: Forecasting scenarios are being constructed from present day towards distant future. Their purpose is to explore to what types obstacles and opportunities we should prepare ourselves for. Backcasting scenarios are being constructed from distant future towards present. Their purpose is to discover alternative pathways through which a desired goal can be met. In other words, backcasting is not concerned with predicting the future. It is a strategic problem-solving framework to explore how to reach specified outcomes in the future. Backcasting can be a relevant option when forecasting studies indicate that long-term developments seem to lead to undesirable outcomes. Backcasting scenarios allow for new options to be considered reasonable, thus widening the perception of what could be feasible and realistic in the long-term. Typically, backcasting is part of a comprehensive scenario process. The steps of scenario process are: 1. Select the subject, goal and research questions 2. Horizon scanning 3. Futures table 4. Future images 5. Scenarios 6. Conclusions Backcasting is based on horizon scanning that provides an operation analysis based of which futures table and future states are created. Backcasting is a method to describe what has happened between the future states and the present moment.

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☐medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☒deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness

	☐Leadership ☒Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	-
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☒Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☒up to 50 ☒50-100 ☒100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations

	☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Backcasting is typically a participatory process that engages and empower different stakeholders in the joint process. Stakeholders are also engaged to assess the feasibility of scenarios.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☒stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☐asynchronously ☐synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☒Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☒environmental scanning ☐negotiation of commitments ☒stakeholder engagement ☒knowledge transfer ☒feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☒agenda setting ☒problem framing ☐policy legitimization / amplifying ☐policy formulation

	☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☐Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] Backcasting can be implemented in a workshop or as a part of a longer scenario process that can last from a couple of weeks to several months. The time spent depends heavily on the end-use of the exercise. Meaningful and feasible backcasting scenarios typically require background work, a horizon scanning, that deserves a considerable amount of time to become deep enough.
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	[what are the main phases of this method? Describe briefly] Backcasting scenarios describe the chain of events from the future states to the present. The process is conducted trough moving backward in time in as many different stages as it is required to find mechanisms trough which the present actions could lead to attaining that particular future scenario. Typically 2-5 scenarios are created from the future states. The chain of events is created by writing a narrative for each future state on how the actions followed each other and what were the changes that made certain developments stronger than another. Actions are explored in a series of 1-20 years time slots in a timeline. For example, if the scenario starts from year 2050, one can create a timeline and explore what happened in 2040, 2030 and 2022. It is important to reflect the causalities between different events, trends, uncertainties and decisions. Weak signals and wildcard are good to include in the narrative. How to write them?

	1) Read and reflect what were the original research questions and futures states? 2) What are the main developments that this scenario is describing? 3) What are the central transformations and events that justify the scenario? 4) Write a logical path / chain of events from the future state towards the present 5) Repeat the process for other future states identified in the process 6) Make sure the scenarios differ from each other Other elements that can be used in the narration process: 1) Creating imaginary personas, fictional news stories from the future, "future artefacts" and other design prompts 2) Describing the same, most important features in each scenario (e.g. actors, uncertainties, events) 3) Naming the scenarios and listing their most relevant features 4) Utilizing images, modelling, graphs How to use them? Important part of the scenario part are the conclusions. Conclusions can be made, for example, by analyzing certain scenarios and comparing them and their transformation to each other. In addition conclusions can made by comparing different scenarios and their implications on the decisions, actions, operational models or strategies that have been developed or are under development. Overall, it is important to reflect what kind of actions would be needed to promote the desired future states and actions identified in backcasting process that could have an impact in real-life. Here close collaboration among key stakeholder is an important success factor.
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated] Scenarios that result from a backcasting process are typically evaluated with different stakeholders. They can be evaluated by their feasibility and probability. For example, a workshop can be organized to test with stakeholders does the scenarios resonate and what implications they could have. Also, an expert panel can be used to evaluate their relevance. It is important to highlight that, in addition the scenarios delivered, the process in itself is valuable in itself as it brings together different stakeholder to envision the future together
Connecting Methods (links and text)	[what other methods can this method be used with and how?]

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] Backcasting requires an operational analysis that is based on horizon scanning that, if done well and profoundly, requires a

	desktop analysis, interviews with experts and researchers, stakeholder interaction and workshops. In addition, futures tables and futures states should be created as a starting point for backcasting exercise. Horizon scanning and future states can be created as lighter versions in a workshop. However, profound scenarios are based on deeper analysis that requires time and effort.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] The backcasting approach is well-suited for long-term urban sustainability solutions due to its normative, goal-oriented, and problem-solving character. Typically backcasting is applied on long-term complex issues, involving many aspects of society as well as technological innovations and change.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

	Foresight platform Backcasting: a roadmap for transformational change Bibri, S.E. (2018): Backcasting in futures studies: a synthesized scholarly and planning approach to strategic smart sustainable city development. *Eur J Futures Res* 6, 13 https://doi.org/10.1186/s40309-018-0142-z Neuvonen, A. et al (2014): Low-carbon futures and sustainable lifestyles: A backcasting scenario approach. *Futures*. Vol 58. 66-76. Neuvonen, A. et al (2017):, Metropolitan vision making – using backcasting as a strategic learning process to shape metropolitan futures, *Futures*, Vol 86, 73-83. Lätti, R. et al (2022): Skenaarioiden rakentaminen tulevaisuustaulukkomenetelmällä in *Tulevaisuudentutkimustutuksi – perusteita ja menetelmiä.* Heikkilä et al. Tulevaisuuden tutkimuskeskus Turun yliopisto.
References and Further Resources (text and links)	

5W Technique

Overview

Name of Method	5W technique
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The 5W technique is an analysis tool consisting of a series of questions that probe the core qualities and characteristics of a given situation. The 5Ws are who, what, where, when, and why (a sixth component, how, can be sometimes added to the list).

Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text) *	☐Financial limitations *e.g., Insufficient resources* ☒Specific climate-related challenges *e.g., City industry or location* ☒Resistance to climate action from vested interests *e.g. Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *e.g. Previous initiatives met with public backlash* ☒Short-term thinking *e.g., Difficulty in policy planning beyond election cycle* ☒Existing governance structures *e.g., Existing setup makes collaboration across departments difficult, siloed governance* ☒Historical legacies and institutional distrust *e.g., Low public trust in city govt* ☒Inadequate public participation *e.g., Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities e.g. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *e.g. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *e.g., Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *e.g., Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] The technique's simplicity, adaptability, and comprehensive approach make it simple to arrange a brainstorming or analytic session in a multitude of situations.
Thematic Areas (FF)*	☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *e.g., Building renovations* ☒Energy systems *e.g., Energy generation* ☒Mobility and transport *e.g., public transport, bikes* ☒Green industry *e.g., Environmentally friendly manufacturing or agriculture* ☒Circular economy *e.g., Initiatives to eliminate waste or reuse materials* ☒Nature-based solutions *e.g., green roofs, ecological restoration* ☒Digital solutions *e.g., Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]

Problem, Purpose, and Needs (text)	The answers to the simple questions of the 5W technique will yield factual components that, once compiled, will allow for the creation of a universal representation of an event, interest, circumstance, or setting.
Impact Goals (FF)	☒short term ☒medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	☒low ☒medium ☒high
Issue Polarisation (FF)	☒low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	OPTIONS SUBJECT TO CHANGE ☒co-creation *e.g., Development of new or added value through collaboration with affected stakeholders* ☒co-design *e.g., Collaborative, and participatory design and development processes with affected stakeholders* ☒co-production *e.g. People using the service are involved in design and implementation* ☒systems thinking *e.g., Approaches specifically designed to effect systemic change* ☒collaborative governance *e.g., Affected stakeholders and communities working together on a problem* ☒deliberative approaches *e.g., Structured dialogic processes* ☐partnership approaches *e.g., long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *e.g., Holding authorities to account* ☒Social innovation approaches *e.g., Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	☒Organizational processes ☐Organizational culture ☐Organizational structure ☒Network Mapping ☒Network Collaboration ☒Context fit (i.e., Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education, and research ☐Knowledge development and transfer ☐Political and administrative awareness

	☐Leadership ☒Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool can support problem framing and context mapping activities.
Engagement Journey (FF)	[at what stage/s in a city's <u>engagement journey</u> is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self-assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	☐empowering inclusion ☒collective will formation ☐collective decision making ☐implementation, monitoring, and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [It is mainly used as an internal tool but can benefit from insight and feedback from other relevant stakeholders.]

Participation

Participant Numbers (FF)	☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities

	☒Organizational staff
	☒Social innovators
	☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity can be conducted with a strategy team, but it is most effective with stakeholders who have direct knowledge of or experience with an issue.
Participant Recruitment (FF)	☒self-selection
	☐random selection
	☐stratified selection
	☐election
	☒invitation or appointment
	☐other [text box]
Interaction between participants (FF)	☐Express preferences only
	☒Deliberate or discuss
	☐Observe as spectators
	☐No interaction
	☐Negotiation and bargaining
	☒Ask and answer questions
	☐Other [text box]
Format (FF)	☒online
	☒in person
	☐asynchronously
	☒synchronously

Development Stage

Social Innovation Development Stage	☒Analyse Context
	☒Reframe Problems
	☒Envision Alternatives
	☐Prototype
	☐Experiment
	☐Assess social innovation readiness
	☐Scale
	☐Evaluate
Scope	☒ecosystem analysis
	☐environmental scanning
	☐negotiation of commitments
	☒stakeholder engagement
	☐knowledge transfer
	☐feasibility plan
	☒brainstorming
	☐prototyping
	☐impact assessment
	☐agenda setting
	☒problem framing
	☐policy legitimization / amplifying
	☐policy formulation
	☐policy implementation
	☐policy evaluation
	☐financing plan
	☐accountability plan
	☐other [text box]

Resources

Resources and Investments (FF and text)	☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify e.g., independent recruitment company, venue etc)
In-house (FF)	☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	A session employing the 5W technique can be run in one to two hours. However, the amount of time necessary to conduct the activity can be adjusted according to the level of detail needed. One might consider dedicating a considerable part of the session to discussing the different viewpoints.
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	• Frame the questions by making them in line with the activity's objectives. • Present the five questions to the participants and allow them to note down their response. • Discuss the outcomes and vote/highlight the replies and their most significant points. • Establish pertinent actions in respect to the crucial points. N.B.: The questions can be changed to make it pertinent to whatever problem or issue is being addressed. The Ws help to cover all aspects of a problem so that a comprehensive solution can be found
Connecting Methods (links and text)	The tool can be used altogether with other tools employed in the problem space for framing purposes, like for instance Problem Framing and the Frameboard or PESTEL analysis.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The tool's simplicity is highly valued, as it consists just of a list of questions to memorise and can be readily replicated and/or adapted to different situations. In addition, the tool does not require much preparation or other materials. Despite this, it can provide a comprehensive depiction of a situation because it seeks to gather a comprehensive and objective set of data.
Existing Guidelines and Best Practice (links)	Szostak, R. (2003). Classifying natural and social scientific theories. *Current Sociology*, *51*(1), 27-49.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Szostak, R. (2003). Classifying natural and social scientific theories. *Current Sociology*, *51*(1), 27-49. https://www.edrawsoft.com/business-diagram/5w1h-method.html https://www.appvizer.com/magazine/operations/project-management/the-5-ws-in-business

Defining the Challenge with Challenge Map

Overview

Name of Method	Designing the Challenge
Type/Level of Method (FF)	☐overall approach ☒ method ☒tool
Brief description	Designing a challenge is a first step in putting together an innovation competition. In order for the innovation competition to be successful and attract enough audience, a team of organizers should define the main challenge of the competition, how to select winners, judges, what is the selection process along with other details. Intentionally designing the challenge can enable you to systematically design open innovation events and reveal innovative ideas worth developing. (https://www.silearning.eu/tools-archive/designing-the-challenge/)
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒ Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☒ Specific climate-related challenges *eg. City industry or location* ☐ Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐ Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒ Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☒ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] Designing the challenge allows you to set the ambitions and constraints of a challenge for an innovation competition. By doing so, you can help ensure the responses to the innovation competition will be fit-for-purpose to take on the challenge at hand. Additionally, these kind of constraints can help innovation competition applicants think creatively within the bounds of what would be helpful.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC

	☒ Innovation Management and Digitization ☐ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☒ Built environment *eg. Building renovations* ☒ Energy systems *eg. Energy generation* ☒ Mobility and transport *eg. Public transport, bikes* ☒ Green industry *eg. Environmentally friendly manufacturing or agriculture* ☒ Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☒ Nature-based solutions *eg. Green roofs, ecological restoration* ☒ Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development, Policy development]
Problem, Purpose and Needs (text)	Designing the challenge is a way to frame the challenge within the context of an innovation competition. By designing the challenge, you enable applicants to better understand the scope of the challenge at hand and ideate possible approaches to address it. To effectively design the challenge, you will need to run multiple workshops to (1) gain insight into what the scope and nuance of the challenge is and then (2) define the challenge objectives, selection processes and other important challenge features. This means you will need time, a working group or potentially a participatory process, and resources to run the workshops/process.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐ short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☒ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☐ systems thinking *eg. Approaches specifically designed to effect systemic change* ☒ collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes*

	☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒ Organizational processes ☐ Organizational culture ☐ Organizational structure ☐Network Mapping ☒ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☒ Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool is extremely useful for defining problem/s, developing a portfolio, enabling participatory or public led social innovation, experimentation, and prototyping.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒ collective will formation ☐collective decision making ☐ implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report

	☒ Mass media ☒ Dedicated website ☒ Social media ☐ Direct engagement with wider public ☐ Other []

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒ small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒ no limit [If designing the challenge becomes a participatory approach]
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☒ Other [It is unlikely that all these categories will participate, but each of them might have valuable insight into the challenge that can help designing it for an innovation competition]
Actors and Stakeholder Relationships (text)	Designing the challenge can be coordinated by an individual or a transition team, but other actors should be part of the process to inform the understanding and scope of the challenge.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☒ self-selection ☒ random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒ Express preferences only ☒ Deliberate or discuss ☒ Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☒ Ask and answer questions ☐ Other.
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒ asynchronously ☒ synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context

	☒ Reframe Problems ☐ Envision Alternatives ☐ Prototype ☐ Experiment ☒ Assess social innovation readiness ☐ Scale ☐ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☒ environmental scanning ☒ negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan ☒ brainstorming ☒ prototyping ☐ impact assessment ☐agenda setting ☐ problem framing ☐policy legitimization / amplifying ☐policy formulation ☐ policy implementation ☐ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐ Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* Designing the challenge could take up to a month and can be efficiently accomplished using two workshops. In the first session gather as group to discuss challenge design. Set challenge objectives and try to define each step in the working sheet. Also, see if there are any gaps or team disagreements on specific topics. When you define gaps do your research and gather on the second session to finalize the challenge and get mutual group consensus

	on your challenge objectives, selection processes and other important challenge features.
Typical duration (FF)	☒ one-off ☐ recurring ☐continuous ☐other [text box]
Step by Step (text)	In the first session gather as group to discuss challenge design. Set challenge objectives and try to define each step in the working sheet. Also, see if there are any gaps or team disagreements on specific topics. When you define gaps do your research and gather on the second session to finalize the challenge and get mutual group consensus on your challenge objectives, selection processes and other important challenge features. (https://www.silearning.eu/tools-archive/designing-the-challenge/) As you define and design the challenge, consider: 1. What are the objectives of your challenge? 2. What are you uncertain about when it comes to addressing the challenge? What questions best describe what you don't know and seem to need to know? 3. What is your most interesting question? Why is it interesting to your audience? Why is it interesting to you and your transition team? 4. How will you select the winners of your challenge? 5. Who will judge the ideas? 6. What is our recruitment plan? 7. What is the challenge process? 8. How will we incentivize people to take part?
Evaluation (text and links)	A participatory process to scope the understanding of the challenge can serve as an essential way to assess the validity of the way you understand the challenge.
Connecting Methods (links and text)	Innovation Competitions.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The two parts of the process should not be compromised. Time should be dedicated to define the challenge from a participatory perspective. Time should also be dedicated to scoping and designing how the challenge can/should be taken on. The way those sessions are carried out can and should be adapted to the context of your city.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://www.silearning.eu/tools-archive/designing-the-challenge/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	"Designing the Challenge." Silearning. European Commission . Accessed July 13, 2022. https://www.silearning.eu/tools-archive/designing-the-challenge/. Tuna en: Head of Explorationtr: Keşif Yöneticisi, Gökçe. "The Challenge of Designing an Innovation Challenge – Part I: United Nations Development Programme." UNDP. UNDP, July 28, 2021. https://www-dev.undp.org/turkiye/blog/challenge-designing-innovation-challenge-part-i. Tuna en: Head of Explorationtr: Keşif Yöneticisi, Gökçe. "The Challenge of Designing an Innovation Challenge – Part II: United Nations Development Programme." UNDP. UNDP, April 22, 2022. https://www-dev.undp.org/turkiye/blog/challenge-designing-innovation-challenge-part-ii.

Futures Table as a component in scenario building

Overview

Name of Method	Futures Table
Type/Level of Method (FF)	☐overall approach ☒method ☐tool
Brief description	Futures Table is a method in a scenario process that offers a structured approach to analyse how different variables of a trend, development or change signal may develop in the future.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement*

	□Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* □Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* □Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* □Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] A futures table is a tool for imagining radical and alternative futures. Futures table is typically a participatory process that engages several stakeholders to create images of alternative futures and encourages long-term thinking in complex issues such as reaching zero-carbon society.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC □Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building □Financing, Funding and Partnerships □Peer to peer learning, and replication, upscaling □Built environment *eg. Building renovations* □Energy systems *eg. Energy generation* □Mobility and transport *eg. Public transport, bikes* □Green industry *eg. Environmentally friendly manufacturing or agriculture* □Circular economy *eg. Initiatives to eliminate waste or reuse materials* □Nature-based solutions *eg. Green roofs, ecological restoration* □Digital solutions *eg. Engaging citizens through data platforms* □Not applicable □Other [text box]
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have] Futures table is a method within a scenario process. Scenarios are plausible descriptions of a future state and the actions that have lead to it. The biggest value in scenarios is that they help us thinking different and alternative futures and provide us with future-oriented information to which we can base decision-making and action in the present. The steps of scenario process are: 1. Select the subject, goal and research questions 2. Horizon scanning **3. Futures table** 4. Future images 5. Scenarios 6. Conclusions

| | Futures table can be used as an individual method. It is, however suggested, that it is based on horizon scanning and the end-result are reflected within future states.

Future states are "snapshots" of the future, that describe the end states of scenarios. Futures table is a method to create those images of future. The futures table shows the key tensions and uncertainties (variables) of the topic of research topic and their possible, alternative development directions (values).

A futures table is precisely defined framework about the future that contains the most important aspects of change. It is on purpose polarised to allow discussing meaningful alternative development directions. By showing the differences we can identify meaningful changes and discuss about trends, events, technologies, behaviour cchanges, and changing values that hint towards certain development direction.

Futures table is based on the morphological analysis by Fritz Zwicky (Zwicky 1967; Zwicky & Wilson 1969). |
|---|---|
| **Impact Goals (FF)** | [does this method typically aim towards long or short term goals]
☐short term
☐medium term
☒long term
☐Not applicable/other |
| **Issue Complexity (FF)** | [what level of complexity can this method handle?]
☐low
☐medium
☒high |
| **Issue Polarisation (FF)** | [what level of polarisation is this method capable of dealing with?]
☐low
☐medium
☒high |

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*

Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☒Political and administrative awareness ☒Leadership ☒Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	-
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☒Public report ☐Mass media ☐Dedicated website ☐Social media

	☐Direct engagement with wider public
	☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☒up to 50 ☒50-100 ☒100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Futures table can be created within a core team. Typically the process includes engagement of several different stakeholder groups.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☐asynchronously ☐synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment

	☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ecosystem analysis ☒environmental scanning ☐negotiation of commitments ☒stakeholder engagement ☒knowledge transfer ☒feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☒agenda setting ☒problem framing ☐policy legitimization / amplifying ☒policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☐Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] Future tables can be created in a workshop or as a part of a longer scenario process that can last from a couple of weeks to several months. The time spent depends on the end-use of the exercise. Meaningful and feasible future tables typically require background work, a horizon scanning, that deserves a considerable amount of time to become deep enough.
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]

Step by Step (text)	[what are the main phases of this method? Describe briefly] A futures table is a tool for imagining radical futures and exploring the largest uncertainties. Futures table consists of a set of variable and their values. Variables are created trough a process of horizon scanning that identify and analyse different change phenomena that impact the topic. The aim of the horizon scanning is to create a holistic understanding of the researched topic and identify those uncertainties and tensions that are most central for the topic. Horizon scanning includes 1) megatrends: global, macro-level phenomena that are expected to have large and long-term implications on society. 2) medium-sized things trends: general tendency or direction of a development or change over time (shorter term) 3) uncertainties and tensions: uncertainties have alternative development directions with no clear trend currently. Tensions have different forces acting in opposition to each other. 4) weak signals and wild cards: Weak signals are signs of an emerging issue or an early warning or an early indication of a change that may be significant in the future. Wild cards are events that have low probability but high impact In practice the horizon scanning is done trough a desktop analysis, interviews with experts and researchers, stakeholder interaction and workshops. A practical tool to conduct horizon scanning is to adapt PESTE/V framework that aims to map out changes in policitical, economic, social, technological, environmental / values environment. II Futures table Futures table is a framework that defines the potential diversity of the explored futures. Futures table is built upon the uncertainties and tensions recognized in the horizon scanning. These are taken into a table to create future states, with the tensions and uncertainties being variables, and their alternative development direction values. It is important to make sure that the values are excluding each other so that so that future states are different enough. 1. Review the results of horizon scanning 2. List relevant issues and make them abstract and create categories with different development options 3. Create a list of 5-10 most important uncertainties (variables) 4. Make sure that at least some of the uncertainties are exogenous, i.e. not directly linked to the subject of research, so that the scope is wide enough. 5. Create 2-5 different development options (value) for each uncertainty (variable) that exclude each other 6. Create a table that includes variables and their different values.

FUTURES TABLE

Variable 1	Variable 2	Variable 3	Variable 4
Value 1a	Value 2a	Value 3a	Value 4a
Value 1b	Value 2b	Value 3b	Value 4b
Value 1c		Value 3c	
		Value 3d	

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III Creating a future state based on futures tables

Future states are snapshots of future. Future states are created by:
1. selecting one value from each variable and
2. combining these a description of that future state.

Future states are usually written narrations of different futures based on the horizon scanning, futures table and creative thinking that brings forward interlinkages of their elements. It is important to aim to create future states that differ from each other.

Evaluation (text and links)	[ways/suggestions of how this method can be evaluated] Futures tables should be tested with different stakeholders: how do they resonate? Are the variables interesting enough?
Connecting Methods (links and text)	[what other methods can this method be used with and how?]

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] Usually futures tables and futures states are part of a longer scenario process but they can be used on their own to depict possible futures and make conclusions based on that. However, to provide deep insight, it is recommended that futures table is based on the horizon scanning that can be more time consuming if done properly.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] It is important to make sure that values in futures table exclude each other so that the different alternatives are diverse enough. PESTEV, with values included, is a useful framework to provide a diverse overview of different changes phenomena based on which variables are chosen. It is important to include variables that are external to the researched subject. For example, if the futures table describes the cities and the transformation of their built environment, other variables such as technology, politics and people's behaviour could be taken into account since cities don't evolve independently of these external factors.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	**Futures Table Guide – A Powerful Scenario Planning Tool — Futures Platform** Tom Richey: Morphological analysis Lätti, R. et al (2022): Skenaarioiden rakentaminen tulevaisuustaulukkomenetelmällä in *Tulevaisuudentutkimustutuksi – perusteita ja menetelmiä.* Heikkilä et al. Tulevaisuuden tutkimuskeskus Turun yliopisto. Neuvonen, A. et al (2014): Low-carbon futures and sustainable lifestyles: A backcasting scenario approach. *Futures.* Vol 58. 66-76.

	Neuvonen, A. et al (2017):, Metropolitan vision making – using backcasting as a strategic learning process to shape metropolitan futures, *Futures*, Vol 86, 73-83.

5.1.3 Phase 3: Envision alternatives

Design the Challenge
Overview

Name of Method	Designing the Challenge
Type/Level of Method (FF)	☐overall approach ☒ method ☒tool
Brief description	Designing a challenge is a first step in putting together an innovation competition. In order for the innovation competition to be successful and attract enough audience, a team of organizers should define the main challenge of the competition, how to select winners, judges, what is the selection process along with other details. Intentionally designing the challenge can enable you to systematically design open innovation events and reveal innovative ideas worth developing. (https://www.silearning.eu/tools-archive/designing-the-challenge/)
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒ Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges

Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☒ Specific climate-related challenges *eg. City industry or location* ☐ Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐ Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒ Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☒ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box]Designing the challenge allows you to set the ambitions and constraints of a challenge for an innovation competition. By doing so, you can help ensure the responses to the innovation competition will be fit-for-purpose to take on the challenge at hand. Additionally, these kind of constraints can help innovation competition applicants think creatively within the bounds of what would be helpful.

Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC ☒ Innovation Management and Digitization ☐ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☒ Built environment *eg. Building renovations* ☒ Energy systems *eg. Energy generation* ☒ Mobility and transport *eg. Public transport, bikes* ☒ Green industry *eg. Environmentally friendly manufacturing or agriculture* ☒ Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☒ Nature-based solutions *eg. Green roofs, ecological restoration* ☒ Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development, Policy development]
Problem, Purpose and Needs (text)	Designing the challenge is a way to frame the challenge within the context of an innovation competition. By designing the challenge, you enable applicants to better understand the scope of the challenge at hand and ideate possible approaches to address it. To effectively design the challenge, you will need to run multiple workshops to (1) gain insight into what the scope and nuance of the challenge is and then (2) define the challenge objectives, selection processes and other important challenge features. This means you will need time, a working group or potentially a participatory process, and resources to run the workshops/process.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐ short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☒ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders*

	☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☐ systems thinking *eg. Approaches specifically designed to effect systemic change* ☒ collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒ Organizational processes ☐ Organizational culture ☐ Organizational structure ☐Network Mapping ☒ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☒ Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool is extremely useful for defining problem/s, developing a portfolio, enabling participatory or public led social innovation, experimentation, and prototyping.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ==LEAVE BLANK== ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒ collective will formation ☐collective decision making ☐ implementation, monitoring and accountability

Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☒ Mass media ☒ Dedicated website ☒ Social media ☐ Direct engagement with wider public ☐ Other []

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒ small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒ no limit [If designing the challenge becomes a participatory approach]
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☒ Other [It is unlikely that all these categories will participate, but each of them might have valuable insight into the challenge that can help designing it for an innovation competition]
Actors and Stakeholder Relationships (text)	Designing the challenge can be coordinated by an individual or a transition team, but other actors should be part of the process to inform the understanding and scope of the challenge.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☒ self-selection ☒ random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒ Express preferences only ☒ Deliberate or discuss ☒ Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☒ Ask and answer questions ☐ Other.

Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒ asynchronously ☒ synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context ☒ Reframe Problems ☐ Envision Alternatives ☐ Prototype ☐ Experiment ☒ Assess social innovation readiness ☐ Scale ☐ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☒ environmental scanning ☒ negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan ☒ brainstorming ☒ prototyping ☐ impact assessment ☐agenda setting ☐ problem framing ☐policy legitimization / amplifying ☐policy formulation ☐ policy implementation ☐ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐ Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and*

	implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly. Designing the challenge could take up to a month and can be efficiently accomplished using two workshops. In the first session gather as group to discuss challenge design. Set challenge objectives and try to define each step in the working sheet. Also, see if there are any gaps or team disagreements on specific topics. When you define gaps do your research and gather on the second session to finalize the challenge and get mutual group consensus on your challenge objectives, selection processes and other important challenge features.
Typical duration (FF)	☒ one-off ☐ recurring ☐continuous ☐other [text box]
Step by Step (text)	In the first session gather as group to discuss challenge design. Set challenge objectives and try to define each step in the working sheet. Also, see if there are any gaps or team disagreements on specific topics. When you define gaps do your research and gather on the second session to finalize the challenge and get mutual group consensus on your challenge objectives, selection processes and other important challenge features. (https://www.silearning.eu/tools-archive/designing-the-challenge/) As you define and design the challenge, consider: 1. What are the objectives of your challenge? 2. What are you uncertain about when it comes to addressing the challenge? What questions best describe what you don't know and seem to need to know? 3. What is your most interesting question? Why is it interesting to your audience? Why is it interesting to you and your transition team? 4. How will you select the winners of your challenge? 5. Who will judge the ideas? 6. What is our recruitment plan? 7. What is the challenge process? 8. How will we incentivize people to take part?
Evaluation (text and links)	A participatory process to scope the understanding of the challenge can serve as an essential way to assess the validity of the way you understand the challenge.
Connecting Methods (links and text)	Innovation Competitions.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The two parts of the process should not be compromised. Time should be dedicated to define the challenge from a participatory perspective. Time should also be dedicated to scoping and designing how the challenge can/should be taken on. The way those sessions are carried out can and should be adapted to the context of your city.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://www.silearning.eu/tools-archive/designing-the-challenge/

Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] <mark>LEAVE BLANK</mark> ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	"Designing the Challenge." Silearning. European Commission . Accessed July 13, 2022. https://www.silearning.eu/tools-archive/designing-the-challenge/. Tuna en: Head of Explorationtr: Keşif Yöneticisi, Gökçe. "The Challenge of Designing an Innovation Challenge – Part I: United Nations Development Programme." UNDP. UNDP, July 28, 2021. https://www-dev.undp.org/turkiye/blog/challenge-designing-innovation-challenge-part-i. Tuna en: Head of Explorationtr: Keşif Yöneticisi, Gökçe. "The Challenge of Designing an Innovation Challenge – Part II: United Nations Development Programme." UNDP. UNDP, April 22, 2022. https://www-dev.undp.org/turkiye/blog/challenge-designing-innovation-challenge-part-ii.

Idea Card
Overview

Name of Method	Idea Card
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The Idea Card is a tool coming from Service Design that presents your idea in just one page. The synthetic nature helps you focus on its essential structure: the challenge and needs you are addressing, the solution, what it might achieve and how you will accomplish this. It is an excellent tool to use when presenting your initial idea to stakeholders or future beneficiaries/customers to get a feel of what you're doing right and what you could improve on.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☒Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors*

	☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: The card helps bring focus to the main idea and as such can support refining solutions for specific challenges. It helps create clarity after diverging sessions of brainstorming and can be used to support conversations with diverse audiences.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The tool is useful for developing SI projects as both: (1) a synthetic and constructive overview of the solution, inclusive of the context, needs and overarching objectives; and (2) a communication and 'on-boarding' tool for external stakeholders to gain support. As such, the tool is a generative tool useful for development and growth purposes.

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒low ☒medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☒medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]

Essential Considerations for Commissioning Authorities (text)	The tool is meant to capture the essence of the idea to solve the challenge in a 'quick and dirty' manner. It is a useful way to get thoughts onto paper quickly but in an organized manner. This is effective when brainstorming in a group to build off ideas and to communicate with others. In short, it adds tangibility to ideas and helps start conversations on the different aspects of the idea to consider. While it can be done individually, it is best done in a group or accompanied by consultation with actors/stakeholders that carry specific knowledge of the challenge or service system.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ==LEAVE BLANK== ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☒collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☒Direct engagement with wider public ☒Other [It is often shared only within the design team and relevant stakeholders, beneficiaries, providers, funders, etc. for refinement and support.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process]

	☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The tool is best completed in a group with relevant stakeholders in order to have a holistic approach and perspective on how to best solve (an aspect of) the challenge and provide an effective solution for the beneficiaries and the service providers. Actors are engaged in a small group to brainstorm and develop the different parts of the card together.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☒self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan

	☒brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☒policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The activity takes about 2-3 hours. The total time allotted however is dependent on the level of detail desired and number of stakeholders engaged. As a quick sketch of the idea, it should be a relatively short exercise but one that can be re-visited in multiple iterations after feedback from stakeholders, discovery research, prototyping and testing.
Typical duration (FF)	☐one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	1. Start the activity by defining your challenge and the specific needs that you are addressing. This can be done by making use of your own knowledge or by consulting with other experts of the challenge space. For this activity, detailed information on the challenge (e.g. statistics, numbers, policy mix, etc.) is a bonus but it is unnecessary to launch a full 'discovery' phase for the scope of the activity, which is to get the idea on paper (organize your thoughts) and be able to gather rapid feedback (communication tool to refine, iterate and gain support). 2. Now, think about what it would look like if the challenge were solved. Be as descriptive as possible and visual representations are encouraged! Remember that a picture is worth a thousand words. 3. Now that your challenge is framed, clarify your own idea. What can it achieve and how could it be accomplished? If inclined and armed with the tools, feel free to add some

	metrics that could be used strategically to design for impact. 4. Share your final results for feedback!
Evaluation (text and links)	As a generative tool, its purpose is to be evaluated by relevant stakeholders in the challenge space, refined and iterated. There is however no reason to evaluate the activity itself.
Connecting Methods (links and text)	The method can be linked with other tools that facilitate filling out the card (e.g. Defining the Challenge, PESTEL analysis, SWOT, Problem Definition) and can be the basis upon which ideas are then rated and selected to advance.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The card should be translated into the local language if possible. Sketches can also be used instead of text, if preferred. More categories with further information can be added if desired (e.g. stakeholders involved, funding opportunities, policy frameworks, etc.). Keep in mind that other tools exist for more detailed insight of the solution (e.g. social business model canvas) and the idea card is meant to be a quick overview of the key points. As already an outline of the idea, the current categories should be included to maintain the basic knowledge needed to present an idea and its context of need.
Existing Guidelines and Best Practice (links)	**Canvas and step-by-step instruction:** https://www.silearning.eu/tools-archive/idea-card/ https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf **Best Practice:** https://www.siceurope.eu/countries/italy/radically-innovating-social-services-turin-municipality-italy
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	**Canvas and step-by-step instruction:** https://www.silearning.eu/tools-archive/idea-card/ https://siscodeproject.eu/wp-content/uploads/2019/09/toolkit-27092019-1.pdf

Impact and Feasibility Analysis

Overview

Name of Method	Impact-Feasibility Matrix
Type/Level of Method (FF)	☐overall approach ☐method ☒tool

Brief description	The impact-feasiblity matrix helps teams prioritize and ultimately decide which ideas/projects are worth moving forward, on what timeline and with what effort. By mapping ideas according to how much they are in line with and can achieve set goals (impact) and whether current organizational resources can support them (feasibility), teams can sort ideas between: quick wins, major projects, busy work and resource drains. In short, the matrix can help teams prioritize projects/tasks, maximize efficiency and impact and align goals by visualizing how specific tasks or projects advance the set goals.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☒Financial limitations *eg. Insufficient resources* ☒Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] By mapping ideas/tasks/projects in a visual way, the matrix helps organize the use of resources in an efficient and effective manner according to their impact in achieving certain goals. This can help organizations, especially those with limited resources, make sound choices on where to invest their resources for maximum impact. By prioritizing the tasks/projects/ideas, organizations can also create a timeline of development based on impact goals and resources and help curb short-term thinking.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes]

	☐Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The tool aims to help teams prioritize which ideas/tasks/projects to work on to achieve impact goals based on their capacity to advance the goal and the resources needed to carry them out. The purpose is to increase team knowledge on the different aspects of the goals (the cost of choices) and to align effort around impact goals while keeping in mind resource limitations and different time horizons.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☒medium ☒high
Governance and Empowerment	
Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change*

	☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☒evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool can be useful for quickly assessing a priority list of ideas/tasks/projects to bring forward.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☒collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?

Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [The canvas usually remains open internally for consultation, feedback and iteration. It is also used as a communicative tool for different stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done in a small group composed of the main representatives of the different stakeholders and value creation areas. To ensure for effective prioritization, it is best to ensure for a mix of different levels to allow for diverse perspectives and problem knowledge (often tacit) to emerge and shape the prioritization.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously

	☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☒negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☒feasibility plan ☐brainstorming ☐prototyping ☒impact assessment ☒agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The time needed to complete the activity depends on the level of detail and thoroughness desired, as well as how many actors are involved in the task. It can take anywhere from 30 minutes to 2 hours.
Typical duration (FF)	☒one-off ☐recurring ☐continuous

	□other [text box]
Step by Step (text)	Step One: Ask the group to share objectives/main goals. This helps align participants around common goals and understandings of the problems/challenges/objectives. Introduce the matrix. Explain what impact means and what feasibility means. Impact regards measuring the degree to which a suggestion makes attaining a specific goal possible. Feasibility involves measuring the degree to which an action is possible based on an assessment of resources. Step 2: Brainstorm ideas/projects or share tasks that advance your previously agreed upon goals (often based on criteria set in previous brainstorming sessions or by project agreements etc.). Write each idea on a separate post-it note. Step 2: Plot these ideas/projects/tasks on one of the 4 quadrants of the matrix. The higher the estimated impact the closer to the ends of the y-axis it should be plotted. The higher the estimated feasibility the closer to the ends of the x-axis it should be plotted. Step 3: Analyze the results. Ideas with high impact and high feasibility are "quick wins" or so-called "low hanging fruit". Ideas with high feasibility but low impact can be considered "busy work". Ideas that are high impact but with low feasibility are often "major projects" meaning they need substantial new investment (coming at a cost) but could yield big results toward goal attainment. Ideas that are low impact and low feasibility should be avoided and are considered a "resource drain". Step 4: Having plotted the ideas, the team can now prioritize them and create an action plan based on the results. The activity helps the team determine which actions should be given the most time and resources in the future.
Evaluation (text and links)	The tool should be shown to relevant actors (beneficiaries, customers, supply chain actors, employees, etc.) for feedback and iteration.
Connecting Methods (links and text)	The canvas can help teams select ideas after a brainstorming session (See KJ ideation). It can be used together with a motivation matrix and/or the idea rating tool.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	N/A
Existing Guidelines and Best Practice (links)	Beekfast Inspirations, (2022). Impact-Feasibility Matrix. Retrieved from https://inspirations.beekast.com/inspiration/impact-feasibility-matrix/ Mindtools, (2022). The Action Priority Matrix. Retrieved from https://www.mindtools.com/pages/article/newHTE_95.htm Impact Effort Matrix Template
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK

	☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Beekfast Inspirations, (2022). Impact-Feasibility Matrix. Retrieved from https://inspirations.beekast.com/inspiration/impact-feasibility-matrix/ Mindtools, (2022). The Action Priority Matrix. Retrieved from https://www.mindtools.com/pages/article/newHTE_95.htm

KJ Ideation

Overview

Name of Method	K/J Ideation
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	KJ Ideation is a brainstorming technique, or 'idea-generating' method developed by Japanese anthropologist Jiro Kawakita (from which its name derives) to collect, sort and find meaning in qualitative data. As such, it facilitates abductive reasoning that provides rigor to the process of sorting out chaotic ideas and insights to form a hypothesis to confirm or reject. While mostly used in Western countries as an ideation tool, it has been used in Japanese companies as a method for collective decision-making. There are four main steps to the method: (1) insight generation; (2) clustering; (3) sense-making; and (4) voting.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☒Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement*

	☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☒Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] By creating an open and collaborative method for collective brainstorming, the tool helps challenge owners bring in different perspectives and knowledge of the issue in order to push past the symptoms and get to the root of the problem. This is done not only through collaboration but is also accompanied by ethnographic research and observation during the inspiration and discovery phase. The process thereby facilitates collective decision-making and will formation, while addressing specific challenges (whether external to the organization or internal).
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The method helps challenge-owners engage diverse actors into the brainstorming and idea generation phases in a systematic and democratic way. The output of the method is a broader awareness of the challenge space, a more fine-tuned and nuanced understanding of the specific challenge and a series of solutions or ideas on how to address certain aspects of the problem. By engaging different actors in the process, not only is the collective knowledge of the problem enhanced, decision-making is done in a participatory manner facilitating implementation and ownership.

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☐Organizational structure ☒Network Mapping ☒Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☒Political and administrative awareness ☒Leadership ☒Organizational vision ☐Other [text box]

Essential Considerations for Commissioning Authorities (text)	The method can be useful for participatory brainstorming and decision-making.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ==LEAVE BLANK== ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒collective will formation ☒collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [The method can be useful for participatory brainstorming and decision-making.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☒50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia

	☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by a small group or project leader who consults with different actor groups through interviews and ethnographic observation. The activity has the potential to create new relationships and connections (of mental models) between actors while working.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☐asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☒knowledge transfer ☐feasibility plan ☒brainstorming ☐prototyping ☐impact assessment

	☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

ow does it work: step by step

Time commitment (text)	The time needed to complete the activity depends on the level of detail and thoroughness desired, as well as how many actors are involved in the task. It can take anywhere from 2 hours and upwards (especially if the research and observation time is included).
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	1. Set up a team of participants and a room to work in. 2. Introduce the challenge and the challenge question. 3. Insight Generation: Ask each participant to share knowledge on the problem from: lived experience, observation and field notes, interviews, best practices, etc. (PESTEL tool) While one participant is sharing, other team members should take notes on interesting elements. Only one insight should be written per post-it. The post-its should be placed on a common board. 4. Clustering: Study the post-its looking for similarities and patterns to create clusters. This process should be led by "feelings" and intuition. Some ideas may not be part of any distinct cluster and be "lone wolves". They should not be discarded as they might fit into larger family of clusters to for a team of teams. Once the clusters are complete, the team should give a title to each one to help make sense of the data and give order to the research. When appropriate, clusters should be grouped into families to create a higher order team of teams. 5. Sense-making: The family of clusters should be visually arranged in a way that gives order to the data and that tells

	its story: indicating patterns, trends, cause and effect relationships, order of occurrence, interdepencies, connections or contradictions. The visualization should be explained, verbally and possibly in a written form, in an effective and simple manner that presents the emerging insights in a logical and precise way, reducing complexity to give form to potentially new interpretations of the problem space. 6. Voting: Participants should vote on the concepts or ideas that are the most feasible and effective (Impact and Feasibility Matrix Tool) and move these forward to the next phase of development.
Evaluation (text and links)	The final results should be presented to all engaged actors for feedback and refinement of results and analysis.
Connecting Methods (links and text)	The activity could benefit from the results of other context analysis tools/methods (e.g PESTEL, Impact and Feasibility Matrix, ethnographic fieldnotes, ethnographic interviews, observations.).

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The brainstorming method can be applied to the generation of concepts or ideas.
Existing Guidelines and Best Practice (links)	Kawakita, J. (1967) Hassouho: Sozosei Kaihatsu notameni [Abuduction Method: For Development of Creativity], in Japanese, Chuokoronsha. Scupin, R. (1997). The KJ Method: A Technique for Analyzing Data Derived from Japanese Ethnology. Human Organization. 56 (2), 233-237.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Kawakita, J. (1967) Hassouho: Sozosei Kaihatsu notameni [Abuduction Method: For Development of Creativity], in Japanese, Chuokoronsha. Scupin, R. (1997). The KJ Method: A Technique for Analyzing Data Derived from Japanese Ethnology. Human Organization. 56 (2), 233-237.

Value Motivation Matrix
Overview

Name of Method	Motivation matrix

Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	[aims and nature of the method	*50-100 words*] A motivation matrix is an exercise that helps facilitators and designers measure what motivates people. The assumption around the motivation matrix is that people perform actions because they are triggered by motivations. The matrix is composed of six core motivation factors: incentive, achievement, social acceptance, fear, power, and growth. After using the motivation matrix, facilitators of the exercise should have a better idea of the motivation behind each individual. This exercise helps make informed decisions.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☒Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: [outline how this method helps to address these barriers]

Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☒Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have]
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders*

	☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☒Mission City ☒Climate City Contracts ☒Pilot City ☒Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making

	☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☐Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	[how are different stakeholders involved or work together?]
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☒random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☒Other [text box]
Format (FF)	[in which formats can this method take place?]

	☒online
	☒in person
	☒asynchronously
	☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☒Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] Depends on the depth of the analysis
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	[what are the main phases of this method? Describe briefly] Create a matrix that relates to these different motivating factors with various users of a service in different contexts. The six core types are: incentive, achievement, social acceptance, fear, power, and growth. Incentive: any type of reward-oriented motivating factor; can be monetary or not monetary Achievement: the kind of motivation that's propelled by the drive for competency Social Acceptance: essentially the need to belong to a group and not feel ostracized Fear: motivation that is based off of wanting to avoid certain outcomes or consequences Power: motivation that is derived from the need to be autonomous or to gain and maintain control over others Growth: intrinsic motivation that encapsulates wanting to become a better version of oneself Then, write statements that predict how a user might interact with the service in a particular context.
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated] Not applicable
Connecting Methods (links and text)	[what other methods can this method be used with and how?] Empathy map

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] Not applicable
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?]

	Not available
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	[all references used to compile the entry, plus additional resources] Design ethically: https://www.designethically.com/motivation-matrix

Pugh Chart

Overview

Name of Method	[name of method]
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	[aims and nature of the method | *50-100 words*]
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☐Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials*

	☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: [outline how this method helps to address these barriers]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have]
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☐medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other

Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☐Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	[how are different stakeholders involved or work together?]
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining

	☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☐online ☐in person ☐asynchronously ☐synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☐Human Labour ☐Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.*
Typical duration (FF)	☐one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	[what are the main phases of this method? Describe briefly]
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated]
Connecting Methods (links and text)	[what other methods can this method be used with and how?]

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised]
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?]
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

Value Proposition Canvas
Overview

Name of Method	Value Proposition Canvas
Type/Level of Method (FF)	☐overall approach ☐ method x tool
Brief description	The Value Proposition Canvas is a fairly simple tool that allows you to establish a logical starting point for building and testing a product or service. It is done to create products and services that meet the needs of people. In order to do that it is important to keep track of the target market's pains, gains, and to-do's – which are all opportunities for providing value to them.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges x Has potential to deal with climate challenges

Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] x Financial limitations *eg. Insufficient resources* x Specific climate-related challenges *eg. City industry or location* x Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐ Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short term thinking *eg. Difficulty in policy planning beyond election cycle* x Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* x Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* x Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* x Other [Narrow definition or inadequate overview of the problem to be addressed] A value proposition can be made for any products, service or even project.More than just being a description of the project or service – it's the **specific solution** it provides and the **promise of value** the end-user can expect from it. Value propositions are one of the most important conversion factors, to convince the market audience to beleive in your project.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] x Urban Governance, Policy Development, CCC x Innovation Management and Digitization x Stakeholder/ Community engagement and capacity building x Financing, Funding and Partnerships x Peer to peer learning, and replication, upscaling x Built environment *eg. Building renovations* x Energy systems *eg. Energy generation* x Mobility and transport *eg. Public transport, bikes* x Green industry *eg. Environmentally friendly manufacturing or agriculture* x Circular economy *eg. Initiatives to eliminate waste or reuse materials* x Nature-based solutions *eg. Green roofs, ecological restoration* x Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box] The value that the project or service creates in any field can be considered, in essence.

Problem, Purpose and Needs (text)	Just envisioning a project or service is not sufficient for it be able to fully benefit the intended end-user. The Value Proposition Canvas helps intersect the service with the end user's wishes and expectations. When done right, it illustrates the match between what is being offered and what is being actively received. As the visual aspect of the Value Proposition Canvas is its driving force, mapping everything clearly forces focus specifically on how the project/service directly alleviates problems and provides benefits to the user, emphasising only the most important problems and gains.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☐medium term x long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low x medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] x low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* x co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* x evaluation, oversight and monitoring *eg. Holding authorities to account* x Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture x Organizational structure x Network Mapping x Network Collaboration

	x Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) x Access to markets x Access to finance x Access to training, education and research x Knowledge development and transfer x Political and administrative awareness ☐Leadership x Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK x Self assess ☐Declare commitment x Define problem/s x Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK xMission City ☐Climate City Contracts xPilot City xTwin City ☐Other This method can help correlate the project aims with actual needs of the city
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation x collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] x Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500

	☐500-1000 x no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] x Policy/decisionmakers x Citizens or general public x Industry and innovation communities x NGOs or civil society organisations x Academia x Science or technology research communities x Organizational staff x Social innovators ☐Other [text box] Depending on the type of project, the value proposition canvas can be prepared by the project team and tested on any key stakeholder
Actors and Stakeholder Relationships (text)	Project team will have to discuss the project, service or the challenge being addressed and use the multiple templates available to feed in the value proposition. Another team may or may not visualise this further. Finally, the stakeholders may either be gathered together to discuss the 'anatomy' of the challenge, service or project, or interviewed individually or in groups to go through the value proposition and validate it.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment x other - based on general user personas
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only x Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining x Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] x Analyse Context x Reframe Problems x Envision Alternatives x Prototype ☐Experiment ☐Assess social innovation readiness ☐ Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments

	x stakeholder engagement ☐knowledge transfer x feasibility plan x brainstorming x prototyping ☐impact assessment x agenda setting x problem framing ☐policy legitimization / amplifying x policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers x Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The deliberation process within the team can take over a whole day, but the actual value proposition itself can be framed in half a day within the standard template. Different visualisation and categorisation might need a bit more time commitment.
Typical duration (FF)	x one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	After the details of the project/service are discussed and understood thoroughly, the team would need to look at the perspective of the end-user and the stakeholder. At first they would need to list down what needs exist that necessitated the project. This is followed by the major issues faced by individuals and how they will gain from the project. The next step is to focus on the left side of the canvas and outline the services itself. After having listed the problems in the user profile part, the team now can prioritise jobs, gains, and pains according to their importance - from the most severe to least significant.
Evaluation (text and links)	When both sides of the canvas are filled, the team needs to make sure the right side of the canvas matches with the left side of the canvas. After showing a fit and a misfit of the Value Proposition Canvas, the team can conclude that it is very important to know who the end user is, what their lifestyle looks like, and what their real needs are.
Connecting Methods (links and text)	Value Proposition is a core part of a Conceptual Proposal. It helps stakeholders understand how the project is going to benefit the end users.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	The AfriAlliance Needs & Solutions Hub: Facilitating interactions amongst stakeholders to generate and share water and climate knowledge and innovation https://afrialliance.org/knowledge-hub/water-and-climate-updates/afrialliance-needs-solutions-hub-nutshell

Make it Your Own

Flexibility and Adaptability (text)	Various visual templates exist for empathy maps, but the most are just extensions of the most popular Osterwalder Model.
Existing Guidelines and Best Practice (links)	[-]
Available Services from NZC (links)	☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	https://digitalleadership.com/unite-articles/value-proposition-canvas/ https://blog.hubspot.com/marketing/write-value-proposition

Personas
Overview

Name of Method	Personas
Type/Level of Method (FF)	☐overall approach ☒ method ☐ tool
Brief description	Personas represent typical users and their goals. Personas can be defined by dimensions that characterize and distinguish customer segments from one another. Persona dimensions are selected to inform the product or service experience under exploration. To this end, they may include demographic information, attitudinal information (key drivers, triggers, or motivations), behavioral information (habits and practices, barriers, experiences sought, needs and desires), and information about desired outcomes or associated trends.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle*

	☐ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC ☒ Innovation Management and Digitization ☐ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development]
Problem, Purpose and Needs (text)	Analyse the types of potential users and organise them according to sets of shared attributes to define personas. It can be helpful to think of a persona as a personality type. A limited number of such personas should be created and considered as representing the target users for the project. This range of selected personas frames the opportunity space so that innovation teams can focus on them for building concepts. Concepts are built to address the needs of these personas and to fit with their context. In order to accurately create personas, without merely wishful thinking, it is important to rely on in-depth qualitative (and quantitative) research.

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☐ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒ systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐ partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☐ Organizational structure ☒ Network Mapping ☐ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness

	☐Leadership ☐ Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool could be useful to analyse a context and envision alternatives before contracting.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☐ implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [It usually remains internal to the design team. When used as a tool of experimentation, it is shared also with the relevant stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☒ up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public

	☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	It is important to rely on broad and in-depth qualitative and quantitative research with a diversity of stakeholders. This can help ensure gaps in knowledge, assumptions, or biases are incorporated into the creation of certain personas. Testing the personas with actors and stakeholders can be a useful way to enhance the accuracy of each persona's different user attributes.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐ self-selection ☒ random selection ☒ stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐ Deliberate or discuss ☐Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☐Ask and answer questions ☒ Other [Ethnographic interviews, focus groups, and participatory research are a few useful way to harvest the research necessary to develop personas]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☐ asynchronously ☒ synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context ☐ Reframe Problems ☒ Envision Alternatives ☐ Prototype ☐ Experiment ☐ Assess social innovation readiness ☐Scale ☐ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☒ environmental scanning ☐negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming

	☒ prototyping ☐impact assessment ☐agenda setting ☒ problem framing ☐policy legitimization / amplifying ☐policy formulation ☐ policy implementation ☐ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐ Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* If the time to conduct researchers with a wide range of potential users is included, this process can take approximately a month However, the method on its own—not including preceding research--can take approximately a week. This includes time to run the exercise of developing the personas and testing them.
Typical duration (FF)	☒ one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	"STEP 1: Generate a list of potential users. Generate a list of potential users for your innovation. This should be based on your insights, design principles, Value Hypothesis, findings from ethnographic research, or results from other methods like Semantic Profile and User Groups Definition. STEP 2: Generate a list of user attributes. Generate a comprehensive list of user attributes relevant to your project. These attributes may be demographic (age, gender, employment, or home ownership), psychographic (values, attitudes, interests, or lifestyles), or behavioral (motivations, intelligence, or emotions). STEP 3: Define a finite number (three to ten) of user types.

