



# Circular Cities Declaration Report 2024

Insights on implementation,  
measurement, and nature

[www.circularcitiesdeclaration.eu](http://www.circularcitiesdeclaration.eu)

## Foreword

The circular economy has the potential to tackle many of the challenges that cities are facing today, including climate change, the biodiversity crisis, and the difficult economic environment. That is why in Turku the circular economy will be central in achieving climate neutrality, in protecting and strengthening biodiversity, and last but not least in creating opportunities for all.

As a founding signatory of the Circular Cities Declaration, Turku has been at the forefront of the circular transition since the launch of Circular Turku in 2021. A unique cooperation project between the municipality, Finnish Innovation Fund Sitra, ICLEI, and other leading organisations, Circular Turku has been a catalyst for the circular transition in Turku. It has notably enabled the development of a roadmap in collaboration with over 200 stakeholders on five priority topics that are food, construction, mobility, energy, and water. In Turku, the circular economy is at the core of a successful climate policy with positive impacts on the environment, economy and wellbeing — forming a circular climate policy that also addresses the indirect emissions embedded in products and materials along their entire lifecycle.

Turku is proud to endorse and therefore recommend reading this Progress Report, to which we contributed alongside 53 other cities and regions from all over Europe. We believe that it provides a unique overview of how the circular economy is being implemented by cities, of the challenges that they are facing, and of how they are showing the way forward. It also sheds light on two topics which are of particular importance for Turku: measuring and reporting progress, as what isn't measured cannot be effectively managed, and regenerating nature, a central yet often overlooked principle of the circular economy. Undeniably, this Progress Report will bring valuable insight for decision-makers at every level of government. To cities, it will provide inspiration and practical learnings, and to governments or to the EU, it will shed light on implementation and will hopefully inform future policies.

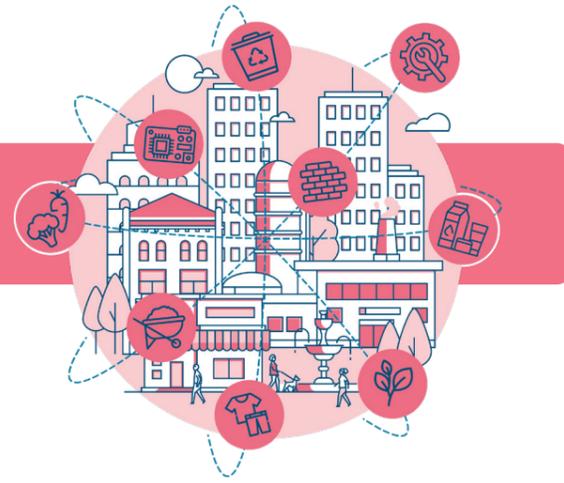
Last but not least, thank you very much to the writing team — ICLEI, the Ellen MacArthur Foundation, and Circle Economy — as well as to every contributing city!

**Minna Arve, Mayor of Turku**

As Mayor of Turku, Minna Arve prioritises sustainable growth, urban inclusion, and innovative policies. Her special interests lie in Climate Policy and Circular Economy. She actively promotes international networks and currently serves as Vice President of ICLEI and Global Portfolio Holder for Circular Development. In recent years, she has been involved in various Finnish, European, and global processes on climate change. Mayor Arve participated in key climate conferences from COP25 to COP28, delivering speeches and joining discussions on Climate Action and Circular Economy.



## Executive summary



In the summer of 2023, signatories of the Circular Cities Declaration (CCD) were asked to report on their progress in transitioning towards a circular economy. In response, 54 signatories from all over Europe — cities in total encompassing 16 million inhabitants, from Bergen to Budapest, and Ghent to Guimarães — submitted detailed reports, that provide a unique insight into how cities are implementing the circular economy in general, as well as specifically how they are measuring progress and how they are regenerating nature.

### Cities are clearly implementing and embedding circular economy principles and roadmaps successfully through a wide range of activities.

The majority of reporting cities have circular economy strategies in place and are now focused on implementing these, with over 200 different actions being identified across cities in all value chains, with a key focus on food and the bioeconomy, as well as the built environment. Cities are driving impact particularly through the development of enabling infrastructure and awareness raising. However, it is also clear that some areas need more focus, including economic incentives and introducing mandatory regulations or advocating to regional or national governments.

**Cities are prioritising progress on circular economy measurement and reporting to support their strategic decision making and transition plans.** Submissions show that improving measurement is a pressing issue for many reporting cities, with more than two-thirds stating they have or are planning to develop a range of indicators to better monitor local circular transitions. Indicators being adopted or considered include governance, behavioural, material flow, and impact indicators. Measuring circular transitions against such a range

of indicators is also enabling a few 'frontrunner' cities to adopt specific, measurable 'upstream' targets that focus on reducing virgin material consumption at source as opposed to 'downstream' waste management targets. This includes introducing targets aimed at increasing reuse, regenerating nature, and making changes to material flows in specific value chains.

### Cities are beginning to realise the untapped potential of the circular economy for regenerating nature.

Alongside adopting standalone nature and biodiversity strategies, more than half of reporting cities identified planning and food policies as decisive ways in which circular principles could support nature-positive outcomes. Overall, the reporting insights show that cities remain in an exploratory phase regarding regenerating nature, with many cities still establishing the link between the circular economy and nature, and, as such, cities are still determining what actions will deliver the most impact.

**Cities are harnessing the potential of the circular economy to achieve climate goals, as well as build resilience and enable a just transition.** The signatory reports (pp.46-100) offer an overview of the strategies and key actions reporting cities are taking and capture the diversity of circular transitions in Europe. They offer a wealth of examples and inspiration for policymakers and fellow cities to explore further and learn from in order to innovate new circular systemic solutions in their own contexts.

Consolidating the key takeaways from this report, six **priority actions** emerge that can accelerate the circular transition in the city context:

#### ★ **Work towards common circular economy metrics:**

Performance data can help cities provide an economic rationale for adopting circular economy approaches, and demonstrate how these help tackle global challenges, such as climate change, biodiversity loss, waste and pollution. Through collaborative action, cities can consolidate behind a set of priority indicators which align to key reporting initiatives. Doing so will improve comparability and ensure that cities have the information they need to make effective decisions.

#### ★ **Set more ambitious targets, including on consumption-based emissions:**

Alongside adopting more upstream material targets, such as on reuse and virgin material consumption, frontrunner cities are setting Scope 3 consumption-based emissions targets. Such goals will ensure that cities move circular economy discussions beyond focusing on downstream interventions such as recycling, and challenge the need for costly waste management in the first place. Looking further upstream in this way can ensure that cities reap the full benefits of the circular economy transition, particularly in relation to meeting climate goals and targets.

#### ★ **Integrate circular economy approaches across city departments to unlock resources:**

In order to ensure that the circular economy is not seen as a siloed solution to specific problems but an integral part of a city's strategic plan and operations, it is vital that circular economy principles and approaches are integrated across all areas of governance, planning, and decision making. Through cross-departmental

coordination and working groups, taking a whole-of-city-government approach will help cities access more resources and tap into relevant but previously overlooked funding pots.

★ **Innovate circular systemic solutions:** New policies and circular systemic solutions are still urgently needed. While this report identifies over 200 actions that cities could replicate or learn from, significantly more progress is needed to unlock the economic and environmental potential of the circular economy. Cities must continue utilising all policy levers available to test and innovate solutions that can be scaled.

★ **Advocate for a new paradigm:** In areas where local government innovation alone is not enough, cities must also clearly advocate to central governments, financial actors, and other stakeholders for more coherent circular economy policy frameworks and packages, and create connections between these key decision makers. To confront the true costs of linear production and consumption, fiscal reforms and cost recovery mechanisms like Extended Producer Responsibility (EPR) schemes are also critical.

★ **Embed nature into all decision-making processes:** Cities need to continue building their understanding of the natural environment that sustains them. Full spatial mapping of green, blue, and grey infrastructure, and monitoring the nature impact or ecological footprint of city operations and urban flows will support this, in much the same way that stakeholders are accounting for greenhouse gas (GHG) emissions. Meanwhile, utilising toolkits such as the [Urban Greening Plan Guidance and Toolkit](#) will inform target setting and nature-positive action planning, and in turn help cities take a more systematic approach to regenerating nature.

# Circular Cities Declaration Report 2024: Insights on implementation, measurement, and nature



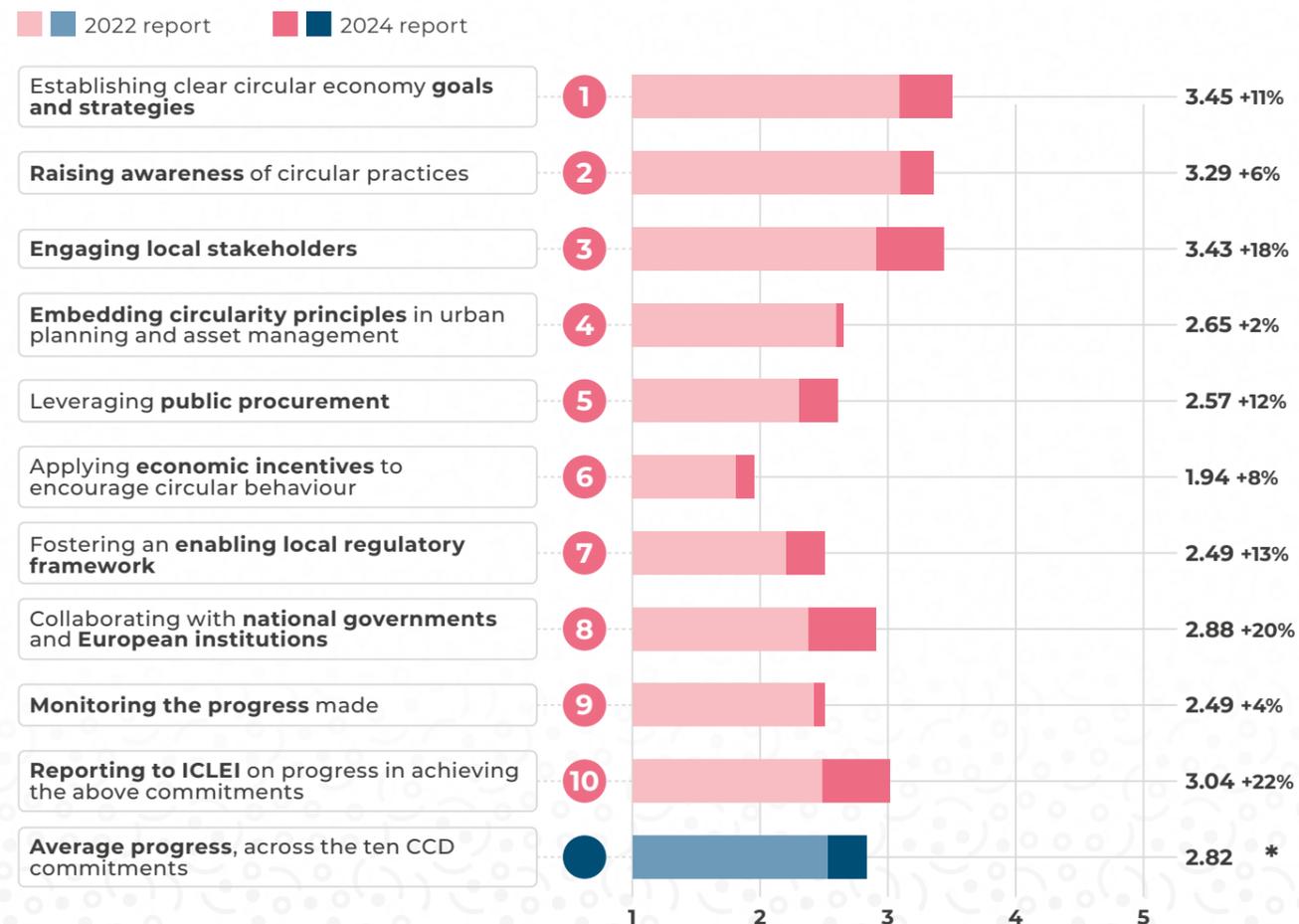
## The Circular Cities Declaration Report 2024 in numbers



### Cities are making steady progress on CCD Commitments

#### Cities' self-evaluation of circular progress

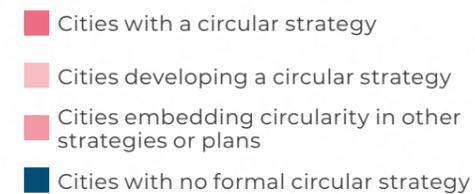
Signatories were asked to rate their progress against the ten CCD commitments from 1 (just beginning) to 5 (systemic change achieved).



\*12% increase in progress towards achieving commitments

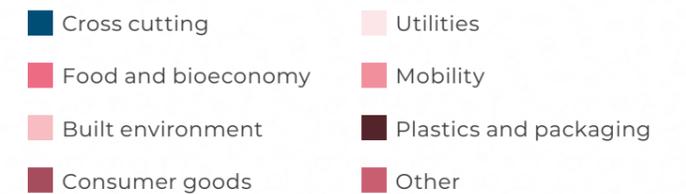
### Cities are implementing circular economy principles through a wide range of activities

#### Strategies and roadmaps



78% of cities include circularity in their strategies

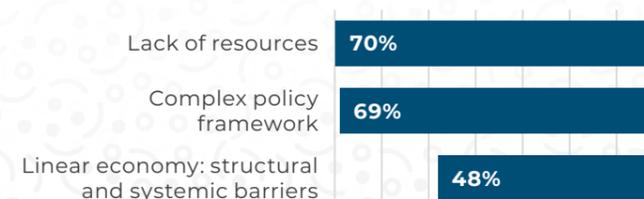
#### Focus areas



63% of actions target specific value chains, with built environment and food and bioeconomy most prioritised

#### Challenges

Lack of resources including funding and staffing was cited as the most common challenge cities faced:



\*Expressed as a percentage of participating cities who reported these challenges

#### Policy instruments

Infrastructure and awareness raising are among the most utilised policy instruments activated by cities:



\*Expressed as the total number of actions which activate a certain lever, out of the total 200+

## Cities are prioritising progress on circular measurement to support strategic decision making

### Deep dive on measuring progress

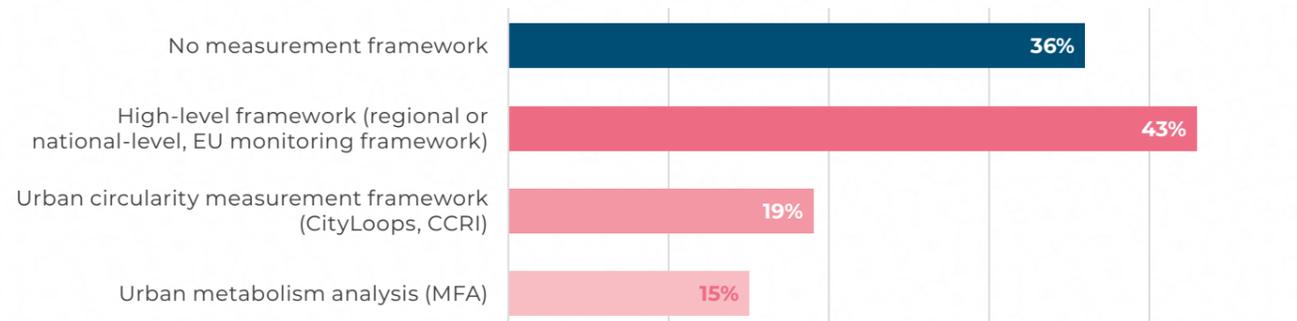
**42%** of signatories said city climate goals are driving circular actions

Frontrunner cities are setting consumption emissions (Scope 3) targets as well as more upstream goals, which link to core circular economy principles.

Principle	 Eliminate waste and pollution	 Circulate products and materials	 Regenerate natural systems
Upstream city goal example	Reduce raw abiotic material by <b>half</b> (Haarlem)	<b>Triple</b> reuse by 2024 (Copenhagen)	<b>Halt</b> biodiversity loss (Fingal)
Enabling goals	Consumption-based emissions reduction targets (Malmö, Oslo, Turku)		

**69%** of signatories have developed or are developing a range of circular indicators\*

### Use of existing available common frameworks and tools is low



\*These include enabler and outcome indicators

## Six priority actions that will accelerate the circular economy in cities



Work towards common circular economy metrics



Set more upstream targets including on consumption-based emissions



Integrate to unlock resources



Innovate new circular systemic solutions



Advocate for a new paradigm



Embed nature into all decision-making

## Cities are beginning to realise the potential of the circular economy for regenerating nature

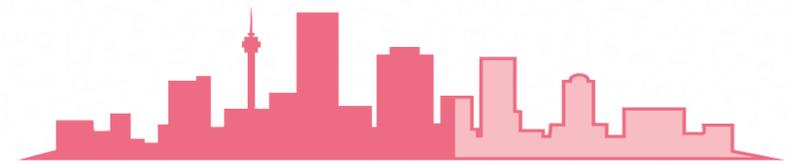
### Deep dive on regenerating nature



**3/5** average rating when asked to self-evaluate progress on 'regenerating nature'



**63%** cited standalone nature or biodiversity plan



**57%** cited city planning processes as a decisive way for cities to protect, connect, create, and grow with nature



**67%** use food policies to promote nature, through supporting urban agriculture, shorter supply chains, and food purchasing



Image: City of Espoo

Shifting attitudes and consumption habits is essential for transitioning to a circular economy. Cities like Espoo (pictured here) have been leading the way in advocating for circular lifestyles through a range of events and programmes, creating an environment conducive to promoting reuse and nurturing the sharing economy. More on Espoo on [page 58](#).

**Table of Contents**

**Foreword by Minna Arve, Mayor of Turku** . . . . . 2

**Executive summary** . . . . . 4

**Introduction** . . . . . 12

**Progress and key insights** . . . . . 14

**Deep dives** . . . . . 28

    Deep dive 1: How circular cities are measuring and reporting progress . 29

    Deep dive 2: How circular cities are regenerating nature . . . . . 36

**Priority actions** . . . . . 42

**City by city: CCD signatory reports** . . . . . 46

**Circular cities support programmes** . . . . . 102

**Acknowledgements** . . . . . 107



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## Introduction

The Circular Cities Declaration (CCD) was established four years ago: to accelerate the transition to a circular economy in European cities. Bringing together a group of leading organisations and a growing number of city signatories — more than 80 today — the CCD creates connections, shares best practices, and showcases the pioneering role of cities to create a system that can work long-term for the economy, society, and the environment.

Over the past year, the CCD has continued to host a [webinar series](#) with sessions on fashion and textiles and on circular business models. These interactive sessions featuring city practitioner experiences and experts show the enormous potential of the circular economy and serve to inspire cities to accelerate their transition. As a systems solution framework, the circular economy has demonstrated that it offers a way forward to tackle urgent global challenges like climate change, biodiversity loss, and waste and pollution, at the same time as creating local economic opportunities and tangible social impacts.

This second progress report indicates that cities are taking ownership of a circular transition and, as a result, are reducing emissions, regenerating nature, and fostering greater resilience within communities. This report builds on data collected from cities and towns of different sizes across Europe, totalling over 54 CCD signatories and encompassing more than 16 million inhabitants.

From July to October 2023, CCD signatories were invited to report on a series of questions, structured around three main areas: general information related to the circular economy, and specific information regarding targets and measurement and activities related to regenerating nature. Submissions from each area were analysed and the insights in the following sections were extracted by ICLEI, the Ellen MacArthur Foundation, and Circle Economy. This report will be valuable for a diverse audience of

policymakers, practitioners, researchers, and those interested in the circular economy. We hope that it will inspire and guide action, and that it will convince readers that cities have already embarked on the circular transition.

In the following initial sections, the report delves into how cities are implementing the circular economy on the ground, first looking at their self-assessed progress towards the ten CCD commitments, followed by an overview of the key implementation actions cities are taking, categorised as policy levers and analysed to shed light on which policy instruments (i.e. methods, mechanisms, or tools that governments use to achieve expected outcomes) are being most used by cities to drive circular economy implementation, including the sectors where they are most active. Throughout, best practices are provided to highlight leading cities. The main challenges facing cities as they work to accelerate progress towards the transition are also explored.

These insights are followed by a deep dive investigating the topic of targets and measurement — looking at the monitoring frameworks being used by cities to track progress and measure impacts, so that they can evidence the benefits of the circular economy. A second deep dive on regenerating nature, focuses on a crucial yet overlooked principle of the circular economy — exploring what cities are doing to mitigate their impacts on nature and biodiversity. After these insights and deep dives, we recommend six priority actions which will enable cities to accelerate their circular economy progress, with the cooperation of other policymakers, businesses, and civil society and citizens. Following this are the one-page summaries provided by all participating signatories, which present each of their strategies, governance structures, and key actions. Finally, an overview of services offered by CCD support partners is provided.

## Progress and key insights

### Key takeaways:

- ★ Cities are making progress towards all of the ten CCD commitments, demonstrating a growing ownership of their circular economy journeys.
- ★ A shift in focus towards implementation is evidenced by a majority of cities (78%) having dedicated circular economy strategies or integrating circularity into other strategic documents.
- ★ Cities have reported over 200 actions across all value chains, and submissions show that the areas where momentum is commonly being driven are in food and the bioeconomy, as well as the built environment. Cities are driving impact particularly through the development of enabling infrastructure and awareness raising, while other policy levers could be leveraged more to unlock the full benefits of the circular economy transition.
- ★ Cities are facing several challenges to further progress, the most cited is lack of sufficient resources with many cities struggling to invest in enabling infrastructure and more innovative policies and incentives.

CCD signatories are increasingly enlisting citizens and businesses in the circular economy. The city of Wiltz is notable for mobilising various demographics through its Circular Innovation HUB, employing innovative approaches. One standout initiative is the Life Cycle Game (pictured here), a workshop that allows the students and schoolchildren to grasp circular economy concepts and challenges through interactive play. More on Wiltz on [page 99](#).

Image: City of Wiltz

### Progress against the ten CCD commitments

Signatories of the Circular Cities Declaration (CCD) have signed up to deliver on ten commitments, all connected to different levers available to cities (listed below). Signatories were asked to self-assess their progress against each commitment from 1 to 5 where: 1 is just beginning and, 5 systemic change achieved.

Comparing this year's submission to last year's (indicated by colour changes in the graph below), shows that cities across Europe have made varying degrees of progress towards the ten commitments. With progress ranging between 2% and 20% across the levers, it is clear that cities are beginning to

take ownership of their circular economy journeys and are moving towards implementation. Still, as per last year's findings, cities seem more comfortable using softer measures such as establishing goals, roadmaps and strategies, raising awareness and engaging local stakeholders, than they are implementing more complex instruments such as economic incentives and fiscal measures, and measuring impacts. Encouragingly, considerable progress has been made by cities collaborating with national governments at European-level and engaging local stakeholders — underlining the importance of multi-level governance and cooperation, as well as public-private engagement, to create an enabling circular economy policy framework.

### Circular cities: key insights

Alongside scoring progress against the ten commitments, cities reported on their circular economy strategies and governance structures and listed the key actions they are taking to implement circular economy practices. Over 200 actions were identified and classified according to the value chain and policy levers used. Cities were also asked to report on their main challenges.

The report findings show that a clear majority of cities now have strategies to steer their circular transition, either explicitly dedicated to the circular economy or embedded within other strategic documents. With these strategies in place, cities

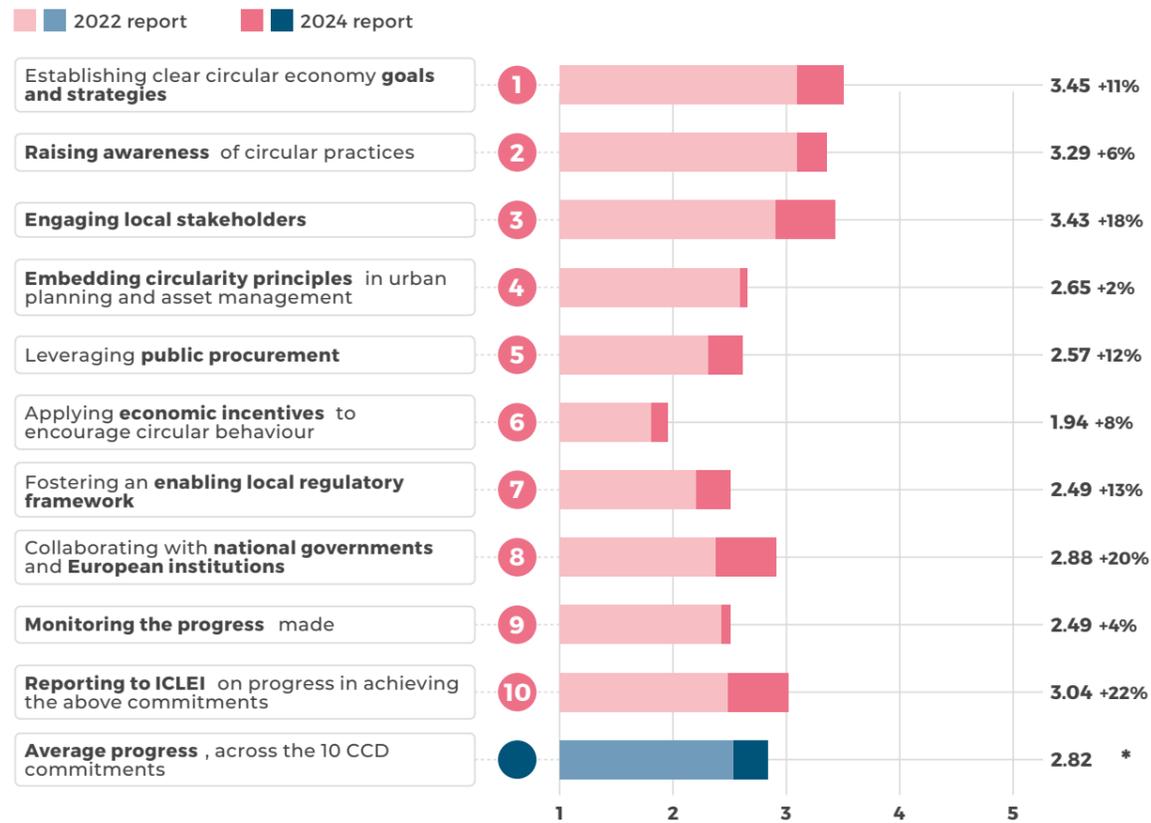
are now focusing on implementation and target setting, notably in value chains such as food and the bioeconomy, as well as the built environment, and are using a variety of policy instruments to drive change. Ultimately, a series of challenges, such as the lack of funding, personnel, or skills are hampering implementation.

**More than half of cities have a circular economy strategy in place, providing a clear focus for circular transition plans**

A strategy — or action plan — defines a common vision and direction for the circular transition. It is a crucial starting point as it ensures cross-departmental collaboration across often large and complex public

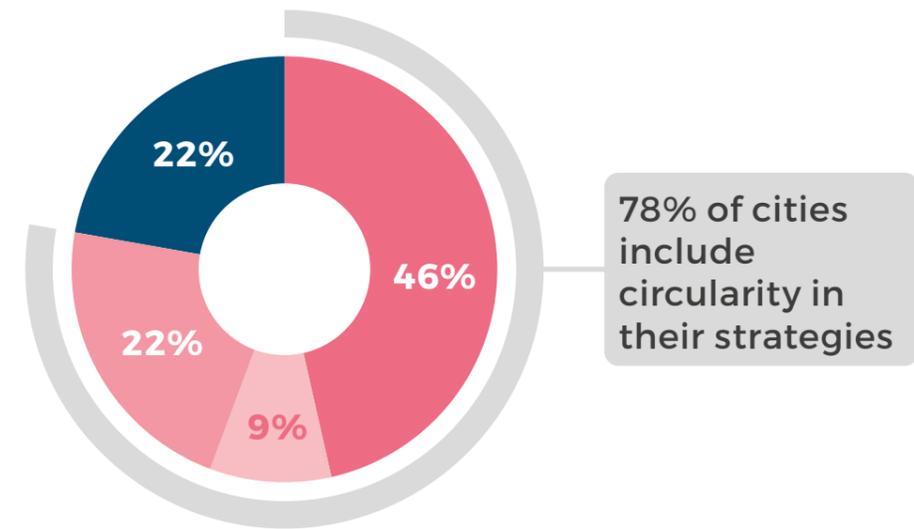
#### Circular economy progress: Signatories' self-assessment

Signatories were asked to rate their progress against the 10 CCD commitments from 1 (just beginning) to 5 (systemic change achieved).



#### Cities with a circular economy strategy or roadmap

- Cities with a circular strategy
- Cities developing a circular strategy
- Cities embedding circularity in other strategies or plans
- Cities with no formal circular strategy



organisations and gives a direction of travel, in many cases with specific quantified targets.

The majority of the 54 reporting signatories (30) reported having a dedicated circular economy strategy or being in the process of developing one, compared to 40% last year. 12 other signatories have embedded the topic of circular economy within other strategies or action plans, mostly climate or municipal action plans. The remaining 12 cities have no formal circular economy strategy in place, with evidence of cities only locally adopting circular principles and for only some sectors, mostly related to waste management.

For more details on the strategies being put in place, see *City by city: CCD signatory reports (pages 46-100)*.

### ***Integrating circular economy strategies across departments is crucial to driving effective implementation***

Most cities now have dedicated staff for the circular economy who are in charge of developing and implementing strategies and managing projects. They either form a dedicated team or are divided across different departments, typically sustainability or economic development departments. In both cases, strategy development and implementation relies on effective cross-departmental collaboration, and all strategic departments tend to be closely involved, including: finance, legal, spatial planning, asset management, procurement, and education. Municipal agencies and companies, like waste management companies or economic clusters or chambers (e.g. Oulu), are also regularly included.

### ***Momentum is being driven in key value chains, such as food and the bioeconomy, as well as the built environment***

The circular economy is a systemic approach that encompasses all value chains and economic sectors. As such, no less than a third of reported actions do not target any distinct value chain. These actions typically target the general public with information campaigns or events, as well as entrepreneurs and SMEs, with calls for projects, incubation programmes, or circular hubs. As local authorities, it is also the role of cities to cut across value chains and to adopt a systemic perspective on their territory.

When it comes to specific value chains or sectors, cities are most active in the bioeconomy, including food, as well as in the built environment. This is in

direct response to the significant negative environmental contributions of both sectors in terms of climate impact and waste generation.

Food and bioeconomy actions include a substantial number of bio-waste valorisation schemes (such as community composting initiatives in Budapest and Fingal), as well as upstream actions aimed at sustainable food production and consumption (Guimarães). Cities such as Bruges, Ghent, Porto, and Zurich have dedicated food strategies covering the whole value chain, from agriculture to consumption. An increasing number of cities are setting up urban gardens dedicated to sustainable agriculture, as can be seen in Rivas Vaciamadrid, Valongo or Albergaria-a-Velha, in this way cities are involving citizens in food growing. Other cities are promoting locally produced foodstuffs

#### **Turku's integrated circular economy roadmap**

Turku's transition towards a circular economy is steered by the **Circular Turku roadmap**, which was approved in 2021. The roadmap takes a systemic perspective to identify interventions that span the different roles a city can play in the circular economy transition using ICLEI's **Circular City Actions Framework** and applying it to five thematic areas: food, construction, mobility, energy, and water. Alongside this, **Turku 2030 City Strategy** sets the goal of Turku becoming a carbon-neutral, nature-positive city, in which the circular economy creates prosperity and new jobs. This strategy guides the necessary cross-departmental collaboration to work towards this goal, and progress is monitored biannually.

