Circular **Innovation**
City *Challenge*

CITIES COLLABORATING WITH INNOVATION ECOSYSTEMS AROUND DIGITAL, CIRCULAR SOLUTIONS

Case presentation on public-private innovation opportunities from the Circular Innovation City Challenge

Circular Innovation
City Challenge

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1. POTENTIAL & IMPACT: Driving Circular Cities through digital and data-driven solutions

Circular Innovation City Challenge

The potential in data-driven and digital circular solutions.
By 2050, close to 70% of the world's population will live in cities. Globally, cities emit 70% of greenhouse gas emissions and produce 50% of global waste. A circular economy is key to cities reaching their climate targets and ensuring a sustainable future in line with the Paris Agreement.

In their 2019 report, 'Completing the picture', the Ellen MacArthur Foundation states that the way we produce and use products and food accounts for 45% of global greenhouse gas emissions.

But the transformative changes we need will not happen without better use of data and insights about the materials and products we use, new circular business models, and new ways to engage city communities. Emerging technologies and digital solutions are key to accelerating this transition.

The reasons why digital and data-driven solutions can be strong enablers for a circular transformation in cities are among others:

- The ability to support decentralized and agile solution frameworks suitable for a complex landscape of materials, products, and stakeholders within a city

- Their ability to support knowledge sharing and learning across a wide range of stakeholders within and outside the city
- Their scaling capabilities across cities and regions
- -Their ability to provide opportunities and tools for direct engagement of citizens and city communities in circular activities

In this case presentation, we will provide examples of how these enablers manifest themselves in solutions currently under development in the digital, circular innovation ecosystem. Moreover, we provide cities with the opportunity to collaborate with these solutions and the digital, circular innovation ecosystem in general.

The case presentation is based on the Circular Innovation City Challenge (CICC) that ran in the first half of 2021. It was a partnership between Copenhagen, Amsterdam, Glasgow, New York City, and Toronto to find innovative, digital, and circular solutions. The challenge was a collaboration with the Ellen MacArthur Foundation and the Danish Business Authority. Facilitated by Danish Design Center (DDC) & Leaderlab.

Visit the challenge site: www.circularinnovation.city

The maturity of the digital and circular innovation ecosystem

The Circular Innovation City Challenge was an international call for solutions from prototype to market readiness. 137 submissions from 26 countries were received, and 5 digital solutions were chosen as winners.

The 137 submissions received represent a snapshot of the current focus areas and maturity of the circular, digital innovation ecosystem. A full overview of the solutions received is available on the challenge website.

We can observe several interesting trends when we look across the solutions. In particular, there seems to be momentum and interest around developing solutions addressing the following themes:

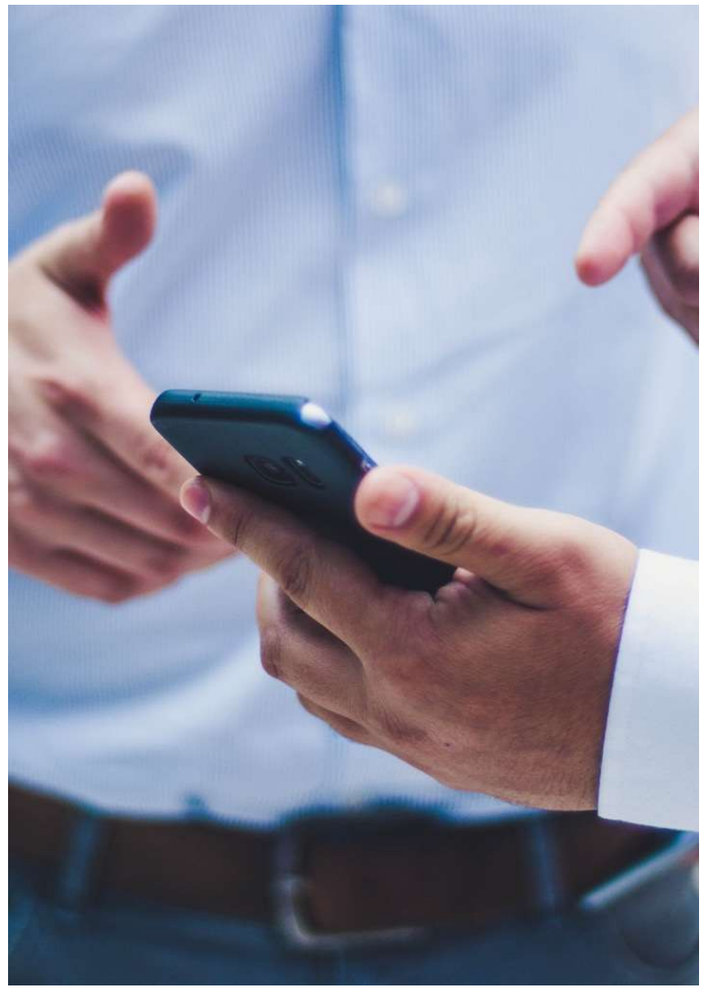
- Digital-physical solutions for new circular product streams in response to moving away from single-use food and drink containers.
- Marketplaces for materials and tools to support identification, data, tracking, and valuation of those materials.
- Services that engage citizens in practical hands-on activities relating to zero-waste and low-carbon lifestyles.