	Cluster users based on the common attributes they have. If you don't already have a sense of what attributes are shared by different types of users you could use an Asymmetric Clustering Matrix to find groupings. Label these clusters; they represent user types. Aim at having a manageable number of user types (three to ten) to build focus and more effective communication. STEP 4: Create personas around user types. For each user type, create a specific persona, a specific character. Create this persona as a combination of attributes defined earlier. Personas should be true to the findings of research and easy to empathize, give them descriptive and memorable titles. For example: Jane, the city gardener, 28 years old, lawyer, art enthusiast, and so on. Complement the persona profiles with quotes and anecdotes when possible. STEP 5: Build a visual profile for each persona. Create visualizations for the personas and define a standard format to organize the attributes, quotes, and anecdotes for each of them. The resulting documents should be highly visual, well communicated, and quick to read. Share them among team members to drive concept exploration." (Kumar, Vijay. 2013. *101 design methods: a structured approach for driving innovation in your organization*. Hoboken, N.J.: Wiley., pg. 210)
Evaluation (text and links)	Testing the personas with actual actors and stakeholders can be a useful way to enhance the accuracy of each persona's different user attributes.
Connecting Methods (links and text)	System Mapping, User-Journey Mapping, Service Blueprints.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The tool should be translated into the local language. If needed, additional features and elements can be added.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://xd.adobe.com/ideas/process/user-research/putting-personas-to-work-in-ux-design/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Usability.gov. "Personas." http://www.usability.gov/how-to-and-tools/methods/personas.html. IBM Garage Methodology. https://www.ibm.com/garage/method/practices/think/practice_personas/. Kumar, Vijay. 2013. *101 design methods: a structured approach for driving innovation in your organization*. Hoboken, N.J.: Wiley., pg. 210

| | Mendel, Joanne. (2012). A taxonomy of models used in the design process. Interactions. 19. 81-85. 10.1145/2065327.2065343. John Bruce. 28 Jul 2017 ,Design Strategies for Impact from: Routledge Handbook of Sustainable Design Routledge. Accessed on: 16 Apr 2018 https://www.routledgehandbooks.com/doi/10.4324/9781315625508.ch3 |

Motivation Matrix
Overview

Name of Method	Motivation Matrix
Type/Level of Method (FF)	☐overall approach ☐ method x tool
Brief description	The Motivation Matrix helps teams understand the connections between the various actors that take part in the solution and adds clarity also to their roles by investigating the motivation behind their action. The tool helps to answer questions regarding the interests of each stakeholder and what their expectation is from their involvement. It is a good strategy tool for partnership managers and network development.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges x Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* x Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* x Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐ Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* x Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* x Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* x Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.*

	☐ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☐ Other [Narrow definition or inadequate overview of the problem to be addressed]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC x Innovation Management and Digitization x Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships x Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	People perform actions because they are triggered by motivations. Pretty much all of the motivating factors out there can be distilled into six core types: incentive, achievement, social acceptance, fear, power, and growth. By creating a matrix that relates these motivating factors with various users of a product in different contexts, you can write statements that predict how a user might interact with the project in a particular context.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term x medium term ☐long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium x high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low x medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> x co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation*

	☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* x deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* x evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: x Organizational processes x Organizational culture ☐Organizational structure ☐Network Mapping x Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) x Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness x Leadership x Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK x Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK xMission City ☐Climate City Contracts xPilot City xTwin City ☐Other This method can help correlate the project aims with actual needs of the city
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion x collective will formation ☐collective decision making ☐implementation, monitoring and accountability

Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] x Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] x small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities x Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The motivation matrix is primarily for an internal understanding amongst the project teams and might not necessarily involve the stakeholders.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment x other - if required interviews can be taken of users
Interaction between participants (FF)	[how do people typically interact with each other during the process?] x Express preferences only x Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously

	x synchronously

Social Innovation Development Stage	[which phase does the tool/method fit best into] x Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment x Assess social innovation readiness x Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning x negotiation of commitments x stakeholder engagement ☐knowledge transfer ☐feasibility plan x brainstorming ☐prototyping x impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] x Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The deliberation process within the team can take over one day. The use of the matrix can take another, including visualisation. Relatively small canvas, but can be revisited over time.
Typical duration (FF)	☐one-off ☐recurring x continuous ☐other [text box]

Step by Step (text)	The Motivation Matrix can be done individually or in groups (preferable). The first step is to make a list of your stakeholders (See Stakeholders Map tool) and organize them on the matrix accordingly. The next step is to analyze one by one relationships and benefits of each stakeholder. Their engagement can be mapped into the intrinsic, extrinsic, positive and negative quadrants.
Evaluation (text and links)	On debating over the completed matrix, the team can identify if the motivations are strong enough for the project to be successful. If the matrix is leaning towards the Positive/Internal quadrant, it is ideal. This sweet spot offers people the highest probability of satisfaction and self-validation, along with successful and fulfilling change.
Connecting Methods (links and text)	It is recommended to map the Motivation matrix after empathy mapping so that the team has a clearer understanding of your end users.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	Motivating Music Students - BlitzBooks
https://blitzbooks.com/the-motivation-matrix/

Make it Your Own

Flexibility and Adaptability (text)	The 4 quadrant model is the fastest and most efficient to map however more detailed matrices that can be used for a more in-depth analysis.
Existing Guidelines and Best Practice (links)	[-]
Available Services from NZC (links)	☐Mission cities [links to Tailored advisory service, for detailed support]
☐Pilot cities [links to expertise to design and support pilots]
☐Twin cities [links to information, knowledge-smart repository]
Other

References and Reading

References and Further Resources (text and links)	https://thefruitfultoolbox.com/enter-matrix-motivation/
https://lucidspark.com/templates/the-ecosystem-motivations-matrix

Idea Rating/Selection
Overview

Name of Method	The Idea Selection
Type/Level of Method (FF)	☐overall approach
☐method
☒tool
Brief description	After coming up with lots of ideas on how to solve a previously identified problem, it can be difficult to know where to start and which idea to develop. The Idea Selection tool helps mapping out ideas according to their originality and feasibility. With the tool, ideas are divided into 4 quadrants following two axes:

• ideas that are original and feasible = ideas that will make an impact
• ideas that are ordinary and feasible = standard ideas
• ideas that are original and not (yet) feasible = save it for later
• ideas that are ordinary and not (yet) feasible = trash these ideas |
| **Keywords (FF)** | LEAVE BLANK |

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☒Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: [outline how this method helps to address these barriers]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☒Not applicable ☐Other [text box]

Problem, Purpose and Needs (text)	This tool can be used to address any problem as it helps in prioritizing solutions to be implemented after an idea generation process.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒low ☐medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☐Organizational culture ☒Organizational structure ☐Network Mapping ☐Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☒Organizational vision ☐Other [text box]

Essential Considerations for Commissioning Authorities (text)	Before starting to put the ideas (written on sticky notes such as post its) into the tool, it is important for the participants to have knowledge of the whole picture of the problem they are working on, to effectively qualify an idea as feasible or not feasible, for example. If that is not possible, the person conducting the meeting should leave space for discussions after the sticky notes are placed in the template.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] ==LEAVE BLANK== ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒collective will formation ☒collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☒Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities

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	☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	If possible, it is important that there are all stakeholders at the same table but it is not necessary.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☒random selection ☒stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒Analyse Context ☒Reframe Problems ☒Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☒negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☒feasibility plan ☐brainstorming ☐prototyping ☐impact assessment ☒agenda setting ☒problem framing ☐policy legitimization / amplifying ☐policy formulation

	□policy implementation □policy evaluation □financing plan □accountability plan □other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials □Software or other tech □Funding □Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] □Can be run internally □Requires input from independent or external organisers ☒Both □Not Applicable

How does it work: step by step

Time commitment (text)	The set up for the activity depends on how many people are involved and separated in how many groups. Ideally every participant should have a chair and every group a working table. If you are doing the activity in smaller groups, they should not be more than 6 people at each table. The time commitment for the activity itself is around 1 (one) hour.
Typical duration (FF)	☒one-off □recurring □continuous □other [text box]

Step by Step (text)	1. Start by printing out the template for each team. Ideally you print it in A2 or A3 size.
	2. First ask the group to write the ideas on sticky notes. Make sure to explain that they should write 1 idea per sticky note. If you have different groups, each group receives the same ideas.
	3. Once they finish writing, introduce them to the Idea Selection template. Explain that they must place the sticky notes with their ideas on the quadrant they feel are more connected and representative of the idea. To place the sticky notes, they should assess each idea answering the following questions:
	   • *Is this idea feasible, can it be implemented?*
	   If the answer is yes, the question will be placed on the right side of the matrix.
	   • *Is this idea original, has it not been done before?*
	   If the answer to this question is also yes, according to the perspective of the team, then this idea will be placed on the top right. Otherwise, it should be placed on the bottom right. Similarly, ideas not assessed as feasible can be divided into the top left and bottom left squares according to their originality.
	The group can either discuss each idea and come to a shared understanding while placing it or the group members can place ideas based on their individual assessment and the group can review and discuss each idea at the end. Make sure to reserve enough time for

	these discussions as people will have different perspectives on feasibility and originality of ideas. It is also important to decide (either you as the facilitator or the group) if people will vote on which or where the idea should be placed or if you need a consensus to move to the next idea. No matter what approach you choose, keep in mind that everyone should feel heard and contemplated to ensure buy-in and ownership for the process and future implementation.
	4. Once everyone is done, explain that your focus going forward will be on the ideas that were added to the top right square. These ideas are called "ideas that will make an impact" in the tool. If you are working with several groups, it can be very useful to have each team present their "ideas that will make an impact" and to compare among the different teams. A good idea is to rank ideas, depending on how many teams identified them as "feasible and original".
	5. Before you end the session, make sure to explain to all participants what is going to happen next with these ideas and how they can be involved. At the end, thank everyone for their contribution.
	This tool doesn't have a specific form of evaluation, since is qualitative and problem based. However, a good idea is to schedule a meeting for a period after using the tool to see how far you have become or if changes needed to be done during the way.
Connecting Methods (links and text)	

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] <mark>LEAVE BLANK FOR NOW</mark>

Make it Your Own

Flexibility and Adaptability (text)	• This model can be implemented by small or big groups. If you have more than 6 people participating, divide the participants into smaller groups. Each group should have 3-6 participants. Ideally, each group should have a working table and be able to work without being influenced by the conversations on other tables. • You can also do this activity online, using Jamboard, Miro or any other online collaboration tool. • Ideally, the tool is used synchronously, although it could be adapted for asynchronous conversations too. • If you have a lot of ideas to qualify, you might want to adapt the process as to give different smaller teams different ideas and present their qualification in the big group afterwards. • The amount of guidance needed depends on the profile of participants. Some might feel more comfortable in this decision making, whereas others might need to be encouraged to follow their gut feeling, whenever they lack information. • The one part that shouldn't be changed is the 4 quadrants of the tool.
Existing Guidelines and Best Practice (links)	The guidelines for this tool are developed by Service Design Toolkit (https://www.servicedesigntoolkit.org/index.html) from the Flanders Service Toolkit Design.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] <mark>LEAVE BLANK</mark>

	☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Another good tool for prioritizing ideas is the Eisenhower Matrix (https://asana.com/pt/resources/eisenhower-matrix) Silearning Repository https://www.silearning.eu/tools-archive/idea-selection/ Silearning pdf template https://www.silearning.eu/wp-content/uploads/2017/04/idea-selection.pdf

5.1.4 Phase 4: Prototype & Experiment

Customer journey
Overview

Name of Method	Customer Journey Map
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The customer journey map is a representation describing each step of the interaction that a user or customer has with a service, product, organization or system taking the perspective of the user. It is stated what the actions, the touchpoints with the service, product or system and the emotional state of the user for each of the steps. It can functions as a planning- and strategic tool to keep the focus on the final users for the final development and the prototyping of a new solution. It can be also used to map existing systems to highlight pain points and opportunities for improvement.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt*

	☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☒Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] The tool has both the potential to develop new, user-centred solutions as well as improving existing services and systems by highlighting pain points and issues.
Thematic Areas (FF)*	☐Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☒Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The Customer Journey is applicable in varied fields and serves the purpose to create an overview of the interaction of users with a product, service or system mapping their emotional state, touchpoints and needs across the journey. It helps to better understand critical points or opportunities, get in the users' shoes and understand the effective use of touchpoints throughout the journey to deliver functioning and effective systems and services.
Impact Goals (FF)	☐short term ☒medium term ☒long term ☒Not applicable/other
Issue Complexity (FF)	☒low ☒medium ☒high
Issue Polarisation (FF)	☐low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☒deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☒evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	☒Organizational processes ☐Organizational culture ☒Organizational structure ☐Network Mapping ☒Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	To develop effective customer journeys, a proper knowledge of the overall system needs to be given provided either by field research or by involving actors and users into the design of the customer journey to ensure a realistic illustration of the pathway
Engagement Journey (FF)	LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	☒empowering inclusion ☐collective will formation ☒collective decision making ☒implementation, monitoring and accountability

Level of Citizen Empowerment (FF)	<mark>LEAVE BLANK</mark> [IAP2 spectrum](#) [Arnold's Ladder](#) Other ideas?
Communication Channels (FF)	☒Public report ☐Mass media ☐Dedicated website ☐Social media ☒Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	☒Policy/decisionmakers ☐Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☒Social innovators ☒Other [users]
Actors and Stakeholder Relationships (text)	Customer Journeys are often developed within the organization planning to implement a new solution without the direct involvement of actors and stakeholders retrieving knowledge from previous research. There is also the possibility of collective mapping directly involving actors and stakeholders in the structured activity of designing the customer journey.
Participant Recruitment (FF)	☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☒Other Contributing with direct input, point of view and active writing/mapping
Format (FF)	☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	☒Analyse Context

	☐Reframe Problems ☐Envision Alternatives ☒Prototype ☒Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	☒ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☒prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☒policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The development of a Customer Journey not considering previous field research that might be necessary to retrieve information is about two hours to create a basic Customer Journey
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	1.*Specify what is the "intervention"* (i.e., a policy supporting social innovation) and what is the effect that is aimed for. 2. *Define indicators of the desired effect.* For example, if the aim is to test a policy for increasing sharing practices, the effect of the policy could be measured by counting the number of initiatives related to sharing practices, counting the number of people and

	1. Individualize the user you will be designing for and map out the main phases of their journey throughout the service in terms of main steps and activities of the user 2. Then draw sketches of the phases in the boxes or take pictures and use photo to sketch technology to convert them into sketches. In alternative, the steps can be described with text. 3. Identify the need that the user has at each moment of the journey and the channels or touchpoints through which the user is in contact with the service or system. 4. At the end of the activity, detect what the possible pain points are, or rather where the beneficiary, customer or donor may have problems or difficulties using the service. Remember that pain points can also occur before or after the service in terms of their decision to use or re-use the service.
Evaluation (text and links)	The tools itself can serve for evaluation purposes and is often not evaluated itself. It can be cross-checked with other actors and users to validate the developed map. Furthermore, the activity itself and the canvas used can be analyzed for their efficacy and efficiency by conducting interviews, focus groups and observation during and after the activity to identify problems of use of the tool and gather feedback.
Connecting Methods (links and text)	- Service Blueprint A service blueprint can be a tool following the creation of a customer Journey to map the back office activities of a system or service going more in depth on what happens out of sight of the user that is relevant for the executing organization(s) - Personas Personas can be a great tool used previously to the Customer Journey map to identify clusters of users. Ideally, a Customer Journey map should be developed for each of the personas to identify similarities and differences of different user groups

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	The Customer Journey template can be adapted to the specific context by translating it into the local language, using text instead of sketches or adding additional categories. The existing categories of activity, needs, touchpoints and emotional state for each step of the journey are important since they ensure the representation of both activities and emotional state/empathy with the user balancing the inclusion of user needs and (potential) responses of the service provider.
Existing Guidelines and Best Practice (links)	**Canvas and step-by-step explanation** https://www.silearning.eu/tools-archive/customer-journey/ **Description of the tool, case studies and similar tools** https://servicedesigntools.org/tools/journey-map **Why customer journeys are important and how to create them** https://www.techtarget.com/searchcustomerexperience/definition/customer-journey-map

Available Services from NZC (links)	<mark>LEAVE BLANK</mark> ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	**Canvas and step-by-step explanation** https://www.silearning.eu/tools-archive/customer-journey/ **Description of the tool, case studies and similar tools** https://servicedesigntools.org/tools/journey-map Richardson, A. (2010). Using customer journey maps to improve customer experience. *Harvard business review*, *15*(1), 2-5. Temkin, B. D. (2010). Mapping the customer journey. *Forrester Research*, *3*, 20.

Experiment Canvas

Overview

Name of Method	[Experiment canvas]
Type/Level of Method (FF)	☐overall approach ☐ method <mark>x</mark> tool
Brief description	An experiment canvas allows for a team or individual to create an experiment for the current time and test out their ideas about a certain issue/topic. This is done through hypothesising the current riskiest assumption there is about an experiment, then a falsifying hypothesis. It is clear and easy way to create an experiment.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges <mark>x</mark> Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* <mark>x</mark> Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* <mark>x</mark> Short term thinking *eg. Difficulty in policy planning beyond election cycle* <mark>x</mark> Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement*

	☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* x Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☐ Other [Narrow definition or inadequate overview of the problem to be addressed]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐ Innovation Management and Digitization ☐ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐ Peer to peer learning, and replication, upscaling x Built environment *eg. Building renovations* x Energy systems *eg. Energy generation* x Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* x Nature-based solutions *eg. Green roofs, ecological restoration* x Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	Often experiments or research is done before considering particular issues or obstacles that could take place. The purpose of the experiment canvas is to map out these possible tensions and experiment with them to test hypotheses.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] x short term ☐medium term ☐long term ☐Not applicable/other TEXT: This method is a short term test to understand how to continue on a longer term trajectory.
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low x medium ☐ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low

	x medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE x co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* x systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* x deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: x Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐ Network Collaboration x Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research x Knowledge development and transfer ☐Political and administrative awareness ☐Leadership x Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	N/A
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City

	☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion x collective will formation ☐collective decision making ☐implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] x Public report ☐Mass media ☐Dedicated website ☐Social media x Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐ up to 50 ☐50-100 ☐100-500 ☐500-1000 x no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] x Policy/decisionmakers ☐Citizens or general public x Industry and innovation communities x NGOs or civil society organisations x Academia x Science or technology research communities ☐Organizational staff ☐ Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Stakeholders can help test the hypothesis of the actors
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election x invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only x Deliberate or discuss ☐Observe as spectators ☐No interaction

	□Negotiation and bargaining □Ask and answer questions □Other [text box]
Format (FF)	[in which formats can this method take place?] x online x in person x asynchronously x synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] □ Analyse Context □ Reframe Problems □Envision Alternatives x Prototype x Experiment □Assess social innovation readiness □Scale x Evaluate
Scope	[Which objective/activity does the tool/method support] x ecosystem analysis □ environmental scanning □negotiation of commitments □ stakeholder engagement □knowledge transfer x feasibility plan □brainstorming x prototyping x impact assessment x agenda setting x problem framing □policy legitimization / amplifying □ policy formulation □policy implementation □policy evaluation □financing plan □accountability plan □other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] x Human Labour x Materials □Software or other tech □Funding □Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] □Can be run internally □Requires input from independent or external organisers x Both □Not Applicable

How does it work: step by step

Time commitment (text)	A team considering an issue could take a couple of days to come up with a risky assumption and fill out the canvas, conducting the

	actual experiment could take longer depending on what the hypothesis is.
Typical duration (FF)	x one-off ☐recurring ☐continuous ☐other [text box]
Step by Step (text)	 Work in a team/independently to create a risky assumption, then a falsifiable hypothesis. After these have been created, how the experiment is setup and how to utilise it. Once the results have been collected the team can conclude whether the hypothesis was correct
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated] https://www.designabetterbusiness.tools/tools/experiment-canvas https://cxl.com/blog/experiment-canvas/
Connecting Methods (links and text)	-

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	When a topic of interest has been identified then a risky assumption and hypothesis can be formed by the team to suit the needs.
Existing Guidelines and Best Practice (links)	[-]
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	[https://www.science-practice.com/blog/2015/01/15/challenge-mapping/

https://demoshelsinki.fi/wp-content/uploads/2018/05/demos-try-out-www-1.pdf]

Service Blueprint

Name of Method	Service Blueprint
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	The Service Blueprint is an operational tool that provides a holistic viewpoint of an organization's operational processes, e.g. key activities, products, services and points of interaction with the intended audience, stakeholders and beneficiaries. As such, it is a strategic tool useful for planning or improving a service as it demonstrates what is happening along the service line and who is doing what through what means.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box]

	TEXT: The tool helps clarify how front-end and back-end processes align via different touchpoints of the service. This helps organizations, and their internal departments/silos, gain perspective of the different facets of the service delivery. The blueprint allows organizations to then address specific barriers to effective value delivery and improve its services.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development, Policy Implementation]
Problem, Purpose and Needs (text)	The Service Blueprint can be used to understand cross-functional relationships and align front-stage and back-stage processes. It is a diagram that displays the entire process of service delivery, by listing all the activities that happen at each stage, performed by the different roles involved. The resulting matrix illustrates the flow of actions that each role needs to perform along the process, highlighting the actions that the user can see (above the line of visibility) and the ones that happen in the back-office (below the line of visibility). Roles can be performed by human beings or other types of entities (organizations, departments, artificial intelligences, machines, etc.).
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark>

	☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☐Network Mapping ☒Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool could be useful to protoype solutions before contracting.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other

Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [It usually remains internal to the design team. When used as a prototyping tool, it is shared also with the relevant stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is better done in a group of members coming from all of the areas of activity. They are engaged in constructing the different phases. One of the positive externalities of the process is the creation of new relationships between actors, providing the basis of future and further activity and collaboration.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only

	☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☐asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☒Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☒prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☒policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally

	☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* The activity itself takes 4-5 hours, but possibly even longer depending on the depth taken. The planning takes longer to be done well (e.g. engaging stakeholders, mapping and resourcing ways to bridge knowledge gaps, etc.).
Typical duration (FF)	☐one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	The Service Blueprint should involve a representative from each area of the service. The first step is to identify which user you're planning for: customer or beneficiary if you have more than one. Then plot out the different steps that are taken before, during and after using the service [See Customer Journey Map]. Some prompting questions could include: How do you engage the users and notify them of your service? What happens when they decide to use it? How do you stimulate re-use of the service or properly end the use of the service? These are all questions that must be considered when constructing the blueprint of the service. After mapping out the steps of the user, the rest of the worksheet can be filled out line by line according to the steps individuated. At the end of the activity, a line of interaction is created between what happens out front (customer) and what needs to happen in the back (organization). This allows for successful planning or improvement if necessary. At the bottom of the tool, there's room for ideas on how to improve at each phase.
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated]
Connecting Methods (links and text)	The Customer Journey map is part of the service blueprint and should be done in preparation for the tool.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The tool should be translated into the local language. If needed, additional features and elements can be added.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] Best Practice: https://medium.com/@studiowatr/optimise-your-business-with-service-design-an-uber-case-study-8b273de13bcb
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots]

	☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Shostack, Lynn G. (1977). Breaking Free from Product Marketing. *Journal of Marketing*, 41 (2), 73-80. Shostack, Lynn G. (1984). *Designing services that deliver in Harvard Business Review*, 62(1), 133-139. Hollins, G. & Hollins, W. (1991). *Total Design: Managing the design process in the service sector*. London: Pitman. Shostack, Lynn G. (2001). How to Design a Service. *European Journal of Marketing*, 16(1), 49-63. Kalakota, R. & Robinson, M. (2004). *Services Blueprint: Roadmap for Execution*. Boston: Addison-Wesley. Bitner, M.J., Ostrom, A.L. & Morgan, F.N. (2007). *Service Blueprinting: A Practical Tool for Service Innovation, Centre for Services Leadership*. Arizona State University [Working Paper]. SIC. (2022). Service Blueprint. Retrieved from https://www.silearning.eu/tools-archive/service-blueprint/ SISCODE. (2022). Service Blueprint. Retrieved from https://www.siscodeproject.eu/repository/tools/service-blueprint Service Design Tools. (2022). Retrieved from https://servicedesigntools.org/tools/service-blueprint

Social Business Model Canvas
Overview

Name of Method	Social Innovation Business Model Canvas
Type/Level of Method (FF)	☐overall approach ☐method ☒tool
Brief description	Visualizing the business model of your idea in a canvas is an effective step towards advancing the concept. It provides the big picture on the processes that ensure that value is created, delivered and captured. The tool is a precursor to drawing up a complete business plan and is useful for formulating in a more rapid and cost-efficient manner the business model behind the idea for the initial phases.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☒Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☒Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance*

	☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☒Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] The tool addresses in a single canvas the different parts of feasibility plan. It is a great way to explore how value will/can be created, by whom, for whom and through which channels. In doing so, different issues of how to implement the solution are addressed and resolved, including: how to finance the solution, how to maintain relevancy and support, how to maintain collaboration between actors, and how to scale impact (scaling up or out).
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☒Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The tool aims to catalyse thought on the different aspects involved in implementing a solution and organizes processes in a visual way that shows linkages and flows. The visualization not only helps as planning tool but also as a communication tool to garner support and feedback.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium

	☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☒medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☒partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☒Network Mapping ☒Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☒Access to markets ☒Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	The tool can be useful for quickly assessing the feasibility and implementation needs/requirements of a solution before piloting and further investment.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding

Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] **LEAVE BLANK** ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] **LEAVE BLANK** IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [The canvas usually remains open internally for consultation, feedback and iteration. It is also used as a communicative tool for different stakeholders. The public version is the business plan that is often built on the model.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by project leaders and with other actors and stakeholders in consultation. In subsequent iterations, different actor groups can be informed, consulted or engaged in refining specific parts. The activity has the potential to create new relationships and connections (of mental models) between actors while working on the model.

Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☒Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ecosystem analysis ☐environmental scanning ☒negotiation of commitments ☐stakeholder engagement ☒knowledge transfer ☒feasibility plan ☐brainstorming ☒prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☒policy implementation ☐policy evaluation ☒financing plan ☒accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method]

	☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The time needed to complete the activity depends on the level of detail and thoroughness desired, as well as how many actors are involved in the task. It can take anywhere from 2 hours and upwards.
Typical duration (FF)	☐one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	The social innovation business model canvas is made up of 15 blocks. Unlike similar business model canvases, this one has been modified to better suit social innovations, including among others, the following changes: a specific social value proposition, a separation between beneficiaries and financing supporters and boxes dedicated to surplus designation and social impact measurement. The canvas can be completed in any order; the following is merely a suggested path. 1. Social Problem/Social Need and Existing Alternatives: identify and analyze the social problem at hand and benchmark existing solutions to find out what is and what is not working. 2. Beneficiaries and Financing Supporters: identify, segment and understand your beneficiaries, customers and financing supporters (donors, investors and funders). 3. Solution/Governance: ideate or describe the solution to the social problem/need and the governance model. 4. Social/Commercial Value Proposition: formulate the social (i.e. the value created for beneficiaries) and commercial value proposition (i.e. the value created for paying customers/investors). 5. Relationship and Channels: describe how you reach your target beneficiaries, customers and/or investors. 6. Social Impact Measures: what indicators can be used to measure the impact of the solution. 7. Key Activities/Key Resources: define what key activities and resources are needed to support the innovation. 8. In-kind Supporters and Key Partners: list key partners who provide support, resources and services that foster the growth of the solution. 9. Cost Structure & Revenue Streams: list what costs are created and how revenues will be generated (i.e. memberships fees, freemium/premium, product sales, etc.). 10. Surplus: indicate where surplus will be invested if generated.

