



OECD – Nordic Innovation webinars on the circular economy in cities and regions

31st March 2020

HIGHLIGHTS



Table of contents

Introduction	4
Spotlight on the Circular Economy in Cities and Regions	5
Launch of the OECD reports on the Circular Economy in Cities	5
Highlights from a peer reviewer: the City of Amsterdam, Netherlands	7
The next generation of circular case studies	8
Highlights from Nordic Countries	11
What's new on the circular economy in cities and regions and how to measure circularity?	13
Key Findings from the OECD Survey on the Circular Economy in Cities and Regions and the OECD framework to measure circularity at the local level	13
Measuring the circular economy	14
Discussion	16
Questions and next steps	18

Takeaways

1. The circular economy represents an opportunity for tackling problems of cities, from unemployment to ageing societies, in a cross-cutting, systemic and collaborative way.
2. In the post-COVID-19 scenario, the circular economy is an opportunity for a new way of thinking and an example of resilience in the face of future crises.
3. It is key to rethink the current model based on increasing consumption and to increase efforts towards efficient secondary material markets, which are still poorly developed.
4. The circular economy plays a crucial role in achieving climate and environmental objectives, as well as social and economic benefits (e.g. job creation and cost savings).
5. The private sector has a key role to play in transitioning to a circular economy and can benefit from new business models, green jobs and high quality social employment.
6. Cities can lead by example through all available policy instruments from urban planning, to facilitating dialogue within the city, as well as providing financial support to connect different sectors and steering the market through public procurement.
7. Cities and regions need to be aware of limitations of the circular economy; even in perfect material loops, a quality loss still exists.
8. Circular economy knowledge sharing through education and vocational training can contribute to build a circular society.
9. Beyond design and waste management, an intelligent and optimised use of goods should have a greater relevance in the policy agenda related to a circular economy.
10. Circular economy indicators should take into account the “system” approach, be harmonised across cities and regions and be able to measure the life of products, beyond their production and final disposal.

Introduction

The OECD Centre for Entrepreneurship, SMEs, Regions and Cities (CFE) held two webinars on the Circular Economy in Cities and Regions on 31 March 2020 as part of the [OECD Programme on the Circular Economy in Cities and Regions](#). The webinars took place in lieu of the 2nd OECD Roundtable on Circular Economy in Cities and Regions, which was originally scheduled in Oslo (Norway) in collaboration with Nordic Innovation and was postponed due to the COVID-19 crisis. More than 500 participants from 35 countries from the public, private, academic and non-for profit sectors attended the webinars, which were moderated by Ms. Aziza Akhmouch, the Head of the Cities, Urban Policies and Sustainable Development Division in the OECD's CFE.

- The Webinar “[Spotlight on the circular economy in cities and regions](#)” (morning of 31 March 2020) showcased circular economy initiatives in various cities, such as [Groningen](#) (Netherlands), [Umeå](#) (Sweden), [Valladolid](#) (Spain), [Glasgow](#) (UK), [Granada](#) (Spain), as well as from [Ireland](#), as case studies of the OECD Programme on the Circular Economy in Cities and Regions. Amsterdam (Netherlands) and Oslo (Norway) shared their experiences and future plans, while Nordic Innovation provided an overview of circular economy strategies in Nordic countries.
- The Webinar “[What's new on the circular economy in cities and regions and how to measure circularity?](#)” (afternoon of 31 March 2020) introduced the findings from the OECD Survey to 45+ cities and regions and presented the OECD proposed Scoreboard to advance the measurement side. The discussion benefited from interventions by Mr. Arturo de la Fuente (European Commission) and Ms. Ashima Sukhdev (Ellen MacArthur Foundation), as well as Prof. Walter Stahel (Product-Life Institute), Mr. David McGinty (PACE) and Mr. Anders Wijkman (Climate-KIC).

As a next step, the [2nd Roundtable on the Circular Economy in Cities and Regions](#), will take place in autumn of 2020 (date TBD).

Spotlight on the Circular Economy in Cities and Regions

Launch of the OECD reports on the Circular Economy in Cities

The Circular Economy in Umeå, Sweden

Ms. Janet Ågren, Deputy Mayor, City of Umeå, Sweden [[PPT available here](#)], provided an overview of Umeå's recent efforts to move towards a circular economy, as analysed in the [OECD report on the Circular Economy in Umeå](#). She also presented some ways forward based on the policy recommendations. By 2050, Umeå is projected to host 200 000 inhabitants, increasing needs for infrastructure and resources demand. This represents a challenge, but also an opportunity, in terms of making the city more sustainable and resilient.

The circular transition in Umeå aims to engage all of the relevant stakeholders from the private sector, civil society and academia. The active participation of 120 stakeholders during the OECD Policy Dialogue is a good example of this will. According to Ms. Ågren, the private sector has a key role to play in this transition and can benefit from it in the following ways: i) Several large companies at the local level are already working on sustainable production and are benefiting from a joint collaboration on circular economy with the municipality; ii) SMEs have great potential in the area of sharing economy, and with the required circular approach, they will play a key role in the city's transition; iii) Business incubators are currently supporting green, sustainable and circular ideas and the municipality expects to foster the participation of new entrepreneurs in the transition. Moreover, accounting for transport routes that cover the north-south and west-east directions, Umeå is strategically located for the private sector and industry to carry out their activities. Opportunities for increasing locally produced food are foreseeable through a collaboration between Umeå and the Västerbotten Region.