More on **Turku on page 95**



Circular Turku Roadmap. Image: Circular Turku

#### **A participatory governance model to foster the circular transition in Guimarães**

Guimarães has implemented **Guimarães 2030: Governance Ecosystem (GGE)**, a **participatory governance structure which integrates top-down and bottom-up governance approaches into a cross-sectoral framework**, bringing together academy, businesses, non-profit associations, government, policymakers, and citizens. Based on this, a city-wide integrated strategy on circular economy, the **RRRICICLO strategy**, was established. With measurable objectives translated into targeted actions, the strategy includes action plans to boost circularity in key sectors, as well as a communication plan to promote awareness and education. It is coordinated by multiple partners including the Urban Services and Environment division, with support of the **Landscape Laboratory** for educational, research and development, and communication clusters. A focus group is attached which includes other valuable stakeholders from local and national NGOs, schools, the Refood Association, Green Brigades, and local parishes.

More on **Guimarães on page 68**



Participatory governance in Guimarães. Image: Guimarães Municipality

through food markets or by creating agricultural cooperatives (Izmit).

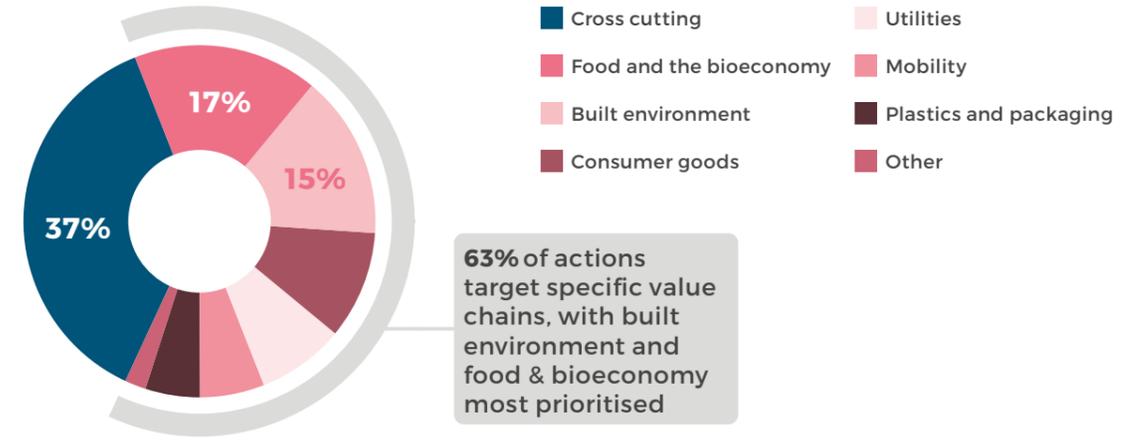
The relatively high number of food and bioeconomy related actions reflects the variety of instruments that cities have at their disposal to drive more sustainable food systems (e.g. awareness raising, food procurement, urban gardening, creating short supply chains, etc.), but also how important developing healthy food systems is for citizens.

Similarly, although the construction industry's value chain is a global one, many activities related to the city's built environment remain on-site, and therefore cities can exert a substantial influence over these, with the ability to mobilise key levers

like urban planning, procurement, or asset management (these levers are analysed below).

Recognising this influence, local authorities are taking a crucial role in driving circular construction practices to transform the built environment. Cities such as Espoo and Bodø have implemented planning measures that integrate circular economy principles into the fabric of new district developments. These initiatives prioritise carbon-neutral and regenerative solutions, setting a new standard for urban development. Additionally, by encouraging material reuse, recycling, and repurposing, local authorities are fostering the development of a nature-positive and resilient urban landscape that aligns with the principles of sustainable development.

Focus areas



Fostering innovative circular business practices across multiple value chains in Haarlem

Haarlem has set ambitious targets to reduce the city's material footprint in its **Circular Economy Action Plan**. The plan sets an overarching goal to achieve a 50% reduction in the use of abiotic raw materials by 2030 and wants production to be fully circular by 2050. To fulfil this commitment, alongside ambitious initiatives in sectors such as construction, textiles, food, and consumer goods, the city is **engaging with local economic actors through the C-District innovation hub**. This hub **organises the economic activity of diverse local businesses around the reuse of various residual flows**, reducing their demand for raw materials.

Presently, 37 companies collaborate on circular approaches in the Maak space of the C-District, which offers an enabling environment for cross-pollination and innovation across various sectors.

More on **Haarlem on page 69**



Haarlem's C-District. Image: MAAK Haarlem

Promoting circular and just food systems in Newham

The **Newham Food Alliance** is a partnership made up of over 40 voluntary, community, and faith organisations which reaches thousands of residents a week with food parcels, meals, and other support. The Alliance **diverts food which is destined to landfill, but still edible, to residents in line with circular economy principles**, to enable healthy eating and reduce food poverty. At the strategic level, Newham launched the first **Just Transition Plan** for any London borough, in 2023. The strategy recognises the imperative not only to curb emissions across the entire borough, but also to simultaneously ensure that all initiatives contribute to greater equity and improved wellbeing for Newham's residents.

Last year, the Newham Food Alliance diverted 200,000 tonnes of surplus food from landfill, saving 8,000 tonnes of CO<sub>2</sub>.

More on **Newham on page 78**



Newham Food Alliance. Image: Newham Council

**Developing supportive infrastructure and awareness raising are the most used policy instruments**

Cities are combining implementation strategies with different policy instruments, i.e. methods, mechanisms or tools that governments use to achieve expected outcomes, into action plans. These policy instruments and levers have been classified using the Urban Policy Framework developed by Circle Economy and the Ellen MacArthur Foundation, which identifies 42 policy

instruments grouped into five main categories — mobilise, educate, manage, incentivise, and regulate — representing the main types of levers available to cities in line with the ten CCD commitments. Full application of the Urban Policy Framework is affected by municipal core competencies and legal duties in each country (e.g. what they can or cannot legally do), but is nevertheless a great source of inspiration and a solid analytical tool to consider what levers cities can use to accelerate the transition from a linear to circular economy.

**Circular deconstruction in Malmö**

When the old hovercraft terminal needed dismantling, Malmö chose a sustainable approach, carefully disassembling the structure to **evaluate the material reuse potential**. Salvaged materials such as concrete tiles, marble floors, and metal roofs were sold through the CC Build platform, while others are currently **stored by the city for future use**. Building on this success, Malmö reaffirms its dedication to **prioritising circularity in construction**, supported by new legislation requiring the **identification of reusable materials** before demolition commences.

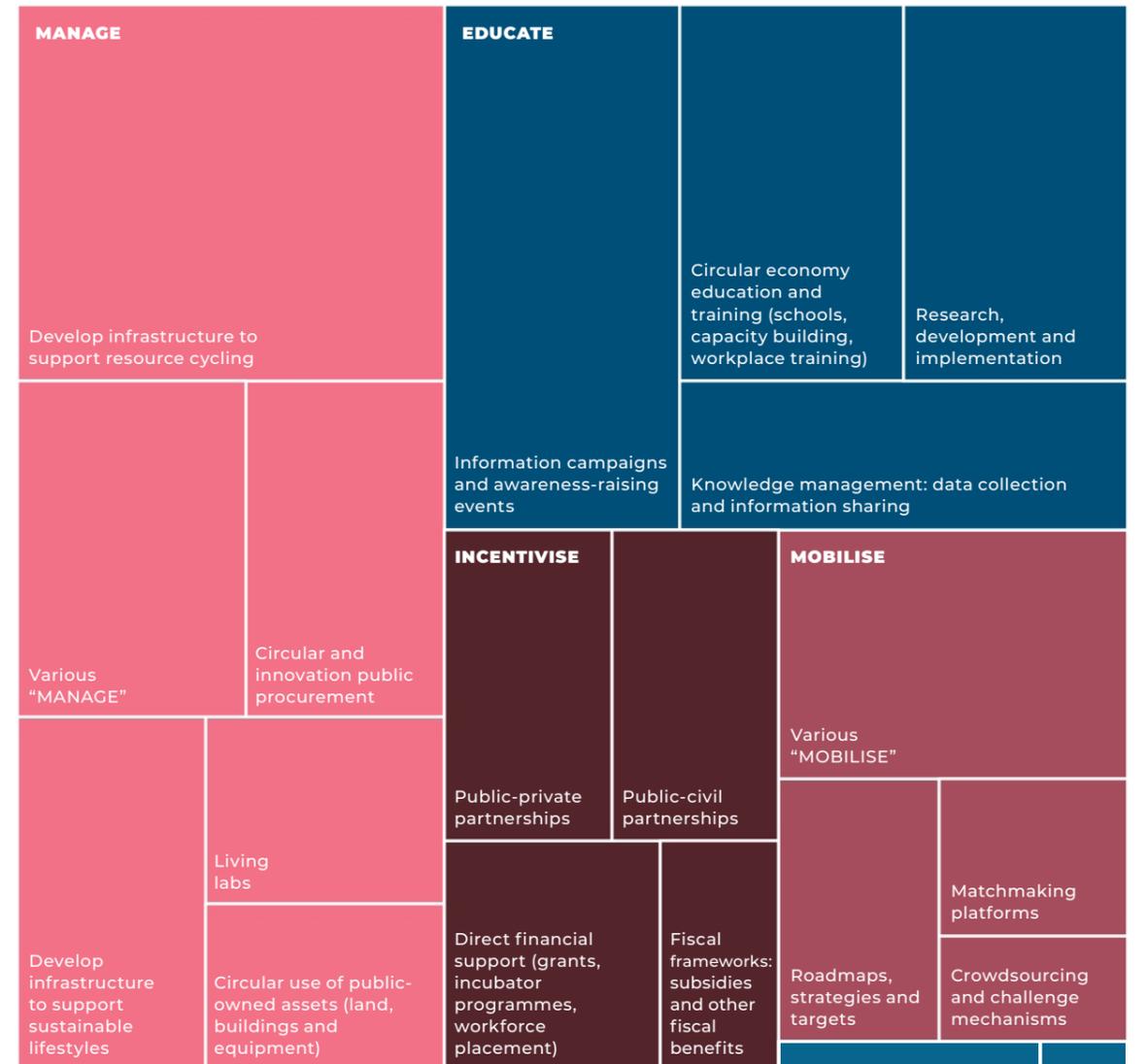
The circular demolition of the terminal led to an estimated saving of 41 tonnes of CO<sub>2</sub>e through material reuse.

More on **Malmö on page 80**



Circular deconstruction. Image: Unsplash / Lluvia Morales

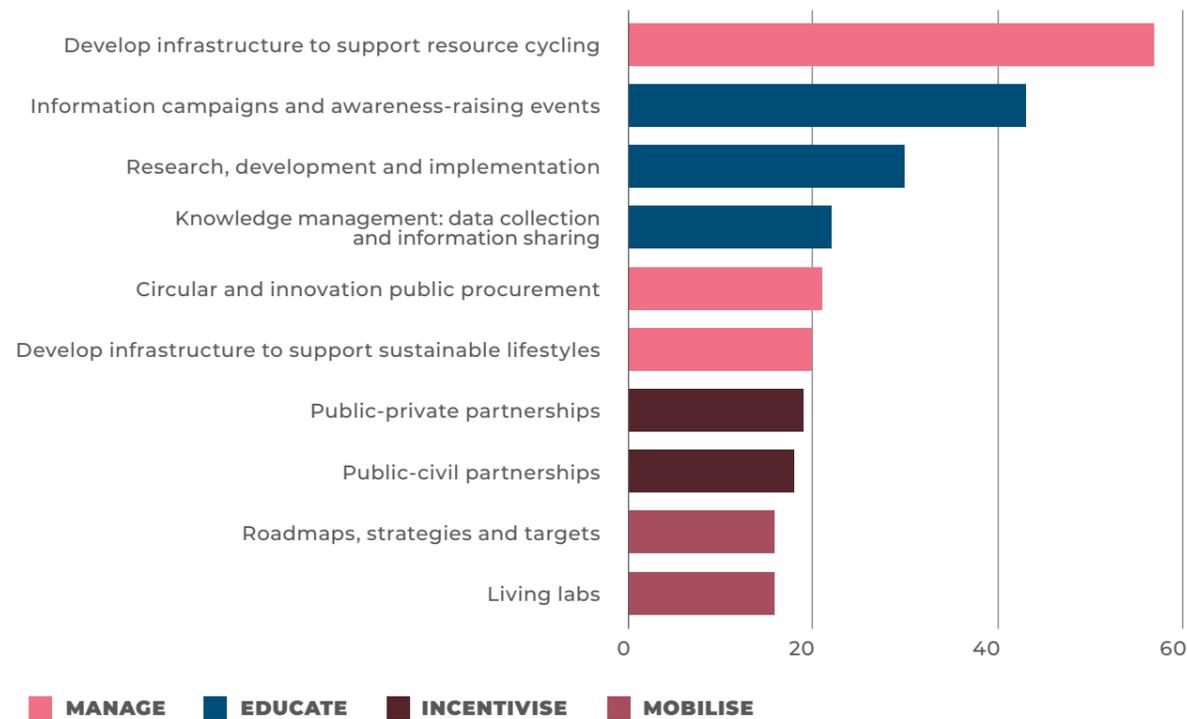
**Policy Instruments**



MOBILISE	EDUCATE	MANAGE	INCENTIVISE	REGULATE
Setting the direction of and building momentum towards long-term change, while also determining how this direction is decided and governed.	Increasing the overall levels of awareness and building the necessary skills and knowledge around the circular economy to foster long-term change.	Influencing the use and function of physical and material elements within the urban environment.	Sending market signals and support to businesses, citizens, and governments to promote certain activities.	Changing the rules of the systems to achieve compliance through enforcement.
1, 3, 8, 9, 10	2	4, 5	5, 6	7, 8
CCD commitments				

For more information on policy instruments, check out the **Urban Policy Framework**.

10 most frequently used Policy Instruments



For more information on policy instruments, check out the [Urban Policy Framework](#).

For the 200+ actions analysed, the chart on page 23 shows which are the most common policy instruments used by cities, and the categories they belong to. The importance of the “Manage” category shows how cities are closing and slowing material loops, either on their own assets or in their territory. Likewise, the “Educate” category shows how they are raising the overall levels of awareness and building the necessary skills and knowledge around the circular economy to foster long-term change.

Across these categories, the five most frequently used policy instruments are the **development of infrastructure to support resource cycling** (e.g. infrastructure to store, refurbish, or treat specific material streams at various stages of the waste hierarchy, from composting plants to recycling

organic flows to material depots that allow the reuse of various goods and components); information campaigns and awareness-raising events; research and innovation projects; public-private partnerships; and the development of circular criteria for the public procurement of assets. These activities demonstrate the extent to which cities are physically investing in the circular transition, and how they are mobilising all local stakeholders in this process.

Significantly, this graph also highlights which policy instruments are not being used, and where cities could be pulling on other levers to aid their circular economy ambitions. For example, instruments related to spatial planning, such as pre-demolition audits to support material recovery (part of the

“Manage” category), are rarely included despite the powerful role they can play in pushing for circular approaches to both public and private land development. The deep dive on regenerating nature, however, outlines how cities can better utilise planning powers (see [page 36](#)). Similarly, there is a huge opportunity to better utilise economic policy instruments. Grants or tariffs, for example, can incentivise circular behaviours and business models while disincentivising or recouping the costs to society of linear practices. Embracing such measures not only aligns with the core principles of the circular economy but also echoes the ethos of a nature-positive economy, which aims to halt and reverse nature loss, fostering nature recovery. By integrating these strategies, cities can foster healthier, thriving, and resilient urban environments that benefit both people and the natural world.

Last but not least, the Urban Policy Framework refers to policy instruments available to all levels of government in urban areas, not just to cities. As such, it is crucial for cities to work with other levels of government to create an enabling framework for the circular transition of cities that articulates regulation and economic policy (see [Priority actions on page 42](#)).

**The lack of resources is the biggest challenge that cities are facing**

In an effort to understand and address the main challenges faced in implementing the circular economy, cities were given the opportunity to report on their experiences, and the responses were systematically classified and analysed for this report. The resulting insights are visually

Developing infrastructure to cycle reclaimed materials in Leuven

Set up by Atelier Circuler — a non-profit local organisation — and with the participation of the Municipality, Leuven’s **Materials Bank plays a crucial role in the city’s goal of minimising the consumption of primary raw materials**, as set out in the [Leuven 2023 Roadmap](#). The Bank offers reclaimed building materials of various origins, sourced from businesses and also private individuals, for resale to both individuals and companies. The Bank simultaneously creates job opportunities by employing the local workforce.

More on [Leuven on page 75](#)



Leuven’s Materials Bank. Image: City of Leuven

represented in the chart opposite, where the size of rectangles corresponds to the importance of each challenge.

Drawing from the findings of the initial **CCD Report 2022**, the challenges faced by cities can be effectively grouped into five main categories: lack of resources; governance-related challenges; stakeholder engagement challenges; targets and measurement; and the prevailing linear economy paradigm.

The biggest individual challenge by far is funding. Cities are struggling to invest in enabling infrastructure (fundamental infrastructure and systems that enable circulation like collection,

sorting, and storage) and more innovative policies and incentives. Personnel or staffing issues and a perceived lack of skills or knowledge about circular solutions were also highlighted.

As identified in the key insights, crucial to overcoming many of these challenges is to work towards further integrating the circular economy across the whole city administration, as doing so will unlock staff capacity and potential funding pots. Cities also cannot confront the linear economy paradigm alone. Only through creating more balanced taxation and fee incentives, alongside regulation that enables circular economy solutions to become the norm rather than the exception, can cities deliver systemic change.

**Raising awareness around sustainable fashion in Ljubljana**

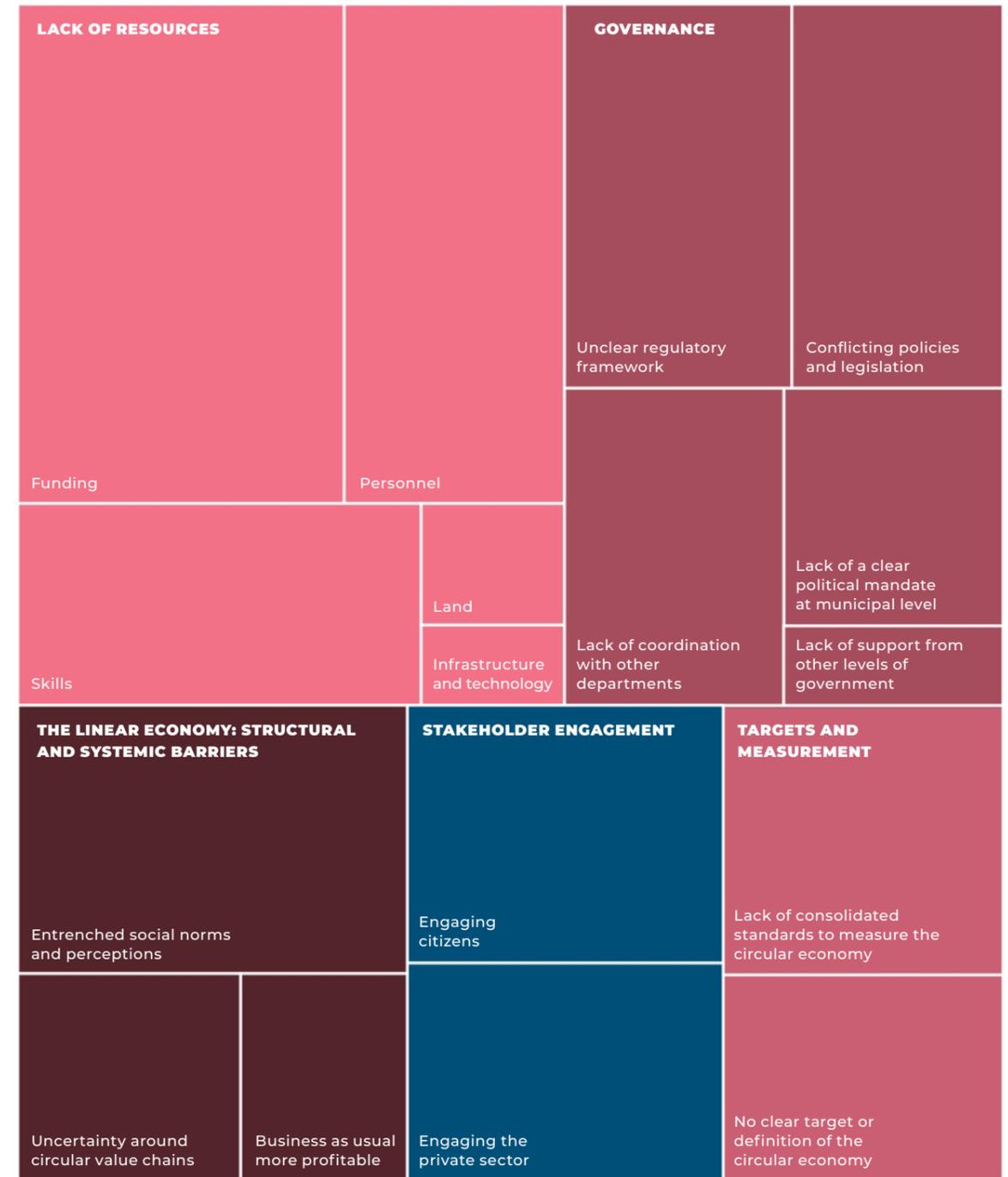
Ljubljana joined the European Week for Waste Reduction 2022 with the **Fast fashion pollutes even faster campaign**. The campaign encouraged citizens to reuse and repair textiles and clothing, with the aim of reducing textile waste. The campaign was shortlisted in the print ads category of the Slovenian Advertising Festival 2023 awards.

More on **Ljubljana on page 77**



Vintage and second hand shopping. Image: Unsplash / Becca McHaffie

**Challenges faced by cities**



## Deep dives



## Deep dive 1: How circular cities are measuring and reporting progress



### Key takeaways

- ★ While waste reduction targets are a common starting point for initiating local action, nearly half of cities indicated climate goals are also driving the case for new circular economy interventions, with some cities now measuring consumption-based emissions and adopting Scope 3 targets.
- ★ In addition to climate goals, a number of 'frontrunner' cities are setting more specific, measurable 'upstream' circular economy goals linked to reducing virgin material consumption, reuse, and delivering nature-positive outcomes.
- ★ More than two-thirds of cities have, or are developing, a range of indicators to better understand local circular transitions using governance, behaviour, material flow, and impact indicators.
- ★ Overall, there is a clear case for European-wide collaboration to help all cities work towards a consolidated set of harmonised metrics based on common definitions.

Measuring progress towards the circular economy at the city level is essential to inform local decision-making on where to focus attention and invest resources. Measurements and indicators of local circularity are critical tools for action and target-setting: baselines can be set, progress tracked, impacts understood, and relevant stakeholders engaged.

The [CCD Report 2022](#) concluded that cities share multiple challenges in measurement, including: defining which aspects of circularity to measure and identifying what data is already available and accessible. This year's submissions suggest there is an emerging consensus among cities on what

targets and impacts of local circular transitions should be measured as a priority. In general, circular economy measurement is an area of growing interest among cities with a number of local initiatives already formed, seeking to overcome common challenges, improve data, and accelerate action.

To understand how cities currently measure progress on circular economy activities, signatories were prompted to share which high-level targets are driving their work, which other indicators they use to measure progress, which partnerships and external frameworks are improving their understanding, as well as challenges they face.

## A number of targets including climate goals are driving circular action

Nearly half of city signatories indicated climate goals are driving the case for new circular economy interventions. While virtually all cities cited waste reduction goals, 42% of cities explicitly mentioned additional quantified targets as being influential on their work. Most often, climate neutrality targets were identified, which shows cities are increasingly joining the dots on how the circular economy contributes to climate action. This includes directly reducing emissions through reducing the consumption of virgin materials, making the most of embodied emissions by keeping resources in circulation, and sequestering carbon through regenerating nature. By transforming consumption and production patterns, the circular economy is increasingly being recognised as a framework that can enable cities to tackle these consumption emissions.

Although the circular economy is being increasingly referenced in city climate action plans, some cities acknowledge that deeper integration is necessary through setting consumption emissions targets. City goals tend to focus only on direct GHG emissions (Scope 1 & 2) occurring within the city 'boundary' (e.g. tailpipe emissions), and overlook consumption emissions which are linked to imported goods and services to the city. Critically, **urban consumption emissions are estimated to account for over half of all emissions in most large cities and are projected to double by 2050**. A small group of European cities reported that they have developed, or plan to develop, ways to measure these consumption emissions. Malmö plans to halve consumption-based emissions by 2030 to 3.1 tonnes per person (see Box 2), whilst Turku plans to significantly reduce consumption emissions, recognising they should drop to one-third of the current level (8.42 t) by 2030. Copenhagen is looking to include a Scope 3 emissions target in their forthcoming climate action plan, and Oslo will introduce steps to reduce 'indirect' emissions as part of their 2024 climate budget.

In addition to climate goals, a number of 'frontrunner' cities are setting more specific, measurable 'upstream' goals that link to core circular economy principles. Such upstream goals suggest there is an emerging convergence around what high-level targets cities should prioritise setting. They include:

- **Eliminating waste and pollution through setting goals on reducing demand for virgin material consumption or increasing secondary raw material use**, e.g. Haarlem aims to reduce raw abiotic material by 50% in 2030, and Capital Region Denmark has set a goal for secondary raw materials to cover 20% of material consumption in 2030.
- **Circulating products through setting goals on the reuse of products and materials**, e.g. Copenhagen aims to triple reuse by 2024, while Ghent aims to increase the amount citizens reuse on average to 8 kg per person a year.
- **Regenerating nature through setting goals on nature and biodiversity and green space coverage**, e.g. Fingal and Espoo have committed to halt biodiversity loss by 2030 and 2035 respectively; Haarlem and Malmö aim to ensure at least 30% of neighbourhoods are green space covered. See *Deep dive 2: How cities are regenerating nature* to read more about relevant strategies ([pages 36-41](#)).

Cities are also setting measurable circular economy targets in priority value chains, as well as across their own operations. As the most emitting and resource-intensive value chains that cities can influence, it makes sense that 31% of cities prioritising food in their circular economy plans and 29% of cities prioritising buildings and infrastructure have set quantified targets around the production and consumption of related produce and materials. The fact that no more than a third of all city signatories have set quantified targets in such value chains requires further investigation but may likely relate to a range of data challenges, such as insufficient baseline data, limited capacity, or lack of technical expertise to determine what targets should be.

Meanwhile, cities are also setting actionable targets on a more operational level, for example, in procurement (see Eskilstuna and Haarlem). By doing so, cities can demonstrate leadership in using the levers within their direct control to support circular outcomes.

It is notable that although these examples of upstream and operational circular economy target setting converge around common principles or outcomes, the methodology behind target setting varies from city to city. This variation in focus also applies to indicator frameworks.

## How circular cities monitor actions and impacts is evolving

While consistency and comparability of indicator frameworks between cities is lacking, the direction of travel is clear: more than two-thirds of cities have developed or are developing a range of indicators to better understand local circular transitions. 69% of cities were identified as already using or participating in projects to improve data quality on the circular economy within their cities. In some instances, cities are devising whole dashboards to track a range of data points. Based on available sources, these indicators fit broadly into two categories: 'enabler' indicators and 'outcome' indicators:

- **Enabler indicators help stakeholders measure key aspects or elements that suggest progress against intended outcomes, these are typically actionable proxy 'how' indicators which consider:**
  - **Governance or operational** indicators, tracking how the circular economy is being directly supported through city spending, policy levers, or projects, e.g.
    - Circular Procurement — number of procurement contracts with circular economy criteria
    - Training — number of staff completing circular economy training
    - Total amount of government investment for circular economy policy implementation

- **Behavioural indicators** that track key changes in practices among residents or businesses, and may relate to specific sectors or value chains, e.g.:
  - Built environment — number of demolitions, % of residents living within 5,000 m of an urban forest
  - Food — diet trends, % buying organic products
  - Mobility — % car ownership, % of residents with car sharing memberships
  - General business/economy — number of businesses with a circular economy business model, number of businesses offering water refill.
- **Outcome indicators that help stakeholders directly measure the overall intended outcomes of a circular economy, these are typically 'what' or 'why' indicators which justify action:**
  - **Material and waste flow indicators** to monitor changes throughout the material life cycle including 'R' strategy indicators showing volumes of existing materials in the economy being circulated, e.g. reuse rate, recycling rate.
  - **Environmental, economic, and social impact indicators** to monitor positive and negative impacts that may occur as a result of structural changes to the economy, e.g. GHG emissions, water pollution, jobs in the circular economy, and total revenue from circular businesses.

**External expert assistance enhances the measuring and reporting processes.** Some cities are working collaboratively to build local capacity on key research topics, with several cities reporting partnerships with local research institutions, universities, or experts. For example, Genoa is working with several research institutes, including the ISPRA, CNR, University of Genoa, and ENEA to improve the identification, collection, and analysis of relevant data. Meanwhile, to improve research capacity, Porto supports and co-supervises multiple Masters and Doctorate research projects which provide valuable data points. Leuven (see Box 2), alongside the local university, is cooperating with regional and national agencies. However, as most cities lack a sufficient circular economy national framework or guidance, only a small number are utilising external assistance, with the majority

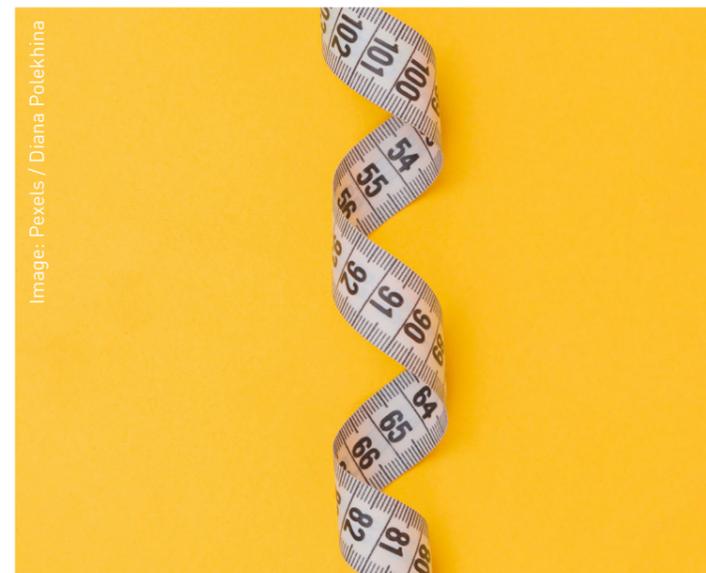


Image: Pexels / Diana Polekhina

missing an opportunity to draw on the expertise of local partners to improve their understanding of the measuring and reporting process.

**Using a common framework for assessing local circularity will improve measurement and enable more comparisons between cities.** The most common approach adopted by cities is to build on and align with regional or national and supra-national frameworks under the assumption that multi-level governance coordination greatly enhances the quality and consistency of indicators. Several Finnish cities highlighted common approaches based on the **Finland Circular Economy Green Deal** to establish harmonised measures which facilitate data collection and monitoring. Meanwhile, Manresa cooperates with the Province of Barcelona, which gathers local indicators of sustainability from all its municipalities.