Evaluation (text and links)	The tool should be shown to relevant actors (beneficiaries, customers, supply chain actors, employees, etc.) for feedback and iteration.
Connecting Methods (links and text)	The canvas can be completed with information and insights coming from other tools, namely: stakeholder map, peoples and connection map, personas, system map, challenge map, etc. These tools can provide content for the model, but are not necessary for the completion of the canvas.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] <mark>LEAVE BLANK FOR NOW</mark>

Make it Your Own

Flexibility and Adaptability (text)	The canvas could be translated into the local language. More context-specific terms and questions could be used in the supportive text and questions in each box.
Existing Guidelines and Best Practice (links)	SIMPACT Project's SI Business Toolbox: model with explanation and accompanying tools that can support each box with tool explanation and canvas http://www.simpact-project.eu/tools/toolbox_business_web.pdf SIC's SI Learning Repository: canvas and steps https://www.silearning.eu/tools-archive/business-model/ Strategy Made Simple: video tutorial of different sections of the canvas (different model but relevant for the concerned boxes) https://strategymadesimple.ca/blog/category/Tools Social Enterprise Institute: detailed explanation with example (different model but relevant for the concerned boxes) https://socialenterpriseinstitute.co/wp-content/uploads/2018/12/Social-Business-Model-Canvas.pdf
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] <mark>LEAVE BLANK</mark> ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	SIMPACT. (2016). SI Business Toolbox. Retrieved from http://www.simpact-project.eu/tools/toolbox_business_web.pdf SIC. (2020). SI Learning Repository: Business Model. Retrieved from https://www.silearning.eu/tools-archive/business-model/

Desktop Walkthrough
Overview

Name of Method	Desktop Walkthroughs
Type/Level of Method (FF)	☐overall approach ☐method ☒tool

Brief description	A desktop walkthrough helps the design team to quickly simulate a service experience using simple props like toy figurines on a small-scale stage (often built from LEGO bricks or cardboard), and test and explore common scenarios and alternatives. The critical deliverable is not the model of the map/stage but the experience of playing through the service experience step by step. The desktop walkthrough is one of the signature methods of service design. It helps to make the experiential process nature of a service – a story unfolding over time – tangible. Desktop walkthroughs allow service concepts to be iterated at a much faster pace. New ideas can be instantly identified, tried, and tested. The service concepts get refined quickly.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☒Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: [outline how this method helps to address these barriers]
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations*

	☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service (re)design]
Problem, Purpose and Needs (text)	This method allows to simulate the experience of customers or users. It's usually used to explore service experiences and allows a team to get a shared understanding of the step-by-step customer journey and any potential critical moments.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☒medium ☐high
Governance and Empowerment	
Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☐Network Mapping ☐Network Collaboration

Note: "Governance and Empowerment" is a section header row spanning the table.

	☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This method requires at least basic knowledge of group facilitation since it is possible to add new personas during the activity. It requires that the person facilitation has the ability to feel and see the need and act on the right time intervening in the group.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☒collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☒Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500

	☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☐Citizens or general public ☐Industry and innovation communities ☐NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☐Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Conducting a desktop walkthrough does not require developing relationships with stakeholders, but the method can be used to think and design new services and improve the relationship between actors and stakeholders.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☒Observe as spectators ☐No interaction ☒Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☐online ☒in person ☐asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☒Envision Alternatives ☒Prototype ☒Experiment ☐Assess social innovation readiness ☐Scale ☐Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement

	☐knowledge transfer ☒feasibility plan ☐brainstorming ☒prototyping ☐impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☒Other: venue
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	Anywhere from a few minutes to a couple of hours depending on what kind of material you will use (if it is LEGO, sticky notes, etc.) and how many groups you will facilitate. For the activity itself: 1 to 2 hours
Typical duration (FF)	☒one-off ☐recurring ☐continuous ☐other [text box]
Step-by-step (text)	**Preparation** Review scope and clarify prototyping questions: Start by reflection on what your group want to achieve with this activity: What is your scope? What do you want to learn from this prototyping activity? Do you want to test the whole experience or just a part? What are the aspects and details you want to test for later? Who you want or need to involve in this walkthrough? Is it just for within the project team, or are you planning to involve potential users or other stakeholders? **Prepare workspace and materials:** Pick up the desktop walkthrough materials and a flipchart paper. Set up the paper on a table. Make sure that the table is not too big so everybody can stand around it and contribute at the same time. **Brainstorm an initial journey draft:**

Select a customer or persona and do a brief brainstorm in the group: looking at your new service concept, what are possible steps in the customer journey?

Sort your sticky notes in chronological order. Do just enough to get a first draft of what the journey could look like.

Create maps and stages:

Based on the initial journey, what locations are important? Start by creating a big overview map that contains all the relevant locations of the service experience. Then, decide if and where you need to zoom in on certain locations for some part of the service. If necessary, create a detailed stage plan for each of these locations.

Create roles, set, and props:

Which roles need to be cast?

What needs to be built?

Pick a figurine for each of the roles/key stakeholders in your service and quickly build the essential set and props, using paper, cardboard, plasticine, or LEGO bricks to set the stage.

Set up roles: Find your actors

Who is going to play which role? Also, it can be helpful to assign someone to keep track of the bugs, insights, and ideas queue during the walkthrough.

Research

The first walkthrough:

Who or what must move at each step in the journey?

Does everything fit together?

Put all the actors and props onto their starting positions and, loosely following the events from your journey draft, play through the service from beginning to end. Move your figures around on the map/stages. Act out all necessary dialogue and do all the interactions with other actors, devices, and so on.

Keep a list of bugs, insights, and ideas:

After each run-through, take a few moments to reflect with your group: what worked? what didn't work? what you would like to change or try next?

Document the results on a flipchart with insights, bugs, new ideas and questions.

Decide on the next variation and iterate:

Check off the idea that has just been simulated and, in your team, quickly decide (show of hands, simple majority) which of the still open changes and ideas you want to try next. Then go again. If you think that last walkthrough was a real cracker, create a quick, less than 60-second video pitch of the walkthrough to capture it for later. Stop iterating either when the set time for your workshop is up or when the group have hit a roadblock that requires them to switch to other core activities next – for example, doing some more research or more intensive ideation.

Document:

Document and finalize your work. Use customer journey maps, photo storyboards, or videos to document the latest version(s) of the service experience from your walkthroughs.

Briefly reflect on your documentation flipchart and identify the critical steps in this journey, other key elements, as well as problem

	areas or questions that need to be addressed in the next steps in the design process. **Present (optional):** Using a storytelling approach, present your last iteration and key learnings to other stakeholders and gather feedback. It is often useful to also capture the presentation and the final feedback rounds on video and add them to your documentation.
Evaluation (text and links)	This method doesn't have a specific form of evaluation, since it is qualitative and subjective. However, a good idea is to schedule a meeting after a period to see which changes were put into practice.
Connecting Methods (links and text)	-

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	This model works with small groups only (from 3 to 6 people) it is important that everyone in the group have a voice and explain the changes they are making in the prototype one by one, so you can track (and document, if that is the case) all the ideas, suggestions and discussions. Also, since the whole model is based on the idea of having physical material and pieces to play, ideally it is done in a venue, not online.
Existing Guidelines and Best Practice (links)	• **Observers**: if you have more participants than 6 in each group, one idea is to add a participant that will only observe the activity. The idea here is that this person will be watching out for bias of active players. The observer can also have an independent view of the process and give feedback to the team at the end of the activity. • **Flow**: this activity can easily trigger deeper discussions that are not necessarily connected to the theme or topic. Always encourage the group to simulate in the model what they are talking about instead of doing randomly different versions of the service they are working on. • **Teleporting**: watch out for pieces and sticky notes moving from one place to the other. Since it is a journey always keep asking the question: how did this ended up there? • **Bugs:** if you realize that the group is stuck on a bug, ask them to take a step back, do a quick brainstorming session to think about solutions and then go back to the activity. • **Judge or director:** if you realize that the group is having too much trouble in making decisions or is trying to do a lot of things at once, nominate a judge or director. The idea here is not that this person will decide everything together, but will help the group organize thoughts, make sure that everyone has their turn to talk and document the changes that are already agreed on.
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Low Threshold Service Design: Desktop Walkthrough Johan Blomkvist, Annita Fjuk, Vasilisa Sayapina (https://ep.liu.se/ecp/125/013/ecp16125013.pdf)

Experience Prototype
Overview

Name of Method	Experience Prototype
Type/Level of Method (FF)	☐overall approach ☐ method ☒tool
Brief description	Experience Prototyping is a method of "research through design." (Wikström, 2015). It is the act of developing "any kind of representation, in any medium, that is designed to understand, explore or communicate what it might be like to engage with the product, space or system [you] are designing." (Buchenau, 2000). This might include design prototyping techniques such as physical prototypes, immersive spaces/installations, immersive theatre, storyboards, scenarios, sketches, videos, etc. "all of which certainly add value by communicating elements that make up an experience." (Buchenau, 2000).
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐ Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐ Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☒ Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐ Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐ Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.*

	☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] Experience prototypes allow you to make an idea tangible and testable with potential users before investing and developing final versions. They offer insight into how to improve, adjust, or redesign ideas to most effectively achieve the underlying design intention / goal.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC ☒ Innovation Management and Digitization ☒ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☒ Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☒ Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☒ Nature-based solutions *eg. Green roofs, ecological restoration* ☒ Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development, Policy development]
Problem, Purpose and Needs (text)	When you have an idea for how to solve a problem with a service, product, or other design, it may be helpful to deploy an experience prototype. Experience prototypes are simple, but tangible and interactive representations of your idea. They enable you to: - Explore and gain insight into existing user experiences and contexts. - Explore and evaluate the effectiveness and usefulness of your design ideas - Communicate ideas to an audience. (Buchenau, 2000). In order to develop and deploy an experience prototype you do not, necessarily, need a lot of resources. The key is to think creatively about the necessary components to enable an experience similar or identical to the one you intend to develop/deliver. This can be a similar but simplified and/or lower fidelity experience to the one your idea is intended to offer. For example, if you want to test a digital service—like an app—you might want to try testing the basic idea on paper first with users to see if the general idea works, if users have contextual needs or nuances you need to account for, or if the service is completely unaligned with their needs. Alternatively, you can run a more high fidelity prototype if this is necessary to test the core components of the idea. In either case, the insight you gain will enable you to iterate and design more effective and useful tools.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?]

	☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☒ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☒ systems thinking *eg. Approaches specifically designed to effect systemic change* ☒ collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐ Organizational processes ☐ Organizational culture ☐ Organizational structure ☐Network Mapping ☐ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐ Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool is extremely useful for experimentation, prototyping, and iteration.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio

	☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☐collective will formation ☐collective decision making ☐ implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☒ Direct engagement with wider public ☒Other [It should be used to gain feedback directly from the people you intend to use the service, tool, etc.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐ small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒ no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☒ Other [It is unlikely that all these categories will participate, but any of them might be the intended user(s) in which case it is important to consider how to run an experience prototype with any of them]
Actors and Stakeholder Relationships (text)	The activity can be run by an individual or a transition team, but it is essential to run experience prototypes with intended users.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☒ self-selection ☒ random selection

	☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒ Express preferences only ☒ Deliberate or discuss ☒ Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☒ Ask and answer questions ☐ Other.
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒ asynchronously ☒ synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context ☐Reframe Problems ☐ Envision Alternatives ☒ Prototype ☒ Experiment ☒ Assess social innovation readiness ☐ Scale ☐ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐ brainstorming ☒ prototyping ☒ impact assessment ☐agenda setting ☐ problem framing ☐policy legitimization / amplifying ☐policy formulation ☐ policy implementation ☐ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☒ Software or other tech

	☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* An experience prototype can vary in terms of the amount of time you may need to commit. If you already have an idea and need to test a simple, low-fidelity version, than it may take a 1-3 hours to create the prototype and 3-5 hours to test it with users. If, however, you don't have an initial idea yet, or need to create a more high-fidelity prototype, than the process may multiple weeks or months. This is why it is extremely helpful to test low-fidelity experience prototypes first, so you can rapidly put a tangible, but simple version of the idea in front of users to get their feedback before investing a lot of time into the development process. Keep early prototypes quick and scrappy.
Typical duration (FF)	☒ one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	1. Develop an initial service, tool, or product idea based on the identification of a challenge, an opportunity, and an ideation process (see How Might We questions) 2. Consider the key attributes or components of the idea that offer a response to the challenge or opportunity. Keep in mind that many products offer lots of intuitive and beautiful elements, but their core functionality comes down to a few simple interactions. These core interactions are the ones you want to test. 3. Consider which mediums are the most fit for purpose to test the idea. It is important to keep in mind that not all mediums will offer an equal ability to test the core functionality or interactions of our idea, so try to be intentional about why you are choosing a specific medium to represent your idea. You might choose to represent and test your idea with a physical prototype, immersive space/installation, immersive theatre, storyboard, scenario, sketch, video, etc. "all of which certainly add value by communicating elements that make up an experience." (Buchenau, 2000).
Evaluation (text and links)	Usability testing with intended users is an important way to gauge whether your idea effectively responds to the challenge or opportunity at hand.
Connecting Methods (links and text)	How Might We questions, Usability Testing.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] Which mediums you use to represent your idea, and thereby prototype the experience of engaging with your prospective service, tool, product, etc., is flexible. However, it is important to be intentional about why you choose to use the medium(s) you do.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://www.ideou.com/blogs/inspiration/why-everyone-should-prototype-not-just-designers
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] ==LEAVE BLANK== ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Nyffeler, Chris. "Why Everyone Should Prototype (Not Just Designers)." Why Everyone Should Prototype (Not Just Designers). IDEO U, May 3, 2019. https://www.ideou.com/blogs/inspiration/why-everyone-should-prototype-not-just-designers. Buchenau, Marion, and Jane Fulton Suri. "Experience Prototyping." *Proceedings of the conference on Designing interactive systems processes, practices, methods, and techniques - DIS '00*, 2000. https://doi.org/10.1145/347642.347802. Wikström, Jonas. "Experience Prototyping." Medium. Apegroup - Behind the Screens, December 21, 2015. https://medium.com/apegroup-texts/experience-prototyping-is-a-great-methodology-when-looking-into-a-context-885cb27aca52. Kelley, Tom, and David Kelley. "How to Build a Prototype in One Hour." Slate Magazine. Slate, October 23, 2013. https://slate.com/human-interest/2013/10/the-importance-of-prototyping-creative-confidence-by-tom-and-david-kelley.html.

5.1.5 Phase 5: Evaluate and Scale

Cultural Probes

Overview

Name of Method	Cultural Probes
Type/Level of Method (FF)	☐overall approach ☐method ☒tool

Brief description	Cultural probes are a design research method, which are particularly well suited to conduct research with participants on sensitive topics and in personal contexts. They are intended to encourage participants to look beyond relatively well understood needs, into the fuzzier realm of their beliefs, desires and cultural preferences. Unlike direct observation (like usability testing or traditional field studies), the technique allows participants to self-report. A cultural probe pack comprised various elements, which can include interactive materials like maps, postcards, cameras, photos, etc. Participants use these interactive materials to record elements of their daily lives, which offer insights and inspiration for a design/innovation team. Examples of how cultural probes have been tailored to suit personal settings include investigating people's values in the home environment [3], understanding the design space of assistive living technologies for older people [5], and exploring user needs in a range of care settings [1].
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☒ Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☒Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☒ Historical legacies and institutional distrust *eg. Low public trust in city govt* ☒ Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☒Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] Cultural probes serve as an extremely useful tool for gaining insight into how certain social systems operate, why participants feel certain ways (trusting or distrusting), and how certain services are currently experienced/might be offered in more fitting ways. As

	such, they are a helpful tool to understand how and why a tool should be designed to overcome certain barriers.
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒ Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒ Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other [Service Development, Policy development]
Problem, Purpose and Needs (text)	Cultural probes are appropriate when you need to gather information from participants with minimal influence on their actions, or when the process or event you're exploring takes place intermittently or over a long period. Additionally, when a topic or context might be too sensitive or personal to gain insight into, Cultural Probes offer a less intrusive way to learn about participants beliefs, desires, and cultural preferences. Furthermore, if the central research topic is one that a participant may find challenging to describe clearly, cultural probes can be creative, non-verbal communication methods for participants to provide insight into what the issue is. Typically, a pack of easily reproducible and low-cost cultural probes are provided by researchers directly to participants with instructions for how participants can or should use the cultural probes. This might include asking participants to use a disposable camera to take photos of anything that relates to the topic, to keep a daily journal about their experiences with the topic, to write a postcard to a friend about a daily experience, etc. It is important to offer participants clarity about what they are expected to do with the Cultural probes without overly determining exactly what they will record. Participants should be encouraged to do as much as they feel comfortable with and to use whatever means of expression they wanted.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?]

	☒ low ☒ medium ☒ high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒ low ☒ medium ☒ high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☒co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☒co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☒co-production *eg. People using the service are involved in design and implementation* ☐ systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒ Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes ☒Organizational culture ☒Organizational structure ☐Network Mapping ☐ Network Collaboration ☒ Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☐Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	This tool could be useful to analyse a context and experiment with potential solutions before contracting.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio

	□Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] ==LEAVE BLANK== □Mission City □Climate City Contracts □Pilot City □Twin City □Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion □collective will formation □collective decision making □ implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] ==LEAVE BLANK== IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] □Public report □Mass media □Dedicated website □Social media □Direct engagement with wider public ☒Other [It usually remains internal to the design team. When used as a tool of experimentation, it is shared also with the relevant stakeholders.]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 □up to 50 □50-100 □100-500 □500-1000 □no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators □Other [text box]
Actors and Stakeholder Relationships (text)	The activity is best done with stakeholders who have a close proximity or lived experience relative to an issue. For example, using cultural probes with citizens might offer useful insight into how a solution should be shaped or the needs it has to respond to. Each type of actor and stakeholder may not be engaged with cultural probes in a project, but each can be to gain specific insight into their experience relative to a particular issue.

Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☒ self-selection ☒ random selection ☐stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐ Deliberate or discuss ☐Observe as spectators ☐No interaction ☐ Negotiation and bargaining ☐Ask and answer questions ☒ Other [Participants may interact with each other, but it is not necessarily part of a Cultural Probe process. If they do, it may be as peer researchers to review and synthesise insights from the Cultural Probes.
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒ asynchronously ☐ synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☒ Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐ Prototype ☒ Experiment ☐Assess social innovation readiness ☐Scale ☒ Evaluate
Scope	[Which objective/activity does the tool/method support] ☒ ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☒ stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☒prototyping ☐impact assessment ☐agenda setting ☒ problem framing ☐policy legitimization / amplifying ☐policy formulation ☒policy implementation ☒ policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* Cultural probes are appropriate when you need to gather information from participants with minimal influence on their actions, or when the process or event you're exploring takes place intermittently or over a long period. Unlike direct observation (like usability testing or traditional field studies), the technique allows participants to self-report. Each individual time a participant self-reports can take anywhere from a few minutes to 30m. The amount of time necessary can be adjusted to fit the needs of the research and participants.
Typical duration (FF)	☒ one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	Selected participants are briefed, given a kit of materials, and briefed about the requirement to record or note specific events, feelings or interactions over a specified period. Typically, a follow-up interview is conducted at some point after the briefing session. This helps ensure that participants are actively engaged, and are collecting the required information.
Evaluation (text and links)	At the end of the specified period, the materials are collected and analysed. A de-briefing session is also typically conducted, in order to supplement, validate and otherwise explore the information gathered by the participants. Information gathered is then analysed, and documented in some fashion. Affinity diagramming can be used to analyse the data gathered. The data can also be used to create personas.
Connecting Methods (links and text)	Affinity diagramming, personas, prototyping (more generally).

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] <mark>LEAVE BLANK FOR NOW</mark>

Make it Your Own

Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised] The tool should be translated into the local language. If needed, additional features and elements can be added.
Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?] https://infodesign.com.au/usabilityresources/culturalprobes/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	BURROWS, A., MITCHELL, V. and NICOLLE, C., 2015. Cultural probes and levels of creativity. IN: Proceedings of Mobile HCI: 17th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct, Copenhagen, Denmark, ACM Digital Library, pp. 920 – 923 Gaver, William & Dunne, Anthony & Pacenti, Elena. (1999). Design: Cultural Probes. Interactions. 6. 21-29. 10.1145/291224.291235. Gaver, W. W., Boucher, A., Pennington, S., & Walker, B. (2004). Cultural Probes and the Value of Uncertainty. Interactions, 11(5), 53–56.

Field Experiment
Overview

Name of Method	Field experiment
Type/Level of Method (FF)	☐overall approach ☒method ☐tool
Brief description	By utilizing an experimental design, such as A/B testing, users (i.e., citizens) are randomly exposed to different options, then results are compared. The aim is testing which solution is best. For example, when utilizing a service, half of the users are provided one version of the service (intervention A), while the other half of the participants are provided a different version (intervention B). Performance and other data are collected for all users for the two conditions: the best performing solution is then adopted for all. Field experiments can be applied to test not only 2 but multiple options, in a specific setting or over time, and can take into account the effect of moderating variables (such as cultures, expertise, age, etc.). Randomized controlled trials, a top methodology utilized in policy making, are a specific form of experiments in which the users/population receiving the (policy) intervention is chosen randomly from the eligible population, and a control group is also chosen at random from the same population. When users cannot be randomly exposed to interventions (i.e., if subjects sign-up for participation), the methodology is called quasi-experiment.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☒Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other [text box] TEXT: the method provides evidence based methodologies. The results of conducting field experiments can be shared with the stakeholders to support informed decision making
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☒Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☒Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable

	□Other [text box]
Problem, Purpose and Needs (text)	Conducting field experiments is a well-established method in the field of economics, development, information systems, psychology, etc. It can be applied to any field. The purpose is to compare the performances of different interventions, or one intervention compared to a control group.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term □Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☒low ☒medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] □low □medium ☒high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE □co-creation *eg. Development of new or added value through collaboration with affected stakeholders* □co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* □co-production *eg. People using the service are involved in design and implementation* □systems thinking *eg. Approaches specifically designed to effect systemic change* □collaborative governance *eg. Affected stakeholders and communities working together on a problem* □deliberative approaches *eg. Structured dialogic processes* □partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☒evaluation, oversight and monitoring *eg. Holding authorities to account* □Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☒Organizational processes □Organizational culture □Organizational structure □Network Mapping □Network Collaboration □Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) □Access to markets □Access to finance □Access to training, education and research ☒Knowledge development and transfer □Political and administrative awareness

	☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	Conducting field experiments requires at least some basic knowledge of data collection and data analysis (A/B testing, t-tests or ANOVA)
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☒Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☐Other [text box]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☐50-100 ☒100-500 ☒500-1000 ☒no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☐Policy/decisionmakers ☒Citizens or general public ☐Industry and innovation communities ☒NGOs or civil society organisations

	☐Academia ☐Science or technology research communities ☒Organizational staff ☒Social innovators ☒Other [users]
Actors and Stakeholder Relationships (text)	Conducting field experiments does not require developing relationships with stakeholders, but the method can be utilized to test the effectiveness of specific interventions on the relationship between stakeholders
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☒random selection ☒stratified selection ☐election ☐invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☒Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☒Experiment ☐Assess social innovation readiness ☐Scale ☒Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☒impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying

	☐policy formulation ☐policy implementation ☐policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials ☐Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.*
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	1.*Specify what is the "intervention"* (i.e., a policy supporting social innovation) and what is the effect that is aimed for. 2. *Define indicators of the desired effect*. For example, if the aim is to test a policy for increasing sharing practices, the effect of the policy could be measured by counting the number of initiatives related to sharing practices, counting the number of people and organizations involved, measuring how many items have been shared and by whom, measuring the satisfaction of people with the service, etc. 3. *Define the experimental design*: to test the effect of an intervention, you need to compare it to (1) the status before the intervention, and/or (2) a control group (i.e., collecting the same data in another district where the policy was not implemented), and/or (3) one or more different interventions. It is more informative to conduct randomized control trials, comparing different interventions to control groups, in multiple locations. 4. *Define which contextual factors* could affect the intervention's effect, i.e., gender, age, socio-economic status, culture, district, engagement mechanisms, involved partners, communication, etc. Information regarding these factors should be included in the data collection, to better understand the effectiveness of the intervention. 5. Collect data according to step 2, 3 and 4, i.e., with questionnaires, interviews, online surveys, apps, etc.

	6. Analyse the results and utilize them for evidence-based policy making. Image Source: http://www.edinburgh-eyetests.co.uk/ebm.htm
Evaluation (text and links)	The method is an evaluation and is usually not evaluated; eventually it is complemented with qualitative data collection methods to overcome the limits of quantitative data collections. The "evaluation" of the quality of an experiment can be inferred by the quality of the measurement instruments utilized to run the experiment. For instance, validated scales and measurement instruments should be utilized to collect responses (thus, questions should not be "invented" but selected from existing validated scales).
Connecting Methods (links and text)	Experiments have been utilized together with other complementary methodologies such as diaries (that is, users are requested to write down their reflections or feelings), follow-up interview or focus-groups.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	Experimental methodologies are very flexible: data can be collected before and after and intervention, or to compare multiple interventions (between them and/or to a control group), or to understand the influence of contextual factors on the intervention (i.e., the designed policy might work only for certain age groups). It requires the collection of quantitative data (i.e., with questionnaires, or collecting performance data or behavioural data). Optionally, qualitative data can complement the understanding (i.e., with follow-up interviews or focus-groups to give a deeper meaning to the quantitative results). Data should be collected on a large enough sample (min. 100 subjects) for the analysis to be reliable.
Existing Guidelines and Best Practice (links)	Gandhi, R., Knittel, C. R., Pedro, P., & Wolfram, C. (2016). Running randomized field experiments for energy efficiency programs: A practitioner's guide. Economics of Energy & Environmental Policy, 5(2), 7-26. *http://www.iaee.org/en/publications/eeeparticle.aspx?id=126* *Generic practical reference for designing experiments*: Field, A., & Hole, G. (2002). How to design and report experiments. Sage.

	A free online application for experimental data analysis: https://jasp-stats.org/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access <u>different levels of services</u>; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	*Scientific reference on field experiments*: Experimental and quasi-experimental designs for generalized causal inference *Practical reference for designing experiments*: Field, A., & Hole, G. (2002). How to design and report experiments. Sage. *A useful guide to experiments analysis*: Field, A. (2013). Discovering statistics using IBM SPSS statistics. sage. A free online application for experimental data analysis: https://jasp-stats.org/ *Application to climate neutrality*: Bernstein, S., & Hoffmann, M. (2018). The politics of decarbonization and the catalytic impact of subnational climate experiments. Policy Sciences, 51(2), 189-211. Gandhi, R., Knittel, C. R., Pedro, P., & Wolfram, C. (2016). Running randomized field experiments for energy efficiency programs: A practitioner's guide. Economics of Energy & Environmental Policy, 5(2), 7-26. http://dx.doi.org/10.5547/2160-5890.5.2.rgan *Applications to policy making*: Banerjee, A. V., & Duflo, E. (2019). Good economics for hard times. PublicAffairs. [Nobel prize winners] Banerjee, A., Banerjee, A. V., & Duflo, E. (2011). Poor economics: A radical rethinking of the way to fight global poverty. Public Affairs. [Nobel prize winners] King, G., Gakidou, E., Ravishankar, N., Moore, R. T., Lakin, J., Vargas, M., ... & Llamas, H. H. (2007). A "politically robust" experimental design for public policy evaluation, with application to the Mexican universal health insurance program. Journal of Policy Analysis and Management, 26(3), 479-506.

