Towards European Circular Cities:

A GUIDE FOR DEVELOPING A CIRCULAR CITY STRATEGY

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CIRCLE ECONOMY

Towards European Circular Cities: A Guide for Developing a Circular City Strategy – February 2023

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Prepared in cooperation with Circle Economy: www.circle-economy.com

Funding provided by the European Investment Advisory Hub.

For further information on the EIB's circular activities: www.eib.org/circular-economy

Published by the European Investment Bank.

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1. THE RATIONALE FOR A CIRCULAR CITY STRATEGY

'Circular economy strategies or roadmaps aim to further the transition to a circular economy. They present a clear strategic plan and define objectives or a desired outcome and include key steps or milestones.

Circular economy strategies or roadmaps are comprehensive and address the transition from multiple points of view in one document. All stages of the value chain such as production, consumption, waste management, secondary raw materials, and innovation and investments are considered.' [1]

Note: Although there might be some nuances between a Strategy and a Roadmap and the use of this term might differ from city to city, we use the term Strategy in this Guidance Document.

While cities are causing and accelerating many of the planet's current environmental problems, they can also contribute to the solution. Despite being hotspots of consumption and pollution, cities are also powerful enablers and incubators for innovative solutions. As such, they can drive and enable systemic solutions like the circular economy.

Even though national governments are driving policies and regulations to accelerate the transition to a circular economy, local governments will be key in building a sustainable future. The circular economy is increasingly seen as a key means to this end. The *Urban Agenda for the EU*, for example, which outlines 14 partnerships to improve the quality of life of urban areas[2] recognises the circular economy as a key thematic area (and thus, partnership). Similarly, the *OECD Principles on Urban Policy*, adopted in March 2019, highlight how promoting more efficient resource use and sustainable production and consumption patterns through a circular economy could help cities transition to a low-carbon economy (Principle 5).[3] This signals strong political momentum for sustainable urbanisation, and illustrates that circular paths are being followed in its pursuit.

A city's journey towards circularity involves preparing and planning the circular transition, and creating an enabling environment in which different stakeholders can play a role and taking circular action on many different levels across the city. These tasks are often complex, and developing a holistic and cohesive Circular City Strategy is crucial. Such a Strategy creates a framework for the progressive evolution of a city's circular journey, and provides the information and direction needed to guide local stakeholders, both within and beyond the municipal administration. It also helps stakeholders align their work with the achievement of the city's circular targets.

This document provides an easy step-by-step guide for developing a Circular City Strategy, whilst also looking at relevant best practice in Europe. The document also considers common barriers and key factors for success in this process. However, there is no one-size-fits-all process for developing a Circular City Strategy. Depending on their local contexts, cities may take different approaches in realising each step of the process this document outlines. The case studies presented throughout this document aim to exemplify how different contexts might require different approaches.

This guidance document also reflects key learnings from the Circular City Centre (C3) Circular City Advisory (CCA) programme, a dedicated, one-on-one support for cities looking to accelerate their transition to a circular economy. The C3 is a competence and resource centre hosted by the European Investment Bank (EIB) and developed in a pilot phase together with Circle Economy with financing from the European Commission through the European Investment Advisory Hub. The aim of C3 is to support EU cities in their circular economy transition. As part of its activities, C3 developed Circular City Advisory (CCA) trajectories to support cities in their journey to circularity. The first trajectory of the CCA programme - *First steps: Prepare & Plan*, is designed to help cities outline the building blocks for a holistic Circular City Strategy, which will help them take the first steps in their circular transition.

In addition to the CCA programme referenced above, C3 develops guidance documents such as this one. It is thus important to note that some of the steps included in this guide follow up on content outlined in another C3 guidance document *'The 15 circular steps for cities'*. Building on this previous guide, this document outlines how each of these steps could be used to develop a Circular City Strategy document, and plan for the work ahead. Of relevance to the reader can also be the C3 guidance document *'A catalogue of circular city actions and solutions'*.

2. STEPS FOR DEVELOPING A CIRCULAR CITY STRATEGY

This guide presents the key elements of a Circular City Strategy, showing how cities can effectively develop such a strategy and start implementing it, and examines specific examples from pioneering European cities.

The figure below provides an overview of the main building blocks of a Circular City Strategy.

OVERVIEW OF A CIRCULAR STRATEGY

2.1 - Define the relevant stakeholders: Who should cities involve in the process?	Involving all relevant city stakeholders early in the circular journey is essential in order to shape a strategy based on long-term commitment and that clearly highlights each one's roles and responsibilities.
2.2 - Baseline assessment: What is the city's starting point?	It is crucial to understand where your city currently stands in terms of circularity.
2.3 - Prioritise focus areas: Where should a city direct action?	The baseline assessment of the city enables municipal stakeholders to better identify and prioritise key areas or sectors with the highest potential for circular action.
2.4 - Envision a circular future: Where does the city want to go?	Envisioning the future of your city is a key step to creating a successful circular strategy.
2.5 - Plan for circular action: How can a city reach its goals?	Key elements of the circular roadmap that will contribute to reaching its circular vision and targets.
2.6 - Establish governance mechanisms for your Circular City Strategy: How will the city lead, enable and encourage the circular transition?	The role of the city is to connect and facilitate cooperation amongst stakeholders.
2.7 - Define a monitoring and evaluation framework: How to measure progress?	Use indicators to track each action's impact and progress towards the wider strategy targets.
2.8 - Identify ways to finance the circular economy: How and where to secure financing?	Identify new mechanisms to finance circular solutions.
2.9 - Structure and compile the strategy.	It is time to plan, prepare and write the strategy.

Figure 1. Overview of the building blocks of a Circular City Strategy (Circle Economy).

2.1 - DEFINE THE RELEVANT STAKEHOLDERS: WHO SHOULD CITIES INVOLVE IN THE PROCESS?

Creating a Circular City Strategy requires the involvement of many stakeholders who will have an important role to play in planning and implementing the actions. A city should involve stakeholders in the process of defining what needs to be done to reach circularity, and how, instead of adopting a top-down, prescriptive approach. This kind of participatory approach provides a model in which ownership and positive impacts are shared amongst citizens, economic actors and local authorities. By actively involving stakeholders, resistance to change will be reduced, and a culture of collaboration will develop. Stakeholder involvement is also highly relevant for leveraging stakeholders' knowledge, supporting the emergence of creative solutions and the exchange of ideas and viewpoints, leading to more effective and synchronised decision-making and planning.[4] The key aspects in planning the stakeholder participation are outlined below.

FORM AN INTERNAL CORE CIRCULAR TEAM

The circular economy is a holistic and trans-disciplinary topic. As such, drafting a Circular City Strategy will require the involvement of all relevant municipal departments, such as urban planning, economic development, environmental, waste and water management and social services. A core circular team, consisting of representatives of various departments, should therefore be formed to coordinate participation. This could be a separate unit within the City, appointed with the task of developing its Circular City Strategy and later monitoring and supporting the implementation.

APPOINT A CIRCULAR CHAMPION

For a well-executed Circular City Strategy, ownership is often the key to success. For this, it is advisable to appoint a circular champion, i.e. a city representative with the mandate to lead the engagement of different stakeholders.

IDENTIFY EXTERNAL STAKEHOLDERS

Local authorities have limited influence on certain areas of the circular transition, which is why actors such as local businesses, communities and citizens should also be mobilised in the transition. Mapping out and engaging with local stakeholders is therefore a key step in developing a Circular City Strategy, to define which actors should be involved, at which stage and to which degree. This will allow cities to build capacity and form a common understanding of circular opportunities and challenges, while aligning actions towards agreed-upon circular objectives and goals. Figure 3 below provides an example of the different stakeholders that may be involved in developing and implementing a Circular City Strategy. Some important aspects in selecting stakeholders are listed below.

- **Citizens** are both actors and beneficiaries of a city's circular transition, and as such, should be involved in early planning and discussions through community-led initiatives.
- **Early local adopters** are those that have already picked up circular economy principles, existing business models and community-based initiatives.
- **Representatives of primary economic sectors**, which were identified in the initial baseline assessment, may have significant influence on cities' economic development and could accelerate a systemic circular transition.
- **Experts and members of academia** can provide technical knowledge, which can inform the strategy design and implementation phases.

Figure 2. A map of stakeholders that have a key role to play in a city's circular transition at various levels of involvement

CREATE A PLAN AND FRAMEWORK FOR CONTINUOUS STAKEHOLDER COMMUNICATION AND ENGAGEMENT

Once stakeholders have been identified, they can be invited to join a 'public-private-people' working or steering group. The core group will be responsible for creating a plan for continuous stakeholder communication and engagement, based on iterative cycles of roundtable discussions and workshops. These interactions can involve parallel sessions for each focus area, to tailor discussions and devise contextually appropriate paths forwards. This format was used in the *DoTank Circular City Wien 2020-2030* programme, as part of *Vienna's 2030 Economic Strategy* [5], and in the development of *Amsterdam's Circular City Strategy 2020–2025* [6] . Figure 4 provides an example of how this engagement could be planned for.

LEARNING FROM BEST PRACTICES: STAKEHOLDER PARTICIPATION IN PARIS, AMSTERDAM AND FLANDERS

Paris, Amsterdam and Flanders have actively involved external stakeholders in their processes of creating a cohesive and inclusive strategy.

PARIS

Co-organised by several Île-de-France authorities at the initiative of the City of Paris, and supported by the Île-de-France regional office of the ADEME, the General Assembly on the Circular Economy of Greater Paris was launched on the 11th of March 2015. Its purpose was to bring a wide spectrum of players (government authorities, businesses, associations, NGOs, academia, research, etcetera) together, to tackle circular economy challenges in the Greater Paris Metropolis.

