European Circular Cities Declaration - Report October 2020 - October 2021

Signatory (name of city/region):	City of Espoo
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1. Strategy and actions

Circular Economy Strategy status

Do you have a CE strategy (/road map, action plan)?
 	
No, it will be developed next year together with the carbon neutrality 2030 roadmap. Besides, during this council period Espoo will draw up a roadmap for biodiversity recovery and the achievement of no net loss by 2035.
 	
Although no specific circular economy strategy exists yet, Espoo counts with several strategic instruments and action plans that have a strong focus on circular economy:
 	
- Sustainability is ingrained in Espoo Story, the **city´s strategy**. After the local elections in June 2021, Espoo council approved the latest city strategy, which highlights important circular objectives such us sustainable construction, pioneering the link of biodiversity in growing cities and providing sustainable consumption choices for the citizens.
- **Sustainable Espoo** is the 4-year cross-departmental programme that coordinates the implementation of the sustainability objectives set in Espoo´s city strategy. Espoo´s third sustainability programme is currently being developed and will be approved early next year. The sustainability team is working so that this year it includes a specific section on circular economy as it did last term, but with greater prominence.
- Other action plans related to circular economy deployed by the City environment department:
  o Circular soil and stone coordination action plan
  o Green roofs vision and action plan
  o Biodiversity report

Which departments are involved? How is it governed?

Espoo´s sustainability team sits under the city strategy department and is responsible for leading the development of Espoo´s sustainability programme and the carbon neutrality roadmap. The Sustainable Espoo programme, currently under development, counts with a steering group that includes city officials and politicians and it is responsible for monitoring progress and cascading/engaging the organization/political scene.

The content of the Sustainable Espoo programme is co-created in collaborative workshops with different departments, companies, and citizens. The objectives of the programme are approved by the local government, and the final content (actions, indicators) by the City Board.

Which targets are set?

Currently under development

How is progress monitored?

Currently under development

Reporting on Circular Economy projects, initiatives, actions or events:

Setting the grounds for the circular economy roadmap

Brief description:

When Espoo signed the Circular Cities Declaration, we tried to use this opportunity to engage with different stakeholders and set the basis for the future circular economy roadmap.

- **Internal communication**: An article about the signature was uploaded to Espoo´s intranet together with a survey. We aimed at mapping circular economy actions across the city and recruiting a group of circular enthusiasts that could help us to cascade and engage other employees during the future circular economy roadmap process. The same was tried in the external communication, including a survey for citizens, but the respondent rate was low.
- **In depth interviews**. The circular economy team guided a master thesis carried out by a colleague from the citizen services department, which aimed to analyse the constraints and opportunities of Circular Economy in Espoo, as well as find out the level of awareness of the Circular Cities Declaration across the organization. The analysis of results is currently under way.

- The sustainability program for the new political term was co-created together in **workshops** with city officials, companies, and other organizations. Circular economy was one of the topics that were discussed, and plenty of action points came as a result, which are now under consideration.

Rate circularity impact –

2 - Stand-alone events. However, important groundwork for the future development of bigger impacts.

Involved stakeholders:

All city departments, companies, associations, citizens.

Supporting Documentation:

Not yet available

Contributes to CCD Commitment # [1-10]

1, 2

Progress indicators (where relevant and available):

Circular economy in Espoo Day

Brief description: **Please include qualitative and quantitative information where available.*

Espoo Day is the city´s annual festival where the city, its residents, companies, and other organizations are invited to organize or participate in events to celebrate the festivity. In 2021, Espoo Day was themed after circular economy with the aim to:

- Bringing circular economy players closer to citizens and improving their visibility.
- Teaching and engaging citizens in circular economy practices (repairing, renting, sharing, etc.)

Rate circularity impact –

1-2; one day event but with potential for citizens and stakeholder engagement in circular practices and lifestyles. Also, it was a good opportunity to open future collaborations with the city cultural department.

Involved stakeholders:

City cultural department, SMEs, museums, citizens.