Most Significant Change

Overview

Name of Method	Most Significant Change
Type/Level of Method (FF)	☐overall approach ☒ method ☐tool

Brief description	Most Significant Change (MSC) is a participatory monitoring and evaluation method without indicators that consists in collecting stories of change from the field. The stories help understand the complexity and reality of the project in the field and offer a more in-depth picture of progress. More precisely, the method helps identifying relevant field stakeholders, gathering their stories (through interviews, focus groups, or fact sheets), selecting significant ones with precise criteria until higher-levels stakeholders identify the most significant changes. Many stakeholders from different levels are involved in identifying change and analysing data. This method focuses on learning rather than accountability. It provides information to help people manage the project and its outcomes are useful to assess the overall performance of a project. It has been used to monitor, evaluate and improve social changes, as for instance, to evaluate a German-Indonesia bilateral climate change program (FORCLIME). It contributed to the learning process of the project and partners, helped review and improve it. The method also enabled the communication of achieved impacts to partners through voices of beneficiaries and stakeholders closest to the action.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☒ Other [text box]

	TEXT: The method is well-suited in contexts where conventional monitoring and evaluation tools may not provide sufficient data to make sense of impacts and foster learnings (e.g. complex projects that produce diverse and emergent outcomes, projects focused on social changes, large projects with multi stakeholder levels, etc.)
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☒Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The method has the purpose of providing a structure for learning from project experiences, by providing discussion categories and a template to collect input (knowledge sharing and documenting). The process provides a simple means of making sense of a large amount of complex information collected from many participants across a range of settings, as well as identifying unexpected changes. It is a participatory form of monitoring that does not require expert knowledge or skills. It consists in collecting stories from various stakeholders on changes occurring during the project, and is easy to implement and communicate across cultures. It can deliver a rich picture of what is happening and can be used to monitor and evaluate bottom-up initiatives that do not have predefined outcomes. It provides a useful method to generate knowledge and facilitate improvements in particular, and it can also assist in fostering a shared vision, building staff capacity in impact evaluation, helping stakeholder steering committees act, etc.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?]

	☐low ☐medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☒medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☒evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	MSC is a participatory method that encourages collective learning. It does not require expert knowledge and is simple to implement. However, it can be time-consuming however and a short in-house training might be useful for relevant stakeholders to understand the method. It is important to ensure stories representativeness that stakeholders from different hierarchies level of the project are involved.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment

	☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [Usually it's for internal use]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Most significant change is a participatory method that involves many project stakeholders in telling/collecting stories, deciding the sorts of change to be recorded and in analysing the data.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection

	☐random selection ☒stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale ☒Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☒knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☒impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☒policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☐Materials

	☒Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☐Can be run internally ☐Requires input from independent or external organisers ☒Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The MSC process is relatively simple in practice, and a trial and error approach can be used. However, understanding the method is a frequent stumbling block so training people in MSC can be useful. In-house training takes 1-3 days and can be led by external consultant or an internal M&E specialist. MSC occurs during a predefined period of time (e.g. 6 months or 1 year) after which a document is produced with all the stories selected of change by upper levels over the period in each domain. The method is quite time-consuming, depending on the nature of the project and intended uses of the process. Hours will be needed to collect the stories, transcribe and analyse them. It is important to allocate enough time for the story collection phase for various stakeholders to enter into a meaningful dialogue about what was happening in the field. Regular meetings must also be held to select the most significant stories; these will take about 1.5 hours depending on the number of domains and selection process. The frequency of SC story collection can vary greatly depending on projects, from biweekly to yearly. Usually, reporting will be more regular at the start of implementing this M&E technique (e.g. every few weeks or monthly initially) and then evolve to a lower frequency as the process continues (e.g. quarterly selection). Lengthening reporting period (after several months or a year) will help reduce the time commitment. The whole process will become quicker and more streamlined as time goes.
Typical duration (FF)	☐one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	The MSC process involves the collection of significant change stories from the field and the selection of these stories by a pre-determined panel of various stakeholders who first try to identify impact, and then regularly discuss the value of these stories of change. A full implementation of the MSC method includes 10 steps: Step 1: Starting and raising interest – introducing stakeholders to MSC, fostering interest and commitment to participate. Step 2: Defining the domains of change – identifying the change domains to be monitored involves the identification of broad domains (e.g. changes in people's lives, in the sustainability of activities…) by selected stakeholders. These domains are to be left loose (vs indicators) to be then defined by actual users.

This step is not essential; stories can be collected and analyzed as a group without being categorized, although using domains helps group the stories into more manageable lots which can then be more easily analysed.

Step 3: defining the reporting method – deciding how frequently to monitor changes taking place in the defined domains.

Step 4: collecting SC stories – a simple question (such as "what do you think was the most significant change that took place during the last month") should be asked to people most directly involved. Respondents are encouraged to report why they consider the change to be most significant. There are many ways to identify and document SC, such as active searching via fieldwork, interviews, group discussions, or having participants write stories directly.

Step 5: selecting the most significant of the stories – stories (1-2 pages) are then analysed and filtered up through the projects' authority levels, in a systemic and transparent way.

Step 6: feeding back the results of the selection process - it is important to record and communicate the criteria/reasons used to select a story at all levels so that each round of collection-selection is informed by previous ones and information is fed back to project managers.

Step 7: verification of stories – stories can be verified to ensure they have been reported accurately and honestly. This also provides an opportunity to gather more detailed information about these perceived significant events.

Step 8: quantification – this step can take place either when an account of change is first describe (with quantitative or qualitative information) or it can also be useful to quantify the extent to which MSC identified in one location have taken place in others within a specific period for instance.

Step 9: secondary analysis and meta-monitoring – the monitoring system itself is then monitored (e.g. analysing how often different types of changes are reported, who participated and how they affected the contents, …). MSC can be a rigorous process without secondary analysis but it deeper analysis of all stories can be useful (using thematic coding, against a logic model, analysis of selection criteria, differences between selected and not selected stories, etc.). Meta-monitoring is simple and strongly recommended to monitor: the number of stories and variation over time, whose stories are selected and whose aren't, or the outcome of the stories (how many generated recommendations and how many of these were then acted on), among others.

Step 10: revising the system – the final step if to revise the design of the MSC process (e.g. changing domains, reporting frequency, types of participants…), taking into account what was learned from using the technique and analysing its use.

When the technique is implemented successfully, whole teams of people begin to focus their attention on program impact.

Evaluation (text and links)	MSC is an emerging technique and many adaptations have already been made. It is currently being used to evaluate hundreds of initiatives internationally, from assessing single projects to the evaluation of programmes in large organisations, such as the GIZ for the FORCLIME project in particular.

Connecting Methods (links and text)	This method is a good tool for monitoring and evaluation. It should be used along with other methods to offset some of its weaknesses, quantitative indicators and methods in particular. To create a comprehensive monitoring, evaluation and learning framework in can be complemented with program logic, quantitative evidence of the spread of outcomes, evidence of whether outcomes have been achieved and why, etc.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	This method is flexible and can be customized to the project. According the method inventor steps 4, 5 and 6 fundamentally define the process but the others are discretionary and their implementation depend on the context and purpose for using MSC.
Existing Guidelines and Best Practice (links)	• Davies, R. & Dart, J. (2005). The 'Most Significant Change' (MSC) Technique: A guide to its use. https://www.mande.co.uk/wp-content/uploads/2005/MSCGuide.pdf • Lennie, J. (2011). The Most Significant Change technique: A manual for M&E staff and others at Equal Access. Retrieved from https://www.betterevaluation.org/sites/default/files/ EA_PM%26E_toolkit_MSC_manual_for_publication.pdf • https://evaluatingadvocacy.org/doc/The-Most-Significant-Change-Technique.pdf • https://mande.co.uk/2010/lists/updated-msc-bibliography/
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Davies, R. and Dart, J. (2005). The 'Most Significant Change' (MSC) Technique: A guide to its use. https://www.mande.co.uk/wp-content/uploads/2005/MSCGuide.pdf https://www.betterevaluation.org/en/plan/approach/most_significant_change https://odi.org/en/publications/strategy-development-most-significant-change-msc/ GIZ (2017) A Portrait of Changes in FORCLIME. https://resultsinhealth.org/our-projects/qualitative-evaluation-of-the-forests-and-climate-change-programme-forclime-using-the-most-significant-change-msc-technique GIZ. Qualitative Evaluation of the Forests and Climate Change Programme (FORCLIME) Using the Most Significant Change (MSC) Technique. https://resultsinhealth.org/our-projects/qualitative-evaluation-of-the-forests-and-climate-change-programme-forclime-using-the-most-significant-change-msc-technique https://www.zotero.org/groups/266453/most_significant_change_technique/

Outcome Harvesting

Overview

Name of Method	Outcome harvesting
Type/Level of Method (FF)	☐overall approach ☐ method ☒tool
Brief description	Outcome harvesting is a tool to identify, formulate then analyse and interpret the outcomes (positive and negative, intended or not) of an initiative. The process is stakeholder-centered and includes 6 steps that are helpful to collect evidence of what has changed for project stakeholders or beneficiaries and work backwards to evaluate whether and how the project has contributed to these changes. It is particularly adapted to evaluate dynamic and uncertain situations when it is difficult to precisely define objectives or actions to take, like with social innovations. This tool can be used for monitoring and evaluating projects. It goes beyond changes tracking to support learning about them: it is well-suited to get insights on the effectiveness of a project (rather than efficiency) as well as to understand the process of change and how each outcome is contributing. **Steps in outcome harvesting** 1. Design the harvest 2. Review documentation and draft outcomes 3. Engage with informants 4. Substantiate 5. Analyse, interpret 6. Support use of findings **Outcome harvest** It has been used to evaluate and improve social innovations: the World Bank for instance drafted a case study of Outcome Harvesting being used in a solid waste management project in Bosnia and Herzegovina.
Keywords (FF)	LEAVE BLANK

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☐Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☒Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources*

	☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement* ☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐ Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* ☒ Other [text box] TEXT: The template helps reflecting on experimentation for analytically identifying issues that should be addressed and strengths of the project
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☒Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☒Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☒Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☐Other [text box]
Problem, Purpose and Needs (text)	The method has the purpose of providing a structure for learning from project experiences, by providing discussion categories and a template to collect input (knowledge sharing and documenting). This method has the purpose of providing a structure to identify, monitor and learn from outcomes of a project. It can be used for real-time monitoring and evidence gathering from complex development processes that involve multiple stakeholders.

	One case study conducted by the World Bank discusses a city of Bosnia and Herzegovina that used Outcome harvesting to evaluate and improve their solid waste management reforms. The method helped local teams identify how to advance in their own reforms, uniquely adapting solutions to address institutional changes that were blocking improvements, and improving communication and relations among stakeholders along the way.
Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☐short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☐medium ☒high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☒low ☒medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] <mark>OPTIONS SUBJECT TO CHANGE</mark> ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☒systems thinking *eg. Approaches specifically designed to effect systemic change* ☒collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☒evaluation, oversight and monitoring *eg. Holding authorities to account* ☐Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☐Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration

	☐Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness ☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	Establishing this process requires some time, it is thus important to chose a data collection and analysis frequency that is compatible with participants' workload. The person in charge (harvester) must ensure the rigor of the data collection/analysis methods used. A highly participatory process is a necessity for a successful Outcome Harvesting process and result.
Engagement Journey (FF)	[at what stage/s in a city's engagement journey is this method best suited to?] LEAVE BLANK ☐Self assess ☐Declare commitment ☐Define problem/s ☐Craft question ☐Select portfolio ☐Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] LEAVE BLANK ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☐Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☐empowering inclusion ☐collective will formation ☐collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] LEAVE BLANK IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [Usually it's for internal use]

Participation

Participant Numbers (FF)	[how many people can usually participate] ☒small groups – up to 10/15 ☐up to 50

	☐50-100 ☐100-500 ☐500-1000 ☐no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations ☐Academia ☐Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	Outcome harvesting is a participatory tool that encourages dialogue among multiple stakeholders: the *harvester* (external or internal person designated to lead the process), the *users* (dependent on the findings to make decisions or take actions, engaged throughout the process) and *informants* (knowledgeable about the project outcomes and willing to share what they know). The harvester needs to engage change agents who are knowledgeable about what the intervention has achieved and how; ideally they should be stakeholders closest to the action.
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☒stratified selection ☐election ☒invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☒Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☒Ask and answer questions ☐Other [text box]
Format (FF)	[in which formats can this method take place?] ☒online ☒in person ☒asynchronously ☒synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☐Assess social innovation readiness ☐Scale

	☒Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☒knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☒impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation ☒policy evaluation ☐financing plan ☐accountability plan ☐other [text box]

Resources

Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☐Materials ☒Software or other tech ☐Funding ☐Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] ☒Can be run internally ☐Requires input from independent or external organisers ☐Both ☐Not Applicable

How does it work: step by step

Time commitment (text)	The process is done as often as needed to understand changes and achievements. The frequency of data collection and analysis is determined in advance. The *harvest* timing depends on the importance of the findings in ensuring the project is progressing the right way. Depending on the certainty of the project results, the harvest should be scheduled as early as possible or when results are expected. For a lower workload, the harvest can happen monthly, quarterly, biannually or annually. Findings may be substantiated, analysed or interpreted less frequently. Indeed, it can require a big time commitment from informants depending on the time period covered and the number of outcomes involved. Depending on the scope, it can take several weeks to go through the 6 steps (e.g. interviews can be only 30 min but reaching out to informants, drafting the outcome statements etc. will likely take a few weeks). The USAID on the other hand considered six months to be a reasonable timeframe for a full harvest for their CIRCLE project. It is important for the harvester to support and give change agents sufficient time to respond and draft

	outcome descriptions to improve quality, especially since the process of harvesting outcomes and ensuing conversations with stakeholders can inspire more actions than the final report.
Typical duration (FF)	☒one-off ☒recurring ☐continuous ☐other [text box]
Step by Step (text)	There are 6 key steps in the outcome harvesting process Step 1: design the outcome harvest - first identify who are the intended users of the harvest, what are their intended uses for the findings, then the harvester and users determine what needs to be known, what useful questions are to be answered, what information is to be collected and from whom. Step 2: gather data and draft outcome descriptions – identify changes* from existing documents or collect data through interviews, surveys and other sources**; then write preliminary outcome descriptions (with questions for review and clarification) *the informant describes what changed, for whom, when and where, why the change is significant, and how the project contributed to it. **potential outcomes can be changes in behaviors, relationships, actions, policies, practices Step 3: engage with informants in formulating outcome descriptions - collect information*, directly engage with change agents to review outcome descriptions, and identify and formulate additional ones. Step 4: substantiate – review of the outcomes, selection of those to be verified by knowledgeable independent third-parties to increase accuracy and credibility of findings. Step 5: analysis and interpretation of validated outcomes – harvesters classify outcomes (might require a database), analyse and interpret the information, and provide evidence-based answers to the harvesting questions (defined in step 1). Note - CIVICUS proposes a template for the process to guide outcome reporting (including outcome statement, significance, contribution and source): https://www.civicus.org/monitoring-toolkits/toolkit/outcome-harvesting/ Step 6: support use of findings – harvesters proposes issues for discussion to users and facilitate dialogue. These steps may overlap and can be iterative; feedback can spark decisions to redesign a next step or return to/modify an earlier one. More concretely, referring to the above-mentioned waste management case in a city of Bosnia and Herzegovina; a customized use of the tools allowed local teams to map the outcomes: identify and formulate them, then explaining their significance and how the project contributed to these changes (small or big, directly or indirectly, intentionally or not) which allowed them to develop solutions and advance the reform. The detailed map of outcome and the process of change they pursued can be found respectively p.24 and p.26 of this report: https://openknowledge.worldbank.org/bitstream/handle/10986/20015/901720WP0Box380n0Outcome0Harvesting.pdf?sequence=1&isAllowed=y
Evaluation (text and links)	The method is an evaluation. It actually was selected by the UNDP as a promising innovation in monitoring and evaluation practice

	among 10 others. Outcome Harvesting has been used by NGOs, community-based organisations, government agencies, etc. in 143 countries, in majority for systemic change, and evaluated by several large organizations. In particular, the World Bank Institute undertook formative pilot evaluations to explore how this method could help teams to manage knowledge and learn from complex and difficult to monitor project implementations.
Connecting Methods (links and text)	Because subtle changes can be difficult to apprehend, it is important to enrich the analysis with an interview/focus group phase. Insights from this method can eventually be combined with other sources of information. Outcome harvesting can also be useful in conjunction with other evaluating, learning and scaling methods, in particular with outcomes mapping which is a useful base for conducting outcome harvesting.

How does it work: case study (of this method)

Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW

Make it Your Own

Flexibility and Adaptability (text)	This tool is flexible and can be adapted to different projects and interventions. The 6-steps are more guiding principles than a fixed structure to follow - although rigorous application of each principle is necessary for a successful outcome harvest. The approach should be customized to specific needs and primary intended users/uses.
Existing Guidelines and Best Practice (links)	- https://outcomeharvesting.net/wp-content/uploads/2016/07/Outcome-Harvesting-Brief-revised-Nov-2013.pdf - https://outcomeharvesting.net/outcome-harvesting-one-pager/ - https://outcomeharvesting.net/outcome-harvesting-smart-me-outcomes/ - https://outcomeharvesting.net/applications/ - https://outcomeharvesting.net/wp-content/uploads/2016/11/Tool-for-calculating-clock-and-calendar-time-for-an-Outcome-Harvest.pdf - https://www.usaid.gov/sites/default/files/documents/HSS_Practice_Spotlight_MERL_Outcome_Harvesting_508_compliant_DRAFT.pdf - https://www.evalacademy.com/articles/how-we-used-an-outcome-harvest https://usaidlearninglab.org/sites/default/files/resource/files/Outome%20Harvesting%20Brief%20FINAL%202012-05-2-1.pdf - https://www.civicus.org/monitoring-toolkits/wp-content/uploads/2019/07/OutcomeHarvesting-HowToGuide-6Steps_May2019.pdf - https://www.usaid.gov/sites/default/files/documents/HSS_Practice_Spotlight_MERL_Outcome_Harvesting_508_compliant_DRAFT.pdf - https://evaluatingadvocacy.org/doc/Outcome-harvesting.pdf
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access different levels of services; clicking this should link to relevant places] LEAVE BLANK ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

References and Reading

References and Further Resources (text and links)	Wilson-Grau, R. and Britt, H. (2013) Outcome Harvesting. http://outcomeharvesting.net Outcome harvesting – applications https://outcomeharvesting.net/applications/ Wilson-Grau, R. (2015) Outcome Harvesting. BetterEvaluation. http://betterevaluation.org/plan/approach/outcome_harvesting Majot, J., Richert, W., & Wilson-Grau, R. (2010). Evaluation of Oxfam Novib's Global Programme 2005-2008 for Aim 1 and 4 GloPro's Strategic Positioning and Counterparts' Outcomes. https://www.outcomemapping.ca/download/simonhearn_en_Evaluation%20of%20Oxfam%20Novib.pdf "World Bank. (2014). Cases in Outcome Harvesting : Ten Pilot Experiences Identify New Learning from Multi-Stakeholder Projects to Improve Results. Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/20015 License: CC BY 3.0 IGO."

Impact metrics
Overview

Name of Method	Impact Metrics for Social Innovation
Type/Level of Method (FF)	☐overall approach ☒method ☐tool
Brief description	This paper describes conventional measurement tools and their limitations for evaluating social impact, and proposes that developmental evaluation is more suited to evaluating social innovation.
Keywords (FF)	<mark>LEAVE BLANK</mark>

Barriers and Issues

Relevance to Climate Neutrality (FF)	[was the method developed for or is it known to be suited to dealing with climate neutrality and how] ☒Developed specifically to deal with climate challenges ☐Has been implemented to deal with climate challenges ☐Has potential to deal with climate challenges
Challenges (FF and text)*	[Which challenges can this method help to address, from here, further development needed] ☐Financial limitations *eg. Insufficient resources* ☐Specific climate-related challenges *eg. City industry or location* ☐Resistance to climate action from vested interests *eg. Previous initiatives met with resistance from powerful actors* ☐Resistance to climate action from public *eg. Previous initiatives met with public backlash* ☐Short term thinking *eg. Difficulty in policy planning beyond election cycle* ☐Existing governance structures *eg. Existing setup makes collaboration across departments difficult, siloed governance* ☐Historical legacies and institutional distrust *eg. Low public trust in city govt* ☐Inadequate public participation *eg. Low capacity to conduct meaningful citizen engagement*

	☐Inadequate representation of affected communities eg. *Those affected by action are not well represented by/connected to existing elected officials* ☐Poor existing services *eg. The current offer does not align with policy directives (limiting its access to government support) or with user demands (in terms of output/delivery/etc.)* ☐Marginalized from innovation ecosystem *eg. Detached from innovation hubs (rural location etc.); limited understanding of system actors and resources; etc.* ☐Scaling challenges *eg. Finding people with a suitable set of skills and competences and dealing with specific local challenges/contexts* Other Several approaches to measure social impact exist and are in use across public, private and civil society sectors. However, each of these approaches has its shortcomings. Some of the practices are associated with the lack of accurate, usable, or agreed-upon data, such as methods involving revealed preferences, stated preferences, and cost-benefit analysis. Others are considered not rigorous enough (e.g. public value assessment), too complex to be understood by the wider audience (e.g. value-added assessment), or not yet proven (e.g. life satisfaction assessment) Pioneered by Patton (2011), the concept of 'developmental evaluation' is based on insights from complex dynamic systems, uncertainty, nonlinearity and emergence, and therefore unlike other evaluation approaches, can feasibly be applied to evaluating social innovation as a process. Developmental evaluation suggests constant movement back and forth between problem and solution. This is because the destination and pathways for social innovations are emergent and cannot be defined in advance
Thematic Areas (FF)*	[is this method well suited to use in a particular sector OR has this method been used in any of the following sectors or to address the following themes] ☐Urban Governance, Policy Development, CCC ☐Innovation Management and Digitization ☐Stakeholder/ Community engagement and capacity building ☐Financing, Funding and Partnerships ☐Peer to peer learning, and replication, upscaling ☐Built environment *eg. Building renovations* ☐Energy systems *eg. Energy generation* ☐Mobility and transport *eg. Public transport, bikes* ☐Green industry *eg. Environmentally friendly manufacturing or agriculture* ☐Circular economy *eg. Initiatives to eliminate waste or reuse materials* ☐Nature-based solutions *eg. Green roofs, ecological restoration* ☐Digital solutions *eg. Engaging citizens through data platforms* ☐Not applicable ☒Other This method has been proposed.
Problem, Purpose and Needs (text)	[does this method aim to address a specific type of problem or fulfil a certain need, and what kind of purpose does the method have] It will improve the existing methods

Impact Goals (FF)	[does this method typically aim towards long or short term goals] ☒short term ☒medium term ☒long term ☐Not applicable/other
Issue Complexity (FF)	[what level of complexity can this method handle?] ☐low ☒medium ☐high
Issue Polarisation (FF)	[what level of polarisation is this method capable of dealing with?] ☐low ☐medium ☐high

Governance and Empowerment

Governance Models and Approaches (FF)	[what overall approach to governance or methodology does this method fit into?] OPTIONS SUBJECT TO CHANGE ☐co-creation *eg. Development of new or added value through collaboration with affected stakeholders* ☐co-design *eg. Collaborative and participatory design and development processes with affected stakeholders* ☐co-production *eg. People using the service are involved in design and implementation* ☐systems thinking *eg. Approaches specifically designed to effect systemic change* ☐collaborative governance *eg. Affected stakeholders and communities working together on a problem* ☐deliberative approaches *eg. Structured dialogic processes* ☐partnership approaches *eg. Long term partnerships that challenge traditional boundaries* ☐evaluation, oversight and monitoring *eg. Holding authorities to account* ☒Social innovation approaches *eg. Approaches that aim to fulfil a social need*
Enabling Conditions (FF)	[which enabling conditions does this method or tool support]: ☐Organizational processes ☒Organizational culture ☐Organizational structure ☐Network Mapping ☐Network Collaboration ☒Context fit (ie. Ability to be embedded in the local/regional/national/etc. level) ☐Access to markets ☐Access to finance ☐Access to training, education and research ☒Knowledge development and transfer ☐Political and administrative awareness

	☐Leadership ☐Organizational vision ☐Other [text box]
Essential Considerations for Commissioning Authorities (text)	
Engagement Journey (FF)	[at what stage/s in a city's <u>engagement journey</u> is this method best suited to?] <mark>LEAVE BLANK</mark> ☐Self assess ☐Declare commitment ☒Define problem/s ☐Craft question ☐Select portfolio ☒Action, learning and embedding
Type of NZC Engagement (FF)	[which type of NZC engagement is this method most suitable for?] <mark>LEAVE BLANK</mark> ☐Mission City ☐Climate City Contracts ☐Pilot City ☐Twin City ☒Other
Democratic Purpose (FF)	[what democratic functions does this method help to serve?] ☒empowering inclusion ☒collective will formation ☒collective decision making ☒implementation, monitoring and accountability
Level of Citizen Empowerment (FF)	[Where does this method typically sit on a spectrum of public participation?] <mark>LEAVE BLANK</mark> IAP2 spectrum Arnold's Ladder Other ideas?
Communication Channels (FF)	[how are the method and its outcomes usually communicated to broader publics] ☐Public report ☐Mass media ☐Dedicated website ☐Social media ☐Direct engagement with wider public ☒Other [text box]
Participation	
Participant Numbers (FF)	[how many people can usually participate] ☐small groups – up to 10/15 ☐up to 50 ☐50-100 ☐100-500 ☐500-1000 ☒no limit
Actors and Stakeholders (FF)	[what type of actors and stakeholders typically participate throughout the whole process] ☒Policy/decisionmakers ☒Citizens or general public ☒Industry and innovation communities ☒NGOs or civil society organisations

	☒Academia ☒Science or technology research communities ☒Organizational staff ☒Social innovators ☐Other [text box]
Actors and Stakeholder Relationships (text)	[how are different stakeholders involved or work together?]
Participant Recruitment (FF)	[how are participants typically recruited to take part?] ☐self-selection ☐random selection ☐stratified selection ☐election ☐invitation or appointment ☐other [text box]
Interaction between participants (FF)	[how do people typically interact with each other during the process?] ☐Express preferences only ☐Deliberate or discuss ☐Observe as spectators ☐No interaction ☐Negotiation and bargaining ☐Ask and answer questions ☒Other [text box] Continuous discussion and monitoring
Format (FF)	[in which formats can this method take place?] ☐online ☐in person ☐asynchronously ☐synchronously

Development Stage

Social Innovation Development Stage	[which phase does the tool/method fit best into] ☐Analyse Context ☐Reframe Problems ☐Envision Alternatives ☐Prototype ☐Experiment ☒Assess social innovation readiness ☐Scale ☒Evaluate
Scope	[Which objective/activity does the tool/method support] ☐ecosystem analysis ☐environmental scanning ☐negotiation of commitments ☐stakeholder engagement ☐knowledge transfer ☐feasibility plan ☐brainstorming ☐prototyping ☒impact assessment ☐agenda setting ☐problem framing ☐policy legitimization / amplifying ☐policy formulation ☐policy implementation

	□policy evaluation □financing plan □accountability plan □other [text box]
Resources	
Resources and Investments (FF and text)	[what kind of resources and investments are needed to use this method] ☒Human Labour ☒Materials □Software or other tech ☒Funding □Other (please specify eg. Independent recruitment company, venue etc)
In-house (FF)	[can this method be run in-house, or does it require external resources and actors] □Can be run internally ☒Requires input from independent or external organisers □Both □Not Applicable
How does it work: step by step	
Time commitment (text)	[how much time does the activity take to be done well] or [what are the other time commitments and constraints to be aware of] *eg. Some methods require a minimum amount of planning and implementation otherwise they risk being poor quality or little impact. Others can be deployed quickly.* *The proposed method of Developmental Evaluation is sensitive to the context which means focusing on users, priorities, political factors etc. Time to implement and evaluate varies*
Typical duration (FF)	□one-off □recurring ☒continuous □other [text box]
Step by Step (text)	[what are the main phases of this method? Describe briefly] Although it helps to focus on process, developmental evaluation may use a wide range of methods, designs, and data. Specifically, with regard to metrics, developmental evaluation emphasizes the importance of context sensitivity and specificity. Given the diversity of innovation contexts, no standardized or generic metrics are either possible or desirable for developmental evaluation. Rather, the development of metrics must be built in to the social innovation process as a central aspect of developmental evaluation, and those metrics may change as emergent processes and outcomes give rise to emergent metrics.
Evaluation (text and links)	[ways/suggestions of how this method can be evaluated]
Connecting Methods (links and text)	[what other methods can this method be used with and how?]
How does it work: case study (of this method)	
Find out more about how this method has been applied in practice (link)	[link to a citizen engagement case study or social innovation case study that used this method] LEAVE BLANK FOR NOW
Make it Your Own	
Flexibility and Adaptability (text)	[what features of this method are adaptable, and which are core features that shouldn't be compromised]

Existing Guidelines and Best Practice (links)	[are there any quality standards, best practice guidelines for using this method?]
Available Services from NZC (links)	[for this option, cities will need to select what category they fall into in order to access <u>different levels of services</u>; clicking this should link to relevant places] **LEAVE BLANK** ☐Mission cities [links to Tailored advisory service, for detailed support] ☐Pilot cities [links to expertise to design and support pilots] ☐Twin cities [links to information, knowledge-smart repository] Other

5.2 Social Innovation Toolkit

NET ZERO CITIES

SOCIAL INNOVATION TOOLKIT

A guideline and a set of tools to support
and boost social innovation initiatives

NET ZERO CITIES

SOCIAL INNOVATION TOOLKIT

Table of contents

All tools and templates can be used by directly printing the PDF template or inserting them into a Mirò board for a virtual workshop.
The toolkit is directed to individuals, municipalities and cities developing new solutions and supporting social innovation along a process of transformation towards climate neutrality.