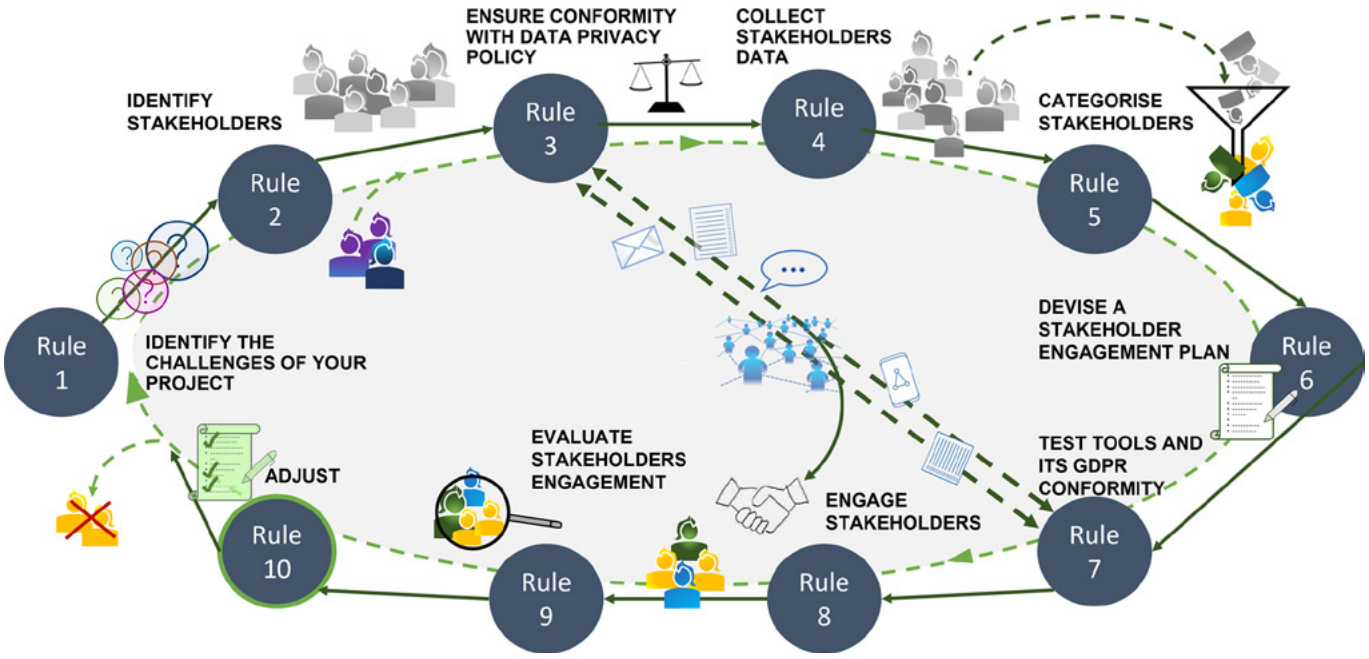

Figure 3. The ten steps of stakeholder engagement plan adapted by Holleman et al. 2020[7]

Working Groups (WG) met three times during workshops organised between April and June 2015. Each group was in charge of a specific topic:

- WG 1 (a): Food, from urban agriculture to bio-waste;
- WG 1 (b): The fight against food waste, through awareness-raising and redistribution;
- WG 2: Planning, from eco-design to green construction;
- WG 3: New economies, performance and re-use;
- WG 4: From eco-design to end-of-life, products with short lives (everyday products);
- WG 5: From eco-design to end-of-life, products with medium or long lives (equipment);
- WG 6: Development of recoverable energy;
- WG 7: Industrial and regional ecology.

These groups comprised more than **240 people**, representing over **120 different organisations**. The list of organisations participating in each WG is available in the *White Paper on the Circular Economy of Greater Paris*.[8] This consultation resulted in a set of recommendations, compiled in the White Paper under 65 proposed initiatives. These proposals are addressed to public decision-makers of the Parisian metropolis, as well as to economic players and citizens. The White Paper represents a first step in developing the *Greater Paris region's Circular City Strategy*.

AMSTERDAM

To create a strategy for a Circular Amsterdam 2020–2025,[9] Kate Raworth's Doughnut Economics model was used as a guiding tool. A participatory trajectory was designed to bring together all involved stakeholders. Together, they formulated the directions for a circular Amsterdam. Over **50 officials** from the various departments in the city and region, and over **100 stakeholders** from three value chains were brought together.

The process comprised four steps:

1. Mirroring the current targets of the city with the Doughnut model
2. Developing holistic circular economy directions for the three priority value chains
3. Enhancing the current targets to align them with the ambitions in the circular economy directions and the Doughnut model
4. Enriching and validating the directions with knowledge from the ground

For each step, a workshop was organised with various stakeholders. The outcome of the four workshops was a set of seventeen directions for pursuing circularity in the key value-chains of Construction, Biomass and food, and Consumer goods. Together, they form the building blocks for an inclusive and thriving Amsterdam.

The directions are built upon existing initiatives, best practices and (inter)national policies, as well as strategies that have been pursued over the past years in Amsterdam. In addition to environmental issues, the directions cover social topics from social equality to employment opportunities.

FLANDERS

Circular Flanders is a joint group headed by a public-private committee, with the purpose of guiding the circular transition in Flanders. The group is made up of 18 organisations from five key groups: government officials, academia, citizens, financial market participants and industry representatives.

By engaging with such a broad pool of stakeholders, Circular Flanders is able to coordinate multiple projects simultaneously. This has brought a range of benefits: a Strategy that influences a wider range of stakeholders, for example (if held responsible for governance roles), as well as heightened access to funding due to greater outreach. By merging existing initiatives, they have also effectively prevented competition and fragmented work.

TOOLS AND PLATFORMS FOR CREATING A CIRCULAR STAKEHOLDER NETWORK

Leveraging technology is now essential to scale the impact of the circular transition, which is why getting up to speed with the relevant digital resources that enable cities to connect with relevant stakeholders and to learn from other case studies is essential. Existing digital tools and platforms that support cities in their design of a circular stakeholder network include:

MATRIX OF CIRCULAR COLLABORATION

This matrix, developed by Reflow, is designed to enable matchmaking among various circular stakeholders. This will promote collaboration and coordination across the many initiatives and projects that can take place at various scales and levels within cities. It is especially useful for identifying and visualising synergies, showing how and where the output of certain projects could feed into other projects as input.

External link ›

URBANWINS TOOLKIT

Part three of the UrbanWINS toolkit provides guidelines for the selection and implementation of adequate stakeholder engagement techniques. It guides users through:

- The benefits and opportunities of stakeholder engagement in the landscape of urban policies promoting sustainability and circular transitions;
- Methods for the identification and selection of stakeholders;
- Stakeholder engagement processes and challenges;
- The role of peer-to-peer interactions among
- different cities, and;
- Case studies and lessons learnt for stakeholder engagement.

External link ›

CIRCULAR NETWORKS: WAYS TO CONNECT WITH AND LEARN FROM CIRCULAR STAKEHOLDERS IN OTHER CITIES

Circular networks are platforms that connect stakeholders which are driven by a similar purpose: working towards a circular economy. Such networks vary in size, purpose and topic, but they are a valuable resource for cities willing to know what is being done elsewhere, learn from best practice examples, engage in collaborative initiatives and lead by example. Here, we provide some examples of the most relevant networks for cities to engage in when defining their circular strategy.

CIRCULAR ECONOMY CLUB

The Circular Economy Club (CEC) is an international network of circular economy professionals and organisations located in cities across 140 countries. Interested stakeholders can join their city's club and gain access to circular economy education, local circular economy activities, information and databases, case studies and other resources.

External link ›

RESOURCEFUL CITIES

Resourceful Cities is an URBACT action planning network of ten European cities, which aims to develop the next generation of urban resource centres and catalyse the local circular economy through participatory and integrated approaches. The network connects citizens, businesses, researchers and policy officers to foster co-creation and innovative solutions for waste prevention, reuse, repair and recycling of products and materials at the municipal level.

External link ›

ICLEI CIRCULARS

ICLEI gathers the most up-to-date knowledge on circular interventions occurring at municipal and regional government levels worldwide. The network provides resources for raising awareness, peer-to-peer interactions and implementation support for circular actions and policies, with the objective of decoupling urban and economic development from resource consumption and creating closed-loop urban and peri-urban systems. The network works in close collaboration with major entities in the field of circular economy such as the Ellen MacArthur Foundation, Circle Economy and Metabolic.

External link ›

THE EUROPEAN CIRCULAR ECONOMY STAKEHOLDER PLATFORM

This is a joint initiative set by the European Commission and the European Economic and Social Committee that connects stakeholders active in the field of circular economy to promote the exchange of knowledge and ideas.

External link ›

CIRCULAR CITIES DECLARATION

The Circular Cities Declaration (CCD) is a commitment developed by a group of EU stakeholders including cities, international organisations, think tanks (ICLEI, Circle Economy), financial institutions and many others. The CCD allows cities to form shared visions of 'circular cities', communicate their commitment and establish a community of organisations working on creating a resource-efficient, low-carbon and socially responsible society.

External link ›

2.2 - BASELINE ASSESSMENT: WHAT IS THE CITY'S STARTING POINT?

Before diving into action, cities must understand where they currently stand in terms of circularity: they must perform a **baseline assessment**. This will allow city stakeholders to identify the main opportunities and challenges in advancing the circular economy. For this assessment, the following elements are important to consider:

GENERATE A SOCIOECONOMIC CITY PROFILE

This showcases the sectors of economic activity with the greatest potential for a circular transformation. It should include a comprehensive analysis of the city's industrial activities (e.g. agriculture, utilities, manufacturing companies, construction and real estate), commercial activities (e.g. transport and mobility, tourism, business and financial services, IT, communication and many others), and public services (e.g. education, public administration, health and social services). For all of these activities, key indicators such as Gross Value Added (GVA, in absolute terms or as a percentage of GDP), total employment and type of jobs, and historical trends that showcase whether a sector is becoming more or less important within a city may be considered.

DETERMINE YOUR CITY'S URBAN METABOLISM AND ENVIRONMENTAL IMPACTS:

Identified sectors should be assessed with regard to their use and flow of resources and materials and related resource and environmental impact. Performing a material flow analysis at the city level is the most comprehensive method to capture all the relevant elements of an urban metabolism, focusing on all inflows, processes and outflows taking place within a city's boundaries. Cities can also focus on additional circular indicators per sector, such as inputs of renewable or non-renewable energy, net additions to stock in the form of infrastructure, buildings and equipment, greenhouse gas emissions, or waste generation and treatment.

ALIGN WITH OTHER SUSTAINABILITY AGENDAS

As the circular economy is a cross-cutting concept, it is important to understand how it relates to and interacts with other sustainability agendas and department-specific strategies already underway, such as plans for climate action, energy, mobility or waste management. Therefore, it could be relevant to analyse existing and planned policies and roadmaps that a Circular City Strategy could interact with or contribute to, as well as (planned) policies and regulations that could either support or conflict with circular actions.

LEVERAGE AND LEARN FROM EXISTING CIRCULAR INITIATIVES

Assessing the landscape of local business and citizens' circular initiatives in the city provides important insights into the degree to which circular economy activities are already underway. Looking at which sectors these initiatives are in, what kind of approaches are used, and what plans for future growth are mentioned, indicates where momentum and innovation exist. It also provides insight into the tangible impacts the initiatives have already achieved, and where there could be potential for further scaling. For instance, a Circular City Strategy could focus on food if many existing initiatives already relate to urban farming, community gardens and food redistribution.

MAKE THE MOST OF IDLE ASSETS

Assets are considered idle when they are not being used, and therefore are not generating any revenue or providing any economic or social benefits. Identifying and compiling data on idle municipal assets can help a city understand where to focus its action. Unused public buildings such as old railway stations, empty warehouses, as well as empty roofs and undeveloped areas could be prime locations to test-drive or implement circular actions. These spaces can be used for innovation and co-creation, for example, through urban living labs, or to create green cities. In Paris, for example, the *Promenade Plantée* is a linear park spanning 4.7 kilometres built on a defunct railway line. Roofs are also a great space to create local community-

based initiatives that bolster self-sufficiency in terms of energy production (through solar panels, for example) or urban farming (vertical farming or hydroponics, for example).

BASELINE ASSESSMENT METHODOLOGIES

CIRCLE CITY SCAN: PRAGUE

The baseline assessment conducted in Prague's Circle City Scan consisted of two essential steps. First, a socioeconomic analysis of the city was performed to highlight the main economic sectors, the value these added to the local economy and their contribution to local employment, combined with a study of households' consumption patterns. The city's political ambitions and challenges were also taken into consideration. This baseline assessment guided the consortium of municipal representatives in the selection of three focus areas for which a deeper scan would be performed: Construction, Households and Utilities. Following up the baseline assessment, a material flow analysis for each focus area was undertaken to assess their metabolisms and identify key impacts and opportunities to implement circular economy interventions.