Supporting Documentation:

https://www.espoo.fi/en/news/2021/09/circular-economy-arrived-streets-espoo-get-know-actors-circular-economy

Contributes to CCD Commitment # [1-10]

2

Progress indicators (where relevant and available):

Kera Smart and Circular District

Brief description:

Kera district is an old industrial area being transformed into an international example of a smart and circular district, which will be home for 14000 residents. In the process, Espoo and its partners are, for example, enhancing the temporary use of buildings (more info in Finnish), preparing collaborations for circular construction, and testing circular services for citizens. Through the Smart and Clean Kera project, the new district is being co-created together with different stakeholders resulting on many achievements towards a circular transition:

Foundations for circularity. Several studies have been carried out to identify the current situation, opportunities, and priorities to achieve a Carbon neutral Kera by 2030 and pioneer the transition towards a circular economy. In 2021, Kera emissions report estimated the GHG emissions in the area for the next 50 years in the areas of construction, energy use and transport. After that, a roadmap for carbon neutrality by 2030 was created, emphasizing some circular solutions as main action points to be prioritized.

Sustainable development commitment for landowners. Kera´s land is not owned by the city, but its scale makes it crucial to achieve Espoo´s sustainability objectives. In August 2021, the City Board approved Kera´s Land Use agreement, which includes a brand new **sustainability commitment annex**. By signing the land use agreement - traditionally used for negotiations such as the cost of city´s infrastructure - landowners will be now committing to carbon neutrality, circular economy and digital transformation. The commitment has been co-created together with landowners and it includes a commitment for continuing the close collaboration for the development of Kera as a sustainable, circular and digital pioneer.

Kera Hub was opened in September 2021 as a base for the development of Kera. It acts as a meeting place for city residents and a showroom for the pilots and achievements of Kera. The renovation and interior design of the premises was carried out in cooperation with the youth workshops of Omnia´s vocational school.

Kera talks event invited companies, landowners, builders, real estate developers, researchers and other actors interested in sustainable urban development to co-operate in Kera and Espoo, aiming at socially influential measures and development projects on various themes, such us circular economy. (More info in Finnish)

Rate circularity impact –

4 the actions and commitments developed in Kera are setting the base towards a circular systemic transition, not only in Kera but in other city districts and hopefully internationally as well.

Involved stakeholders:

Kera is co-created together with different city departments, residents, landowners, companies and other development partners. The Smart and Clean Kera project is partly funded by the Finnish Innovation Fund Sitra and is a collaboration with the Smart & Clean Foundation of the Helsinki Metropolitan Area and several companies (A-insinöörit Oy, Espoon Asunnot, Fortum Oyj, LähiTapiola, Neste Oyj, Nokia Oyj, Ramirent Oy, SOK)

Supporting Documentation:

https://www.espoo.fi/en/housing-and-building/kera

Contributes to CCD Commitment # [1-10]

1, 2, 3, 4

Progress indicators (where relevant and available):

Closed Plastic Circle Project

Brief description:

In 2021 Espoo took the coordination role of the Closed Plastic Circle project previously orchestrated by the Smart & Clean foundation.

The project aims to get **all recyclable plastic in the Helsinki metropolitan area and Lahti to circulate more efficiently (6%->60%)** through a systemic approach:

- An **ecosystem** made up of actors in the private and public sectors develops impactful actions
- **Value chain and lifecycle**: Design, production, use, recycling, public procurement, regulation, etc.

Rate circularity impact –

Potential for 4: the project aims to systemic change. However, the current impact is hard to measure at this stage.

Involved stakeholders:

The project involves stakeholders from across the plastic value chain (manufactures, retailers, research institutes, waste utilities etc.): Helsingin city, HSY, Fortum, Lassila & Tikanoja, Siemens; VTT

Supporting Documentation/link:

https://www.espoo.fi/en/city-espoo/sustainable-development/carbon-neutral-circular-economy#section-24161

Contributes to CCD Commitment # [1-10] : 2, 3, 7

Progress indicators (where relevant and available):

KIEPPI Project: model for circular partnerships

Brief description:

In KIEPPI project Espoo worked together with other two Finnish cities, Tampere and Turku, to develop circular and sharing economy solutions that promote the transition towards sustainable neighborhoods.

