Designing participatory transformative processes for

JUST & CLIMATE-NEUTRAL
CITIES

METHODOLOGICAL GUIDELINES
FOR USING TRANSITION MANAGEMENT

TOMORROW

"Europe, the first climate-neutral continent in the world by 2050."

URSULA VON DER LEYEN, President of the European Commission

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TOMORROW

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ENERGYCITIES

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FOREWORD

WALKING THE PATH TO CLIMATE-NEUTRALITY AND RESILIENCE WITH OUR CITIZENS AND COMMUNITIES

Over the past years, climate neutrality has become the new norm for long-, and even mid-term climate ambition for local authorities. Our citizens, particularly younger generations, have called on us local politicians to "act now". We, mayors, have responded by signing up to the Covenant of Mayors for Europe or joining the EU Mission of 100 climate-neutral and smart cities by 2030.[1]

These visions of decarbonised and resilient communities require strategic roadmaps and concrete actions, such as new collaborations, agreements or contracts between different local stakeholders. Called local 'COP', climate pacts, or city-climate-contracts, these agreements represent much needed innovative forms of social and economic governance and democracy.

The city of Leuven started this journey a few years ago by introducing our innovative model of governance, called Leuven 2030. This approach spearheads new ways of decision making by the city together with local stakeholders, representing civic society, businesses, knowledge institutions and governments. Leuven 2030 has strongly contributed to being awarded the European Green Leaf in 2018 and the European Capital of Innovation in 2020. However, most importantly, this governance model and the distributed leadership and ownership it pursues, has created concrete leaps in moving towards climate-neutrality and resilience.

As a Lighthouse city in the TOMORROW project, we have had the honour to share our experiences with our peers in other European cities. Some of these experiences are illustrated through these guidelines. What lies before you is a precious document, which I hope many of you mayors and transition leaders in cities will use to accelerate sustainability transitions in our cities and towns across Europe and beyond, for our best possible, shared future.
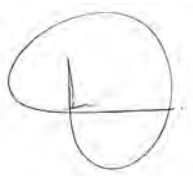
Mohamed Ridouani
Mayor of Leuven,
Member of Energy Cities Board

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1. Leuven 2030 is a city broad network, founded in 2013, as one of the driving forces towards a climate neutral Leuven in 2030. It brings together 500 members representing the local government, other public authorities, knowledge institutions, companies, civic society organisations and hundreds of citizens, equally represented in our General Assembly and Board of Directors.

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INTRODUCTION

In July 2019, President of the European Commission Ursula von der Leyen declared she wants Europe to become *"the first climate-neutral continent in the world by 2050"*.[2] In 2020, ambitions were raised, by presenting plans to reduce greenhouse gas emissions to at least 55% by 2030, compared to 1990 levels.[3] Today, the urgency to accelerate energy transitions is more pressing than ever. Efforts have intensified, as illustrated by the Commission's launch of the Mission for 100 climate-neutral and smart cities by 2030. While the Commission's ambitions have been met with praise, its Green Deal has equally been criticised to be a mere 'rhetorical commitment'. Actual, concrete plans for decarbonisation are often still opaque, while the Green Deal's success will depend on how it will be implemented on national, regional and local levels. For this operationalisation, cities play a pivotal role in fleshing out how to deal with practical challenges on the road to climate neutrality.

This guide supports policy workers in (European) cities who want to design a transformative and participatory process for realising just and climate-neutral cities. Based on a three-year research project with six European cities (TOMORROW), this guide has been developed to address issues encountered in the practice of urban transitions: from redesigning municipal institutions to creating legitimacy for radicality and shaping co-creation.

2.   European Commission (2019).

3.   European Commission (2020).

The guide can be used to work towards developing a roadmap for decarbonisation in 2030 or 2050, but also to develop sustainability policies, trade agreements, or memoranda, and can be used by teams in public or private organisations, across organisations and/ or with support from a third party. Importantly, the *process* of transition management that this guide covers is more important than any anticipated *outputs*.

The guide describes processes of governing urban transitions along the metaphor of tending to a garden, as illustrated in Figure 1: starting with **Understanding the Conditions (Step 1)**, then **Planting the Seeds (Step 2)**, **Nurturing Growth (Step 3)** and finally **Harvesting Results and Continuing the Cycle (Step 4)**. Each chapter starts with 'the basics'- a recap of what transition management activities need to be conducted as part of that step. We then propose a 'deep dives' - themes that have surfaced in practice that require particular care

and attention. These issues concern identifying the radical core, developing transition legitimacy, co-creating knowledge with diverse actors, and setting up governance arrangements. Applying the steps requires flexibility, open-mindedness and the willingness to go back and forth between them. It is an invitation to observe: learning what supports the ecosystems in your garden (i.e. city), as well as what inhibits them, and to apply those lessons directly.

This guide has been designed in parallel with the TOMORROW **Workbook Vol. I** and **Vol. II**, which provide hands-on exercises to put the steps into practice. It is a sequel to the Guidance Manual Transition Management in the Urban Context (2016), available **here**.

FIGURE 1. THE STEPS COVERED IN THIS METHODOLOGICAL GUIDELINE FOR TRANSITION MANAGEMENT

GARDEN METAPHOR & METHODOLOGY STEPS

STEP **1**: UNDERSTANDING THE CONDITIONS

STEP **2**: PLANTING THE SEEDS

STEP **3**: NURTURING GROWTH

STEP **4**: HARVESTING RESULTS & CONTINUING THE CYCLE

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METHODOLOGICAL GUIDELINES
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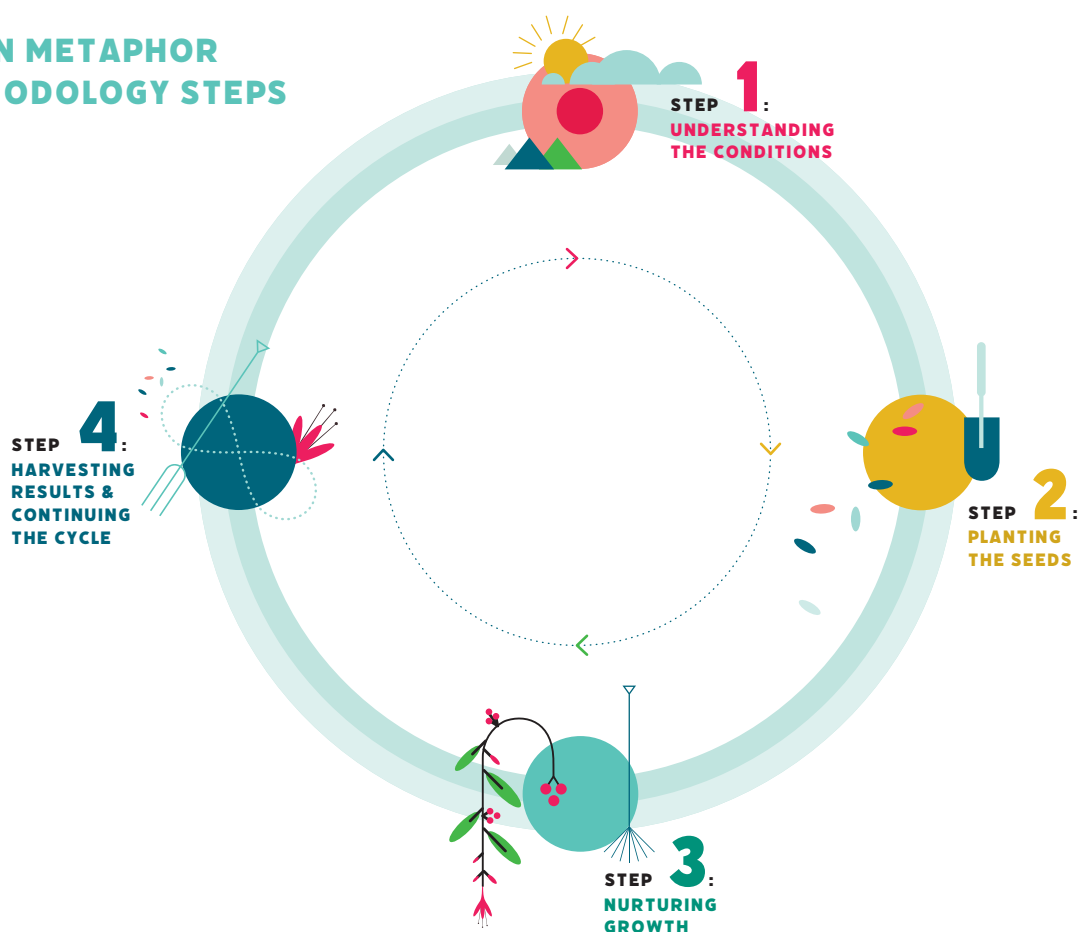
NAVIGATING TRANSITION MANAGEMENT

These guidelines are based on the transition management approach, which has been developed through research and insights from the academic field of sustainability transitions. This section provides a theoretical background to the metaphor of tending to a garden by introducing the concept of transitions and how transition management is designed to accelerate transitions. We also explain how this guide tackles some of the main tensions that have surfaced in transition governance over the past years, and the adaptations to which these have led.

UNDERSTANDING SUSTAINABILITY TRANSITIONS

A sustainability transition is considered a *"radical transformation towards a sustainable society, as a response to a number of persistent problems confronting contemporary modern societies"*.[4] Sustainability transitions entail fundamental change in ways of doing (practices), ways of thinking (cultures) and ways of organising (structures).[5] For energy, for instance, this could mean a new energy saving habit such as wearing warmer clothes inside (practice), understanding energy as a commons instead of a commodity (culture) and the emergence of decentrally organised energy cooperatives (structures).

A central feature of transitions is how they deal with complex, persistent problems: issues that are deeply entrenched in structures of society, difficult to predict, and which involve many different actors.[6] They are inherently intertwined with other problems and cover multiple scales, sectors and actors. This means that trying to address them with a stand-alone technological solution, is likely to lead to reproducing the problem. Therefore, working on sustainability transitions means not only problematising the resource use of fossil fuel economies, but also the organisational and power structures that sustain this.

Several core phenomena are key to understanding sustainability transitions[7]:

- **Non-linearity:** Transitions do not develop gradually and evenly in a forward or straight 'upwards' line, but rather through disruptive shocks.

- **Co-evolution:** Technological, social, economic, ecological, and institutional factors influence each other, and as such 'co-evolve'.

- **Emergence:** New structures emerge out of chaotic and complex processes, rather than from being planned and managed.

- **Variation and selection:** Novelties that accelerate transitions follow from a variety of experiments.

- **Multi-level dynamics:** Transitions are conceptualised by the interaction between the "context (landscape), dominant configuration (regime), and alternatives (niches)".[8]

4.   Grin et al. (2010).

5.   Frantzeskaki & de Haan (2009).

6.   Dirven et al. (2002) in Rotmans & Loorbach (2009).

7.   Loorbach et al. (2017).

8.   Kemp et al. (1998) in Loorbach et al. (2017).

This last point on multi-level dynamics is reflected in a model called the Multi-level Perspective (MLP). This model visualises the landscape, regime and niches in transitions on three distinct levels[9]:

- **Landscape:** 'Exogenous' factors or 'trends' in the system, which influence both niches and regimes. Examples are climate change or resource scarcity.

- **Regime:** Dominant structures, cultures and practices. Examples are centralised (fossil fuel) energy systems in the market, government, and consumption.

- **Niches:** Alternative practices, structures and cultures. Examples are energy cooperatives and other innovative energy practices.

As demonstrated in Figure 2, out of a multitude of niches, certain alternatives can manage to become mainstream, up to the point where they change or replace the dominant socio-technical regime: a transition.

Another model that helps to conceptualise transitions, is the X-curve model (see Figure 3). The X-curve captures *"dynamics of societal transitions as iterative processes of build-up and breakdown over a period of decades."*[10] The model features two main lines: one moving up and one moving down. The line starting at the top left represents 'exnovation' (a process of breaking down and phasing out) while the line starting at the bottom left represents 'innovation' (a process of emergence and building up). The interaction between these two patterns takes place within the context of developments in demography, technology, economy and (geo)politics among others. Below we feature succinct descriptions of elements of innovation and exnovation.

FIGURE 2. A DYNAMIC MULTI-LEVEL PERSPECTIVE ON TRANSITIONS

SOCIO-TECHNICAL LANDSCAPE

Landscape developments put pressure on existing regime, which opens up, creating windows of opportunity for novelties.