“Umeå needs to close the loop to reach its local environmental targets. The circular economy will play a crucial role to meet these goals.”

Ms. Ågren referred to some of the OECD policy recommendations that are already under implementation. For instance, the Business Development Department of the Municipality of Umeå will take up a co-ordination role to develop and implement circular economy initiatives. Furthermore, Umeå is exploring opportunities for mapping existing circular initiatives at the regional level, while Umeå University will work on metabolism analyses in the region. The municipality is strengthening its public procurement through pilot tests and fostering a circular economy culture by working closely with all relevant stakeholders in the private sector, academia and civil society.

Ms. Ågren concluded her intervention by stating that despite the current uncertainty generated by the COVID-19 crisis, Umeå will continue working on the opportunity to leave behind the business as usual approach and move towards a circular system. As such, the city council has set in new environmental and

climate objectives, which are expected to support the transition to a circular economy. Furthermore, the city council will decide on a new waste management strategy in late 2020.

The Circular Economy in Valladolid, Spain

Ms. Rosa Huertas Gonzalez, Director of the Innovation, Economic Development, Employment and Commerce Department, City of Valladolid, Spain [[PPT available here](#)], shared the rewarding experience of taking part in the [OECD Programme on the Circular Economy in Cities and Regions](#), which resulted in the [OECD report on the Circular Economy in Valladolid](#), Spain. The City of Valladolid joined the programme to develop a framework encompassing the existing initiatives in the field of the circular economy and to integrate them within a long-term vision.

Ms. Huertas provided participants with an overview of the state of the art of the circular economy in Spain and summarised some initiatives carried out at various levels of government. Both the national and the regional governments have developed circular economy strategies that are yet to be approved: the [Spanish Circular Economy Strategy to 2030](#) (2018) and The Castile and León 2020-30 Circular Economy Strategy. At the local level, the city council showed its political commitment towards the circular economy by being one of the first signatories of the [Seville Declaration in 2017](#).

Ms. Huertas stressed that the circular economy in Valladolid is a shared responsibility and a driver to tackle many challenges: environmental pollution, unemployment, an aging population, and the “talent drain”, as young people leave the city after completing their studies. Therefore, the circular economy represents an opportunity to tackle these problems in a cross-cutting, integrative and collaborative way.

The promotion of circular practices in local companies, business and entrepreneurial ecosystems is key for Valladolid, as it can bring great opportunities for new business models, green jobs and high quality social employment. The City of Valladolid, led by the [Agency of Innovation and Economic Development](#), has prioritised a circular economy approach within the city's strategy as a key factor to create jobs and stimulate innovation.

Ms. Huertas claimed that the policy dialogue that gathered 50+ stakeholders has provided Valladolid City Council with a wide variety of views and contributions for the development of the future circular economy strategy. The stakeholders involved represented different departments of the city council, national and subnational authorities, academia, civil society, operators (water, energy and waste) and entrepreneurs. As the circular economy is a shared responsibility, it is important to count on contributions from all stakeholders and to have a complete vision of their needs and preferences. These stakeholders, together with citizens, have a strong influence upon the current production and consumption patterns through their purchasing decisions.

Ms. Huertas also pointed out that the City of Valladolid would benefit from a more effective co-operation between public and private sectors, while strengthening coherence across current and future policies. Furthermore, scaling up and moving from experimentation to real business are also key elements for the circular economy to take place. This is particularly important for Valladolid due to the great number of projects that are led at the neighbourhood or individual scale. Thus, scaling up these initiatives will result in a positive impact on a social, economic and environmental basis.

“The transition to a circular and resilient economy is now more necessary and possible than ever before.”

Finally, referring to the 19 OECD policy recommendations for the City of Valladolid, Ms. Huertas highlighted the relevance of the promotion of a circular vision by leading by example, the implementation of Green Public Procurement and the creation of a circular economy strategy that can deliver job creation. Ms. Huertas concluded by emphasising the long road ahead in the transition to the circular economy, while stating that the COVID-19 crisis shows the feasibility of modifying the current economic system and highlights the resilience of both citizens and entrepreneurs.

The Circular Economy in Groningen, Netherlands

Mr. Anne Helbig, Policy Advisor, City of Groningen, Netherlands [[PPT available here](#)], showed his gratitude to the OECD for the opportunity for Groningen to join the [OECD Programme on the Circular Economy in Cities and Regions](#), which resulted in the [OECD report on the Circular Economy in Groningen](#), Netherlands. This collaboration provided the City of Groningen with the opportunity to obtain an in-depth analysis of Groningen's transition to a circular economy, insights about the progress and the work of other cities and regions and specific policy recommendations for the development of a circular economy strategy.

Groningen embarked on the path to a circular economy in 2018. The city set the ambition to become waste and carbon neutral, respectively, by 2030 and 2035. It also implemented initiatives on local food exchange and circular water management.

However, due to the fragmentation across existing initiatives, Groningen lacked a coherent and global ambition. Consequently, the city council took the decision to make circular economy a priority and identified three strategic areas in its circular vision: i) public procurement; ii) waste management; and, iii) knowledge sharing.

“As a municipality, we want Groningen to become a role model. We cannot achieve it on our own, as we need to engage research institutes, the private sector and citizens.”

