

**BROCHURE**

# The Circular Economy in Cities and Regions



## About the OECD Centre for Entrepreneurship, SMEs, Regions and Cities

The OECD Centre for Entrepreneurship, SMEs, Regions and Cities provides comparative statistics, analysis and capacity building for local and national actors to work together to unleash the potential of entrepreneurs and small and medium-sized enterprises, promote inclusive and sustainable regions and cities, boost local job creation, and support sound tourism policies.



**Website:** [www.oecd.org/cfe](http://www.oecd.org/cfe)



**Twitter:** @OECD\_local



# The OECD Programme on the Circular Economy in Cities and Regions



The OECD Programme on the Economics and Governance of Circular Economy in Cities and Regions, part of the OECD Centre for Entrepreneurship, SMEs, Regions and Cities, supports subnational governments in their transition towards a circular economy, through:

① **SHARING**: collecting best practices and experiences on the circular economy in cities and regions through a **survey** and by favouring peer-to-peer exchanges;

② **LEARNING**: engaging in **policy dialogues** in cities and regions to identify challenges and opportunities;

③ **MEASURING**: developing an **indicator framework** for decision making and evaluation of circular economy strategies.

## The Circular Economy in Cities and Regions: Why does it matter?

Cities represent almost two-thirds of global energy demand, produce up to 80% of greenhouse gas emissions and 50% of global waste. The circular economy is receiving increasing attention as a new socio-economic paradigm to optimise the use of resources. This is particularly relevant in cities and regions at a time when megatrends such as climate change, population growth and urbanisation are affecting the way goods and services are produced, delivered and consumed. Circularity implies putting

resources back into environmental and economic systems, and reducing material losses through reusing and preventing waste. This can occur through different means, from product design to more pro-environmental behaviours. As such, the circular economy approach is an interesting implementation vehicle to the SDG 12 of the 2030 Agenda for Sustainable Development.

## The role of cities

Cities and regions have a critical role to play in the circular transition. First, they hold core responsibilities in key sectors for the circular economy such as transport and solid waste. Second, they are laboratories for innovation and experimentation. Third, being responsible for 60% of public investment in OECD countries, sub-national governments can lean on critical long-term investment choices related to energy, transport and water. Hence, they can avoid linear lock-in for infrastructures. Cities can be promoters, facilitators and enablers of the circular economy.

*« The circular economy is not an end in itself but a means to an end: better environmental quality, economic growth and social well-being »*



# 1. Survey: taking stock of “Going circular”

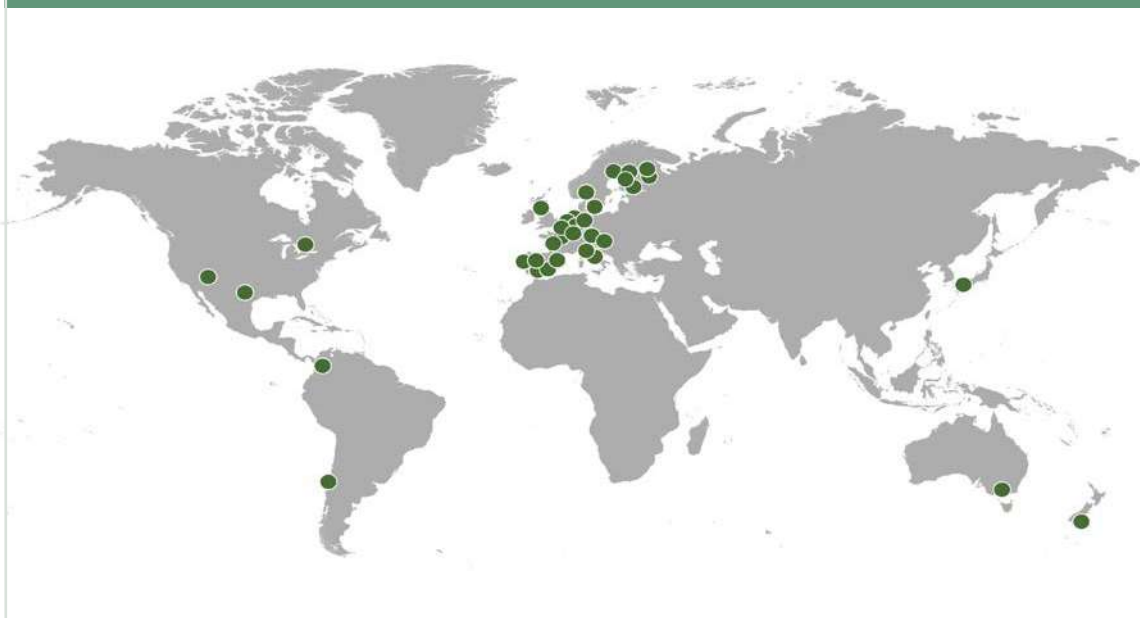
## Preliminary results of the OECD Survey on the Circular Economy in Cities and Regions