External link ›

METABOLISM OF CITIES' URBAN CIRCULARITY ASSESSMENT

The Urban Circularity Assessment Method presents a scientifically robust and easy-to-use methodology for municipal policymakers and stakeholders interested in monitoring material circularity at the city level. It comprises three steps: the first is a city-level material flow analysis and stock accounting for the flows and stocks of biomass, metals, minerals and fossil fuels. The second step entails the selection of relevant circularity indicators that can monitor progress towards the given objectives. The final step takes the form of a circular economy assessment that provides insight into the city's requirements and opportunities.

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EMF CITY SELF-ASSESSMENT

This specific self-assessment tool developed by the Ellen MacArthur Foundation supports cities in understanding circular solutions for food and assesses their progress towards a desirable state for urban food circularity. It consists of a digital survey that guides stakeholders through the most relevant, impactful and effective policy mechanisms available to reach a circular food system.

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2.3 - PRIORITISE FOCUS AREAS: WHERE SHOULD A CITY DIRECT ACTION?

Because a city's economy is shaped by a multitude of factors and angles, narrowing down the Circular City Strategy to a range of concrete focus areas will be key to streamline the circular transition. The baseline assessment discussed in the previous section will enable your city to identify which sectors have the highest potential for circular action.

COMPARE RELEVANT FOCUS AREAS OR SECTORS

Focus can centre on economic sectors that follow specific economic activity classification systems such as NACE, NAICS or NOGA codes, or particular focus areas, such as whole economic systems, that encompass more than one sector. Food systems, for example, span across a range of sectors, from food production and processing to distribution and consumption (see Table 1 for more information).

SELECT FOCUS AREAS OR SECTORS

The selection of focus areas should be agreed upon by all relevant stakeholders (private, public, people) included in the participatory process. In cities such as Turku, Copenhagen, Paris and Porto, members of civil society, academia and industry representatives have also contributed to the selection of the primary focus areas during the design phases of their respective Circular City Strategies.

IDENTIFY CHALLENGES AND OPPORTUNITIES

Once sectors are selected, a deeper analysis can be undertaken to get a better understanding of the main impacts and circular opportunities within the sector.

Drawing from past projects and diving into cities' existing Strategies, Table 1 defines some of the focus areas that cities could prioritise.

Table 1. Focus areas for cities' circular transitions

PRIORITY SECTOR	DESCRIPTION	CITIES WITH THIS FOCUS
Built environment	Cities are most commonly defined by their built environments, the human-made spaces where people live and work. The urban built environment is one of the most resource- and energy-intensive sectors of the global economy. A circular built environment aims to reduce this sector's negative impacts by ensuring that materials and components are maintained and used at their highest value for as long as possible.	Amsterdam London Paris Porto Turku
Consumer goods (in particular Electrical and electronic equipment (EEE), plastics and textiles)	Consumer goods value chains are complex ecosystems that represent a diversity of activities, from material production, to processing and distribution, to consumption and waste management. A circular consumer goods system is based on the principles of reducing the consumption of such goods, prolonging their lifespans (through strategies such as reuse, repair and refurbishment), and managing end-of-life products to produce secondary materials that can substitute virgin materials for manufacturing.	Amsterdam Copenhagen London Paris
Energy systems	Cities consume energy in several forms to fulfil demand across all sectors: as fuel for vehicles, heating for homes or street lighting, for example. Our current energy systems are a significant source of greenhouse gas emissions and require the extraction of critical raw materials to deploy infrastructure. A circular energy system puts a distinct focus on the material component of the transition towards green and renewable energy. In particular, it aims to reduce the materials required for the construction of energy equipment and infrastructure, better manage these resources through maintenance and repair strategies to prolong their lifespans, and to repurpose or recycle these materials at their end-of-life stage.	Turku Riihimaki Rovaniemi
Food systems	Cities rest at the intersection of food activities and represent key hotspots of consumption, often creating a linear flow of resources from more rural to urbanised areas. To cater for urban populations' food demand, urban food systems have developed into complex ecosystems and represent a diversity of activities, from food production, processing and distribution to consumption and food waste management. Circular food systems prioritise regenerative production, favour reuse and sharing practices, reduce resource inputs and pollution and ensure resource recovery for future use.	Amsterdam London Paris Turku

Table 1. Focus areas for cities' circular transitions

PRIORITY SECTOR	DESCRIPTION	CITIES WITH THIS FOCUS
Manufacturing	Cities often host industrial hubs clustering a variety of manufacturing industries. The manufacturing sector exerts a significant pressure on the environment through resource consumption, GHG and other emissions to the air and water, and waste generation. In addition, it is a sector that is increasingly sensitive to linear risks such as resource depletion as most industrial processes rely on the input of critical materials and rare earths. Shifting to a circular manufacturing model means focusing on closing product and material cycles, identifying industrial synergies to make a more efficient use of shared resources such as utilities, but also by-products, but also optimising and extending products' lifetime.	Espoo
Mobility & Logistics	Mobility is a fundamental part of cities that allows people to access services, commute to work and socialise, and also allows for the transport of goods to, within and from cities. Current modes of mobility are still heavily reliant on fossil fuels and the private ownership of vehicles, despite increasing fleet electrification, which has implications not only for the pollution, congestion and liveability of cities, but also in terms of material use (plastic, minerals and metals) and waste generation. A circular mobility system does not only move away from fossil-fuel-based transport modes: it also reimagines and redesigns the modes and means of transporting people and goods throughout the urban environment to minimise their ecological footprint, e.g. through increased sharing.	Turku Rovaniemi
Waste	The current linear model is characterised by a "take-make-waste" culture which in the EU alone results in about 225 million tonnes of municipal solid waste being generated annually.[10] In a fully circular economy, waste is either fully designed out, or at least minimised to the extent possible so that resources are kept in use in closed loops, ensuring that unavoidable waste or residues are recycled or recovered	Brussels Helsinki Milan Paris Porto Prague Turku
Water systems	Water is one of the most essential resources within cities and, as such, urban water systems are often characterised by complex networks of storage, distribution, usage and wastewater treatment activities. Circular water systems recognise different urban water flows, drinking water, stormwater, wastewater and source water, and utilise them at their highest value.	Turku Riihimaki

2.4 - ENVISION A CIRCULAR FUTURE: WHERE DOES THE CITY WANT TO GO?

Envisioning a city's future is a key step in creating a Circular City Strategy. A circular vision communicates the directional path that a city aims to take, and demonstrates its long-term aspirations and goals. In other words, a clear circular vision will serve as a guiding light for future strategic planning and implementation.

DEFINE AN INSPIRING VISION FOR YOUR CIRCULAR CITY STRATEGY

Establishing a circular vision requires contributions from and diverse perspectives of multiple stakeholders, such as private companies, citizens and public institutions. A clear consensus amongst stakeholders may pave the way for a smooth transition to a circular economy, and can help overcome existing fragmentations within a city. To achieve this, cities can use workshops and public consultations with all relevant stakeholders to brainstorm and agree on the formulation of the vision.

Vision statements should:

- Be aspirational
- Be relatable for everyone (they should speak to people)
- Go beyond technical objectives and targets
- Have a holistic approach
- Convey long-term thinking

SET CLEAR GOALS AND MEASURABLE TARGETS FOR THE CIRCULAR TRANSITION FOR EACH FOCUS AREA OR SECTORS

As part of the process of developing a circular vision, it is important to set tangible goals and targets to reflect how and when the circular vision will be achieved. The goals and targets should centre on key focus areas, ideally including clear timelines for their achievement. This will ensure that all actions remain aligned with and support the guiding vision. It will also facilitate the monitoring of progress and impact over time.

The Table 2 below shows examples of cities' circular visions and targets.

Table 2. Examples of different circular visions and targets adopted by EU cities that have developed a Circular City Strategy

CITY	VISION	TARGETS FOR IDENTIFIED PRIORITY SECTORS
Amsterdam	*'In Amsterdam, we want to ensure a good life for everyone, within the Earth's natural boundaries. That can be done in a circular city in which we adopt a smarter approach to scarce raw materials, produce and consume differently, and in which there are more jobs for everyone. We are working on wellbeing, health, a pleasant living environment, a cleaner environment, and more justice, both within and beyond the city limits.'*	**For "The circular city":** • Use 50% fewer primary raw materials by 2030. • Become 100% circular by 2050 at the latest. **For "Food systems"** • Cut down 50% of food waste by 2030. • Consume 60% of protein from plants by 2050. • Collect separate kitchen and garden waste from 73% of households by 2030. **For "Consumer goods"** • Reduce consumption by 20% by 2030. • For "Built environment". • From 2025 buildings and renovations must follow the principles of the circular economy.
London	*'A circular economy approach is not only more resource efficient but also protects businesses from fluctuating commodity prices. It provides an opportunity to develop a more stable operating environment for manufacturers, retailers and consumers. Circular economy business models may be of particular benefit to London in the post-Brexit economic environment creating the possibility of new revenue streams, markets and product lines.* *This is ReLondon's (formerly LWARB) vision for London—a circular city that capitalises on these opportunities to become a more resilient, resource-efficient and competitive city of the future.'*	**For "Food systems"** • Cut food waste by 20% by 2025 compared to the baseline data of 2015. **For "Consumer goods"** • textiles: send zero textiles to disposal by 2036 (landfill or incineration). • electronic equipment: send zero electronic equipment to disposal by 2036 (landfill or incineration). **For "Waste"** • Recycle 65% of waste by 2030. • No waste and sustainable use of natural resources by 2040. • Become climate positive, with negative net emissions, by 2029.
Turku	*'Resource wisdom means sustainable use of natural resources, zero waste and zero emissions. Achieving these goals is a prerequisite for sustainable well-being in the Turku region. The circular economy provides a framework for concrete interventions that will lead the Turku region toward resource wisdom…'*	**For "Energy systems"** • Recover and reuse waste heat by 2029, to increase the efficiency of energy systems in Turku and reduce the need for additional thermal energy production. **For "Food systems"** • 100% of utilisation of agricultural products in the food value chain by 2029. **For "Water systems"** • In 2029 urban runoff is managed through nature-based solutions. • By 2029 water demand is reduced.

2.5 - PLAN FOR CIRCULAR ACTION: HOW CAN A CITY REACH ITS GOALS?

Once a clear vision and related goals and targets have been established, cities need to define their action plan, laying out the steps to be taken in order to achieve their vision and targets. To ensure a smooth implementation, definitions of focus-area-specific actions should include a preliminary budget, a timeline and milestones, and identify parties responsible for implementation. This section outlines key considerations for defining circular actions, and understanding their potential for achieving the circular vision.

CREATE A LONG-LIST OF CIRCULAR ACTIONS FOR EACH SELECTED SECTOR OR FOCUS AREAS

Circular actions are defined based on circular potential: the extent to which an action contributes to the achievement of **a city's defined vision and targets.** For example, if a city has a target to cut its built environment's material footprint by 50% by 2030, the stakeholders responsible could focus on circular actions such as reusing idle buildings instead of building new ones, increasing the reuse of building components, promoting secondary material use in public procurement and revitalising idle urban industrial areas.