While marketplaces for materials and tracing of material streams have been a circular economy focus area for some time, it is interesting to see the strong focus on respectively multi-use food and beverage containers, as well as ways to drive citizen action and behaviour change. This is in line with a strong policy focus on plastic pollution and single-use packaging, as well as an increasing focus on how to facilitate low-carbon lifestyles. A circular economy has been a focus area for innovation for close to a decade, however, the digital and data-driven approach to circular solutions is a more nascent area.

The majority of solutions received by CICC were at an early stage, with incorporation and development occurring within the last two years. In a challenge competition, there will be a natural bias towards early-stage solutions, so this is also a reflection of the chosen proces. A part of the submitted solutions were beyond the pilot stage, and while they showed great potential, most of them had yet to demonstrate full market scale capabilities.

In general, it appears that the digital, circular innovation ecosystem is significantly responding to high-priority challenges within the circular transform. Nevertheless, higher maturity is also needed in solutions, and public-private innovation partnerships can be a strong means of building this maturity.

In the following sections, we will explore the three core innovation areas of CICC and the responding innovative solutions in detail.



"Through establishing collaborations between emerging innovation and major global cities, the challenge lays the foundation for partnerships that can contribute to the resilient, thriving, and climate-neutral future of the cities of Amsterdam, Copenhagen, Glasgow, New York, and Toronto. The Ellen MacArthur Foundation looks forward to following these inspirational stories."

- Ella Hedley, Emerging Innovators Manager, Ellen MacArthur Foundation

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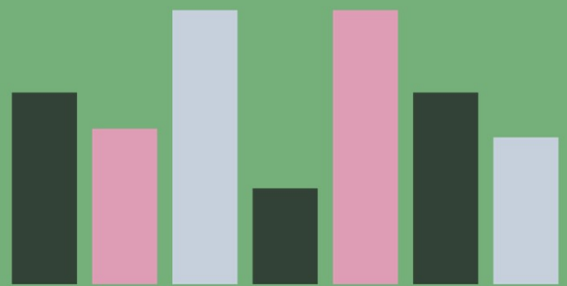
CICC Innovation **areas**



01.
Facilitating circular business models through data on materials, products & resource flows in our cities

02.
Making local businesses drivers of circular, thriving & climate neutral cities

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

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2. Innovation Area 1

Facilitating circular business models through data on materials, products & resource flows in our cities

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Why is this an important innovation area?
Designing out waste and creating efficient circular business models, require a strong understanding of how cities and communities operate when it comes to the flow of the materials, goods, and products we use.

The use of data and digital services within this area is a key catalyst for a circular transformation of business practices, and for ecosystem collaboration around circular business models across value chains.

What are cities' needs in terms of innovation?
Some cities have just begun their circular transformation, while others have been doing so for a while. As part of this process, the need for data and insight is constant, but the types of data used, and their applications can change over time.

We identified the following key action areas for building cities' capacity to access and use circular data:

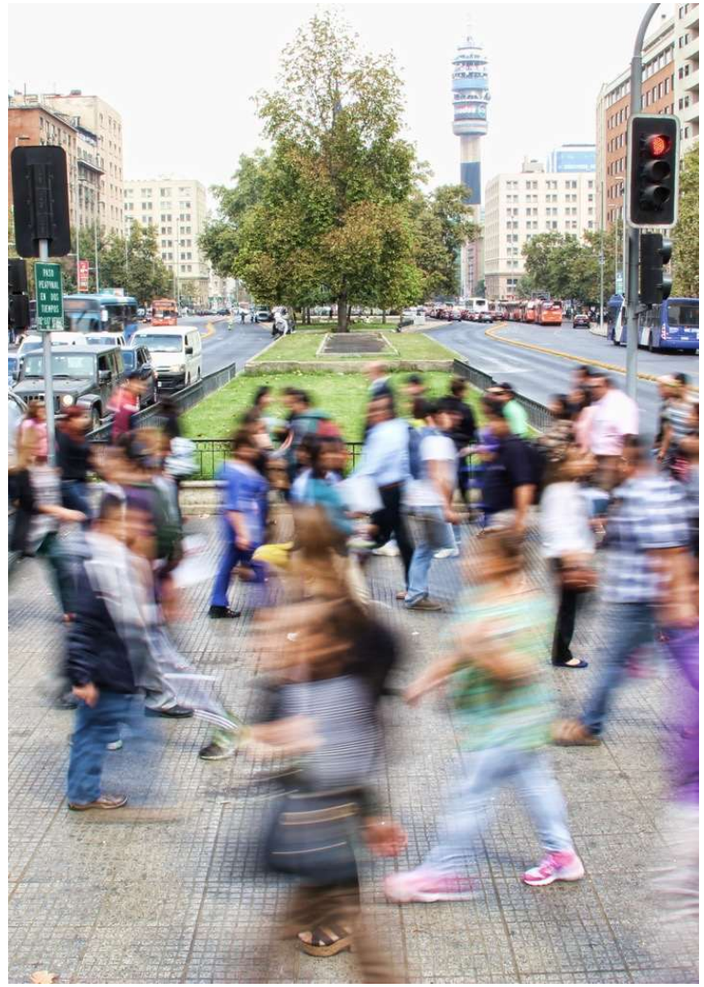
1. Cities need to access or capture reliable data on what materials and products are used, when, where and how much in the city. This baseline is important not only to understand what flows to address, but also, which stakeholders and ecosystems that need to be engaged to capture the value in the material streams.

