## **Action Plan for Groningen, the Netherlands**

#### Introduction

The main objective of the Action Plan is to provide the City of Groningen with a menu of options for the implementation of the OECD recommendations contained in the Draft case study of the City of Groningen, Netherlands.

The Draft case study of the City of Groningen concluded with 20 recommendations divided into three groups according to the role that the city can play as:

- **Promoter:** identifying priorities, promoting concrete projects and engaging stakeholders.
- Facilitator: fostering co-operation between stakeholders, citizens and levels of government.
- **Enabler:** creating the necessary conditions for the circular economy to happen (setting up incentives, identifying policy gaps, updating regulatory frameworks, catalysing funds, etc.).

These recommendations, as ways forward towards the transition to the circular economy in Groningen, Netherlands, were discussed during the OECD Policy Seminar held in Groningen, on 17 September 2019. The Policy Seminar gathered 22 stakeholders from local, regional and national authorities, the private sector (energy, building, bio economy) and academia (University of Groningen, the Hanze University of Applied Science and research centres). The main goal of the Policy Seminar was to co-create an Action Plan in relation to the policy recommendations. As such, stakeholders were divided in 6 groups and were asked to identify:

- Actions: actions to put into practice the recommendations
- **Challenges:** perceived obstacles from the implementation of the actions.
- **Expected outcomes:** from implementing the proposed actions.

The Action Plan sets out a series of specific actions aiming at supporting Groningen's transition to the circular economy. In particular, it identifies:

- **Objectives**: the Action Plan presents a number of objectives for each of the recommendations, in terms of expected outcomes.
- **Practical steps**: the Action Plan includes a set of actions that can be useful in advancing towards the achievement of the objectives. The proposed actions are indicative and based on international practices, while taking into account the local context.

- **Possible Champions and partners**: this section refers to the stakeholders, institutions or organisations that can play a (leading) role in the execution of the actions.
- International experiences: they include relevant practices carried out in the field of the circular economy by cities, regions and national governments that can serve as inspiration for the implementation of the recommendations. These experiences are not expected to be implemented in Groningen as such, but to provide the municipality with a set of examples for the design and development of the suggested actions. In addition, the Action Plan refers to several OECD tools, which include information and standards for the implementation of the actions.
- **Timeline**: in order to implement the recommendations efficiently, it is necessary to prioritise the recommendations within the short, medium and long term, accordingly to the targets they expect to achieve, but also to take into account the resources and capacities needed (human, technical and financial ones). These time scales are indicative and should be updated as actions are being implemented.

#### It is important to note that:

- Actions are not compulsory nor binding: identified actions address a variety of ways in which recommendations can be implemented and objectives achieved. However, they are not compulsory nor binding. They represent suggestions, whose adequacy and feasibility should be carefully evaluated by the Municipality of Groningen in an inclusive manner, involving stakeholders as appropriate. In turn, the combination of more than one action can be explored, if necessary.
- <u>Prioritisation of actions should be considered</u>: taking into account the unfeasibility of addressing all the recommendation at the same time, prioritisation is key for the adequate implementation of the Action Plan. As such, steps taken towards the circular transition should be progressive.
- Resources for implementation should be assessed: the implementation of
  the actions will require human, technical and financial resources. When
  prioritising and assessing the adequacy and feasibility of the suggested
  actions, the resources needed to put them into practice should be carefully
  evaluated, as well as the role of stakeholders that can contribute to the
  implementation phase.
- <u>The Action Plan is a dynamic tool</u>: it requires to be updated as new potential steps and objectives may emerge as actions start to be implemented.