New socio-technical regime influences landscape.

SOCIO-TECHNICAL REGIME

MARKETS, USER PREFERENCES
INDUSTRY
SCIENCE
POLICY
CULTURE
TECHNOLOGY

Socio-technical regime is 'dynamically stable'. On different dimensions there are ongoing processes.

New configuration breaks through, taking advantage of 'windows of opportuntity'. Adjustments occur in socio-technical regime.

Elements are gradually linked together, and stabilise in a dominant design. International momentum increases.

TECHNOLOGICAL NICHES

Learning processes take place on multiple dimensions. Different elements are gradually linked together in a seamless web.

TIME

SOURCE: Geels & Schot (2007).

9. Kemp (1994) in Geels (2005).
10. Loorbach et al. (2017).

Innovation: Build-up of emerging culture, structure, and practices

- **Experimentation:** Radically new ways of doing and thinking;
- **Acceleration:** Alternatives connect, become accessible;
- **Emergence:** New structures become visible;
- **Institutionalisation:** New structures stabilise;
- **Stabilisation:** Optimisation of the new system.

Exnovation: Transforming and phasing-out of dominant culture, structure, and practices

- **Optimisation:** Existing structures are improved;
- **Destabilisation:** A fundamental discussion about the direction of society is initiated;
- **Chaos:** Societal structures experience disruptive shocks;
- **Break-down:** Fall out of existing order;

- **Phase out:** Former dominant institutions and practices become anomalies and eventually disappear.

The mechanisms and patterns described by the X-curve constitute a starting point for debate about the state of transition. The X-curve offers a common language and perspective to explore the dynamics at play, as well as possible actions and reactions by individuals, organisations and sectors. While the transition dynamics described by using the X-curve are subjective, their general characteristics and phases are based on scientific insights into the way in which complex systems fundamentally change their nature.[11]

The booklet **X-curve: a sense-making tool to foster collective narratives on system change** by DRIFT and EIT Climate KIC features more background information about the X-curve, examples and suggestions for how to apply it in your context.

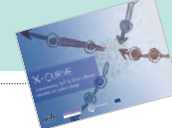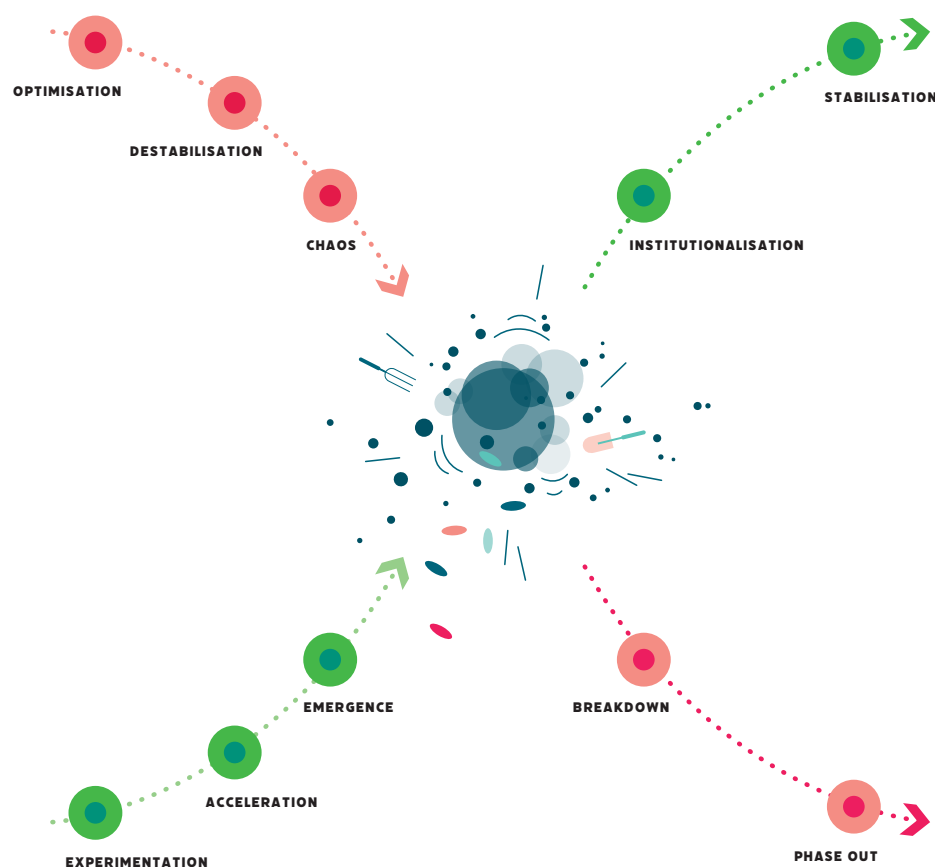FIGURE 3. **THE X-CURVE MODEL** (ADAPTED FROM LOORBACH ET AL., 2017)

OPTIMISATION

DESTABILISATION

CHAOS

INSTITUTIONALISATION

STABILISATION

EMERGENCE

BREAKDOWN

ACCELERATION

EXPERIMENTATION

PHASE OUT

SOURCE: Silvestri et al. 2022, based on Loorbach, 2007.

11.   Idem.

REVISITING TRANSITION MANAGEMENT

WHY TRANSITION MANAGEMENT?

Having established that transitions deal with complex and persistent problems, the question becomes how we might attempt to accelerate, shape or govern them. The starting point for discussing the governance of transitions, is that it is impossible to 'command and control' transitions. It is, however, possible to support, trigger or accelerate certain transition dynamics, by facilitating processes that foster (social) learning, systems thinking, and enable new activities and collaborations for a more sustainable future. In this section, we introduce how the 'searching and learning process' of transition management has been designed to do exactly that. Transition management was developed in the early 2000s by researchers and policy workers in the Netherlands.[12] Since then, the approach has been broadly applied in fields such as energy, healthcare and water, and on the scale of regions, cities and neighbourhoods.

In the manual Transition management in the Urban context (2016) a hands-on overview is provided of how four kinds of transition management practices can be applied in practice.[13]

These practices cover four areas:

o   **Strategy:** focusing on the long term, structuring societal problems and envisioning alternative futures;

o   **Tactics:** developing coalitions, images, and transition agendas;

o   **Operations:** mobilising actors and implementing projects and experiments;

o   **Reflexivity:** evaluating, monitoring, and learning throughout the process.

Importantly, transition management is not about delivering a final report or product. Through the process, the seeds for accelerating change are planted by initiating strategic activities and breaking open conversations. Both the activities themselves, as well as the final product, are intended to have lasting impacts.

UPDATING TRANSITION MANAGEMENT

In these guidelines we update the activities described in the manual Transition management in the Urban context (2016), to respond to pressing challenges and newly emerging transition dynamics found in practice. Now that both practitioners and researchers, as well as society in general, have become more familiar with (the urgency of) transitions, new issues and dilemmas are surfacing for transition management. The three crucial updates in these guidelines are:

1.   Developing a 'radical core' based on system analyses;

2.   Reflecting and acting on legitimacy tensions;

3.   Anticipating governance arrangements to sustain impact.

BOX 1. CHANGING OBJECTIVES OF TRANSITION MANAGEMENT

The MUSIC project (Mitigation in Urban Areas: Solutions for Innovative Cities) aimed to catalyse and mainstream carbon and energy reduction in urban policies, activities and the built environment. In this project, five European cities (Aberdeen, UK; Montreuil, France; Ghent, Belgium; Ludwigsburg, Germany; and Rotterdam, the Netherlands) were supported to facilitate an alternative governance process through transition management.

Importantly, the objectives set out in the transition management manual that was created during this project were to establish 1) a sense of direction, 2) an impulse for local change, and 3) collective empowerment.[14] These objectives were developed for contexts in which awareness and action for climate-neutrality were still relatively low. Today, these objectives may be challenged, as transitions move into different phases and dynamics.

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12.   Kemp & Rotmans (2009), Voss et al. (2009).

13.   Loorbach (2010).

14.   Roorda et al. (2016).

DEVELOPING A 'RADICAL CORE' BASED ON SYSTEM ANALYSES

In this new iteration of transition management, responding to specific context-dependent dynamics of transitions is a central feature. Therefore, **Step 1. Understanding the conditions** focuses on assessing transition dynamics, formulating a specific 'radical core': radical new ideas, objects, or actions, that have the potential to challenge/alter/replace existing institutions, based on the transition phase that a system may find itself in.

Maintaining a sense of 'radicality' can become challenging once the operational day-to-day work of transition management requires the most attention. Therefore, becoming more explicit about the radical ambitions of a process can help to balance reflexivity (i.e. being mindful of the conditions and adapting plans during the process) and pushing for radicality.

REFLECTING AND ACTING ON LEGITIMACY TENSIONS

A contentious issue with regard to accelerating transition dynamics is how to relate to political developments in the respective democratic context. Previously, in some instances, the political context was deliberately disregarded in transition management processes. This came from the idea that transition management is not about creating policy, but rather about creating a collective and shared agenda, and a platform for collaboration. Practically, having the process 'operate under the radar' might lower the threshold when inviting actors to envision new and unknown territory. And finally, there was an awareness of how the process might be co-opted by a political party, making the outcomes vulnerable to political electoral shifts. However, such depoliticisation of the process has also been found to be problematic. Unquestionably, transitions affect interests and power relations and thus political issues and democratic processes must be reckoned with.

Another emerging issue concerns strategically involving front-runners as drivers of the transition management process. Inherently, this means that people who, according to the initiating party, do not fit this profile, are excluded and consequently cannot influence the process. Individuals with specific transformative visions and practices were selected to participate to co-formulate a shared future and pathways thereto - rather than having radical perspectives diluted by having too many 'regime' voices on board.

However, focusing merely on front-runners can arguably be considered problematic, as democratic values such as deliberation, transparency and participation do need to be accounted for. In these guidelines, we explore how involving a larger group of actors means leveraging more interests and preferences, and how this can be addressed by developing the concept of transition legitimacy in **Step 2. Planting the seeds**.

ANTICIPATING GOVERNANCE ARRANGEMENTS TO SUSTAIN IMPACT

Finally, the long-term impact of the process itself, i.e. sustaining the impact of transition management once initial funding stops or a partner withdraws, is the third update. This is closely related to how to embed the outcomes of transition management in (new) structures, cultures and practices. For the process to have a lasting impact it must be embedded with existing programmes, initiatives or roadmaps. In **Step 4. Harvesting results and continuing the cycle**, we discuss how this can be done by anticipating governance arrangements. While transition management is a temporary intervention, the searching and learning process continues by continuing its legacy.

TENDING TO A GARDEN: A METAPHOR

Along with these transition management updates, the metaphor of transition management as tending to a garden was experimented with, as this too requires patience, creativity, curiosity and hard work. Additionally, we have used this metaphor to describe four distinct steps, as illustrated in Figure 4. If you are a policy maker, urban planner or otherwise practitioner working on urban sustainability transitions, the metaphor and the steps can support you to implement transition management, without losing sight of how each step is interconnected.

The revised transition management process starts by analysing current system dynamics and addressing the question: *'Why is a transition process needed, and what is required for a transition to a just and sustainable city?'* in **Step 1. Understanding your Conditions**. Accordingly, **Step 2. Planting the Seeds**, focuses on how formulate strategies, tools and activities to implement, and learn from, dealing with the question *'How can our process and outcomes serve the radical core while being democratically legitimate?'* In **Step 3. Nurturing Growth**, addresses questions that may arise in the implementation of activities, such as *'How do you support and empower the transition team?', 'How do I monitor my progress in responding to system demands and respond to this in real time?', 'How do I build the capacities needed within myself and my organisation?'* and finally *'How do I meaningfully co-create knowledge with citizens and other stakeholders?'*. Importantly, these guidelines also consider how to foster the long-term impact of transition management in **Step 4. Harvesting Results and Continuing the Cycle**, asking *'How can transition governance structures sustain the impact of the transition management process?'*.

All steps are iterative - meaning they build on each other, but you can also go back and forth during your process. The aim is that by following these steps, transition management can support working towards a healthy and flourishing equilibrium, similar to that of an ecosystem in a garden.

BOX 2. INTRODUCING THE TOMORROW CITIES

In the EU-funded project TOMORROW (2019-2022), Energy Cities and the Dutch Research Institute for Transitions (DRIFT), together with the pilot cities of Braşov (Romania), Brest (France), Dublin (Ireland), Mouscron (Belgium), Niš (Serbia) and Valencia (Spain), spearheaded innovative ways to develop long-term transition roadmaps, by implementing the revised transition management methodology.