During this process, it is recommended that stakeholders base their selection of actions on established frameworks that highlight how particular actions contribute towards circular economy principles or strategies. For instance, the *Circular City Actions Framework* (CCAF) provides key complementary action-based strategies to enable urban stakeholders to address specific issues based on five different R-strategies:

- **Rethink:** Redesign systems to lay the foundation for circular activities and enable the circular transition.
- **Regenerate:** Harmonise with nature by promoting infrastructure, production systems, material types and sourcing that allows natural ecosystems to thrive.
- **Reduce:** Do more with less by using and supporting infrastructure, processes and products that are designed to minimise material, water and energy use and waste generation from production to end of use.
- **Reuse:** Use longer and more often by extending and intensifying the use of existing materials, products, spaces and infrastructure.
- **Recover:** Eliminate waste by maximising the recovery of resources at the end-of-use phase so that they can be reintroduced into production processes.

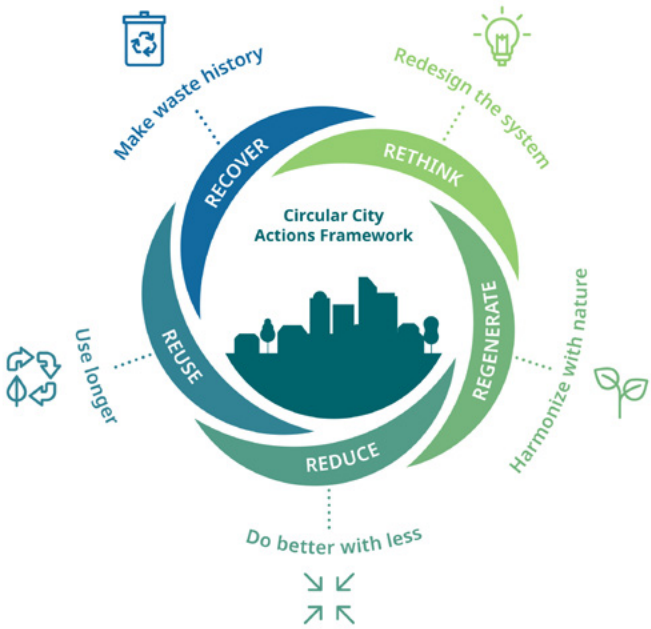

Figure 5. The Circular City Action Framework by ICLEI Circulars

In collaboration with Circle Economy, the C3 has also developed the guide "*A Catalogue of Circular City Actions and Solutions*", where interested stakeholders can consult key circular actions for each of the relevant focus areas identified and access case studies where these have already been implemented, and get an estimate of the budget associated with them. Table 3 provides an extract of these circular actions.

Table 3. Circular city actions from A catalogue of circular city actions and solutions.

CITY	VISION	CCAF CATEGORY	BUDGET
Built environment	Make the best use of existing buildings and infrastructure	REDUCE / REUSE	Low—Med
Built environment	Disassembly, selective deconstruction and demolition of buildings and infrastructure	REUSE	Low—Med
Built environment	Remediation of brownfield sites for urban redevelopment/ regeneration	REDUCE / REUSE	Med
Consumer goods	Public advertising to support circular behaviour	RETHINK	Low
Consumer goods	Product sharing platforms, centres (for example, tools, garden machinery)	REDUCE	Low
Consumer goods	Circular centres, shops and malls for repair, restoration and resale of consumer goods	REUSE	Low
Food systems	Regenerative urban and peri-urban farming	REGENERATE	Low
Food systems	Circular public procurement of food products and services	RETHINK	Low
Food systems	Rescue and redistribution of food surplus	REUSE	Low
Manufacturing	Eco-industrial/circular parks with local value loops	REDUCE / RECOVER	Low
Manufacturing	Circular innovation ecosystems and hubs	RETHINK	Low—Med
Mobility & Logistics	Compact city planning and development to reduce transport needs and facilitate shared solutions	RETHINK	Med—High
Mobility & Logistics	Shared or low-carbon mobility and logistics systems and platforms	REDUCE	Low—High
Mobility & Logistics	Reuse and recycling of vehicles or components	REDUCE	Low—Med
Waste	Expanded/improved separate collection of recyclable materials	RECOVER	Med—High
Waste	Urban biorefineries for food/feed/chemicals recovery	RECOVER	Med—High
Water systems	Grey water reuse systems	REUSE	Med
Water systems	Recovery of nutrients and chemicals from wastewater and sludge	RECOVER	Med

Potential circular actions can also be sourced from digital tools, such as Ganbatte, Circle Economy's circular solution digital explorer, which delivers data-driven insights and actionable case studies from around the world, guiding cities through their circular transition.

CREATE A SHORT-LIST OF CIRCULAR ACTIONS

Circular actions can be selected based on various criteria. For instance, it is important to explore and estimate the potential circular impact and socioeconomic benefits that could stem from each of the selected actions, and examine their technical feasibility. Based on this assessment, stakeholders' consultation can be used to select actions and further define them (for example, via workshops or other tools).

Potential benefits of circular actions on the city economy can be assessed based on many criteria. Here, we provide a few examples of factors that could be considered to short-list actions:

- **Circular potential and environmental impact:** Circular actions have the potential to directly influence the urban metabolism of the city by recirculating materials and making a more efficient use of resources, contributing to reducing the city's environmental footprint at all levels including:
  - Reduction in the material footprint;
  - Material and product recirculation;
  - Secondary materials uptake;
  - Reduction in the material footprint;
  - Material and product recirculation;
  - Secondary materials uptake;
  - Reductions in waste generation;
  - Reductions in GHG and other emissions;
  - Reductions in water consumption;
  - Reductions in energy consumption; etcetera.
- **Socioeconomic potential:** Socioeconomic factors can be leveraged to upscale the impact of selected circular actions based on:
  - Job creation;
  - Private and public cost savings (sector-wide or for individual projects);
  - Creation of new markets, business models and revenue streams (for example, for secondary materials or refurbished products); etcetera.
- **Technical feasibility:** While it is important to visualise the potential circular, socioeconomic and environmental impacts that circular actions may have, it is equally important to consider whether such actions can technically and realistically be implemented based within the city's available resources and existing tools. The feasibility of certain circular actions largely depends on factors such as:
  - Availability of technology;
  - Legal and institutional barriers;
  - Readiness of local stakeholders;
  - The scalability of circular actions and solutions, especially from an economic feasibility perspective; etcetera.

PREPARE A CIRCULAR ACTION PLAN

Each action should have a clear action plan, scheduling all of the activities involved over a timeline, describing who will be responsible for those, and defining a desired deadline for each. If possible, it is also useful to give information about the estimated budget for each activity. This will ensure effective and timely implementation of each action.

2.6 - ESTABLISH GOVERNANCE MECHANISMS FOR YOUR CIRCULAR CITY STRATEGY: HOW WILL THE CITY LEAD, ENABLE AND ENCOURAGE THE CIRCULAR TRANSITION?

Governance plays a crucial role in the implementation of the circular economy but it is important to remember that it cannot be composed only of top-down initiatives of national or local Governments or by bottom-up initiatives led by users/consumers, businesses, NGOs etc. The circular transition should be an iterative and interactive process, with exchanges and learning cycles among those involved.[11] Everyone has a role to play in the transition. Therefore, it is important to clearly delineate and agree roles and responsibilities for both the City and other stakeholders.

DEFINE THE CITY'S ROLE AND RESPONSIBILITIES FOR EACH CIRCULAR ACTION PLAN

Various governance dimensions and policy instruments have been identified to help cities implement their Circular City Strategy. Below are listed a few examples of how circular economy governance could be structured and which roles the City could take to advance the transition.

DEFINE ROLES AND RESPONSIBILITIES OF OTHER STAKEHOLDERS

The role of the City can vary depending on the actions and interventions proposed, but it should ultimately aim to facilitate an ecosystem where different actors can connect and cooperate in pursuit of a common goal.[15] Other stakeholders will also have to play their part: they are often the missing links, those that will ultimately be needed to implement actions on the ground. For this reason, it is crucial to identify the key stakeholders needed to implement each action. They could be the same as those involved in the process and defined in Step 1, or other important sector players identified during the strategy development process. For each key stakeholder or stakeholder group, it is then important to define the roles and responsibilities they will be appointed to for each action included in the Strategy (it is usually beneficial to assign the role of 'champion' or 'lead' to one of the stakeholders, who can be the representative and end responsible for that specific action).

Note: As part of the baseline assessment, it is likely that independent, community-based circular initiatives are identified and already operating within your City. When conceptualising the action plan, it is important that such initiatives are integrated into planning and aligned with the overall Circular City Strategy. This will help capture existing circular momentum and promote the exchange of knowledge and experiences to enable synergies among stakeholders working in the same focus areas.

OECD—CHECKLIST FOR ACTION

The circular economy in cities and regions: Synthesis report[12] by the OECD provides a Checklist for Action based on 12 key governance dimensions. The tool aims to support decision-makers in promoting, facilitating and enabling the transition to a circular economy. The Checklist is accompanied by the OECD Scoreboard on the Governance of the Circular Economy, a tool for cities and regions to self-assess the existence and functioning of enabling conditions for circular economy policies, initiatives, strategies and programmes.

External link ›

The 12 dimensions are grouped into three clusters corresponding to the complementary roles of cities and regions as promoters, facilitators and enablers of the circular economy:

PROMOTERS

Main role

- Cities can promote the circular economy by acting as role models, providing clear information and establishing goals and targets.

Enforcing mechanisms

- **Roles & responsibilities:** defining who does what and leading by example
- **Strategic vision:** developing a Circular City Strategy with clear goals and actions
- **Awareness & transparency:** promoting a circular economy culture and enhancing trust

Examples of implementation

- Since 2015, the city of Amsterdam, the Netherlands, has been implementing the *Learning by Doing Programme*, which aims to show that the circular economy is profitable in all aspects, by convening the different city departments and diverse stakeholders to define policy actions.
- The *Urban metabolism of Paris and its region*[13] study aimed to i) develop a deeper knowledge of the material flows in the city; ii) identify the City's priorities based on the analysis of consumption and production trends and material flows; iii) identify key focus areas potentially able to implement circular economy principles and practices. Due to this, the municipality was able to establish ties with Yale University to carry out the analysis, which should be regularly updated. Moreover, the analysis focused beyond the city's administrative area and covered the metropolitan area and region.

FACILITATORS

Main role

- Cities and regions can facilitate connections and dialogue and provide soft and hard infrastructure for new circular businesses

Enforcing mechanisms

- **Coordination:** implementing effective multi-level governance
- **Policy coherence:** fostering systems thinking
- **Stakeholder engagement:** facilitating collaboration amongst public, not-for-profit actors and businesses
- **Appropriate Scale:** adopting a functional approach

Examples of implementation

- The City of Toronto created a Cross-Divisional Circular Economy Working Group, which now comprises 11 divisions, to coordinate and increase the capacity of City divisions for implementing circular economy initiatives. The working group's mandate is to provide informed input, ideas and feedback during the development of the City's circular economy initiatives. Convening these cross-divisional groups helps the City identify specific trade-offs within focus areas as they move forward with circular economy action.