Espoo focused on the areas of sharing economy, urban food production and material flows through the following pilots:

- A consultancy firm **mapped all the biomass** originated within the city boundaries, and its possible circular uses, which will be explored and tested in future projects. The tender content for the consultancy work was developed collaboratively with different city departments.
- Four sharing economy six-month experiments with SMEs tested the viability of **new business models** at the neighborhood level: car sharing, shared cargo bikes, market place and tool library.
- Two experiments were carried out with companies in the field or **circularity and food**: a trial to reduce food waste at retail stores and the use of by-products of beer production to grow local mushrooms and
- Through **service design** methods, a company designed models for Sustainable moving services and a collective waste collection.
- Together with the Helsinki metropolitan area reuse center (Kierrätyskeskus) and the regional waste management utility (HSY) Espoo developed a project concept for a local **circular shopping mall**, which is currently looking for funding opportunities.
- Together with the Helsinki metropolitan area reuse center (Kierrätyskeskus), Espoo tested a pick-up locker for sharing economy transactions. (More info in Finnish)
- The project commissioned a master thesis, which analysed the opportunities for increasing construction plastic circularity through public procurement.

Beside specific pilots and collaboration with companies, the project partners developed a collaboration model for circular partnerships (pdf in Finnish - available in English on demand), which will be tested in upcoming circular projects in Espoo.

Rate circularity impact – (1- small scale intervention without lasting change to 5 – fully closed loop, systemic transformation)

2 - However, the pilots and partnership model set the base for more impactful collaboration and projects.

Involved stakeholders (internal and external)**:**

Different City Departments, local SMEs, NGOs, national recycling centre, regional waste management utility and citizens.

Supporting Documentation:

https://6aika.fi/tuloksia-kieppi-kestavien-kaupunginosien-kumppanuusmalli/ (Finnish)

Contributes to CCD Commitment # [1-10]

2, 3, 5

Progress indicators (where relevant and available):

Each pilot reported a set of indicators in their final report.

International Collaboration

Brief description:

Espoo applied to become a replicator in the CityLoops project, financed by Horizon Europe and coordinated by ICLEI. They project aims to increase the circularity of the built environment and biowaste at the city level. The application was successful, and Espoo is now initiating the collaboration with its twin cities (Apeldoorn for biowaste and

Roskilde and Hooje-Taastrup for construction). The first meetings have focused on presenting each city and their projects, setting expectations, and building collaboration methods.

In 2021 Espoo started to collaborate with the public procurement team to define a collaboration model that enables more sustainable and circular procurement. In order to get support and inspiration for this work, Espoo joined ICLEI´s Circular procurement interest group

The collaboration is coordinated by Espoo´s sustainability team, which aims to use this opportunity to also build strong internal networks with other city departments, for example offering City Loops tools as support and added value to City planning and asset management professionals.

Besides, the City of Espoo has joined the circular economy working group of the Climate Leadership Coalition, the largest non-profit climate business network in Europe.

Rate circularity impact – (1- small scale intervention without lasting change to 5 – fully closed loop, systemic transformation)

2 - big potential, but at this time the collaboration has just started.

Involved stakeholders (internal and external)**:**

ICLEI, twin cities, Espoo´s sustainability team, City planning and infrastructure.

Supporting Documentation:

https://cityloops.eu/

Contributes to CCD Commitment # [1-10]

2, 4, 5

Progress indicators (where relevant and available):

Usage of City Loops tools, replication of demonstrations, implication of city departments

Story of Plastic – From Waste to Product

Brief description:

The Story of Plastic project aims to make visible the whole path of plastic from waste to product. The project collects plastic waste from schools in Espoo, students from the LAB University of Applied Sciences analyse the collected waste in a plastic lab and explore how 3D printing technology could turn it into new materials. The students then design products, which will be exhibited around the city and also in a virtual exhibition, where material of the whole cycle of plastic will be presented. The project aims to find more applications for recycled plastics, together with plastic operators and commercial companies too, such as IKEA.

Rate circularity impact – (1- small scale intervention without lasting change to 5 – fully closed loop, systemic transformation)

Potential for 4 , the idea is to achieve a systemic transformation where we have new useful ways to use plastic waste. We are working on including companies in a "plastic ecosystem" during the project.

Involved stakeholders (internal and external)**:**

The City of Espoo implements the project together with the LAB University of Applied Sciences. The project partners are Lassila & Tikanoja Oyj (L&T), the Helsinki Region Environmental Services Authority (HSY), IKEA and Smart & Clean Foundation.