SOCIAL INNOVATION TOOLKIT

What is this toolkit for?

This toolkit was designed by NetZeroCities to help cities integrate social innovation in their path towards Climate Neutrality in the following ways:

1. Provide tools that allow for a human-centered approach to transition projects:
By focusing on social needs and putting people at the center of solutions, cities can improve the efficacy of climate mitigation strategies.

2. Offer a process to engage diverse actors in the mission:
Through an iterative, design-based learning and development process, equipped with participatory and service design tools, cities can explore local ecosystems, get to the core of the challenge, envision new alternatives, prototype for validity and impact, evaluate for effectiveness and scale meaningful solutions for broader transformation.

3. Cue cities to the value of activating enabling ecosystems for transformative change:
Cities will be prompted to reflect and act in an iterative cycle of divergent and convergent phases, affording them opportunities to engage with different actors and find value creating opportunities for systemic change that align bottom-up initiatives with larger objectives or vice versa.

Who is it for?

We created this toolkit for cities committed to accomplishing the daunting task of achieving climate neutrality by 2030, or latest by 2050, for all.

At its core, cities are a collection of people: individuals, groups, collectives and organizations. Each acting in their own, or collective, life-world. In simple terms, a life-world is how we experience the world in our day-to-day. It is subjective and includes all the social and cultural experiences, activities, perceptions and contacts that make up everyday life. This experience can run in contrast with the objective world as analyzed by the sciences.

Getting everyone on board for the mission and making sure that everyone is included in the transition to net zero emissions means enabling everyone's life-world to be in line with the dire need of our planet to act. This is where Social Innovation comes in. The Social Innovation toolkit is made to help cities design solutions that are inclusive of: (1) everyone's needs, both current and future; (2) the lived experience of each system actor; and (3) voices from the margins as an essential means towards designing for all. This is also accomplished by designing for the constraints, by: (1) recognizing the difficulties of changing ingrained social practices; (2) reaching the hard-to-reach; and (3) accounting for system barriers.

SOCIAL INNOVATION TOOLKIT

How can I use it?

The toolkit is a paper-based, beta version of an online, interactive service that will be made available on the NetZeroCities platform.

The toolkit is designed to be used by a city's transition team or any team looking to design social innovation programs, policies or projects in support of net zero emission goals. We have provided a process for cities to follow that guides them through the different phases of development, from analyzing the context, reframing the challenge, envisioning alternatives, prototyping and experimenting solutions, and evaluating and scaling them.

While the process is visually linear, it is a cyclical and iterative process. Cities and project leaders can enter in at any point of the cycle. To facilitate this, we have included broad questions to serve as entry points, as well as, other questions that could be addressed and supported by the selection of tools in each phase.

The toolkit is meant to provide a starting point upon which to carefully craft context-based, social innovation experimentation. We suggest using it to start reflection and to find a team lead with the knowledge base to dive deeper.

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

SOCIAL INNOVATION TOOLKIT

Analyse the Context

What elements inform the challenge space?

In order to design truly meaningful and impactful portfolios of solutions that engage all system actors in the mission, it is fundamental to understand the context, both in 'hard' terms – the infrastructure of people, organizations, companies, spaces, norms and regulations, etc. – and 'soft' terms – i.e. the practices, routines and beliefs that inform everyday life and the choices we make. This phase explores these contextual factors, their inter-relationship and how they influence the challenge space.

Other questions that can be answered in this phase:

- What is my city already doing in Social Innovation for Climate Neutrality (e.g. policies, funding programs, training centers, etc.)?
- What are the specific needs of citizens and other actors, particularly the marginalized, in the transition to climate neutrality?
- What resources are available?
- Which actors could be engaged in my climate goals?

Analyze Context • Reframe Problems • Envision Alternatives • Prototype & Experiment • Evaluate & Scale

Analyse the Context

Tools for context analysis

Other tools that can be applied in this phase

Related methods on NetZeroCities' Knowledge Repository

- Observation of context

To the NZC Knowledge Repository

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

CONTEXT MAP
Preparation & Instructions

Description

The Context Map is a framework used to help understand the context. The template can map out the trends and different perspectives. This brings out drivers outside the organisation and the forces that could shape the project now and in the future.

The context map is primarily for an internal understanding amongst the project teams and might not necessarily involve the stakeholders.

After the canvas is filled, the entire team then deliberates on the data gathered and builds on it, also identifying blind spots. Key drivers that need to be focussed upon can be chosen in the end, things that, positively or negatively, have the biggest potential to impact the project in the near future. This map can be left available so that team members may keep adding onto it for further synthesis.

How to conduct

Duration:
45-60 min

Material:
Pens, post-its

Participants per team:
2-5

Instructions:
1. The best way to use this Context Canvas is to break the team up into smaller sub-teams, and to assign each team a couple of sections of the canvas.
2. Each sub-team has a deep meaningful discussion about what is going on in the world regarding the assigned section(s).
3. Once all sub-teams are finished discussing and capturing drivers for their sections, they may add it to the common canvas

CONTEXT MAP
Template

Demographic Trends
What are the main characteristics of your municipality/region in terms of demographic, education and employment?

Economy & Environment
What are the current economic trends in your region and country that are having an impact on the municaplity?

Rules & Policies
What are the current changes ongoing in the regional & national policy landscape and how are they going to influence your municipality?

Technology Trends
What are the main technological changes and developments ongoing that will impact you in the future?

Citizen Needs
What are emerging citizen needs?
How do you think these will develop in the near future?

Inspiring Examples
What are other municipalities in your and other countries doing better than you at the moment?

Uncertainties
What are the uncertainties that you see in your context/environment?
Factors that might be really important, but you don't know how or when?

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

ETHNOGRAPHIC FIELDNOTES
Preparation & Instructions

Description

Ethnographic fieldnotes are a tool to organize different observations, types of analysis, emerging questions and reflections, as well as ideas for future action.
Ethnographic fieldnotes are a useful tool to make sense of complex interactions and processes taking place in response to challenges such as climate change. They are structured, written observations done in physical and social proximity to a community or to the daily lives of a particular city. They can reflect not only the context in which a problem is being addressed and observed but also the links to citizens views. They can be a critical means to understand one's positionality, as well as the routines, challenges and conditions in which communities face ecological and governance challenges.

How to conduct

Duration: 60-120 min, repeat various times if necessary

Material: Pen, eventually camera

Participants per team: Individually

Instructions:
1. Immerse yourself in a specific social context in order to understand it.
2. Fill the template with your observations based on your own reflections and positionality, emerging questions, and ideas for the future. The template is just meant to guide the personal impressions and reflections and can be used flexibly according to the specific situation.
3. The collected data can then be analysed further during group discussions and further activities like problem definitions to extract and prioritize issues to be tackled.

ETHNOGRAPHIC FIELDNOTES
Template

Observations

Problems

Ideas

Open Questions

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

ETHNOGRAPHIC INTERVIEW
Preparation & Instructions

Description

Ethnographic interviews are a method used to understand deeply the actions and motivations of people behind a theme or topic of research. This process relies on a close connection between the researcher and the community they are working in. In creating connections the researcher is able to get a more rich understanding of how the community functions and what their motivations towards climate actions are for example, which is reflected in interviews with stakeholders.

While it is not likely to help on technical challenges, it will be crucial for community issues and 'why' questions.

How to conduct

Duration: 30 - 90min / interview, the overall process from creating the interview guide to scheduling and conducting is usually 2-4 weeks

Resources:
- There should be a basic knowledge on the topic in order

Material: Pens

Participants per team: 1-3 for creation of the interview guide, 2 for the interview sessions (1 interviewer + 1 note-taker)

Instructions:
1. Create an interview guide with key questions (things that have to be covered in the interview) and some probes that are optional, but could be interesting to go in depth depending on where the conversation goes
2. Select stakeholders to participate in interviews, depending on what the aim of the project is, e.g. understanding a particular community's needs to reach climate neutrality. Participate in and get to know the community
3. Conduct interviews as open-ended and exploratory conversations with members of the community to understand the issues they perceive related to the topic. Through open-ended questioning, new topics that were not considered by the stakeholder may be opened. Always have a second person joining the interview as a note-taker documenting the key points mentioned by the interviewee

ETHNOGRAPHIC INTERVIEW
Template

Interview Guide

Q1 _____

Probes _____

_____

Q2 _____

Probes _____

_____

Q3 _____

Probes _____

_____

Q4 _____

Probes _____

_____

Q5 _____

Probes _____

_____

...

Note Taking Template

Interviewee _____
Interviewer _____
Note-Taker _____

PEOPLE & CONNECTIONS MAP
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

The People & Connections Map is a visualization tool used to identify stakeholders you are trying to reach and how. It is a tool for mapping actors that surround you that could potentially become your partner, user or supporter. These might include people, communities, funders, networks etc. All of them can represent a resource to your innovation and link to your group goal or your innovation.

The tool helps to focus attention on all actors in the product-service (eco)system. In doing so, it sheds light on actors and their possible role in the solution's design and implementation. It also provides insight on those affected by the challenge, ensuring that marginalized voices are included. By mapping actors, services can be (re-)designed based on value creating relationships and improved based on user (actor) research. The tool is a first step towards a stakeholder map which defines these roles in greater strategic detail. As a first step, it also starts shedding light on the replicability of other SI ideas in the local context (from a reverse engineering perspective).

How to conduct

Duration: 45 - 90 min

Material: Pens & Post-its

Participants per team: 3 - 8

Instructions:
1. Start from the center point of the tool by listing your target audience (beneficiaries, users, customers) who can benefit from your idea.
2. You can use the four segments to divide the stakeholders by specific areas or themes (e.g. healthcare, finance, etc)
3. Then work towards the outer layers and list stakeholders that surround you or are somehow related to the work you do. The closer they are positioned to the center point the stronger their influence or value is.
4. Once you fill in the worksheet, revise the input, one by one, and reconsider possible repositions together with your team.
5. By reviewing the stakeholders you will encourage team discussion and gain better understanding of relationships and connections you are trying to build. When finished, you will get a clear, visual stakeholder graphic to help you highlight and communicate the main focus of your work.

PEOPLE & CONNECTIONS MAP
Template

INTERNATIONAL

NATIONAL

REGIONAL

MUNICIPAL

TARGET AUDIENCE
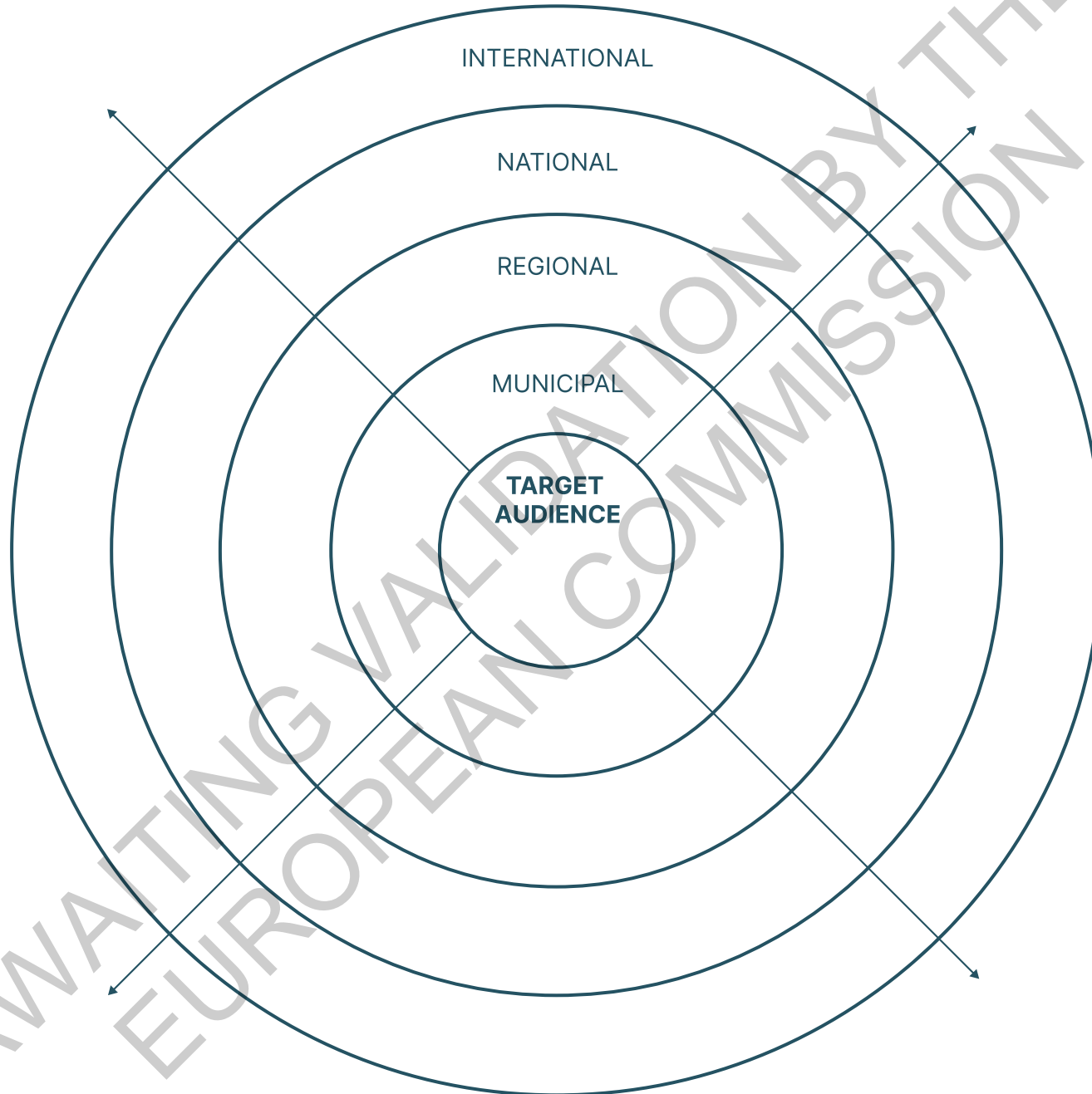
PESTEL-CV ANALYSIS
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

A PESTEL analysis is a strategic tool coming from marketing used to identify external forces in the environment that faces an organization. By completing the tool, the team analyses the Political, Economic, Social, Technological, Environmental and Legal forces that make up the external environment. The exercise provides a situational analysis that allows organizations to anticipate threats and opportunities, gain contextual awareness and process external trends. In order to be an active and strategic operative tool, internal assessment needs to be done to translate the insights into actionable strategies for the organization's future opportunities and operation. The insights coming from this analysis are useful towards a SWOT analysis as well as in activities regarding future scenarios and strategic direction.

The tool aims to help teams get aligned on the context of innovation in order to better design solutions that can be effective, feasible and long-term. It helps to visualize and bring to the surface also the tacit knowledge that each member has of the specific challenge area.

The original PESTEL Analisys has been adapted to Social Innovation and climate neutrality goals by leveraging the environmental component and considering cultural values an additional factor.

How to conduct

Duration: 45 - 100 min

Resources:
- Possible to use other previously conducted context analysis as a base e.g. stakeholder maps, system maps, interviews or others

Material: Pens, post-its

Participants per team: up to 15

Instructions:
1. The first step is to gather together a working group of key actors across the organization to brainstorm ideas and conduct the research.
2. The team should work together to map out the trends in each area of the matrix (political, economic, social, technological, environment/values, legal), starting a reflection and discussion on how these trends frame their current activity and open up possibilities of different future horizons of development.
3. Based on the initial mapping, ethnographic, field and/or action research strategies (e.g. interviews, focus groups, immersive observation, etc.) should be used to gain further insight of each focus area from the perspective of key stakeholders.
4. Next, the group should collect evidence for each insight to then evaluate and score based on 'likelihood' and 'impact': how likely it is to happen and what kind of impact it could have on the organization (similar to impact and feasibility analysis tool, substituting feasibility for likelihood). In the final stage, the group should refine insights and make strategic recommendations on a path forward.

PESTEL-CV ANALYSIS
Template

Regulations and restrictions, consumer attitudes

Economic growth, employment rates, consumption

Values and norms rooted in the local culture

Spread of information technology, international influences, uptake

Government, Legislation and potential changes, global influences

Tax policies, employment laws, industry regulations, health regulations

Income distribution, demographic influences, lifestyle factors

ENVIRONMENTAL

CULTURAL VALUES

ECONOMICAL

TECHNOLOGICAL

POLITICAL

LEGAL

SOCIAL

SOCIAL INNOVATION TOOLKIT

NET ZERO CITIES
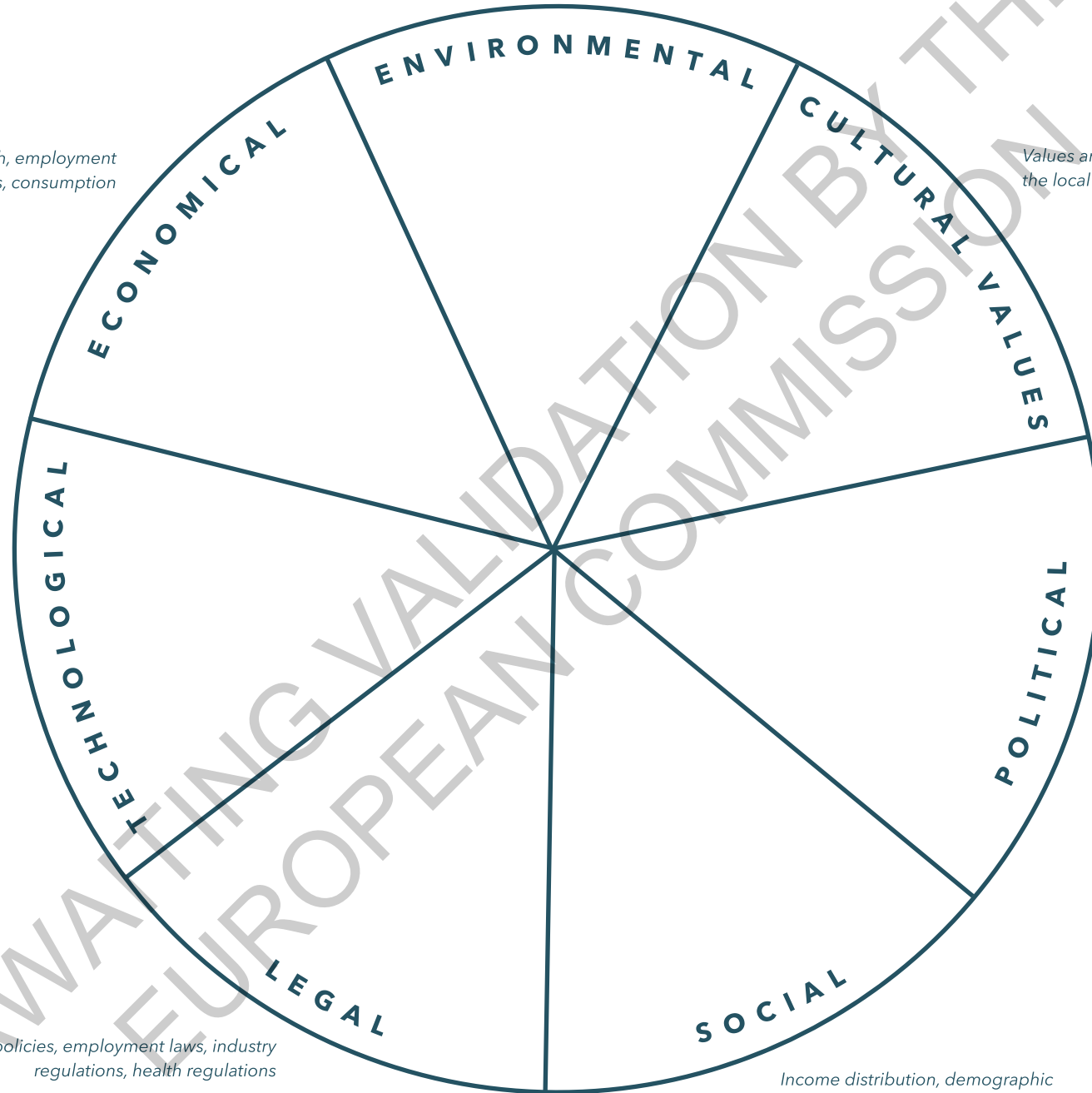
SYSTEM MAP
Preparation & Instructions

Description

System maps (also referred to as stakeholder maps) are schematic representations of the main actors of a given (service) system, from the point of view of the main service-providing organization. The actors are made up of those surrounding and those internal to the organization, including users, staff, departments, and external providers. Typically, the maps make use of pictograms or other visual representations, and lines and arrows connect the different actors representing the different relationships and flows among the various actors.

Stakeholder map and system maps are useful for identifying the boundaries of service systems, core service performances, and the different kinds of flows, both existing and aspirational.

Systems maps come in many shapes and forms; what you will be using it for, and the questions you want to answer with it will determine which type of systems map to use. It's important to strike a balance between mapping the detailed complexity and making it simple enough to be useful, at the right time to use it. Remember, it's a living map (not a static one) and will change over time.

The activity is best done with stakeholders who have a close proximity or lived experience relative to part of the system. Each stakeholder can inform the system mapping process to enable the system map to more accurately reflect the dynamics, interactions, and relations with other actors.

How to conduct

Duration: Sessions of 45 - 90 min,
The time commitment of System Mapping depends on the degree to which it is planned to be participatory and/or iterative. If it is planned to be both, it can take approximately a 1-2 months to plan, invite, coordinate, execute, and iteratively repeat the process.

Resources:
- Statement of a challenge or a restricted context or environment of intervention

Material: Pens, post-its

Participants per team: 3-10

Instructions:
1. Write down the challenge statement for your complex problem in the centre of a worksheet/flipchart. Try to be concise, but not too narrow in your description (defining the right problem scope is important in not going too broad or too narrow).
2. You can refer to the 'Challenge Statements' section to assist you with this process.
3. Identify key issues Brainstorm and describe the key issues that affect/contribute to that challenge. Make it concise.
4. Identify potential drivers Discuss what the drivers are behind each key issue. Write each driver down on the map.
5. Team discussion Discuss the relationships between key issues and drivers with your team, by drawing lines and linkages between them. Drivers can be linked to multiple issues. Identify any possible sub-issues that contribute to your problem but are not on the map yet. Write them down on the map and connect them with key issues and/or drivers. Try to be clear on how certain you are about the relationships and linkages, how strong (and resistant to change) they are.