ENABLERS

Main role

- Cities and regions create the enabling conditions for the transition to a circular economy

Enforcing mechanisms

- **Regulation:** identifying the regulatory instruments that need to be adapted to foster the transition to a circular economy
- **Financing:** helping mobilise financial resources and allocating them efficiently
- **Capacity building:** helping mobilise financial resources and allocate them efficiently (financing); adapting human and technical resources to the challenges to be met
- **Innovation:** supporting business development
- **Data & Assessment:** generating an information system and assess results

Examples of implementation

- The city of Amsterdam, the Netherlands, developed tenders for land allocation, primarily for new-build projects[14] and supported the creation of a circular neighbourhood, the Circular Buiksloterham. Once one of the most polluted areas in the city, it is now turning into a circular area for living and working. The type of innovations and solutions promoted by these experiences in terms of urban planning and land tendering (for example, circular construction, or change of land use) helped overcome the administrative, legal and financial obstacles that were faced.

CIRCULAR CITY GOVERNANCE – A FIRST GUIDE FOR POLICY MAKER

Developed under the *Urban Agenda Partnership on Circular Economy*, this resource provides an overview of the role of governance for cities in the transition towards a circular economy. The resource highlights the roles that cities can play in supporting the transition and provides a framework for cities to identify roles and responsibilities for various stakeholders.

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THE URBAN POLICY FRAMEWORK

This framework is designed for municipal policymakers and advisors that are working to implement the circular economy. It is geared towards an audience that understands the opportunities that a circular economy can bring, and aims to identify the practical tools and instruments that are at policymakers' disposal to support the transition.

Based on the influence of policy instruments in cities, this framework is arranged into five categories:

- **MOBILISE** sets the direction of and builds momentum towards long-term change, while also determining how this direction is determined and governed.
- **EDUCATE** increases the overall levels of awareness and builds the necessary skills and knowledge around the circular economy to foster long-term change.
- **MANAGE** influences the use and function of physical and material elements within the urban environment.
- **INCENTIVISE** sends market signals and support to businesses, citizens and governments to promote certain activities.
- **REGULATE** changes the rules of the systems to achieve compliance through enforcement.

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EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT - EFFECTIVE POLICY INSTRUMENTS FOR GREEN CITIES

This interactive tool allows cities to explore the various policy instruments that are at their disposal in detail. The tool explores various themes, including governance, finance and waste. It is a unique and interactive resource that assists decision-makers in addressing urban challenges with evidence-based policies.

DEFINE ROLES AND RESPONSIBILITIES OF OTHER STAKEHOLDERS

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2.7 - DEFINE A MONITORING AND EVALUATION FRAMEWORK: HOW TO MEASURE PROGRESS?

The Circular City Strategy should include a monitoring framework, agreed upon in stakeholder engagement, in order to track each action's progress and impact, as well as its contribution to the greater targets set by the Strategy as a whole.

DEFINING INDICATORS

Indicators can be selected based on various frameworks:

- **Headline indicators: Monitoring progress towards predetermined targets**

  Headline indicators give a verdict on the current state of circularity of a system, in this case the city or specific focus area. Headline indicators tell you are progressing towards your goal or target. At the city or focus area-level, headline indicators could include:

  - Circular material use rate[16] within a city
  - Material self-sufficiency
  - Total waste generation (or waste generation for specific waste streams, such as food waste)

- **Performance indicators: Measuring circular performance**

  Performance indicators are the key indicators of progress towards an intended result (circularity, or the headline indicator). They provide a focus for strategic and operational improvement, create an analytical basis for decision making and help focus attention on what matters most. At the city or focus area-level, performance indicators could include:

  - Recycling rate (of total waste or of a specific material within a specific sector)
  - Secondary/renewable material input rates
  - Material savings (reductions in raw material use)

- **Process indicators: Measuring the level of public and private engagement in the circular economy transition**

  Driver indicators measure actions that enable or facilitate progress towards a circular economy. Typically, these reflect macro/meso-level issues such as governance, competitiveness and technological innovation, socioeconomic indicators, public spending, and circular projects, buildings and infrastructure destined to aid the transition. At the city or focus area-level, driver indicators could include:

  - Public procurement contracts with a circular economy dimension
  - Public budget allocated for circular economy projects
  - Investment in circular economy-related research and innovation projects
  - Employment in sectors relevant for the circular economy (such as repair, recycling, waste management, etcetera)

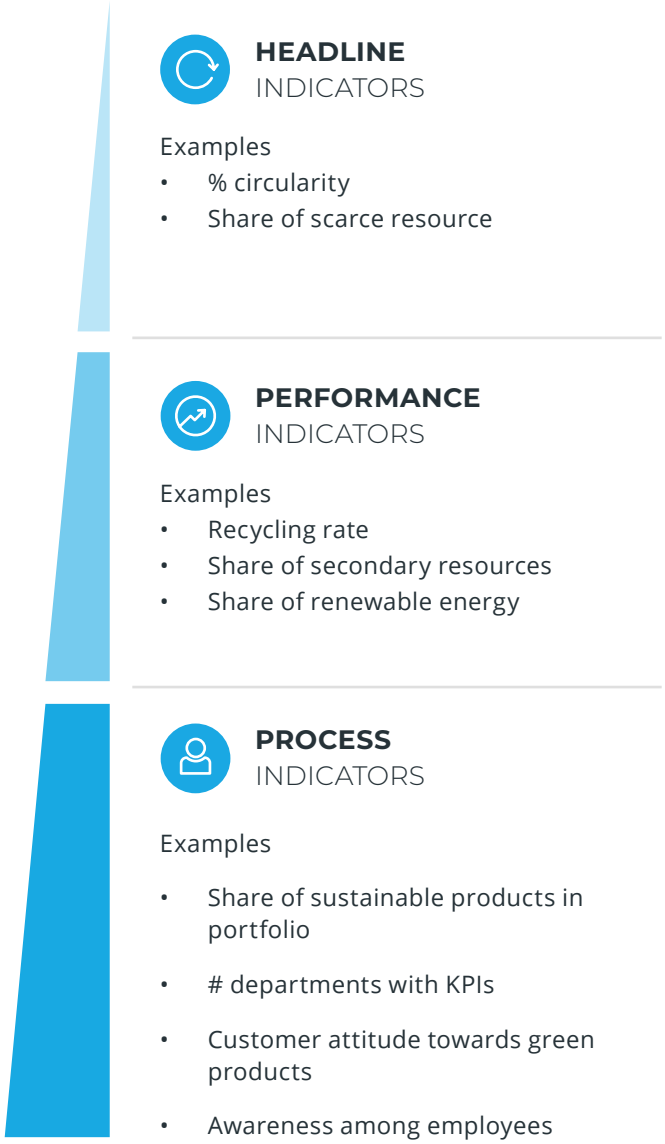

Figure 6. Headline, performance and process circular indicators

- Circular economy-related awareness and knowledge-building campaigns
- Stakeholder involvement in circular working groups and events
- Circular projects and investments made

- **Impact indicators: Measuring the impact of each action's implementation**

  Impact indicators enable quantification or estimation of the social, economic or environmental impact of different activities. At the city or focus area-level, impact indicators could include:

  - Material footprint[17] (city-wide or of specific focus areas such as the built environment, the textile sector, consumables etcetera)
  - Carbon footprint
  - Air quality

  Cities may also be interested in measuring their circularity by specifically looking at their material flows and the administrative processes put in place to support and monitor circular progress. This was the case in Mataró, which decided to classify the indicators displayed in Figure 7 below into inflow, outflow, and process indicators.

SELECTING INDICATORS

Defining which indicators to focus on early during the strategy design phase allows stakeholders to start thinking ahead about the type of data they will need to collect and the methodologies they can adopt to calculate or measure them. To adopt a final set of indicators, cities can use a similar evaluation system to that used by Toronto (See Table 4 above) to prioritise indicators based on:

- **Communication power:** Is the indicator relatable and understandable for a broad range of audiences?
- **Proxy power:** Does the indicator represent the target (or result) in a clear manner?
- **Data power:** Is quality data available on a timely basis for this indicator?

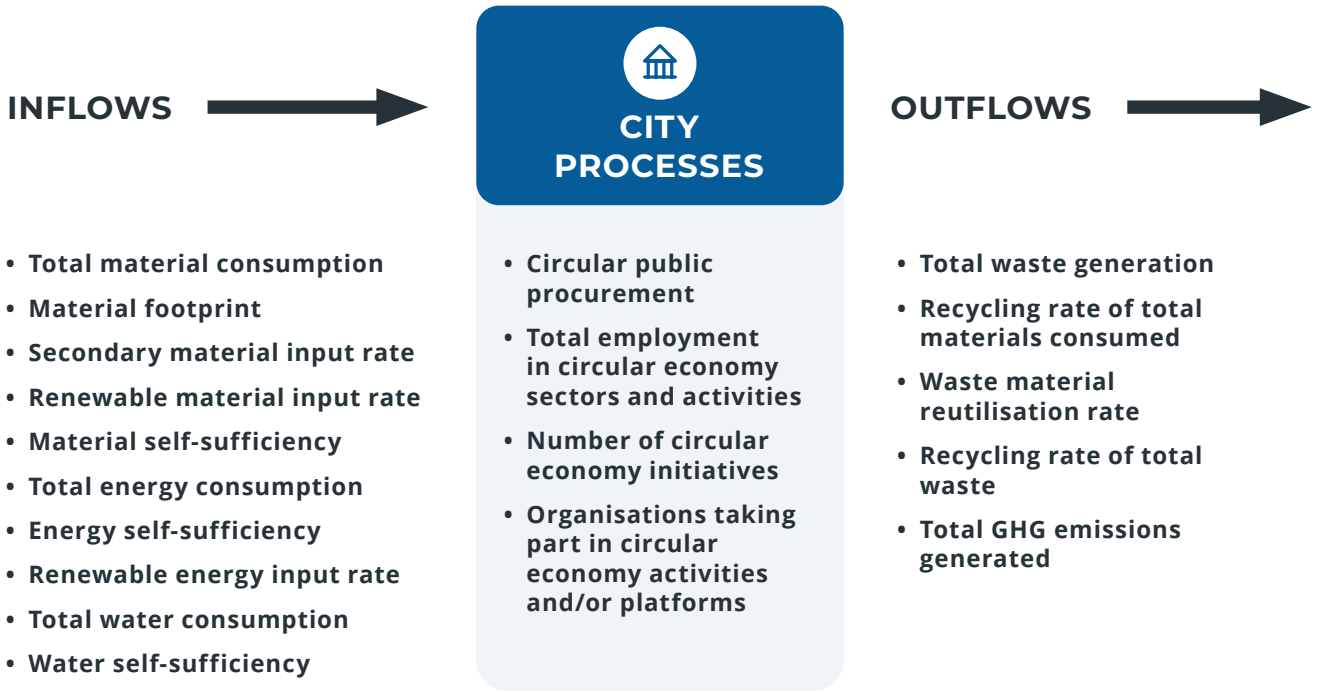

Figure 7. Inflow, outflow and process indicators used in the city of Mataró

Table 4 Indicator evaluation system based on communication power, proxy power and data power adopted in Baselining for a Circular Toronto.[18]

INDICATOR (UNIT)	COMMUNICATION POWER	PROXY POWER	DATA POWER
Amount of construction & demolition waste generated (tonnes)	High	High	Medium
Rate of reuse or high-value recycle (%)	High	High	Low
Demolition rate (%)	High	Medium	Medium

CIRCULARITY MONITORING TOOL FOR CITIES

CityLoops

CityLoops is developing a practical circularity measurement package for cities consisting of a circular economy definition, accompanied by indicators that guide users in understanding which parameters have to be measured in their city as indication of their progress. CityLoops is also piloting a methodology for cities to conduct urban circularity assessments either at the entire city level or at sector level.