2. In order to achieve a circular economy, cities need to ensure circular data and insights are readily accessible for city stakeholders and the broader city community to guide their actions and initiatives.

3. Cities must capture and provide data that enable city governments themselves to analyze and track the circular transition of their city and understand how to drive internal action, policy, procurement, and regulation.

As part of these innovation areas, the city is often required to access and develop new data streams and to develop new services based on these data streams. For some cities, those capabilities may lie within the organization, but often collaboration with external providers and businesses will be required.

What innovative solutions are available?
Within the digital, circular innovation system, solutions are being developed within the above action areas. For example, these three CICC winners each presented a unique solution:



Topolytics from the UK combine 'reference' data on key sites e.g. waste producers, waste processors, road systems, population, weather, and other contextual data to build a real-time live view in their WasteMap platform with associated insights into the waste and material system. Live - because the materials are constantly flowing through, into, and out of the city.

Concular digitizes materials in buildings using material passports. Based on blockchain technology, the solution measures the potential GHG mitigations and financial savings and recirculates materials into new buildings. Concular uses a matching methodology based on 8 years of experience and data gathered from the largest marketplace for reclaimed materials in Europe.

Konsido a Danish business analyses millions of electronic invoices, to provide a unique insight into city procurement patterns. That insight can be enhanced by the insight from experts in the circular economy, providing a solution that allows decision-makers to prioritize how circular procurement can be increased and done most effectively.

When it comes to innovative solutions addressing cities' capacity for working with data, there is rarely one solution that fits all.

Despite their capabilities, they do require close city engagement to go the last mile and develop a workable solution for each city.

Collaboration with the innovation ecosystem
Cities have a number of opportunities to strengthen their collaboration with the innovation ecosystem and to advance solutions that facilitate data on materials, products, and resources flows in cities.

Firstly, cities can provide insights into their existing data capabilities, as well as what data are already being captured and how.

Secondly, cities can provide insight into who within the city stakeholder landscape is responsible for or has an interest in specific data categories and facilitate matchmaking.

Thirdly, cities can study and clarify which data protection and privacy regulations (e.g., GDPR) will impact circular data initiatives in their most priority areas.

Early access to this type of information can accelerate and scale future collaborations between city and innovation solution providers.

“These fresh circular and digital solutions change the way value is created and makes future solutions viable into cities today.”

- Jyri Arponen, Senior Lead, The Finnish Innovation Fund Sitra

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3. Innovation Area 2

Making local businesses drivers of circular, thriving & climate neutral cities

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Why is this an important innovation area?
It requires both suitable and efficient circular infrastructure around logistics, data in resources, and offtake marketplaces for local businesses to take responsibility and implement circular initiatives around the products they sell and the packaging, materials, and resources they use. Furthermore, it calls for collaboration across the entire value chain of operators in the ecosystem.

The data-driven and digital solutions within this area can connect the city's businesses, suppliers, and local manufacturers with product-as-a-service, or take-back systems, as well as services within product and material reuse, repair, and recycling.

What are cities' innovation needs?
The goal of circular transformation in cities cannot be achieved by city operations alone. It requires all stakeholders in the city ecosystem and community, and not least city businesses to be part of the journey.

When it comes to building the capacity in cities for businesses to engage in circular action, we identified the following key areas:

1. Circular B2C and B2B business models designed around product-as-a-service, take-back systems, or other solutions that will work practically within the city context.

2. Digital platforms and setups for collaboration between city businesses and their customers or consumers around product repair, reuse, resell, and recycling.

3. Digital platforms and setups for local ‘resource loops’, material reuse, and recycling collaborations within the city ecosystem.

Some of these activities may already take place or be handled partly within existing city infrastructure or through business-to-business collaborations. However, to scale these initiatives, the city will often need to partner with new solution providers outside the public sector. The city's role would then be to facilitate or initiate the development of new logistics, infrastructure, and operating system setups in support of this development.

Consequently, this may challenge the city's existing systems and may lead the city to contemplate regulations regarding previously public-only domains to allow access for new types of actors. In this regard, waste collection and waste management are of particular importance.

What innovative solutions are available?
Solutions are being developed within the digital, circular innovation system in the above action areas.

An example of a concrete solution is *Seenons*, a data-driven, circular economy company that matches waste with businesses that then upcycle the waste materials into new products. Through their digital platform and app, Seenons brings together businesses, transport and logistic partners, waste service providers, and municipalities to provide more efficient and sustainable waste solutions in cities.

A further example is the product category of **'reusable beverage and food containers.** In CICC, this was the type of solution category that saw the most momentum with over 10% of the solutions applied. Many of the solutions in this category came from Canada. Among the finalists were *Inwit* and *Circulr*.

These solutions all provide an alternative to the single-use containers from takeaway restaurants, coffee shops, etc. Their main differences are in how they implement their business model, and the incentive/deposit structure for both customers, and participating businesses. Most of these solutions and infrastructures are designed to work on market terms and to be operated by private actors. They are not extensions of, but rather a supplement to existing infrastructures for waste logistics and resources in cities. However, as they are to work in the city context, collecting, distributing, and handling materials and products,

their ability to scale can both be hindered or supported by the design of the overall city infrastructure and operations.

