Creating **circular innovation** in cities

Do you have an innovative digital or data-driven solution that can help create a circular city? A city where businesses and people work together to make the most of our resources? An inclusive city, in which designing for circularity means providing new jobs and opportunities for all communities and citizens?

If your circular solution can create an impact socially and lower the carbon footprint for cities globally, for example by:

- Providing data on product and material flows in the city that will help design out waste in businesses and communities
- Facilitating circular business models e.g. through digital platforms enabling product-as-a-service, leasing, or take-back systems
- Making it easier for small and medium-sized businesses in the city to support product and material reuse, repair, and recycling
- Facilitating circular living for citizens and thriving neighborhoods through digital platforms enabling ocal action and engagement
- Creating and supporting local resource loops in the city between different businesses, sectors, and communities

or if you can surprise us with something completely different.
Then you're the one we're looking for!

Thematic framing

By 2050 close to 70% of the world's population will live in cities. Cities emit 70% of greenhouse gas emissions, and account for 50% of the global waste production. But we are determined to change that, because we love our cities - and our planet.

The transition to a circular economy is key in helping cities reach their climate targets, and a sustainable future in line with the Paris Agreement and the UN global goals. A transition that will help us build back better towards more green, resilient and inclusive cities in the recovery from the COVID-19 crisis. Cities in which designing for circularity means providing new jobs and opportunities for all communities and citizens.

The radical changes needed will not come without better use of data and insights on the materials and products we use, new circular business models, and new ways of engaging all city communities. We believe that emerging technologies and digital solutions are key to accelerate this transition.

Can your innovation drive this change?

Innovation areas

The following three innovation areas are shared across all partner cities. Your solution can have its impact within one, or across more of them - but these are our main areas of focus.
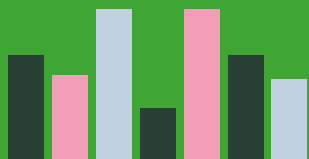
01
Facilitating circular business models through data on materials, products & resource flows in our cities

Designing out waste and creating efficient circular business models, require a strong understanding of how our cities and communities actually work. Collecting this data and making it available in a way so it becomes a catalyst for innovation and collaboration is key.

So can your solution

- Provide reliable data across different data sources on what materials and products are used, when, where and how much in the city? Especially in regards to packaging, products with repair and reuse potential, and resource streams with potential for local symbiosis?
- Provide data services or platforms to small businesses to help them identify new business opportunities through circular business models, and support certification of their positive impact?
- Provide data services that enable city governments to analyse and track the circular transition of their city, and understand how best to support and facilitate circular business models through public procurement and policy decisions?
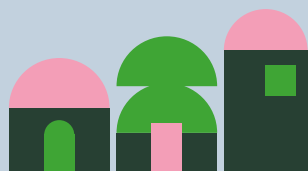
02
Making local businesses drivers of circular, thriving & climate neutral cities

In a thriving city, local businesses take responsibility for the products they sell and the packaging, materials, and resources they use. They engage with their suppliers and customers to ensure products can be, and are repaired, reused, and recycled. And because of this, they prosper and help shape sustainable city communities.

So can your solution

- Enable circular B2C and B2B business models designed around Product-as-a-Service, take-back systems, or other, that will work practically within the city?
- Enable collaborations between city businesses and their customers around product repair, reuse, and recycling - e.g. through sharing platforms, reward systems, information on product use and disposal etc.?
- Facilitate local 'resource loops', material reuse or recycling collaborations within the city, e.g. for packaging, high-value materials or bioresources across different business sectors and communities?
- Connect city businesses, suppliers, and local manufacturers to provide real-use data and insights on the circular design of products, incl. material choices, design for disassembly, supporting product innovation, and stronger circular business models?

03
Creating thriving, resilient communities through new ways of sharing, co-owning & managing cities' resources

Community collaboration and inclusive access to circular products and services are core to the transformation to a circular, climate neutral city. The circular city life and the behavioural change needed is best led by the local communities and citizens themselves. Facilitating local initiatives is a critical first step towards more extensive circular business models and city initiatives.

So can your solution

- Enable local sharing hubs, community co-ownership models, or 'commons' approaches to resources through digital platforms?
- Provide training, capacity building, and knowledge to community groups around designing and managing local sharing and co-ownership platforms, or enabling local resource symbiosis, reuse, and recycling initiatives?
- Enable democratisation of the sustainable and circular management of city resources especially when it comes to community groups who have less access today?

Who can apply?

We are seeking from early prototype to market-ready innovative solutions, with the potential to significantly strengthen our ability to create a circular, climate neutral, and thriving city. Your solution can be cross-sector or focus on specific areas such as plastics, food, construction, textile, or others. It can focus on direct material reductions or on business and consumer behaviour. The most important thing is that your solution is digital or data-driven at its core, and responds to one or more challenge areas.

The challenge is a global call to action for innovators and entrepreneurs, businesses, and organisations. We invite and encourage all types of innovators globally to apply and to help us find the answers to create better and more circular cities.

Given the global COVID19 situation the challenge program and activities are designed to be based on virtual participation, so travel will not be mandatory.

Why should you apply?

If you are among the challenge winners you will work with one or more partner cities to explore how your solution can help solve the cities' challenges. This can lead to participating in an innovation and development project with the city.

As a winner, you will engage in an exploration phase that will consist of one or more workshops with key city experts and stakeholders. If shared interest and common ground are found, this can be followed up by a joint process to develop and define an impactful on-the-ground pilot project together.

Selection criteria

Your innovation will be evaluated based on its potential to create a significant impact on the innovation areas. The following criteria will be used to guide the review of your innovation:

Transformative potential
The solution's overall potential for creating significant impact within its area of focus.

Circular & climate impact
The solution's potential for impact on increasing circular resource flows and lowering climate impact.

Community & social impact
The solution's potential for creating thriving cities and creating new opportunities for diverse communities in the city.

Technical feasibility
The technical feasibility of bringing the solution to market.

Financial feasibility
Your company or initiative's ability to demonstrate a pathway to profit or sustained operations, if a non-profit initiative.

Scale & replicability
The solution's potential and ability to scale and to be replicated across different cities and urban contexts.

The submitted solutions will be reviewed and selected by a jury consisting of representatives from partner cities and domain experts on circular economy, digitisation, and financing.

Find information on jury members and more on the process on
www.circularinnovation.city

Partners

The Circular Innovation City Challenge is made possible through the collaboration between the cities of Copenhagen, Glasgow, Amsterdam, New York, and Toronto, the Ellen MacArthur Foundation, and World Circular Economy Forum. The challenge is facilitated by the Danish Business Authority, the Danish Design Centre and Leaderlab.

The challenge is based on the outcomes of the 2019 C40 World Mayors Summit workshop 'Building a climate neutral circular city', and the analysis and opportunities presented in the Ellen MacArthur Foundation report 'Completing the Picture' (2019).