External link ›

2.8 - IDENTIFY WAYS TO FINANCE THE CIRCULAR ECONOMY: HOW AND WHERE TO SECURE FINANCING?

The transition to a circular economy entails important structural changes to the current economic model, which means that cities and their stakeholders must find new mechanisms to secure financing. This will help ensure the implementation and financial viability of the circular actions contributing to the wider Circular City Strategy.

There are several financing instruments that may be used to fund the transition, such as equity financing, grants, direct investment (for a specific project) or framework/multi-sector investment programme loans, or more de-centralised financing models, often arising from bottom-up initiatives such as crowdfunding, cooperatives and public-private-people partnerships. For this, the particularities of circular actions or projects must be well-understood by fund-seekers and investors.

Some important aspects in relation to accessing financing are listed below and in Table 5.

- The type of business or revenue model proposed (for example, product-as-a-service models, sharing models, closing the loop models);
- The size and maturity of the project/company involved in the circular action;
- The risk profile of the circular action, based on technical criteria specific to markets, value chains, regulatory requirements or client risks.

CIRCULAR CITY FUNDING GUIDE

This web-based guide was developed to provide information on financing and funding sources for circular initiatives, and to provide guidelines for establishing funding programmes to support the transition to a circular economy. This guide responds to the need for broader and more effective knowledge dissemination regarding the financing of the circular transition identified by cities and institutions.[19]

External link ›

Table 5. Overview of different types of financing for circular projects (Circular City Funding Guide, EIB 2021).

ORGANISATION OR PROJECT TYPE	CASH FLOW CHARACTERISTICS / RISK ASSESSMENT	FUNDING OPTIONS				
R&D	Pre-revenue / Very high risk	Alternatives	Equity	Grants	Guarantees	
Start-up	Pre-profit / Very high risk		Equity	Grants	Guarantees	
Scale-up	Pre-profit to profit / High risk		Equity			Debt
Growth	Profit / Medium risk		Equity			Debt
Mature	Profit / Low risk					Debt

2.9 - STRUCTURE AND COMPILE THE STRATEGY

After defining and agreeing on the steps required for the development of a Circular City Strategy, the actual work of preparing and writing the strategy needs to be planned. It is important to keep in mind that the entire process, from planning to the finalised circular strategy, can be long, sometimes taking up to a year.

Sitra's guide on *How to Create a National Circular Economy Roadmap* suggests the following approach to be taken in drafting a strategy:

In drafting the strategy, it is important to keep in mind that this document will be communicating your city's long-term circular vision. Therefore, efforts must be made to write and present the strategy as clearly as possible in both text and illustrations.
It is also important to clarify different stakeholders' roles and create a strong consensus on the direction the city is heading to. When writing the strategy, it is important to inspire your audience with text that demonstrates the urgency to move towards circular economy practices. Below are a few key elements to be considered when writing your Circular City Strategy:

- Adopt an appropriate writing style that is accessible to all stakeholders but does not oversimplify the comprehensiveness and complex nature of the circular economy.
- Summarise the main steps and circular economy principles/concepts that you want to adopt using infographics.
- Clear visual elements such as infographics, tables and visuals that will make your Strategy user-friendly and understandable.
- Emphasise the benefits of the circular economy, possible trade-offs and the importance of creating a shared consensus and commitment amongst stakeholder to facilitate action throughout the document.
- Focus on the reader and craft an inspiring narrative that urges the reader to act.

Once the strategy is ready, start planning its adoption and dissemination. The formal ***adoption of the strategy*** could for example be through a decision in the municipal council, something that would give legitimacy to the strategy and ultimately facilitate the implementation. Then ***disseminate the strategy*** as widely and effectively as possible, to ensure that it inspires stakeholders into taking an active role in the circular transition.

3. CURRENT STATUS OF CIRCULAR CITY STRATEGY DEVELOPMENT IN EUROPE

As one of the key building blocks of the *European Green Deal*, the Commission's *Circular Economy Action Plan* shows that the circular economy ranks high on sustainability agendas across Europe. However, the circular economy concept has only begun to gain traction in recent years, largely stemming from increased pressure from several disruptive sustainability trends, but the majority of political discussions around the circular economy are still occurring at the national and EU levels. To successfully implement the *European Green Deal*, Member States will need to leverage the circular action and momentum taking place in their cities. As of yet, only few European cities have developed a Circular City Strategy[20], but the concept is becoming increasingly popular, and many cities are focusing their efforts on putting the circular economy at the top of their urban action agendas. Table 6 provides an overview of cities that have already adopted a Circular City Strategy.

Table 6. Overview of existing and planned circular economy strategies in Europe. Adapted from European Economic and Social Committee's report on 'Circular economy strategies and roadmaps in Europe'[21] and JASPERS Excel Database.

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
City	Bergamo	TBD	TBD	Mobility, tourism, waste management, water	Planned	External link ›
Region	Bern	TBD	TBD	Built environment, food, waste	Planned	External link ›
City	Vienna	TBD	TBD	Built environment, recycling, urban innovation, water	Planned	External link ›
City	Zurich	TBD	2040	Waste, resource management, built environment	Planned	External link ›
City	Amsterdam	Amsterdam Circular Strategy 2020-2025	2020-2025	Built environment, biomass and food	Existing	External link ›
Region	Andalucia	Andalusia's circular bioeconomy strategy	2030	Biomass, bioproducts, infrastructure, energy	Existing	External link ›
Region	Aragon	Circular Aragon Strategy	2030	Agriculture and livestock	Existing	External link ›

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
Region	Bilbao & Bizkaja (Region)	Circular Bilbao & Bizkaia	Different targets for 2020, 2030 and 2050	Tourism sector, trade sector, advanced manufacturing sector	Existing	External link ›
Region	Brabant	Stepping stones to Circular Economy 2019-2028 in Brabant	2019-2028	Built environment	Existing	External link ›
City	Brussels	Brussels Regional Program for a Circular Economy 2016 – 2020	2016-2020	Built environment, waste, logisitics, commerce	Existing	External link ›
Region	Castilla-La Mancha	Circular Economy Strategy of Castilla-La Mancha 2030	2030	Plastics, food waste, critical raw materials, built environment and milling, and bioeconomy	Existing	External link ›
Region	Catalonia	Roadmap for the circular economy in Catalonia	2017-2021	Water, built environment, energy, materials, chemicals, waste and textiles	Existing	External link ›
City	Copenhagen	Circular Economy in Greater Copenhagen	2035	Waste, built environment, consumer goods	Existing	External link ›
City	Edinburgh	Edinburgh Economy Strategy: Enabling good growth	NA	Waste, energy and utilities	Existing	External link ›
City	Espoo	Sustainable Espoo Programme	2030	Smart City, industrial areas developement	Existing	External link ›
City	Est Ensembre Gran Paris	Circular economy plan	2025	Built environment, waste management	Existing	External link ›
Region	Extremadura	Extremadura 2030 Green and circular economy strategy	2030	Waste	Existing	External link ›
Region	Flanders	Circular Flanders	2050	Plastics, food losses, critical resources, built environment	Existing	External link ›

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
City	Freiburg	The Circular Economy Strategy of the City of Freiburg	2025	Waste, material circulation, consumer goods, technologies, consumption	Existing	
Region	Galizia	Circular Economy Galley Strategy 2019-2030	2030	Waste, material circulation, Built environment, food, nature economy, consumer goods	Existing	
City	Ghent	2020-2025 Climate Plan, City of Ghent	2020-2025	Biobased technology, communication, small-scale businesses, housing	Existing	External link ›
City	Glasgow	Circular Economy Route Map Glasgow 2020 – 2030	2023	Food	Existing	External link ›
City	Gothenburg	Circular Gothenburg	2030	Waste, material circulation	Existing	External link ›
Region	Großes Walsertal	Circular Economy in the Great Walser Valley	2030	Waste, material circulation, built environment, food, nature economy, consumer goods, technologies, mobility & logistics, trade/sharing, energy & utilities	Existing	External link ›
City	Helsinki	The City of Helsinki's Roadmap for Circular and Sharing Economy	2035	Built environment, procurement, green waste, plastics, sharing economy and new business opportunities in circular economy	Existing	External link ›
Region	Kongsvinger	Circular Kongsvinger	NA	Built environment, resource efficiency	Existing	External link ›
City	Leuven	Roadmap 2025 - 2035 - 2050	2030	Repair and reuse, food, built environment, consumption	Existing	External link ›
City	Lisbon	Lisbon: the first EU Green Capital in Southern Europe	NA	Waste, material circulation, built environment, food, mobility & logistics, energy	Existing	

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
City	Ljubjana	Circular Economy examples in the City of Ljubljana	NA	Food, forest, manufacturing, and mobility	Existing	External link ›
City	London	London's circular economy route map	2036	Environment, food, textiles, electronics, plastics	Existing	External link ›
City	Maribor	Strategy for the Circular Economy transition in the municipality of Maribor	2030	Waste, material circulation, mobility & logistics, energy & utilities	Existing	
City	Milan	Milan Circular Economy Strategy	NA	Food, textiles, plastics	Existing	External link ›
City	Murcia	Circular Economy Strategy of the Region of Murcia	2030	Waste, biowaste, wastewater	Existing	External link ›
City	Nantes	Our Great Ambitions Our Shared Commitments	2030	Waste, material circularion	Existing	
City	North Karelia	North Karelia's circular economy roadmap	2030	Waste, built environment, consumer goods	Existing	
Region	North-Netherlands	The Metabolism of the Northern Netherlands	2030	Waste, built environment and nature economy	Existing	
City	Oslo	Circular Oslo	2025	Electronics, food, textiles, building materials and plastics	Existing	External link ›
Region	Päijät-Häme	Päijät-Häme Roadmap towards Circular Economy	2030	Food, materials, built environment	Existing	External link ›
Region	Pais Vasco	Basque Country Circular Economy Strategy 2030	2030	Waste, material circulation, built environment, food, mobility, energy	Existing	External link ›
City	Paris	Paris Circular Economy Plan	2020	Waste, user and city services	Existing	External link ›
City	Porto	Circular Roadmap for the City of Porto in 2030	2030	Limited to solid waste collection and transportation	Existing	External link ›