This guide presents examples from these cities, who have put the transition management steps into practice. While the cities in the TOMORROW project designed roadmaps as an outcome of their process, other outputs such as building networks, communities or specific projects could be more fitting and thus transformative for other contexts. Similarly, while this guide mostly refers to cities as the geographical scale for implementing transition management, the process can also be initiated (trans)nationally, regionally or on a neighbourhood level.

FIGURE 4. THE STEPS COVERED IN THIS METHODOLOGY GUIDELINE FOR TRANSITION MANAGEMENT AND THE RELATED EXERCISES DEVELOPED IN WORKBOOK VOL. II.

GARDEN METAPHOR & METHODOLOGY STEPS

STEP **1**:
UNDERSTANDING
THE CONDITIONS

TRANSITION CANVAS
ACTION PLAN CANVAS
TRANSITION DYNAMICS MAPPING
RADICAL CORE TOOL

STEP **2**:
PLANTING
THE SEEDS

CO-CREATION CANVAS
TRANSITION LEGITIMACY TOOL

STEP **3**:
NURTURING
GROWTH

STEP **4**:
HARVESTING
RESULTS &
CONTINUING
THE CYCLE
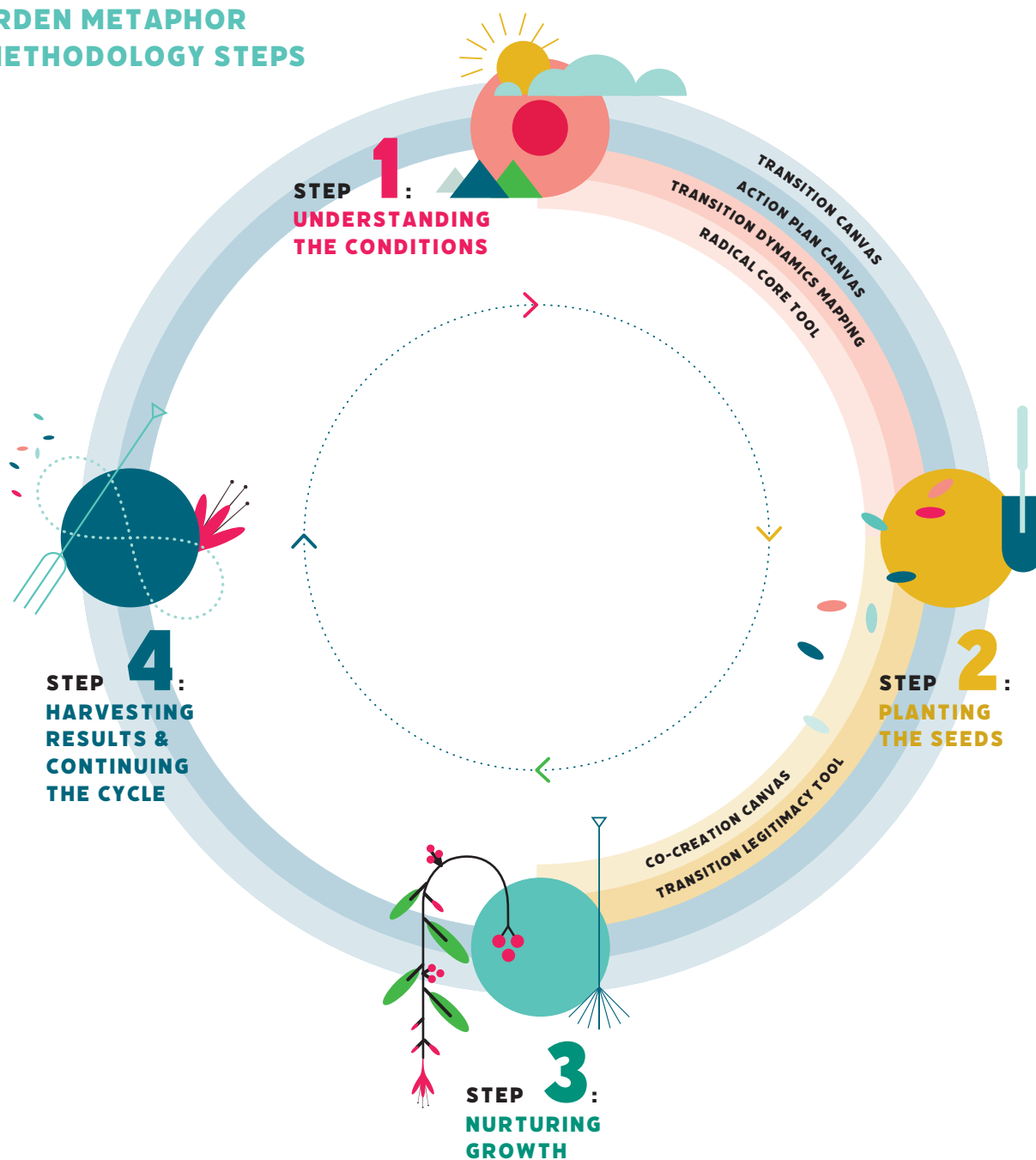
UNDERSTANDING THE CONDITIONS

We start from the assumption that there is a general consensus on the desired direction of the transition you are working on in a designated geographical context (e.g. city). This could for instance be climate neutrality by 2050. If this is not yet the case, please refer to the manual Transition management in the Urban context (2016).

1.1 THE BASICS

SETTING UP A TRANSITION TEAM

OBJECTIVE: Form a group responsible for all strategic decisions in relation to the transition management process, its organisation and facilitation.

We differentiate between the transition team and the wider transition actors.

- The transition team includes the team members that are at the core of the design and implementation of the co-creation process.

- The wider transition actors comprises the overall actors engaged in the co-creation process.

The transition team organises and facilitates the transition management process. Since working on transitions concerns complex problems that involve a multitude of actors with differing interests and goals, it is key to choose your transition team wisely. This means including actors who want to apply innovative methods and have different perspectives from you. In **Step 1. Understanding the conditions**, the transition team is responsible for conducting the system and actor analysis and choosing what system dynamics to focus on. Afterward, the team will negotiate roles and responsibilities for organising and facilitating the rest of the process (more on this in **Step 3. Nurturing growth**).

The transition team consists of a core group of three to six people, with additional support for specific knowledge and capacities. The overall team ought to consist of actors with a diverse range of capacities and skills, including those with a good overview of sustainability initiatives and projects, facilitation and stakeholder engagement skills, and knowledge of policies and legal frameworks. To recruit transition team members you can conduct interviews based on a set or guiding questions or criteria. Such criteria can include issues such as intrinsic motivation, time, skills, or connection with (local) initiatives and stakeholders.

Keep the following suggestions in mind when building a transition team:

- **Prioritise diversity.** Aim for a diverse team in terms of institutions and sectors (e.g. civil society, business, public sector, non-profit sector, academia, etc.) as well as personal backgrounds (e.g. ethnicity, socio-economic background and gender). The transition team can include colleagues from the initiating organisation, but also actors from other organisations. For example, if you want to facilitate a process that focuses on specific neighbourhoods, you need to engage people that have been already working in those neighbourhoods or, preferably, residents from those neighbourhoods.

- **Build trust.** Especially at the beginning of the process, building trust among the members of your transition team is key. Think of creative and fun ways to get to know each other at a personal and professional level by organising informal activities.

- **Create shared principles and values.** Transparency about each other's strengths, weaknesses, personal drive and learning aims is an important foundation for the process.

- **Develop a shared understanding of the transition challenge.** Establish how transition team members (initially) understand the transition challenge; what changes they hope to affect, and how they want to influence that change directly and indirectly.

- **Identify a vision of your transition management process.** Invest time in identifying a shared vision of what your transition management process might look like. You will adjust this vision as you involve more stakeholders in the process.

- **Define roles and responsibilities within the team and during meetings.** Reflect on the role of the transition team, and on who will be responsible for what activities. We also suggest planning recurring meetings, deciding on a decision-making structure, and integrating a reflexive monitoring process (more in **Step 3 Nurturing growth**).

- **Assess the capacities and skills available and missing.** To run the process you will need capacities on board such as project management, stakeholder management, analytical and visioning skills, group facilitation, communication and lobbying. It is therefore essential to know which capacities and skills are present, and which ones you need to build (e.g. through training) or recruit. For instance, you might want to involve a team of 'front-runners' or decide to initiate a citizens assembly responsible for certain outcomes (also see **Step 2. Planting the Seeds** on Finding Resources).

KEY TASK: Taking into account the issues listed above, scope potential members for your transition team. Conduct a number of interviews with them to understand their perspectives in detail before inviting them to become members of your transition team.

BOX 3.

FORMING A TRANSITION TEAM IN BRASOV, ROMANIA

Brasov has a highly involved team cooperating on the energy transition and climate neutrality. This is largely due to a history of working together on local planning: some current partners have also been involved in the monitoring and evaluation of the Sustainable Energy Action Plan (SEAP - part of the Covenant of mayors), and the development of the Local Heating Strategy in Brasov.

The Brasov transition team began its journey through an online meeting in June 2020, setting its mission, vision and goals. The transition team was built on an existing network, and complemented by companies representing sectors in the city who have a major influence on the energy transition at the local level. The Brasov team selected companies to take part, rather than individuals, to ensure the continuation of the transition team meetings beyond the TOMORROW project, and to prevent individuals from becoming overwhelmed in terms of time load. The transition team is fluid, meaning that there is always room for new members to join. At its conception, the transition team included the following organisations:

- Brasov Municipality;
- Brasov public transport company;
- Electricity distribution company;
- Natural gas company;
- Public lighting company;
- High Efficiency Cogeneration company;
- Waste company;
- Environmental protection agency;
- Water company;
- Transilvania University;
- Brasov Design Center (BVDC) (A group of local professionals in architecture, design, communication, technology, sociology and economics promoting co-design for public services).

The transition team aims to reconsider all sustainability goals of Brasov, including political targets set for 2030 and the resources assigned to this, energy management at the local level, available technologies to reduce CO_2, the legal possibilities for the municipality to produce and consume their own energy, renewing the public transport fleet with with electric and hybrid vehicles, and the quality of life and the wellbeing of citizens.

More specifically, the main objective of the transition team is to:

- Define the local Sustainable Energy and Climate Action Plan (SECAP) for 2030;
- Test tools and implement innovative methods to involve the civil society at all stages of the SECAP development;
- Develop a roadmap to Climate Neutrality in 2050;
- Promote energy sufficiency and climate neutrality on the local agenda;
- Promote a circular economy, local production of energy, renewable sources, recycling and reuse of materials.

During a hybrid transition team meeting in January 2022, opened by the Mayor of Brasov, a broader set of stakeholders was invited: a landfill company, another local waste company, the metropolitan area association and a construction company. All the participants contributed to the SECAP 2030 by providing measures in order to ensure the transition of the city to a low-emissions community. An added value of the transition team is how its members started collaborating among themselves for the purpose of developing future local projects.

The transition team keeps in touch through online meetings and email exchanges. Meetings do not take place on a regular basis but rather based on needs identified by the municipality. There are also meetings held with only a few members of the transition team, focussing on more specific topics from the SECAP.
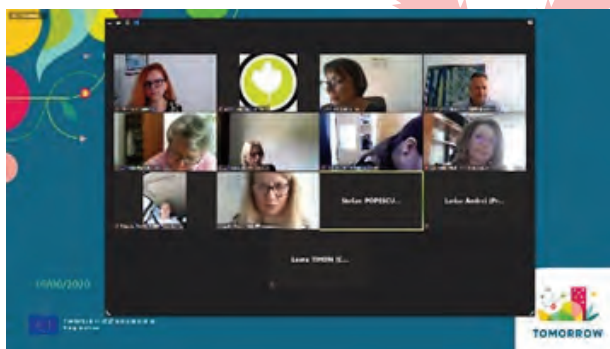
A screenshot of an online transition team meeting in Brasov.

Brasov.
© Andrei Paul

DEFINING THE SYSTEM

OBJECTIVE: Define the boundaries of the system in terms of geography, sectors and institutions, in order to find focus and make the process feasible.