The Survey gathered data and information on the status of the circular economy in 34 cities and regions (31 cities and 3 regions), and the main tools, obstacles and good practices available to date. It targeted cities and regions at any level of implementation of circular economy initiatives, from pioneers to newcomers.

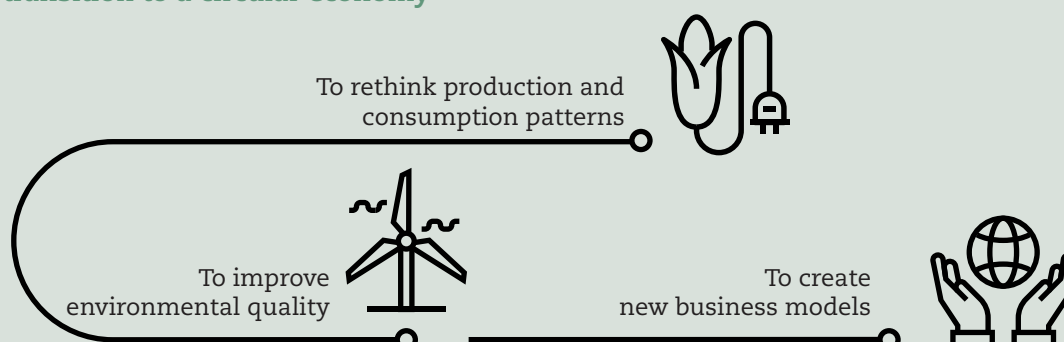


### THE SURVEY AT A GLANCE

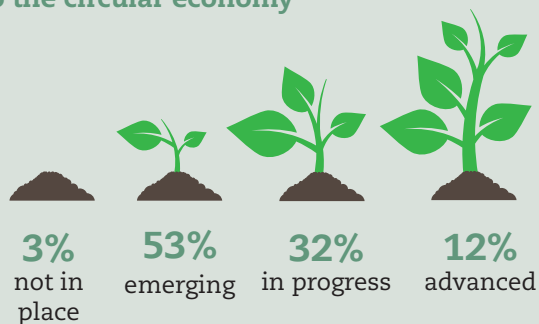
*(based on 34 cities and regions)*



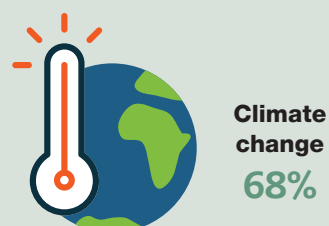
### Main objectives for cities and regions to transition to a circular economy