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
City	Porvoo	Porvoo's Circular Economy Roadmap	NA	Waste, built environment, energy & utilities	Existing	
City	Prague	Circular Prague	2030	Built environment, households, utilities	Existing	External link ›
City	Riihimäki	Riihimäki's Circular Economy Roadmap	2050	Waste, energy, quality of life	Existing	
City	Rotterdam	From mess to beautiful: Rotterdam Circular Programm 2019 - 2023	2030	Waste, built environment	Existing	External link ›
City	Roubaix	Circular economy From Zero Waste to Circular Economy!	NA	Waste	Existing	
City	Rovaniemi	Roadmap for the Circular Economy of the City of Rovaniemi	2030	Nature economy, mobility and energy	Existing	
City	South Karelia	Circular Economy in South Karelia	NA	Waste, built environment, food, mobility, energy	Existing	
Region	Southwest Finland	Southwest Finland's Circular Economy roadmap	NA	Waste, material circulation, built environment, food, nature economy	Existing	
City	The Hague	Circular The Hague Transition to a sustainable economy	2030	Built environment, trade	Existing	External link ›
Region	The Province of Gelderland	From Chains to Cycles	2023	Waste, material circulation, built environment, food, consumer goods	Existing	
City	Tilburg	Tilburg Circular Agenda 2019	NA	Waste, material circulation, built environment, food, consumer goods	Existing	
City	Tirana	Green City Action Plan of Tirana	2030	Waste, water, public spaces, transport/mobility, energy, resource management	Existing	External link ›
City	Turku	Circular Turku: A blueprint for local governments to kick-start the Circular Economy transition	2040	Food, construction, mobility, energy, water	Existing	External link ›

LEVEL	CITY	DOCUMENT TITLE	TIMESPAN	SECTORS	STATUS OF CIRCLE ECONOMY PLANNING	LINKS
City	Valladolid	Circular Economy in Valladolid	2030	Energy, mobility, urban development	Existing	External link ›
City	Vantaa	Vantaa's circular economy roadmap 2019-2030	2030	Waste, built environment, consumer goods	Existing	
City	Bornholm	Circular Economy Action Plan	2032	Biowaste, education, tourism	Existing	External link ›

3.1 - EXAMPLES OF CIRCULAR CITY STRATEGIES IN EUROPE

As inspiration for the preparation of a Circular City Strategy, this section presents three examples of urban circular economy strategies prepared by Paris, Amsterdam and Maribor. A more extensive summary of circular economy in cities and regions can be found in the report *Best Practices - Developing Circular Economy Strategies in Europe*, prepared by JASPERS.

Table 7. Overview of Circular City Strategy structures and time-frames.

CITY	STRATEGY STRUCTURE	TIMEFRAME	AUTHOR
Paris	Vision Challenges Strategy Actions Governance	2017- 2020	Mayor and Circular Economy Deputy
Amsterdam	Vision Priority Areas Current State Recommendations	2020-2025	City of Amsterdam and others
Maribor	Current situation Governance Process development Priority areas SWOT analysis	Not specified but aligned with SDG's (2030)	Private-public institute, city and others

PARIS

Paris is the most populous city in France and a leader within the circular economy sphere. In 2017, the Paris City Council published its strategy to transition to a circular economy. The circular economy has been identified as a key means for reinforcing Paris's urban and economic resilience, with many actors already driving this forward in their local areas.

BASELINE ASSESSMENT

In 2014, the City of Paris joined forces with the Paris Region Lab to experiment with solutions that contribute to more efficient management of natural resources and materials used within the city to improve its urban metabolism. Several cities and regions carry out metabolism analyses as one of their first steps in developing a Circular City Strategy.

TARGETED SECTORS AND FOCUS AREAS

The *Paris Urban Metabolism* study revealed that the main priorities for the city of Paris are:

- Control of the food chain
- Recovery of sources of organic matter (for use as soil amendment and energy)
- The fight against food waste
- Visibility of the consumable goods supply chain (origin and logistical organisation)
- Impacts of the construction industry
- Support for innovation and new economies
- Solutions facilitating access to and sharing of premises and property
- Priority to short production and distribution chains

STAKEHOLDER PARTICIPATION

In 2015, the General Assembly on the Circular Economy of Greater Paris, organised in collaboration with around 20 metropolitan authorities, mobilised more than 250 structures from the associative, industrial, economic, institutional and academic worlds. The resulting White Paper contains 65 proposals for action to promote the development of the circular economy. The themes addressed were as diverse as they were complementary: the zero waste trajectory, food waste, recovered energy, industrial ecology and construction waste, to name a few.

CIRCULAR VISION AND TARGETS

Based on the work of the General Assembly of the Circular Economy, the 65 proposals of the White Paper on the Circular Economy and the challenges highlighted by the city's urban metabolism analysis, the Strategy presents ambitious objectives to be achieved. These objectives, while in line with European and French frameworks, are also specific to Paris: a zero waste trajectory for household waste, sorting of all plastics from 2019 onwards, collection of food waste throughout Paris by 2020, and zero waste sites for the City's construction and development operations.

CIRCULAR ACTIONS

The *Paris Circular Economy Plan* was accompanied by a first roadmap, adopted in July 2017, and a second roadmap, adopted in November 2018. They are each composed of 15 concrete circular actions. The first roadmap addresses priority themes: planning and construction; waste reduction, reuse, reorganisation and repair; support for local players; public procurement; and responsible consumption. The assessment of this first roadmap shows that all of the actions were initiated in 2017. Five of them are in the development phase and ten are being finalised.

GOVERNANCE

In July 2017, the Paris Council unanimously adopted the Paris Circular Economy Plan. The municipal strategy presents a plan until 2020. It aims to activate operational levers to promote a coordinated and in-depth change in the current economic model.

CURRENT STATUS OF IMPLEMENTATION

At the beginning of July 2022, Greater Paris Metropolis announced its *Metropolitan Strategy for the Circular and Solidarity Economy of the Greater Paris Metropolis*. It aims to formalise and strengthen the action of the Metropolis in this field through five strategic orientations:

1. To be exemplary in this area and to show solidarity with the municipalities and territories
2. Supporting the circular and solidarity-based transition of municipalities and metropolitan areas
3. Develop soberly and build with less new and carbon-based materials

4. Strengthen the local food industry and recycle food waste
5. Encourage reuse, reconditioning and repair to extend the life of goods

These strategic orientations have then been broken down each year into action plans defined in a roadmap. Seven roadmaps will be drawn up as the strategy unfolds over the period 2022–2030. An initial roadmap was defined this year as part of the launch of the *Metropolitan Strategy for a Circular and Solidarity Economy*. The development of the Strategy was co-constructed over the course of six collective workshops that took place between January and February 2022. This most recent Strategy will contribute more broadly to the Sustainable Development Goals (SDGs) of the 2030 Agenda proposed by the UN, in particular to SDGs 11, Sustainable Cities and Communities, 12, Responsible Consumption and Production, and 17, Partnerships for Achieving the Goals.

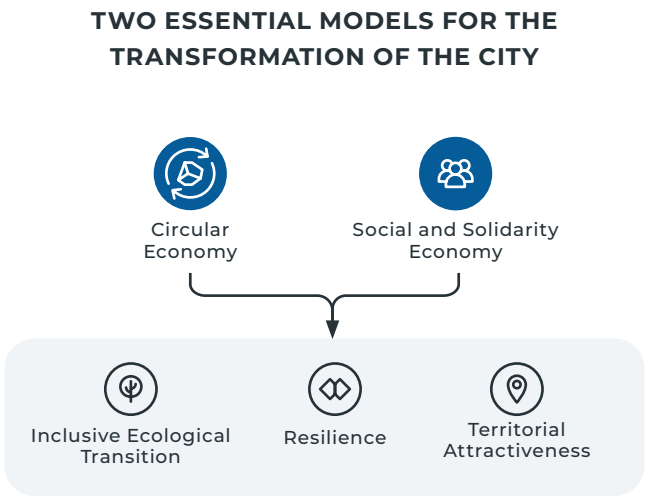

Figure 8. Essential models for a circular and solidarity economy framework for the Greater Paris Metropolis (Adapted and translated from the original source).

AMSTERDAM

Amsterdam is a benchmark city for the circular economy. It boasts the ambitious goal of becoming a 100% circular city by 2050. Its *Circular Strategy 2020–2025* brings together a large number of measures from waste reduction to resource management and circular construction, encompassing businesses, the city and its residents in the transition.

BASELINE ASSESSMENT

In October 2015, the Municipality of Amsterdam commissioned Circle Economy and Fabric TNO to collaborate on a circular economy vision for the city based on quantitative insights. The team were the first to apply a City Circle Scan (CCS): a stepped process to determine key hots-pots in value chains and identify potentially easy, early wins for a transition to a circular economy.[22]

As a first step, the team assessed the status of circularity across 30 sectors of the Amsterdam Metropolitan Area. This assessment collated existing data and analysed it against four key indicators. Each indicator was substantiated by further quantitative or qualitative sub-indicators. This step helped identify focus areas with a high economic and ecologic impact as well as a high potential for value retention.

Sectors were accumulated into value chains to ensure that the transition is not limited to sectoral boundaries. These value chains were then ranked qualitatively according to their impact and potential (great, moderate, low) against the four indicators: Ecological impact (quantitative), Economic impact (quantitative), Conservation potential (quantitative), and Transition potential (qualitative). Circle Economy and TNO nominated the ten highest-ranking chains. Through consultations with the municipality and local stakeholders, two value chains were selected as focus areas for the development of an action plan.

TARGETED SECTORS AND FOCUS AREAS

The strategy presented in Circular Amsterdam 2015 offers a starting point, giving concrete direction to the ambition, vision and agenda on the theme of a circular economy for two specific value chains: construction and organic residual streams.

The 2019 Strategy adopted construction and organic value chains alongside consumer goods. No further information regarding the selection or confirmation of focus areas is provided in the 2019 strategy. However, all three focus areas in Amsterdam's strategy are also featured in the Netherlands' national Circular Economy Strategy. It is likely that Amsterdam was motivated to adopt these specific focus areas with the aim of aligning with the national strategy. The ambitions for food and organic waste streams,halving per capita food losses,are also strongly aligned with the Sustainable Development Goal on combating food waste.

The three priority sectors the City of Amsterdam will focus on for its Circular City Strategy are presented below:

- **Food and organic waste streams**
  - Ambition one: Short food chains provide a robust sustainable food system
  - Ambition two: Healthy and sustainable food for the people of Amsterdam
  - Ambition three: High-quality processing of organic waste streams
- **Consumer goods**
  - Ambition one: The City sets the right example by reducing its consumption
  - Ambition two: Using what we have more sparingly
  - Ambition three: Amsterdam makes the most of discarded products
- **Built environment**
  - Ambition one: The transition to circular development requires a joint effort
  - Ambition two: The City sets the right example by formulating circular criteria
  - Ambition three: A circular approach to the existing city

STAKEHOLDER PARTICIPATION

The *Circular City Strategy* adopted by the city of Amsterdam is an excellent example of broad stakeholder participation. Residents and businesses were contacted by the City via consultations, communication campaigns, and participation meetings, but also through the use of platforms that enable knowledge sharing and practical information such as *Amsterdam Smart City or Circular City (Cirkelstad)*. Overall, the strategy process involved discussions among more than 60 city officials spread across ten different departments, 150 local businesses, experts and organisations including the following:

- Local administration offices
- Utility providers (energy, water, waste treatment companies)
- Industry representatives (food, built environment, consumer goods)
- Citizen initiatives
- Economic clusters
- Knowledge institutes.

VISION AND TARGETS

Amsterdam envisions broad prosperity, where material wealth is not the only measure of a 'good life', wellbeing, health and a pleasant environment are also critical. Its goal is to become a modern and inclusive city where everyone can thrive within planetary boundaries. By targeting three main value chains (Food & organic waste streams, Consumer goods, and the Built environment) the City of Amsterdam aims to reduce its overall use of primary raw materials by 50% by 2030 and be 100% circular by 2050. These milestone targets will also help the City reach its climate-neutrality target by 2050.