The [OECD report on the circular economy in Groningen](#), Netherlands, led to the development of a Roadmap to Circular Economy in Groningen, based on the following objectives:

- Enable citizens and the private sector to develop a circular future.
- Become a role model for citizens and the private sector in embracing circular economy principles in daily activities. The implementation of a Green Public Procurement model in the municipality is a good example of the way the municipality can “lead by example”.
- Co-operate with all the relevant stakeholders (knowledge institutions, citizens and the private sector).
- Consider waste as a resource. A good example of this is the Circular Economy Hub, which is an incubator space for circular small business and start-ups, as well as an information centre and repairs hub. The Hub aims to close those raw material cycles to the maximum extent possible.
- Support the transition to a vision that maximises the use of materials and products rather than ownership. For instance, the City of Groningen carries out Green tenders to replace office furniture after ten years of use in the whole municipality.
- Commit to high quality reuse.

The Roadmap focuses on the following areas: 1) Energy; 2) Water and sanitation; 3) Biomass and food; 4) Waste; 5) Construction and demolition; and 6) SMEs.

Highlights from a peer reviewer: the City of Amsterdam, Netherlands

Ms. Eveline Jonkhoff, Strategic Advisor and Program Manager on Circular Economy, City of Amsterdam, Netherlands [[PPT available here](#)], participated in the [OECD Programme on the Circular Economy in Cities and Regions](#) as a peer reviewer of two case studies, Valladolid and Granada, Spain. The role of the peer reviewer is to share experiences, provide good examples and pitfalls to avoid. Ms. Jonkhoff highlighted some key aspects observed during the policy dialogues, such as the great willingness to learn from all cities involved, the political commitment and leadership of local authorities and the active role played by universities and innovative businesses. This high level of involvement is key, as cities have a privileged position to build alliances and partnerships between municipal departments, municipalities, SMEs, private companies and universities. These experiences and perspectives observed during the policy dialogues are good examples of how the transformation to a circular economy system can happen.

“Every city has a unique position to start the transition to the circular economy and the drivers, needs and chances to become a circular city are common. It is inspiring to learn from unique circular approaches and combine them.”

When cities and regions embark in the circular transition, they need to be aware of their starting point, as well as be able to assess the strengths and opportunities of the city. At the beginning of the transition, cities face several challenges as they have to discuss, reflect and interact with stakeholders in order to develop a holistic strategy. According to Ms. Jonkhoff, since the beginning of the transition, cities have to lead by example through all the available policy instruments. This set of tools include urban planning, facilitating dialogue within the city, providing financial support to connect different sectors or steering the market to be circular way through public procurement.

Ms. Jonkhoff argued that cities are already able to implement a variety of policy instruments to prepare for their transition and, consequently, they can move towards transitioning to a circular economy from their unique position. Regardless of their level of advancement, cities can benefit from knowledge sharing with other cities. Ms. Jonkhoff invited all the cities to draw inspiration from the experiences shared by the Case Studies of the [OECD Programme](#) and to apply a “learning by doing” approach in their future transitions.

Ms. Jonkhoff shared the approach of the City of Amsterdam, whose ambition is to become a “thriving, regenerative and inclusive city for all citizens, while respecting the planetary boundaries.” Through the application of circular principles, Amsterdam aims to change the current production and consumption system while improving the social and economic situation of its citizens.

Amsterdam expects to reduce its primary resource use by 50% by 2030 to be on track to become 100% circular and climate neutral by 2050, at the latest. When Amsterdam started the transition in 2015, two main value chains were prioritised—the built environment and food and organic waste streams. This prioritisation resulted in 70 projects by 2017.

Based on the commitment of a variety of stakeholders, from the private sector to different municipality departments, the City of Amsterdam developed the [Building Blocks for the New Strategy Amsterdam Circular 2025 in 2019](#). During the same year, the city carried out 116 new circular projects in research, innovation and the scaling up of existing initiatives.

Ms. Jonkhoff also announced the launch of the [Amsterdam Circular 2020-2025 Strategy](#), which takes into account “consumer goods” as an additional field compared to previous strategies. The initiative gathers inputs and visions of stakeholders from the private sector, R&D institutions and citizens and applies a “learning by doing” approach. The initiative calls for the implementation of 200 related projects within the circular economy of Amsterdam over the next years. Furthermore, in order to measure progress, the City of Amsterdam has recently launched a [monitoring framework](#) to determine the social, economic and environmental impacts of the transition. The monitoring framework includes input and output indicators and measures the wellbeing of citizens.

Finally, in collaboration with Prof. Kate Raworth ([Doughnut Economics](#)), C40 and Circle Economy, the City of Amsterdam has recently launched [The Amsterdam City Doughnut](#), which is included in the *Thriving Cities Initiative* of C40. This initiative aims to analyse Amsterdam’s impact locally and globally from social environmental perspectives.

The next generation of circular case studies

The City of Glasgow, United Kingdom

Ms. Cheryl Robb, Cities & Regions Manager, Zero Waste Scotland, United Kingdom [[PPT available here](#)], shared the latest initiatives of the City of Glasgow (United Kingdom), which will be part of the next generation of case studies of the [OECD Programme on the Circular Economy in Cities and Regions](#).

Glasgow's circular path has been driven by a partnership between [Zero Waste Scotland](#), a non-profit environmental organisation funded by the Scottish Government and the European Regional Development Fund, [Glasgow City Council](#) and the [Circular Glasgow](#) initiative, which is managed by the Glasgow Chamber of Commerce.

Zero Waste Scotland aims to develop a network of connected circular cities throughout Scotland to provide opportunities to learn from international and national best practices.