### Level of advancement to the circular economy

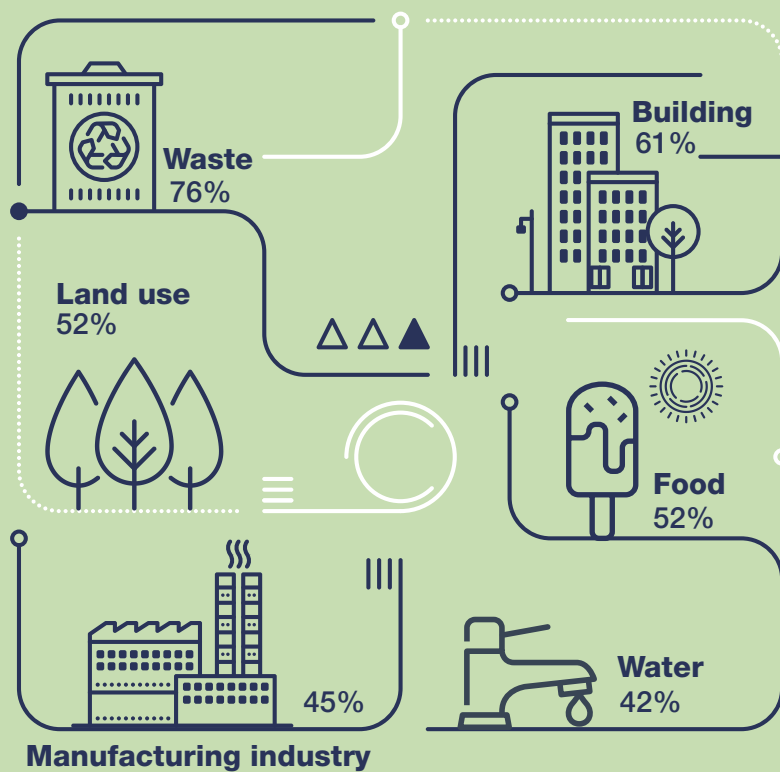


### Main driver for transition to the circular economy



**15 out of 34** countries or cities have a circular economy initiative

### Which sectors are included in your circular economy initiative?



### What tools foster circular economy?



**Digitalisation**  
54%



**Sharing economy**  
50%



## Polls at a glance

**15 out of 34** countries or cities have a circular economy initiative

Does a dedicated budget exist for circular economy activities?



**41%** YES **38%** No **41%** Anticipated

Are there capacity building programmes in place ?



**56%** YES **35%** No **9%** Anticipated

Are circular criteria included in public procurement?



**47%** YES **15%** No **38%** Anticipated

Do pilots and experimentations for the circular economy take place?



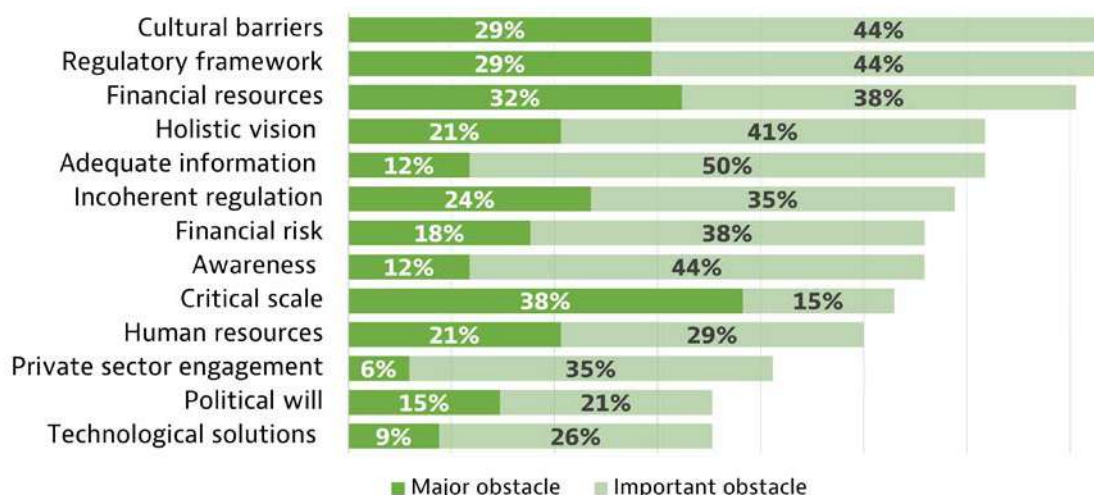
**76%** YES **9%** No **15%** Anticipated

Are there co-ordination structures for the circular economy in place?