# **Action plan for the City of Groningen (The Netherlands)**

## Promoter

Objective	Make the city a role model Actions	Possible champions/partners	Relevant experiences	Timeline
- Trigger behavioural and business change inside and outside the municipality  - Show the feasibility of the circular transition with concrete actions  - Be an example for business and citizens in implementing circular practices	<ul> <li>Apply circular models within the municipality, according to the principle "practice what you preach", such as:</li> <li>Reduce waste generation (e.g. reducing the use of paper or banning one-use plastics like cups in municipal events and daily activities).</li> <li>Apply product-as-a-service model through public procurement (e.g. pay for a lighting service adapted to the municipality's needs rather than buying light bulbs and appliances; lease a furniture service instead of buying specific furniture, etc.).</li> <li>Promote use of secondary materials (e.g. all public plastic bins must be made of recycled plastics, an initiative started in 2018).</li> <li>Clearly communicate to the citizens the goals and the progress achieved by the municipality (e.g. percentage of one-use plastic saved in one year, etc.)</li> </ul>	- Municipality departments	- The Amsterdam Airport Schiphol rents light as a service, instead of the traditional model of buying light bulbs: with this model, Schiphol pays for the light it uses while Philips continues to be the owner of all the installation and is responsible for the performance and durability (Circular Economy Club, 2019)  - The City of Tokyo, Japan, for the celebration of the 2020 Olympic Games, aims at renting, leasing materials after the games.  Source: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Short- Medium
- Obtain a deeper	Map existing circular initiatives in various sectors  - Collect information on existing "circular economy related initiatives", such as	- The Municipality of	- In the Region of Flanders	Short
understanding of circular economy related initiatives and those with potential to contribute to the circular transition	Projects, programmes, plans in various sectors (e.g. food, waste, water, transport, etc.), which implement:  Regenerative design;  Sustainable production practices based on reducing virgin material and using secondary material;	- Business sector (e.g. the Business Association West, the informal organisation "De Koepel", Suiker Unie, Attero, Smurfit Kappa, Avebe).	(Belgium), Circular Flanders is mapping the range of financing instruments available for the circular economy (Source)  - In Austin (US), the municipality has created a directory of businesses that allow customers to	GHUIT

- Identify the sectors where these initiatives are taking place
- Take stock of stakeholders who are involved in the circular economy, as well as their responsibility, core motivations and interactions
- Identify gaps
- Build on good examples
- Learn from practices and failures
- Develop an understanding of what the circular transition means for each sector
- Explore potential crosssector synergies and their common features

- Applying short mile distribution practices;
- Inducing sustainable consumption patterns aiming at reducing waste;
- Handling waste responsibly.
- Explore different ways to conduct the mapping, for example through:
  - An online platform to upload initiatives and register projects in the field of the circular economy. It could take the form of an open source database to be able to research any aspect from the circular initiatives. A communication campaign to reach out to all stakeholders will be needed
  - Off line platforms, gathering inputs from stakeholders through regular meetings, surveys, interviews and public consultations.
- Identify the core motivations and the benefits of the business that are undertaking these initiatives. Consider the following options:
  - Surveys
  - Meetings / interviews
  - Public consultations
- Continuously monitor circular economy events/seminars organised in the city.
- Update and share the information collected through the mapping.

- Universities and research centres (e.g. University of Groningen, the Hanze University of Applied Science, Northern Innovation Circular Economy lab, NICE; the Energy Transition Centre; Energy Academy Europe)
- Entrepreneurs (e.g. Circular Economy Club)
- Civil Society Organisations (e.g. Toentje Foundation)

- participate in the circular economy. The directory has a new interactive map that showcases all types of circular businesses, including rental companies (Austin's Circular Economy Story, 2019)
- Circular Oslo is performing a mapping of circular economy initiatives (Source)

Source: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

### OECD Recommendation 3: Promote stakeholder engagement to identify their roles in the implementation of the circular economy strategy

- Build consensus over the changes that the circular economy is going to bring in the everyday life of citizens, as well as in business practices
- Develop trust and a sense of ownership among stakeholders regarding the
- Engage stakeholders through formal and informal mechanisms. The following principles could help achieve outcome-oriented, fit-for-target and adaptive stakeholder engagement:
  - Map all stakeholders who have a stake in the outcome or that are likely to be affected, as well as their responsibility, core motivations and interactions.
- The Municipality of Groningen
- Universities and research centres (e.g. Northern Innovation Circular Economy lab, NICE; the Energy Transition Centre; Energy Academy Europe)
- -The City of Paris (France) has launched the "White Paper on the Circular Economy of Greater Paris" and the Circular Economy Plan for Paris 2017-2020 (City of Paris, 2017). The Circular Economy strategy of the Greater Paris has been developed by 240 stakeholders from over 120 different organisations. They were