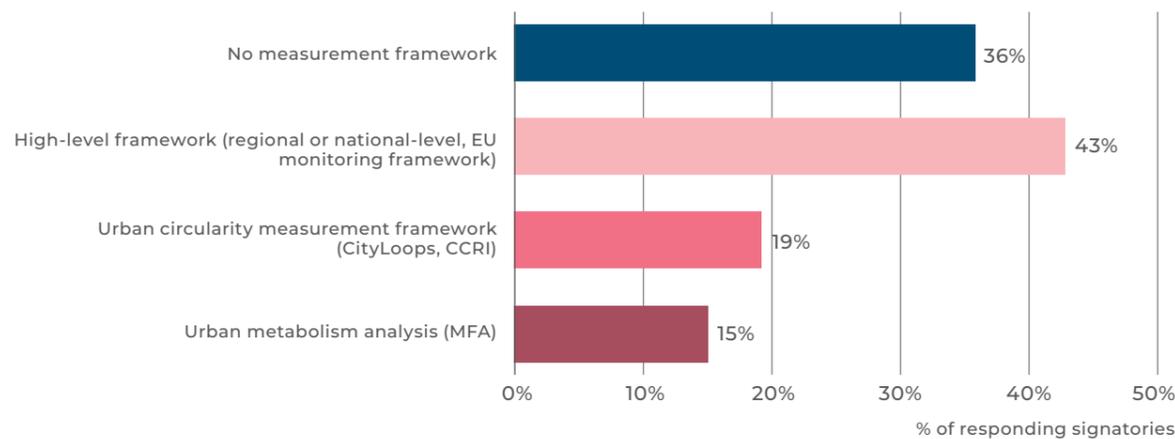
While a number of more concrete external measurement frameworks have been developed to support cities in recent years, signatories indicate limited use of these, with only nine cities using tools like **CityLoops**, and seven cities (Temse, Zurich, Capital Region of Denmark and City of Copenhagen, Bodø, Haarlem, Valladolid) having conducted actual

specific material flow analyses. Moreover, these examples could be attributed to these cities being part of the development of these frameworks (e.g. pilot cities for CCRI), or benefiting from technical assistance or ‘handholding’ to apply them.

While many of these tools are still new, low uptake highlights the need for cities to be encouraged more to integrate them into common practice. It also raises questions about the feasibility of introducing any new comprehensive measurement requirements on the circular economy for cities. Any new initiatives must clarify who within a city government is best placed to take ownership of integration, and ensure that integration is feasible considering limited resources within cities. Ultimately, there is a need for city stakeholders to further clarify and prioritise what tools would best enable them to measure circularity (see Box 3).

**How to make best use of data is also an open question for many cities.** Few cities provided details about how data, once collected, informs strategic decision-making. However, among relevant responses, a number of examples stood out for their commitment to transparency, by making progress against their indicators publicly available. Even without impact

**Uptake rates of common frameworks & tools**



data, Helsinki publicly tracks progress on each action mentioned in their circular economy action plan (see Box 2). In comparison, Ghent shared information about the **Ghent City Monitor** which, although not being exclusively framed around the circular economy, tracks many relevant enabler indicators linked to the production and consumption of goods and services, as well as city functions and sectors. In doing so, Ghent highlights how circular indicators can be integrated into wider, ‘horizontal’ city dashboards. Both Helsinki and Ghent’s approaches foster engagement with external stakeholders and help manage risks associated with implementation or the transition itself.

**In summary, submissions show that measuring circularity at a local level is a pressing issue for many cities.** Cities recognise that measuring a holistic set of indicators — beyond waste and recycling — will better reflect how effectively the circular economy as a framework is being applied. It will also accelerate action by bridging multiple local agendas together,

such as climate action and economic development. A patchwork of local initiatives has now been formed by cities to monitor their own progress and identify interventions — this in itself is opening the door for cities to adopt more ambitious, systemic, and upstream circular economy targets around virgin material consumption, reuse, and regenerating nature. At the same time, what is measured and how such indicators are used to spark action varies significantly, making it difficult for cities to benchmark or compare. There is a risk of duplication of effort and divergence when cities’ missions to accelerate local transitions should be a collective endeavour.

To truly accelerate local action, a collective effort is needed across European stakeholders to establish a simple set of core circular economy indicators which all cities can learn from and adopt. Reporting against common indicators will enable cities to compare progress and develop the new policies and approaches needed to accelerate the transition.

**Box 1: How cities can start measuring their local circular transition**

- 1. Take stock** — Create a baseline assessment for the city’s circular transition. Consult internally and externally for available data on key local characteristics, stakeholders, existing governance arrangements, and understanding of existing production, consumption, energy, and waste patterns. Cities should consider a mix of quantitative and qualitative information to determine both ‘Enabler indicators’ (Governance, Operational, and Behavioural) and ‘Outcome indicators’ (Material Flows, Environmental, and Social Impacts). Identify hotspots where circular economy actions could achieve the most impact.
- 2. Prioritise** — Decide key changes needed based on data collected and where data remains insufficient, working towards a holistic set of indicators. When prioritising indicators, consider their communication power (is the indicator relatable and understandable for a broad range of audiences?), proxy power (does the indicator represent the target or outcome clearly?), and data power (is quality data available on a timely basis?).
- 3. Act** — Cities cannot and should not be expected to measure all features of a circular economy; measurement is ultimately necessary to inform city actions. New policies and approaches are needed, and insufficient data only strengthens the case to test and learn. Design interventions aimed at priority changes, and ensure monitoring and evaluation are fully integrated so that data and learnings can inform future policies.
- 4. Collaborate** — Measuring progress will be ever-evolving, so engaging with external stakeholders like technical experts, private sector, and academia will improve data collection, fill knowledge gaps, and refine baselines. Cities can consider using tools or platforms to communicate progress publicly, as well as exchanging findings with other cities and regions, ideally working towards common indicators.

**Box 2: Best practices emerging from implementation by signatories****Malmö's comprehensive measurement approach**

Malmö takes a comprehensive data-driven approach to sustainability action planning. The city uses the **miljöbarometern** (or environmental barometer) tool to track a range of indicators on an annual basis, including management of a number of circular services (e.g. circular procurement of food and furniture). Meanwhile, to inform and update its circular roadmap, the city conducts material flow analyses in specific value chains with research partners to improve baselines and better understand private sector impacts in specific sectors. The city has also conducted an analysis of the municipality's GHG emissions, to get a baseline for the net zero organisation target in the environmental programme.

To accelerate action, Malmö in collaboration with the Stockholm Environment Institute, has started measuring the city's consumption-based emissions. Using Klimatkompassen (The Climate Compass), the city understands the GHG emissions generated by the consumption of goods and services by its residents, down to the postcode level. This facilitates circular actions that are more targeted to aid in achieving Malmö's ultimate aim of halving its carbon footprint by 2030 to 3.1 tonnes per resident.

Malmö is always looking for new data sources and is working with the 'Go Low' app to support citizens in taking actions to reduce emissions. The city is also supporting a student project identifying hotspots for intervention through commercial environment permits on waste streams. More on Malmö on [page 80](#).

**Leuven's engagement with key stakeholders to build a circular monitor**

Conscious of the far-reaching environmental and social impacts of material production and consumption, Leuven recognises the need to look beyond recycling and emissions data to measure circularity. But like most European cities, given current data availability, Leuven has partly relied on the downscaling of national datasets, which is time-intensive and does not provide insights on the impact of local policy actions. Therefore, the city takes a pragmatic approach, valuing bottom-up data in areas where local policy can actually make a difference, while continuing to work on a more robust monitoring methodology.

The **Circular Leuven Platform** currently tracks progress in all five domains of the city's circular strategy: Construction, Entrepreneurship, Share/Repair/Reuse economy, Consumption, and Policy and Knowledge. Underpinning these are 28 actions, some of which are measured quantitatively, some only qualitatively. The Platform's stakeholders therefore gather a combination of outcome indicators, e.g. materials and waste flows, and enabler indicators related to policy and other processes.

Refining the city's circularity monitor is an ongoing process. The city works in close collaboration with researchers at the local university, KU Leuven, the **Flemish Circular Economy Policy Research Center**, and the **Flemish Technological Research Institute VITO** to identify data points, develop methodologies for collection, and integrate key indicators into a circular monitor, as part of a larger sustainability framework monitor. This illustrates how local authorities can leverage the strengths and expertise of local partners to achieve robust circular indicators. More on Leuven on [page 75](#).

**Communicating Helsinki's circular economy action plan progress**

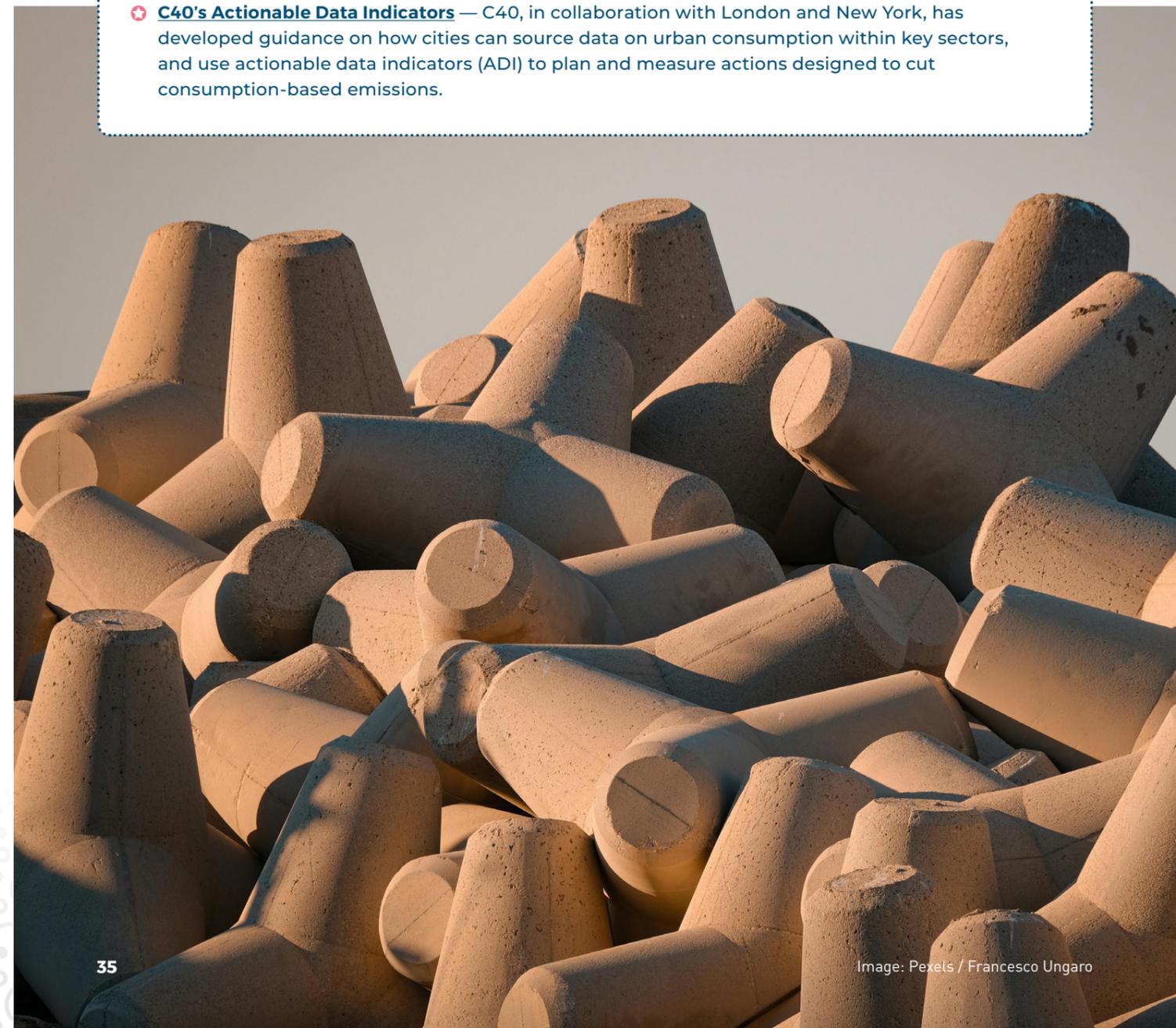
While Helsinki does not have specific quantified targets related to circular economy policies due to limited context-specific data, the city is still monitoring and communicating its activities in a robust way. To achieve this, the city has established the **Circular Economy Watch**, an online platform that aims to showcase all the work being carried out by the Municipality to promote the circular and sharing economy.

The Circular Economy Watch is updated by the environmental team in line with the city's annual reporting process. The platform makes it easy for residents to follow Helsinki's progress by having a designated contact person for each circular economy measure, who is responsible for updating the monitoring service with the latest information. While the platform currently focuses on action plan deliverables, its ambition is to publicly report more concrete impact measures. For example, tracking building demolitions or new builds on an annual basis would provide better insights about Helsinki's circular built environment.

To establish these impact measures, Helsinki is actively engaged in the national circular economy green deal initiative organised by the Finnish Ministry of Environment, which will develop goals, measures, and construct models that facilitate the tracking of local consumption of material resources around five key themes: Construction, Industrial Processes, Consumer Sector, Food, and Energy. More on Helsinki on [page 70](#).

**Box 3: Key resource tools to support city measurement efforts**

- ✦ **OECD governance of circular economy framework** — Aims to support decision-makers to self-assess the existence and functioning of enabling conditions for circular economy policies, initiatives, strategies, and programmes. The checklist looks at 12 key governance dimensions, grouped into three key clusters of actions that cities and regions can prioritise to promote, facilitate, and enable.
- ✦ **CityLoops** — A Horizon 2020 project involving seven European cities and regions which has established a comprehensive indicator list for cities to use and identify the most relevant indicators. Indicators are grouped into three layers: 1) Urban context; 2) Sector economic activities; and 3) Material flows and stocks.
- ✦ **Ganbatte** — Ganbatte is an online platform that aims to provide cities with the data insights, knowledge, and tools they need to achieve their climate goals through circular actions. Cities can explore available data on material and carbon footprints, jobs in circular sectors, as well as identifying concrete actions to start working towards.
- ✦ **C40's Actionable Data Indicators** — C40, in collaboration with London and New York, has developed guidance on how cities can source data on urban consumption within key sectors, and use actionable data indicators (ADI) to plan and measure actions designed to cut consumption-based emissions.



## Deep dive 2: How circular cities are regenerating nature



### Key takeaways

- ★ There is a growing understanding and urgency around the need to value and promote nature and biodiversity — including in and around cities — to prevent irreversible loss and damage to the natural systems which underpin our collective survival and prosperity.
- ★ Alongside adopting standalone nature and biodiversity strategies, urban planning and food policies were identified by more than half of signatory cities as the decisive ways in which cities can support nature-positive outcomes.
- ★ However, cities remain in an exploratory phase on regenerating nature, and are still trying to build the case for further action and improve their understanding of what actions will deliver the most positive impact.

**Cities rely on nature** to support life and help regulate air and water, and maintain soil health, which is vital to avoid erosion and sequester carbon. The healthy functioning of natural ecosystems fosters resilience to extreme weather events like flooding, droughts, or extreme temperatures. Nature also enriches the lives of citizens through recreation, community cohesion, and mental wellbeing. Although every city is situated in a

unique natural setting with varying landscapes and features, all are energy and resource hungry. Together, the impacts of cities on nature are significant and global, far exceeding city boundaries. Thus, it is imperative that cities work with and for nature, and advocate for the necessary resources, policies, and capacity building programmes that can enable a positive relationship between cities and their surroundings.

### Box 4: A regenerative city vision

'Regenerate natural systems' is a core yet sometimes overlooked **principle of the circular economy**. Instead of continuously degrading nature, a regenerative city directly builds **natural capital**, by rethinking how it plans, builds, and grows urban areas, for example through food production and organic waste management, planning and development, and nurturing blue and green infrastructure. Cities can also achieve nature-positive outcomes through eliminating waste and pollution, and circulating products and materials. Working with nature can create healthy, thriving, and resilient cities that benefit both people and the natural environment. This principle is also highlighted by the **Nature-Positive initiative**, a global societal goal aiming to 'Halt and Reverse Nature Loss by 2030 on a 2020 baseline, and achieve full recovery by 2050'.

**Cities are linking a range of social and environmental risks with nature.** Collectively, cities were able to long-list many drivers for the need to value nature in cities: plenty observed nature being vital for life-sustaining services, adapting to climate change and extreme weather events, improving citizens' health and wellbeing, fostering a sense of place, and reducing healthcare costs. When prompted to rate their current progress on regenerating nature, cities averaged 3.14/5, while 12% of reporting cities did not provide scores. This suggests that nature is on the agenda of cities, but that the links between circular economy and nature may need further strengthening.

**Biodiversity or nature strategies are the primary route for ensuring a coordinated and holistic approach to regenerating nature, with almost two-thirds (63%) of cities indicating they had a standalone plan active or in development.** Prominent examples taking holistic approaches were typically found in Northern European cities such as Bodø, Copenhagen, Espoo, and Turku.

Common 'nature-positive' actions included nature conservation, habitat restoration, controlling invasive species, as well as promoting nature through city planning, urban sustainable agriculture, and general nature-based solutions capacity building.

Very few cities shared identifiable quantified targets, with many instead focusing on broader qualitative outcomes, for example, increasing biodiversity or reducing the depletion of natural resources. As highlighted in *Deep dive 1: How cities are measuring progress*, more time-bound, defined, and measurable goals are emerging around nature. The Irish county of Fingal aims to halt biodiversity loss by 2030, and Espoo has committed to 'no net loss' by 2035. To define tangible targets, Turku is exploring 'ecological footprint' and 'nature balance' as strategic indicators. Meanwhile, various cities across Europe are setting more precise objectives in areas that have a high impact on nature, including through city planning frameworks as well as food policies.

Pateira de Frossos, Albergaria-a-Velha. Image: Carmo Sereno



## Planning enables circular cities to protect, connect, create, and grow with nature

Planning processes were identified by more than half of cities as a decisive way for cities to protect, connect, create, and grow with nature. By tapping into regulatory instruments already in place at a local level, city planners can make crucial decisions to ensure nature-positive urban development. 57% of cities referred to Master Plans and Land Use Plans as enabling regulatory instruments to:

- **Protect and restore existing nature in cities:** The Master Plans of Bergen, Esch-sur-Alzette, Oslo, Porto, and Valongo are dedicated to safeguarding natural elements amidst urban expansion. Their initiatives prioritise the preservation and restoration of vital green spaces, swamps, waterways, and habitats, ensuring protection against developmental pressures. Other protective measures include densifying urban development efforts in Malmö, which thereby avoid urban sprawl and the conversion of valuable farm and nature lands. Espoo, Eskilstuna, Oslo, and Fingal include nature assessment measures in land use planning, ensuring that valuable nature is exempted and protected from urban development.
- **Connect nature:** In cities like Est Ensemble Grand Paris, Florence, Manresa, Torres Vedras, and Valladolid, emphasis is made on forging connections between fragmented natural areas across the cities through the establishment of green corridors. These deliberate natural pathways facilitate the flow of biodiversity, enabling ecosystems to thrive across the urban and rural landscapes.
- **Create space for nature:** Initiatives in cities such as Braga and Torres Vedras highlight a proactive approach to urban development through the creation of pocket parks or urban forests. They focus on using Master Plans to intentionally create new natural spaces within the city, striking a balance between urban growth and the preservation of natural elements. At a neighbourhood level, various cities have set goals linked to green space inclusion in urban development projects, such as through the Green Area Factor tool (Malmö, Espoo, Turku, Tampere), proximity of citizens to nature (Eskilstuna, Høje-

Taastrup), and planting a number of trees and greenery (Liège, Matosinhos, Newham). As a measure to ensure equal access and availability of nature, the cities of Malmö and Haarlem are following the 3-30-300 guideline developed by the [Nature Based Solutions Institute](#) specifying that; 3 trees should be seen from every home, 30 percent tree canopy cover in every neighbourhood, and each citizen should have their nearest public park or green space within 300 metres of their home.

- **Grow and build with nature:** Cities are shown to increasingly prioritise efficient resource and land utilisation in their strategic planning. Examples from Mechelen, Zurich, Esch-sur-Alzette, and Ghent demonstrate this shift by encouraging the repurposing of existing buildings through stronger demolition controls and audits, effectively reducing GHGs and lessening the environmental toll of resource extraction and material production. Similarly, in Est Ensemble Grand Paris and Guimarães, optimising already occupied land through brownfield upgrading is a key approach. Former industrial areas are being revitalised and decontaminated, fostering more efficient and environmentally friendly land use practices in their urban spaces. Cities are also leading by example in their own developments, including Copenhagen promoting nature-positive design and material choice aspects by requiring [DGNB](#) gold certifications in all municipally owned developments, and Eskilstuna requiring [Sweden Green Building Council 4.0](#) silver certification in all municipal buildings.



Vigeland Park, Oslo. Image: Unsplash / Nick Night

## Food policies can also foster nature-positive outcomes

Cities are also creating space for – and promoting – nature-friendly food production within city limits, as well as using procurement and other policy levers to support the wider food system transition away from degenerative production methods. As the single largest contributor to biodiversity loss globally, food represents another critical policy area in which cities can drive nature-positive outcomes both within and beyond city boundaries.

As recognised in *Progress and key insights*, cities across Europe continue to play a leading role in food system transformation, undertaking interventions at key points across the value chain through holistic food strategies. Alongside highlighting multiple other interconnected benefits linked to a circular economy for food, including resilience, health, and climate adaptation, a significant majority of cities (67%) appear to join the dots between food and nature.

Most notably, cities are supporting nature through food policies directly linked to production and working with farmers to overcome barriers to profitably grow nature-friendly food. Ljubljana is investing in peri-urban farms and providing technical assistance to improve farming methods. Linked to the integral role of planning policy discussed above, İzmit is allocating available urban land to farming cooperatives which increases local resilience, creates jobs, and reduces demand for food grown conventionally elsewhere.

Another apparent trend is cities playing a more active role in connecting citizens with producers. Cities such as Albergaria-a-Velha, Braga, Évora, Maribor, Mechelen, Porto, and Zurich have created regional labels and local food markets to promote local produce and shorten supply chains, which are proven to reduce food loss and waste, and ultimately help farmers using nature-friendly practices to generate more revenue.

Procurement stands out as a decisive, high-impact lever that cities can use to lead by example through purchasing better food directly for schools and catering in other public settings. Among many submissions, Copenhagen, Malmö, and Oslo shared world-leading goals for the procurement of organic food.

## Circular cities need stronger frameworks to grow with nature

Beyond integrating nature-based solutions into planning and food policies, cities are exploring other ways to regenerate nature, including through partnerships and education. Ljubljana highlighted efforts to regularly convene local NGOs and activists with an interest in nature and biodiversity. Meanwhile Braga, Copenhagen, and Evora all shared plans to better integrate nature into school activities and curriculums. Several cities highlighted participation in nature-focused networks or frameworks aimed at driving awareness and better equipping city officials, for example [Cities4Forests](#), [Cities with Nature](#), and [Green City Accord](#). Wiltz and Esch-sur-Alzette (see Box 6) also highlighted the value of national frameworks in the nature space too, with all Luxembourg cities using the [Pacte Nature 2030 checklist](#). The first-of-its-kind, continent-wide [EU Nature Restoration Law](#), currently under consideration, should mean all European national frameworks will further enhance nature in urban ecosystems.

Despite implementing a range of actions, cities were forthcoming in the challenges they face around making the case for nature. Many signatories were clear that while they understand how nature is critical for cities to continue functioning, they still lack sufficient tools and data to record the nature footprint of urban resource flows, to inform where to prioritise limited resources. In parallel, cities face more practical, political choices around land use and ownership. Often, city administrations highlight tensions between balancing what is needed for nature in the long-term and responding to development pressures in the shorter and medium term. Space in cities is finite, and as populations increase, tensions around space availability emerge. Cities also reported that identifying the owners of degraded land or buildings best suited for redevelopment was resource intensive and sometimes not possible. Such challenges highlight the need for policy frameworks and incentives to improve how cities value nature. Rather than positioning nature against development, cities can develop and grow with nature. Illustrated by strategic frameworks such as [Urban Nature Plans](#), the [3-30-300 rule](#), and [Green Area Factor tool](#), approaches that can stitch these agendas closer already exist, but an improved framework

supporting nature-positive outcomes is needed for cities to better understand what to aim for and how to get there.

**In conclusion, many cities are in an exploratory phase for regenerating nature, and are still trying to build the case for long-term action and improve their understanding of what to do.** Many cities are reasonably putting most of their efforts into protecting and enhancing existing nature in cities, but the full extent of the nature footprints which

cities are responsible for globally is not yet understood. Consequently, nature has not yet found a systemic place in circular economy strategies, even if some are recognising that the key tenets of addressing this involve reducing depletion of natural resources and consumption of virgin materials. Planning and food policies offer tangible routes for cities to monitor and more actively regenerate nature both inside and outside city boundaries. Overall, actions are still largely project-based rather than city-wide.

### Box 5 - Three ways cities and local governments can regenerate nature

- 1. Avoid nature conversion** — Build cities from within by ensuring a more efficient land use through, for example, repurposing empty buildings, rooftop extensions, parasitic architecture, and brownfield upgrading. Explore multifunctional usage of urban spaces by integrating different functions into the design of urban features, e.g. rainwater harvesting on roofs, or facilitating multi usage of buildings/premises at day and night time, e.g. schools being opened up as venues for community leisure activities. Tap into existing regulatory instruments to protect further nature from exploitation or conversion (e.g. **Natura2000**, Master Plan, land use plans, etc.).
- 2. Increase nature regeneration** — Ensure that nature is increased within the urban fabric in a systematic and equal manner. Include measures such as nature-based solutions, daylighting rivers, renaturing parking lots, and retrofitting green roofs/walls, or adopting tools such as the 3-30-300 guideline and Green Area Factor in the urban development processes.
- 3. Mitigate the impact on city nature footprints** — Reduce the impact of resource flows on the nature footprint by prioritising design and construction choices that favour bio-based or circular building materials. Opt for buildings that are adaptable to future needs and modular, allowing for disassembly and reuse in different locations. Foster regenerative food production practices by mandating nature-friendly food public procurement and allocating municipally owned lands for regenerative crop cultivation.

### Box 6: Best practices emerging from implementation by signatories

#### Turku — Translating an ambitious goal into tangible and measurable actions

Turku has set a very ambitious goal to be **one of the world's leading climate and nature cities by 2030**. The city is now focusing efforts on translating this bold vision into tangible actions across the municipal departments. To track progress, Turku is developing indicators to assess the city's impact on nature. A nature balance indicator tool was initially considered but tracking regular progress against elements, like the restoration of the city's rare and endangered species, has proved challenging. Turku is therefore working to find alternative ways to measure nature. This includes pioneering ecological footprint measurement with a new model, jointly developed by the University of Jyväskylä, Sitra, and S Group. Recognising the important role business can play in combating biodiversity loss, researchers are involving local companies to calculate their ecological footprint and take control of their impact on nature.

Alongside measurement, Turku is also taking action: using multiple instruments including planning and procurement to regenerate nature as the city grows. To ensure green and blue integrations across all urban development projects, the city is using the Green Area Factor, a measurement tool that describes the quantity and quality of natural assets across a defined spatial area. Turku is also looking into using permit processes to regulate the defined nature measures for the development of municipally owned land by private developers, as well as setting procurement standards to encourage regenerative food production. More on Turku on [page 95](#).

#### Genoa's multi-level governance approach

Located between the mountains and the sea, Genoa is pursuing regeneration of its existing green, grey, and blue ecosystems to foster a sustainable future in 2030 and a decarbonised city in 2050. Under the **Lighthouse City strategy**, Genoa is adopting a multi-level governance approach, consulting a broad range of stakeholders in the development of plans to improve the management of green spaces and coastal ecosystems. Political representatives, national agencies, third sector groups, and citizens participated in a peer-to-peer process. Taking into account the different perceptions around what it means to become a resilient and sustainable city at all levels has been key to a 'just' transition for Genoa.

As part of the document's strategic objectives, Genoa is looking to exploit all opportunities to increase the amount of green spaces and rebalance nature and the built environment. From planting more trees on the street and building green roofs, to building new bike lanes with green lines to improve space for local species, as well as embedding parks into the urban fabric and peri-urban green belts. For blue infrastructure, the regeneration of a 20,000 m<sup>2</sup> area consisting of 100,000 m<sup>3</sup> of water water located on the Levante waterfront is already benefiting from adaptive and regenerative interventions, resulting in direct benefits including a high standard of carbon sink performance, mitigation of the effects of rising temperatures, and enhancement of biodiversity such as marine fauna and flora species. More on Genoa on [page 65](#).

#### Esch-sur-Alzette joins pact to reopen and monitor green spaces

For over 150 years, Esch-sur-Alzette has been a foundation for steel yards. Based on Luxembourg's Nature Pact 2030 — an instrument aimed at preserving and restoring biodiversity — Esch is now committed to regenerating two former steel yards into new, green districts. The agreement runs until 2030, and contains over 60 different measures to improve climate and nature protection locally.

Prior to joining the Nature Pact agreement, Esch created a new urban development Master Plan, **Plan d'Aménagement Général (PAG)**, mapping a clear overview of efforts to regenerate nature and natural resources across the city. This planned approach is guiding Esch to quantify green spaces and enlarge the green belt, such as starting a tree inventory to count each tree in the city and monitor each tree's condition and health, as well as revitalising its two main rivers, Alzette and Dipbech, which cross the city's urban areas. To also protect valuable nature from urban expansion, the Master Plan sets requirements for where urban development is allowed, followed by defined compensation measures if untouched land is developed.

Whilst Esch is only in its first year of committing to regenerating nature across the city through the Nature Pact agreement, it has reached 'bronze' level during the kick-off audit, with a roadmap to reach the next level by 2025. The findings and data submitted through the Pacte Nature agreement will also be used to update and to improve the urban development plan (PAG) at the next review (due 2027), in order to further maximise regenerative efforts in Esch-sur-Alzette. More on Esch-sur-Alzette on [page 56](#).

## Priority actions

### The vision of circular cities is only possible through collective action by policymakers, businesses, civil society, and citizens

Cities are leading by example in the transition to a circular economy. The positive trend across all ten CCD commitments and high-level analysis of signatory reports shows cities are leading by example in the transition to a circular economy. Cities are clearly implementing and embedding circular economy principles and roadmaps successfully through over 200 different actions across all value chains. However, not all policy levers available to cities are being fully utilised and it is clear that existing actions are not sufficient to achieve systemic change.

Deep dives into measuring progress and regenerating nature shine a light on how each topic in its own way will be fundamental to further progress. These two areas of increasing interest to Circular Cities will be key to the circular economy transition, as showcased by exciting best practices from frontrunners in the CCD community. To drive impact, cities are measuring and reporting on a wide range of indicators, as well as

setting more ambitious, upstream targets in areas such as reuse and consumption emissions. Meanwhile, although cities are using planning and food policies to achieve nature-positive outcomes in recognition of the critical role natural systems play in underpinning city resilience and prosperity, the links between circular economy and nature impacts need further strengthening.