Before diving into your system analyses, it is important to decide on the boundaries of the system you want to target. A system's boundary demarcates what processes and components are considered to be 'inside' the scope, and which are considered 'outside' the scope of the transition management process. You demarcate your system by deciding on geographical, sectoral, and institutional boundaries. For example, you can draw a geographical boundary around the inner city, or include the city outskirts. This often coalesces with institutional boundaries: whether to include the city municipality or the broader city boundaries, which might have different institutional structures. A question to ask in this regard is whether you focus on one specific sector or multiple ones - think of mobility, public space, heating, electricity (both residential and commercial?), material use, etc. Once these demarcations have been decided on (for now), you can start the analyses of your system.

While drawing these boundaries, be aware that these are artificially drawn boundaries, which in reality are not isolated. Factor in any relations between sectors within and outside of your system boundaries, and reconsider whether your system boundaries still make sense. For instance, closer inspection through your system analysis might turn out the initial demarcation was too narrow or too broad.

KEY TASK: As specific as possible, write down the boundaries of the system within which you will be developing activities, and for which you aim to accelerate a transition. You can use the System Demarcator Tool in Workbook Vol. I for this.

CONDUCTING ACTOR & SYSTEMS ANALYSES: SEEING TRANSITION DYNAMICS

OBJECTIVE: Create an understanding of the relevant actors within your system and how these relate to one another as well as to the sustainability challenge at hand. In addition, start to understand the history and current dynamics of the system you want to target for designing and implementing a process toward sustainability transitions.

ACTOR ANALYSIS

The actor analysis helps to identify the most relevant actors or stakeholders in a system, what roles they have, and how they relate to each other. In turn, this can demonstrate what actors need to be involved in the transition management process for certain activities. An actor analysis can be conducted by an individual or a group of people (e.g. transition team) and by using desk research methods or by interviewing different stakeholders (e.g. colleagues from across departments within a local administration). You could also organise a participatory workshop including actors from civil society, business, academia, and knowledge institutions. Who is invited to such a workshop will influence defining the direction of the process, so reflecting on issues of legitimacy is already important here (see the deep dive in **Step 2**).

There are different heuristics that you can use to make sense of the diversity of actors within your system, which are explained in Workbook Vol I:

- **Social Network Analysis (SNA):** to track and understand networks and relationships at different levels;

- **Power-Domain-Mapping:** to map actors based on their organisational background and the kinds of power they are exercising;

- **Multi-Actor perspective (MaP):** to map actors in different sectors and their institutional logics, and reflect on interactions and interconnections between institutional logics.

SYSTEM ANALYSIS

A system analysis identifies the history, and current state including dynamics, challenges and opportunities in a given system. It also provides the opportunity to more deeply reflect on the interconnections between (persistent) problems, and their root causes. It will help you to understand which transition management activities are most relevant. As with actor analysis, a system analysis can be done individually or with a group of people, using desk research methods, or participatory methods. For the transition team to orchestrate the transition management process from a shared understanding, it is important to conduct the systems analysis together and have different perspectives to enrich the overall picture of the system.

By conducting system analyses, it is possible to understand what transition dynamics are at play. Knowing this is a prerequisite for doing the 'deep dive' of formulating your radical core.

There are different tools that you can use to analyse system dynamics, as explained in Workbook Vol I. and Vol II.:

- **Uncovering systems:** to identify structures, cultures, and practices in your system

- **Multi-Level Perspective (MLP):** to characterise the system and map its dynamics by identifying the dominant structures (regime), the innovative developments (niches) and the broader societal trends (landscape)

- **X-Curve model:** to map the innovation and exnovation dynamics of a system

- **Four levels of governance:** to identify different types of governance activities in a system

- **Transition Dynamics Mapping Tool:** to visualise and reflect on the different dynamics of the X-curve. The tool consists of two stages: 1) Mapping transition dynamics and 2) Identifying system-level interventions.

Be aware of the provisional nature of your actor and systems maps - if throughout the transition management process you develop new insights, you might need to rethink the actors that are relevant to your system, or the dynamics that you observe (and hence relevant actions).

KEY TASK: Select tools for conducting actor and system analyses from the **Workbooks Vol. I. and Vol II.**, and implement these, preferably with your transition team.

1.2 THE DEEP DIVE:
IDENTIFYING YOUR RADICAL CORE

The outcome of your actor and system analyses is an insight into the transition dynamics in relation to your initial ambition for conducting transition management. This general ambition or direction was likely identified by the transition team, or derived from policy documents for instance, e.g. climate neutrality by 2050.

Once you have insight into the transition dynamics, you can define a radical core: a central ambition, which aims to be radical and/or transformative for transition governance activities. The radical core consists of those radical new ideas, objects, or actions, that have the potential to challenge/alter/replace existing institutions. It is a certain selection based on what is feasible yet still transformative within the scope of your process and from your position. The radical core responds to the question: *What do you want to transform with your process?* It is the start of your operational process or 'programme management', in which the aim is to keep the solution space broad. This operational process is further described in **Step 2. Planting the seeds**. The radical core can be used for direction throughout the process through reflexive monitoring (see **Step 3. Nurturing growth**).

In the examples below, we demonstrate how certain findings from the system analyses (i.e. transition dynamics) can lead to formulating a 'radical core':

- **Possible transition dynamic:** A strong focus on the status quo, rather than long-term governance

  - *Potential radical core:* Uncover obstacles for transition to a sustainable future, e.g. by building new networks and constellations as a counterweight to vested interests.

- **Possible transition dynamic:** Change dynamics are observable through experimentation and upscaling of experiments

  - *Potential radical core:* Connect current 'front-runners' with broader strategic agenda and institutional actors, e.g. through a transition arena.

- **Possible transition dynamic:** A strong political will is apparent, but no broad public support for change.

  - *Potential radical core:* Embed energy transitions in broader societal changes, e.g. by developing a shared narrative or establishing a sense of urgency through organising a citizens' assembly.

- **Possible transition dynamic:** Progressive policy making, but no signs of breaking down fossil structures.

  - *Potential radical core:* Obtain insight into fossil fuel subsidies, and inform political decision-making on the issue, e.g. by investigating financial streams.

A tool that can be used for defining the radical core is the Transition Canvas as illustrated in Figure 5 (see Workbook Vol. II for instructions). In Box 4, we have featured an interview with the city of Dublin on defining their radical core. In Table 1, you can find examples of how the TOMORROW cities initially defined their radical core.

RADICAL CORE

KEY TASK: Define your radical core by answering the question 'What do we want to transform with our process?' based on your actor and system analyses. Refer to **Workbook Vol. II** for instructions on the Transition Canvas.

FIGURE 5. THE TRANSITION CANVAS

TRANSITION CANVAS TOOL

NAME: CITY: ORGANISATION:

	SYSTEM LEVEL INTERVENTION — What the system needs right now to accelerate the transition.	RADICAL CORE — What you want to transform with the process.	OUTCOMES — What you want to achieve (mid/long-term) (e.g. implementing the actions of the charter).	OUTPUT — Results that contribute to achieving an outcome. (e.g. a charter supported by certain actors)	ACTIVITIES — What you plan to implement to help realise the outcomes.
CITIZEN ENGAGEMENT ACTIVITIES					
ACTORS ENGAGEMENT ACTIVITIES					
PUBLIC ADMINISTRATION ACTIVITIES					
OTHER ENTITIES ENGAGEMENT ACTIVITIES					
INSTITUTIONALISATION ACTIVITIES					
SHARING & LEARNING ACTIVITIES					

TOMORROW

BOX 4.

AN INTERVIEW ON FINDING THE RADICAL CORE WITH KATIE & SUZANNE FROM DUBLIN, IRELAND

© Katie
Harrington

© Suzanne
Fitzpatrick

Katie (left) and Suzanne (right) work for Codema, Dublin's Energy Agency. They have been involved in the TOMORROW project as Energy and Climate Awareness manager and Communications manager to create a roadmap for climate neutrality.

**What uneasiness did you encounter during the process?
Is there one element that stands out as the most tricky one?**

We are doing something that has never been done before in Dublin and perhaps even nationally. There's no blueprint for us to follow. We're essentially creating a blueprint alongside the creation of a roadmap. So we have almost two responsibilities in one, the first one being to create a roadmap to reach our climate targets and secondly, to zoom out and look at the process as a whole and understand what worked and what didn't, in order to pass the torch to other communities and agencies around the country and internationally. Basically, designing a roadmap for our roadmap! Managing that has been a significant challenge and brought a sense of uneasiness at times; not knowing if we're on the right track.

We started this process with some knowns and a lot of unknowns. For example, we have four local authorities or municipalities here in Dublin and we know they are only directly responsible for 5% of greenhouse gas emissions in the Dublin region. So, our motivation for this transition team and designing this roadmap was "Okay, well how do we tackle the other 95% and how do we do this in a fair and effective way?". That really is our radical core for this team and for the roadmap; bringing together a diverse group of stakeholders from a range of sectors to understand and deliberate on the best pathways for us to reach our climate targets for Dublin. Due to this process being the first of its kind in Dublin, we also don't have all of the answers so we spend a lot of time in the zone of uncertainty, which can be a challenge also.

**How did you come to your radical core?
What is it, and why is it radical?**

Our roadmap will be radical as it has significant potential to be transformative within our capital city. There are several reasons for this; 1) the roadmap will be guided by the quantitative evidence-base of our Dublin Regional Energy Masterplan (a first-of-its-kind in Ireland, holistic energy model providing cost-optimal pathways to reach our 2030 and 2050 climate targets across heat, transport and electricity), 2) this Energy Masterplan has taken into account our national climate targets of a 51% reduction in emissions by 2030 and net-zero emissions by 2050 3) Our transition team will be responsible for translating this technical data into transformative actions within their sectors and networks, aligning with on-going initiatives and ultimately humanising the technical evidence-base into a fair and ambitious strategy for the whole of Dublin.

**Have you experienced any push pack on the radicality,
and if so, how?**

There is a fine balance between radicality and reality. In other words, regardless of how ambitious our strategy is, we will still be working within the parameters of the national political, social and economic system. In a bid to maintain our radical core and work outside of the confines of the "system" we didn't put any parameters in developing a vision for Dublin in 2050. We kept it as a very divergent process where we asked the team to think beyond the realms of possibility. To set priorities may have prevented people from exploring themes and areas that they felt were important.

Our transition team spent an entire day working through our vision for 2050, which involved us doing a guided meditation where we walked through Dublin in 2050 and envisioned the sounds, smells, tastes and feeling of our capital city. We also made clay models that captured an element of our own vision to 2050 and created a story around these. It was a very creative and at times uncomfortable process but it allowed us to transport ourselves to a future we want to see and explore themes that we felt were extremely important for the future of Dublin. Through clustering exercises we were then able to prioritise and group these ideas to design the elements of our vision- of which we have 10 and they range from warm & cosy homes, thriving people, places and biodiversity to people being actively involved and benefitting from a fair energy transition and just democratic society.

"There is a fine balance between radicality and reality."

Do you feel like you are compromising your radicality at any point? How and why?

This is a difficult question to answer. As it puts into question the radicality of the roadmap and whether our national climate targets are even radical enough in the context of our responsibility as a developed nation? Are our national targets truly fair given our historical emissions and responsibility to developing nations? We could (and arguably should) be doing more, acting faster, fairer and working towards more ambitious targets. However, we are also working within the context that Ireland's greenhouse gas emissions are increasing, not decreasing.

The truth is that we urgently need to start reducing our emissions because they are cumulative; once they are emitted they stay in our atmosphere for hundreds of years. So in terms of looking long-term- it can be beneficial from a visioning point of view to look to the year 2050 and picture a utopian future, but in terms of grounding that vision in action- we need to see the most ambitious action and transformative change in the next 8 years if we want to have any chance of seeing our vision of 2050 come to fruition. As the most recently published IPCC report concluded- every year matters, every choice matters. Frankly, we don't have the luxury of time to compromise on the radicality of our roadmap and we hope to demonstrate that in our final strategy for Dublin.

What would you advise other cities that run into uneasiness as they try to set out on pushing the fringe through formulating a radical core?

Find your "why". Why is it important that you push beyond the realms of possibility with your transition roadmap? Why develop a transition roadmap for your city? Why collaborate with a diverse range of people and perspectives? This process isn't easy so it is really important to dig into why you are going through this process.

For us in Codema we realised that to have the biggest impact across our capital city, we couldn't work alone. We needed to move beyond our comfort zone and engage with people from across a broad range of backgrounds and experience. We are learning every single day through this transition roadmap journey and it helps to remind ourselves of the bigger picture, which is to ensure a better quality of life for all citizens through a fair and inclusive transition to a low-carbon society. Remember- if it feels new, uncomfortable and uncertain at times you are most likely on the right track and asking the tough questions of the process. It shouldn't be easy and smooth. It takes effort to think outside the box but it takes courage to create a new box altogether.