Short

circular economy implementation process

- Create outcome-oriented, fit-for-target, anticipatory and adaptive stakeholder engagement
- Develop a systemic, inclusive approach to get a better return on the time and resources that decision makers invest in the circular economy

- Define the ultimate line of decision-making, the objectives of stakeholder engagement and the expected use of inputs.
- Use stakeholder engagement techniques, ensuring the effective representation of all stakeholders in the process.
- Allocate proper financial and human resources and share needed information for result-oriented stakeholder engagement.
- Regularly assess the process and outcomes of stakeholder engagement to learn, adjust and improve accordingly.
- Embed engagement processes in clear legal and policy frameworks, organisational structures/principles and responsible authorities.
- Customise the type and level of engagement to the needs and keep the process flexible to changing circumstances.
- Clarify how the inputs will be used.
- Organise communication campaigns and activities in the city to raise awareness among stakeholders on the circular economy's objectives and benefits and the how citizens can start applying more circular habits in their everyday life.
- Create participation spaces for citizens and stakeholders throughout the different implementation phases of the circular economy strategy. Some instruments that can be used to share the ownership of the circular economy transition with stakeholders could be:
  - Creating multi-stakeholder forums
  - Organising workshops
  - Organising breakfast meetings on the circular economy
  - Applying a co-creation methodologies
  - Implementing feedback loops
  - Keeping the process flexible to changing circumstances
  - Embedding the inputs in the circular strategy development process.
- Regularly assess the process and outcomes of stakeholder engagement to

- Business sector (e.g. the Business Association West, the informal organisation "De Koepel", Suiker Unie, Attero, Smurfit Kappa, Avebe)
- Entrepreneurs (e.g. Circular Economy Club)
- Civil Society Organisations (e.g. Toentje Foundation)
- Citizens

divided in working groups and defined 65 proposals.

- The City of Amsterdam developed in 2016 "Circular Amsterdam A vision and action agenda for the city and metropolitan area". It identified experts and stakeholders and conducted interviews for the definition of Amsterdam's future vision.
- Circular Flanders (Belgium) developed the "Vision 2050" with the circular economy on its seven priorities and gave stakeholder participation a key role (OVAM, 2018).

Sources: Stakeholder Engagement for Inclusive Water Governance (OECD,2015), OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

	learn, adjust and improve accordingly.			
OECD Recommendation 4: D	Develop a strategy on the circular economy			
- Define a global vision of the circular economy for Groningen  - Establish goals and indicators  - Enhance coherence across the existing initiatives  - Develop deeper knowledge about the type of material flows existent in the city  - Guarantee a better use of resources and more efficient logistics  - Improve planning and decision making process  - Identify circular opportunities for industrial symbiosis	<ul> <li>Collect available data on material flows to guide policy-making decisions, through urban metabolism analyses.</li> <li>Collaborate with universities to carry out an urban metabolism study for Groningen.</li> <li>Define material/resource flows that can be used/re-used across-sectors and identify the gaps. The following flows could be taken into account and a unit of measure to express these flows could be the amount of kilotons produced per year (kt/year): <ul> <li>Imports to the city (e.g. manufactured goods, food and agro products, construction materials, chemical products, fossil fuels)</li> <li>Exports generated by the city (e.g. manufactured goods, food and agro products, construction materials, chemical product waste sent to landfill, water pollution, etc.).</li> <li>Recycling and energetic valorisation (organic and inorganic).</li> <li>Towards nature (e.g. atmospheric emissions)</li> </ul> </li> <li>Repeat the metabolism flow analysis after a certain period of time (e.g. a year)</li> <li>Design a participative methodology to engage key stakeholders to work on the definition and co-creation of a shared circular economy strategy that reflects their concerns and follows the principles mentioned in recommendation 3. (E.g. Designers can help the early stage of a strategy on the circular economy, identifying appropriate materials and making a link between the demand and how people use resources).</li> <li>Together with the stakeholders, identify key sectors and possible partners.</li> </ul>	- The Municipality of Groningen - Provinces of Groningen, Drenthe and Friesland Consulting company - Universities and research centres - Business sector (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.) - Entrepreneurs (e.g. Circular Economy Club) - Civil Society Organisations	- Amsterdam (Netherlands): "Amsterdam Circular 2020-2025" (2019)  - Paris (France): Circular Economy Plan 2017-2020 (2017); Urban metabolism study in Paris (Source)  Sources: OECD, Strategic Financial planning for water supply and sanitation, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Short