Further concerted, collective action is needed from cities and other stakeholders. Cities are uniquely positioned to innovate and implement bespoke circular policy solutions. To guarantee effective implementation and ensure a more just transition to a circular economy, cities should be a focal point for at-scale public-private collaborations. Multi-level governance needs to be at the centre of national and EU circular economy-related strategies. Civil society alongside closer business relationships has an integral role in ensuring local circular transitions are distributive, inclusive, and tangible.

Cities are embracing the circular economy as a means of reducing carbon footprints. Helsinki has diminished its need for virgin materials in construction projects by incorporating secondary materials, exemplified by the new tramway linking Kalasatama to Pasila.

Image: City of Helsinki

## Six priority actions

Consolidating the key takeaways from this report, we have identified six priority actions which will enable cities, with the cooperation of other policymakers, businesses, and civil society and citizens, to accelerate their circular economy progress:

### 1 Work towards common circular economy metrics

Performance data can help cities provide an economic rationale for adopting circular economy approaches, and demonstrate how these help tackle global challenges, such as climate change, biodiversity loss, waste and pollution. Through collaborative action, cities can consolidate behind a set of priority indicators which align to key reporting initiatives. Doing so, will improve comparability and ensure that cities have the information they need to make effective decisions.

### 2 Set more ambitious targets, including on consumption-based emissions

Alongside adopting more upstream material targets, such as on reuse and virgin material consumption, frontrunner cities are setting Scope 3 consumption-based emissions targets. Such goals will ensure that cities move circular economy discussions beyond focusing on downstream interventions such as recycling, and challenge the need for costly waste management in the first place. Looking further upstream in this way can ensure that cities reap the full benefits of the circular economy transition, particularly in relation to meeting climate goals and targets.

### 3 Integrate circular economy approaches across city departments to unlock resources

In order to ensure that the circular economy is not seen as a siloed solution to specific problems but an integral part of a city's strategic plan and operations, it is vital that circular economy principles and approaches are integrated across all areas of

governance, planning, and decision making. Through cross-departmental coordination and working groups, taking a whole-of-city-government approach will help cities access more resources and tap into relevant but previously overlooked funding pots.

### 4 Innovate circular systemic solutions

New policies and circular systemic solutions are still urgently needed. While this report identifies over 200 actions that cities could replicate or learn from, significantly more progress is needed to unlock the economic and environmental potential of the circular economy. Cities must continue utilising all policy levers available to test and innovate solutions that can be scaled.

### 5 Advocate for a new paradigm

In areas where local government innovation alone is not enough, cities must also clearly advocate to central governments, financial actors, and other stakeholders for more coherent circular economy policy frameworks and packages, and create connections between these key decision makers. To confront the true costs of linear production and consumption, fiscal reforms and cost recovery mechanisms like Extended Producer Responsibility (EPR) schemes are also critical.

### 6 Embed nature into all decision-making processes

Cities need to continue building their understanding of the natural environment that sustains them. Full spatial mapping of green, blue and grey infrastructure, and monitoring the nature impact or ecological footprint of city operations and urban flows will support this, in much the same way that stakeholders are accounting for GHG emissions. Meanwhile utilising toolkits such as the [Urban Nature Plan Guidance and Toolkit](#) will inform target setting and nature-positive action planning, and in turn help cities take a more systematic approach to regenerating nature.

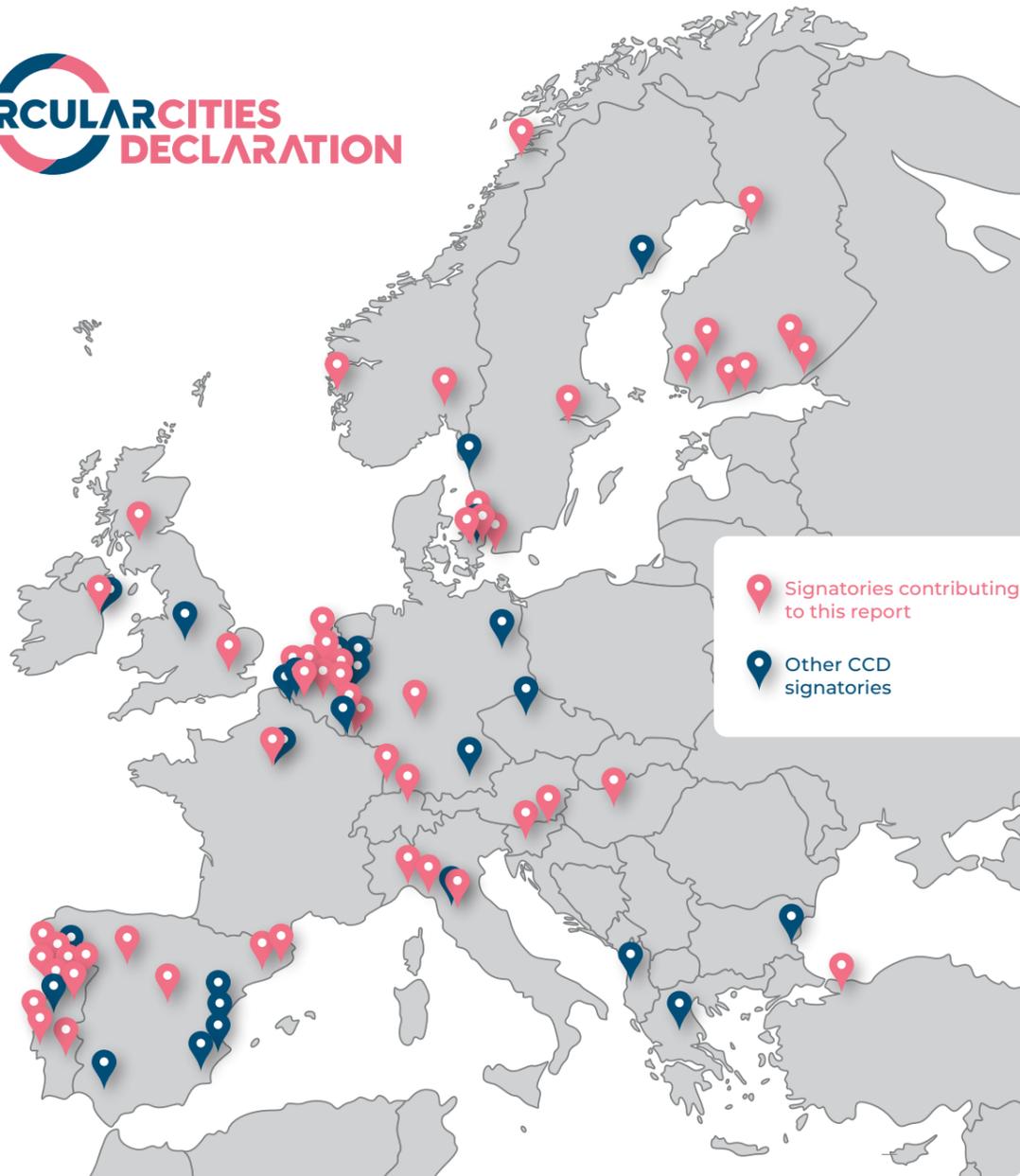
Related to the six priority actions recommended before, further actions are identified for stakeholder groups to support cities' transition.

### Stakeholder priority actions

Stakeholder	Priority action
<b>National and EU policymakers</b>	<p>Prioritise the design and implementation of economic policies and financial incentives that enable circular material flows and circular business models. This could include fiscal reforms that establish a level playing field for secondary-raw materials, for instance VAT reductions or exemptions, or shifting taxation from labour (income tax) towards resources. In addition, provision of sufficient budget to cities to implement action on the ground and fund innovation.</p> <p>Introduce further cost recovery mechanisms, such as Extended Producer Responsibility schemes, that shift the cost burden from cities and taxpayers to companies in handling the end of life products, to help incentivise reverse logistics and stimulate product redesign.</p> <p>Support reporting initiatives and statistics agencies to consider the needs of cities and help establish local circular economy measures and definitions.</p> <p>Strengthen national policy frameworks for nature, which enhance the understanding of, and resources for, cities to implement nature-positive solutions.</p> <p>Ensure national building codes and guidance can enable circular building regulations. This could further strengthen local implementation and ultimately lower cities' nature footprint.</p>
<b>Businesses and startups</b>	<p>Collaborate closer with cities on circular economy solution activation and citizen engagement.</p> <p>Participate in place-based data sharing initiatives to enable cities to design and develop policies as well as measure their impacts.</p>
<b>Civil society and citizens</b>	<p>Support the implementation of circular economy solutions by helping cities to engage with and empower citizens through public-civil partnerships and living labs.</p> <p>Take a more active role in data collection and reporting on indicators, ensuring that public and community interests are represented.</p>

## City by city: CCD signatory reports

### Circular Cities Declaration Signatories



Current signatories of the Circular Cities Declaration

## Águeda, Portugal

### General information

Population: **46,131**

Mayor: **Jorge Henrique Fernandes de Almeida**



Câmara Municipal de Águeda

### Strategy & governance

Águeda's circular economy principles are embedded in many of the action plans of the municipality such as the [Climate Change Adaptation Plan](#), the [Action Plan for Sustainable Energy, Climate, and Environment](#), and the [Local Action Plan for Water Circularity](#). These include many actions which will be implemented in the short-to-medium term to enable circularity in the region, allowing Águeda to progress towards its national and European targets. Although there is currently no formal strategy dedicated to the circular economy, in the last few months the municipality has been implementing and expanding projects that will help to define indicators for strategy development.

### Key actions

- ★ **A sustainable festival** – The [AgitÁgueda](#) festival brings together thousands of people every year, contributing to cultural enrichment as well as the promotion of the circular economy throughout Águeda. Hundreds of materials used in the decoration of city streets are [recycled](#) and reimagined to produce new art pieces which are incorporated into [urban art installations](#) across the municipality.
- ★ **Waste with Value Initiative** – [Resíduos com valor!](#) is a cross-cutting initiative supporting the local circular economy and promoting local partnerships. It aims to mobilise the local community to collect and separate waste via a reward waste collection machine, and subsequently more effectively manage separation and recovery of various waste streams. Supported by a system of 'points' attributed to each citizen for depositing separated waste, points can then be exchanged for flow reducers, recycling bags and composters, among other rewards, helping to contribute to the sustainable development of the county. Since the [pilot project](#) began in 2021, more than 300,000 packages have already been valorised, as well as 40,000 kg of glass, and 6,420 kg of plastic and metal recovered.
- ★ **beÁgueda Bicycle Sharing** – This sustainable mobility project enables the shared use of bicycles in the municipality, with various parts and components of the bicycles being reused during the repair and maintenance of the fleet.
- ★ **Circular art installation** – [Clic.lab](#), part of the C-Change project, is an international programme that connects art and the environment. The sound installation [Clic.lab - A Planet in Suspension!](#) raises awareness on the urgency of reusing materials. This installation, which receives hundreds of visitors, was built using abandoned and discarded materials.
- ★ **School composting** – In 2022, in order to build capacity amongst citizens to manage organic waste separately, the Municipality of Águeda made domestic composters available to all schools in the municipality. As a complement, training sessions on the proper use of composters were provided in schools, institutions, and in [online format](#) for the community.

# Albergaria-a-Velha, Portugal

## General information

Population: **24,841**  
Mayor: **António Loureiro**



Câmara Municipal de Albergaria-a-Velha

## Strategy & governance

Circularity is integrated into the **Municipal Sustainability Strategy** of Albergaria-a-Velha. Circular targets are set out in the strategy, including commitments to recycling at least 20% of paper, glass, plastic and municipal solid waste by 2027, and achieving 10% green public procurement (GPP) by 2027. The strategy also commits to introducing segregated bio-waste collection and treatment by 2025. Several departments are collaborating to achieve the outlined objectives including the Environment and Urban Services Division, Civil and Forest Protection Office, Municipal Construction, Equipment and Roads Division, and Planning. Regarding regional collaboration, the municipality subscribes to the second edition of the Institutional **Pact for the Valorization of the Circular Economy in the Centro Region**, an initiative of the Commission Coordination and Regional Development Centre.

## Key actions

- ✦ **Composting initiative** – The **Albergaria A-Verde to Compost** project is committed to enabling the valorisation of organic waste both at home and at the community level. The municipality has installed a community composter to be used by 25 families, providing shared infrastructure for those without a garden. As part of the Home Composting programme, the municipality allocated 350 individual composters.
- ✦ **MOB.A** – The **MOB.A** programme (Albergaria-a-Velha Bicycle Mobility Operation) offers free use of bicycles to citizens. The programme counteracts the current culture of mobility, which is heavily based on the use of cars and motorbikes. The main objective is to promote a culture of sustainable mobility in the city, as well as to encourage active and healthy lifestyles.
- ✦ **Recycling of masks and textiles** – As part of the **To Be Green project**, masks were collected across ten locations for separation, recovery, and reuse of their parts (elastic and metal frames are removed, and non-woven material is extracted).

A facility has also been opened where the community can deposit clothes or home textiles for recycling and bring clothes in good condition for exchange. Since reporting in the **CCD report 2022**, the city's main achievement is the increase in the number of masks and recycled textiles — from May 2021 to December 2022, 3,605.21 kg of textiles and 317.70 kg of masks were recycled, which translates to an increase in the number of citizens using these services.

- ✦ **Certifying local circular companies** – The **Certificate Recicla – Albergaria-a-Verde scheme** awards local companies with either a silver, gold, or platinum certification, which demonstrate the implementation of measures to protect the environment. By the end of 2022, 224 companies were certified – almost doubling since the **CCD report 2022** – and there were 23 new subscriptions to the door-to-door waste collection service. The success achieved in its first addition can be attributed to the high level of adherence and commitment on the part of Albergaria-a-Velha's entrepreneurs. This has motivated the municipality to continue with the scheme.

# Bergen, Norway

## General information

Population: **289,330**  
Mayor: **Marit Warncke**



## Strategy & governance

Bergen is Norway's second largest city, with a rich history of industry and trade. Bergen's Climate strategy, **Green Strategy**, integrates the circular economy as one of its four pillars for achieving climate neutrality by 2030. The circular economy is further developed in the city's climate action plans **Green Municipality** and **Action Plan for Green Strategy**, the **Action Plan for Business Development** and the **Procurement Strategy**, and is amplified through participation in various networks and projects such as the CCRI, UTM, and Hoop. The Climate Department and the Industry & Agriculture Unit are in charge of the strategic development of the circular economy at municipal level and collaborate with other partners for the four focus sectors on circularity. Bergen is driving circularity in the built environment through rehabilitation, transformation, and reuse of materials. In the food system, the city promotes urban agriculture and systemic solutions for food waste and biomaterials. Furniture, electronics, and textiles have been identified as main streams for making consumer goods more circular, and shared transportation is fostering circularity in mobility and planning.

## Key actions

- ✦ **Establishing a reuse department** – In 2023 Bergen launched its **reuse department**. It consists of a digital system and marketplace for reuse, a warehouse, and dedicated personnel. This department handles the reception, storage, and redistribution of reusable construction materials, inventories, furniture, and outdoor items within the municipality. Additionally, the department is involved in repairing and adjusting furniture. Though only serving the municipality, the reuse department redistributed over 1,000 pieces of furniture in 2023.
- ✦ **Circularity in building projects** – The municipality has ambitious goals on circularity in the built environment and it leads the way with projects like the **Midtbygda nursing home**, and the **Outer Arna school and Mindemyren multi-purpose building**. With **FutureBuilt**, an innovation program for ambitious and sustainable developers, the city invites local construction industry stakeholders to participate in climate-friendly and circular urban development. Additionally, through the **Bopilot office**, Bergen is investigating the municipality's role in conveying alternative circular housing solutions around new concepts of shared housing.
- ✦ **The Reuse Week** – During the last week of November the City of Bergen organises a week of reuse and waste reduction with several partners. The city invites civil society to participate in these events. In the 2023 edition, the **Reuse Week** had more than 60 different activities related to circularity, from repair cafés, clothing swaps, food rescuing, and reuse markets to various lectures. More than 45 different organisations and initiatives hosted events this week.
- ✦ **Circular mobility** – With **mobile points**, Bergen makes smart and sustainable forms of transport more visible and accessible. Mobile points are hubs that connect several sustainable urban transport services like city bikes, spaces for sharing vehicles, public charging points, bicycle parking spaces, and collective bus stops. Strategically located across the city, as of 2023 Bergen has 13 mobile points.
- ✦ **Sustainable agriculture and food systems** – Bergen has a **strategy for urban agriculture**. Through the **City Farmer**, the municipality provides support and guidance for citizens and various other actors in growing their crops. Additionally, the city provides funding for urban agricultural projects. In alignment with the city's Climate Strategy and various Action Plans, the municipality is promoting active kitchen gardens in schools and kindergartens.

## Bodø, Norway

### General information

Population: **53,500**  
Mayor: **Odd Emil Ingebrigtsen**



Shutterstock / Tord Kristian Larsen

### Strategy & governance

Bodø is a city undergoing a large urban transformation, with high ambitions for climate, environment, and the circular economy. Ambitions for circularity are embedded across different strategies and plans, such as the [Climate and Energy Plan for Bodø 2019-2031](#), the [Procurement Strategy 2023-2026](#), and more. The municipality is getting national attention for the [Overall Environmental Programme for Hernes](#), a new city district where circular construction will be the norm. In terms of collaboration at the national and international level, Bodø is also involved in networks and research projects on circularity, such as [CityLoops](#), [CIRCULUS](#), [The Hoop](#), and [B-Watersmart](#).

### Key actions

- ✦ **Public-private collaboration** – The municipality is trying to take a leading role in developing circularity within society via building close collaborations with businesses and society. To this end, Bodø has established a [public-private collaborative centre for sustainability](#), where professional communities work together on circularity and other sustainability goals.
- ✦ **Reuse Week** – This annual circular initiative takes place in September, hosting a range of events targeting the public, education establishments, and businesses. The week has been growing every year and now also involves surrounding municipalities.
- ✦ **Reuse marketplace for construction materials (physical and digital)** – The local waste company Iris Produksjon is piloting a reuse marketplace for secondary construction materials near Bodø city centre. The pilot previously delivered materials to a single construction project but opened for use by other companies and the public in September 2023.
- ✦ **Soil reuse** – Mapping of soil and contaminated soil has been carried out for the whole municipality with the help of different tools such as [Material Mapper](#), and subsequently displayed in visualisation dashboards. This information is highly valuable to inform decision makers regarding the further processing of those masses for potential cleaning and reuse. Building on this initial data collection, a procurement criteria tool for soil reuse is currently being developed.
- ✦ **Ongoing development of procurement criteria** – As part of the implementation of the [Procurement Strategy 2023-2026](#), national regulations will require more ambitious environmental criteria in procurements for 2024, and the planning and use of circular and environmentally friendly criteria for tenders is in constant development. Projects like [Sjøgata of zero emission construction](#) have strengthened internal competence on the topic, as well as fostering collaboration and highlighting the importance of market dialogue.
- ✦ **Circular demolition of a local school** – With the collaboration of the local waste management company, various secondary materials have been successfully recovered from the demolition of a school and donated to a local charity for reuse.

## Braga, Portugal

### General information

Population: **193,333**  
Mayor: **Ricardo Bruno Antunes Machado Rio**



### Strategy & governance

Following the completion of a Diagnosis of the Circular Economy of the Region in 2022, the municipality of Braga is now developing a dedicated circular economy strategy proposed to be published in nine months. As it stands, circular actions are included in existing planning documents such as the Environmental Education Plan. Several key strategies where circularity will be embedded are currently in development for the municipality, for instance the Sustainability Strategy (in preparation) and the Sustainable Purchasing Plan of the Municipality of Braga, which is expected to be ready for implementation in 2024. The Municipal Climate Action Plan — which will be adopted in early 2024 — is also expected to have a dedicated section on the circular economy. The strategy aims to bring about collaborative actions among various services of the municipality, including the Municipal Directorate of Territory Management, the Municipal Directorate of Works, and the Municipal Directorate of Management, covering almost all the departments.

### Key actions

- ✦ **Bulb exchange programme** – With a view to enable greater energy efficiency amongst the entire population of Braga, the [Programme to support the exchange of conventional bulbs for LED bulbs](#) incentivises this exchange by returning **50% of the amount spent** on purchasing LEDs against the delivery of the respective invoice and the collection of the old bulb (preventing unsorted disposal). The budget available for this campaign is EUR 50,000. Results are pending for this new initiative.
- ✦ **Support plan for the purchase of bicycles** – This initiative supports citizens and small businesses in the purchase of a wide variety of bicycles and cargo bicycles — conventional, electric urban, new or used, as well as accessories for loading people or goods on bicycles, up to a value of **EUR 40,000**.
- ✦ **Platform to evaluate potential for installing photovoltaic panels and bio-roofs** – through an online [platform](#), Braga citizens and companies can simulate and quantify an investment to install solar panels, in addition to calculating annual savings and return time for that same investment.
- ✦ **Take Care of Braga I and II** – Last year Braga reported on [Cuidar Braga I](#), offering a free service to manage biowaste from agriculture and forestry, thus avoiding their burning onsite and the connected risk of sparking wildfires. [Cuidar Braga II](#) took the initiative a step further to shred the biowaste to produce chips for composting, soil cover or to make pellets or briquettes, all of which can be used by citizens free of charge. There has been a gradual increase in the use of this closed-loop service since the last report.
- ✦ **Education towards a Circular Economy** – To raise awareness among the public, the municipality has organised capacity building workshops during the [European Week for Waste Reduction](#) every year since 2014. Workshop topics include soap and moisturiser making from used cooking oil, vermicomposting, and how to repair clothing.

## Bruges, Belgium

### General information

Population: **119,541**  
Mayor: **Dirk De fauw**



Unsplash / Tamar Gogua

### Strategy & governance

The circular economy is one of the seven bridges of the city of Bruges' climate plan **BruggeNaarMorgen**, which aims to reduce local CO<sub>2</sub> emissions by half by 2030 and to have net zero CO<sub>2</sub> emissions by 2050. In the context of this climate plan, a strategic vision on circular city development and circular entrepreneurship was drawn up together with various relevant stakeholders. This resulted in the publishing of a concrete action plan with ten priority actions for **Bruges Circular City**, with an overarching aim to reduce emissions, use raw materials more efficiently, promote local circular activity, and enable social cohesion and employment. These actions are addressed by various city services in collaboration with city stakeholders.

### Key actions

- ✦ **Circular Hub Bruges** – The **Circular Hub Bruges** was set up as a network for social and circular entrepreneurship in the region of Bruges. The hub aims to inspire, connect, and initiate. The hub places good practices in the spotlight, brings entrepreneurs together, and sets the pace for new circular initiatives.
- ✦ **Circular festival** – Together with **Avansa** and **de Republiek**, the city organises an annual **circular festival**. During this festival there are several workshops, company visits, lectures, and demos. In this way, the municipality informs and mobilises a large audience of both citizens and entrepreneurs around the circular transition, and with each year, aims to engage a large audience.
- ✦ **Food distribution platform** – Since June 2020, the food distribution platform **De Voedselploeg** has been collecting food surpluses, mainly from supermarkets. This initiative prevents food loss and reduces related CO<sub>2</sub> emissions. The collected food is sorted and redistributed to organisations that offer food aid in the context of poverty reduction and social support. Employment opportunities for those distanced from the labour market are also generated through the running of the food distribution platform.
- ✦ **Repair initiatives** – **Kringwinkel 't Rad** and the local waste company **IVBO** have joined forces in the **Living Lab Herstel Eerst** to focus on recovering and repairing discarded electrical and electronic equipment. Taking a holistic approach, they are collaborating with recycling parks to ensure these devices are collected carefully so that repair is still possible. In order to build capacity amongst citizens to repair, Avansa organises local **Repair Cafés**, where volunteers demonstrate and repair items such as electronics, furniture, bicycles, and textiles.
- ✦ **Scharphoutsite, circular building** – The City of Bruges is building a new meeting centre on the **Scharphout site** as a pilot project for circular construction. The ambition and the learnings from the Scharphoutsite is a lighthouse project for building professionals in and around Bruges, helping to amplify that sustainable construction is so much more than just energy-efficient construction. At the national level, the City participates in the **Circular Construction Green Deal** of the Flemish Government.

## Budapest, Hungary

### General information

Population: **1.63 million**  
Mayor: **Gergely Karácsony**



Unsplash / Elijah G

### Strategy & governance

While Budapest does not yet have a specific circular economy strategy, measures related to circularity are embedded in the city's **Sustainable Energy and Climate Action Plan (SECAP)**, Environmental Protection Program, and the Mid-term Urban Development Strategy. A dedicated circular economy strategy is currently being developed with the collaboration of a city advisory group established by the municipality. Further, the SECAP will be revised in 2023 and 2024, in line with the 100 Climate Neutral Cities Mission requirements. The municipality fosters collaboration between departments to work on the circular economy, with several departments involved including City Management, Urban Planning, Property Management and the leading department of Climate and Environmental Affairs.

### Key actions

- ✦ **Prevention platform** – The municipality established an informal city advisory group to provide recommendations regarding sustainability in the city, consisting of NGOs and small businesses dealing with reuse and prevention. To date, the group has initiated the development of the first circular economy strategy of Budapest, as well as issued recommendations on the sustainable planning and arrangement of festivals and events in the city.
- ✦ **Community composting** – Last year the municipality reported on the implementation of composting points across five districts of Budapest. The accompanying composting campaign launched in 2022 aims to raise awareness of the composting process amongst citizens and discourage organic waste burning. Each of the five points are operating well, and the first compost (humus) sorting and sharing event was held in September 2023. Further extension is planned, with the aim of having community composting sites in every district of Budapest. The campaign has also expanded into the assisted funding of composting infrastructure in schools and associated training programmes.
- ✦ **Community budgeting** – The municipal waste company of Budapest operates two Reuse and Education Centers, where citizens can donate and purchase second hand items at a low cost. The company offers funding — community budgeting — for winning circular ideas to be hosted here. This year the Municipality selected a civil organisation via a tender for opening a DIY workshop where citizens can study how to repair their bikes, small gadgets, furniture, and electronics.
- ✦ **Tackling food waste** – Budapest is participating in three EU projects which aim to tackle food waste by transforming the urban food system, namely **SCHOOLFOOD4CHANGE**, **FOODCLIC**, and **DIVINFOOD**.

## Capital Region of Denmark, Denmark

### General information

Population: **1.89 million**  
Mayor: **Lars Gaardhøj**



Amager Hospital / Bjarke Ørsted

### Strategy & governance

The region promotes the circular transition through a number of key regional strategies and programmes. Both the **Regional Development Strategy** and the region's **Agenda for Action for the SDGs** include circularity and the sustainable use of resources as key goals. The region's programme for green and responsible hospitals (**Grøn2030**) promotes circularity through various activities such as waste reduction, waste management, and sustainable procurement. The region has furthermore adopted a new target of reducing its climate footprint by 50% in 2030 and becoming climate neutral in 2050. In 2023, the region launched a four-year **Programme for Sustainable and Circular Construction**. By uniting the departments of regional development, real estate, and raw materials, the programme aims to establish circular material flows, utilise the potential of excavated soil, and strengthen the circular competencies amongst stakeholders.

### Key actions

- ✦ **Programme for Sustainable and Circular Construction** – The new programme runs from 2023 to 2026, and will contribute to the establishment of circular material flows via actions including supporting the development of material hubs and digital solutions. To strengthen the skill set needed for the transition in construction, training and capacity building activities will be a core feature. The programme will additionally build public and private partnerships in the sector and showcase best practice examples of sustainable and circular construction in the region.
- ✦ **Construction and Demolition Handbook** – The region led pilot research on construction and demolition waste in the now finalised **CityLoops** Horizon2020 project. Based on this work, a **handbook for circular construction** and **nine replication packages** have been published on topics including circular demolition, circular soil handling, recycling of concrete, and circular business cases. These resources are directed at public authorities to help them access the developed tools and determine which are suitable to use in their own construction or demolition projects.
- ✦ **Green and responsible hospitals** – The **Grøn2030** programme contains a series of actions related to moving towards waste-free hospitals in the region by working on aspects such as product life extension, reusability, and minimising consumption. In 2022, the region launched a digital platform to support its existing initiative that ensures furniture, IT-equipment, medical equipment, and other items are reused internally or donated to NGOs. Another key focus of the programme is the implementation of sustainable procurement that promotes circularity.
- ✦ **Circular Economy Beyond Waste** – As part of their work as lead partner in this LIFE EU-funded project, the region is analysing how the effects of circular initiatives by public authorities can be estimated and communicated. In the past year, the region has completed a nation-wide **Citizens' Assembly on responsible consumption**, resulting in 13 overarching recommendations being developed which were proposed to the regional council in June 2023.

## Copenhagen, Denmark

### General information

Population: **660,000**  
Mayor: **Sophie Hæstorp Andersen**



Københavns Kommune / Troets Højen

### Strategy & governance

Copenhagen's drive to become a circular city is mainly guided by the city's **Waste and Resource Management Plan 2018-2024**, which set goals of tripling the amount of reuse while achieving a 70% recycling rate for household waste. A new waste and resource management plan is currently under development and will be in effect from 2025. Likewise, a new climate plan centred around consumption-based targets is currently under development. This will follow the city's current **The CHP 2025 Climate Plan** that strives for Copenhagen to be climate neutral by 2025. In addition, Copenhagen has strategies for **sustainable procurement** and a **food and meal strategy**, which will also guide the city's effort to become more circular.

### Key actions

- ✦ **Circular innovation platform** – The **Circular Copenhagen** innovation platform enables the innovation of new circular solutions for waste and resource problems in close collaboration with innovative companies and knowledge institutions. Projects are currently in progress to investigate and improve diaper recycling and the reuse of paint among other topics. The use of digital watermarks on packaging is also being investigated in collaboration with AIM and the Alliance to End Plastic Waste. The projects selected focus on residual wastes for which there are currently no high-value recycling solutions.
- ✦ **Tripling the level of reuse** – Copenhagen is in the process of equipping all the city's recycling stations — totalling five municipal and 11 local — with a swap zone for reusable products. By 2024, the city expects that the amount of direct reuse via municipal infrastructure will have more than tripled in comparison to 2016.
- ✦ **Diaper collection** – Copenhagen is in the process of establishing a city-wide collection scheme for **diaper waste** (for households with kids age zero to three), daycare centres for kids, and selected elderly care centres. The aim is to collect an annual amount of 5,000 tonnes of diaper waste for recycling.
- ✦ **Paint it Forward** – Copenhagen is partnering with a local non-profit institution to promote **reuse of paint residues**. So far, the results indicate that an annual amount of more than 10 tonnes of water-based paint residues from the recycling stations in Copenhagen can be collected for reuse and used by local artisans, citizens, and projects.
- ✦ **Food waste valorisation** – A door-to-door collection scheme for food waste has been in place in Copenhagen since 2017, resulting in an annual collection of around 15,000 tonnes of waste which is used for production of biogas and fertilisers. Symbiosis with the national gas provider has been developed to make use of the biogas, and Copenhagen is actively engaged in further development projects to increase the value of collected organic household waste, e.g. by **converting it to protein-rich feed**. Several ongoing initiatives in Copenhagen aim to minimise the amount of food waste in the first place.