SYSTEM MAP
Template

Information flow →

Monetary flow →

Material flow →

SECONDARY
STAKEHOLDERS

**MAIN
STAKEHOLDERS**
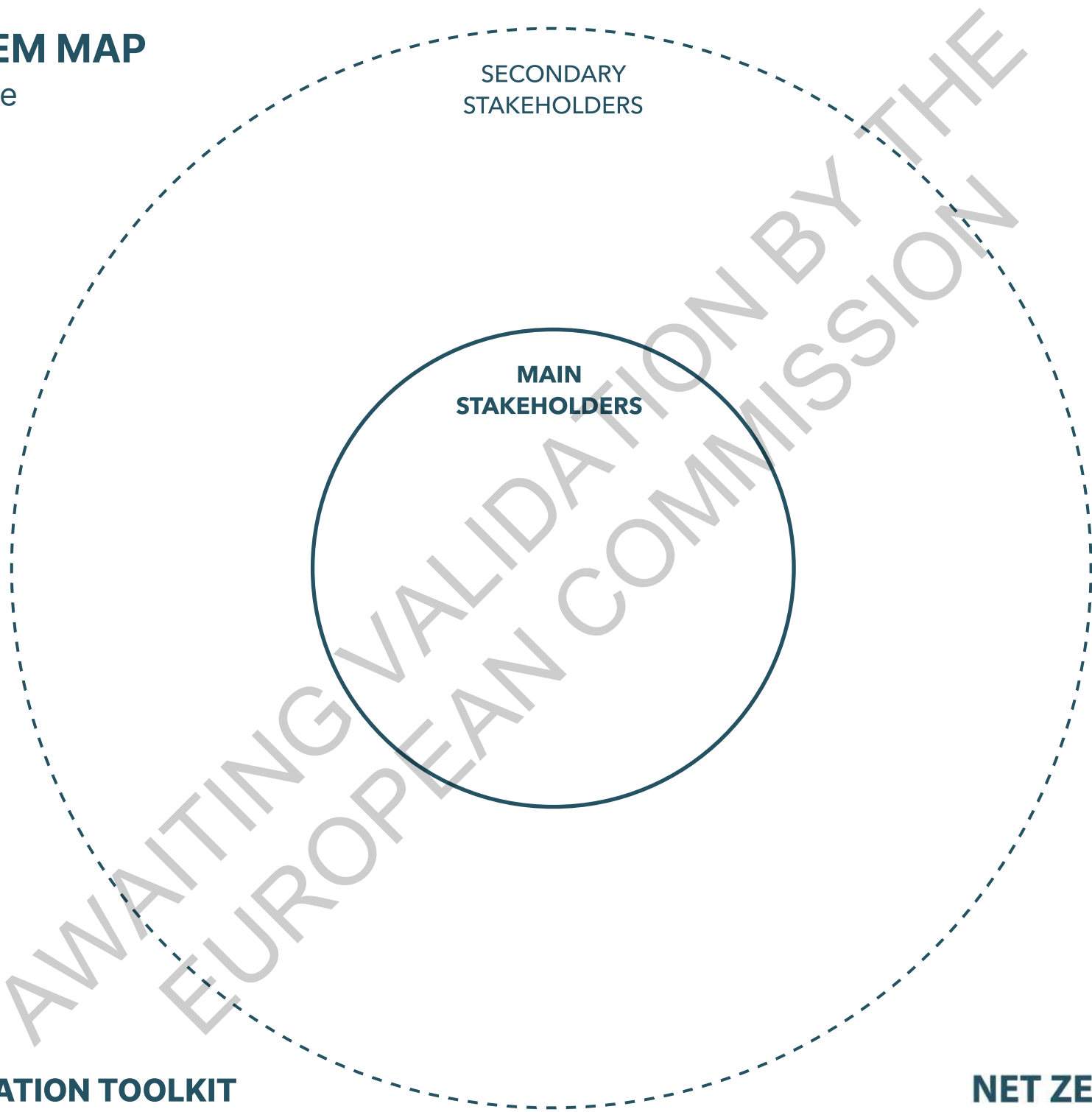
SOCIAL INNOVATION TOOLKIT

Reframe Problems

Does the challenge respond to real needs?

Complex problems, such as mission challenges, are often experienced and understood in different ways by actors. Translating larger mandates into local contexts and needs requires pooling together different actors to reframe the challenge. The process not only deepens understanding of the challenge, but also provides insight on the current system and how it can be improved, generating several insights for innovation on different time horizons. Sometimes it is helpful to look at the present from the perspective of the future to ensure that what we are doing now will fit into the future we want. These future scenarios and visions also work to include the voice of future generations into the solution-building process.

Other questions that can be answered in this phase:

- How does my city plan to achieve net zero emissions in a systemic, inclusive and anticipatory manner?
- What is the societal challenge being addressed?
- How can my city respond to the specific needs while achieving climate goals?
- How can SI contribute to co-benefits of net zero emissions
- Are my climate goals future-fit?
- How can existing social innovations be useful towards the city's climate goals?

Analyze Context — Reframe Problems — Envision Alternatives — Prototype & Experiment — Evaluate & Scale

Reframe Problems

Tools for defining and reformulating problems

Other tools that can be applied in this phase

Related methods on NetZeroCities' Knowledge Repository

- Scenario-building with backcasting

- 5 W Technique

- Defining the Challenge with Challenge Map

- Scenario Building with Futures Table

To the NZC Knowledge Repository

Description

The Frameboard tool is a canvas/template developed by Guido Stompff in 2018 with the aim of enabling both the visualisation and communication resulting from the exploration of a frame. A frame is intended in this case as a certain temporary perspective on a problem or challenge being explored.

Since the Frameboard focuses on a frame – formulated as a temporary perspective on a determined issue – it is particularly useful to quickly explore the situation and iteratively envision alternatives or ideas to address the problem(s).

The Frameboard is applicable in diverse fields and offers the opportunity to visualise and understand a given problem by building an (iterative) overview of different frames. These frames are alternative ways of examining the situation, with different problems, ideas, and solutions. The frames are explained in slightly different ways to grasp the nuances for envisioning a comprehensive course of action.

How to conduct

Duration: 120 - 180min

Resources:
- Starting issue or initial problem to be defined and discussed

Material: Pens, post-its

Participants per team: 3-10

Instructions:
1. The template is divided into seven slots
   a. description
   b. value proposition
   c. target users
   d. key problem(s)
   e. solution approach
   f. alternative ideas, and
   g. name and tagline – that can be drawn or sketched into).
2. It is recommended that a minimum of six to ten distinct frames are explored to visualise and comprehend the issue in object at the early stages of a project. This will help to reach the best result possible.
3. The frameboards will then allow for discussing different frames, with different views and types of solutions for the problems individuated.

TITLE & SKETCH

DESCRIPTION

VALUE PROPOSITION

TARGET USERS

KEY PROBLEM(S)

SOLUTION APPROACH

ALTERNATIVE IDEAS

PROBLEM DEFINITION
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

The first stage in developing an effective and efficient response is defining the problem, as what may initially seem to be the problem may be a symptom of an underlying, and potentially larger, issue. The Problem Definition tool enables groups to comprehend what these potential underlying causes are and contextualise the problem to reframe it in a more focused and direct way.
The Problem Definition can be used when in need for describing and elaborating on the underlying cause(s) of a targeted issue. To that extent, tool can be adapted to diverse kinds of interventions.
With the help of the Problem Definition tool, it is possible to zoom in on a core issue that can be acted or improved upon after first gaining a comprehensive picture of the numerous complex and interconnected issues that influence it.

How to conduct

Duration: 30-45 min

Resources:
- Initial analysis and exploration of the context and its problems

Material: Pens, post-its

Participants per team: 3-15

Instructions:
1. The Problem Definition tool is a worksheet that should be filled from left to right, and it presents five consecutive columns, each one with a leading question, namely:
   a) What is the issue?
   b) Who is it a problem for?
   c) What social/cultural factors shape this problem?
   d) What evidence do you have that this is a significant problem?
   e) Can you think of this problem in a different way? Can you reframe it?
2. Examine the Problem Definition template for a specific individual or organisation in small groups, taking notes on a large sheet of paper. You can repeat the process multiple times to expose new viewpoints. Compare your versions and then discuss whether you are making the same assumptions and presenting the same information. Attempt to reframe the problem then.

ISSUE	AFFECTED GROUPS	ENVIRONMENT	EVIDENCE	REFRAMING
What is the issue?	Who is it a problem for?	What social/cultural factors shape this problem?	What evidence do you have that this is a significant problem?	Can you think of the problem in a different way? Can you reframe it?

EMPATHY MAP
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

An empathy map is a collaborative visualization used to articulate what is known about a particular type of user. It externalizes knowledge about users in order to create a shared understanding of user needs, and aid in decision making. It helps synthesize observations and draw out unexpected insights. Empathy maps provide a glance into who a user is as a whole through a study of what they speak, think, do and feel about an activity.

How to conduct

Duration: 30 - 45 min

Resources:
- Persona(s) to be further analyzed

Material: Pens, Post-its

Participants per team: 3 - 5 people

Instructions:
1. After user groups have been identified, interviewed and target personas have been established, the journeys and experience need to be reflected upon. What they said, thought, felt and did during the interactions need to be mapped out in order to create a canvas. This can further be analysed to bring out gaps in the project.
2. Each persona can be placed in the center of an empathy map to be further analyzed in terms of what the persona says, thinks, feels and does
3. Reflecting on the different aspects of the persona, groups will emerge into the mental model of the user group and develop empathy

to be completed

SAY

THINK

FEEL

DO

AWAITING VALIDATION BY THE
EUROPEAN COMMISSION

Envision Alternatives

Can the challenge be solved or approached in novel ways?

Solving a challenge can involve generating new ideas, but it can also mean creating new combinations or formations of existing offers. Equipped with a deep understanding of the context and the challenge, the phase is dedicated to generating new ideas based on previous reflection, dialogue and insights of the challenge.

Other questions that can be answered in this phase:
- What new solutions are needed to bring my city on an inclusive and effective path towards net zero emissions?
- How can the city ideate new ways to align interests around decarbonization goals?
- How can the city design policy frameworks for climate targets that include the specific needs of its citizens and the city's other actors?

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Envision Alternatives

Tools for ideating solutions

Other tools that can be applied in this phase

Related methods on NetZeroCities' Knowledge Repository

- Call for Ideas

- Idea Rating / Selection

To the NZC Knowledge Repository

DESIGNING THE CHALLENGE
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

Designing a challenge is a first step in putting together an innovation competition. In order for the innovation competition to be successful and attract enough audience, a team of organizers should define the main challenge of the competition, how to select winners, judges, what is the selection process along with other details. Intentionally designing the challenge can enable you to systematically design open innovation events and reveal innovative ideas worth developing.

Designing the challenge allows you to set the ambitions and constraints of a challenge for an innovation competition. By doing so, you can help ensure the responses to the innovation competition will be fit-for-purpose to take on the challenge at hand. Additionally, these kind of constraints can help innovation competition applicants think creatively within the bounds of what would be helpful.

How to conduct

Duration:
Ideally divided in two workshops of about 3h each

Material:
Pens, post-its

Resources:
- Stakeholders of the innovation competition to be

Participants per team:
3-15

Instructions:
1. Designing the challenge could take up to a month and can be efficiently accomplished using two workshops.
2. In the first session gather as group to discuss challenge design. Set challenge objectives and try to define each step in the working sheet. Also, see if there are any gaps or team disagreements on specific topics.
3. When you define gaps do your research and gather on the second session to finalize the challenge and get mutual group consensus on your challenge objectives, selection processes and other important challenge features.

Objectives & Goals
What are the objectives & interests that we have in posing this challenge?

1. ....

2. ....

3. ....

Recruitment
Why is it interesting to our audience?

What is the recruitment plan?

How will we incentivize people to take part?

Selection of winners
What are the selection criteria for the winners?

Who is going to judge the ideas?

Process
What is the process of the challenge going to be like?

→ .... → .... → ....

IDEA CARDS
Preparation & Instructions

Description

The Idea Card tool helps to organize and detail an idea in only one page.
It requests detailing the needs and challenges addressed, how the solution works and who is involved.
It can help elaborating initial ideas more in detail to then present it to others to receive preliminary feedback.
In a group the Idea Card may spark discussions on how initial ideas can be implemented pointing out key factors, barriers and opportunities while further developing a concept.

How to conduct

Duration: 45 - 60 min

Resources:
- Ideas from brainstorming
- Other selected ideas (from ideation sessions)

Material: Pens, post-its

Participants per team: individually or in teams of 2 - 6

Instructions:
1. Introduce the template to the participants and the goal of the exercise. Previously define the ideas to be elaborated either in a voting session after the brainstorming or by finding another way of selecting single ideas or clusters to be further elaborated
2. The tool can be completed individually or in groups. Start the activity by defining the challenge and the specific ideas that you are working on
3. Ask participants to fill the idea card field by field to further detail the concepts.
4. Organize a final sharing session for feedback

IDEA CARD
TEMPLATE

CHALLENGE
What challenge are you addressing?

IDEA

NEEDS
What needs does the city have related to the challenge?

OBJECTIVE
What does the solution achieve?
What is the ultimate objective?

HOW?
How is the new solution working?

WHO?
Who is involved in the building and delivery of the solution?

Description

'How Might We', or short HMW, questions are used by designers to transform problem statements or challenges into opportunities throughout the initial phases of the process of solutions finding.

It is meant to rephrase previously stated problems and challenges as opportunities as an ideal starting point to then solve the initial challenges.

Take care that questions are neither too broad nor to narrow to ideate solutions later on like this:
"How might we design a product that makes our users feel confident and secure during their online financial transactions?"

A too narrow HMW question is this one:
"How might we design a product that helps users deposit their paycheques in three easy steps by using a guided workflow?"

A too broad HMW question could be
"How might we design the world's most innovative banking app?"

How guides team members to believe the answer is out there.
Might lets everyone know that there's the possibility (and opportunity) of failure
We reminds that solution finding and service design is teamwork

How to conduct

Duration: 30min

Resources:
- Previously defined challenges
- Other research data (if available) like slides, graphs and insights (paper-based or digital)

Material: Pens, post-its

Participants per team: 3-10

Instructions:
1. Introduce the template to the participants and the goal of the exercise. Define the focus of what is the reasoning behind moving from challenges to 'How might we's...?'
2. Divide particpants in groups, if necessary
3. Ask the teams to fill up to 5 HMW statements for each challenge. Ensure that it is clear that at this point the team is starting to look for solutions instead of challenges.
4. A quick discussion or voting session can finally help to identify the final HMW question to be used for the generation of ideas

HOW MIGHT WE...
TEMPLATE

Transform the previously identified challenges into opportunities by rephrasing them as 'How might we...?' questions

HOW MIGHT WE...

HOW MIGHT WE...

HOW MIGHT WE...

CHALLENGE

HOW MIGHT WE...

HOW MIGHT WE...

HOW MIGHT WE...

Description

It is key to understand the motivation of single actors and actor groups to engage them in a solution.
Negative aspects are as important as positive ones to find solutions to overcome barriers and obstacles early in the ideation process.

The Influencing Factors Matrix can help to identify these influencing factors on the motivation. The basic concept for this was shared by Jim Taylor, Ph.D., in a Psychology Today article breaking down motivation and its factors into two basic axes: positive vs. negative and internal vs. external.

In this way, it can be investigated how solutions can provide the highest levels of satisfaction and validation to actors and make change successful and fulfilling. This is ideal because it increases the probability of the change coming along with new solutions being accepted, supported and sustained over time.

How to conduct

Duration: 45min

Resources:
- Challenges
- Solution Ideas (Idea Cards, Value Propositions,..)

Material: Pens, Post-its

Participants per team: 3-10

Instructions:
1. Introduce the template to the participants and the goal of the exercise. Define the focus of what is the reasoning behind moving from challenges to potential solutions and which factors are infleuncing the deployment of these solutions
2. Divide particpants in groups, if necessary
3. Each team takes 45min to reflect on the influencing factors on various actors/actor groups according to the matrix
4. If there are multiple groups, the key points of the matrix can be shared to the entire group and discussed all together.

INFLUENCING FACTORS MATRIX
Template
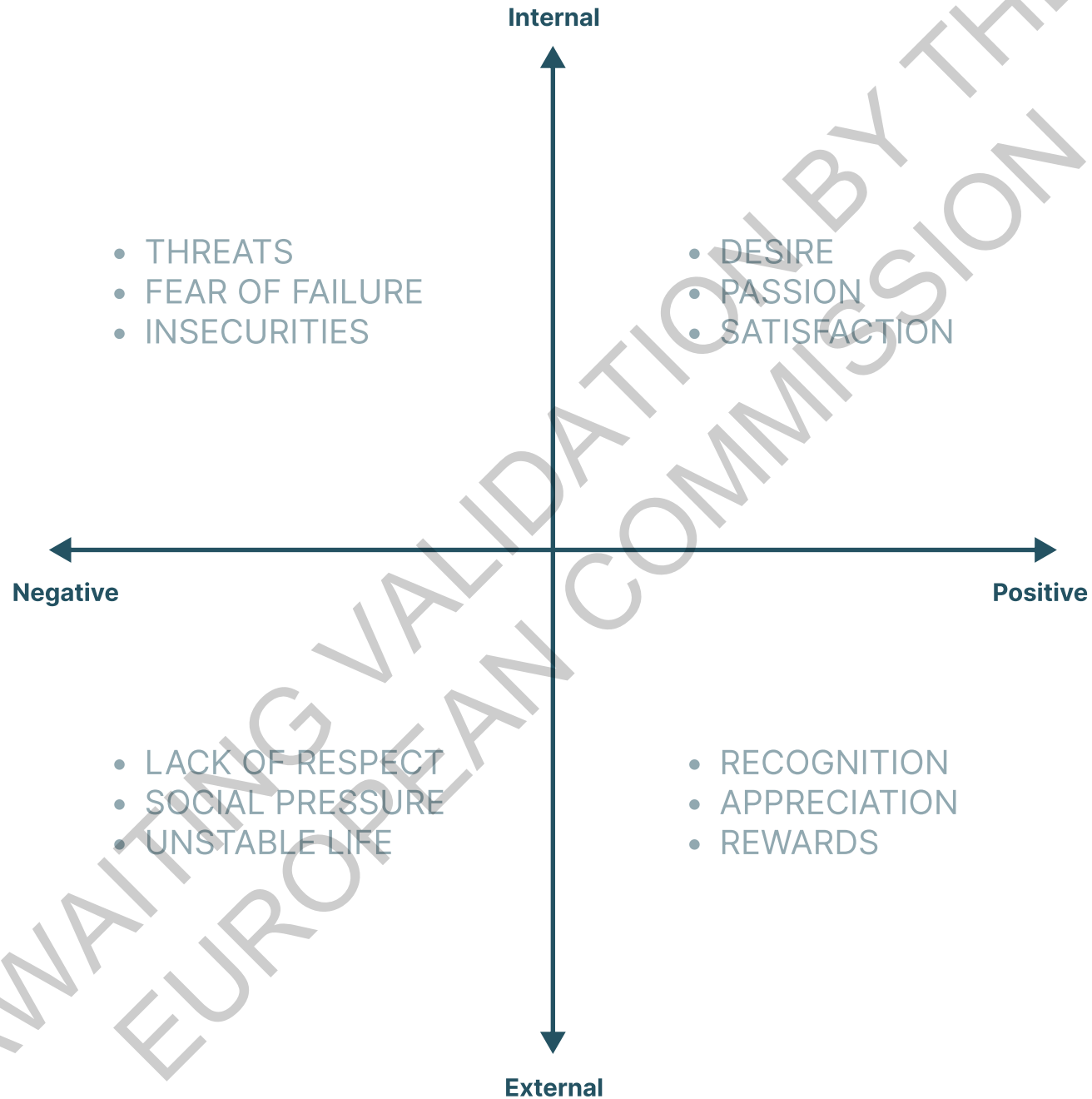
Internal

Negative

Positive

- THREATS
- FEAR OF FAILURE
- INSECURITIES

- DESIRE
- PASSION
- SATISFACTION

- LACK OF RESPECT
- SOCIAL PRESSURE
- UNSTABLE LIFE

- RECOGNITION
- APPRECIATION
- REWARDS

External

Description

The impact-feasiblity matrix helps teams prioritize and ultimately decide which ideas/projects are worth moving forward, on what timeline and with what effort. By mapping ideas according to how much they are in line with and can achieve set goals (impact) and whether current organizational resources can support them (feasibility), teams can sort ideas between: quick wins, major projects, busy work and resource drains. In short, the matrix can help teams prioritize projects/tasks, maximize efficiency and impact and align goals by visualizing how specific tasks or projects advance the set goals.

Impact regards measuring the degree to which a suggestion makes attaining a specific goal possible. Feasibility involves measuring the degree to which an action is possible based on an assessment of resources.

How to conduct

Duration: 60 min

Resources:
- Potential solutions and ideas to be evaluated

Material: Pens, post-its
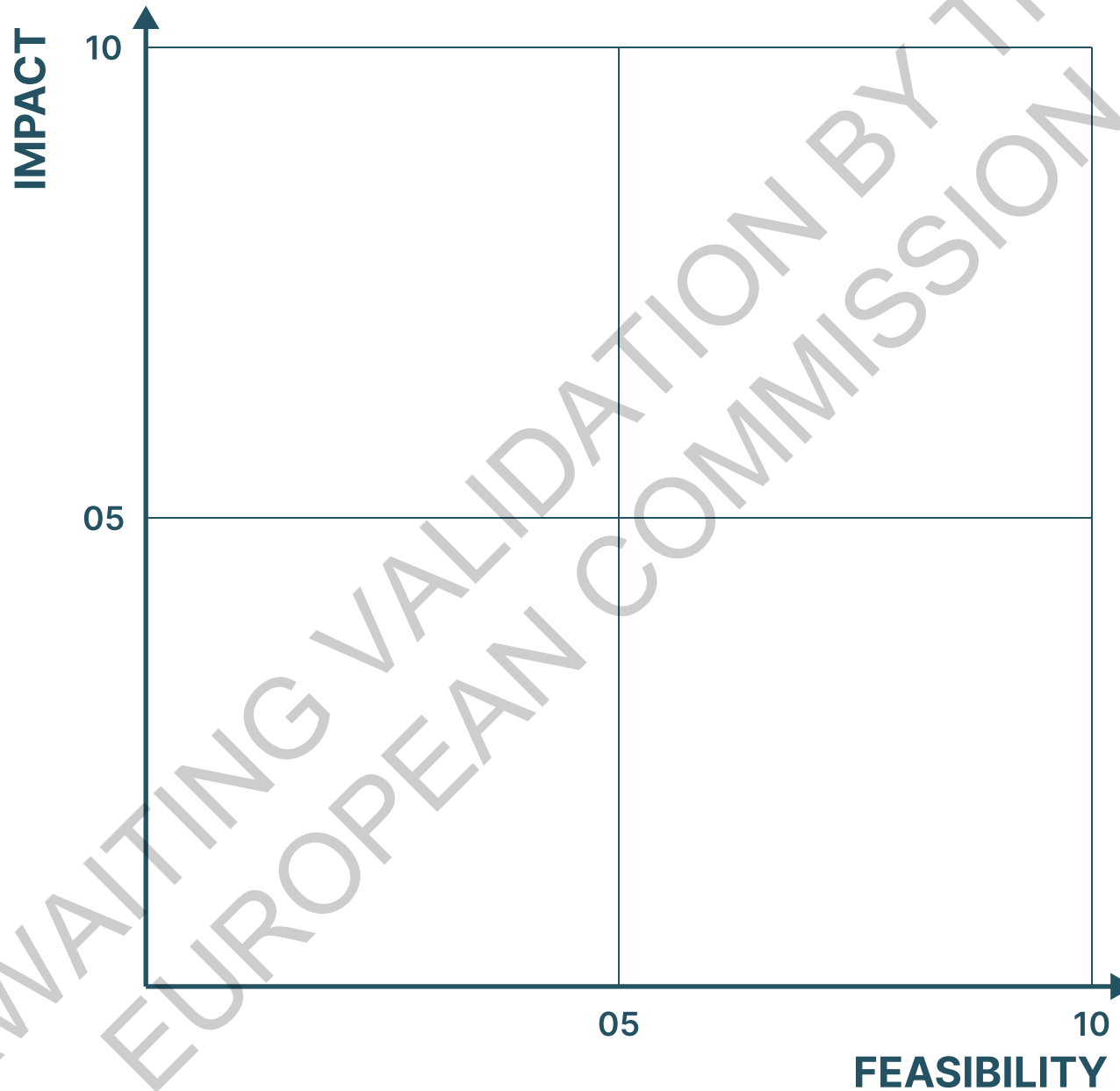
Participants: 3-15

Instructions:
1. If no ideas were developed previously and are brought into the exercise, brainstorm ideas/projects or share tasks that advance your previously agreed upon goals (often based on criteria set in previous brainstorming sessions or by project agreements etc.). Write each idea on a separate post-it note.
2. Plot these ideas/projects/tasks on one of the 4 quadrants of the matrix. The higher the estimated impact the closer to the ends of the y-axis it should be plotted. The higher the estimated feasibility the closer to the ends of the x-axis it should be plotted.
3. Analyze the results. Ideas with high impact and high feasibility are "quick wins" or so-called "low hanging fruit". Ideas with high feasibility but low impact can be considered "busy work". Ideas that are high impact but with low feasibility are often "major projects" meaning they need substantial new investment (coming at a cost) but could yield big results toward goal attainment. Ideas that are low impact and low feasibility should be avoided and are considered a "resource drain".
4. Having plotted the ideas, the team can now prioritize them and create an action plan based on the results. The activity helps the team determine which actions should be given the most time and resources in the future.

IMPACT-FEASIBILITY MATRIX
Template

IMPACT

10

05

05   10

FEASIBILITY

KJ IDEATION
Preparation & Instructions

Description

KJ Ideation is a brainstorming technique, or 'idea-generating' method developed by Japanese anthropologist Jiro Kawakita (from which its name derives) to collect, sort and find meaning in qualitative data. As such, it facilitates abductive reasoning that provides rigor to the process of sorting out chaotic ideas and insights to form a hypothesis to confirm or reject. While mostly used in Western countries as an ideation tool, it has been used in Japanese companies as a method for collective decision-making. By creating an open and collaborative method for collective brainstorming, the tool helps challenge owners bring in different perspectives and knowledge of the issue in order to push past the symptoms and get to the root of the problem. This is done not only through collaboration but is also accompanied by ethnographic research and observation during the inspiration and discovery phase. The process thereby facilitates collective decision-making and will formation, while addressing specific challenges (whether external to the organization or internal).

The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by a small group or project leader who consults with different actor groups through interviews and ethnographic observation. The activity has the potential to create new relationships and connections (of mental models) between actors while working

How to conduct

Duration: 60 - 180 min

Resources:
- Challenge to be tackled

Material: Pens, post-its

Participants per team: 4 - 10

Instructions:
1. Set up a team of participants and introduce the challenge and the challenge question.
2. Ask each participant to share knowledge on the problem from: lived experience, observation and field notes, interviews, best practices, etc. (also the PESTEL tool can be used for this). Then all team members should brainstorm on ideas for solutions for the problem. Only one insight should be written per post-it. The post-its should be placed in the left column of the template / a common board.
3. Clustering: Study the post-its looking for similarities and patterns to create clusters. This process should be led by "feelings" and intuition. Some ideas may not be part of any distinct cluster and be "lone wolves". They should not be discarded as they might fit into larger family of clusters to for a team of teams. Once the clusters are complete, the team should give a title to each one to help make sense of the data and give order to the research. When appropriate, clusters should be grouped into families to create a higher order team of teams. Sense-making: The family of clusters should be visually arranged in a way that gives order to the data and that tells its story: indicating patterns, trends, cause and effect relationships, order of occurrence, interdepencies, connections or contradictions. The visualization should be explained, verbally and possibly in a written form, in an effective and simple manner that presents the emerging insights in a logical and precise way, reducing complexity to give form to potentially new interpretations of the problem space.
4. Voting: Participants should vote on the concepts or ideas that are the most feasible and effective (the Impact and Feasibility Matrix Tool can be helpful for this) and move these forward to the next phase of development.