The first steps in the circular economy in Glasgow took place in 2015 when Zero Waste Scotland, Glasgow City Council and Circular Glasgow partnered to conduct the [Circle City Scan of Glasgow](#) to identify circular economy opportunities for the City of Glasgow. These organisations have been working together with businesses and other stakeholders to encourage and support the development of circular approaches. By participating in the OECD Programme, Glasgow aims to identify the main gaps of the city and adopt a more strategic approach to start influencing the local policy.

“The participation of the City of Glasgow within the OECD Programme partnership can be a driver for change and a great support for other cities to accelerate their transition to the circular economy.”

Ms. Robb summarised the main features of Glasgow's circular transition. In 2018, during the [Circular Economy Hotspot Scotland](#) Conference, the Glasgow City Council committed to develop a circular economy roadmap. For the design of the roadmap, a variety of groups had already been targeted within the private sector, such as food and beverages, construction, manufacturing and events. Prior to the Policy Dialogue with the OECD, the City of Glasgow conducted a mapping of stakeholders working on the circular economy, from universities and community organisations, to small and large companies in the private sector.

The strong engagement with the private sector is driven by the City of Glasgow's target to make 6% of total employment related to the circular economy. In addition to the private sector, the city aims to embed a circular approach on education in collaboration with universities and institutions.

Ms. Robb stated that the celebration of COP26 in Glasgow (postponed due to the COVID-19 crisis), the development of the Circular Economy Roadmap in 2020, the Declaration of Climate Emergency and the Net Zero Target for 2030 set by the city council in 2019 have sharply accelerated the pace of change in the city.

Ms. Robb concluded by stressing the importance of sharing knowledge from the policy dialogue with the OECD across cities in Scotland.

The City of Granada, Spain

Mr. Agustín Castillo Martínez, General Coordinator of Public Works and Urban Development, City of Granada, Spain [[PPT available here](#)], thanked the OECD on behalf of the City of Granada for the opportunity to participate in the [OECD Programme on the Circular Economy in Cities and Regions](#). The collaboration with the OECD, started in 2018, gathered peer reviewers and 54 stakeholders to enhance the circular economy culture in the city.

Mr. Castillo provided a snapshot of the main socio-economic and environmental features of the City of Granada. The city hosts 232 000 inhabitants, or 530 000 inhabitants if considering the 35 municipalities of the metropolitan area. Granada is home of one of the oldest universities of Spain, which receives more than 65 000 students and 3 000 teachers every year. It is also well known for its cultural heritage and relies on tourism as a pillar of its economy. The city hosts the UNESCO heritage sites of the Alhambra and the Albacín, which welcome more than three million tourists every year.

“The circular economy demands a cultural change, and breaking with all paradigms, changing our way of acting and analysing problems in order to obtain different results that entail social, environmental and economic benefits.”

The City of Granada adhered to the [Declaration of Seville](#) in 2017, a political agreement that committed to initiate procedures encouraging a circular economy in public and private city activities. Granada aims to become a zero waste, zero energy balance and zero emissions city. Through the Municipal Water Supply and Sanitation Company, EMASAGRA, Granada focuses particularly on the role of water within the circular economy. The recent transformation of the wastewater treatment plant into a bio factory resulted in the increased reuse of water and increased energy generation. The Granada bio factory, which is included in the European Circular Economy stakeholder platform, is an example of how a facility can evolve from being an energy consumer to an energy producer. It generates resources from what was previously sent to the landfill and brings about the reuse of water. The city will implement further communication campaigns for awareness raising on waste management.

The City of Granada is part of the European Commission “Digital City Economic Transformation Initiative”, along with fifteen other European cities, including three in Spain. The initiative fosters complementarities and synergies between existing policies involving digital priorities (e.g. EG2020 Strategy Granada 2020, Granada Human Smart City, EDUSI Granada Strategy and Granada Smart City Strategic Plan) and newly planned policy actions supporting digital transformation. The digital transformation strategy of Granada will be implemented through several activities, including the creation of a Citizenship Innovation Laboratory that will define and detail the open data strategy and start deploying the digital innovation hub in the City of Granada.

The Government of Ireland

Ms. Bernie Kiely, Assistant Principal, Department of Communications, Climate Action & Environment, Ireland [[PPT available here](#)], opened her intervention by expressing her enthusiasm about the opportunity to join the [OECD Programme on the Circular Economy in Cities and Regions](#) and welcomed the shared experiences and lessons learnt from other case studies. In fact, many of the lessons shared during the webinar are applicable to the case of Ireland, including the need to implement a strategic approach. The current COVID-19 crisis is an opportunity to strengthen resilience and sustainability in cities and countries at large.

“The circular economy represents an opportunity for a new thinking and an example of great resilience in the face of future crises.”

Ireland is developing its circular economy transition. The country has a need to consolidate the circular economy due to the lack of recognition across all political and economic sectors, as shown by a 2019 [survey](#) by the Environment Protection Agency (EPA) and the Irish Business and Employers Confederation (Ibec), which concluded that only approximately 50% of Irish business leaders understood the meaning of the circular economy. Therefore, showing the potential of circular economy gains for the Irish economy and the environment becomes essential. A public consultation on the forthcoming circular strategy recently occurred and it is currently being assessed. Waste management, recycling, reuse and materials maximisation will be key topics of the strategy.