Collaboration with the innovation ecosystem
There are several opportunities for cities to further strengthen their collaboration within the innovation ecosystem. This will help drive the maturity of solutions that encourage local businesses to adopt circular business models and support zero waste goals.

Together with solution providers, cities can examine whether there are any steps they can take to better set up city infrastructure for novel business models such as product-as-a-service and takeback without intruding upon market dynamics.

Secondly, cities can identify which material streams, business sectors, and local actors and operators are likely to be suitable candidates for engaging in local resource loops.

Thirdly, cities can facilitate cross-business dialogue and collaboration to identify potential co-investments or joint logistic solutions between innovative solution providers in these domains.

Such actions will all contribute to paving the way for new circular business models and increased resource flows.

”It has been wonderful to experience the creativity, eagerness, and drive to make a real difference in enabling a more circular economy, which will enable a more sustainable use and consumption of materials, products, and services in the future. We need all solutions to come into play and at scale in order to deliver on a more sustainable future.”

- Camilla Haustrup Hermansen, Director of Business Development, Plus Pack

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4. Innovation Area 3

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

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Why is this an important innovation area?
In order to succeed with the overall circular city transformation, collaboration with city communities and citizens is key. The C40 Cities report highlights the crucial role cities play in combatting climate change, supporting climate action, and reducing urban consumption.

Digital and data-driven solutions within this area have the potential of creating new modes of engagement, increasing awareness for the individual, and providing new ways of presenting incentives for diverse city community groups to get involved.

What are cities' innovation needs?
Engaging citizens in the transformation and development of the city is not a new task for city governments. However, the speed and scale of the circular transformation, as well as the impact on individual citizens, are unprecedented.

We identified the following key action areas for building cities' capacity to engage citizens in the circular transformation:

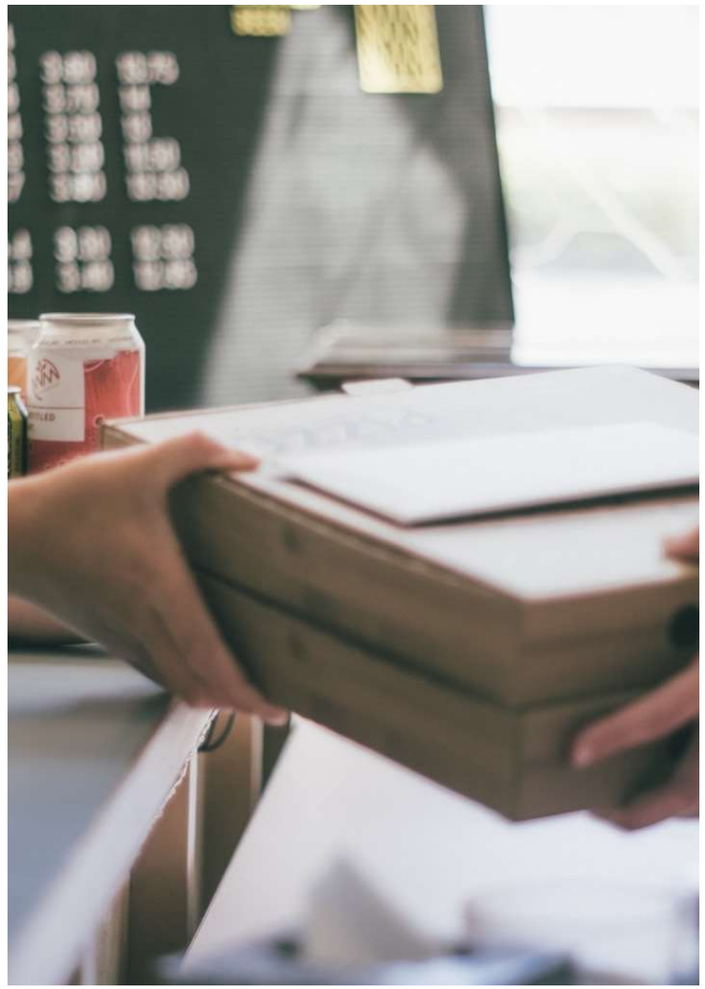
1. Finding ways to support crowdsourcing of data, insights, and circular initiatives from citizens and community groups.

2. Finding ways to engage citizens and community groups directly in the sustainable and circular management of city resources.

3. Finding ways to provide knowledge and capacity to community groups around designing and managing local sharing, reuse, and recycling initiatives, and enabling decentralized local resource symbiosis.

Many cities already have digital platforms for citizen input, but it is essential to create a collaboration in which the city and its citizens work together to achieve their common goals of circularity and low-waste, low-carbon lifestyles. Particularly for consumption behaviors like reuse, repair, and recycling, which are harder to influence solely through regulation, for example when it comes to alleviating single-use plastics or promoting better waste sorting.