- Define result-oriented and realistic objectives, and ensure that they are coherent with the national and regional levels.
- Define short, medium and long-term targets and sub-targets for the circular strategy (e.g. quantity of circular economy related projects, number of circular building to be constructed, etc.).
- Align the objectives of the circular economy strategy with the goals of the existing energy transition, climate change, smart city plans.
- Design a set of actions to put in place the defined objectives, define their expected outcomes and allocate a budget and resources to each of the actions:
  - Financial resources, linking the circular strategy to a financial plan for its implementation.
  - Technical resources
  - Human resources
- -Explore the available indicators that can be useful for the monitoring of the strategy.
- Develop a financial plan for the implementation of the strategy and include it as a part of it. The following steps could be considered to prepare the plan in coordination with the strategy content:
  - Define an economic forecast (e.g. public spending level, existing and future financing alternatives, public spending trends and expected evolution).
  - Measure the target's cost and financing. Specifying targets and technology decisions determine the investment programme that should be sully specified and costed. Future financing options at all levels of government (international, national, regional, local) should be explicitly considered. For example, available funding to promote the circular economy from the Dutch national Ministry of infrastructure, the national regional strategies and the SDGs implementation programme.

	- Clearly communicate the aim and the expected outputs of the strategy.			
DECD Recommendation 5:	│ Promote a circular economy culture			
Raise awareness on the circular economy among citizens, business and relevant actors  Encourage citizens to embrace circular habits in their daily lives	- Promote conferences and seminars at schools and universities in order to raise awareness among children and students in Groningen.  - Launch communication campaigns to show the impacts of the circular economy and communicate how citizens and different actors can contribute to it.  - Create a dedicated website in order to share knowledge, good practices concerning the circular economy.  - Organise events for knowledge sharing, networking and the promotion of the circular economy at the local level.  - Share success stories with the citizens (e.g. through the social media, newspapers, TV)  - Use Social Media to spread the message to younger generations.  - Define the tools for the dissemination of the message among the adult population.  - Highlight the importance of the circular economy in the existing and upcoming strategies of the city, when appropriate (e.g. climate change, housing, energy etc.).  - Coordinate actions with other cities participating in the OECD project and worldwide working on the circular economy (e.g. organization of events, exchange of experiences, business models sharing, project financing opportunities, etc.).  - Promote the creation of a group of businesses focused on the circular economy.	- Municipality communication area  - Utility companies  - Universities  - Research Institutes  - Relevant stakeholders (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.)  - Civil Society Organisations  - Circular economy ongoing projects  - Media companies  - Schools  - Households	- North Karelia, Finland: organises annual seminars in different topics related to circular economy. A regional coordination group holds meetings 4 times per year.  - The City of Valladolid (Spain) organises "Circular Weekends", during which entrepreneurs connect with one another and join forces for circular projects. This participation space that involves citizens in public discussions helps promote a circular culture while raising awareness and engagement.  - The City of London (United Kingdom) started recruiting "circular economy ambassadors" in different companies and local authorities to share the benefits of circular economy with specific information for each economic sector and to raise awareness at the workplace (London Waste and Recycling Board, 2017).  Source: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Medium