Ms. Kiely introduced two inspirational circular economy initiatives that have taken place in Ireland, the Rediscovery Centre and Circuleire:

- **The Rediscovery Centre** provides educational programmes and trainings on reuse, repair, resource efficiency and lifecycle design. It functions as an umbrella organisation for four social enterprises that address the reuse and repair of the following product categories: Furniture, Paint, Bicycles and Fashion.
- **Circuleire** is a recently launched, cross-sectoral, industry-led innovation network dedicated to accelerating the zero-carbon circular economy in Ireland. The project has been launched by the Irish Manufacturing Research (IMR) in collaboration with the Department of Communications, Climate Action and Environment (DCCAE), the Environmental Protection Agency (EPA) and EIT Climate-KIC.

Ireland's participation in the OECD programme will take place at the same time as the review of its national waste policy and the new national circular economy strategy. In this regard, the Irish Government aims to reflect the ambition of the recently published European Commission [Circular Action Economy Action Plan](#) in the strategy, which is one of the main drivers for the Irish transition to a circular economy.

Highlights from Nordic Countries

The City of Oslo, Norway

Mr. Håkon Jentoft, Senior Executive Officer, International Relations, City of Oslo, Norway [[PPT available here](#)], shared the experience of the City of Oslo in the transition to the circular economy. The City of Oslo, winner of the European Green Capital Award 2019, has a green policy tradition. The city expects to launch a circular economy strategy by the end of 2020. This initiative will build on already existing city strategies and will analyse how decisions taken at the city level might have an impact on suppliers, production and delivery of services to citizens.

“As a city, we want to focus on the way our daily decisions are influencing our suppliers and the delivery of services. We want to discover the role of the city within the circular economy context.”

Mr. Jentoft highlighted some key priorities for the forthcoming circular economy strategy:

- **Green public procurement.** As for many other cities, public procurement is one of the main policy tools of Oslo. Its development will be essential for the success of the strategy.
- **Reduced material consumption.** The City of Oslo has already developed a strategy to reduce material consumption within the municipal administration; it also aims to influence citizens by encouraging consumption reduction, sharing and reuse.
- **Resource management.** Mr. Jentoft highlighted the importance of considering resource management beyond waste produced in cities, while including the metabolism and the flow of urban resources in this field of management. The City of Oslo aims to explore the resource flows of the city and to make this research accessible for as many stakeholders as possible.
- **Zero-Emission City by 2030.** The City of Oslo set the target to become a zero emissions city by 2030. The future circular economy strategy will be a key driver to achieve this target. However, it is not enough to simply consider the emissions within the city, but also the way the city itself through its economic activities influences the surroundings.

Nordic Innovation

Mr. Elís Benediktsson, Senior Advisor, Nordic Innovation [[PPT available here](#)], shared the experiences of Denmark, Finland, Iceland, Norway and Sweden (the Nordic countries) on their transition towards the circular economy. He expressed his gratitude toward the OECD for the collaboration and co-organisation of the 2nd Roundtable in the Circular Economy in Cities and Regions that was postponed due to the COVID-19 crisis.

The Nordic countries have been leaders in climate change policies locally and globally. While historically the focus of Nordic countries has been on energy emissions, the emphasis on material production has increased recently, with attention on big polluter sectors (e.g. food, steel, cement and plastics). Other initiatives have included the industrial symbiosis, water, green construction and green public procurement, both at the municipal and national levels.

“The Nordic countries are and have been amongst the global leaders in the fight against climate change. This leadership has been mainly based on strict emission targets and decarbonisation incentives.”

Mr. Benediktsson emphasised the major role carbon neutrality has played for progress within the Nordic Council and the Nordic Council of Ministers. All the Nordic countries have established national net zero emission targets and carbon and fossil fuel free goals, by between 2040 and 2050.

Increasingly, private and public sectors are showing interest towards the circular economy. In Nordic countries there are various examples of initiatives and strategies:

- **Finland** has been and continues to be a frontrunner of the promotion of the circular economy among Nordic countries and internationally. This position has primarily been driven by SITRA, the Finnish innovation fund, and has resulted in the well-established World Circular Economy Forum. In 2014, SITRA launched a report identifying key opportunities for the country ([The opportunities of a circular economy for Finland](#)) and in 2016, it published the world's first national circular economy roadmap, [Leading the cycle – Finnish roadmap to a circular economy 2016-2025](#). In 2018, the Finnish Government and other national institutions launched a report including a set of economic instruments for the circular transition, *Economic instruments in value chains of circular economy*. In 2019, Finland published a second version of the roadmap, [The critical move – Finland's roadmap to the circular economy 2.0](#).
- **Denmark** released the [Danish National Strategy for Circular Economy](#) in 2018, and in the same year, financed 11 initiatives on circular businesses and a circular society. The Green Transition task-force of the Danish Business Authority conducted a series of analyses on resource efficiency in 2014. The Ellen MacArthur Foundation launched a study in 2015 titled the [Potential for Denmark as a circular economy](#).
- **Sweden** will launch its national strategy in September 2020, while it has already developed a number of key strategies on sustainability, consumption, cities and other areas. Moreover, in 2018, the Swedish government created the [National Delegation for the Circular Economy](#), a public-private advisory board for the government that focuses on plastics, public procurement and design. The Swedish innovation agency, [Vinnova](#), is also currently financing 100+ projects in the field of circular economy.
- **Norway** is working on the development of its circular economy strategy to be launched in December 2020. In 2014, it set a national cross-sectoral strategy for biogas and, in 2016, the Waste and Recycling Industry launched a roadmap for the circular economy. The *Klimakur 2020* investigation has provided 160 defined public measures for the main Norwegian sectors. Finally, together with 12 public and private actors, Circular Norway is leading the [Circularity Gap Report Norway](#).
- **Iceland** currently has no national strategy for the circular economy, but for several decades it has led strategies worldwide on green energy, focusing especially on hydro and geothermal energy. Furthermore, Iceland has developed several projects, including the *Iceland carbon capture project*, which turns CO₂ into rock, and *The National programme for the prevention of waste 2016-2027*, currently under implementation.