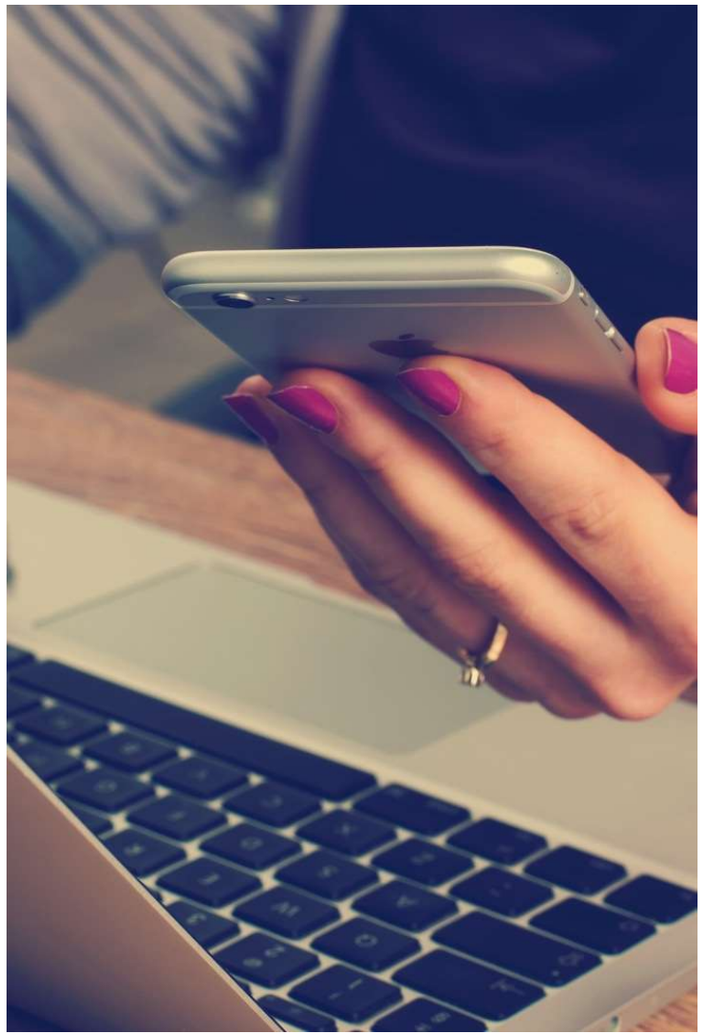
What innovative solutions are available?
Within the digital, circular innovation system there are solutions being developed, within the above action areas.



Go Zero Waste from Spain provides cities with a digital tool to help implement Zero Waste and circular economy policies among citizens based on incentives and gamification. The platform can empower citizens to reduce their waste, climate impact, and encourage them to live more sustainably. Using an app, citizens are motivated to take action on local challenges, such as repairing clothes and small appliances, promoting reusable services, using sustainable transportation, and learning how to reduce food waste.

Another example is *Poket* from Canada. A SaaS platform for cities and organizations to deploy their own crowdsourcing engagements where citizens receive incentives for entering location-specific observations and insights on their phones. For example, self-reported data, citizen-generated data, participatory mapping, or community-driven insights are all viable options.

The hallmark of these solutions and platforms is that their potential can only be unlocked through collaboration across cities, businesses, and community sectors. When they connect cities, companies, citizens, and communities around a shared vision and path towards a circular city, they can be the missing link to reach scale in the joint circular efforts. As such they are enabling solutions that require close city engagement to go the last mile towards a practical and workable solution for cities.



Collaboration with the innovation ecosystem
There are several opportunities for cities to further strengthen their collaboration with the innovation ecosystem and to help drive the maturity of solutions that facilitate citizens and community engagement.

Firstly, cities can identify concrete areas where crowd-sourcing of data and insights can supplement the city-generated public data and help support the overall circular transformation and support circular business models.

Secondly, cities can investigate what incentives can be established to encourage citizen engagement. Either through collaboration with local businesses or through city-driven incentives.

Thirdly, cities can clarify where and how concrete citizen actions - outside of city-governed operations - can contribute to fulfilling the city's overall circular ambitions.

Combined, these activities will contribute to a better understanding of how digital tools are used to engage citizens at a broader scale and to encourage circular action that is meaningful to citizens.

5. KEY LEARNINGS FROM CICC AND PUBLIC-PRIVATE INNOVATION PROJECTS

Circular Innovation City Challenge

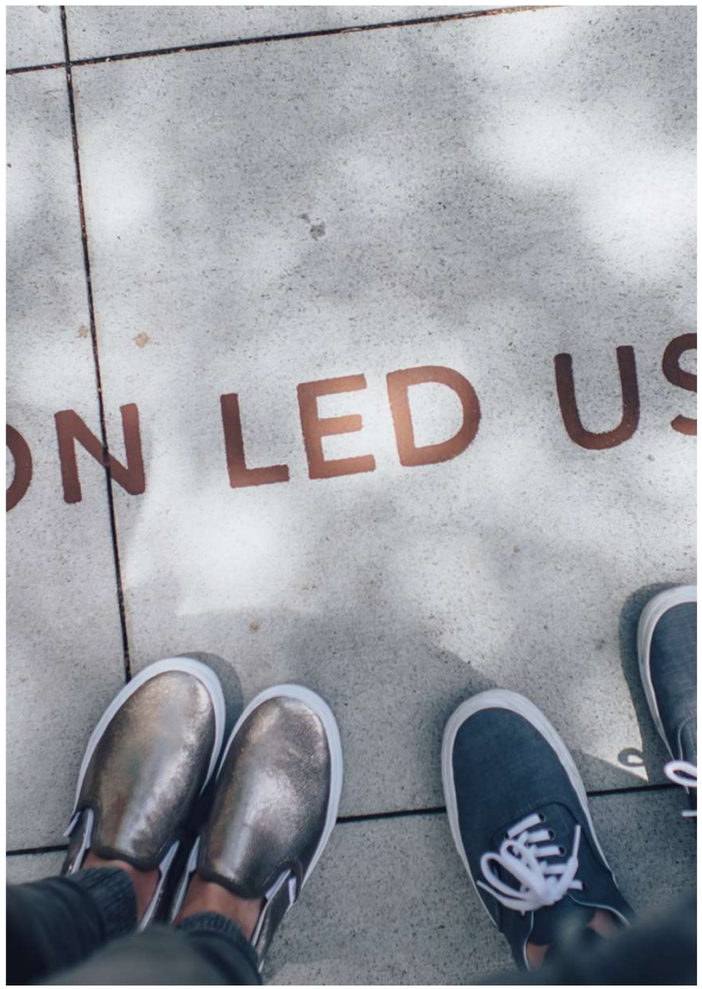
The ambition for the Circular Innovation City Challenge was from the outset to strengthen the collaboration between cities and solution providers from the digital, circular innovation ecosystem. This included:

- Enabling cross-sectoral collaboration between city governments and businesses
- Experimenting with new types of public-private innovation and collaboration
- Leading and gaining experience with the emerging field of data and digital in combination with circular economy

Through the CICC initiative insights and learnings were gained that can strengthen such collaborations going forward. Fundamentally, engaging in an open innovation process such as CICC requires an explorative mindset. The solutions coming out of the innovation ecosystem may not be those that one would expect, and new areas of impact might come to one's attention.

As a result of the CICC process, partner cities have been able to learn about solutions and approaches they did not know existed.

"The expectation was that several products or proposals sent in would be similar to what we are already working on [in Amsterdam] - like material passports, materials banks and marketplaces etc.



[...] I was glad to see the ideas we already knew, but also glad to see a lot of additional ideas we didn't hear of before. And of course, it was great to see the number of ideas that were sent in", says Salomé Galjaard, Strategist for Circular Economy and Sustainability, City of Amsterdam.

Apart from bringing new opportunities, this also spurred the cities to rethink how they structure their circularity work, how they work with other city departments and across silos, and how they share information and ideas internally.

Open innovation in a city context

Planning internal processes and preparing for engagement and implementation of a new solution is normally required for a city government. But this is challenged by an open-ended process when engaging with the innovation ecosystem in an open innovation manner. Therefore, it can be difficult to handle internal processes in the city government in due time, to get colleagues on board and to obtain the mandate to engage in collaborative activities.

This could result in a delay in the results and outcomes of the potential public-private innovation collaboration, and also a delay in moving from exploration to collaboration and implementation, thereby slowing down and standing in the way of the entire process.

”In [public-private] collaboration it is important that the city government takes the first step whenever needed, clearly states the ambitions and show that we are in it for the long term. That we are not going to have different ambitions next year, and sort of put out our hand and say: we really want to do this; build a circular city, facilitate a circular textile industry or reduce food waste for example. If you then really listen to each other and have collaboration as a starting point – not everything has to be solved by putting money on the table let’s say. Finding these shared ambitions is a very important start. We have to take the first step, invite others, really listen and see how we can facilitate the transition with all the different instruments that we have.

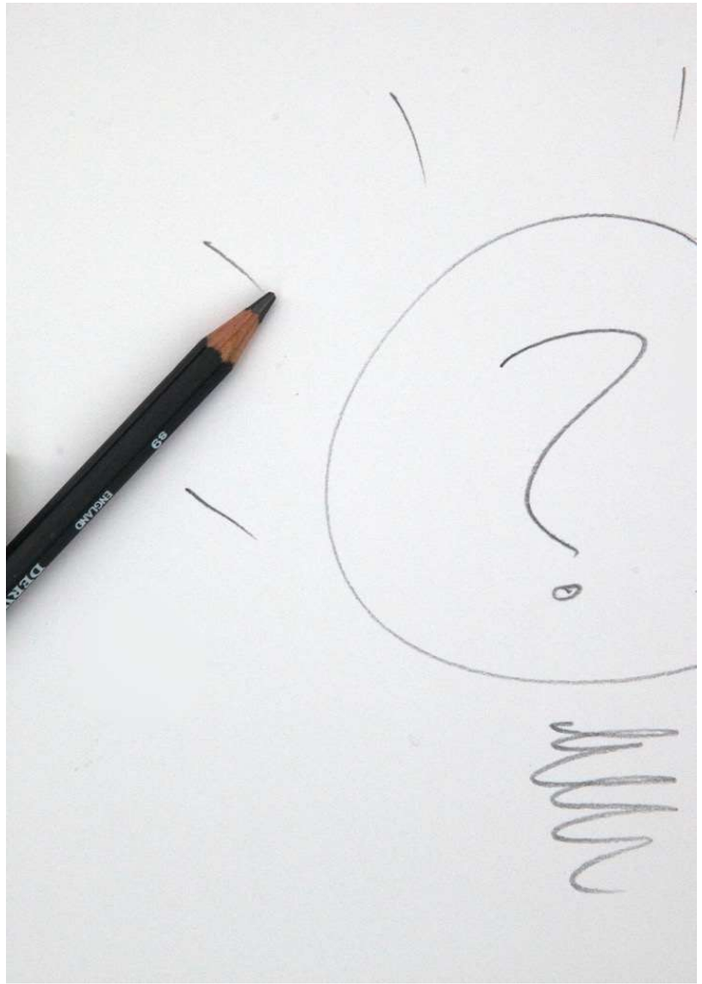
Also within the municipality we should be way better at collaborating. This is a big topic of discussion at the moment. To be aware that we are just one of the players , and that there are other stakeholders that do the bulk of the work. We should be facilitating, maybe pushing a bit to increase the ambitions, but also to let others do what they are good at.”