#### OECD Recommendation 6: Promote training programmes and develop technical capacities

- Promote technical and nontechnical capacity building among public officials, stakeholders and citizens to provide them with the necessary tools to foster the circular transition in their city
- Review and analyse the required skills and capacities for carrying out all the activities associated with designing, setting, implementing and monitoring the circular economy strategy. This could include the capacity to:
  - Design circular economy plan/ programmes that are realistic, result-oriented, realistic, result-oriented, tailored and coherent with national and regional objectives.
  - Co-ordinate across different levels of government ensuring complementarities and achieving economies of scale across boundaries.
  - Involve stakeholders in planning of circular economy strategy
  - Ensure adequate financial resources by linking strategic plans to multi-annual budgets and to mobilise private sector financing.
  - Allocate adequate human resources.
  - Design and use monitoring indicator systems.
  - Share experiences and carry out evaluations.
  - Properly use monitoring and evaluation information for decisionmaking.
- Develop targeted capacity building programmes within the different departments of the municipality (e.g. procurement, legislation).
- Develop targeted capacity building programmes for the private sector (e.g. starting with stakeholders from selected sectors).
- Create tailored educational contents on the circular economy concept for schools (e.g. upstream and downstream waste management, circular agrofood, product re-design, energy transition, reuse).

- The Municipality of Groningen
- Universities and research centres (e.g. Northern Innovation Circular Economy lab, NICE)
- Relevant stakeholders (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.)
- Flanders Circular (Belgium) offers a Masterclass on Circular Economy. In four sessions of half a day, participants discover the opportunities for their business in a circular economy
- The City of Glasgow (United Kingdom) has organised workshops and events to build capacity and share good practices. The Chamber of Commerce of Glasgow also provides capacity building programmes for businesses aiming at transitioning to the circular economy
- The City of Barcelona is part of the "Circular design: Learning for Innovative Design for Sustainability" Project. The goal is to foster knowledge co-creation process and the development of training materials in order to teach and train students, faculty and enterprise staff of the design sector in Innovative Design for Sustainability (IDfS) strategies (Circular Design, 2019).

Source: Making Water Reform Happen in Mexico (OECD, 2013), OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

Short- Medium

	Promote competition of ideas, awards and certifications			
- Stimulate new ideas and projects that can provide solutions to the city's problems, and provide support for innovators	Competition of ideas and awards  Organise a call for projects based on specific criteria (e.g. circular employment, amount of reused materials) and set an award in terms of public recognition, incentives or economic prize.  Explore the possibility of providing financial or spatial support for the implementation of the winning ideas:  Financial support could be provided through mechanisms detailed in recommendation 16.  Spatial support through the creation of experimentation spaces (Recommendation 18)  Certifications  Consider integrating the circular economy into existing and familiar certifications (e.g. ISO, environmental certificates)  Establish circular economy criteria for certification. For example:  Use of recycled materials  Development of life-analysis calculations  Deconstruction processes  Present a plan for disposal of materials or parts  Extended product lifespan (e.g. long guarantee, availability of spare parts of a product)  Product-as-a-service concept.  Based on the information of international experiences, prioritise certain sectors in order to undertake pilot experiments on circular certificates.  Collaborate with local universities and research centres to analyse the	- The Municipality of Groningen  - Universities and research Centres  - Business sector  - Utility companies  - Relevant stakeholders (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.)  - Entrepreneurs  - Civil Society Organisations  - Circular economy ongoing projects (e.g. Circular Economy Club)	- The White Paper on the circular economy of Greater Paris (France) includes a proposal to design and use of the circular economy labels (Source)  Source: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Medium

criteria for circular certifications

- Engage a dialogue with the private sector in order to discuss the development of a local declaration for businesses and organisations to express their commitment with the circular transition.
- Consider developing a local label or certification for products, initiatives or organisations that are implementing circular practices in Groningen (e.g. certifications assert that products are produced at a local level, are produced using secondary materials, etc.).
  - Define common guidelines for circular economy products and processes at a local level.
- Promote a systematic recognition of good circular practices through audits

#### OECD Recommendation 8: Create demand by being a launching customer

- Support SMEs, entrepreneurs and start-ups by investing in projects with lack of demand to get into the market but with good future perspectives
- Define the key challenges that the city would like to address through the application of solution provided by entrepreneurs, start-ups or companies.
  - Define themes (e.g. related to waste, safety, health, tourism, mobility, technology, etc.)
  - Define steps, procedures and clear rules.
  - Define targets to be reached through the activities
  - Measure social benefits and provide concrete figures
- Organise a call for projects that could be coordinated with other open calls like the competition for ideas in recommendation 11.
- Allocate the necessary human and financial resources for evaluating and monitoring the selected initiatives.