Mr. Benediktsson concluded his intervention by describing the work of the Nordic Council of Ministers (NCM). The NCM has included circularity in the recommendations for a common Nordic public procurement policy. As part of the NCM, the [Nordic Working Group for Circular Economy](#) works on the development of indicators for circular economy. Finally, Nordic Innovation is developing the [Nordic Sustainable Business Transformation](#) programme to foster circular business models in cities.

What's new on the circular economy in cities and regions and how to measure circularity?

Key Findings from the OECD Survey on the Circular Economy in Cities and Regions and the OECD framework to measure circularity at the local level

Ms. Oriana Romano, Head of Unit, Water Governance and Circular Economy, OECD [[PPT available here](#)], reported on the preliminary results of the Survey on the Circular Economy in Cities and Regions, which gathered 46 answers to date (43 cities and 3 regions), mostly from Europe, but also from the Americas, Oceania and Asia. Responses have been collected from cities and regions in different stages of advancement towards the circular economy (Newcomers, In Progress, and Advanced). According to the results:

- Climate change is the main driver for the circular transition (72% of respondents), followed by global agendas (52%) and economic change (50%). Research and development, technical development and new business models are also key drivers for the transition.
- Several circular economy initiatives are flourishing, as a total of 25 out of 46 cities/regions have circular economy initiatives in place, and another 17 are in development.
- Waste (76%) is the most common sector in circular economy initiatives, followed by the building sector (63%), land use (57%), food and beverage (54%), water and sanitation (54%), and the manufacturing industry (48%).

According to the survey's results, cities and regions are working through a broad variety of tools. For instance, pilots and experimentations are applied in the 76% of cases, while there is a wide use of digitalisation (i.e. the measurement of separate waste collection, the collection of real time data, the use of sensors and blockchain technologies). Furthermore, 41% of cities (e.g. Phoenix, Toronto, Austin and Melbourne) and regions have a dedicated budget for the transition to circular economy and 56% of cities and regions are developing capacity building programs inside and outside the municipal departments. There is an increasing trend in the inclusion of circular economy related criteria in public procurement tenders (47% of respondents).

Survey respondents were invited to self-evaluate vis-a-vis their levels of advancement towards the circular economy transition. As a result, 53% of them find themselves to be *Newcomers*, 32% are *In progress* and only 12% of respondents saw themselves as *Advanced*.

Regarding the barriers to moving towards a circular economy, the survey's results show that inadequate regulatory frameworks, insufficient financial resources and/or the lack of a holistic vision are the main identified obstacles. According to the survey results, top priorities for cities and regions are in order: i)

rethinking production and consumption patterns; ii) improving environmental quality; and iii) creating new business models.

“The narrative of the circular economy should move from waste management to a more systemic approach, which will include different sectors of the economy.”

Ms. Romano introduced the OECD Scoreboard, which aims to provide cities and regions guidance and a better understanding of their levels of progress in terms of circularity. The OECD Scoreboard is composed of 10 dimensions that can identify whether some key enabling conditions are in place. These dimensions include: 1) Circular economy framework; 2) Coordination mechanisms; 3) Policy coherence; 4) Economy and finance; 5) Innovation; 6) Stakeholder engagement; 7) Capacity building; 8) Green Public Procurement; 9) Data and information; and 10) Monitoring and evaluation.

The Scoreboard is currently being tested; its purpose is to accompany cities and regions in identifying gaps and assessing progress to improve policies.

Measuring the circular economy

The European Commission

Mr. Arturo de la Fuente, Deputy Head of Unit, European Commission, Eurostat [[PPT available here](#)], shared the [EC circular economy monitoring framework](#). The European Commission started working on the circular economy in 2015, when it launched the [First Circular Economy Action](#). This initiative aims to stimulate Europe's transition towards a circular economy, boost competitiveness, foster sustainable economic growth and create new jobs. The [New Circular Economy Action Plan](#) of the European Commission is one of the building blocks of the [European Green Deal](#) that replaces the Circular Economy Action Plan from 2015.

The [European Union monitoring framework for the circular economy](#), established in 2018, was originally designed by the European Commission for policy making in the European Union at the supranational level. It is composed of four areas, 10 indicators, and 13 sub-indicators, which are mainly focused on measuring economic and environmental dimensions. The four areas and their indicators (10 total) are as follows:

- **Production and consumption**
 - EU self-sufficiency for raw materials, green public procurement, waste generation and food waste.
- **Waste management**
 - Overall recycling rates and recycling rates for specific waste streams.
- **Secondary raw materials**
 - Contribution of recycled materials to raw materials demand and trade in recyclable raw materials.
- **Competitiveness and innovation**
 - Private investments, jobs and gross value added and patents.