- Salomé Galjaard, Strategist for Circular Economy and Sustainability, City of Amsterdam.

"What we do most of the time is incremental innovation. Adjusting and changing the existing is what we have the mandate to do. While radical innovation and potential are rarely explored. And when opportunities present themselves, we find that it can be difficult to seize them.", says Kathrine Overgaard Warberg, Program Director of 'Circular Copenhagen', City of Copenhagen.

Digital readiness in city governments
Finally, the partner cities expressed a lack of maturity and readiness to work with data and digital solutions:
*"It's way more difficult to work with data-driven and digital circular solutions than with more traditional processes. This [challenge] puts up a mirror to our internal procedures and to our processes and shows us what we need to transform in the city government. It's very healthy to look into this mirror though,"*says Salomé Galjaard, Strategist for Circular Economy and Sustainability, City of Amsterdam.

Additionally, in the conversations with the cities, they stress the importance of a much deeper understanding of what needs and problems the city government is trying to solve before introducing a digital product or service into the equation.



*"You have the challenge of data availability and data quality on the one hand and then on the other also knowing what to do with that data. There is so much data available, but if we don't ask the right questions, it is useless. So, it is not a matter of generating more and more data, but it is pin-pointing what it is exactly that we need to know or do and then organizing ourselves around that,"*says Salomé Galjaard, Strategist for Circular Economy and Sustainability, City of Amsterdam.

It is important to be clear on what need the data is going to solve, rather than making as much data available as possible.

Naturally, spending more time initially to get a better understanding of the need can limit the immediate opportunities to scale collaborations with digital solution providers. Nonetheless, mirroring, internal transformation, and in-depth understanding of the specific needs in cities are necessary and critical steps in maturing the long-term collaboration between cities and the digital, circular innovation ecosystem, and improving the chances for success.

Moving towards a twin transition
The partner cities all agree that there is a huge and yet untapped potential in the twin transition of the digital, data-driven combined with the circular realm.

For the participating city governments this is also a complex transition that requires; A next level of data management, data availability, and new ways of working together - both internally and with external stakeholders and ecosystems.

"As with sustainability, digitisation in general touches upon all departments and everything we do. And that makes it complex. Combining sustainability and digitisation might make it even more complex, because once you try to organize it by person or department it will not give you a complete picture. In order to implement the digital solutions that will have a systems' impact - and then I'm not talking about just an individual app - but real system impact, it is extremely complex, and you will have to organize a lot of different people in the organization. You will encounter difficulties like data management, data availability, and that people will have to work in a different way, procedures will have to be adapted. It needs to be done though if we want to achieve our goals", says Salomé Galjaard, Strategist for Circular Economy and Sustainability, City of Amsterdam.

So, for city governments to succeed in the twin transition, they must adapt to the digital reality and also explore and test new ways of working across public-private, stakeholder landscapes, value chains, and city ecosystems.

6. NEXT STEPS

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Participating cities in the Circular Innovation City Challenge have pointed to open innovation processes and city-city learning as key aspects of their future circular transformation journey.

While CICC brought concrete solutions to the table, it still only scratches the surface when it comes to the digital, circular solutions needed going forward. As the cities individual experiences in collaborating with digital and data-driven circular solutions expand, so does the opportunity to further share those learnings and gained know-how among networks of committed circular cities.

As the interviews revealed, the partner cities in CICC are hard at work in the city's "engine room." And they are eager to share experiences and insights with other cities at the same stage.

Hopefully, this will help digital, circular solutions to scale more easily across cities and regions. If cities with similar ambition levels and overlapping goals can share lessons and become more prepared for public-private partnerships, solution providers can utilize experiences gained from one city in their engagement with another, and thus increase the impact of solutions.

The solutions identified in the Circular Innovation City Challenge demonstrate an innovation ecosystem that is increasingly attentive to the possibilities inherent in digital and data-driven technologies.

The shift towards integration of digital and data-driven technologies into the circular domain will undoubtedly be even more extensive in the future. Some of the innovation areas lying ahead might be within:

•Further integrating sensor and IoT-based solutions to allow for more precise data on materials, products and their flow across the supply chain

•Providing data analytics with a focus on circularity to support the development of new circular business models

•Supporting citizen and community engagement tools to shape circular behavior and facilitate the shift towards low-carbon lifestyles

•Enhancing digital integration of capabilities, e.g., data, marketplace and logistics to create new value chains designed around circular resource flows

•Creating smart products, tracking and traceability solutions to support circular business models around reuse, repair and product-as-a-service.

Core to digital and data-driven, circular business models and solutions is the sharing of data between actors in the city and throughout the value chain.