As internal stakeholders, the project is led by Espoo´s Sustainability team and collaborates with the City premises department, Education department and schools.

The Story of Plastic has received funding from the Ministry of the Environment’s support programme for the Plastics Roadmap trial and pilot projects.

Supporting Documentation:

https://www.espoo.fi/en/city-espoo/sustainable-development/sustainable-espoo/kestava-espoo-ohjelman-projektit/story-plastic-waste-product#section-21705

Contributes to CCD Commitment # [1-10]

2, 4

Progress indicators (where relevant and available):

Circularity in Corona recovery projects

Brief description:

During 2021, Espoo applied for two projects that aim to help the city in its path towards a sustainable recovery from the corona pandemic. Both projects were granted, and have a strong focus on circular economy topics:

- RAKKE (Solution path for sustainable growth ecosystems): The project strengthens cooperation, innovation and business activities between the public and private sector in the development of low-carbon transport, energy, circular economy and clean and smart urban solutions. The aim of the project is to build effective ecosystems together with 100 partners to lay the foundations for more effective project and development activities.
  In terms of the circular economy, the focus is on mapping flows for several materials and forming an ecosystem around them to accelerate the circular transition. Also topics in other working packages are related to circular economy. For example biogas, energy citizenship or circular districts.

- KETO (Implementation path to sustainable growth development environments): A joint project of the City of Espoo, VTT, Aalto University and Omnia, which promotes the objectives of the Sustainable Growth Programme for Finland by strengthening private and public partnerships and developing the research infrastructure towards the growing market for green transition and digitalisation. The project creates the preconditions for the development of a R&D environment for energy and mobility solutions using unique smart pylons technology in the Otaniemi–Keilaniemi area, the development of an internationally renowned clean and smart construction area in the Kera area, and the creation of an agile experimental environment for circularity in the food system in Kiviruukki.

Rate circularity impact – (1- small scale intervention without lasting change to 5 – fully closed loop, systemic transformation)

Potential for 4, but at this time the collaboration has just started.

Involved stakeholders (internal and external)**:**

KETO: VTT technical research center, Aalto University, Omnia vocational school. Funded by REACT EU.

RAKKE: Espoo city and 100 partners. Funded by the Supporting the Secure Growth and Vitality of Uusimaa (UKKE) funding from the Helsinki-Uusimaa regional council

Supporting Documentation:

Contributes to CCD Commitment # [1-10]

1,2,3,4,5

Progress indicators (where relevant and available):

Work in progress

Carbon neutral construction sites

Brief description:

Emissions from logistics and construction site machinery and transport account for a significant share of the total traffic emissions in cities. Achieving carbon neutrality requires the participation of the building sector: infra, new building, renovation, and demolition construction sites. The HNRY project focused on reducing these emissions acting on different levels. For example, Espoo used machinery powered by green electricity, biogas, biofuels and hydrogen and piloting less polluting working habits, ways of using machinery and circular material use. Additionally, a special focus was put in the reuse of excavated landmasses and stone materials. Circular pilots tested new ways of

using surplus clay coming from construction sites and reusing concrete in infra building, which enabled reduced transportation needs and distances, offering a significant opportunity for reducing emissions. During the Espoo pilot, a Green Deal for Sustainable Procurement was prepared with the Ministry of the Environment. Its site machinery and equipment criteria were also piloted at Lukutori: this provided support and information for reforming the procurement process. Rate circularity impact – (1- small scale intervention without lasting change to 5 – fully closed loop, systemic transformation) 3, but set the basis for bigger impact
Involved stakeholders (internal and external)**:** Construction companies and contractors, different city departments. Other cities: Turku, Vantaa. HNRY is funded by European Regional Development Fund and is a part of Six Cities Strategy.
Supporting Documentation: https://hnry.fi/miten-urakkakilpailutuksella-voidaan-edistaa-paastovahennyksia-ja-resurssiviisautta/ (In Finnish)
Contributes to CCD Commitment # [1-10] 2, 3, 4, 5, 8, 9
Progress indicators (where relevant and available): Report available in Finnish https://6aika.fi/tuloksia-hiilineutraalit-ja-resurssiviisaat-yritysalueet-hnry/(Finnish)