Most of the data of the monitoring framework are produced by Eurostat in cooperation with the national statistical offices of EU Member States. Data are available for all of the indicators, with the exception of food waste and green public procurement. There is an overrepresentation of waste related indicators, although this does not imply that waste is the most relevant topic in relation to the circular economy. The new Action Plan calls for an update and improvement of the monitoring framework. It is expected to focus on material footprints, additional critical sectors (e.g. constructions, plastics, textiles, and electronics), the design of sustainable products, innovation, value added change and its implication on the climate neutrality ambition of the European Union.

“We need to advance more in our understanding of how cities and regions can help and support the New Circular Economy Action Plan, and the other way around.”

The EC monitoring framework does not concern cities and regions. When measuring the circular economy at the local scales, there are different factors to be taken into account: first, it is difficult to apply national indicators, such as food production or trade flows, at the local level; second, circular economy related national indicators are not always suitable for the local level, as some of these factors take place in different places, and this can represent an obstacle to go deeper into the cities and the regions.

By including a chapter on cities and regions, the [New Circular Economy Action Plan](#) is paving the way towards a deeper understanding of the how cities and regions will be able to support the new initiative and vice versa.

The Ellen MacArthur Foundation

Ms. Ashima Sukhdev, Government & Cities Programme Lead, Ellen MacArthur Foundation [[PPT available here](#)], started her intervention by introducing the Ellen MacArthur Foundation. Founded in 2010, its mission is to accelerate the transition to circular economy. It operates across Europe, North America, Latin America and China, while working with businesses, governments and academia.

In January 2020, the Ellen MacArthur Foundation launched a tool for measuring a circular economy, [Circulytics™](#), which measures companies' circularity across their operations, while identifying their gaps and weakness. Since its launch in January 2020, almost 500 companies have signed up for the service, including more than 100 companies with combined annual revenues of more than USD 1 billion.

“Once people understand what the circular economy is, the immediate question they have is: how do we measure our progress towards it?”

Circulytics™ analyses two main categories:

- **Enablers.** It examines what companies do to enable the transition towards the circular economy (i.e. the development of a circular economy strategy, the inclusion of the circular economy in existing initiatives, recruitment, capacity building programmes, stakeholder engagement and investment on infrastructure and systems that boost circularity).
- **Outcomes.** It measures the way circularity has an impact at the company level, including the inputs, the used materials, virgin materials and energy. Furthermore, it analyses the circularity level of products and services produced by the company (i.e. the possibility to be repaired, remanufacturing, etc.)

All the information gathered from the company is analysed and eventually leads to an overall score for that company (from A+ to E), accompanied by a specific scorecard. The scorecard provides both a result and a specific evaluation for seven selected dimensions (Strategy and planning; People and skills; Systems, processes, infrastructure; Innovation; external engagement; Inputs; and Outputs). Some of the companies have published the results of their scorecards, aiming to provide stakeholders with transparent information on their circular economy performance. The Ellen MacArthur Foundation foresees including industry benchmarks on Circulytics™, providing companies with anonymised information of the state of the art of the circularity levels of overall industries.

Regarding the next steps, Ms. Sukhdev announced that the Ellen MacArthur Foundation expects to continue updating the indicators and adapt the methodology based on inputs and feedback received. For the future, there might be interest to explore if companies in specific cities or countries use Circulytics™, and whether there could be ways to extrapolate that data to the local or national levels.

Finally, Ms. Sukhdev reflected on the implications of the COVID-19 crisis on the involvement of the private sector, citizens and politicians on the transition towards the circular economy. As a result of the crisis, it is

important to continue encouraging citizens to realise that the circular economy can support economic development by respecting planetary boundaries.

Discussion

The Product-Life Institute Geneva, Switzerland

Prof. Walter Stahel, Founder-director, Product-Life Institute Geneva, Switzerland, highlighted that the circular economy covers economics, innovation and competitiveness, maximising the use value of stocks (assets, capitals) comprising natural, human (work and acquired skills), cultural (material and immaterial), financial and manufactured capitals. Therefore, wealth is the sum of the quality and quantity of these stocks, which is not measured. Cities and regions currently lack of the overall wealth measure that could be useful to recognise changes over time.

“We need to improve the intelligent use of goods and not be hypnotised by production and waste management.”

Prof. Stahel suggested an analogy by comparing the life cycle of human lives and that of products: people’s birth and death versus objects’ production and waste. Human-beings are born and eventually die, but life continues to be the most important dimension. The same happens with products; while the main focus is on design, production and waste management, the use of products remains the most important dimension. As such, an intelligent and optimised use of goods, tackling planned obsolescence and easing repair, is key for products to last. In terms of measurement, the focus should be on improving the quality of human life and the intelligent use of goods, instead of analysing birth and death, and production and wasted resources.

Finally, Prof. Stahel concluded by sharing examples of the three benefits of measuring circularity, which are to:

- **Identify the chances to increase the resilience to manage uncertainty adequately.** The resilient cities initiative by the Rockefeller Foundation that gathers 500 cities worked on this issue.
- **Increase the capability of people to contribute to circular society, spreading the circular economy knowledge in education and vocational training:** due to the lack of resilience of the current linear economy model (as it have been proved with the COVID-19 crisis), the current situation can help identify opportunities to increase the capability of people to contribute to a circular society.
- **Identify opportunities to close gaps.** Examples include: the invisible liability loop by returning products made of synthetic materials to their producers; the single use agricultural products exploiting nature’s circularity; and the incineration of unavoidable single use goods made of plastic (contaminated hospital waste, harvesting electricity and heat).