## Esch-sur-Alzette, Luxembourg

### General information

Population: **36,625**  
Mayor: **Georges Mischo**



Ville d'Esch-sur-Alzette

### Strategy & governance

Whilst Esch-sur-Alzette does not have a standalone circular economy strategy, circularity can be found in the many measures taken to adhere to the municipality's Mission Statement, which is based on Luxembourg's [Climate Pact](#) and [Nature Pact](#). Both of these agreements run until 2030 and contain over 60 different measures to improve climate and nature protection locally. The municipality is additionally a member of the ProSud network — consisting of 11 municipalities in the Minett region — which has laid out a climate strategy for the region to become climate neutral by 2050 at the latest.

### Key actions

- ★ **Reuse centre and platform** – The conversion of the local recycling centre into a resource centre ([SIVEC](#)), has played a major role in reducing waste and enabling the reuse of resources in the municipality. Features of the centre include an onsite collected items shop for visitors, and an online platform which informs local organisations about incoming items on a daily basis. Those organisations subsequently distribute give boxes and run repair cafés, workshops and plenty of other activities in order to keep the collected items in use for as long as possible.
- ★ **Sustainable mobility** – Esch-sur-Alzette has recently published its new Local Mobility Plan aiming to radically change mobility within the municipality. One planned measure is to reduce individual vehicle traffic on the main roads by limiting access using retractable bollards. The secondary roads will hence become primarily reserved for sustainable means of transport, i.e. by foot, bicycles, buses, trams, etc. — whereas the different networks (e.g., bicycle lanes, bus lanes, etc.) are to be extended.
- ★ **Sustainable and circular subsidies** – To financially enable citizens to transition towards a more sustainable lifestyle, the municipality has introduced subsidies for the acquisition of sustainable products such as low-energy household appliances and (e-)bicycles. To encourage citizens to keep existing household appliances in use, subsidies are also available for appliance repairs.
- ★ **Sustainable procurement** – The Department of Ecology is currently running an internal survey to grasp the needs of the 42 different departments that form the municipal administration, in order to set-up a central procurement system which favours sustainable materials and products wherever possible.
- ★ **Climate conscious redevelopment** – There are currently two former industrial sites in Esch-sur-Alzette, Lentille Terres-Rouges and Metzschmelz that are being transformed into environmentally-friendly residential districts. To comply with the local and national efforts to significantly bring down CO<sub>2</sub> emissions, the two districts have been designed as low carbon areas and are nearly self-sufficient in terms of energy and water needs.

## Eskilstuna, Sweden

### General information

Population: **107,918**  
Mayor: **Georges Jimmy Jansson**



### Strategy & governance

Circularity is embedded in Eskilstuna's [Waste Action Plan](#) and [Climate Action Plan](#). The sectors prioritised by the city are building and infrastructure, and consumption and production, including public procurement, circular design, and circular shopping. In terms of climate change, targets for the city include becoming climate positive by 2045 and reducing CO<sub>2</sub>e by 80% by 2030, compared to 2020. The city also aims to reduce the total amount of waste to 300 kg per capita by 2027. Departments and municipally-controlled entities are responsible for achieving these goals and regularly reporting on the progress made. Two part-time employees of the city's municipal management office are responsible for the coordination of the implementation of circular economy actions, and dedicated circular economy staff can be found in many other departments including procurement, property management and internal labour, and adult education services.

### Key actions

- ★ **Eskilstuna Roadmap** – The circular economy is a key consideration of the city roadmap, which was created in collaboration with many relevant local stakeholders including the local university, Mälardalen Industrial Technology Centre, and business organisations. As part of the roadmap development, several organisations signed the [local climate declaration](#) with common goals stated in the [Climate Action Programme](#).
- ★ **ReTuna as a circular hub** – Through the roadmap, the function of [ReTuna recycling mall](#) was expanded to include a knowledge centre and innovation test bed for businesses wanting to transition to the circular economy. For example, IKEA started its circular journey at ReTuna. The aim of the circular hub is to share knowledge on material flows, circular methodology, and effective resource use between local, regional, national, and global actors.
- ★ **Circular construction** – The city has taken several steps towards building a material reuse depot, taking a consultative approach by first interviewing local, regional, and national stakeholders in the building sector and retail, to receive feedback on best practice and identify opportunities for sponsoring. In order to raise awareness and improve knowledge on secondary materials within the municipality, internal seminars have been held for staff. On a more strategic level, a roadmap to climate neutral building and infrastructure procurement is being developed, with circular use of materials building being a feature.
- ★ **Citizen engagement on circularity** – Residents of all ages are being educated on sorting for recycling, reuse, and sustainability. To increase understanding amongst children, introductory education to circular material usage has been rolled out in primary schools, including talks by speakers from various Swedish cities and internationally. In terms of collaborative actions, a [pilot project](#) on reusing materials — including textiles, wood and metals — in secondary schools is ongoing, as well as a project on how reused material can be a resource for young entrepreneurs in secondary school.

## Espoo, Finland

### General information

Population: **312,700**  
Mayor: **Jukka Mäkelä**



Hannu Vallas

### Strategy & governance

The city of Espoo is committed to becoming a **carbon-neutral city** that adheres to the principles of the **circular economy** and protects local biodiversity. The development of the circular economy supports the **city's goal of becoming carbon-neutral by 2030, no net loss of biodiversity by 2035** and **achieving the UN's Sustainable Development Goals** as a pioneer city. In the **Sustainable Espoo development programme**, five circular economy priorities are set from 2021 to 2025: circular economy solutions during the construction life cycle, towards a waste-free Espoo, the biocircular economy, sustainable public procurement, and circular and sharing economy services for residents. The city has recently **signed the Green City Accord and joined the national Nature-wise municipalities network**. The **Climate Watch service** allows the public to follow how the city is progressing in implementing its climate action.

### Key actions

- ✦ **Sustainable urban development** – The City of Espoo is developing areas such as **Kera** and **Kiviruukki** into unique smart districts that are built sustainably, favouring carbon-neutral and circular solutions. To achieve this the city has implemented **a development commitment** that steers private landowners towards circular carbon-neutral solutions, innovative procurement such as **a design competition aimed to increase the use of whole building parts** and **a street of future pilot** in Kera that showcased and raised awareness of circular everyday solutions. Kera has also served as a development and testing area for the **co-creation model** for sustainable and urban areas. In addition, Espoo is putting more emphasis on **preserving and regenerating biodiversity** by creating a road map towards a **no net loss -city**.
- ✦ **Circular procurement** – In 2022, Espoo introduced a new procurement contract for furniture which included criteria for second-hand furniture. This led to successful circular procurement in the **Lippulaiva Library** of used furniture and fixtures as well as reupholstered and re-painted furniture. Regarding professional clothing, a new

procurement contract was introduced in 2023, which included criteria for the use of recycled materials as well as general requirements for corporate responsibility — for example, that of the supply chain. Further circular procurement measures in development addresses recycling rate of materials in demolition projects and the circulation of plastics in construction projects.

- ✦ **Encouraging circular lifestyles** – Various events and exhibitions for citizens have been organised to increase awareness and motivation for circular lifestyle. The topics have covered sorting of household waste, circulation of plastic, repairing of clothing, and sharing economy among others. Some of the highlights of events organised in Espoo are a **Climate action exhibition**, a **circular economy event at Kera**, **workshops for using reused and recycled materials to build a speaker** and a **plastic workshop** for reshaping recycled plastic into new products. To promote the circular economy in everyday lives, local **circular and sharing economy services** in the Helsinki Metropolitan area were compiled on the Service Map. The city has also **promoted sustainable mobility** by offering free cycling and bicycle maintenance courses and events for residents in collaboration with local companies.

## Est Ensemble Grand Paris, France

### General information

Population: **439,276**  
President (and Mayor of Montreuil): **Patrice Bessac**



Est Ensemble / Anthony Voisin

### Strategy & governance

Est Ensemble adopted its first **Circular Economy Action Plan** in 2019, which focuses on three strategic axes: mobilising local stakeholders to drive the transition to a circular economy, optimising resources by implementing local loops, and making Est Ensemble Grand Paris an exemplary circular organisation. In 2022, Est Ensemble assessed this plan to introduce a strong focus on circular economy in its **Climate Action Plan** (PCAET: Plan Climat Air Énergie Territorial), to be adopted in 2024. To foster the circular economy in the Est Ensemble territory, the plan sets out several targets across sectors to be achieved including cutting household waste production in half by 2050. Targets resulting from the plan are set for 2026, 2030, and 2050. As the circular economy is a cross-cutting area, actions are implemented by all relevant departments including Urban Planning and Ecology, Legal, and Employment and Economy.

### Key actions

- ✦ **Circular Economy Charter** – In order to encourage circular practices in the construction sector, Est Ensemble Grand Paris has created a charter for the development of the circular economy aimed at social housing companies, developers, promoters, and real estate actors. In June 2022 the charter was signed by approximately twenty construction and housing sector stakeholders.
- ✦ **Organic waste valorisation** – To **reduce the total volume of waste produced in the territory**, Est Ensemble in collaboration with SYCTOM, successfully piloted the separation, collection, and treatment of organic waste to produce methane and compost, for a period of three years beginning 2019. In 2024, recovery of organic waste at source will be mandatory in France, therefore Est Ensemble will resume the rolling out of collection points for organic waste across the cities.

- ✦ **Reuse centres** – Awareness raising activities amongst citizens are being implemented by the signatory as a necessary first step to increase reuse and retention of household items. Alongside this, reuse collection points will be rolled out across Est Ensemble Grand Paris, with the aim to allow citizens to have a collection point within less than 20 minutes by car. Est Ensemble has a target of at least five facilities for better reuse of household and company waste to be established by 2027, the Excellence Center for Circular and Solidary Economy to be opened on the SYCTOM premises being one of them.
- ✦ **Mapping textile stakeholders** – Textile waste is a historic sector in the Est Ensemble territory. The city plans to foster a sustainable and dynamic textile sector moving forward, beginning with the mapping out of textile stakeholders as directed in the Climate Action Plan. Through the mapped stakeholders, the city hopes to incentivise the sector to become more circular along the value chain, including textile composition.

## Évora, Portugal

### General information

Population: **53,568**  
Mayor: Carlos Pinto de Sá



### Strategy & governance

Although Évora does not have a separate circular economy strategy, the topics of sustainability and circularity are central to the city's municipal policies. They are particularly visible in the work of the Operational Services and Economic Development departments as well as the Education and Social Intervention and Youth and Sports Divisions. To oversee progress, the implementation of circular economy measures is governed by the municipal executive. The Municipality was one of the first in the country to develop a **Municipal Strategy for Adaptation to Climate Change**, from which the guidelines are now taken into account in the city's main planning instruments. City policy has more recently focused on ensuring public ownership and **sustainable management of water** in the face of issues of drought. Évora shares a series of waste and recycling targets with the 12 municipalities of the Alentejo Central region, including achieving a recycling rate of 80% and achieving recovery of over 48 kg of urban solid waste per inhabitant per year.

### Key actions

- ✦ **Building resilience naturally** – Through the **Life – Água da Prata Project**, Évora is implementing nature-based solutions to increase climate resilience and water efficiency in the region, making use of the historic Água da Prata Aqueduct. Measures to promote the adaptation of green spaces to resist heat waves and extreme precipitation include strategically planting trees and bushes to reduce water needs, and switching to irrigation with untreated water. Next to the Torregela river basin, where the riparian gallery will be reestablished, further nature-based measures will be implemented to reinforce the unstable banks using stones and willow stakes, and restore the palisade, planting trees and shrubs of native species.
- ✦ **Citizen composting campaign** – The campaign **Missão Cascas Solidárias** aims to promote the practice of **domestic composting** by distributing composters free of charge for an indefinite period of time to all residents with a garden who express interest. Through a commitment between the Environmental Waste Management body and the participating citizen, that requires compliance with some basic rules, citizens receive a composting kit that includes a 300 litre composter, a home composting guide and access to the private 'replanters' group on Facebook. The ultimate objective will be to reduce the amount of organic waste of family homes and institutions across the twelve municipalities of the district of Évora.
- ✦ **Water recovery system** – The requalification of the water recovery system of the local Municipal Swimming Pool Sports Complex has made it possible to treat and reuse water more efficiently, allowing a saving of around 40,000 m<sup>3</sup> of water every year.
- ✦ **Urban Gardens – Farms on the outskirts** of Évora provide an important means of local supply of fresh fruit and vegetables to the city. This locally sourced supply of food contributes to increased local food autonomy, local food resilience and increased community awareness of sustainable food production.

## Fingal, Ireland

### General information

Population: **330,000**  
Mayor: **Georges Adrian Henchy**



### Strategy & governance

Fingal is striving towards becoming a circular county with the driving force being the Council's **Climate Action Plan 2024 – 2029**, which embeds circular actions related to resource management and land use, as well as the promotion of waste prevention. The circular actions derive from the National Waste Plan for a Circular Economy 2023-2029, which includes policies and targets to accelerate the transition, such as recycling of 70% of packaging waste by 2030. Circular principles are also being integrated into the municipality via sectoral strategies such as the Economic Development Strategy and Tourism Strategy. To consider how to promote sustainable skills development across sectors, the Council has established a Green Skills Group under the Fingal Skills Strategy. Furthermore, the Local Economic & Community Plan in development will include the establishment of an Environmental Sub-Committee to promote environmental objectives. The Council is also preparing a **Green Public Procurement Strategy** to guide the council towards circular procurement.

### Key actions

- ✦ **Partnership with the National Centre for Circular Economy** – the Council is working with the **Rediscovery Centre** to implement a number of circular initiatives, including the **Circular Paint Initiative** which sees leftover paint collected at Council recycling centres, reprocessed, re-packaged and made available for community use.
- ✦ **Community repair and redistribution** – the Bicycle Repair Initiative collects bicycles from council recycling centres for repair and distribution for reuse. Alongside this, the **Fingal Musical Instruments Initiative** collects instruments from recycling centres, repairs and redistributes them back into the community via schools and youth groups.
- ✦ **School composting** – the **Composting for Schools Initiative** is active in 60 schools in Fingal and uses a holistic approach to tackle food waste, generate compost for the community and educate children on food systems via interactive learning and classroom resources. Building further capacity around composting, a **community leaf-mould composting initiative** has been developed with more than 60 community groups making compost from autumn leaves.
- ✦ **Active Travel** – The Council published an **Active Travel Strategy 2023** which sets out the Council's vision to make walking, cycling and wheeling a safe choice for everyday short journeys and embedding these options in the planning, design and delivery of infrastructure and initiatives. The Council's School Streets Project which transforms space outside schools into car-free pedestrian and cycling zones continues. Several active travel projects were initiated across the County to provide segregated cycling facilities including the Harry Reynolds Road Scheme in Balbriggan to provide a sustainable transport choice for local commuters.
- ✦ **Sustainable Partnerships** – The Council has executed a three-party collaboration agreement with Dublin City University (DCU) and the Dublin Airport Authority (DAA) on sustainable initiatives around aviation and the airport. Representatives of all three organisations met to workshop potential project concepts resulting in the development of two projects on district heating and AI real-time connect on-demand mobility as a service for which funding is now being sought for implementation.
- ✦ **Green Procurement** – The Council is developing a Green Procurement Strategy and has introduced sustainability criteria into its works, services and supplies tenders in 2023. Green Public Procurement Training was rolled out across the Council to staff in 2023.

## Florence, Italy

### General information

Population: **366,527**  
Mayor: **Dario Nardella**



Unsplash / Domenico Loia

### Strategy & governance

The Florence Circular City Strategy 2021-2023 has served to drive the circular economy in Florence. The strategy's aims include to increase the percentage of the quantity (70% by 2025) and the quality of separate waste collection and to close material loops by driving the development of territorial industrial chains and plant efficiency. These circular actions are supported by the city's Climate Adaptation Plan. **The Agreement for the Circular Economy** is a transversal agreement that brings together the citizens and public and private entities of Florence to create a city network towards the circular economy. The signatories promote collaboration and make available economic, instrumental and professional resources. The Green and Open Space Plan functions to raise the issue of climate change and quality of open spaces within urban planning and territorial governance. The Environment department of the municipality leads the circular economy development, with each department delegating an environmental contact to enable cross-department collaboration and alignment. Five full-time staff currently work on circular economy. The municipality has built an internal network of environmental contacts to coordinate activities internal and external to the municipality.

### Key actions

- ★ **Circular municipal regulations** – The regulatory powers delegated to municipal-level in Florence are being put to use to set circular rules in municipal regulations regarding the use of plastic and the necessity for separate waste collection for temporary events on public land.
- ★ **Rentable tableware service** – The city is providing a **rental service** for washable and reusable tableware which can be leased for private events.
- ★ **Reducing single-use plastic** – The **Firenze Plastic Free** campaign has so far installed twenty-two high quality water fountains across the city since 2006. Most recently, water bottles have been distributed to all children in the first class of the 55 primary schools in the municipal area as well as to all municipal employees. An action plan for reducing plastic is being developed focused on the reduction of single-use plastic consumption, information and incentive for good practice and correct waste management cleaning of urban areas.

## Frankfurt am Main, Germany

### General information

Population: **767,609**  
Mayor: **Mike Josef**



Stadt Frankfurt am Main / Eckhard Krumpolz

### Strategy & governance

The path towards a circular economy in Frankfurt am Main is outlined in the city's **Sustainability Report**, which is based on the United Nations' 2030 Agenda for Sustainable Development and the seventeen Sustainable Development Goals (SDGs). The report outlines 61 indicators to measure progress towards sustainability, and analyses progress towards achieving the 17 SDGs, outlining developments, influencing factors, concepts, projects, and measures. The city's aspirations towards a zero waste city are derived from its initial action plan entitled **On our way to a Zero Waste City**, published in 2021. Targets outlined in the report include to reduce the amount of residual waste per capita and year from the current 205 to 120 kilograms by 2035. In addition, the total amount of municipal waste per capita and year is to be reduced by two percent annually. In terms of climate policy, the city of Frankfurt am Main aims to be **climate-neutral** by 2035, whilst the Frankfurt municipality plans that its administration will be climate-neutral by 2030. The city also supports associated companies to achieve climate-neutrality with specialised programmes.

### Key actions

- ★ **Sustainable strategy development** – By participating in **Global Nachhaltige Kommune Hessen**, a collaborative project of the many communities of the municipality of Hesse, Frankfurt am Main is developing a strategy for the implementation of the 17 global sustainable development goals (SDGs) at the level of everyday municipal administration. Via **support** from the municipality of Hesse, the city is currently formulating thematic guidelines as well as strategic and operational goals, in the four selected fields of Mobility, Climate, Environment and Resources, Housing and Sustainable Urban Development, and One World and Global Responsibility.
- ★ **Initiatives towards zero waste** – The city of Frankfurt am Main has set itself the goal of significantly reducing the amount of waste produced in the city. Initiatives of the city to support the path to zero waste include the development of a **platform** for citizen participation and awareness regarding circular initiatives in the city, the establishment of a **Zero Waste Expert-Board**, the opening of a one-stop-shop **Neufundland Frankfurt** secondhand warehouse, and a similarly circular **online shop** for refurbished electrical appliances.
- ★ **City strategy research** – Frankfurt am Main is a participating case study city in a joint **study** with the German Institute of Urban Affairs (Difu), which aims to support cities in developing their own strategy for a circular city. The project aims to support strategic development at the municipal level and will run until February 2025, during which concrete action plans for the circular economy will be developed along with indicators for measuring success.
- ★ **Establishment of a ReUse network** – Together with the Hessian Ministry for the Environment, Climate Protection, Agriculture and Consumer Protection (HMUKLV), the City of Frankfurt am Main supports the establishment of a **ReUse network in Hessen**. The network aims to improve cooperation and support repair initiatives including those in recycling-centres, waste management companies and second-hand shops.

## Freiburg im Breisgau, Germany

### General information

Population: **235,859**  
Mayor: **Martin W. W. Horn**



Stadt Freiburg / Patrick Seeger

### Strategy & governance

Freiburg has been a leader in resource efficiency and waste management for decades. In recent years, the city has shifted focus to waste prevention, reuse and repair, and engaging businesses and citizens to do their part for the transition of the city to a circular economy. A zero-waste strategy for Freiburg is under development, aiming to be published in 2024, whilst the city aims to be climate neutral by 2035. Since 2009 Freiburg has adopted its own set of 59 sustainability goals in 12 fields of action, last updated in 2017. Many of the 2030 targets relate to circularity, in particular sustainable and fair public procurement, halving food waste, regional food supply, raising awareness for conscious consumption and behaviour patterns, reduced waste generation and reduction of CO<sub>2</sub> emissions by 60%. To achieve these targets, numerous **SDG-related measures** are implemented annually, and **biannual local sustainability reports** are published.

### Key actions

- ★ **Green waste valorisation** – The city of Freiburg has reimaged a former landfill Eichelbuck to valorise regionally collected green waste via an onsite composting plant and biochar-producing plant.
- ★ **Climate-neutral waste vehicles** – As early as 2012, the Freiburg Waste Management and City Cleaning GmbH (ASF) began the gradual conversion of its vehicle fleet to an emission-free fleet using battery and **fuel cell-based** drive systems. Freiburg's streets are cleaned with seven electrically powered flatbed vehicles and sweepers and six flexibly deployable e-bikes, resulting in an important contribution to a noise-and emission-free mobility change in inner-urban traffic. In the area of waste disposal, the switch from fossil to renewable energy use began in 2021 with the use of two hydrogen-powered collection vehicles. In 2023, the ASF fleet expanded to nine fuel cell vehicles.
- ★ **Consulting society on circularity** – The Freiburg Nachhaltigkeitsrat is a body of experts from business, science, politics and civil society which advises the Freiburg City Council and the city administration and issues recommendations and statements on sustainable development issues. In

the last two years, the topic of the circular economy has been addressed from various points of view in the Sustainability Council and was the main topic at two meetings.

- ★ **Library of things** – The City of Freiburg has supported the initiation of a concept to build a library of things. The **project** is now being continued by volunteers and the Haus des Engagements. To provide visibility to the various sharing initiatives in the city, the municipality has created a **webpage** that platforms all sharing offers in Freiburg.
- ★ **Circular events** – Several campaigns and events are held throughout Freiburg to actively raise awareness and encourage citizens to become more circular. As part of the European Week of Waste Prevention and in cooperation with local students, several mobile phone collection-for-recycling campaigns were held across the city, with phone exchange shelves set up in two city offices. Several pop-up events have been held to set the scene for the upcoming opening of a ReUse department stores - **Fundfabrik**. Freiburg initiated the city cleanliness campaign **Augenauf! Freiburg** in 2022 and 2023, which included the promotion of individual CleanUp events.

## Genoa, Italy

### General information

Population: **561,203**  
Mayor: **Marco Bucci**



Freepick / A Mededkov

### Strategy & governance

Genoa's transition to a circular economy is guided primarily by its Circular Economy Strategy. The strategy was developed in a participatory manner to address resource availability and conservation, in a virtuous cycle considered essential for the community and for an urban context that looks to the future from a perspective of sustainable development. The area in which it operates involves a transversal approach to the city and its production chains and is aimed at addressing a challenging scenario of global change that aims to impact mainly, although not exclusively, on the environment. The action is financed by the PON Metropolitan Cities 2014-2020 measure, as integrated by the effect of the additional resources assigned to Italy by the European instrument Recovery Assistance for Cohesion and the Territories of Europe (**REACT EU**).

### Key actions

- ★ **Circular economy strategy for Genoa** – As part of the **C-City project**, a participatory Circular Economy strategy was created with methodological, monitoring and governance tools. The strategy considers the short, medium and long-term perspective, and focuses on the three themes of EcoDesign, Long Use and Reuse, and on the upstream objective of reducing raw material and produce usage in the city, aiming long-term towards a zero-waste city. The strategy provides an operational tool co-designed with citizens, third sector, businesses and large players.
- ★ **Opening of a Circular Hub** – The Circular Hub, located in the city centre, is an on-site and digital space of knowledge exchange among different stakeholders, which favours the development of Circular Communities on a neighbourhood scale. The space enables acting through agreements, co-planning meetings, and co-creation of urban circular economy microprojects. The digital platform mediates actions, events, opportunities, territorial needs, good practices and replicable models, to raise awareness on the opportunity to transform to a just and responsible circular economy.
- ★ **Opening of a Circular Desk** – The Circular Desk is a technical facilitation desk that builds relationships between the various actors working in the circular economy sector, and provides an initial evaluation for possible open innovation activities related to circular processes, industrial symbiosis, water cycle, energy retrofitting, energy communities and upcycling projects. The desk aims to boost innovative processes and transform the social market present in the city into Circular District Market 2.0, for short and sustainable supply chain products.
- ★ **SURPLUSE reuse centre** – The largest reuse centre in the Surplus Network of Genoa has recently been established. The centre contributes to a more centralised management of locally available materials for exchange. Overall, the 20 second-hand sales points available in the Refresh app create a network of goods for exchange equivalent to approximately 53 tonnes.

## Ghent, Belgium

### General information

Population: **267,712**  
Mayor: **Mathias De Clercq**



### Strategy & governance

Ghent's ambitions for a circular transition are stipulated in the city's **Climate Action Plan 2020-2025**. Focusing on a circular economy and therefore using materials sparingly, but also space, energy, water and nutrition, is a necessary strategy for achieving our climate objectives in terms of mitigation and adaptation. There are no SMART targets or monitoring on circular economy in the Climate Plan, but a number of actions were initiated, focusing on: setting an example and influencing the market through public procurement and city-owned buildings and **circular urban planning**; upscaling circular economy, as part of an economic spearhead policy aiming at a **cleantech ecosystem** on European top level; supporting urban circular initiatives, and finally, awareness raising amongst citizens. A **policy note** for waste prevention and stimulation of reuse is published by the public waste company for Ghent, Ivago, which gives dedicated tips to citizens to avoid waste via its information magazine.

### Key actions

- ✦ **Supporting circular entrepreneurship** – The city of Ghent is providing direct funding and for circular entrepreneurs via **Circuit Circulair** and **Circular Kickstart** — two programmes focused on start-ups with a circular business concept. The selected ideas receive an intensive coaching programme and become part of an ever-growing circular community. Dedicated support provided includes investment advisors who are focussed on bio-based and cleantech investments, and the provision of a 'starter-subsidy'. The growing interest in such programmes is reflected in the 31 submissions received for the second edition of the Circuit Circulair programme, building on the 23 submissions received for the first edition. Ghent also collaborates with the **Social Circular Hub Ghent**, which supports and connects small and large companies with social economy partners. One success story is the collaboration between day-care centres and the social economy on washable diapers.
- ✦ **Circular construction commitment** – The city coordinated the **Interreg project URBCON**, focusing on enabling secondary concrete reuse, one of the most commonly used construction

materials. Ghent also acted as a replicator city in the Horizon project **CityLoops**, leading to the development of a **replication plan** which stipulates how to further avoid or valorise construction and demolition waste in city-owned projects. By participating in the **Living Lab ImpaC<sup>3</sup>t**, the city, together with Thuispunt Gent, the social housing company, aims to address how to integrate circularity in collective renovation projects at an affordable cost. Ghent confirmed its continued commitment towards a more sustainable construction sector by signing the **Flemish circular concrete agreement**.

- ✦ **Share and repair** – In 2022, Ghent was one of the three first cities in Flanders to receive an award for shared mobility, with 3.2 shared cars per 1,000 inhabitants. By signing the Flemish **Green Deal Renting and Sharing**, Ghent aims to promote and support the numerous valuable sharing and renting citizen initiatives and start-ups in the city. In partnership with the Social Cohesion and Urban Well-Being Service, over 30 **Repair Cafés** are organised every year, where volunteers help to repair electro-domestic appliances, bikes and clothes. Furthermore, the second hand shop **Kringwinkel Ateljee** is now offering repair-as-a-service for domestic appliances.

## Glasgow, United Kingdom

### General information

Population: **635,130**  
Mayor: **Jacqueline McLaren**



Stephen Hosey

### Strategy & governance

Glasgow aims to be the first circular city in Scotland. The **Glasgow Circular Economy Route Map** presents the vision for a circular Glasgow, wherein local economy is understood as an engine for environmental and social regeneration, allowing a just transition towards net-zero. The Route Map aligns with **Glasgow's Climate Plan**, which aims to deliver an improved quality of life for its citizens and communities, biodiversity and habitats, supporting a sustainable and regenerative economy. The Executive Director of Neighbourhoods Regeneration & Sustainability leads on net-zero targets, circular economy and climate resilience. The Climate & Sustainability Board, which includes directors from each of the Council services, governs the Climate & Sustainability workplan. Beneath this board sits The Climate & Sustainability Scoping Group, which screens new projects and decides whether these need board approval to be brought onto the programme. The Sustainability Team oversees the circular economy in Glasgow, working in partnership with **Sustainable Glasgow**, the **Chamber of Commerce**, **Circular Glasgow**, and Glasgow City Council's Green Economy Team.

### Key actions

- ✦ **Thriving Cities Initiative** – During COP26, the City of Glasgow made a political commitment to become a **Thriving City**. A Thriving City aims to reduce overall levels of consumption while creating an economy where everyone is given an opportunity to thrive. The Glasgow City Council and C40 Cities, in collaboration with local stakeholders and residents, will co-create solutions to address inequities in consumption and create action pathways to reduce consumption-based carbon emissions across the city. The Thriving City Initiative builds on the Circular Economy Route Map and **Glasgow's Food Plan**. It is also underpinned by the **Thriving Glasgow City Portrait**, led by the University of Glasgow's Centre for Sustainable Solutions. Based on the **Doughnut Economics** model, the City Portrait has been co-created through a series of workshops with 140 participants that include council officers, academic facilitators, community groups, and elected officials.
- ✦ The **Circular Glasgow Network** aims to bring together entrepreneurs, innovators, and circular economy enthusiasts to connect, build, and share

their knowledge of a circular economy and its role in reaching net-zero targets. Currently, there is a community of around 300 businesses promoting and growing the circular economy movement in Glasgow, including the **Circular Supper Club**, Repair Cafe, **Remade Network**, **UpHub**, **Rags to Riches**, Glasgow Wood, and **SWG3**.

- ✦ **Step Up to Net Zero**, launched in February 2022, supports SMEs with the tools they need to maximise the value of products, services, and systems while minimising waste. The project, fully funded by the Glasgow City Council, also offers opportunities to upskill and retrain staff while helping businesses in their efforts to reduce their carbon footprint and grow green profits.
- ✦ **Grounds for Recycling**, a circular innovation event around coffee waste, brought together the coffee and cycling communities of Glasgow during the summer of 2023 to collectively help tackle food waste. The campaign supported over 60 coffee hangouts and local roasters to join forces and turn used coffee grounds into soil improvers. All grounds were collected by an e-cargo bike from venues that took part in the campaign and were taken to Glasgow Botanic Gardens, where it is used throughout the park.

## Guimarães, Portugal

### General information

Population: **156,830**  
Mayor: **Domíngos Bragança**



### Strategy & governance

The **Guimarães Governance Ecosystem 2030** was able to integrate top-down and bottom-up approaches into a cross-sectoral framework, bringing together academy, businesses, non-profit associations, government, policymakers, and citizens. The **RRRCICLO strategy** was established under this framework as the citywide integrated strategy on circular economy. With measurable objectives translated into targeted actions, RRRICLO includes action plans for waste management and to boost circularity in key sectors, as well as a communication plan to promote awareness and education. The strategy is coordinated by the Urban Services and Environment division, with support of the **Landscape Laboratory** for educational, research and development, and communicational clusters. Members of RRRICLO's focus group include Resinorte, Vitrus Ambiente, representatives from local and national NGOs, schools, the Refood Association, Green Brigades, and the parishes. The Centre for Waste Valorisation and the Center for Innovation in Polymer Engineering collaborate as technological partners. RRRICLO is outlined in Guimarães's Zero Waste Europe commitment, under the Mission Zero Academy, contributing to transform the city into a zero-waste municipality.