"Remember- if it feels new, uncomfortable and uncertain at times you are most likely on the right track and asking the tough questions of the process."

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TABLE 1. THE RADICAL CORE AS DEFINED BY THE CITIES OF THE TOMORROW PROJECT

CITY	RADICAL CORE
Brasov (RO)	- Permanent collaboration across city departments for climate targets - Permanent collaboration between city and external stakeholders - Involve citizens and use their input for public policy - Integrate social perspectives and reflexive thinking in energy planning
Brest métropole (FR)	- Mobilise actions, e.g., alliances between actors - Connect local actions to changing national regulations/market rules - Ignite collaboration between internal services through transition team - Share the creation, implementation and monitoring of the roadmap to 2050 with external actors
Dublin (IE)	- Create a 'transition community' of stakeholders dedicated to implementation roadmap - Engage citizens from the start of the roadmapping process - Change mindset of local organisations to commit to actions that go further than their own agenda and proactively act on climate action
Mouscron (BE)	- Involve more target groups and stakeholders in climate plans - Start communication and collaboration between departments for climate objectives - Change the regulatory framework
Niš (RS)	- Share power between the municipality and external actors (i.e., citizens or citizen representatives) - Involve citizens in the roadmapping process - Involve a university professor to lead the process
València (ES)	- Collaborate with external entities to define the roadmap (quintuple helix, i.e., government, business, NGO's, media, academia) - Work with projects/ experiments as a starting point - Have other sectors/entities lead parts of the process - Provide ownership of roadmap to citizens - Identify and facilitate upscaling of energy niches

PLANTING THE SEEDS

Going back to the metaphor of a garden, once you understand the conditions of the soil, you can select the best seeds and planting design in order for the garden to flourish. For the transition management process, this means planning actions that support the radical core that you identified in Step 1, and enabling a transparent and effective process.

This step addresses the question '**How can our process and outcomes serve the radical core while being democratically legitimate?'**. The answer to this question is not static: it is a guiding question for your transition team, which you revisit throughout your process. There are three basic steps for planting the seeds:

- **Translating your radical core into potential outcomes and outputs:**
  This will help operationalising the analyses conducted in **Step 1**.
- **Sketching out potential activities:** It is important to create a first draft of potential activities,
  while minding the pitfall of going into 'solution mode'.
- **Finding resources:** The transition management process can only be successful to the extent
  that there is a realistic understanding of the resources that are (or can be made) available.

The deep dive in this chapter concerns how to develop transition legitimacy, i.e., how to assure honouring democratic values while pushing for the radical core of your transition management process.

2.1 THE BASICS

TRANSLATING YOUR RADICAL CORE TO OUTCOME, OUTPUT, & ACTIVITIES

OBJECTIVE: Hypothesise what you want to achieve with the transition management process without immediately thinking in ready-made 'solutions'.

Once your radical core has been identified, you can translate this into planning the organisation of your programme management. One way to do this is by breaking down the radical core to outcomes, outputs and activities:

- **Activities:** What actions will you implement? Activities (e.g. co-creation processes) can be developed, by checking them with your transition team and possibly an even wider circle of participants. The activities lead to outputs.

- **Outputs:** The concrete results of the activities, e.g. 500 participants, or delivering a report to the mayor. These outputs are planned to lead to outcomes.

- **Outcomes:** The mid- to long-term results of the outputs: what will the outputs lead to? The outcomes serve the eventual impact that you aim to achieve with your transition management process: the radical core.

A tool that can be helpful for this step is the Transition Canvas (see Workbook Vol II. for instructions). This canvas can later be used as a tool for your reflexive monitoring process (see **Step 3. Nurturing growth**). When formulating the outcomes, outputs and activities based on the radical core, a common pitfall can be to become too specific too soon. It is important to discuss the *potential* activities that could serve your radical core, rather than pinning down your activities too soon and thereby excluding opportunities that may arise.

KEY TASK: Discuss with your transition team what type of outcomes and outputs will address your radical core and fill this out in your Transition Canvas (see Workbook Vol II.). This is an initial hypothesis.

Challenge yourself to be specific and ambitious when filling out the transition canvas. Vague assumptions such as how 'more collaboration' will foster progress are doomed to fail.[15] Instead, specify how you aim to address the underlying reasons for systems failure such as fragmentation, hierarchies, or diverging interests that are neither exposed nor investigated.

PLANNING & TRYING OUT ACTIVITIES

OBJECTIVE: Define activities for your process, without pinning down ready-made 'solutions' or becoming 'locked in' a certain direction.
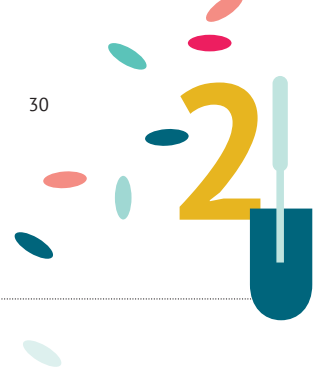
The next step is to sketch what activities will help you realise the outputs and outcomes linked to your radical core. To develop fitting activities, you can find inspiration in other cities, for instance by using the TOMORROW Factsheets. Consider examples such as:

- **Living Streets** In Ghent (Belgium), citizens are invited to 'take over' their street for a period of time through local consensus-building. Ideas have included carless streets, neighbourhood events, and playgrounds. This approach might support you in learning about what kind of public space citizens in your city dream of. *More information*.

- **A Challenge Prize design** If you find that you do not yet have any idea about what 'niche' innovation activity is happening in your city, you might consider unearthing civic creativity by hosting a challenge prize. *More information*.

- **Defund Fossil Fuels** The organisation 350.org found that across Europe, many funding streams are contradicting renewable energy policy. If you found in your systems analysis the 'deconstruction' of institutions is a key system dynamic, you can consider a similar initiative. *More information*.

- **Citizens assemblies** Different kinds of citizen assemblies, such as those with randomly selected citizens, are taking place across Europe, such as the one in Ireland. *More information*.

- **Urban labs** Setting up an experimental space in your city for social and technological innovations may support the development of niches. *More information*.

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15. Nagorny-Koring and Nochta (2018).

KEY TASK: Discuss potential activities with your transition team and fill them out in your Transition Canvas (see Workbook Vol II). In addition, use the Action Plan Canvas (see Workbook Vol. II) as a strategic planning tool to capture both long-term and short-term plans.

Do not be afraid to experiment or to fail during your transition management process when identifying what activities can trigger, support or facilitate change. In fact, if the activities feel 'safe', they probably aren't pushing the boundaries enough to have the right impact. To achieve these outcomes, the transition management process will need to establish activities different from 'business as usual'.

FINDING RESOURCES

OBJECTIVE: Anticipate the financial, human and social resources that are available to you or that you will need to attract in order to realise the activities that you have identified.

The activities need to be realistic to the funding, timing and resources that are available to you and your transition team. Where your resources come from will depend on who is involved in organising the transition process. Assess the resources that are available in terms of:

- Finances;
- Human resources (e.g. time investment, expertise and skills);
- Social networks (e.g. international/local).

If you find a discrepancy between what is needed and what you have available, you can opt for sketching out a 'minimal' as well as a 'desirable' process plan. Developing support and links to policies and projects might increase the access to resources – as actors become more involved they will want to make time and links to other policy domains and funding streams may become clear.

KEY TASK: Write down what resources you have access to and what resources you have to acquire. How will you do this?

BOX 5. REINVENTING INTERNAL COLLABORATION IN MOUSCRON, BELGIUM

Part of the radical core of Mouscron's process was to develop integration and cohesion between services and projects in order to realise a transition roadmap for a sustainability transition. Supported by the elected representatives, a transition team was set up within the municipal administration, bringing together sixteen members from departments such as the Energy Unit, the Transversal Strategic Programme Coordination Unit, the Environment Unit, the Mobility Department and the Communication Department. The transition team meets every two months and has highlighted the need to become more aware of each other's projects, as it appeared that each department was working towards sustainability objectives in isolation. This observation sparked more internal collaboration in the transition team, based on the Sustainable Development Goals. As such, the transition team as a collaborative mechanism reinvents the way the administration works, which usually operates in silos.

The transition team developed an innovative and centralised communication strategy aimed at mobilising internal and external stakeholders on long-term commitments related to the Sustainable Development Goals. Members of the transition team act as ambassadors to raise awareness about economic, ecological and social aspects of the transition among public institutions, economic actors, associations, citizens and administrative and technical services. The aim is to empower these actors to initiate their own projects in accordance with the sustainability goals of the City of Mouscron towards 2030 and 2050.

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2.2 THE DEEP DIVE: DEVELOPING TRANSITION LEGITIMACY

OBJECTIVE: Address possible tensions between your radical core and the democratic structures that you work in.

As explained in the introduction, transition management was developed because 'traditional' democratic institutions appeared unable to create actions for sustainability transitions. However, while trying to bring in radical perspectives and actions, activities also have to be embedded in institutions and organisations in order to have an impact. In order to do so, the process has to be democratically legitimate, as it will affect public decision-making and public funds. A definition of legitimacy is that activities are *"recognised as lawful, just or rightful".*[16]

The transition legitimacy framework can help you to navigate this balancing act of being legitimate in liberal democratic structures while safeguarding your transformative potential, or, 'radical core'. It does so by considering three elements of a governance process based on Bekkers and Edwards (2007), as also illustrated in Figure 6:
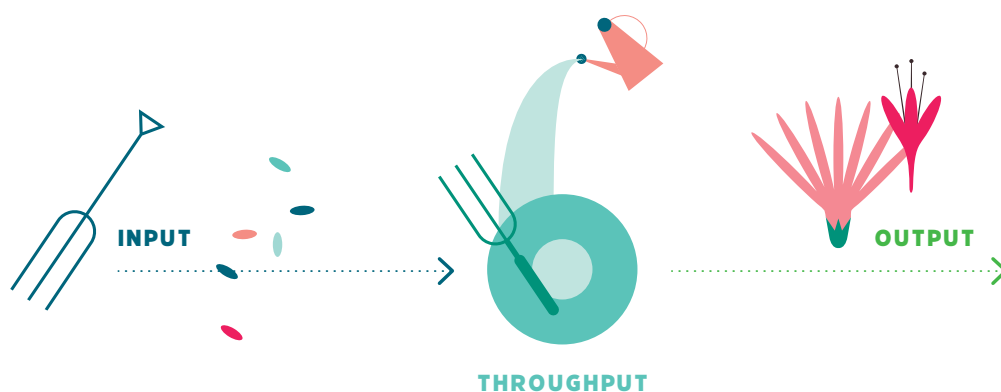
- **Input politics:** "Norms that can be related to values of political equality, active citizenship and popular sovereignty"

- **Throughput processes:** "Certain qualities of the rules and procedures by which (binding) decisions are made"

- **Output policies:** "The capacity of government to produce certain output or outcomes that actually contribute toward remedying collective problems"

As seen in Figure 7, to consider the legitimacy of your process, each phase of the governance process features a series of themes and questions that can be discussed. During the TOMORROW project, we studied how 'traditional' democratic legitimacy was dealt with, as well as transition legitimacy (i.e. answering to the design of transition management). It was found that there is a tendency to emphasise liberal democratic norms over transition legitimacy, as these seem most familiar and are part of the established understandings of legitimacy. However, thereby the radical core is at risk of becoming diluted. Answering the questions in Figure 7 will help you navigate the possible trade-offs and tensions between increasing transition legitimacy and safeguarding liberal democratic legitimacy (see Workbook Vol II. for instructions and more details)

We recommend taking up these questions with your transition team when developing the activities of your process. If relevant, you can also choose to use this table as part of your reflexive monitoring process (see **Step 3. Nurturing growth**), in order to monitor how you are performing on input, throughput and output legitimacy.

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16.   Morris (1998) in Bekkers and Edwards (2007) p. 48.

FIGURE 6. INPUT, THROUGHPUT AND OUTPUT OF A GOVERNANCE PROCESS ADAPTED FROM BEKKERS AND EDWARDS (2007)

INPUT

THROUGHPUT

OUTPUT

SOURCE: Adapted from Bekkers and Edwards (2007).