ACTIONS

Through an evaluation of relevant circular projects, municipal instruments and different value chains (Construction, Biomass & food, Consumer goods), the City and stakeholders suggested five action perspectives needed for the circular transition: the three focus areas discussed above, and more general actions such as expanded public procurement and improved research, Information provision and networks.

GOVERNANCE

Following the Circle City Scan process, Amsterdam conducted two municipality-wide programmes to test approaches towards circularity (*Learning By Doing and the Circular Innovation Programme*), before drafting its Circular City Strategy in 2019 (*Amsterdam Circular 2020–2025 Strategy*).

CURRENT STATUS OF IMPLEMENTATION

Circular Amsterdam, A vision and action agenda for the city and metropolitan area showcases how quantitative and qualitative data can be used to drive the selection of focus areas. The document follows a clear methodology and includes feedback loops to validate the results of the team's data driven analysis.

MARIBOR

Maribor is the second-largest city in the Republic of Slovenia and is a regional leader on the topic of circular economy. In 2018, it became the first Slovenian city with a Circular City Strategy and, through different EU programmes, it has tested solutions for the implementation of circular economy in the city and in public utility companies.[23]

BASELINE ASSESSMENT

The *Strategy for the Transition to Circular Economy in the Municipality of Maribor* (2018) sets municipal utility and service providers in the centre of the city's transition towards a circular economy, drawing on established collaboration across different public bodies.

To coordinate actions across organisations, the Wcycle institute was established jointly by five communal companies. Wcycle targets the effective, city-wide management of waste, excess heat, wastewater, unused space and the more abstract resource of 'social environment' in a closed urban metabolism. Measures and actions by the service providers are organised along two principles:

- Available resources (excess heat, unused space, etcetera) in the ownership of utility providers are to be circulated across them to enable more efficient performance. Gains will benefit Maribor's citizens equally, as they improve basic public services.
- If they can't be utilised among utility providers, available resources will be directed into Maribor's private sector. This ensures that potential gains remain within the city and potential negative impacts aren't externalised.

TARGETED SECTORS AND FOCUS AREAS

Consistent with its approach, Maribor defined **seven strategic project areas** in which public service providers have more or less direct influence to set actions, as listed below:

1. Treatment of municipal waste and associated services
2. Use of processed construction and demolition waste and soil in urban construction
3. Managing surplus heat and renewable energy
4. Sustainable mobility - Urban transport and joint service
5. Reuse of recycled water and alternative water resources
6. Sustainable management of land and regeneration of degraded areas
7. Cooperating economy network

Many of Maribor's priority areas are also featured in *Slovenia's National Circular City Strategy*. However, in Maribor's strategy there is a strong focus on waste prevention and on the transformation of waste into a resource, looking closely at waste treatment regulations for five waste streams:[24] municipal waste, waste packaging, food waste, bio-waste and critical raw materials.

STAKEHOLDER PARTICIPATION

For the creation of the city's circular strategy, the Municipality of Maribor worked with ten partners from five EU Member States. At the beginning of 2018, the first draft of the strategic document was presented at participatory local workshops in Maribor for members of the municipal administration of the city, businesspeople and the wider public. This created an opportunity to give feedback on the document and form general consensus amongst stakeholders regarding the city's primary needs.

VISION AND TARGETS

Objective: The municipality developed a *Strategy for the Transition to the Circular Economy in the Municipality of Maribor* which aims to manage all the city's resources in a circular manner.

The project objectives for planning and implementing the Wcycle project are:

- Reducing the environmental burden
- Reducing the use of natural resources
- Increasing the use of renewable sources, energy and water
- Quality use of land
- Development of cooperative economy
- Creating new, predominantly green jobs
- Creating added value and economic growth
- Use of new technologies, own research and development

ACTIONS

The strategy describes activities for each strategic project area. These activities are all within the competence of public companies. The proposed activities range from smaller administrative changes (unification of public fleet requirements to ease repairability and management) to actions requiring a longer time horizon, such as adapting the city's water network to handle recycled urban water. The private sector is involved in the transition through a co-operative economy network of partners. The municipality of Maribor aims to support non-governmental organisations within the network with legislation and more favourable terms, however no further specifications were available on this.

GOVERNANCE

The strategy is closely linked to the consortium of nine EU Alpine city partners (Maribor is the leading partner) to achieve the goals of a low-carbon society through the introduction of an integrated circular economy system for the management of urban areas, that builds on available practices and existing low-carbon strategies. The project partners will provide implementation strategies and establish cross-sectoral cooperation and governance. In addition, a toolbox for circular economy deployment and a transnational circular economy marketplace / cooperation platform will be established.

The positive consequences of these circular efforts are the emergence of new business opportunities for the Municipality of Maribor, the people and the economy, the creation of high-quality, predominantly green jobs, new added value and a new economic boost. The strategy is a long-term project that provides development-oriented efficient management of resource flows in local and regional environments.

CURRENT STATUS OF IMPLEMENTATION

Overall, Maribor's Strategy stands out among other circular economy strategies in that it involved establishing a dedicated institute responsible for the circular transition. Service and utility providers are ideal candidates to help place the circular economy firmly at the core of a municipality. As the Maribor example shows, these players can draw on existing processes for communication and decision making.

4. SUMMARY AND CONCLUSIONS

Now is the time for cities to take the lead in the circular transition, given their potential to be cradles and catalysts of circular change, and the positive impact such a transition can have for the city. A crucial step in this is developing a holistic and cohesive Circular City Strategy that provides a framework for the progressive evolution of a city's circular journey, guiding and coordinating local stakeholders in their efforts toward the achievement of a common circular goal.

This guide will help the cities in their work of preparing such a strategy. Important to note is that there is not a one-size-fits-all approach to developing a Circular City Strategy. What is applicable and appropriate in Glasgow may be less so in Genoa, for example. However, with the guidance given and the examples of approaches taken by pioneering cities in Europe, this guide provides the key elements and approaches that a city should consider when developing its own Circular City Strategy.

Some important aspects in the development of a Circular City Strategy are summarised below.

- A Circular City Strategy should be **focused**, which is why identifying **concrete** areas of intervention can ease the implementation of actionable circular solutions.
- Defining a Circular City Strategy is a **participatory team effort**, and cities should thus aim to involve all interested parties early in the process in order to create a **common vision and commitment to the implementation of the strategy**. This will ensure that the strategy considers all relevant angles, interests and needs in the planning of the circular transition.
- General and focus-area-specific **targets and milestones need to be properly set in time**, in a manner that allows for planning, defining actions and monitoring progress and impact. The timing of the circular strategy could also be aligned with national or supranational agendas for example goals and targets under the national Circular Economy Strategy, or 2030 for the UN Sustainable Development Goals.
- **Measure and communicate on** the progress in implementation of the strategy and progress towards the targets, and in the impact generated by the circular actions.

A summary of the key steps in developing a Circular City Strategy is given below.

KEY STEPS IN DEVELOPING CIRCULAR CITY STRATEGY

1 Define the relevant stakeholders: who should cities involve in the process?

- Create a core circular team or a circular economy unit
- Appoint a circular champion
- Identify and engage with external stakeholders, e.g. local businesses, community centres, academia, citizens and NGOs,early in the process
- Create a plan and framework for continuous stakeholder communication and engagement

2 Baseline assessment: What is the city's starting point

- Perform an assessment of the city's socio economic profile, highlighting the main actors and drivers of the economy
- Assess the urban metabolism and related material flows in the city and its environmental impacts
- Prepare an overview of the political agenda and how it could link to the circular economy
- Identify and map existing circular private and community-led initiatives to assess where the biggest momentum exists
- Identify idle assets that could be used to advance circularity within the city

3 Prioritise focus areas: Where should a city direct action?

- Compare relevant focus areas' economic and environmental profiles to assess their potential role in the circular transition
- Select the key focus areas or sectors that the Circular City Strategy could focus on

4 Envision a circular future: Where does the city want to go?

- Define a clear and inspiring vision for your city's strategy, in collaboration with stakeholders
- Set specific and measurable goals and targets

5 Plan for circular action: How can a city reach its goals?

- Long-list circular actions in selected sectors or focus areas, appropriate to capture circular opportunities and address identified challenges
- Short-list circular actions based on stakeholder consultations and impact assessments

6 Establish governance mechanisms for your Circular City Strategy: How will your city lead, enable and encourage the circular transition?

- Assess the role of the city in implementing the Strategy and define the governance instruments, tools and levers the city will use in this process
- Define the roles of other external stakeholders in implementing the Strategy
- Define roles and responsibilities of different stakeholders and the timelines for implementation of different actions in an action plan
- Look for ways to align the strategy with other sustainability plans, programmes and initiatives to capitalise on circular synergies

7 Define a monitoring and evaluation framework: How to measure progress?

- Define a monitoring and evaluation framework to measure progress and impact
- Select indicators that will be used to monitor progress

8 Identify ways to finance the circular economy: How and where to secure financing?

- Identify potential sources of funding
- Support project promoters in accessing appropriate sources of financing

9 Structure and compile the strategy

- Align with local government to ensure that required support is secured
- Identify and mobilise the resources needed for the development of the Strategy
- Define roles and responsibilities for the drafting of the strategy and allocate the necessary resources
- Write the strategy
- Secure political support for the strategy, e.g. through adoption in the Municipal Council
- Prepare a plan for dissemination of the strategy

ANNEX 1 - ADDITIONAL RESOURCES

References for the development and drafting of strategy documents

DOCUMENT	DESCRIPTION
How to create a national Circular Economy road map: A guide to making the change happen **Author:** Sitra Studies 170 **Date:** 2020	A circular economy road map is a tool for change: it helps define the required steps and compiles key stakeholders' views on the essential changes and actions required for the circular transformation. Road maps include a vision as well as goals and tangible actions that will accelerate a country's transition towards a circular economy.
Handbook of Sustainable Urban Development Strategies **Author:** European Commission **Date:** 2020	The Handbook aims to provide methodological support to augment knowledge on how to implement integrated and place-based urban strategies under cohesion policy. It contains recommendations intended to complement official regulations, without being prescriptive. It is a policy learning tool, which should be flexible and adaptable to the needs arising from different territorial and administrative contexts.
The 15 Circular Steps for Cities (Third Edition) **Author:** European Investment Bank & Circle Economy **Date:** 2022	This document outlines problems facing many linear cities today, and argues the case for circular change. It highlights elements that make cities suitable as both cradles and catalysts for a circular transition. The document also provides concrete guidance on how a linear city can kick start its circular journey, presented in the form of 15 circular steps. This guide builds on these steps and outlines how some of them could be used to develop a Circular City Strategy document, and plan for the work ahead.
The Circular Economy in Cities and Regions : Synthesis Report **Author:** OECD **Date:** 2020	The OECD *Synthesis Report* provides a Checklist for Action based on 12 key governance dimensions. The tool aims to support decision-makers in promoting, facilitating and enabling the transition to the circular economy. The Checklist is accompanied by the OECD Scoreboard on the Governance of the Circular Economy, a tool for cities and regions to self-assess the existence and functioning of enabling conditions for circular economy policies, initiatives, strategies, and programmes.

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