### Key actions

- ★ **The Plastic-Free Local Market** aims to phase out single-use plastic bags in the municipal market. So far it has avoided the use of 400,000 single-use plastic bags since 2020. Under a new municipal regulation, local market retailers can now only hand out either reusable bags or compostable bags made from starch and vegetable oils that can then be used at home for organic waste disposal. So far, the market has produced 1,000 reusable textile tote bags manufactured with 20 tons of textile waste collected with support of students.
- ★ **Green Waste Valorisation** – Green waste coming from public green areas, school gardens, and on-demand collection for households and other non-domestic users amounts to 170 tons of biomass. These feedstocks are valorised for various purposes in Guimarães. Wood shavings are placed in gardens, flowerbeds, and paths to minimise water loss by evaporation. Fertilisers are produced through a mechanical biological treatment. Another fraction is used as a source of thermal energy for air-conditioning, mainly in

schools, producing 0.5 GWh of green energy per year. Biomass is also distributed to the private sector, which then uses it to prevent vegetation growth in local blueberry farms.

- ★ **A three-level food waste prevention programme** was implemented in 2022, combining awareness-raising, the promotion of local consumption to reduce the environmental footprint of the city, and taxation mechanisms, towards a **zero waste commitment**. Citizens that opt for home composting are exempted from the payment of the waste management tax, while a **pay as you throw** (PAYT) system is implemented for those who separate food waste at source through door-to-door selective collection. The distribution of composters for home composting started in 2021, reaching 1,200 families so far. In terms of awareness raising, 321 students from 15 schools have participated in the **360.come** project, promoting behavioural changes aimed at reusing waste, reducing food waste, and fostering healthy and sustainable agricultural practices. The implementation of all these measures has led to a 31% decrease in the generation of food waste.

## Haarlem, The Netherlands

### General information

Population: **165,650**  
Mayor: **Jos Wienen**



Adriaan Spaarne

### Strategy & governance

The circular economy and the energy transition are fundamental pillars of Haarlem's sustainability strategy. In alignment with this strategy, the city has developed a **Circular Economy Action Plan** following a transversal approach that involved the Economic Department and the Sustainability Department of the municipality. With the Circular Economy Action plan, Haarlem sets an overarching goal to achieve a 50% reduction in the use of abiotic raw materials by 2030 and become a circular city by 2040. To fulfil this commitment, the city is actively spearheading ambitious initiatives in sectors such as construction, textiles, food and consumer goods. Harnessing also the potential of the circular economy as a vehicle for reducing GHG emissions, Haarlem has achieved the third level performance for the **CO<sub>2</sub> performance ladder**. All the progress around the circular economy is systematically reported through the sustainability budget report.

### Key actions

- ★ With the participation of the City of Haarlem, the **C-District** is an **innovation hub** that fosters collaborative projects around the circular economy. This hub brings together businesses, governmental entities, and educational institutions to exchange knowledge and explore innovative business activities and products with a social impact. The C-District also operates as a testing ground for regional businesses committed to the reuse of residual flows.
- ★ 50% of the products, goods, and services **procured** by the municipality are circular. Furthermore, 50% of the soil, road, and water works include circular criteria. The city is committed to procure 100% circular by 2030.
- ★ Haarlem sets ambitious commitments for the **construction sector**. 20% of housing constructions in the Metropolitan Region of Amsterdam are realised in timber, following the **Green Deal Timber Construction**. 50% of external construction projects – projects wherein the municipality is not involved – have transparent

material flows. Beyond these targets, the City of Haarlem is promoting a raw materials hub with the involvement of private actors. In addition to this, a circular construction market is set up in cooperation with entrepreneurs from the region.

- ★ The municipality is committed to the promotion of **sustainable food systems**. Awareness raising around prevention of food waste is a priority for Haarlem. Through direct involvement, the city is fostering a protein shift in municipally-managed canteens, aiming for a 65% plant-based acquisition, and prioritising locally produced foodstuff to the greatest extent possible.
- ★ Haarlem is leading a transition towards a more **sustainable consumption** model. The city is advocating an attitude shift toward sharing, reusing, swapping, and repairing, with the goal of reducing its material footprint. This is evident in the **textile** sector, where the city aims to double the amount of separately collected textiles from 4 kg to 8 kg per inhabitant between 2022 and 2025.

## Helsinki, Finland

### General information

Population: **658,457**  
Mayor: **Juhana Vartiainen**



### Strategy & governance

In the summer of 2023, the Helsinki City Council approved the **Action Plan for the Circular and Sharing Economy** of the City of Helsinki. The action plan replaces the city's previous roadmap for the circular and sharing economy. The priority areas of the action plan are construction, procurement, environmental awareness and sustainable consumption. It sets gradually tightening circular economy targets for each priority area until 2035. To support the achievement of the goals, a total of 23 measures have been included in the action plan. The city's environmental services coordinate the implementation of the measures by offering support and cooperation to the different city sectors and departments. Progress of the action plan is monitored through the public **Kiertotalousvahti** portal.

### Key actions

- ✦ The city is planning and **building a new tramway from Kalasatama to Pasila**, following a low-carbon and a circular approach. The carbon footprint of concrete pile slabs was reduced by about a quarter by using concrete with lower emissions. In order to minimise the excavation needs of the finished track structure, electric cable pipes were added ready for later use. By utilising recycled materials, such as recycled growing media, recycled asphalt, and recycled stones, the need for virgin materials was reduced. During 2022, all of the recyclable materials of the project were successfully recycled. Almost 83% of the waste was recycled. The project has followed the BREEAM Infrastructure certification system.
- ✦ **Construction of Stadin AO campus** – In the life cycle project of the Roihupelto campus of Helsinki Vocational College and Adult Institute, the old school building was demolished and a new one is being built in its place. In the contract tender, the city required that the contractor deliver reusable demolition materials. Additionally, the tender outlined a minimum percentage requirement for the reuse of building parts as a percentage of the total share. A small amount of bricks were saved from the demolished building to be utilised as part of the new building. The remaining reusable demolition materials have been sold by the contractor through a private operator at an auction.
- ✦ **Circular procurement for workwear** – Palvelukeskus Helsinki's **framework agreement regarding workwear** entered into force in 2022. Within this framework, part of the workwear used by the municipal service centre personnel is acquired as a rental service. Palvelukeskus Helsinki includes food service providers, care providers, and personnel from the cleaning services, among other municipal employees. The goal is to promote the longevity of products and to enhance their use and recycling.
- ✦ During the fall of 2022, the city organised the **Oodi circular economy event** at the Oodi Central Library, targeting residents of Helsinki. The programme featured various repair and tuning workshops, as well as a clothing exchange point. Participants also gained a variety of tips for adopting more sustainable lifestyles, such as reducing food waste and borrowing and renting goods.

## Høje-Taastrup, Denmark

### General information

Population: **55,258**  
Mayor: **Michael Ziegler**



### Strategy & governance

Social, economic, and environmental sustainability are central to Høje-Taastrup's **Development Strategy**, which is being revised this year with an enhanced emphasis on sustainability and community. This 2020-2032 strategy touches upon all parts of the municipality's services, activities, education and job opportunities, and is supplemented by a number of sectoral plans. One of those is the **Climate Plan**, targeting the attainment of CO<sub>2</sub>-neutral electricity and heating by 2030. There is also a so-far achieved objective to enhance energy efficiency in heating by 1% per year. Municipal operations have successfully reduced their CO<sub>2</sub> emissions by 35% since 2017. The Climate Plan is currently being evaluated and updated with new goals and actions. A dedicated Sustainability Strategy encompassing circular initiatives is also being developed by the Environment Department in close collaboration with all city departments, citizens, and the business community. The procurement strategy of the city focuses on professionalising public procurement and making it more sustainable.

### Key actions

- ✦ As part of its involvement in the **CityLoops project**, Høje-Taastrup continues to emphasise the **valorisation of construction and demolition waste**. Crushed concrete from a local demolition site was used as recycled aggregate in the foundation for the new city hall, while excess soil from the construction process was used for landscaping in the area where the concrete came from. The initiatives saved 1,100 tons of raw materials and 40 tons of CO<sub>2</sub>. This **success story** has become a lasting part of the city hall's history, and can help inspire new projects. Høje-Taastrup has also taken advantage of CityLoops to engage with all stakeholders in order to unlock existing barriers to the circular transition in the construction sector.
- ✦ Awareness raising is a necessary lever for the local transition to a circular economy. The municipal Sustainability Group has been pivotal in **breaking barriers between departments** to increase knowledge sharing throughout the administration. A preliminary assessment of the resources embedded in the old city hall was conducted as part of CityLoops. The findings indicated that opting for the adaptive reuse of the existing building rather than demolishing it could save 20,000 tons of raw materials and reduce CO<sub>2</sub> emissions by 2,000 tons. Upon observing these results, the Properties Department expressed interest in documenting the embedded resources in existing municipal buildings. The aim is to support the case for **prioritising maintenance and renovation over demolition and construction** of new buildings.
- ✦ The Sustainable Development Goals (SDGs) are strongly embedded in Høje-Taastrup's **Procurement Strategy**, particularly SDG number 12: Responsible production and consumption. The **use of procurement as a strategic lever for increased circularity** can be observed in a number of public tenders. Among these is the acquisition of uniforms for municipal employees, with a mandate to prioritise the reuse of existing uniforms. To date, this effort has prevented the disposal and manufacturing of 3,520 clothing items and has saved nearly 20 million litres of water. Additionally, the procurement department will implement an analysis tool to assess the impact of various procurement options.
- ✦ The municipality is working towards **reducing food waste** in municipal kitchens and cafeterias and transitioning to more climate-friendly menus.

## İzmit, Türkiye

### General information

Population: **376,056**  
Mayor: **Fatma Kaplan Hürriyet**



Dreamstime / Aydın Sertbas

### Strategy & governance

The municipality of İzmit does not have a circular economy strategy yet, but demonstrates a clear mandate to guide the city's transformation along a circular path in every aspect. In the last four years, several individual actions and projects have been initiated to reach that goal. The **Strategic Plan** of the municipality for the period 2022-2024 sets definite goals for the Directorate of Climate Change and Zero Waste to reduce the amount of various waste fractions through recycling application and awareness raising. These fractions are packaging waste, textile waste, electronic waste, battery waste, and vegetable oil. Additionally, the municipality is involved in actions such as promoting waste collection, fostering reuse, providing equipment to enable zero waste in schools and public organisations, and collaborating with international organisations in networking activities. Progress on the targets is monitored by the Climate Change and Zero Waste Directorate.

### Key actions

- ✦ **Awareness raising around separate waste collection through incentives for children** – The Climate Change and Zero Waste Directorate initiated the **Children's Prize Market** project to promote household recycling and encourage waste separation at the source, offering various incentives for participants. Citizens can bring recyclable items to the centre on weekdays and earn various gifts for their children such as stationery, books, and toys in return. Philanthropists can also support the project by donating elements for the initiative. The Hacı Hızır neighbourhood served as the pilot area for this project, and now has been expanded to seven other spots, collecting around 40 tons of waste per year in total. The initiative is also running in schools, where schoolchildren are encouraged to collect waste separately. In exchange for the waste collected in schools, equipment for the schools is also provided.
- ✦ The **Çınar Waste Mobile Application** serves to educate and inform citizens about recycling and environmental initiatives in İzmit. The app provides a recycling map with locations of all recycling points in the city, allowing users to find the nearest waste bins, and provide feedback via unique QR

codes on each bin. The initiative has significantly increased the collection of various recyclable materials, with a notable impact on packaging waste (20%), vegetable waste (25%), waste batteries (18%), textile waste (9%), and electronic waste (83%) in 2022 compared to the previous year.

- ✦ **Fostering collection of used oil** – İzmit's Zero Waste Directory actively encourages households and schools to deposit used cooking oil at collection points scattered around the city. In exchange for the collected oil, fruit saplings are planted in the Yeşilova District together with students.
- ✦ **Pursuing self-sufficiency by fostering organic agriculture** – The **Producing City İzmit** project aims to transform the agricultural system of İzmit through a series of interrelated interventions known as Agricultural Production Gardens. The city has started to cultivate summer and winter vegetables in municipality-owned fields. In addition to that, lavender, jujube, wheat and aronia crops have been planted in the Emirhan and Ambarcı villages. Foodstuff from the fields has been distributed among families in need. In addition to that, the municipality has established the İzmit Çınar Cooperative in the Durhasan Agricultural Production Garden. This Cooperative provides a workforce environment for unemployed women.

## La Spezia, Italy

### General information

Population: **93,288**  
Mayor: **Pierluigi Peracchini**



Comune della Spezia

### Strategy & governance

Although La Spezia does not have a dedicated circular economy action plan, circularity constitutes a fundamental aspect of the City Development Strategy in areas such as waste, water, mobility, energy, construction, and demolition. The municipal departments of Mobility & Energy and Environment, Spatial Planning & Construction collaborate to develop circular initiatives aligned with both local economic development and EU policies. These initiatives undergo biannual monitoring. Starting in 2017, the city has developed a specific **La Spezia Green programme**, aimed at achieving a more sustainable city. La Spezia places significant emphasis on territorial cohesion, collaborating with the Liguria Region through interdepartmental working groups to promote participatory processes. These efforts aim to achieve ambitious targets in biodiversity, energy efficiency, and the reduction of CO<sub>2</sub> emissions.

### Key actions

- ✦ **Waste management** – Various awareness raising campaigns have been carried out to increase separate waste collection in areas with door-to-door collection as well as to promote waste separation among local trade associations. 181 new zonal waste collection islands have recently been created, and street bins without bags have been installed. Home composting has been encouraged through digital training courses for beginner composters and digital educational kits for primary and middle schools. In recent years the Municipality of La Spezia has achieved approximately 80% of separate waste collection, which is a regional record. The goal for the next few years is to reach 90%.
- ✦ The city is undertaking multiple projects for **lower-emission mobility** options, including the expansion and electrification of public train and bus lines. A third of the bus fleet has been renewed with greener options. Additionally, a new network for electric trolleybuses will be built by 2023. A network of 31 charging stations for electric vehicles has been developed in the municipal area, thanks to an agreement between the Municipality and various operators.
- ✦ Following the **Sustainable Urban Mobility Plan**, the Municipality made 300 electric scooters and 120 public bicycles available for **shared mobility**. The Speziainbici shared bike service is being strengthened with the introduction of new bike stations, electric bike charging, repair tools, and the expansion of the network of cycle paths from the previous 8 km to over 32 km.
- ✦ **Water saving measures** have been made part of the municipal building regulations for new construction and renovation projects. Among the measures, equipment should be installed to regulate water flows, and all projects with green areas over 100 m<sup>2</sup> are required to redirect rainwater collected on roofs to irrigation and cleaning of paved areas.
- ✦ The municipal **sustainable energy action plan** is being updated. Targets have been set to improve the efficiency of thermal power plants and lighting systems. Photovoltaic panels are being installed in municipal buildings. La Spezia aims to promote the creation of Renewable Energy Communities, also by making public surfaces available for energy generation.

## Lappeenranta, Finland

### General information

Population: **72,288**  
Mayor: **Kimmo Jarva**



Lappeenranta Kaupunki

### Strategy & governance

The city of Lappeenranta developed a **Circular Economy Roadmap** which is updated each year. Lappeenranta strives to achieve a sustainable wellbeing for its citizens to minimise emissions, waste, and overconsumption. The city sees the circular economy as an opportunity for promoting green growth and increasing the number of workers employed in environmentally-friendly jobs. Competence building of citizens and companies around the circular economy is a main component of the Circular Economy Roadmap. The roadmap is a building block of Lappeenranta's Climate Programme, which sets the goal of achieving carbon neutrality by 2030. All initiatives that the city develops as part of the roadmap are publicly available on a **digital portal**. Greenreality Services is responsible for implementing the actions and Vitality and the urban development director oversee and monitor them. Currently, the city employs three to five people dedicated to the circular economy, showcasing its commitment to the circular transition.

### Key actions

- ✦ **We are recycling everything series of roadshows**, organised in collaboration with the Regional Council of South Karelia, **raised citizens' awareness on everyday actions** around the circular economy. A total of six events covered topics such as repair, composting, waste management, collection of textiles, and the sorting of garden waste, offering also hands-on advice on recycling for people of all ages. The events also offered opportunities for **swapping various goods**, with a bring-in/take-out exchange table where attendees could deposit items that they no longer use so that others could benefit from these and take them home.
- ✦ Lappeenranta has been designated as one of the **112 Mission Cities** of the European **NetZeroCities initiative**. Mission Cities are committed to being climate-neutral and smart by 2030. With the support of the European Commission, Lappeenranta will develop and implement a series of interventions to reach carbon neutrality by 2030. The circular economy is prominently featured among those interventions as a vehicle for bringing about climate neutrality, with a series of targets around increasing recycling rates, reducing the amount of waste that undergoes incineration and a commitment to increase the production of biogas.
- ✦ Working towards **minimising food waste** and promoting **plant-based diets**, the city is implementing a series of actions in school canteens. Salads and vegetables are placed in a prominent position on serving tables. A 'happy face' scale for weighing food waste ensures that there is no food waste left on the plate. These actions aim to foster behavioural change among schoolchildren.
- ✦ **Transparency around decision-making and information accessibility** are of utmost importance for the Municipality of Lappeenranta, also when it comes to the circular economy. The **Sustainability Watch online portal** has been updated and dedicated sections have been included for climate neutrality and the circular economy.

## Leuven, Belgium

### General information

Population: **101,904**  
Mayor: **Mohamed Ridouani**



Jan Crab

### Strategy & governance

Leuven has a council-approved circular economy strategy developed within the framework of its **Circular Leuven** Platform that comprises representatives from the city's quadruple helix stakeholder groups: government, industry, academia, and civil society. The circular economy strategy is built around five strategic objectives: circular entrepreneurship, circular building, repair-share-reuse, circular consumption, and knowledge & policy. For each objective, targets and actions are set out, defined in close collaboration with key platform stakeholders. In 2023, Leuven concentrated on enabling the transition from pilot projects to scaled-up circular economy activities to achieve maximal impact. Inclusion of Waste & Circularity as one of the priority domains within Leuven's Climate City Contract (to be published in 2024) resulted in a circular economy project portfolio focussing on the built environment and plastics, with clear commitments from stakeholders and an ambitious roadmap towards climate neutrality. As part of its **NetZeroCities Mission City** commitment, Leuven is working on investment plans and taking part in project development assistance programmes at European level.

### Key actions

- ✦ The **Materials Bank** is an essential element in the city's ambition to reduce the use of primary raw materials. It offers reclaimed building materials for resale to private individuals and companies while providing social economy employment. With the Materials Bank now operating at two locations, the volume of materials doubled through structural collaboration with stakeholders. A strategy for further scaling up is being explored, focussing on stone and wood, as well as additional services being tested.
- ✦ Leuven's **Circular Hub C3000** continues to **connect entrepreneurs' sustainability ambitions** with Leuven's circular economy policy. Services offered include inspirational and training sessions in collaboration with entrepreneurial networks, an advisory desk for circular and social entrepreneurship, matchmaking, and project development focussing on the valorisation of waste streams (building materials, plastics, textiles, etc.). C3000 plays an active role in the network of 12 circular hubs in Flanders.
- ✦ **Maakleerplek** is a **circular makerspace** in Leuven which connects educational, business and creative actors in an open experimental space. Maakleerplek houses a Low Tech and a High Tech Lab, a tools library, and citizen repair initiatives focusing on the reduction of textile and electrics and electronics waste streams. The makerspace activities have been amplified by European (Horizon 2020 and Interreg) funding and resulted in follow-on projects scaling up repair in collaboration with local stakeholders, including businesses and waste management companies.
- ✦ Leuven's **Urban Lab** strengthens collaboration between knowledge institutions and the local government. Researchers, policy makers, civil servants, and local stakeholders meet regularly to discuss solutions for circular economy challenges. These actors also set up collaborations, resulting in applied scientific input in circular economy projects and a testing ground for research projects.

## Liège, Belgium

### General information

Population: **195,346**  
Mayor: **Willy Demeyer**



Ville de Liège

### Strategy & governance

Even though Liège does not have a dedicated circular economy strategy, circularity is embedded in various strategies at municipal level. Liège's **Climate Plan** sets the goal to reduce CO<sub>2</sub> emissions by 55% by 2030 compared to 2005, achieving carbon neutrality by 2050. In order to meet these goals, the reduction of the material footprint of the city is regarded as essential. The city has therefore incorporated a **Zero waste - Zero plastic** perspective into its **Transversal Strategic Plan**. Currently being updated in order to align the city actions with the SDGs, this Strategic Plan encourages the reduction of waste and promotes various awareness raising initiatives around it. To further articulate these ambitions, the city is a member of the Zero Waste Municipalities in Wallonia, committing itself to keep waste generation below 100 kg per year and inhabitant. A waste prevention action plan is thus developed and implemented each year. Currently, four municipal agents from the Environment Unit and the Ecological Transition's Cabinet work in the area of waste prevention, which includes circular economy (one agent full-time, three agents partially).

### Key actions

- Awareness raising, support, and advice** – The city has implemented various actions aimed at raising the awareness of citizens and encouraging reuse and second hand. These actions include a **Zero Waste competition**, awareness raising stands, and communication around second-hand initiatives and Repair Cafés. For businesses, the **Entreprendre Durable** web platform provides advice on how to become more sustainable and circular. For civil associations, the municipality has been involved in granting reusable items such as cups, as well as in centralising and redirecting requests for loans of reusable cups between different associations. The educational sector also receives support from the municipality for several initiatives such as the HEC's Recycling & Upcycling Challenge, IFAPME's Rec'Up festival or various awareness campaigns, including a **Student Brochure**.
- Collaboration with the social economy** – The city establishes agreements with various social economy companies that work in the circular economy. Purchasing from the second-hand channels of these companies **is encouraged**.
- Waste management** – Liège collects four fractions of waste door-to-door from households every week. Organic waste is valorised through biomethanization. Composting is also encouraged, and **various resources** are available on this subject on the city's website. Paper and cardboard waste are recycled in cooperation with a social economy company. The city offers a quarterly door-to-door collection of bulky items. Citizens can also take these items to the fixed or mobile recycling centres, or call the **Ressourcerie** – a second-hand initiative – free of charge. The City continues its efforts to prevent and revalue its waste as much as possible via various initiatives. For example, selected as part of the 'Déchets-Ressources' call for projects last year, a municipal agent is responsible for helping sort and recycle the various items coming from vocational schools in Liège.
- The municipal administration's duty to set an example** – The city carries out several circular actions within its administration: internal recycling parks, dematerialisation, and reuse of obsolete equipment (furniture, clothing, computer equipment, etc.). City officers share their circular actions through a newsletter that is circulated across different departments with the aim of inspiring colleagues. The new building of the city administration has been designed with a high potential for adaptation in order to extend its use.

## Ljubljana, Slovenia

### General information

Population: **294,000**  
Mayor: **Zoran Janković**



Mestna občina Ljubljana

### Strategy & governance

The city council adopted the **Circular Economy Strategy for the City of Ljubljana** in January 2022. The implementation of the strategy is coordinated by the circular economy manager. The strategy has four priority areas: plastics (single-use), food waste, textiles, and electronic and electrical equipment. For each priority area, concrete measures are foreseen, and a series of parameters are established, which include responsible organisations and staff members, timeframes, financial resources required, and key performance indicators. Most of the foreseen measures have been initiated, and some of them have already been implemented. The circular economy is also embedded in other high-level strategies, roadmaps, or action plans, such as the municipal spatial plan, rural and urban agriculture development strategy, urban forest development strategy, local energy concept, cultural development strategy, tourism development strategy, zero waste strategy, and the digital development strategy. In 2022, Ljubljana was selected as one of the **Mission Cities** for the NetZeroCities EU Mission for climate neutral and smart cities 2030.

### Key actions

- Centre ROG** – October 2023 saw the opening of a universally-accessible **creative hub** with programmes seeking to transcend the split between high and popular culture. The hub offers 9,000 m<sup>2</sup> of creative space, as well as a new 8,000 m<sup>2</sup> park open to citizens for daily use and public events. With its modern infrastructure, expertise and international connections, the Centre Rog will provide creators, organisations, businesses and the general public with a supportive environment for innovative projects for sustainable, circular, and socially responsible development in the areas of manufacturing, urban handicraft, applied arts, design, and architecture.
- In 2023, the city started to organise swap markets for clothing**. So far six of the 17 local districts have joined the initiative, but the invitation has been extended to all of them. The events are organised in collaboration with the Zavod BOB and the Ekologi brez meja NGOs. Citizens are encouraged to bring up to five pieces of still wearable clothes to these events and can take away as many clothing items as they like.
- The Fast fashion pollutes even faster campaign** – The city joined the European Week for Waste Reduction 2022 with a campaign that raised awareness about fast fashion. The campaign encouraged citizens to reuse and repair textiles and clothing and thus reduce the generation of textile waste. The campaign was shortlisted in the print ads category of the Slovenian Advertising Festival 2023 awards.
- New libraries of things** – The first library of things of Ljubljana was established in 2014. In 2022, the city opened two new ones. They are run by two youth organizations, MISSS and Mladinska postaja Moste, providing young individuals with an opportunity to gain valuable experience in non-profit circular entrepreneurship.
- Map of swap shops, borrowing shops, repair, and recycling facilities** – Ljubljana is constantly mapping municipal circular economy actors on its webpage in order to additionally support the promoters of circular practices in the city and strengthen their profile and involvement in the lives of citizens.

## London Borough of Newham, United Kingdom

### General information

Population: **352,005**  
Mayor: **Rokhsana Fiaz OBE**



### Strategy & governance

In December 2023, Newham launched the first **Just Transition Plan** for any London borough. Developed in collaboration with Arup and Dark Matter Labs, this strategy recognises the imperative not only to curb emissions in council operations and across the entire borough, but also to simultaneously enhance adaptive capacity and long-term resilience in response to the ongoing impacts of climate change. The overarching goal is to ensure that all initiatives contribute to greater equity and improved lived experience outcomes for Newham's residents. One of the six actions within the plan is building a sharing and circular economy. This includes both reducing the overall volume of materials used and waste generated in the borough, and ensuring a high proportion of the waste created is diverted to compost and recycling. Responsibility for building a sharing and circular economy lies between the Director of Climate Action, Director of Public Realm, Green Economy Lead and Waste Prevention and Recycling Team, working with various council departments to deliver this holistically across service areas.

### Key actions

- ✦ The **Newham Food Alliance** is a partnership made up of over 40 voluntary, community, and faith organisations which reaches thousands of residents a week with food parcels, meals and other support. **The Alliance** diverts food which is destined to landfill, but still edible, to residents, to facilitate a circular economy, enable healthy eating, and reduce food poverty. Last year, the Alliance diverted 200,000 tonnes of surplus food from landfill, saving 8,000 tonnes of CO<sub>2</sub>. The council has recently purchased electric cargo bikes, cycle training for volunteers and other infrastructure elements, enabling the move to sustainable transport and reducing emissions from the partnership's operations.
- ✦ **Food waste prevention programme** – A large proportion of waste found in residential refuse bins is food waste. To reduce this, the council works closely with **Nutrition Kitchen** to provide workshops that teach residents about portion sizes, how to use leftovers, when food is safe to eat, and which foods can be frozen. Residents keep in touch with each other after the course via WhatsApp groups, to continue to share useful tips and recipes. The council also works with schools to teach food waste prevention through growing vegetables and herbs in school nature gardens, and run composting workshops with children and families.
- ✦ **Repair and reuse** – In early 2023, Newham launched a **free home collection service** for clothing and small electronic equipment alongside charity TRAIID. Working in partnership with East London Waste Authority and three neighbouring local authorities, Newham is bringing repair opportunities to local residents by running regular Repair Cafés. Residents can bring along electronics (digital devices, home appliances, etc.), clothing and textiles, and bicycles for an expert repairer to fix for free, and learn new skills along the way.
- ✦ **Circular Clothing and Textiles Programme** – Newham participates in national circular fashion campaigns, promoting second hand shopping in collaboration with local organisations through initiatives such as Buy Nothing New Month.

## Loures, Portugal

### General information

Population: **201,632**  
Mayor: **Ricardo Leão**



### Strategy & governance

Loures integrates the concept of the circular economy in its vision of territorial sustainability. This vision is embedded in the **Municipal Action Plan for Adaptation to Climate Change**, through actions that seek to build the resilience of the territory, some of them based on the circular economy. At the moment, the Climate Action Plan is being developed, which will include the mitigation component. The city has extensively worked in education and awareness raising for sustainability, where one of the three axes of action is 'Making the Economy Circular'. Loures remains dedicated to prioritising its water resources and actively seeks opportunities to enhance its circularity.

### Key actions

- ✦ The **LRS 360° project** promotes **environmental awareness and education actions** for the school community. LRS 360° is an itinerant electric campaign around the circular economy in Loures, fostering the consolidation of responsible consumption habits and the reuse and recycling of materials. Each action involves three steps, called 'stops'. The first stop involves watching a 3D virtual reality film on the life cycle of packaging. The second stop involves a packaging deposit machine, the EcoPortal, which receives packaging deposited by students, who are then rewarded with a voucher for environmental activities. In the third stop, students decorate a 'mupi' (billboard) in their schools, creating videos, stories and advertisements for the dissemination of the activity.
- ✦ **2% é H2O** – Portela's municipal swimming pool is required to renew 2% of its total volume daily due to regulations. This water is recovered for the irrigation of the entire garden area of the facility every day, and is also redirected to feed street washing vehicles and manual irrigation in the parish councils of Moscavide, Portela, Sacavém and Prior Velho.
- ✦ **The Wastewater Reuse Plan** serves as an initial study for establishing a municipal water network for reuse, sourcing treated wastewater from municipal treatment plants. In collaboration with Águas do Tejo Atlântico, the entity responsible for water treatment, Loures Municipality is actively involved in this initiative. Furthermore, a pilot project is underway to introduce reusable water at the new Municipal Stadium, aligning this effort with sustainability and circular economy objectives.
- ✦ The **PAB\_LivingLAB** project **aims to reduce the carbon intensity** of the activities and services of Parque Adão Barata (PAB) through the implementation of innovative technological solutions. PAB\_LivingLab is structured around five axes: Circular Economy and Environment, Mobility, Energy, Buildings, and Living Lab. Topics such as water efficiency, waste management, air quality, and green space management are addressed in the circular economy pillar.

## Malmö, Sweden

### General information

Population: **357,377**  
Mayor: **Katrin Stjernfeldt Jammeh**



Dreamstime / Sergey Dzyuba

### Strategy & governance

The circular transition is an integral part of the **Environmental Programme for the City of Malmö**, a set of strategic documents that outline the 2021-2030 long-term environmental goals of the municipality. The programme establishes the following targets: achieving a 70% reduction in GHG emissions in its geographical area, and net-zero emissions for the city administration and a reduction of consumption-based GHG emissions to 3.1 tons/citizen by 2030. The municipality is also committed to increasing biodiversity and promoting resource efficiency. Sectoral plans such as the **Waste and Eco-cycle plan 2021-2030** complement Malmö's circular ambitions. Three dedicated officers work full-time on the circular economy, although the topic is transversally approached through the involvement of other departments such as Procurement, Property Management, and Internal Services, as well as through the municipally-owned Va Syd waste management authority. Each department is responsible for fulfilling its targets and reporting on the progress made.