**47%** YES **44%** No **9%** Anticipated

## Obstacles to a circular economy transition



## Top priorities for future circular economy strategies

Environmental quality and resource efficiency



Policies and regulation



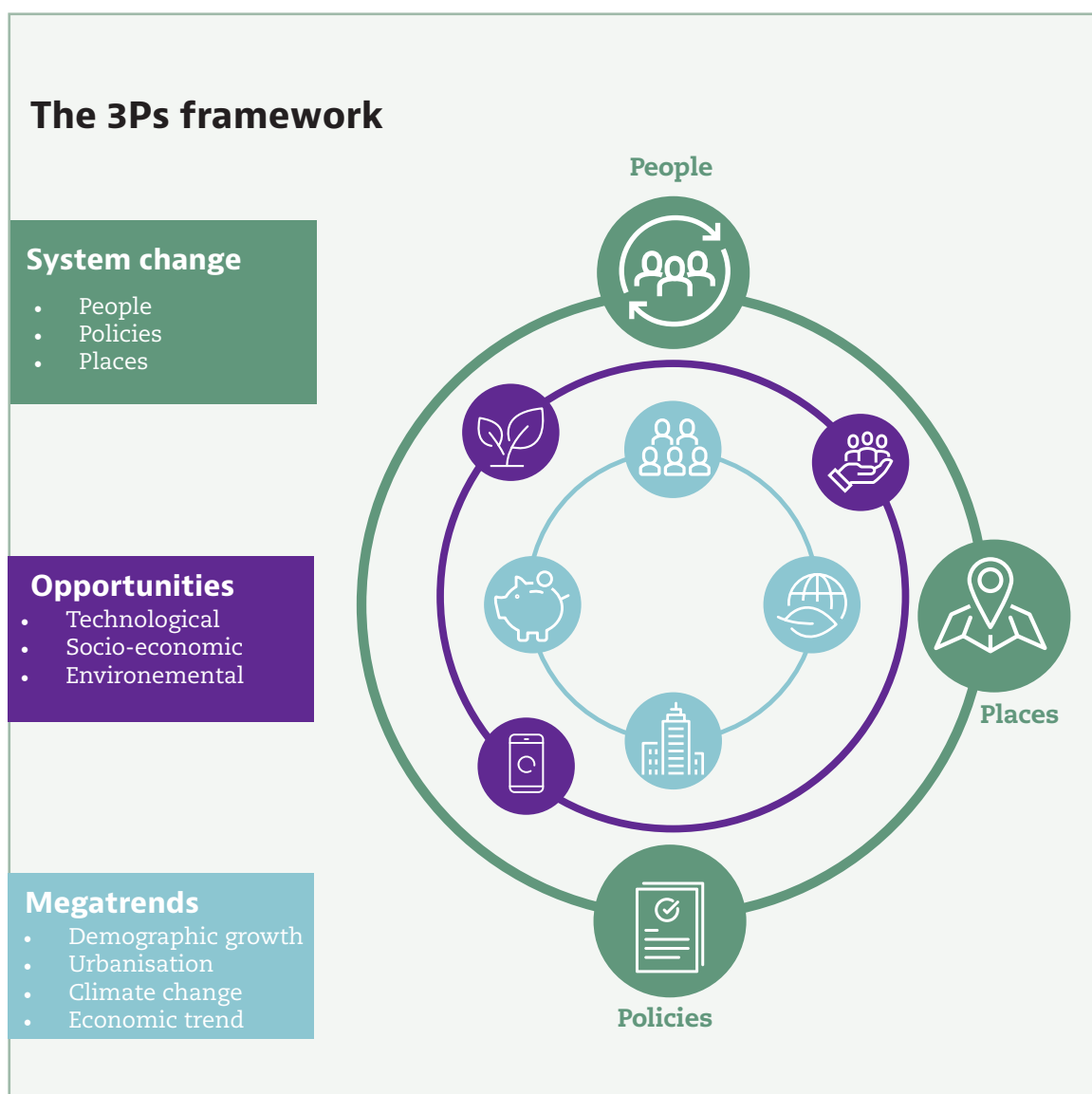
Behavioural change and awareness



# Unlocking the potential of the circular economy in cities

The circular economy is transformative, systemic and functional. First, it implies behavioural and cultural change towards different production and consumption pathways, new business and governance models in a shared responsibility across levels of government and stakeholders (**People**). Second, it provides an opportunity for complementarities across water, waste, energy, transport, housing and land use (**Policies**). Third, inflows and outflows of materials, resources and products require a reflection on the appropriate scale at which the circular economy is applied and on functional linkages across urban and rural areas (**Places**).