2. Others

Upcoming action – *What will you do in the next year to make further progress?*	During next year, we are planning to create a circular economy roadmap as part of the carbon neutrality roadmap and using the learnings from the groundwork performed during this first year. The strategy will be co-created in collaboration with the whole city organization, as well as companies, other organizations and citizens. We will also work on improving the awareness of the CCD especially across the city organization and find ways for the different departments to commit to it. On the project level, we will continue the development of ecosystems through KETO and RAKKE projects that enable the transition to a circular economy in the energy, mobility and urban development fields. We will also keep the close collaboration together with stakeholders in the Kera district, to ensure that when the construction phase starts, circular design and techniques are at the heart of it. We also plan to keep strengthening our international connections and visibility with the help of City Loops and CCD network. We also plan to strengthen the sustainability team collaboration with other departments with the help of City Loops tools. We will apply for new funding to gain more resources to develop circular innovations in Espoo.
Challenges faced – *What barriers or challenges emerged when developing/ implementing the above listed activities? This will allow us to direct relevant resources and expertise to you.*	In 2021 Espoo carried out in-depth interviews across the organization, to discover the challenges and opportunities for the local circular transition. The results are currently being analysed and will be reported in the coming months. In the meantime, we can provide with a high-level overview of the challenges faced during last year: • Mainstreaming circular economy in the city activities. How to avoid business as usual outside innovation projects. • Lack of circular economy knowledge within the organization • Lack of time • Organizational silos • The commitment to circular economy is not yet assimilated as such by management and politicians. • Limiting regulation (land use, food, pulp, etc.) • Procurement, lack of time and resources for proper circular thinking (Redesign of needs) and application.

	• Lack of storage space for materials - and lack of investment will for these storage spaces.

Quantitative Indicators (Please report if data is available, and include baselines from beginning of reporting period if possible)	
Total waste generation in kg per capita	2020: 520 kg/year The number includes municipal solid waste and is based on the most recent statistics. Municipal waste refers to waste from housing (household waste) and waste from trade, industry and services (eg from schools, hospitals, offices, shops, restaurants and other companies) with comparable properties, composition and amount. The municipality specific number in an estimate, that has been calculated by dividing the total amount of solid waste in the Helsinki metropolitan area including Kirkkonummi (645 000 tonnes) by the number of its residents. More information: https://www.hsy.fi/en/waste-and-recycling/waste-statistics/
Recycling rate (% MSW – all fractions, reported separately if possible)*	The recycling rate of all municipal solid waste in the Helsinki Metropolitan region was 50 % in 2020. To the recycling rate is counted the waste that is recycled as material, as construction material or composted or fermented. Less than 1 % went to landfills or other, and rest was incinerated with energy recovery. The recycling rate of all MSW is higher than that of households due to better sorting of biowaste in the private service sector.
Waste landfilled (% MSW – all fractions)	Less than 1 %

Commitment Overview – Towards which commitments have you made progress this year?	Rate yourself 1-5 *(1 – just beginning, 5 –systemic change achieved *)*
1. Establishing clear circular economy goals and strategies to provide a common direction for the local circular transition	2

2. Raising awareness of circular practices across our administration and amongst local citizens and businesses	2
3. Directly engaging local stakeholders from civil society, the private sector and the research community in the development of circular economy plans and initiatives, striving to make the transition inclusive and helping to nurture circular business models such as the sharing and the repairing economy	3
4. Embedding circularity principles in urban planning, infrastructure and asset management procedures	2
5. Leveraging public procurement to promote the market for circular products and services	1
6. Applying economic incentives and seeking opportunities to use fiscal measures designed to encourage circular economic and social behaviour	-
7. Fostering an enabling local regulatory framework which allows and encourage secondary raw material markets, repair, reuse and sharing schemes	-
8. Collaborating with national governments and European institutions to establish an appropriate policy and regulatory framework for the circular transition	2
9. Monitoring the progress made and impacts of our circular economy activities	1
10. Reporting to ICLEI on progress in achieving the above commitments	1

** If you consider that systemic change has been achieved in your city, well done! Please provide some supporting documentation.*