### Key actions

- ✦ Malmö is currently developing its **circular economy roadmap**. This process includes engaging city actors in a climate programme called **Climate Transition Malmö** — done in a partnership with **URBACT**, and with support from the NetZeroCities programme — and the creation of a stakeholder group to scale up the circular transition.
- ✦ The development of the roadmap is inextricably linked to the **setting up of a resource hub**. Currently under development, the hub aims to promote sustainable cooperation and learning, whilst connecting local and regional actors. It will also collect, create, and spread knowledge around material flows and effective resource use in order to boost innovation and foster a circular transition in Malmö.
- ✦ Two **baseline studies** have been carried out to evaluate the current state of the circular economy in the city. The results of **the first study, which focused on the built environment and consumption goods**, demonstrated that there is a big potential for harnessing the progress done by many actors already active around the circular economy. Nonetheless, barriers were identified around public-private collaboration, regulation, and limited resources. **The second study** concluded that, beyond information gaps around available materials and difficulties in finding collaborating partners, there are many avenues to promote industrial-urban symbiosis.
- ✦ **Circular buildings** – An **old hovercraft terminal** was deconstructed in a circular way to test the boundaries of how much material is possible to reuse. Concrete tiles, the marble flooring, and the metal roof were sold through the **CC Build platform**, while other materials have been stored in a municipal material bank to be used in the future. An estimated 41 tons of CO<sub>2</sub>eq were saved by reusing these materials.
- ✦ A recent LCA study was commissioned by the municipality to estimate the environmental benefits obtained from the **circular procurement of building and navigation signs** under the **ProCirc project**. This innovative procurement intervention saved between 50 and 85% of CO<sub>2</sub>eq emissions, and contributed to diminish the reliance on virgin material by over 50%.

## Mangualde, Portugal

### General information

Population: **18,303**  
Mayor: **Marco Almeida**



Turismo de Mangualde

### Strategy & governance

Mangualde has developed a Local Integrated Action Plan for a Circular Construction Sector that aims to establish the principles, priorities, and actions for fostering a circular transition of the local society and territory around the construction and built environment sectors. This plan results from a local co-creation process and incorporates reflections of a diverse range of stakeholders pertaining to the social and economic fabric of Mangualde. This development was supported by a common work process among eight Portuguese partner cities belonging to a network project called **Circular Network for Sustainable Construction** within the framework of Portugal's National Initiative of Circular Cities. The initiative gathers more than 30 municipalities working also in sectors such as water, urban economy, and urban/rural relations. The Integrated Plan outlines ambitious but actionable goals that promote awareness raising and the implementation of good practices in the construction sector, framed in a broad strategic vision that fosters the digital and ecological transition of local territory and society.

### Key actions

- ✦ **Awareness raising** is a priority of Mangualde's Local Integrated Action Plan. Thus, the municipality is promoting the **engagement and sensitisation of relevant stakeholders** in the circular economy. The majority of the actions of the Action Plan recognise the importance of a direct interaction between the municipality and the different target groups of the plan, either by reaching out to them with specific contents on relevant circular matters, or by giving them the sometimes forgotten **recognition and public merit for their good practices**.
- ✦ **Circular construction** – The Municipality is developing technical assistance to stakeholders in the construction sector. This will include monitoring mechanisms, support for on-site processes, and the setting up of a material bank for collecting and sharing construction materials, while fostering a conscious deconstruction of buildings. Local tax policies and incentives are being conceived to promote positive discrimination for those who perform better in terms of circularity and sustainability in all economic processes.
- ✦ **Circular urban water cycles** – In a context of an efficient use of natural resources, Mangualde has been making considerable investments for implementing a strategy that promotes sustainable and circular urban water cycles. Applying the most recent membrane filter technologies for the treatment of urban wastewater effluents, the municipality has also established a series of protocols that ensure that local stakeholders remain committed to an efficient use of natural resources at every stage of the water cycle: collection, treatment, and reutilisation, either for agricultural irrigation or for industrial processes. Ongoing research points towards the suitability of directing this treated water to human consumption, due to its high levels of purity and the chemical and bacterial performance achieved.
- ✦ Mangualde has been leveraging **public procurement for the acquisition of local and seasonal foodstuff**, promoting short consumption circuits and circular food systems.

## Manresa, Spain

### General information

Population: **78,886**  
Mayor: **Marc Aloy Guàrdia**



Javier Videla

### Strategy & governance

Manresa does not have a dedicated circular economy strategy, but numerous high level documents integrate circularity. Manresa's **Municipal Action Plan** is soon to be updated. It sets sustainable goals around ecomobility, urban greening and the local production of goods, among others. In parallel, the **Urban Agenda 2030**, the citywide integrated strategy for sustainability, includes concrete actions around waste prevention, waste management, and the circular economy, as well as around urban greening, local production and responsible consumption, energy transition, and the use of recycled materials in construction. Manresa's **Action Plan for Sustainable Energy and Climate** lists 104 actions aimed at decarbonising the city by focusing on areas such as energy efficiency, waste reduction, resilience, and awareness raising. Manresa features a cross-departmental governance model for the circular economy, involving the Economic Promotion & Business, Environment, Presidency, Urban Planning, and Education units.

### Key actions

- ✦ The **Manresa Symbiosi** initiative was launched in 2016 to implement the first **industrial symbiosis** project in the city. This project aims to efficiently maximise the use of resources, creating optimal conditions to encourage the emergence of synergies between companies, thus kickstarting a circular transition among businesses. The project was promoted by the Municipality of Manresa together with the Catalan Waste Agency and the regional Consortium for Waste Management of Bages, and the collaboration of various other public and private actors, such as the Provincial Council of Barcelona, the Eurecat Catalan Technology Centre, and the Business Association of Bufalvent. After 2018, the action — still led by the Municipality of Manresa — got scaled up to include the adjacent region with the involvement of the Bages County Council. Manresa Symbiosi is a consolidated project that offers technical assistance to the regional businesses through the Industrial Symbiosis Office and its dedicated technical team.
- ✦ The **Manresa Il·lumina energy community** was created through the Manresa Symbiosi project. This is a cooperative formed by 31 companies of the Bufalvent industrial area that promotes energy transition and investments in green infrastructure for a decarbonised economy. The cooperative has installed solar panels to produce electricity that will be shared among community members.
- ✦ The **Porta Residu Recurs project** – The municipality of Manresa is involved in the By-Products and Raw Material Stock Exchange platform run by the General Council of the Official Chambers of Commerce, Industry and Navigation Catalonia. Companies willing to buy and sell byproducts and secondary raw materials can sign up on the platform and participate in the marketplace. The municipality is committed to wide-spreading the platform among local actors.
- ✦ Manresa is driving the transition towards sustainable and circular food systems with the upcoming approval of the new **Food Action Plan** and the creation of the **Local Food Council** as its governing body.

## Maribor, Slovenia

### General information

Population: **112,564**  
Mayor: **Aleksander Saša Arsenovič**



Rok Breznik

### Strategy & governance

The **Strategy for the Transition to the Circular Economy in the Municipality of Maribor**, developed in a collaborative effort between the municipality and the Regional Development Agency Podravje-Maribor, was adopted by the City Council in June 2018. The underlying framework of the Strategy is its innovative model for the systematic management of the resources at the level of the Municipality of Maribor and its wider urban area. This model, articulated through the Wcycle project, serves as a blueprint for transforming Maribor's economic fabric around the circular economy. The Wcycle project framework consists of seven sectoral pillars: municipal waste management, construction and industrial waste, waste-energy management, transport services, reuse of water, planning, and the social economy. The strategy adopts a cross-sectoral and cooperative approach for resource management along the seven sectors. The favourable outcomes of these practices have been the emergence of new business opportunities for Maribor, its inhabitants, and its economy, as well as the creation of predominantly green jobs that provide added value to the local economic fabric.

### Key actions

- ✦ **Circular Economy in public transport** – In cooperation with the University of Maribor, and through its involvement in the **CE4CE** project, Maribor is committed to reducing the environmental footprint of public transport through the circular economy. The municipality is making the transport sector more circular by identifying circularity gaps in public transport and developing innovative management models for planners and operators. Additionally, the principles of the circular economy are incorporated into public procurement procedures thus encouraging the design of more circular products and business models. The project fosters cooperation between policy makers, manufacturers, transport companies, and other municipalities.
- ✦ By making its operations more circular, Maribor is **reducing GHG emissions associated with municipal waste management**. As one of the four cities leading the 'waste and circularity' hub of the **CLIMABOROUGH** Horizon Europe project, Maribor is piloting mass flow monitoring systems for municipal waste management, as well as optimising its transport logistics.
- ✦ Maribor is advocating for a coordinated Europe-wide approach for the **management of waste from electrical, electronic equipment (WEEE)**. By participating in the **WEEEWASTE** Interreg project, Maribor aims to improve policies regarding management of e-waste as well as to encourage reuse, collection, recycling, and other forms of recovery of WEEE in the EU. The project also encourages citizens to think towards a more responsible management of e-waste.
- ✦ **Awareness raising around food** – The municipal efforts include educating younger generations about the importance of adopting local diets to minimise environmental impacts. Each winter and spring, a school hosts cooking classes and workshops for underprivileged youth in the region. A collaborative partnership has been established with local educational institutions to promote awareness regarding the significance of consuming locally sourced food. Additionally, Maribor successfully hosts an annual street food festival. All these activities are developed as part of the **Foodwave** project.

# Matosinhos, Portugal

## General information

Population: **172,557**  
Mayor: **Luísa Salgueiro**



## Strategy & governance

The principles of the circular economy and sustainable development are driving Matosinhos's actions. Following the United Nations' Sustainable Development Goals and leveraging numerous environmental projects, Matosinhos is committed to tackling environmental and climate challenges. As part of the [elaboration of a Circularity Strategy for the Municipality of Matosinhos](#), the Department of Environment defined a set of guidelines that will materialise in a Roadmap for Circularity. Currently, Matosinhos is mapping its urban metabolism in order to develop a regenerative system where the production of waste, emissions and energy losses are minimised, by slowing down, reducing, and closing material and energy cycles. The municipality is also in the process of updating its [Strategic Action Plan for Urban Solid Waste](#), which establishes the goals around the management of all fractions of municipal solid waste. In its [Plan for Climate Change](#), Matosinhos commits to an 85% reduction in its GHGs by 2030.

## Key actions

- ★ **Strengthening social cohesion through a laboratory for waste prevention and reuse** – The **RECIRCULAR project** is contributing to rethinking the way materials and resources are managed in Matosinhos, promoting waste prevention, and increasing the durability and reparability of products. The project aims to create a Laboratory for the Prevention and Reuse of Waste, following two complementary axes: the environmental axis and the social axis. Acting as a **resource centre**, the **RECIRCULAR Lab** collects materials that citizens no longer need. These items are then refurbished, repaired or plainly reused, and donated either to institutions or to economically vulnerable communities. Beyond a mere improvement of the waste management in Matosinhos, the project aims to strengthen the municipality's social responses and social cohesion. The municipality will encourage networking, creating synergies and partnerships between the social sector, the private sector, local authorities, IPSS (Private Institutions of Social Solidarity), and other relevant entities.
- ★ **Sustainable and communitarian agriculture** – In collaboration with the regional waste management authority LIPOR, the **Horta à Porta** project makes community garden plots of around

25 m<sup>2</sup> available to the residents of Matosinhos. The participants receive training in organic farming.

- ★ **Home, community, and school composting** – **Composting** has become a widespread practice in Matosinhos. The municipality provides composters and recycling bins to numerous citizens, with a significant portion of organic waste from homes composted by LIPOR, resulting in the production of the **Nutrimais** compost, which is then commercially available. The municipality has substantially increased the number of families engaged in composting their bio-waste, both at home and through community composting.
- ★ **Tackling food waste in food services** – The **Dose Certa** project, in partnership with LIPOR, aims to assess the potential for reducing food waste in food services both during the preparation of the meals and on portions. Through analysis and evaluation of the practices of each business, Dose Certa creates an improvement plan, reducing losses and consequently costs, and promotes a 'sustainable menu'. The **Embrulha** project, also in partnership with LIPOR, offers sustainable and compostable packaging to food services so that customers can take leftover food with them.

# Mechelen, Belgium

## General information

Population: **88,614**  
Mayor: **Bart Somers**



Stad Mechelen

## Strategy & governance

In co-creation with businesses, social organisations, academia, and public institutions such as the intermunicipal waste company, Circular Flanders, and the Waste Agency of Flanders, the city of Mechelen developed a [Circular City Strategy](#) in 2021-2022. This strategy, an integral part of the [Climate Strategy 2030](#), sets the roadmap by which the city aims to achieve a 30% reduction in its material footprint in the Rivierenland region by 2030. Two action plans complement this strategy. The [CECI Action Plan](#) outlines the actions for stimulating the involvement of citizens and social organisations as both producers and consumers in the circular economy. The [Urban Resource Centers Action Plan](#) is devoted to the creation of circular hubs — places where ecosystems are cultivated, and material resources are reclaimed to reintegrate them into the economy. Mechelen employs dedicated personnel amounting to 2.6 full-time equivalent in charge of programme management, circular consumption and manufacturing, circular construction and the bioeconomy/circular food chains. Nonetheless, the circular economy has become an organisational goal for the municipality, cutting across various departments.

## Key actions

- ★ In cooperation with Circular Flanders, Mechelen is stimulating **circular entrepreneurship** through the [Circular Economy Hub Region Mechelen](#). A partnership of different experts deliver tailor-made guidance to the development or scaling up of new social-circular business models in the region. If possible, in collaboration with social economy actors. Furthermore, different actors along the value chain are put together for ecosystem work and blended business model development. The hub provides workshops, keynote presentations, inspirational visits and networking opportunities. In a similar vein, a physical hub called **Impact Factory** is developed, to be a breeding ground for circular ideas and entrepreneurship, providing a platform and a physical space for entrepreneurs, researchers, policy makers, financiers, and social organisations.
- ★ **Circular food chains** – In order to tackle food surpluses and food insecurity while also providing opportunities for adapted work to people with a distance to the labour market, Mechelen developed a food distribution platform called **Food savers** as part of the **FLAVOUR** project. Through the project **CITISYSTEM**, Mechelen is promoting regional bio-based cycles by closing the loops of food waste and bio-waste.
- ★ **Construction and the built environment** – Mechelen is stimulating circularity in the construction sector through a set of levers that include an adapted building code, sustainable renovation advice to citizens, as well as setting circular criteria in tendering procedures for renovation or sale of city's assets. In the case of the [repurposing of the Moenstraat library](#) for instance, 75% of the construction material present has been recovered when transformed to a district with apartments. The Sloop Teams project aims to recover secondary raw materials from buildings following an urban mining approach by fostering and the reuse of materials on a systemic level. This is done through a living lab approach for selective demolition in various cases.
- ★ **Circular transition in the furniture industry** – The **TransFormMaker** project strives to establish a network of furniture-making regions, fostering circular ecosystems that facilitate the circulation of raw materials and create (social) employment in the Genk and Mechelen areas. This initiative is endorsed by the Flemish Agency for Innovation and Entrepreneurship. In the Mechelen region, efforts are underway to map residual and waste flows, including wood, textiles, foam, plastics, and metal, across production and construction companies or larger organisations.
- ★ **Circular consumption** – Mechelen is promoting circular consumption habits through a multidimensional approach, as a result of the CECI project. This approach builds on the results of the neighbourhood project **Stroom** which aimed at raising circular consumption initiatives from below. The **Digibank Mechelen** project refurbishes ICT equipment in the Digibank atelier, and promotes digital inclusion for the elderly, disabled, and the economically disadvantaged. Similarly, there is an Atelier for the refurbishment of glasses, in view of the circular and social economy. Many more social-circular initiatives from NGOs, citizens and entrepreneurs have been financially supported through the [Climate Action Fund](#).

# Mikkeli, Finland

## General information

Population: **52,583**  
Mayor: **Janne Kinnunen**



Jonne Vaahtera

## Strategy & governance

Circular economy is embedded in both Mikkeli's **Strategic Action Plan 2022-2025** and **Climate Neutrality Plan for 2035**. This latter relies on a series of sectoral objectives, for instance procurement, with 25% of all tenders issued in 2023 having to integrate circular criteria. Central to Mikkeli's circular economy ambition is the **EcoSairila hub**, organised around the new wastewater treatment plant and the biogas plant (see below). In terms of budget, roughly EUR 500,000 to EUR 1 million have been dedicated to the circular economy every year, including funding for circular economy projects and investments in infrastructure.

## Key actions

- ✦ **Blue Economy Mikkeli (BEM)** is a programme part of EcoSairila and coordinated by the municipality for developing a centre of excellence in water technology and especially the circular economy of municipal waters. It aims at building a unique environment and services for companies enabling testing and piloting of new wastewater and side streams technology within a modern wastewater treatment plant. BEM is a registered ECCP cluster and part of the national Innocities programme.
- ✦ **Green Economy Mikkeli (GEM)**, also part of EcoSairila, is a development and growth programme and project, designed to support and accelerate the cycling of technical and biological material/waste streams in Mikkeli. The goals are to a) develop circular economy business opportunities, b) foster job creation, c) create a public-private-third sector circular economy ecosystem, and d) coordinate. The target groups are relevant parts of the city organisation, circular economy companies, local R&D-organisations and citizens.
- ✦ The **BioSairila Oy's biorefinery plant**, completed in 2021, processes sewage sludge, biowaste, and by-product streams from agriculture and industry

generated in the municipality and nearby areas. It produces biomethane processed into transport fuel and fertiliser and soil improvement products, e.g. for use by local farmers and land construction entrepreneurs. In connection with the biorefinery, there is also a gas filling station for contract customers, which serves especially waste containers and other heavy gas equipment travelling in the area. The biorefinery was completed in 2021 and since then has been producing transport biogas at an increasing pace, which is utilised at local e-gas stations.

- ✦ **EU-funded projects** – **KIELO** aims to boost the reuse of building parts and materials, and widen the circular economy in construction and demolition business. **Mekstiili** is a project in which commercialisation possibilities of the waste textile material are investigated with the help of a business analysis of new product blanks.
- ✦ **Mikkeli Circular Economy Days**, started in March 2023 within the CityLoops project, is a series of informative actions targeted to citizens, companies, students, public sector procurement personnel, and provides information on topics such as bio-waste collection or repair and service possibilities of textiles and household appliances.

# Oslo, Norway

## General information

Population: **709,037**  
Mayor: **Anne Lindboe**



Unsplash / Marian Rotea

## Strategy & governance

In June 2023, the Oslo city government presented a first proposal for a **Comprehensive Strategy on Circular Economy**. Its main objectives are reduced consumption of virgin natural resources, jobs creation from reuse activities, and circular innovation. Circular economy principles are also fully integrated in the municipality planning documents, starting with the **Climate Strategy**, while circular actions are included in the **city's climate budget**, with indirect GHG emissions for the first time included in the **climate budget proposal for 2024**. Following the adoption of the **Strategy for Future Consumption** in 2019, a set of monitoring **indicators** has also been developed, and a dedicated **webpage** has been set up to showcase the municipality's work to promote sustainable consumption. To promote sustainable and healthy food, an **action plan** was similarly adopted in September 2023. Finally, progress made towards the SDGs — strongly embedded in all strategy and actions — is assessed in Oslo's **Voluntary Local Review**.

## Key actions

- ✦ In collaboration with **Klimaoslo.no**, the municipality has set up a **public inventory of consumption based emissions**, including indirect emissions coming from the **procurement of ICT, furniture or food** or from **building projects**, as well as **waste levels and car ownership among citizens**. These indicators are directly related to the circular economy and will be further developed and expanded upon.
- ✦ Supported by the municipality, **Construction City** is an innovation cluster and its mission is to drive collaboration and new solutions in the construction industry. This is where stakeholders — for startups and major companies alike — meet to share insights, collaborate on projects, and lift the industry's competitiveness. Likewise, the **Circular Resource Centre** builds local capacity and skills on re-use to reduce the city's climate footprint, raw material extraction, and waste by the construction industry.
- ✦ Fostering circular construction as well as circular business models, **Hovinbyen circular Oslo** is one of the **innovation districts** defined in the "**Campus**

**Oslo - strategy for the development of the knowledge capital**". The driving force behind the project is to see urban knowledge and business development in a closer connection than before.

- ✦ Within the StartOFF program — framework for carrying out startup-friendly **public procurement** — the city has launched **Think circular**, a call for solutions aimed at encouraging repair, reuse, rent, or co-use rather than buying new products within the administration.
- ✦ **Nydalen Fabrikker** is a 'retrade' centre for circular products and services as well as a cooperative for professionals working on re-use, redesign, upcycling, and green production. It is the continuation of **Vollebekk Fabrikker**, an urban development project and incubator for circular businesses, social entrepreneurship, and communities.
- ✦ Together with residents, voluntary actors and the business community, the city of Oslo works to **ensure that no plastic is released into the fjord or watercourses in Oslo**.

## Oulu, Finland

### General information

Population: **211,858**  
Mayor: **Seppo Määttä**



Unsplash / Janné Leimola

### Strategy & governance

Oulu's **Circular Economy Roadmap** was approved by the City board in June 2021. It includes four focus areas: energy production and energy efficiency, the built environment, material flows, and the food system, as well as four enabling themes, respectively: education and communication, procurement, city planning, and the sharing economy. Each focus area and theme has defined goals until 2030. The city of Oulu is committed to implement the targets set by the Circular Economy Roadmap. Circular targets are also part of the **City Strategy**. Progress towards implementation of the roadmap is **monitored** twice a year as part of Oulu's environmental program.

### Key actions

- ✦ **Likke Recycling Center** – More than a recycling centre, Kiertokaari Oy's – Oulu's waste management authority – Likke Center redefines recycling by extending the life of items through refurbishment, maintenance, and repurposing. Collaborating with customers and businesses, Likke fosters a community-driven approach to recycling. Progress is tracked through donated items, successful repurposing, and reduced landfill waste.
- ✦ **Circular economy cluster** – The cluster supports companies' circular transition (business models) and strengthens existing circular (economy) activities. It operates as an open ecosystem for companies, the public sector and research institutes. To date, activities have gathered over 400 people from business, R&D, and public sectors to discuss circularity. The main event has been **KiertotalousAreena 2023**, Circular Arena Oulu 2023, with seminar speakers and a circular trade fair with over 50 exhibitors showcasing their circular solutions.
- ✦ **Textile Sales** – Kiertokaari Oy collects 10,000 kg of discarded textiles monthly, meticulously sorting and reusing items as raw materials, repair materials, or directly for resale. Targeting residents seeking sustainable clothing options, this action reduces textile waste and virgin material use.
- ✦ **Participation in the AshCycle Project** – Kiertokaari Oy is actively engaged in the **AshCycle** project, funded by the EU. Dedicated to reducing waste generated from the incineration of municipal solid waste, biomass, sewage sludge, or their combinations, AshCycles explores innovative recovery methods for valuable elements from ash residues, aligning with the principles of the Industrial-Urban Symbiosis (I-US) concept. This includes the use of ash from incineration plants in soil construction processes and the utilisation of ash as a substitute for concrete in geopolymer products.
- ✦ **Valorisation of demolition waste from public works** – Financed by the Ministry of the Environment, **this project** aims to find ways to valorise 'side streams' generated in public works, such as demolition waste or excavated soil. Waste streams from municipal construction projects have been mapped, and management plans have been developed for the most important ones. Digital tools as well as regional cooperation mechanisms, including other municipalities and public agencies, are being set up to foster the reuse or recycling of identified streams.

## Porto, Portugal

### General information

Population: **231,962**  
Mayor: **Rui de Carvalho de Araújo Moreira**



Miguel Nogueira

### Strategy & governance

Alongside climate neutrality and nature preservation, becoming a circular city is central to Porto's **Municipal Strategy for the Environment** towards 2030. These ambitions are guiding several strategies and plans, such as the **Porto, a Circular City by 2030** roadmap, which aims to reduce waste, extend the useful life products, and cycle resources at their highest value. As such, circularity is a key measure of Porto's **Climate Pact** to achieve decarbonisation. Porto is also leading by example or encouraging best practices, aligning goods and services procurement with circularity principles and developing a dedicated strategy to push the market towards delivering circular solutions.

### Key actions

- ✦ **Water urban cycle** – Facing water scarcity and following national targets for reclaimed water, Porto set up a first **wastewater treatment unit** with a daily production and distribution capacity of 1,000 m<sup>3</sup> of reuse water for urban cleaning, reducing the consumption of fresh water. Treatment capacity will be increased to use reclaimed water for irrigating green spaces. This initiative is part of a wider shift towards **circularity in the water sector**, also including nutrient recovery and transformation into fertilisers.
- ✦ **Circular food systems** – Relying on a large coalition and aspiring to create a food system that would be resilient, circular, regenerative, healthy, and fair, Porto initiated and supported a number of projects such as **Municipal Urban Vegetable Gardens**, a **Weekly Organic Products Market**, a **Municipal Network of Solidarity Restaurants**, **Home**, and **Community Composting** schemes. Also, **Orgânico**, a residential organic waste collection program, and FoodLoop, a pilot food circular entrepreneurship ideas contest. In 2022, the **Good Food Hubs** initiative was launched to shorten food supply chains by bringing closer consumers and regional certified organic producers, to improve access to fresh, quality, healthier, and regional food at fair prices, while simultaneously encouraging sustainable agricultural practices, as a way to protect soil, increase biodiversity and reduce GHG emissions. Until now, 46 local market hubs have been set up under the initiative, involving nine producers and around 1673 consumers.
- ✦ **Reuse and repair** – With the **ReBOOT** project, the municipality collects unused or broken computers from citizens and companies alike in order to prevent electronic waste. A collective repair program trains citizens in diagnosing and repairing their own devices, thus keeping them longer in use. The project relies on different partnerships, such as the local start-up **Recycle-Geeks** to facilitate the training, waste management companies, the non-for-profit sector to receive and redistribute repaired computers, as well as universities to mobilise participants.

## Rivas-Vaciamadrid, Spain

### General information

Population: **98,000**  
Mayor: **Aida Castillejo Parrilla**



### Strategy & governance

In 2020, Rivas-Vaciamadrid developed its Circular Economy Action Plan, **Con R de Rivas**, building on an extensive **participatory process**. The plan includes many actions, on topics such as waste prevention or management, and is aligned with targets set in the EU and Spanish legislation about waste recycling and landfill minimization by 2025, 2030, and 2035. The city has also developed other plans such as Sustainable Mobility and Energy Efficiency Plans.

### Key actions

- ✦ **Bio-waste valorisation** – Rivas-Vaciamadrid has set up a **community composting network**, including around 500 home composting bins, ten community composting bins, and 16 at school premises, as well as dedicated support, advisory, and maintenance. In parallel, the city is implementing a separate collection of bio-waste with street containers, while food waste coming from the weekly street market is valorised into food-for-feed.
- ✦ **Urban gardening** – The municipality is developing a shared allotment garden – with additional sites in 2023 – in order to raise awareness, educate participants, foster community cohesion, and produce organic vegetables. Gardens are also developed in schools, while ten active agro-ecological projects have been set up in the Soto del Grillo Ecological Park.
- ✦ An **eco-label** has been launched to certify local businesses in the city. Focused at first on the hospitality sector, it is now targeting food businesses.
- ✦ On top of existing recycling centres, additional **recycling points** have been set up in Rivas-Vaciamadrid. Strategically located next to sport centres, schools, and commercial venues, recycling points make it easier for citizens to segregate different fractions of waste such as writing utilities, coffee capsules, batteries, printer toner, etc. **Improving recycling** was also the main driver behind the implementation of a **separate collection for cardboard**.
- ✦ Beyond recycling, Rivas-Vaciamadrid is also committed to promoting reuse, with the creation of a **give-away shop** dedicated to various products, such as toys, sport, travelling and camping equipment, books, school stuff, etc.
- ✦ To reduce the environmental impact of public works, Rivas-Vaciamadrid started a **pilot project** to use materials considered as waste in the asphalt composition, preventing waste from ending up in a landfill.

## Rotterdam, Netherlands

### General information

Population: **663,900**  
Mayor: **Ahmed Aboutaleb**



### Strategy & governance

Rotterdam works on halving abiotic primary raw material use by 2030 and aims to be fully circular by 2050. The circular transition is not an end goal, but a way to make Rotterdam more economically resilient, more sustainable, healthier, and cleaner. The city has recently launched its updated circular economy programme **Rotterdam Circular 2023-2026: Working together towards a circular city**. The programme distinguishes six transition agendas around construction, organic flows, consumer goods, commissioning and purchasing, entrepreneurs, and Rotterdam residents. Each agenda has been developed following a 'doing-thinking' approach, and prioritises acting higher up on the R-ladder. Collaboration among different stakeholders is identified as a precondition for success. Starting from the municipality itself, paying special attention to its role as a local government and cooperation between different departments are crucial in the circular transition. Among others, the departments for city maintenance, waste management, city development, urban planning, economy, sustainability, and social development are involved in the circular economy. The programme employs around 25 individuals, while additional personnel across the organisation integrate circular practices into their daily work.

### Key actions

- ✦ Rotterdam is making the **circular management of public assets and spaces** the norm, by systematically including circularity in policy documents, working methods, and by developing communication materials. The Public Works team is actively involved in extending the lifespan of municipal assets. This means that the management and the maintenance of various elements, including their purchasing and financing, are being structurally rethought. Additionally, the city is incorporating locally or regionally sourced reused and refurbished materials for renovating, replacing or redesigning assets and areas.
- ✦ **Green Gold** – All sorts of valuable biomass are released in a city like Rotterdam, with 25 million square metres of green outdoor space, including reeds, grass, clippings, wood, duckweed, wool, and seaweed. In 2022, the city mapped out which materials will become available annually in a detailed way. This way, **the city estimates its organic matter flows on an annual basis**, in order to streamline the maintenance of valuable elements, and help preserve the materials and nutrients that are important for trees and plants. The city will continue current trials with **leaf bokashi**, and will soon start pilots with willows, cross-laminated wood, city wood, cattail, and seaweed. The leaf compost produced with bokashi will be directed to the circular materials bank.
- ✦ Rotterdam is currently developing the **Upcycle Mall**, a meeting point where residents can participate in the circular economy. The mall will include a wood/furniture workshop, a plastic/textile workshop, a circular lunch café, a repair shop, and a circular shop. The mall will allow companies to sell their circular products, and pupils and students will be able to attend circular learning programmes, and benefit from work placements and research positions.
- ✦ **Civil servants as 'circular experts'** – Rotterdam is currently developing an internal 'Expert in Circular' learning path that will allow municipal employees to get trained in the circular economy. Employees will learn exactly what circularity is in an engaging manner, as well as what it means for their own work and for Rotterdam's residents. Thus, employees across departments will be able to incorporate circular principles to their own work and share their experience with colleagues.