IDEATE
Brainstorm collectively on solutions, write the single ideas on post-its and stick them in this area

CLUSTER SOLUTIONS
Take the single ideas from the previous column and try to find clusters of ideas and concept by grouping similar or related ideas together

VOTE
Vote for the idea cluster that seems most effective and feasible to you and could bring real value when implemented

MOTIVATION MATRIX
Preparation & Instructions

Description

A motivation matrix is an exercise that helps facilitators and designers measure what motivates people. The assumption around the motivation matrix is that people perform actions because they are triggered by motivations. The matrix is composed of six core motivation factors: incentive, achievement, social acceptance, fear, power, and growth. After using the motivation matrix, facilitators of the exercise should have a better idea of the motivation behind each individual. This exercise helps make informed decisions.
The six core types are: incentive, achievement, social acceptance, fear, power, and growth.

- **Incentive**: any type of reward-oriented motivating factor; can be monetary or not monetary

- **Achievement**: the kind of motivation that's propelled by the drive for competency

- **Social Acceptance**: essentially the need to belong to a group and not feel ostracized

- **Fear**: motivation that is based off of wanting to avoid certain outcomes or consequences

- **Power**: motivation that is derived from the need to be autonomous or to gain and maintain control over others

- **Growth**: intrinsic motivation that encapsulates wanting to become a better version of oneself

Based on the *Motivation Matrix by Design Ethically*

How to conduct

Duration:
45-60 min

Resources:
- List of relevant stakeholders and users, ideally already detailed as personas
- Specific service/product environment that the motivation is specific for

Material:
Pens, post-its

Participants per team:
3-8

Instructions:
1. Divide the participants in groups, if required
2. Provide an introduction to the environment that you want to work on e.g. a new service or a specific thematic area that people are being in touch with
3. Depending on the quantity of stakeholders and users to be analysed, you can ask all groups to work on the same personas or user groups or split them among the groups
4. Give enough time to each group to discuss and detail all the different motivational aspects for the user groups
5. Have a final discussion with all participants together where the groups present their results and reasoning to each other to then exchange and discuss their work

MOTIVATION MATRIX
Template

Motivation → ↓ Persona	🎁 Incentive	🏅 Achievement	👥 Social Acceptance	⚡ Fear	🏋️ Power	📊 Growth
👤 - - - - - - - - - -						
👤 - - - - - - - - - -						
👤 - - - - - - - - - -						
👤 - - - - - - - - - -						

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

PERSONAS
Preparation & Instructions

Analyze
Context

Reframe
Problems

Envision
Alternatives

Prototype
& Experiment

Evaluate
& Scale

Description

Personas represent typical users and their goals. Personas can be defined by dimensions that characterize and distinguish customer segments from one another. Persona dimensions are selected to inform the product or service experience under exploration. To this end, they may include demographic information, attitudinal information (key drivers, triggers, or motivations), behavioral information (habits and practices, barriers, experiences sought, needs and desires), and information about desired outcomes or associated trends.
Analyse the types of potential users and organise them according to sets of shared attributes to define personas. It can be helpful to think of a persona as a personality type. A limited number of such personas should be created and considered as representing the target users for the project. This range of selected personas frames the opportunity space so that innovation teams can focus on them for building concepts. Concepts are built to address the needs of these personas and to fit with their context. In order to accurately create personas, without merely wishful thinking, it is important to rely on in-depth qualitative (and quantitative) research.

How to conduct

Duration: 45 - 60 min

Resources:
- Initial context analysis
- Understanding of actors and user groups

Material: Pens, post-its

Participants per team: 3-8

Instructions:
1. Generate a list of potential users.
   This should be based on your insights, design principles, Value Hypothesis, findings from ethnographic research, or results from other methods like Semantic Profile and User Groups Definition.
2. Generate a list of user attributes.
   These attributes may be demographic (age, gender, employment, or home ownership), psychographic (values, attitudes, interests, or lifestyles), or behavioral (motivations, intelligence, or emotions).
3. Define a finite number (three to ten) of user types.
   Cluster users based on the common attributes they have. If you don't already have a sense of what attributes are shared by different types of users you could use an Asymmetric Clustering Matrix to find groupings. Label these clusters; they represent user types. Aim at having a manageable number of user types (three to ten) to build focus and more effective communication.
4. Create personas around user types.
   For each user type, create a specific persona, a specific character. Create this persona as a combination of attributes defined earlier. Personas should be true to the findings of research and easy to empathize, give them descriptive and memorable titles. For example: Jane, the city gardener, 28 years old, lawyer, art enthusiast, and so on. Complement the persona profiles with quotes and anecdotes when possible.
5. Share the different personas created by the teams to drive concept exploration.

PERSONAS
Template

PICTURE

NAME

AGE

BEHAVIOUR

JOB TITLE

NEEDS

DIFFICULTIES & FRUSTRATIONS

CITATION

"

"

KEYWORDS

PUGH CHART
Preparation & Instructions

Description

Pugh chart can support comparing a variety of options directly and weighing their different characteristics against each other.
By giving weight and importance to the variables, the Pugh Chart considers the specific needs and values of an initiative and can help to make the best decision in a specific situation. Ranking the criteria keep the team's focus and reveals the best opportunities at an early stage.

It can be used to evaluate different product- or service directions as well as a series of funding opportunities or similar.

How to conduct

Duration: 60 min

Resources:
- Initial analysis and exploration of the context and its problems

Material: Pens, post-its

Participants: 3-15

Instructions:

1. The group creates a list of minimum 3 and maximum 5 relevant criteria based on the goals, needs and limitations of the project. They put them on the left side of the matrix
2. A weight is attributed to each criterion according to its importance to the team. E.g. having 5 chosen criteria they are attributed the weight 1-5 according to their importance with 5 being the most important and the weight is written in the circles of the second column.
3. Now each option is evaluated for each criterion rating it from one to the number of options that were given (maximum 5) with the highest number being the best score.
4. The final score of each option is calculated by multiplying the score for each criterion with its weight and then calculating the sum of all scores for each option.

PUGH CHART
Template

	WEIGHT *Score to be multiplied by X*	OPTION 1:	OPTION 2:	OPTION 3:	OPTION 4:	OPTION 5:
CRITERION 1:	X					
CRITERION 2:	X					
CRITERION 3:	X					
CRITERION 4:	X					
CRITERION 5:	X					
TOTAL SCORE						

VALUE PROPOSITION CANVAS
Preparation & Instructions

Description

The Value Proposition Canvas is a fairly simple tool that allows you to establish a logical starting point for building and testing a product or service. It is done to create products and services that meet the needs of people. In order to do that it is important to keep track of the target market's pains, gains, and to-do's – which are all opportunities for providing value to them.

A value proposition can be made for any products, service or even project.More than just being a description of the project or service – it's the specific solution it provides and the promise of value the end-user can expect from it. Value propositions are one of the most important conversion factors, to convince the market audience to believe in your project.

Just envisioning a project or service is not sufficient for it be able to fully benefit the intended end-user. The Value Proposition Canvas helps intersect the service with the end user's wishes and expectations. When done right, it illustrates the match between what is being offered and what is being actively received.

How to conduct

Duration:
30-45 min

Resources:
- Service or product idea already defined and detailed

Material:
Pens, post-its

Participants per team:
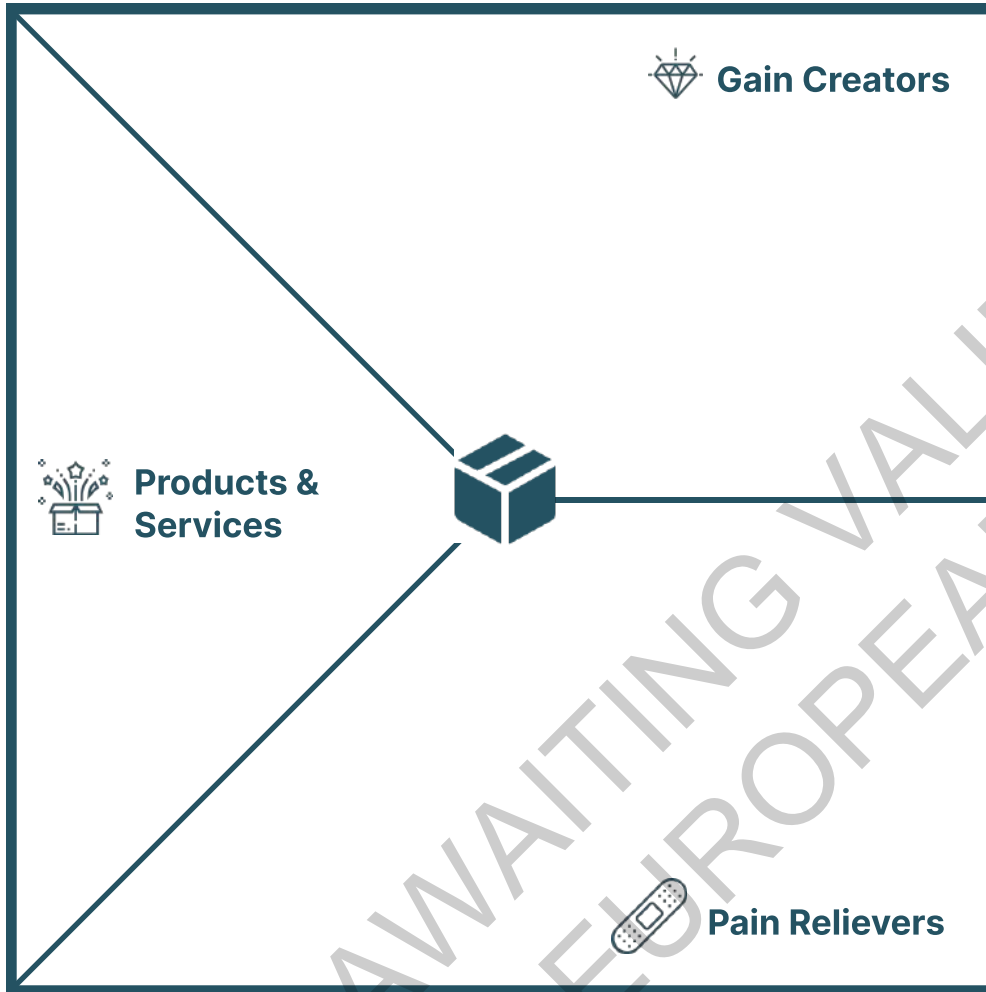3-5

Instructions:
1. After the details of the project/service are discussed and understood thoroughly, the team would need to look at the perspective of the end-user and the stakeholder.
2. At first they would need to list down what needs exist that necessitated the project.
3. This is followed by the major issues faced by individuals and how they will gain from the project.
4. The next step is to focus on the left side of the canvas and outline the services itself.
5. After having listed the problems in the user profile part, the team now can prioritise jobs, gains, and pains according to their importance - from the most severe to least significant.
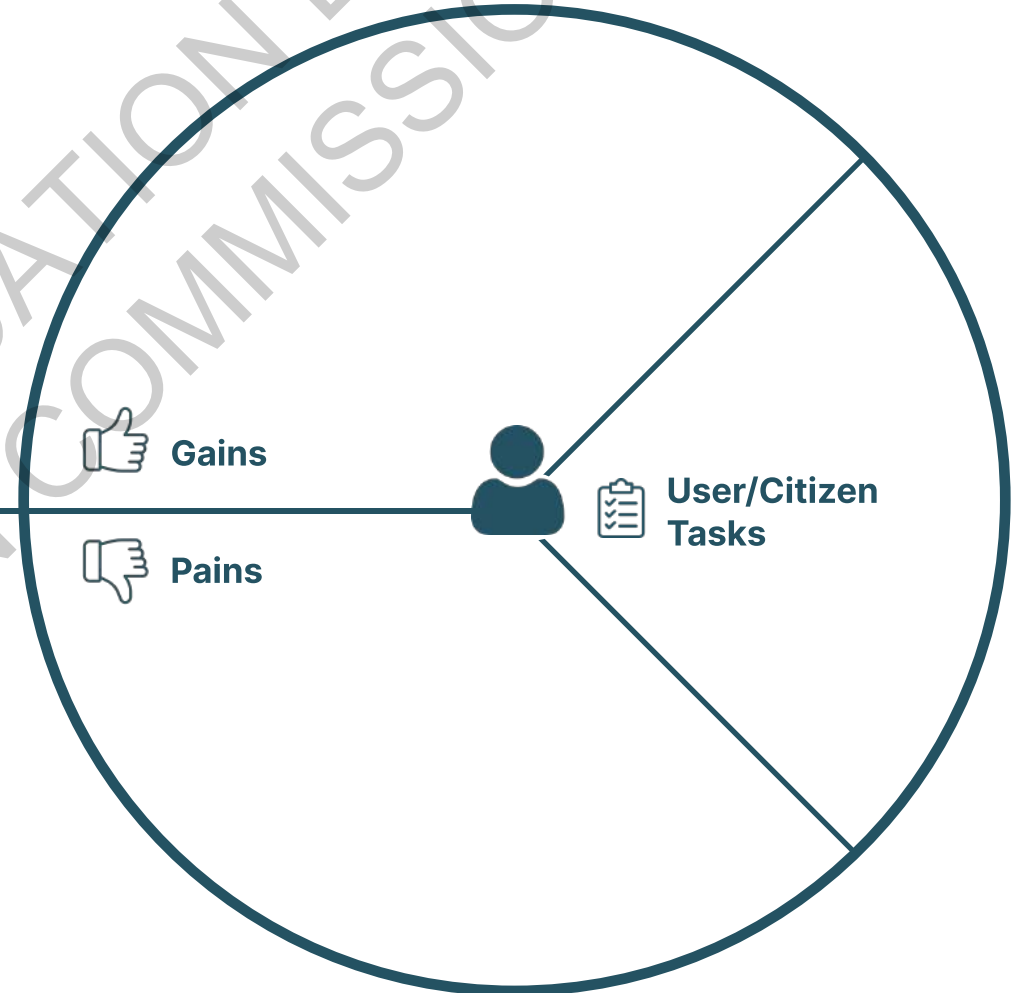
VALUE PROPOSITION CANVAS
Template

Value Map

User/Citizen Profile

Gain Creators

Products & Services

Gains

Pains

User/Citizen Tasks

Pain Relievers

SOCIAL INNOVATION TOOLKIT

Prototype & Experiment

How can new solutions be tested for validity and effectiveness?

Mission challenges are hard to solve because of the highly interconnected and systemic nature of the problems. Testing solutions to complex challenges can often mean creating system-level prototypes that require high investments of time and capital. The tools in this phase are meant to help prototype specific interactions happening at different 'touchpoints' or features of the solution, helping to ensure that the solutions are purposefully built around life experience and concrete needs to provide real value. Prototyping also helps reduce risk around innovations by not only attempting to work out problems pre-emptively, but also by creating through doing the knowledge needed to implement the innovation. After prototyping, agile piloting and experimentation can take the solutions a step further.

Other questions that can be answered in this phase:
- How can the city test social innovations before scaling and making large infrastructural changes?
- How can specific features be more effective and people-centered
- Does the service/product really satisfy the needs of the target user
- How can the city experiment with social innovation ideas?

Analyze Context — Reframe Problems — Envision Alternatives — **Prototype & Experiment** — Evaluate & Scale

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Prototype & Experiment

Tools for prototyping and experimenting

Other tools that can be applied in this phase

Related methods on NetZeroCities' Knowledge Repository

- Agile Piloting
- Desktop Walkthrough
- Experience Prototype
- Impact Metrics

To the NZC Knowledge Repository

Description

The customer journey map is a representation describing each step of the interaction that a user or customer has with a service, product, organization or system taking the perspective of the user. It is stated what the actions, the touchpoints with the service, product or system and the emotional state of the user for each of the steps.
It can functions as a planning- and strategic tool to keep the focus on the final users for the final development and the prototyping of a new solution.
It can be also used to map existing systems to highlight pain points and opportunities for improvement

The tool has both the potential to develop new, user-centred solutions as well as improving existing services and systems by highlighting pain points and issues.

The Customer Journey is applicable in varied fields and serves the purpose to create an overview of the interaction of users with a product, service or system mapping their emotional state, touchpoints and needs across the journey. It helps to better understand critical points or opportunities, get in the users' shoes and understand the effective use of touchpoints throughout the journey to deliver functioning and effective systems and services.

How to conduct

Duration:
60-90 min

Material:
Pens, post-its

Resources:
- Extensive knowledge of the system through field research or involving experienced actors

Participants per team:
3-8

Instructions:
1. Individualize the user you will be designing for and map out the main phases of their journey throughout the service in terms of main steps and activities of the user
2. Then draw sketches of the phases in the boxes or take pictures and use photo to sketch technology to convert them into sketches. In alternative, the steps can be described with text.
3. Identify the need that the user has at each moment of the journey and the channels or touchpoints through which the user is in contact with the service or system.
4. At the end of the activity, detect what the possible pain points are, or rather where the beneficiary, customer or donor may have problems or difficulties using the service. Remember that pain points can also occur before or after the service in terms of their decision to use or re-use the service.

CUSTOMER JOURNEY
Template

User Actions

What does the user do at each stage? Draw and/or describe the actions briefly

User Needs

What are the main needs of the user at that particular point?

User Emotions

What is the mood of the user in that step?

Touchpoints

What are the points of contact between the user and the service/product provider?

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

Description

'An experiment canvas allows for a team or individual to create an experiment for the current time and test out their ideas about a certain issue/topic. This is done through hypothesising the current riskiest assumption there is about an experiment, then a falsifying hypothesis. It is clear and easy way to create an experiment.

How to conduct

Duration: 45min preparation + testing + 30min wrap up

Resources:
- The working team should already have transformed an issue into a risky assumption to be tested and then actually experiment it

Material: Pens, post-its

Participants per team: 3-10

Instructions:
1. Define the riskiest assumption that you would like to test?
2. Construct a hypothesis based on this assumption that could be confirmed or confuted by the testing results
3. Develop a setup for the testing:
    a. What kind of environment will you conduct the tsting in?
    b. Who is going to be participating?
    c. How do you want to measure success?
    d. How many times should you repeat the experiment to achieve significant results?
4. Report and detail the results of the testing, both quantitative and qualitative outcomes
5. Draw a conclusion - has your hypothesis been validated?
6. What are the next steps

EXPERIMENT CANVAS
Template

Riskiest Assumption

Hypothesis

We believe that _____

will drive _____

within _____

Experiment Setup

Results

Quantitative

_____

_____

Qualitative

_____

_____

Validation of hypothesis

☐ Validated
☐ Invalidated
☐ Partly validated: _____

Next Steps

AWAITING VALIDATION BY THE EUROPEAN COMMISSION

SERVICE BLUEPRINT
Preparation & Instructions

Description

The Service Blueprint is an operational tool that provides a holistic viewpoint of an organization's operational processes, e.g. key activities, products, services and points of interaction with the intended audience, stakeholders and beneficiaries. As such, it is a strategic tool useful for planning or improving a service as it demonstrates what is happening along the service line and who is doing what through what means.
The Service Blueprint can be used to understand cross-functional relationships and align front-stage and back-stage processes. It is a diagram that displays the entire process of service delivery, by listing all the activities that happen at each stage, performed by the different roles involved. The resulting matrix illustrates the flow of actions that each role needs to perform along the process, highlighting the actions that the user can see (above the line of visibility) and the ones that happen in the back-office (below the line of visibility). Roles can be performed by human beings or other types of entities (organizations, departments, artificial intelligences, machines, etc.).

How to conduct

Duration: 60-90 min / session

Material: Pens, post-its

Participants per team: 3-8

Instructions:
The Service Blueprint should involve a representative from each area of the service.
1. The first step is to identify which user you're planning for: customer or beneficiary if you have more than one. Then plot out the different steps that are taken before, during and after using the service [See Customer Journey Map]. Some prompting questions could include: How do you engage the users and notify them of your service? What happens when they decide to use it? How do you stimulate re-use of the service or properly end the use of the service? These are all questions that must be considered when constructing the blueprint of the service.
2. After mapping out the steps of the user, the rest of the worksheet can be filled out line by line according to the steps individuated. At the end of the activity, a line of interaction is created between what happens out front (customer) and what needs to happen in the back (organization). This allows for successful planning or improvement if necessary.

SERVICE BLUEPRINT
Template

User Actions

What does the user do at each stage?

Line of interaction

Frontstage

What happens in direct interaction with the user?

Line of visibility

Backstage

What happens in the background hidden from the users' eyes?

Support Processes

What internal & external processes support the backstage actions?

SOCIAL INNOVATION TOOLKIT

SOCIAL BUSINESS MODEL
Preparation & Instructions

Description

Visualizing the business model of your idea in a canvas is an effective step towards advancing the concept. It provides the big picture on the processes that ensure that value is created, delivered and captured. The tool is a precursor to drawing up a complete business plan and is useful for formulating in a more rapid and cost-efficient manner the business model behind the idea for the initial phases.

The tool addresses in a single canvas the different parts of feasibility plan. It is a great way to explore how value will/can be created, by whom, for whom and through which channels. In doing so, different issues of how to implement the solution are addressed and resolved, including: how to finance the solution, how to maintain relevancy and support, how to maintain collaboration between actors, and how to scale impact (scaling up or out).

The tool aims to catalyse thought on the different aspects involved in implementing a solution and organizes processes in a visual way that shows linkages and flows. The visualization not only helps as planning tool but also as a communication tool to garner support and feedback.

The activity is best done in a small group composed of main representatives of the different stakeholders and value creation areas. It can also be done by project leaders and with other actors and stakeholders in consultation. In subsequent iterations, different actor groups can be informed, consulted or engaged in refining specific parts.

The activity has the potential to create new relationships and connections (of mental models) between actors while working on the model.

How to conduct

Duration: 90-180 min

Resources:
- Concept for a social innovation initiative to detail the business model

Material: Pens, post-its

Participants per team: 3-15

Instructions:
1. The social innovation business model canvas is made up of 15 blocks. Unlike similar business model canvases, this one has been modified to better suit social innovations, including among others, the following changes: a specific social value proposition, a separation between beneficiaries and financing supporters and boxes dedicated to surplus designation and social impact measurement. The canvas can be completed in any order; the following is merely a suggested path.
2. Social Problem/Social Need and Existing Alternatives: identify and analyze the social problem at hand and benchmark existing solutions to find out what is and what is not working.
3. Beneficiaries and Financing Supporters: identify, segment and understand your beneficiaries, customers and financing supporters (donors, investors and funders).
4. Solution/Governance: ideate or describe the solution to the social problem/need and the governance model.
5. Social/Commercial Value Proposition: formulate the social (i.e. the value created for beneficiaries) and commercial value proposition (i.e. the value created for paying customers/investors).
6. Relationship and Channels: describe how you reach your target beneficiaries, customers and/or investors.
7. Social Impact Measures: what indicators can be used to measure the impact of the solution.
8. Key Activities/Key Resources: define what key activities and resources are needed to support the innovation.
9. In-kind Supporters and Key Partners: list key partners who provide support, resources and services that foster the growth of the solution.
10. Cost Structure & Revenue Streams: list what costs are created and how revenues will be generated (i.e. memberships fees, freemium/premium, product sales, etc.).
11. Surplus: indicate where surplus will be invested if generated.

SOCIAL BUSINESS MODEL
Template

Based on *the Social Business Model Canvas in the SILearning Toolkit*

IN-KIND SUPPORTERS AND KEY PARTNERS	KEY ACTIVITIES	SOCIAL PROBLEM/NEED	SOLUTION / GOVERNANCE	SOCIAL VALUE PROPOSITION	RELATIONSHIPS	BENEFICIARIES
What key resources are supporters providing to your SI?	What are the key activities for the development & operation of your SI?	What social needs are you addressing?	**SOLUTION** Describe your solution **GOVERNANCE** Describe your governance structure	What value are you delivering to your stakeholders & users?	What kind of relationship do you have with the different stakeholder groups?	Who benefits from your initiative?
	KEY RESOURCES What are your key resources?	**EXISTING ALTERNATIVES** Are there any similar solutions already existing? How is your solution different?	**SOCIAL IMPACT MEASURES (DERIVATIVE ASSET)** How are you measuring your social impact?	**COMMERCIAL VALUE PROPOSITION** What value are creating for your financing supporters?	**CHANNELS** How do you reach your beneficiaries / supporters?	**FINANCING SUPPORTERS** Who are your financial supporters?

COST STRUCTURE	SURPLUS	REVENUES
What costs do you have and how are they covered (e.g. by key supporters, partners, volunteers,...)?	Where do you invest any eventual surplus?	Where do your revenues come from?

SOCIAL INNOVATION TOOLKIT

Evaluate and Scale

How are you implementing, sustaining and scaling social innovations?

While evaluation is often thought of as a post-implementation activity, it is useful to know how to evaluate solutions from the beginning to design truly impactful solutions. Measuring impact becomes a strategic asset for understanding effectiveness and knowing what, when and how to adapt the solution for a better fit or to scale the solution for wider impact.

Other questions that can be answered in this phase:
- How can the city evaluate current social innovation initiatives as prototypes to be scaled?
- How can social innovations be scaled up?
- How can social innovation be evaluated?
- Does the SI fit all the user criteria?
- What solutions already exist that could be scaled or empowered through policy?

Analyze Context — Reframe Problems — Envision Alternatives — Prototype & Experiment — Evaluate & Scale

Evaluate & Scale

Tools for scaling solutions

Other tools that can be applied in this phase

Other NetZeroCities Resources

- Cultural Probe
- Field Experiment
- Most Significant Change
- Outcome Harvesting
- WHO Scaling up Framework

Access the other resources on the NZC Online Portal

NET ZERO CITIES

FUNNEL OF EXPERIENCE SHARING
Preparation & Instructions

Description

The template for experience sharing helps reflecting on experimentation for analytically identifying issues that should be addressed and strengths of the project.
The method has the purpose of providing a structure for learning from project experiences, by providing discussion categories and a template to collect input (knowledge sharing and documenting).

How to conduct

Duration: 30 - 40min

Resources:
- This template should be used after a project or testing/ prototyping experience to evaluate and reflect on the results, outcomes and learnings

Material: Pens, post-its

Participants per team: 3-12

Instructions:
1. The visual template can be utilized to facilitate meetings with the goal of extracting learning from experiences. The template helps participants structure experiences according to 2 dimensions:
   a. phases of the project (plan, execution and end), and (2)
   b. activities (actions, outcomes and learnings).
2. A facilitator should write down each of the participants' contributions on the template. If the meeting takes place in person, the template can be printed poster-size. If the meeting is held online, the template can be used in a collaborative software (such as Miro) and each participant can write down his/her experiences and reflections.
3. The resulting structure is a template with 9 cells, in which the underlying metaphor of the funnel suggests the idea that learnings (that metaphorically come out of the funnel) are distilled from all the input collected in the top part of the funnel (corresponding to actions and outcomes).

FUNNEL OF EXPERIENCE SHARING
Template

	PLANNING	EXECUTION	CLOSING
ACTIONS			
OUTCOMES			
LEARNINGS			