The 3Ps framework (OECD 2016) people, policies and places, provide guidance for action in cities and regions:





## 2. Our current policy dialogues

Cities and regions engage with the OECD in Policy Dialogues gathering a wide range of stakeholders. These Policy Dialogues help identify economic and governance challenges, as well as policy solutions for the transition to the circular economy, in an efficient, effective and inclusive manner. The Policy Dialogues involve experts and cities as peer reviewers.

### Valladolid, Spain

The City of Valladolid is committed to promote a transition to the circular economy. A total of 67 projects related to the circular economy have been benefitting from municipal grants since 2017. Projects are promoted by the private sector, non-profit organisations and research centres with headquarters in the municipality. It is expected that a circular economy approach can bring new socio-economic opportunities to the city, especially by enhancing innovation in business.

Valladolid was one of the first signatories of the Declaration of Seville (2017 commitment on the circular economy of Spanish municipalities). Since then, the Innovation Agency of the municipality developed a Road Map for the Circular Economy. For the future, clear objectives and priorities should be set to create an enabling environment and generate coherent circular economy initiatives, while scaling-up existing ones. Opportunities include: i) the use of circular public procurement; ii) co-

ordination across SMEs, local government and university; iii) an active role for the Innovation Agency as facilitator of circular economy initiatives.

### Umeå, Sweden

Umeå's population doubled over the last 50 years, making it one of Europe's fastest growing cities in a sparsely populated region (Northern Sweden). The vision of the city is to achieve 200 000 inhabitants by 2050. For this reason, the local government is developing a model integrating environmental, social and economic aspects within a circular economy approach. The Strategic Plan 2016-2028 states that the city should become a circular economy leader.

This vision provides a good momentum to discuss future circular economy related plans, since population growth will have consequences on housing, use of natural resources and space. It is also well timed in relation to Swedish government action in the circular economy. The national government has conducted two

Valladolid, Spain



Umeå, Sweden





investigations with a focus on circular economy from 2016, one with a focus on consumers and reuse, and another with a focus on industrial symbiosis. In 2019, a national delegation for the circular economy has been established to strengthen society's transition to a resource-efficient, circular and bio-based economy both nationally and regionally. Building knowledge and collaborations across government, business and universities are the greatest priorities for the transition to circular business models.

## Groningen, The Netherlands

The City of Groningen is the 5th most populated city in the Netherlands and the biggest urban centre in a prevalently rural region. The presence of renowned universities, the high number of students and a fast growing start-up scene alongside a vibrant business and innovation environment transformed Groningen into a regional knowledge hub. The Municipal Council unanimously decided to make the circular economy a priority for the city. A vice mayor with specific responsibilities on the topic took office in March 2018.

Groningen is the only city in the region where the population is projected to grow. As a consequence, during the next 20 years, a total of 20 000 new homes will be built. This is an opportunity to move from 'business as usual' to a more circular approach where material from demolitions and secondary material for construction can be used, combined with energy and water efficiency in buildings. The constructor sector is ready to take this

step (e.g. Cradle to Cradle constructions), but there are regulatory and financial obstacles to overcome. Groningen is developing a circular economy strategy focusing on waste, public procurement and knowledge building.

## Granada, Spain

The recent transformation of the wastewater treatment plant into a biofactory in the City of Granada stimulated city debate on the circular. It aims to reach zero waste, zero energy and zero Co2 emissions by 2020. The circular vision for the city could be based on two of its major strengths: culture and science. While Granada is mainly known for the stunning Alhambra, the city has obtained global recognition as a digital hub thanks to strong specialisation at university level in technology and artificial intelligence.

In 2017, the Spanish Ministry of Economy, Industry and Competitiveness designed Granada as the "City of Science and Innovation". Interviews with 50+ stakeholders from the private, public and not for profit sector, identified several challenges. These include the need to improve environmental awareness and the connection between the local government, the university and the private sector. There are many options for the city to move from a linear to a circular approach. The city could serve as a living lab in which universities and start-ups could connect and benefit from experimentation spaces. A circular approach can be applied to the hospitality industry. The city plans to link smart city activities to the circular economy.