## Tampere, Finland

### General information

Population: **253,000**  
Mayor: **Kalervo Kummola**



Visit Tampere / Laura Vaino

### Strategy & governance

**Sustainability** is high on Tampere's agenda and well-integrated in the city's strategy. Circular economy is an integral part of it, with a dedicated **Action Plan** adopted in 2022 and focusing on four areas: built environment in land use planning and in construction (1+2), material cycles and waste management (3), and the sustainable food system (4). The aim is to integrate circular economy principles in city's everyday operations and decision making, as well as the active cooperation with stakeholders (businesses, citizens, R&D, other public operators and administration) in order to enable circular economy solutions. There are also many actions related to the circular economy in the climate neutrality roadmap (**Climate Neutral Tampere 2030 Roadmap**), especially those in the 'Sustainable consumption' and 'Sustainable construction' sections of the Roadmap. The Climate and Environmental Policy Unit oversees the implementation of the plan, in close coordination with all city departments and supported by a dedicated expert group. Reporting to the City Board happens on a yearly basis.

### Key actions

- ✦ The City of Tampere has actively taken part in the preparation of the **National Circular Economy Green Deal**. The municipality is currently assessing whether it will actually commit to the deal and set numeric targets for promoting the circular economy, most likely in the construction sector.
- ✦ The **ReCreate-project** aims to discover how to **reuse precast concrete in construction**. In this project, Tampere has endeavoured to pilot deconstruction of precast concrete structures, as well as discussing with environmental authorities on their reuse. The waste regulation is essential as regards what is considered as 'preparing for re-use' and when the material is considered as waste. Results have been shared with around ten Finnish municipalities and with other relevant stakeholders to collectively develop criteria (toolbox) to be used in future plot handovers.
- ✦ In line with the action plan and the **Regional Economic Development Strategy**, the Kiertotre project aims to **develop new circular solutions**. It notably includes the organisation of challenge competitions for companies, on topics such as 1) **waste weighing, logistics optimization and CO<sub>2</sub> emission calculations pilot**, 2) **rigid plastics collection, sorting and treatment**, and 3) the utilisation of Tampere's IoT platform to **promote circular economy discussions**.
- ✦ With the EU-funded **Kiertotaloudesta Kasvua project**, the municipality's Employment and Growth department is raising awareness and developing skills among the workforce — especially unemployed people under 30 years — and small enterprises, in value chains like **food (and food waste)** and textiles.
- ✦ A **development centre for the circular economy, Kiertotalous Pirkanmaa**, has been founded by Tampere and other municipalities and is operated by EcoFellows. Focusing on the built environment and industrial symbiosis, it supports municipalities and brings companies into a joint discussion with municipalities. The centre is also a contact point for the Circular Cities and Regions Initiative.

## Temse, Belgium

### General information

Population: **31,175**  
Mayor: **Hugo Maes**



Lokaal Bestuur Temse / Yoon Fotografie

### Strategy & governance

Temse has created a first **holistic climate vision**, '**Towards a healthy and regenerative municipality**', and wants to become fully circular by 2030. An action plan, **TemseCircular2030**, was developed in consultation with local stakeholders. It focuses on three priority value chains, respectively construction, agri-food and organic waste streams and consumer goods, identified thanks to a circular scan that combined a quantitative and qualitative analysis of local value chains and material streams. Circularity is strongly embedded in the municipality's multiannual budgetary planning while most circular projects are monitored by the Department of Sustainability, in coordination with the Department of Local Economy.

### Key actions

- ✦ **Circular entrepreneurship in the Waasland region** – Temse is fostering and supporting circular innovations in the Waasland region. It organises "WOAHW", a pitch and bootcamp event with **entrepreneurs** and experts to discuss local challenges and develop new solutions. With the neighbouring city of Sint Niklaas, Circular Flanders, other hubs from cities such as Ghent, as well as local companies, Temse is exploring the creation of a local hub for the circular economy.
- ✦ As a result of a WOAHW session, Temse has set up a **partnership with local entrepreneurs, social economy and farmers** to sow industrial hemp, in order to **produce bio-based construction materials** with a lower carbon footprint. This has been possible with the involvement of Cordeel Group, a building materials manufacturer.
- ✦ **Shared-use mobility** – Temse is strongly committed to shared mobility, with a vision ready and forecast for scaling up towards 2050. Intelligent space-sharing has brought significant savings in the space taken up by mobility. The car has lost its dominance to cyclists and pedestrians. Active modes are the preferred modes of travel for citizens. Car parks and other car infrastructure have given way to flowers, plants, resting points, water features or cycling and pedestrian infrastructure. Multimodal travel has become so common that it is the norm. There are opportunities to switch from one mode to another everywhere.
- ✦ **Bike sharing scheme for kids** – Children grow quickly. Some families can't afford to buy new bikes every two or three years, while others struggle with two many — often unused — bikes in their garage. To address this issue, Temse has set up **Op Wielekes**, a bike sharing scheme for kids, where families can borrow a bike upon subscription.

## Torres Vedras, Portugal

### General information

Population: **83,072**  
Mayor: **Laura Maria Jesus Rodrigues**



Câmara Municipal de Torres Vedras

### Strategy & governance

Committed to sustainability, climate action, and the circular economy, Torres Vedras is involved in a number of European Projects and initiatives, particularly on procurement, such as the **GreenMed** and the **SPP Capacity Building** projects. In 2017, the Municipality joined the **Procura+**, the European sustainable procurement network, and launched 'Circular Procurement Torres Vedras', which included a series of training actions on circular purchases. More recently, the Municipal Water and Sanitation Services (SMAS) of Torres Vedras was selected as a CityLoops Replicator within the scope of the **CityLoops** Project, allowing the municipality to share experiences and learn about new procedures and tools to close the cycle of two key waste streams: construction and demolition waste, and bio-waste.

### Key actions

- ✦ **Promote separate collection of bio-waste** – 15 sessions (online and in-person) were held to promote domestic composting within the scope of the **Composting is valuing** project in 2022. The aim is to raise awareness among the population about the need to reduce the amount of organic waste deposited in landfills and on the other hand produce a natural fertiliser that can be used on land to increase productivity. Since the beginning of the campaign, 1,127 composters have been distributed and, in 2022, it is estimated that around 402 tons of bio-waste will have been separated at source.
- ✦ The **Compostim** project is a **pilot community composting project** that combines composting with the enhancement of green spaces. The first community garden composter was installed in a residential area and there are currently seven with an estimated 6.4 tons of bio-waste diverted from landfill.
- ✦ It also developed the initiative 'Circular and Sustainable Textiles – Waste is out of fashion!', focused on reducing waste production, as part of European Waste Prevention Week. The SMAS of Torres Vedras also announced the **REplastiCAR+** project, in partnership with Águas do Tejo Atlântico, which aims to raise awareness of the problem of plastics and the need to reduce the consumption of packaging and send it for recycling. This project had around 200 visitors. Another action was the workshop '**Let's give our rags a new life?**' where participants learn to make bags from fabric scraps, aiming to reduce textile consumption and reduce the use of raw materials.
- ✦ The '**Separate and Win in Yellow**' competition consisted of a competition between educational establishments in the municipality of Torres Vedras that encouraged students to collect and place plastic and metal packaging in the yellow recycling bin. Bags are distributed to place the packages, which are then collected and weighed. All schools are eligible to receive a prize if they collect a minimum of 70 bags or 455 kg during the school year. In turn, the '**Separate and Win in Blue**' competition promoted the collection of waste placed in the blue recycling bin and schools that have a minimum target by school of 1000 kg of paper and cardboard.
- ✦ **Material reuse workshops** were also held, aiming to help them understand not only the importance of separating waste correctly, but also reducing the consumption of single-use packaging.

## Turku, Finland

### General information

Population: **200,000**  
Mayor: **Minna Arve**



Dreamstime / Marusz Prusaczyk

### Strategy & governance

Turku's transition towards a circular economy is steered by the **Circular Turku** roadmap, approved in 2021. Developed in partnership with Sitra, the Finnish Innovation Fund, it prioritises five topics: food, water, energy, construction, and mobility. **Turku 2030 City Strategy** sets the goal for becoming a nature city which is carbon neutral and where a circular economy creates prosperity and new jobs. The progress of the strategic goal is monitored biannually. Circular economy is also embedded in the **Mayor's programme**. The Climate and Environmental Policy unit has a steering role for the circular economy and coordinates the involvement of other departments, such as Finances, Procurement, Communications, City planning, Urban Environment Services, and EU office.

### Key actions

- ✦ **Climate budgeting and circular economy** – By 2029, the **Turku Group** – including all municipally-controlled companies – will implement the largest investment program in its history (around EUR 2 billion). Investments have a crucial impact on the carbon neutrality goal and the transition to a circular economy. In the Low Carbon Circular Economy City (VÄKI) project, climate budgeting is developed as a tool for the preparation, guidance and monitoring of the city group's investment program, combining the implementation of climate goals and circular economy.
- ✦ **Turku Science Park circular economy forum and drafting of the roadmap** – In 2022, a circular economy forum was launched for Turku Science Park, the city's spearhead project. In collaboration with local stakeholders, a district level Turku Science Park CE roadmap was drafted, aiming to develop the area into a platform for circular solutions in construction, mobility, energy, nature-based water management, and urban food production. The roadmap will be published in late 2023.
- ✦ In the city's **Procurement Strategy**, one of the main goals is to increase ecological sustainability (climate, circularity, and biodiversity targets). In a pilot, bids of goods for the year 2022 were examined to find out how many of them included circular economy criteria and which were the most prevailing criteria. The learnings from the pilot help in focusing on the right criteria and to increase the usage of circular economy criteria. In addition to the environmental plan, a circular economy plan is requested from suppliers. In 2023, schools will have one vegetarian meal per week and only organic milk and flakes will be served in kindergartens and schools.
- ✦ **Waste-water management plant's outlet pipe project 2018-2023** – The project aimed to improve the WWM plant's ability to operate at full capacity during exceptionally heavy rain and high sea levels, hence improving the climate resilience. The purification plant's resilience will also be improved with the old outfall system remaining as a backup for handling maintenance and disruptions. A new UV disinfection facility will also be built at the plant. The project will significantly improve the sanitary quality of the waste water released into the sea in the Turku area. Furthermore, the plant's turbine will generate eco-friendly energy from the waste-water flow. The project was granted Blue Project-certified funding by the Nordic Investment Bank.

## Valladolid, Spain

### General information

Population: **300,479**  
Mayor: **Jesús Julio Carnero**



Ayuntamiento de Valladolid

### Strategy & governance

Since the signing of the [Declaration of Seville](#) — the commitment of Spanish cities to the circular economy — in 2017, the city of Valladolid has been actively working to deploy the circular economy at the local level. Then began its [Roadmap towards the Circular Economy](#), an adequate instrument for the immediate action. The progress culminated in 2021 with the approval of the strategic document of the [Valladolid Circular Economy Action Plan, PALEC 2021-2023](#). Its mission is to promote the circular economy as a paradigm of a new model with economic, environmental, and social benefits and to facilitate the conditions for its development, with the vision of making Valladolid a benchmark city. The circular economy is a fundamental lever policy to achieve climate neutrality, as part of [Mission Valladolid](#), the local strategy for decarbonization by 2030, as Valladolid is one of the 100 European climate-neutral cities of the EU research and innovation programme Horizon Europe.

### Key actions

- ✦ Valladolid was a [case-study in the OECD Programme on the 'Circular Economy in Cities and Regions'](#) 2018-2020, which supported the city's transition towards a circular economy through Measuring (indicators framework), Learning (multi-level dialogues to identify challenges and opportunities) and Sharing (peer-to-peer learning). The programme served as a diagnosis, applying a complete methodology deployed through different roundtables with local stakeholders.
- ✦ From 2018-2021 the Council launched four [Calls for grants for the CE 'ecoinnovation & ecodesign projects'](#), aimed at companies, business associations, non-profit entities, or research centres located in Valladolid. Since 2017, grants have been awarded for almost EUR one million and almost 100 projects of a very diverse type have been developed (training, awareness/ dissemination, research studies/demonstration projects, and market implementation projects for new products/services).
- ✦ Valladolid is also promoting [circular entrepreneurship](#) through the [CIRCULAR LABS Project](#), focusing on the Iberian space, and whose aim is to integrate the circular economy into new business models, enabling spaces for creativity, ideas generation and adaptation to change, accelerating the transition of the 'linear-to-circular' model. On this topic, the municipality has also joined the [Hub ECCUS - Circular Economy and Sustainable Urban Cities](#), a platform for public-private collaboration integrated by several cities and companies.
- ✦ To promote the circular economy through [public procurement](#), Valladolid developed the local [Instruction 1/2018](#) on Public contracting to promote socially efficient, strategic, integral, and sustainable contracting. This expressly incorporates the principles of the European circular public procurement guide.
- ✦ Building on the Seville Declaration, the [Declaration of Valladolid](#) expands and reinforces the [commitment of Spanish cities](#) towards the circular economy.

## Vallès Occidental, Spain

### General information

Population: **949,026**  
Mayor: **Ignasi Giménez Renom**



Consell Comarcal del Vallès Occidental

### Strategy & governance

The *Consell Comarcal* (county council) of Vallès Occidental, together with local stakeholders, aims to develop a circular economy strategy. With 23 municipalities on a surface area of 583.13 km<sup>2</sup>, the county is located in the province of Barcelona (Catalonia, Spain). Home to almost one million inhabitants, it has a diversified economy with more than 25,000 companies, several universities and research centres, and has the second highest GDP (27 million) of Catalonia. Vallès Occidental embeds circular economy principles across economic, social, and environmental development policies.

### Key actions

- ✦ The [Vallès Circular agreement](#) constitutes an enabling framework for the circular transition, accelerating economic development policies as well as the promotion to introduce circularity in the economic activity of the companies and initiatives of the different municipalities of the region. The project has allowed the execution of three [Market Places](#) of circular economy, the design of [sectoral dissemination materials](#) and tools for the application of circular economy to businesses. Awareness-raising activities, training and workshops for different audiences are also carried out. This context has opened the way to advance in the construction and development of [Circular Cities](#).
- ✦ With the [CityLoops](#) project, it has been possible to share, learn about, and replicate new tools and methodologies [for waste reduction](#) in the territory, especially [on food waste and construction waste](#), thus reducing the environmental footprint and increasing the regenerative capacity of the towns and cities of the region. Together with the technological and research centre LEITAT, several dissemination and replication activities on organic waste management and prevention have been carried out in the region.
- ✦ [RECOOPEREM](#) is a [food redistribution](#) platform that collects surplus food from school canteens, mass catering companies and hospitals and redistributes it to charities. From 2015 to 2023, the project has been able to distribute more than 95,000 tupperware to almost 4,000 beneficiary families, avoiding the generation of 37,000 kg of organic waste. It also supports occupational integration skill development. Likewise, with [Mercavallès](#), unsold or 'ugly' fruit and vegetables from the local wholesale market are also recovered and distributed to charities. From 2021 to 2023, more than 82,000 kg of fruit and vegetables were received, of which almost 58,000 kg have been used and redistributed.
- ✦ [Bosc del Vallès](#) – Innovative project for responsible forest management, based on the circular economy and renewable energies and aiming at the valorisation of forest biomass. It promotes the mobilisation of surplus wood from forests, paying a fair price to the owners, and reducing dependence on fossil fuels, CO<sub>2</sub> emissions and the continuous increase in the cost of energy for users-customers. It is managed by the Forest Biomass Service and integrates two large consumption boilers and a Forest Biomass Logistic Centre.
- ✦ [Parc Vallès Circular](#) – The Vallès Circular Park is a unique project to transform the area around the N-150 road using the circular economy as a catalyst. It is articulated around several axes of transformation that contribute to the sustainable development of the region and with a high potential for transfer. It promotes an ecosystem where products, materials, and resources remain in the economy for as long as possible, reducing the generation of waste and promoting the use of it.

## Valongo, Portugal

### General information

Population: **94,672**  
Mayor: **José Manuel Ribeiro**



Câmara Municipal de Valongo

### Strategy & governance

Valongo has received the **European Green Leaf Award**, reflecting the municipality's ambition for sustainability and cross-sectoral approach, including circular economy. A Circular Economy Strategic Plan is currently being drawn up, along with a Circular Economy Interactive Platform. At a local level, it is also important to mention the **municipality's reinforcement on selective waste treatment**, in agreement with **LIPOR**. Regarding international cooperation, Valongo signed the **Green City Accord**, and is also involved in the **Network for Circular and Sustainable Construction (R2CS)**, focused on circular economy, but regarding urban planning and construction.

### Key actions

- ✦ **O Mercado** – In partnerships with farmers co-ops, baskets of fruit and vegetables are provided to the public at fair price, to help citizens adopt healthier lifestyles and promote local food production. Impacts include 36% of beneficiaries now including vegetables in their diet, two jobs created, and 72 tonnes of fruit and vegetables sold in 18 months.
- ✦ In partnership with LIPOR, Valongo has set up four **biological urban gardens**, providing a total of 329 plots to citizens where they can grow vegetables, based on principles of organic farming. Two more gardens are being created and the ambition is to reach a total of 1000 plots.
- ✦ Through a series of **environmental education activities**, such as 'plogging', workshops, games and lectures, the municipality aims to raise awareness towards the importance of recycling, reuse of materials in order to better use our natural resources. Targeting the school community, these activities are carried out in partnership with educational institutions, the municipality of Porto and the educational nonprofit organisation ABAE; they involve around 1000 people annually.
- ✦ Valongo is part of the **Intermunicipal Waste Management System** – LIPOR, the Greater Porto Intermunicipal Waste Management Service, which manages, recycles and treats urban waste produced by its eight constituent municipalities. As such, the municipality works on reducing landfilling and encourages the separate collection of fractions like **bio-waste** or **textiles** and footwear.

## Wiltz, Luxembourg

### General information

Population: **8,097**  
Mayor: **Carole Weigel**



Caroline Martin

### Strategy & governance

A rural municipality, Wiltz is experiencing a substantial population increase, making it essential to implement circular economy principles to ensure a high quality of life for the future generations. Luxembourg's 'circular economy hotspot' since 2015, Wiltz has set out its ambition in a commitment **Charter for the Circular Economy**, renewed in 2022. Circularity is put into practice across all projects led by the municipality through the following five fields of application: health & well-being, water & energy, spatial planning & construction, business models & resources and finally services & logistics. The circular economy department of the municipality (two full time project managers) — in collaboration with the other departments — is leading and consulting on pilot projects, pursuing continuous ground work and tools for better implementation, working on communication and sharing knowledge and experiences.

### Key actions

- ✦ **Tool for setting circular standards in construction** – Building on experiences from pilot projects, Wiltz has drawn up a 'circular standard for constructions and urban projects'. This tool summarises circular economy measures that can be implemented by default in construction and urban projects. Within a national working group bringing together several municipalities and led by Klima-Agence, this tool is being revised and adapted to become nationally available.
- ✦ **Evaluation and Key Performance Indicators** – As a national frontrunner, Wiltz has developed an **evaluation framework** to measure impacts. For this, a catalogue of circular economy actions has been developed (in accordance with the tool here above), including the different actions for each of the five pillars of circular economy defined for Wiltz. This catalogue makes it possible to count the actions implemented for each project and, for each of them, to define what is the impact: eliminate waste and pollution, circulate products and materials, and regenerate nature (based on the definition of **Ellen MacArthur Foundation**). This allows the municipality to understand what is the impact of implemented actions and orientates future interventions.
- ✦ **Sharing knowledge and training – The Circular Innovation HUB**, Wiltz's competence and training centre, is growing with an updated training program and a new exhibition with the theme: 'Planetary boundaries – and if circular economy would be the solution'. The training and event program is adapted to a broad target audience: inexperienced professionals starting with an introduction, proficient professionals looking for specific and advanced knowledge (for example on construction materials and methods), pupils and students as well as the general public. Additionally, an annual conference on circular economy attracts many public and private actors to discover recent projects and developments in Wiltz.

## Zurich, Switzerland

### General information

Population: **448,000**  
Mayor: **Andreas Hauri**



Patrick Federl

### Strategy & governance

In September 2022 after a public votation, circular economy was added to Zurich's cantonal constitution — just as for the city's ambitious target of reaching net zero by 2040. «*Intelligent Use of Resources - Circular Economy (CE)*» is one of **four environmental strategy goals** of the City of Zurich, which has also its circular economy strategy, called **Circular Zurich**. Together with eleven private and public stakeholders, Zurich has signed a **charter on circular construction**, defining a common framework to collaboratively measure and improve the circularity of buildings, with the ambition to cut the use of non-renewable primary raw material by 50% by 2030. Part of the **Procura+** network, Zurich is also a frontrunner in terms of **sustainable procurement**.

### Key actions

- ✦ Zurich is currently making an inventory of ongoing and planned circular measures coming from various city's departments. It is planned to publish a first set of 79 circular measures in January 2024 into a **road map**. The aim of this inventory is to report on the variety of existing and new measures in a structured way and to build a framework for managing the road map.
- ✦ With the **KlimUp** program, the City administration received the green light from legislation to **fund early-stage start-ups and nonprofits with overall 14 million CHF** over the next five years. Details on this program to foster a climate-neutral city as well as intelligent use of resources are being defined.
- ✦ Zurich introduced a **mandatory city-wide collection of bio-waste** from households in 2023. New containers for disposing of organic waste for every household have been distributed. Collected garden waste, biodegradable kitchen waste and food leftovers will be processed into biogas and compost at the Biogas Zürich plant.
- ✦ The **construction sector** has long been a focus area: sustainable construction materials, reusing existing components and recycling concrete need scaling up. Zurich runs pilot projects proving the feasibility of circular construction concepts.
  - Kindergarten **Mööslistrasse**: By **reusing existing building components, furniture and equipment**, approx. **30 % of indirect GHG emissions were saved** in this pilot project for a new Kindergarten compared to conventional renovation with new parts.
  - **Municipal Waste Recycling Center Juch-Areal**: Zurich's new Recycling Center is built as a flagship project by mainly reusing local and regional building materials and reused components. Components from the city's inventory were catalogued in a digital database for applying architects to use in their designs. The winning project is now being built and achieves a 40% reduction of GHG emissions.
- ✦ The municipal **food strategy** from 2019 includes measures to reduce overall environmental impact around nutrition. An ongoing update will be published soon.



Image: Ellen Ongena; Stefaan Van Hul

Initiatives like WOAHW (pictured here), promoted by the Municipality of Temse, exemplify signatories' endeavours to engage with businesses and cultivate an environment conducive to circular practices.

## Circular cities support programmes

CCD support partners help accelerate the circular transition in cities and regions by offering specific services and support programmes targeted at local and regional authorities. These include consultancy and advisory services on technical matters, financing and funding, unlocking opportunities for collaborative projects, knowledge transfer and dissemination, and networking.

### Circular Cities and Regions Initiative (CCRI)

The CCRI is an EU flagship initiative, launched by the European Commission (DG RTD) as part of the EU Circular Economy Action Plan 2020, which aims to support Europe's green transition by boosting circularity at local and regional level.

The CCRI aims to increase synergies among projects and initiatives, disseminate relevant knowledge, and give greater visibility to best practices. It **offers comprehensive support** to stakeholders across Europe's cities and regions. It provides in particular:

- **Financial assistance to projects** which support the deployment of locally-tailored circular systemic solutions in pilot cities/regions (€ 200 million earmarked under Horizon 2020 and Horizon Europe in the form of grants).
- **Technical assistance services for investments in the circular economy** at local and regional scale (€ 40-50 million earmarked under Horizon 2020 and Horizon Europe through **PDA grants**).
- Various **capacity-building, networking and matchmaking opportunities** for cities and regions, delivered by a dedicated CCRI Office as well as a wide network of **associated partners**.
- Further advisory services to support cities/regions in the development of new circular business and governance models, delivered through strategic partners, such as with the EIB's **Circular City Centre (C3)** and the Organisation for Economic Co-operation and Development's **Programme on the Circular Economy in Cities and Regions**.



Circular  
Cities & Regions  
Initiative

[More on the CCRI](#)

[More on CCRI demonstration and PDA projects](#)

[helpdesk@circular-cities-and-regions.eu](mailto:helpdesk@circular-cities-and-regions.eu)

### European Circular Economy Stakeholder Platform (ECESP)

Established by the European Economic and Social Committee and the European Commission, the **European Circular Economy Stakeholder Platform (ECESP)** is a stakeholder-driven project and a one-stop shop to **exchange good practices, news and knowledge** on circular economy. The platform also provides a space for debates and building partnerships. It takes the form of a **website**, an annual **Conference**, a series of webinars called **EU Circular Talks**, as well as **thematic working groups**. Activities are designed by a Coordination Group of 24 members from the public sector, the private sector and civil society. Their goal is to accelerate the dissemination and implementation of Circular Economy at national, regional and local level.

The ECESP contributes to strengthening cooperation among stakeholders' networks, facilitates the exchange of expertise on the Circular Economy, and helps to identify social, economic and cultural barriers, as well as solutions, to the transition towards a circular economy.



European  
Circular Economy  
Stakeholder Platform

[More on ECESP](#)

[CEStakeholderEU@eesc.europa.eu](mailto:CEStakeholderEU@eesc.europa.eu)

### European Investment Bank

The **European Investment Bank (EIB)** is the lending arm of the European Union. It is the biggest multilateral financial institution in the world and one of the largest providers of climate finance. The EIB supports the circular economy transition in EU cities with both **financing and advisory support**.

**The Circular City Centre (C3)**, hosted at the EIB is a **competence and resource centre** that provides awareness raising and capacity building material and offers circular city and project advisory programmes. Through the C3, the EIB offers three different *Circular City Advisory* programmes targeting cities with different levels of circular progress, and *Circular Project Advisory* to support cities in **advancing their circular projects towards financing and implementation**.

Further information about the **financing of circular city projects** can be found on the website of the **Circular City Funding Guide** website.



 [More on the EIB's support to the circular economy](#)  
 [More on the C3](#)  
 [C3@eib.org](mailto:C3@eib.org)

### CSCP

The **Collaborating Centre on Sustainable Consumption and Production (CSCP)** is an international non-profit Think and Do tank that works with businesses, policy makers, partner organisations, and civil society towards a good life. CSCP supports cities, municipalities, and local actors through a series of programmes:

- **Multi Stakeholder Engagement Facilitation**, offering technical support and collaboration for cities interested in promoting circularity through stakeholder engagement, as shown and applied in the **Biowaste Clubs**. Contact: [biowasteclub@cscp.org](mailto:biowasteclub@cscp.org)
- **Support services for public utility companies** to enhance circularity at the city level. Contact: [felix.schumacher@cscp.org](mailto:felix.schumacher@cscp.org)
- **Services for the circularity of the local economy**, contributing to enhancing the capacity of both city administrations and businesses. Contact: [crisrina.fedato@cscp.org](mailto:crisrina.fedato@cscp.org)
- **Communication and empowerment of local champions**, promoting local frontrunners that lead the way towards circular economy and circular societies. Contact: [felix.schumacher@cscp.org](mailto:felix.schumacher@cscp.org)



 [More on CSCP](#)

### Ellen MacArthur Foundation

The Ellen MacArthur Foundation is an international charity that develops and promotes the circular economy in order to tackle some of the biggest challenges of our time, such as climate change, biodiversity loss, waste, and pollution. It works with its network of private and public sector decision makers, as well as academia, to build capacity, explore collaborative opportunities, and design and develop circular economy initiatives and solutions.

- Ellen MacArthur Foundation **Cities Hub** includes best practice case studies, frameworks and insights tailored for cities and regions, as well as general **resources for policymakers**
- Recent resources include **circular neighbourhoods**, **CE & climate action plans**, and **circular procurement guide**
- Visit [www.ellenmacarthurfoundation.org](http://www.ellenmacarthurfoundation.org) to access additional content including teaching resources, circular economy business insights, and the circular startup index



 [More on Ellen MacArthur Foundation](#)  
 [governments@emf.org](mailto:governments@emf.org)

### ENEA (ECERA)

**ENEA**, a founding member of ECERA (European Circular Economy Research Alliance), is the Italian National Agency for New Technologies, Energy and Sustainable Economic Development, a public body aimed at research, technological innovation and the provision of advanced services to enterprises, public administration and citizens in the sectors of energy, the environment and sustainable economic development.

- ENEA provides **technical support, project collaboration, knowledge transfer, and dissemination to local governments and civil society** on topics such as sustainable living and transition to a circular economy. Know more: [ENEA - sustainability](#); [ENEA - circular economy](#)
- The **Italian Circular Economy Stakeholder Platform (ICESP)** aims to promote knowledge diffusion, dialogue and synergic relations among Italian actors, following the quadruple helix



 [More on ENEA](#)  
 [info@icesp.it](mailto:info@icesp.it)

### ICLEI Europe

**ICLEI - Local Governments for Sustainability** is the world's leading network of local and regional governments committed to sustainable development, working with more than 2,500 local authorities. ICLEI influences sustainability policy and drives local action for low emission, nature-based, equitable, resilient, and circular development.

The ICLEI Europe circular economy portfolio features 48 demonstration actions on circularity, contributing to accelerate the circular transition in 42 European cities. Through its activities ICLEI Europe:

- **Supports local governments** identify and employ the full range of levers at their disposal to promote the transition to a circular economy.
- Inputs into the **development of local Circular Economic Action Plans**, and the implementation of **Circular Systemic Solutions**.
- Ensures the circular transition is understood and positioned within an effective **European multi-level governance dialogue**.



 [More on ICLEI Europe - Circular economy](#)  
 [iclei-europe@iclei.org](mailto:iclei-europe@iclei.org)

### ReLondon

ReLondon is a partnership of the Mayor of London and the London boroughs to improve waste and resource management and transform the city into a leading low carbon circular economy. Its mission is to make London a global leader in sustainable ways to live, work and prosper, by revolutionising our relationship with stuff and helping London waste less and reuse, repair, share and recycle more.

Drawing from the learnings of our London activities, ReLondon also supports other UK and European cities to design and deliver circular economy initiatives through:

- **Bespoke consultancy support and training** to help cities develop, implement, and monitor circular economy strategies and help them deliver new projects and programmes such as behaviour change campaigns, citizen engagement activities and small business support programmes.
- **Connection with European projects** developing tools and knowledge for cities, such as **Circular PSP** and **CIRCuiT**.
- **Bank of resources** and case studies.
- For UK local authorities, the **UK Circular Cities and Regions Network**.



 [More on ReLondon](#)  
 [hello@relondon.gov.uk](mailto:hello@relondon.gov.uk)

**Circular Flanders**

Circular Flanders is the platform for action, inspiration and policy support for the Flemish circular economy. It is a partnership of governments, companies, civil society, and the knowledge community. Our approach starts from public-private partnerships working on six thematic agendas such as Circular Construction, Chemicals/Plastics, Food and more. We have identified seven strategic levers for change, including Circular Procurement, Innovation & Entrepreneurship and Finance.

Local authorities have been important stakeholders all along. Circular Flanders supports strategic policy-making, capacity-building, awareness raising and project implementation on a local level. Our initiatives include:

- Setting up a Flemish **network for cities and municipalities**, facilitating exchange and collaboration
- Provide one on one support with targeted consultancy to help cities develop, implement, and monitor circular economy strategies
- Connection with European projects and networks developing tools and knowledge for cities, such as Interreg EU projects **KARMA**, **CEO** and the Circular Cities and Regions Initiative
- **Bank of resources** and case studies



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