TABLE 2. THE TRANSITION LEGITIMACY FRAMEWORK RELATING TO INPUT, THROUGHPUT & OUTPUT LEGITIMACY

TYPE OF LEGITIMACY	DIMENSION	RELATED QUESTION
Input Legitimacy	Citizen participation	What opportunities for participation are provided?
	Eliciting alternative perspectives	What sustainability and justice perspectives are taken up?
Throughput legitimacy	Quality of participation	In which ways are the quality of participation enhanced?
	Checks and balances	What checks and balances are involved in the process?
	Cultural imaginaries	Which cultural imaginaries are deliberated?
	Institutional work	Which institutions are challenged?
	Reflexivity	In which ways are ongoing questioning and adaptation encouraged?
Output legitimacy	Responsiveness	Which outcomes are effective, and responsive to the wishes of the actors involved?
	Guided action	Which concrete actions are linked to institutional change and long-term cultural imaginaries?
	Collective empowerment	Which outcomes are linked to changes in social relations and roles?
	Reflexive governance	In which ways are actors held accountable for the outcomes? In which ways are outcomes adapted to new insights?

KEY TASK: Use the transition legitimacy framework (see Workbook Vol II.) with your transition team. After filling out the table, discuss the question '*What steps need to be taken to improve or safeguard democratic and transition legitimacy in our process?*' and reflect on how this can translate to learning questions in the reflexive monitoring section of your Transition Canvas to monitor your performance.

For more background to the transition legitimacy framework you can read this article: De Geus, T. Wittmayer, J.M, Vogelzang, F. (2022) **Biting the bullet: Addressing the democratic legitimacy of transition management.** *Environmental Innovation and Societal Transitions*, 42, pp. 201-218.

**BOX 6. DEALING WITH POLITICAL CHANGE
IN THE CITY OF NIŠ, SERBIA**

Political change is always a risk when planning the implementation of any project. This risk might be even higher in Serbia compared to EU member countries, as political strategies are not always followed by individual politicians, leading to decisions which can be contrary to official policy.

The implementation of the TOMORROW project was often affected by political changes, specifically the local elections in June 2020 and national elections in April 2022. The local elections resulted in the appointment of a new Mayor of the City of Niš. Even though the same political party won, the new government did not immediately recognise the importance of the project and Energy Transition process of the City. Despite strong efforts to convey the importance and benefits of the process, direct emails to the mayor, prioritising the project during staff meetings, and lobbying members of the mayor's staff, the mayor decided to withdraw from the project. After extensive communication with the EU-project coordinator, and explaining the procedure for terminating the participation, this decision was reversed, allowing the City of Niš to catch up with the transition management process.

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"Political change is always a risk when planning the implementation of any project."

ON POWER AND INEQUALITIES IN THE PROCESS

Next to legitimacy, another important element to reflect on is the issue of power dynamics with regard to your transition management process. This can be focussed on issues in the system you are targeting, but also on a micro-scale to make sure that your transition team promotes equality and diversity. In order to understand possible blindspots, refer to the **Guide on the Transformative Power of Social Innovations in Energy (2021)** as a resource for discussion and exercises for your transition team.

3

NURTURING GROWTH

Once you have planted the seeds in your garden, nutrients, water and care are needed for a garden to flourish and grow. For nurturing growth and fostering the transition process, the basics consist of:

- **Strengthening the transition team:** While the transition team has already been established as part of **Step 1**, during the process it is key to further develop the transition team.
- **Developing reflexive monitoring:** Reflexive monitoring can support your transition team to monitor the progress in responding to system demands in real time.
- **Including a view on the internal organisation:** It is likely that changing internal structures (e.g. at the municipality or energy company) are an element of your transition management process. This section addresses how to build the capacities needed within your team and organisation.

The deep dive consists of supporting the co-creation of knowledge with different societal stakeholders. A co-creation process fosters collaboration, diverse partnerships and learning among different societal actors such as civil servants, citizens, urban planners, entrepreneurs, architects, scientists, and business representatives.

3.1 THE BASICS

STRENGTHENING
THE TRANSITION TEAM

OBJECTIVE: Consider how the transition management process challenges your own role and how the transition team relates to the process.

As introduced in **Step 1. Understanding the conditions**, the transition team is the core team that directly supports and drives the transition management process. The transition team plays a key role in supporting and collaborating with diverse actors to understand the system, discovering opportunities for change, and coordinating activities.

Throughout the process, we suggest creating time and space for the following aspects:

- **Create a balance in terms of the 'ownership' of the process.** As the initiator of the process, you will need to strike a balance between maintaining a certain 'ownership' of the process while simultaneously allowing transition team members to become the 'owners' themselves. Too little ownership from the transition team may lead to issues such as delays or little progress in transforming ideas into actions. Too much ownership from the transition team (i.e. too little coordination by a designated actor) may cause the process to become neglected over time or to participants to lose the motivation to remain involved.

- **Strengthen the transition team's values and principles.** The transition team will go through changes and will need to address challenges, disagreements and tensions along the way. Re-establishing agreed values and principles periodically can help keep the team together and address potential conflicts.

- **Support and respect one another.** Recognise efforts and ideas, as well as the skills and talents of each team member by creating an open and transparent environment. This means that you could organise team meetings to share ideas and challenges and discuss ways to address them. Also, make sure to find the time to celebrate achievements together.

- **Accept constructive feedback.** This means providing each other with feedback that enriches the process and helps you to improve both individually and as a team.

- **Be aware of your responsibilities over time and divide the tasks proportionately among team members.** Everyone in the team should have a clear idea of expectations and responsibilities and be able to work toward them in an autonomous and collaborative way. At the same time, team members should feel free to ask questions and to ask for support when encountering challenges.

- **Continuously evaluate the role of your transition team.** Questions that may help you to do this may include:

  - What is the transition team's mandate, and what is the mandate within their own organization? How does that correspond to the potential outcomes that were identified?

  - Who is responsible for what?

  - What is the decision-making process?

  - Is the meeting frequency still suitable?

  - What are you confident about?

  - What do we find challenging/difficult?

  - What drives you? What do you look forward to?

KEY TASK: Collectively map the members of your transition team (e.g. on a blank sheet or an online canvas like Miro), and discuss the answers to the questions above with your transition team.

REFLEXIVE MONITORING

OBJECTIVE: Monitor and evaluate the ongoing progress by aligning your long-term goals with your daily activities. Ideally, this is ideally done during every step of the transition management process.

Reflexive monitoring helps you track your progress as well as gauge the process' intended and unintended consequences. It is an innovative monitoring and evaluation method, which helps to align daily activities with your radical core. The method helps to learn and to adapt throughout the process by developing joint strategies and solutions. We recommend using reflexive monitoring during all steps of the transition management process. The degree of involvement of each transition team member depends on where you are in the process and the roles that have been defined.

A reflexive monitoring plan focuses on action: 'reflexive' means that insights lead directly to new actions that change your course, rather than merely 'reflecting' without tying consequences to the insights. This means that the monitoring activity is not a separate activity itself: it is an integral part of the process, which is done internally and collectively, rather than by outsiders.

Part of reflexive monitoring is creating a reflexive mindset within your transition team, meaning to be open to constructive criticism, new ideas and failure. A positive learning environment and culture encourage people to share their opinions, raise questions and challenge established norms. It is crucial that maintaining (or building) trust and a safe environment is prioritised, and to demonstrate that all ideas are taken seriously. Initially, reflexive monitoring might be difficult, as most teams are not used to continuously reflecting on the process: it requires practice and experimenting with what tools work for your team.

Each reflexive monitoring framework will look different, as the questions that you decide to focus on are unique to your process. The starting questions below can help you find out what questions are relevant for your reflexive monitoring approach:

- Which contextual factors are relevant for my radical core?
- What type of innovative activities does the project need?
- Which tools are appropriate?
- How much leverage (institutional backing, resources) do I have to apply?
- What competencies do I need?

KEY TASK: Reflect on the following questions both individually and in your transition team:

- **How can you create a learning environment within your transition team?**
- **How might you collect feedback and suggestions as part of the multi-stakeholder activities (e.g. meetings, webinars, etc.)?**
- **How will you organise regular reflection and adaptation meetings with your transition team?**
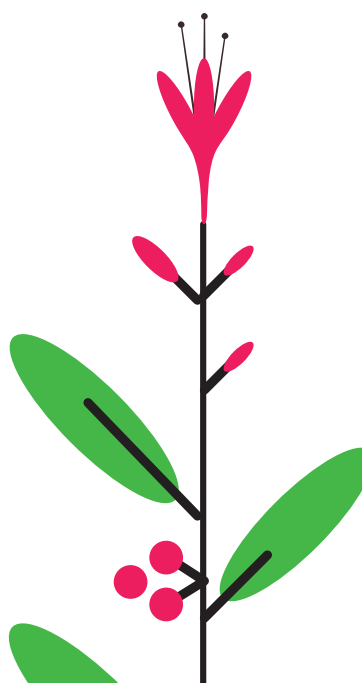
BOX 7. CONDUCTING REFLEXIVE MONITORING IN PRACTICE

Below we have listed suggestions for how to conduct reflexive monitoring during multi-stakeholder activities (e.g. meetings, workshops, etc.).

Before the event:

- Have a preparatory meeting with your transition team, note the expectations you have, roles and responsibilities of the facilitators, note takers, etc. Be complete and specific (note worries, struggles, etc.).

- Check that all practicalities are arranged (e.g. venue, materials such as flipcharts, post-its, pens, food and drinks for the participants).

During the event:

- Record the audio (and/or video) (make sure participants give consent).

- Make sure everyone is clear on roles and responsibilities (e.g. note-takers, facilitators, etc.).

- Ideally, there are two note-takers during multi-stakeholder activity, respectively focussing on:

  - Description/content: What is being said? (without judgement or interpretation).

  - Observation and reflection of the process, including on issues such as:

- **Group dynamics:** how do the participants interact? What are the participants' positions, fears, reactions, and emotions?
- **Facilitators dynamics:** how do the facilitators interact between themselves and with the participants?
- **Methods and tools:** how tools and methods are perceived by the participants?
- Other important elements that you observe during the meeting.

Observation tips:

- Use a symbol or a letter for each level of observation (e.g. G: for group dynamics, F: for facilitation dynamics, M: for methods, O: for others) or use different colours.

- Observe non-verbal communication and how people speak (e.g. tone of voice, emotions) and behave (e.g. do they take attention, do they speak one to another?, are they shy or feel comfortable to speak?)

After the event:

The transition team has a meeting to share observations, insights, and reflections. At the end of the meeting, you define the next steps and what needs to be taken into account for the next meeting.

- Process the notes taken during the multi-stakeholder activities.

- Define the interview questions for potential in-person interviews with the participants as a follow-up.

Learning more about reflexive monitoring

You can find more details about reflexive monitoring in the following materials:

- **Connecting Nature Reflexive Monitoring Guidebook** (extended version);

- **Connecting Nature Reflexive Monitoring Guidebook** (short version).

- Van Mierlo, B. C., Regeer, B., van Amstel, M., Arkesteijn, M. C. M., Beekman, V., Bunders, J. F. G., ... & Leeuwis, C. (2010). **Reflexive Monitoring in action. A guide for monitoring system innovation projects.** Communication and Innovation Studies, WUR; Athena Institute, VU.

- **Website** with practical tips on transition work including reflexive monitoring.

INTERNAL ORGANISATION

OBJECTIVE: Relate your activities to existing structures and policies to embed the impact of your transition management process.

Another element of nurturing growth is linking your activities to existing structures, policies, and programmes, such as Memorandums of Understanding, treaties, covenants, roadmaps, and visions that have been formulated earlier. The advantages of collaborating with other initiatives is to galvanise your impact or double up on resources. If this is neglected, the risk of the process legacy not being sustained becomes higher (see **Step 4. Harvesting results and continuing the cycle**). Determining how your process relates to existing local, national, regional and international policies will help you position the process. In deciding to pair with other initiatives, it is important to define what makes your transition management process stand out, i.e. its radical core as defined in **Step 1**.

A related issue is the capacities needed in your organisation in the long-term, and how these might be built as part of the transition management process. In municipalities, for instance, internal hierarchies and fragmentation might prevent transition methods from being successful.[17] In terms of embedding the process in your organisation by creating a sense of ownership, you might want to assess what (covert) resistance the process faces, and what sentiments or interests might be the source of this resistance. Depending on your analysis, you might initiate internal sessions or activities, such as an internal information session, internal campaign, 'dream session', or interviews. The example of Valencia, described in Box 8, provides a concrete example of how an internal structure was developed in order to support the transition management process.