Groningen, The Netherlands



Granada, Spain





### 3. Towards an OECD Circular Economy Indicator Framework

There is wide recognition amongst policy makers and scholars on the need for some metrics on the circular economy. According to the principle “One cannot improve what is not measured”, policy-makers need robust data and information on which to base decisions and improve implementation. Yet, a limited number of studies are devoted to circular economy indicators that could actually contribute to a deeper understanding and evaluation over time (Blomsma and Brennan, 2017 and Ghisellini, 2016).

According to the OECD Inventory on Circular Economy Indicators (forthcoming), the following preliminary observations can be drawn:

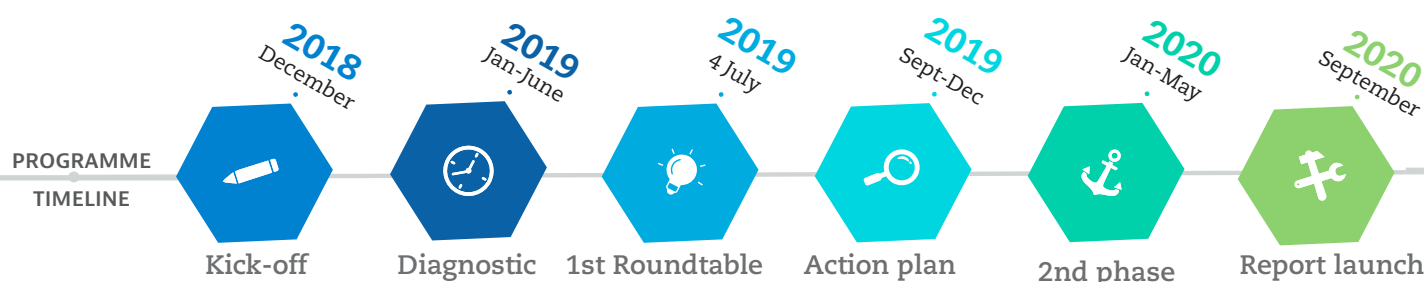
- Environmental measurement prevails (e.g. energy usage, emissions, hazardous waste).
- Several sectors are taken into account (water, energy, agriculture, transport, built environment, industry, textiles, raw material extraction), but solid waste is predominant.
- Governance indicators specifically tailored to the circular economy appear to be lacking or are under development.
- The greatest gap in literature and databases concerns lack of data and indicators at the city level. Some cities are developing their own indicator frameworks, such as Paris, Brussels, London, Amsterdam, Basel, Bern, Bilbao, Glasgow and Prague.

- Resource consumption or waste recycling rates are typically used for measuring urban circularity (Geng et al., 2009; Guo et al., 2017; Su et al., 2013; Zhijun and Nailing, 2007).

#### OECD tools

The OECD is developing a set of tools towards a circular economy framework such as:

- **Key input, process and output indicators** regarding circular economy initiatives in place, with a focus on the economic and social aspects;
- **A scoreboard** for measuring how circular a city/ region is, based on key dimensions, such as innovation, system change, jobs and skills, economic and finance, a functional approach;
- **A self-assessment tool** to identify whether governance conditions are in place, work well or need to be improved. The potential of the circular economy can be exploited if the necessary governance and economic conditions are in place: legal and regulatory frameworks need to be updated; policies aligned, stakeholders informed and engaged; progress and results monitored and evaluated; clear and robust business cases created.



## CONTACT

### **Oriana Romano, PhD**

*Coordinator, OECD Programme on Cities and Circular Economy*  
OECD Centre for Entrepreneurship, SMEs, Regions and Cities



**Email:** [Oriana.Romano@oecd.org](mailto:Oriana.Romano@oecd.org)



**Website:** [oe.cd/circ-eco](http://oe.cd/circ-eco)



**Twitter:** [@OECD\\_local](https://twitter.com/OECD_local) [#CircularEconomy](https://twitter.com/CircularEconomy)

Visit our website: [oe.cd/circ-eco](http://oe.cd/circ-eco)  
Follow us on Twitter: @OECD\_local #CircularEconomy