The Platform for Accelerating the Circular Economy

Mr. David McGinty, Global Director, PACE, briefly presented the objective and mission of the [Platform for Accelerating the Circular Economy \(PACE\)](#). PACE is an initiative that aims to drive action in identified critical areas related to the circular economy and gathers relevant stakeholders from government, the private sector and civil society to scale innovative models for circularity and achieve a larger global scale.

In terms of measurement, PACE has convened a coalition of different groups working on metrics, including the Ellen MacArthur Foundation, the World Business Council for Sustainable Development (WBCSD), Circle Economy, the European Union, etc., to analyse different levels of metrics. This collaboration seeks to find areas where metrics can be harmonised and enable the creation of channels for scaling up, through advice and looking for opportunities (data gaps, missing systems).

“One of the powers of metrics in cities is the ability to inform and mobilise communities. The mobilisation component becomes the real immediate value of the metrics.”

Mr. McGinty highlighted three main reflections:

- The emerging, rapidly increasing movement in developing regional and national groups and clusters on the circular economy. For instance, there is an increasing number of alliances of ministers of environment on circularity in Latin America, Africa and Southeast Asia. Additionally, civil society groups are raising), and there are several alliances at a regional and sub-regional levels in Latin America too.
- The interesting opportunities that might arise focusing on the economic region rather than the geographical region. For example, the United States Chamber of Commerce carried out an assessment of the Great Lakes region (United States) to analyse circular initiatives that had taken place in the region, understanding the meaning of circular transition and their reasons to measure circularity.
- The raising of metrics at cities level. One of the powers of metrics in cities is the ability to inform and mobilise communities. The mobilisation component becomes the real immediate value of the metrics.

Climate-KIC

Mr. Anders Wijkman, Chair, Climate-KIC, started his intervention by warning about the risk of overrating the opportunities of the transition towards the circular economy. While the circular economy is widely perceived as the way for perfect material loops, there is always a quality loss in that process. Therefore, even if circularity is better than the current linear production model, it is necessary to be aware of its limitations. Mr. Wijkman emphasised that even once circularity has been achieved, it is not sustainable to continue to increase consumption growth. In this sense, Mr. Wijkman urged participants to concentrate the economy on well-being and sufficiency rather than on the continuous and unlimited resource consumption.

“While the circular economy is widely perceived as the ways for perfect material loops, there is always a quality loss in that processes.”

Regarding the path to follow on the circular transition, Mr. Wijkman highlighted key obstacles preventing advancement towards circular economy practices and ways forward to overcome them:

- 1) **Structuring the economy.** The main reason why markets for secondary materials are relatively limited is due to the low price of virgin materials. Fiscal instruments can be useful to make some corrections and keep the balance.
- 2) **Design.** The current design of products makes difficult to recycle and reuse materials or components. Most of the value of products is lost during recycling process. Mr. Wijkman called upon the need for the European Commission to set new design requirements to allow higher recyclability of materials. While the current eco-design directive is satisfactory, it strongly focuses on energy related areas, while it should consider materials and typology of products in a broader perspective.
- 3) **Public procurement.** While the European Directives are adequate, the main problem is the lack of proper knowledge of the circular economy and its implications among public procurement officials. However, capacity building programmes can help overcome this knowledge gap.

Regarding measurement, Mr. Wijkman identified several obstacles: the lack of a clear definition of circularity and its broad variety of meanings (i.e. resource efficiency, extension of product life, recondition and refurbish, materials reuse, recycling, etc.); the existence of a broad variety of indicators, which makes it difficult to assess their robustness and rely on the information they provide; and the persistent focus on indicators referring to recycling, in contrast to the fact that accordingly to the study [Retaining value in the](#)

[Swedish material system](#), material recovery remains very low--approximately 40% for steel and aluminium, and around 15% for plastics. Mr. Wijkman suggested that the best indicator to measure circularity could be the “product life extension”.

Mr. Wijkman argued that there are no adequate indicators to measure “systems”. However, if policy-makers wish to change systems, like the transport system, they need to measure and control several factors, like urban planning, pollution, material consumption, and facilities for alternative means of transport, at the same time. Climate-KIC is working on a programme with 15 cities to address the challenge of developing system indicators. Mr. Wijkman advocated for agreeing on the clear definition of five to ten indicators that can be useful in the transition to the circular economy.

Questions and next steps

During the webinars, participants raised a series of questions through the chat. In relation to cities, questions were devoted to the process of developing circular economy strategies and the way to obtain the needed political support. Participants showed interest in knowing more about the main challenges, like funding limitations that cities faced during this process, as well as the targeted sectors on their circular initiatives. Questions concerned the implications of the circular economy initiatives on spatial planning or the potential opportunities from urban-rural synergies.

In terms of measurement, attendees inquired about the adequacy of international measurement frameworks in cities and the availability of tools for measuring progress at the local level. Participants asked about the New Circular Economy Action Plan, which includes a chapter on cities and regions, and how this will be reflected on the measurement side.

Finally, the post-COVID-19 scenario was also of great interest to the audience, which asked questions about the way to build the narrative and engage policy-makers and the private sector on the need of the circular transition in the future. Ms. Romano thanked all the speakers and participants for their contributions during the session and wrapped up the event by summarising the main outcomes of the discussions. Ms. Romano invited all the participants to follow the work of the [OECD Programme on the Circular Economy in Cities and Regions](#). Moreover, she invited all the participants to join the 2nd Roundtable on the Circular Economy in Cities and Regions that will take place in Oslo, Norway.