KEY TASK: Determine how to embed your transition management process by assessing established structures and policies in your internal organisation. Questions that can help navigate this may include:

o   **How is your organisation structured?**

o   **How might your organisation need to change to support the transition management process? / What internal support is needed to make the process a success?**

o   **What internal fragmentation or change needs to be addressed?**

o   **How can these necessary capacities be built within the organisation?**

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17.   Nagorny-Koring and Nochta (2018).

BOX 8.

THE MISSION DAY: INNOVATING INTERNAL ORGANISATION IN VALENCIA, SPAIN

In February 2021, the València Plenary Session agreed to apply for the European Mission of 100 climate-neutral and smart cities in 2030. The Energy Transition Strategy, demonstration projects and Energy Transition Roundtable developed as part of the TOMORROW project were incorporated as key elements of the application. When preparing the application of València to this Climate-Neutrality Mission, the City Council developed a governance framework that allowed for collaboration across different departments and local entities in an agile and effective way: The Climate-Neutrality Mission,

Firstly, the **governance structure** was set, defining 3 different layers of coordination:

- **Political layer:** this covers aspects such as political momentum, key decisions and communication and visibility aspects. In València's case, the Mission's political management relies on the Mayor's office, the political coordination relies on the Council of Climate Emergency and there are some other Councils involved sporadically, such as Innovation, Mobility, Urban Ecology, etc.

- **Operational layer:** this covers the strategic and operational management, the technical coordination of the work, and the participation in networks and alliances. It is the team that is in charge of the daily work of the Mission. In València's case, it involves the departments of Urban Strategies, Innovation, and Climate Emergency, and the local foundations of Las Naves and València Climate and Energy. Then, it also considers external consultants and other partners sporadically.

- **Outreach layer:** this covers the co-creation of the Mission, the systemic innovation and the cross-cutting momentum. In València's case, it involves the Energy Transition Roundtable and other thematic working groups of the five helixes of the city (public, private, scientific, civic and media pillars). It also includes the Mission Alliance (a body that gathers ambassador entities, member entities, citizens and key figures showing their commitment and support to the Climate Mission of València) and the City-University binomial (a body that aims at strengthening the mid-term collaboration and synergies between the Polytechnical University of València and the municipality, at strategic and technical levels) .

Secondly, the Operational team defined the "Mission Day": a fixed day of the week to work on the Climate Mission together. Every Friday from 9am to 11am (extended to 1pm in the most demanding weeks) were fixed in the agendas of the whole Operational team to meet and make decisions around the application preparation, the management of external consultants, the preparation of events and communication activities, etc.

The Mission Day facilitated the coordination and development of the Mission application, ensuring that every Friday, actors could discuss and make decisions with the involvement of the whole team. It also allowed the team to conduct co-creation workshops and brainstorming sessions among the team. The Mission Day will stay to define the details of the Climate Mission and Climate City Contract, and more departments will be integrated into the Operational layer. For that, it is needed to make sure that the Political layer of other departments is also aligned.

FIGURE 7. A DEPICTION OF THE DIFFERENT LAYERS OF PARTICIPATION
IN THE ALLIANCE FOR THE CLIMATE MISSION

MEMBER ENTITIES

CITIZENS

ORGANISATIONS
AMBASSADORS

KEY FIGURES
& INFLUENCERS

ALLIANCE
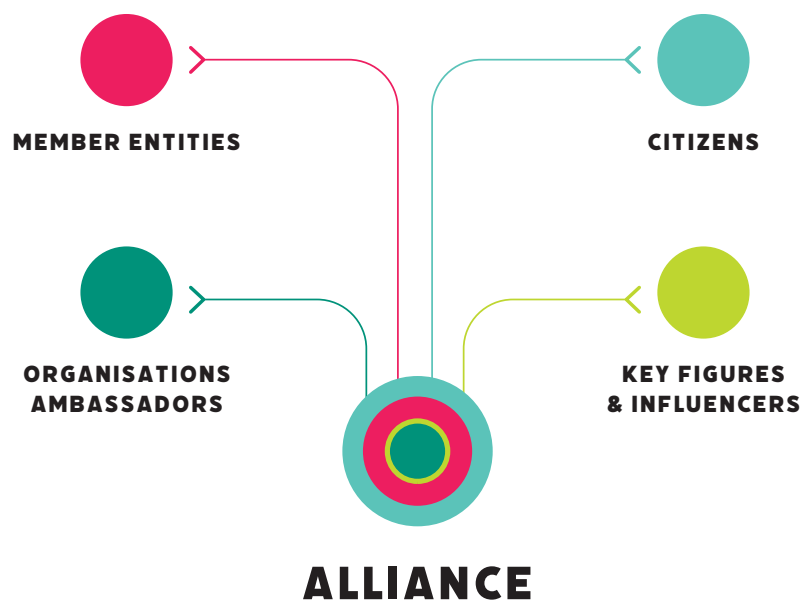
Far Left: Members of the
Energy Transition Roundtable
during a working session.

Other images:
© Alejandro Gomez

3.2 THE DEEP DIVE: CO-CREATING KNOWLEDGE WITH DIVERSE ACTORS

OBJECTIVE: Enable collaboration across diverse actors, sectors, and knowledge by focusing on enabling an inclusive and open co-creation environment.

Co-creation is aimed at actively engaging people to collaborate across different sectors, backgrounds and knowledges. It can generate collaborative outputs and create new partnerships, enabling innovative interventions. A central assumption of co-creation is that by putting a diverse group of people together, individuals are more likely to go beyond their comfort-zone, and develop new ideas. Eventually, this can hopefully lead to changed practices, behaviours and structures.

To ensure a meaningful co-creation process and a procedural quality, there are some design principles that are important to take into consideration:

o **Inclusivity** - bring together diverse actors and multiple types of knowledge at an equal level;

o **Openness** - adopt, integrate and share knowledge throughout the process;

o **Legitimacy** - ensure that the process includes legitimate and credible knowledge and is trusted by participants and wider urban actors.

You can find additional details about the design principles as part of the Connecting Nature Co-Production Guidebook.

Below we describe a series of operational steps that you can follow to design and organise a co-creation process:

1. Define the goal of the co-creation process by organising a series of meetings within your transition team. You will probably also need to go back to the radical core and adjust it in relation to the goals of the actors that are engaged in the process.

2. Build on the actor mapping in **Step 1. Understanding the conditions** and select a diverse group of stakeholders relating to the goal of your co-creation process;

3. Start contacting different actors and explain to them why you would like to involve them. In this phase, try to also be open to their ideas and suggestions, so that they can feel welcomed to shape the process;

4. Design and plan activities with the different stakeholders. Together with your transition team you can make a timeline of the different activities and start implementing them (see Box 9 and Box 10 below for some examples).

5. Monitor your process and adapt it where necessary. As part of the process implement reflexive monitoring to continuously check how the process is going and modify the process accordingly. Importantly, this can include reflections on power dynamics and the diversity of the group.

6. Implement any actions necessary to ensure official endorsement of outcomes (e.g. transition roadmap or self-sustaining governance structures).

Practical resources with facilitation techniques to help implement co-creation processes include the Systems Thinking Playbook for Climate Change, The MSP Tool Guide: Sixty tools to facilitate multi-stakeholder partnerships or Nesta's Collective intelligence design playbook.

KEY TASK: Organise a workshop with your transition team to design the co-creation process and together reflect on the following guiding questions:

o What is the goal of your co-creation process? (link these to your system analyses)

o Who are you going to engage? Why will you choose these participants? How can you make the process inclusive (i.e. bringing in diverse types of actors and knowledge)?

o How are you going to organise the co-creation process? Try to be specific: e.g. scale, online vs. offline, campaigns, kinds of sessions.

o How are you going to ensure openness to new knowledge, actors and information?

o How will you ensure that your participants feel able and motivated to participate? (e.g. ownership of the process, capacity to participate, etc.)

BOX 9. EXAMPLES OF CO-CREATION ACTIVITIES

As part of the TOMORROW Factsheets you can find some examples of co-creation processes that have been designed and facilitated in different cities. Some examples are:

- **Stadslab2050:** an urban living lab set up in Antwerp (Belgium) by the municipality, which encourages citizens and other local actors to develop new ways of thinking and ideas to build a sustainable city. The lab plays a key role in building a diverse network of (social) entrepreneurs, citizens, civil servants, academics and other stakeholders to find new ways of looking at challenges and create new solutions.

- **Green Participatory Budgeting:** This participatory decision making process in Lisbon (Portugal) was introduced by Lisbon City Council in 2008. Citizens can submit proposals for developing sustainability projects in the city, and they can vote on the projects that they want to see included in the Lisbon City Council Activity and Budget Plan the following year.

- **Energy tables:** an inclusive participatory energy transition process in the city of Cádiz (Spain) that addressed social and economic challenges. While promoting the energy transition it also addressed social equity, energy poverty and creating employment opportunities.
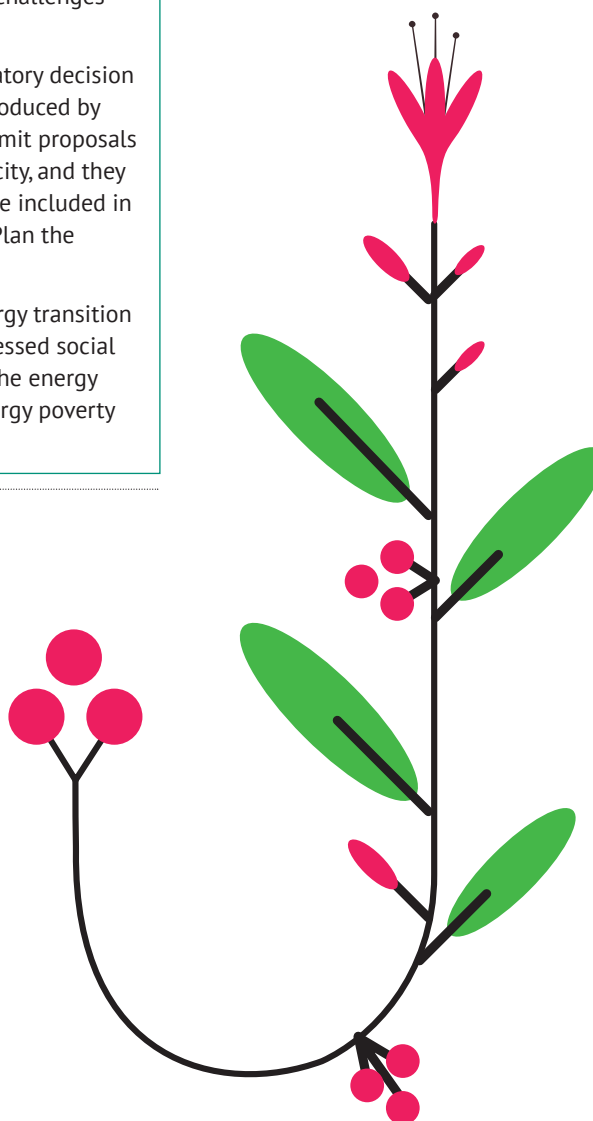
BOX 10.

CREATING OWNERSHIP & ESTABLISHING NEW WORKING METHODS IN BREST

As part of the TOMORROW project, local actors were invited to create groups ('coalitions') to foster collective action on climate issues. These groups could be created around a shared topic of interest (e.g. encouraging people to use their car less, reducing and optimising lighting at night), a business park area (e.g. the "Technopôle" in Plouzané) or a particular business sector (e.g. events sector). The participants were diverse: public administrators, associations, private actors, city services, etc. The objective of each coalition was either to develop mutual assistance, common actions, or capacity building, according to the needs identified.

To facilitate these coalitions, the municipal department of urban ecology organised a training on cooperative working methods for group facilitation, instead of hiring one designated moderator. The workshops had seventeen participants, seven from Brest métropole's services and ten from other organisations, such as the local climate citizen network, a french research institute and a real estate developer. The goal was to have local actors work together more efficiently in the coalitions, not just in the TOMORROW project, but also for other future challenges. This advice was taken up from the participation experts at the organisation Collporterre, who supported the mobilisation process in Brest and organised the training.

It turned out to be difficult for the coalition's members to understand that they were not in a 'traditional' working group. Actors tended to rely on the person who had initiated the coalition for tasks such as preparing each meeting and writing reports. Moreover, the process takes time! After eight months it started picking up steam. Only having video conferences due to COVID-19 restrictions also posed a challenge in getting to know each other.