In the report '*Looping on data - Best practices and barriers for sharing data in circular business models'* the Danish Business Authority, in collaboration with Ellen MacArthur Foundation, examine the barriers that public and private sectors need to overcome, and provide examples of how using data to promote circularity can be supported by a variety of initiatives and supporting digital infrastructure.

However, the success of future innovations cannot be solely determined by technical challenges alone. It depends equally on the ability of cities and innovation ecosystem stakeholders to jointly discover the best path to bring future innovations from the lab into the complex everyday lives of hard-working and ambitious cities across the globe.

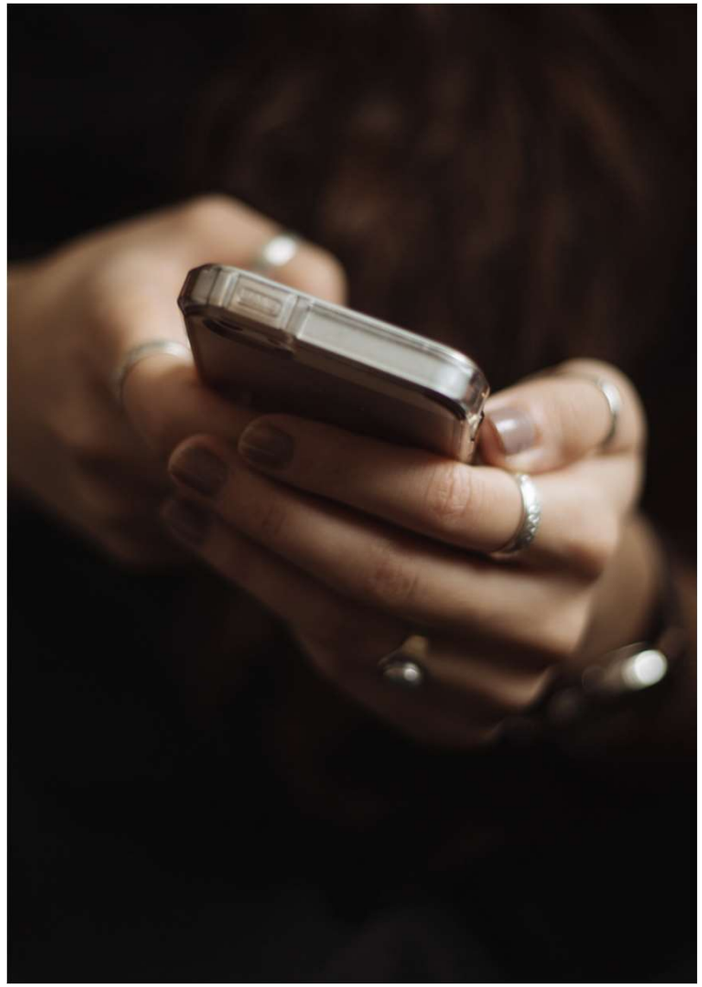
6. BACKGROUND & METHODOLOGY

Circular Innovation City Challenge

About Circular Innovation City Challenge
In a joint effort, the cities of New York, Toronto, Amsterdam, Glasgow, and Copenhagen sought innovative digital and data-driven solutions from around the world to create more circular and thriving cities. Digital solutions to create a truly circular city where businesses and people work together to make the most of our scarce resources. A thriving city where designing for circularity means generating new jobs and opportunities for all citizens and communities.

The Circular Innovation City Challenge has been a global call to action for innovators and entrepreneurs with digital and data-driven solutions to accelerate circularity. Together with the five partner cities, the DDC, Leaderlab, the Danish Business Authority, and the Ellen MacArthur Foundation invited and encouraged all types of innovators globally to apply and help cities find innovative solutions to create more circular and thriving cities. Fortunately, we found that there are already several innovative solutions on the global scene within the digital and circular economy fields.

Find more information about CICC here:
www.circularinnovation.city



The challenge has resulted in following:

- More than 137 digital and data-driven circular solutions were submitted from more than 26 countries across the five continents
- 15 finalists pitched their digital and data-driven solutions for cities and international jury members
- 5 winners were selected by our international jury. Get to know the winners here.
- The five winning innovators are now exploring public-private innovation collaboration opportunities with the cities

The methodology behind the cases
The three cases from the Circular Innovation City Challenge are based on interviews with partner cities and winning innovators participating in the selected public-private innovation collaboration projects.

In the two cases focusing on the specific project collaborations both cities and innovators are interviewed, with the interview zooming in on the perspective of the interviewed part.

We have posed the same questions for both the selected city and the innovator engaged in the project. The third case is taking a broader look at the field of digital and data-driven solutions in circular economy and the learnings gained from working with public-private innovation within this field.

The empirical data for the three cases are drawn from 5-6 interviews and other secondary qualitative sources such as background information and meetings held with the partner cities throughout this process, as well as insights and perspectives presented by the cities during panel debates at public events in 2021. The format of the interviews was a semi-structured interview held as an informal conversation, each one hour. Each interview was recorded for internal purposes.

This particular case is generated based on interviews with:

- Salomé Galjaard, strategist of circular economy and sustainability, City of Amsterdam
- Kathrine Overgaard Warberg, Programme Director of Circular Copenhagen, City of Copenhagen
- Colin Hughes, Policy Officer - Sustainability, City of Glasgow

And valuable insights and feedback from the CICC Jury Members.

Partner Cities in the Circular Innovation City Challenge

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