- The Municipality of Groningen
- Campus Groningen
- Research Centres
- Universities and research centres (e.g. Northern Innovation Circular Economy lab, NICE; the Energy Transition Centre; Energy Academy Europe)
- Business sector (e.g. the Business Association West, the informal organisation "De Koepel", Suiker Unie, Attero, Smurfit Kappa, Avebe)
- Relevant stakeholders (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.).

- Start-up in Residence (San Francisco, United States) and the Amsterdam Circular Challenge (Amsterdam, The Netherlands) connect start-ups and businesses to provide solutions to city's problems through transparent selection processes. If the solution provided by a project proves successful, the municipality invests in it or becomes its launching customer.
- A similar scheme has been adopted by the Dutch national government. Through the "Circular Challenge Project", the government supports financially profitable business cases and can act as a "launching customer". (Source).
- In the Province of Drenthe the home corporation is a launching costumer

Medium

Sources: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

## Facilitator

### OECD Recommendation 9: Facilitate coordination across municipal departments and across regional and provincial strategies

Objective	Practical Steps	Possible champions/partners	Relevant experiences	Timeline
- Strengthen synergies across municipal departments to avoid duplications, overlaps and grey	Coordination across municipal departments (horizontal)  - Identify how the different municipal departments can relate to the	- Municipal Departments (Economy,)	Coordination across municipal departments (horizontal):	Coordination across municipal
areas  - Clarify the targets and expectations	circular economy in their policies (e.g. public procurement, environment, innovation, etc.).	- National Ministry of Infrastructure	- Creation of dedicated horizontal working groups (Toronto, Oulu and Melbourne) (Source: OECD Survey,	departments (horizontal): Short
of the circular economy initiatives within the municipality	- Consider appointing a person or a workgroup responsible for coordinating the work on circular economy with clear mandate over	- Provinces of Groningen, Drenthe and Friesland.	2019)  - Creation of specific teams in charge	Coordination across
- Develop a common narrative throughout municipal departments and the regional level while aligning	all departments in the municipality. Define the ways for co-ordination:	- Groningen-Assen Regional Alliance,	of coordinating their transition (Amsterdam, Paris, London, Rotterdam, Ljubljana and Brussels)	levels of government (vertical):
targets - Create spaces for dialogue and	<ul><li>Inter-departmental programmes</li><li>Co-ordination group of experts</li></ul>	- Northern Netherlands Alliance (SNN),	(Source: OECD Survey, 2019).  - Metropolitan Area of Barcelona:	Medium
experience exchange, enhancing common actions and learning processes	<ul> <li>Formal or informal forums that gathers all the municipal departments.</li> <li>Periodical communications on circular economy activities</li> </ul>	- Economic Board of the Northern Netherlands (EBNN),	Creation of a body for the coordination of the city and the metropolitan area (Source: OECD Survey, 2019).	
- Strengthen the existing coordination mechanisms with provincial and regional and address	- This person or workgroup would be a central point to all the topics within the circular economy:	- Circular Friesland	Coordination across levels of government (vertical):	
the circular economy-related questions within them (e.g. input and output of energy, resources and	<ul> <li>Clearly define the responsibilities of the coordinator/workgroup.</li> <li>Set clear short, medium and long-term goals for the</li> </ul>		- The Spanish national strategy created an interministerial body that includes the national government, the	
materials).	coordinator/workgroup and periodically monitor and evaluate the performance.		Autonomous Regions and the local governments through the Spanish Federation of Municipalities and Provinces (FEMP).	