To continue the process of shared ownership, a reflection session for facilitators was organised to share common obstacles and facilitation techniques/ tools that could support their coalition: e.g. on how to create collective intelligence, rather than doing a traditional 'round-table'. A toolbox was shared with different facilitation resources, such as co-development or prioritisation methodologies, templates of action plans, and playing cards to delegate roles during a meeting. This session was a success as it allowed participants to develop new visions for their day-to-day practices, and will be continued every two-three months to exchange ideas and advice. Overall, the project allows them to experiment, try something new, and develop new ways of thinking about how to make a group work together.

Above: © Anne-Claire Urvoas

Left: TOMORROW
evening event.
© Anne-Claire Urvoas

Top left: Brest métropole.
© Mathieu Le Gall

Top right: Cable car.
© Mathieu Le Gall

Middle right: Library.
© Mathieu Le Gall

Far left: First session in June.
© Anne-Claire Urvoas

Left: Second session
in October.
© Anne-Claire Urvoas

4

HARVESTING RESULTS & CONTINUING THE CYCLE

Once the first seeds have been sown and the seedlings have grown into a variety of trees and plants, the garden can become increasingly self-sufficient, as the plants produce the seeds for the next season. Of course, circumstances and conditions will change, and it will become increasingly clear what does and does not work. Well-considered interventions are needed at the right time, whether it be pruning, adding, removing, or relocating plants to keep the garden flourishing. As with a garden, the goal of transition management is to set a process in motion that thrives more each year, rather than a project that only lasts for one season. We highlight three foundational elements that need to be put in place to continue the cycle:

- **Presenting your results:** Having proceeded through the transition management process, presenting insights and results from the activities will help take stock of achievements and set out a direction for how to continue accelerating the transition.
- **Obtaining endorsement or ratification:** Ensuring a significant impact of the transition management process, realising buy-in from crucial actors is key.
- **Mobilising resources for continuation:** Assuring that there are funds and capacities available is a prerequisite for being able to continue the cycle, i.e. accelerating transitions.

For the deep dive, we consider how governance arrangements or structures can sustain the impact of the transition management process.

4.1 THE BASICS

PRESENTING YOUR RESULTS

OBJECTIVE: Create outputs that amplify the results that you achieved and build towards a sequel to what was set in motion with the transition management process.

Presenting your results helps to create momentum to promote your radical core, celebrate achievements, and take stock of the next steps that are needed. For instance, results can be presented through an exhibition, festival, in a magazine, with a roadmap, signing ceremony, or some other kind of (communication) event. What medium is appropriate depends on the activities and outputs that were defined in the Transition Canvas, as well as the audience you want to target. The right audience depends on the next steps you identified for continuing the cycle, i.e. the governance arrangements you decide to set up as discussed later on in this section.

We encourage you to be creative - a report is not necessarily the most effective way to communicate your results. On this Wiki page you can find ample examples and inspiration of how this was done in other cities, e.g. through roadmaps.

KEY TASK: Before and during the implementation of the activities in your transition management process (as described in your Transition canvas, see **Workbook Vol II.**), discuss with your transition team what form or medium is most suitable as an output for presenting your results.

OBTAINING ENDORSEMENT OR RATIFICATION

OBJECTIVE: Obtain endorsement from key actors to create ownership of the outcomes and a shared sense of responsibility moving forward. This can mean having all those who participated endorse the outcomes, as well as additional actors important for implementing next steps, such as the municipal council and mayor.

During the process, it becomes clear what key actors need to endorse or ratify the outcomes in order to take the next steps for accelerating the transition, for instance through reflexive monitoring (see **Step 3**). Preferably, these actors need to have been involved in an earlier stage, e.g. as members of the transition team or in the broader co-creation process to assure legitimacy (see **Step 2**). A public endorsement or ratification (e.g. of a roadmap) can be done during a 'signing ceremony'. An alternative is to invite individuals and/or organisations to join a translocal pledging initiative such as the European Climate Pact, and to integrate this as an output.

KEY TASK: Before (e.g. during actor analysis) and during (e.g. through reflexive monitoring) the transition management process, consider who are the key actors that are needed to endorse or ratify outputs. Also, discuss how this might be linked to the governance arrangements (see below) and the medium through which you plan to present your results.

MOBILISING RESOURCES FOR CONTINUATION

OBJECTIVE: Anticipate how to fund the governance arrangements that are needed to sustain the impact of your transition management process.

Deciding which endorsements are needed also affects who will have ownership of (parts of) the follow-up process and specific actions. Sharing these responsibilities can open up possibilities for funding and accessing certain capacities. By strategically planning for this in your activities, e.g. by using reflexive monitoring, and sharing responsibilities as part of co-creation as discussed in **Step 3**, budgets, facilities but also capacities, and skills for continuing the impact of the transition management process can be sourced or developed.

KEY TASK: As a follow-up to finding resources for your transition management process, assess with your transition team what resources and capacities are needed for the governance arrangements that you planned for.

4.2 THE DEEP DIVE: SETTING UP GOVERNANCE ARRANGEMENTS

> **OBJECTIVE:** Develop, explore and implement structures that allow you to revisit and adapt the radical core and transition management activities that are needed.

Throughout the transition management process, there is a need to anticipate what happens once the initial first cycle of transition management activities is done, in order to sustain the impact of your transition management process (e.g. a roadmap, agenda, new organisations, etc.). We use the term governance arrangements to describe this, meaning *"the ensemble of rules, processes, and instruments that structure the interactions between public and/or private entities to realise collective goals for a specific domain or issue"*.[18] In other words, putting arrangements in place to continue realising the radical core that was formulated as part of the first transition management cycle (*"collective goals"*).

While this may be the final section of this guideline, establishing governance arrangements or doing 'institutional work' certainly does not come last. Planning for and developing such 'rules, processes and instruments', ties in with the actor and system analysis in **Step 1**, addressing your activities and legitimacy in **Step 2**, and **Step 3** on internal organisation and institutionalisation. In this section, we outline two related ways to design governance arrangements:

1. By continuing an initiative (e.g. a living lab), and also while increasing its impact;

2. By changing organisational structures;

When deciding to continue an initiative to accelerate a transition, like a living lab, you can consider how to increase its impact. For instance, by replicating it (e.g. to other locations in a city, or in collaboration with new partners), scaling it up (e.g. in terms of people who are involved), or using it as a lever or vehicle to initiate institutional changes. Scaling up through learning from an initiative and institutionalising the lessons learned (e.g. about tendering, regulations, or participation approaches) can be done by public, private, or community entities. An example of this are the Living streets in Ghent (see here), which started a discussion on the use of public space in the municipality. Another example is scaling up a community energy cooperative to put restructuring energy markets on the agenda.

Alternatively, you can focus primarily on continuing, adapting, and reflexively monitoring the outputs of transition management at a higher policy level. Activities to create or transform institutions are sometimes also referred to as 'institutional work'.[19] This can happen through influencing policy or lobbying for instance, or by establishing new committees, departments, or job functions for instance, as was done through Leuven 2030 (see Box 11).

Often these two forms of governance arrangements will exist in parallel. When designing and planning for either of these two trajectories, there are five (overlapping) principles that are essential according to recent studies[20, 21, 22]:

- **Connection between long- and short-term:** Actions, measurable targets, and indicators, as well as budgets, need to connect long-term visions and insights in systems with short-term actions. Platforms as spaces that enable collaboration can play a role in this regard by allowing for long-term networking and collaboration to share knowledge, resources, and visions.

- **Adaptive capacity and innovations:** Governance arrangements should not be static, but respond to emerging challenges and issues, for instance by enabling continuous innovation. Partnerships between different innovation actors and a focus on experimentation (although importantly not exclusively) can foster this.

- **Participation:** Meaningful participation and inclusivity of a variety of actors in governance, e.g. through participatory platforms, is important for knowledge production and keeping the process open to a plurality of perspectives. Knowledge institutes or intermediary actors, i.e. actors who are not government or market actors, may have a role in facilitating these processes as bridging organisations.[23]

- **Policy coherence:** A 'silo mindset'[24] or internal fragmentation limit the collaboration that is needed for policy coherence[25] and continuing transition management. Therefore, a degree of restructuring is likely to be necessary within the organisations involved in transition management and across actors, e.g. to integrate the climate neutrality goals from specific policy domains, and align interests and visions on different scales.[26] Internal steering committees are an example of a governance arrangement that can support this.

19. Hielscher et al (2021).	**23.** Fastenrath et al. (2020).
20. Laes et al. (2014).	**24.** Sarabi et al. (2020).
21. Wolfram et al. (2016).	**25.** Dorst et al. (2022).
22. Visseren-Hamakers et al. (2021).	**26.** Wolfram (2016).

○ **Reflexivity:** Reflexivity is important to be able to adapt goals, strategies and institutions based on new insights and experience. Forums, or participatory monitoring bodies can be created as a structure for sharing mistakes and successes during the implementation of roadmaps. It is important to note if the process can really be held accountable by the monitoring: is there space, budget and willingness to pivot based on new insights?

KEY TASK: Discuss with your transition team what governance arrangements are needed and feasible to set up or keep after the initial transition management process is finished. How are the five principles described above represented? What key responsibilities are there, and how can this be organised?

BOX 11.

LEARNING FROM LEUVEN: FOUR GOVERNANCE ARRANGEMENTS TO SUSTAIN THE ENERGY TRANSITION

The city of Leuven (Belgium) has been a source of inspiration for many cities' journey towards carbon neutrality: In 2019 they successfully designed and ratified an energy transition roadmap. To sustain the legacy of its roadmap process towards 2030/2050, Leuven has integrated several major governance arrangements, of which we describe four below: three concern changing an organisational structure, and one concerns continuing the impact of an initiative.

First, Leuven 2030, is a non-profit organisation engaging stakeholders from four key sectors: (local) governments, the private sector, knowledge institutes and civil society organisations and citizens. Leuven 2030 coordinated the development of an energy transition roadmap, outlining the actions needed to achieve a climate-neutral city by 2050, as well as related projects on climate adaptation and local governance. Leuven 2030's aim is to connect short-term actions with long-term objectives, lobby for policy coherence, stimulate new innovations and ownership of the roadmap by stakeholders. It also supports cross-city coordination on sustainable transition issues by generating integrated knowledge and monitoring and learning processes. Through the data collection app Futureproofed Cities used by the local government, the activities in the roadmap are monitored and adjusted using precise indicators and parameters, mostly CO_2 emissions. Leuven 2030's innovative structure and outcome of a roadmap for 2050 has led to an official endorsement by the municipality in 2019, after which Leuven 2030 continued working on the implementation.

A second governance arrangement is the Circular Leuven platform, a network bringing together key actors for a circular economy, such as representatives of the municipality, Leuven 2030, knowledge institutes, employers' organisations, and local businesses. The aim of this platform is to provide a space for consultation and support between the partners and to collaborate on, as well as monitor, the implementation of an urban circular strategy. The platform enhances the strategy ownership among the stakeholders, as well as the development of concrete goals and targets to monitor progress.

The third governance arrangement is Partnership LICHT Leuven, a collaboration between the City of Leuven, Leuven 2030 and a local energy cooperative. Together with citizens, LICHT initiates projects in renewable energy and sustainable mobility, for instance on energy saving and collective investment in solar PV.

Finally, the Project Vorm 3010 mobilised the participation of citizens in a neighbourhood (Kessel-Lo) to elaborate a local, common mobility plan. Citizens were consulted through surveys and a citizens' panel, which resulted in the creation of the mobility plan finalised in 2022. The 28 targets that resulted from this process will guide the development of public space in Kessel-Lo for the years to come. In addition, the lessons learned on collaboration with citizens will be used for other neighbourhoods in Leuven.

Leuven.
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Top left: Road to 2030.
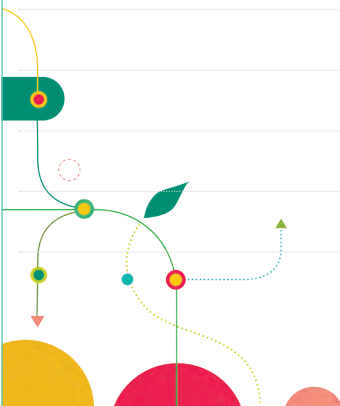CC BY 4.0 Tessa de Geus

Left: © Leuven 2030

Top right: Leuven
CC BY 4.0 Tessa de Geus

Middle right: © Leuven 2030

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NOTES

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