- Make sure that there are not contradictory objectives between the city and the region that may hamper the achievement of long-term targets.
- Avoid asymmetries or lack of information between the actors at a local and regional level
- Periodically revise and update the tasks and responsibilities of the co-ordinator/working group.
- The working group should be formed by all involved departments to raise awareness on the topic and plan joint actions.
- Explore inter-municipal collaboration opportunities in order to detect common needs within the region.

#### Coordination across levels of government (vertical)

- Set up a co-ordination platform across the municipality, the provinces and the region for co-operation on circular economy-related policies. The following governance instruments could be considered:
  - Bodies between regional and local authorities can take the form of committees, commissions, agencies or working groups.
  - Ad-hoc meetings for city-province-region co-ordination
  - Network to work on the circular economy that includes representatives from the region, the 3 provinces and from all municipalities in Northern Netherlands
  - Dialogue between the municipality, the provinces and the region.
  - Cooperation agreements between Groningen, the region the 3 provinces and other municipalities of the region for the implementation of joint projects on the circular economy
  - Joint actions between the municipality and the region and set up pilot projects
  - Roadmap together with the region for co-ordination, harmonisation of objectives and improve the implementation of policies
  - Shared databases and information systems

- Brussels Region Regional Programme for the Circular economy 2016 – 2020 is coordinated by 3 Ministers and 4 regional administrative bodies.

Sources: Making Water Reform Happen in Mexico (OECD, 2013), Making Decentralisation Work (OECD, 2019) and OECD Policy Seminar (2019); OECD Water Governance in OECD Countries (2011)

- 14 - Foster business opportunities and innovation
  - Create an online platform to share good practices and challenges for SMEs and entrepreneurs on the transition to the circular economy.
  - Monitor the development and activities on the online information platform (e.g. number of up-dates, their frequency, coverage in terms of information use, etc.).
  - Organise events and workshops for exchange of success stories, good practices and barriers.

- The Municipality of Groningen
- External Consultancy
- Campus Groningen
- Research Centres
- Business
- Relevant stakeholders (e.g. construction and demolition, design, energy, health, ITC, creative industries, etc.)
- -Entrepreneurs
- Start-ups

- Some cities and regions have developed online platforms to provide:
  - An online portal on the circular economy (Paris, France),

Medium

- Waste-related information in real time (North Karelia, Finland)
- Open data (Toronto, United States).
- A materials marketplace to foster secondary materials exchanges (Austin, United States)
- An online zero waste to provide assistant recycling information to local residents (Phoenix, United States)
- Start-up Sweden, launched in 2016, is a boot camp for digital start-ups from rural areas in Sweden. The policy initiative connects start-ups from rural areas across Sweden with the entrepreneurial ecosystem Stockholm. The boot camp takes place 4 times a year, with each boot camp providing 10 companies with the opportunity to go to Stockholm and expand their networks via contacts with other companies, financiers, potential customers and partners.

Sources: OECD, 2019; Swedish Agency for Economic and Regional Homepage, Growth (n.d.). https://tillvaxtverket.se/english, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

OECD Recommendation 11: Facilitate to	ne connection with	business and universities
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- Develop an "ecosystem" for the circular economy fostering collaboration between universities, business and the government. following the existent experiences on digital society and healthy ageing (triple-helix collaboration)
- Stimulate innovation
- Promote pioneering activities and business models
- Provide start-ups and scale-ups with access to business partners, ideas, clients, financing, and help to share knowledge and expertise
- Build knowledge and obtain a broad understanding of the circular economy

Collaboration between the municipality and university

Options could be:

- Collaboration agreements to work on prioritised areas
- Agreements to finance PhD positions on circular economy related subjects
- Academic spin-offs providing training and coaching services.
- Tax breaks and social security exemptions to companies that hire recent master's / PhD graduates on circular economy areas.

Collaboration between the private sector and university

- Consider financial instruments to link the private sector with universities. Some instruments that could be used are:
  - R&D and innovation subsidies.
  - Tax incentives for companies that engage in collaborative research.
  - Financial support to create academic spin-offs and for firms to purchase R&D services from certified researchers from universities.

Actions for entrepreneurship

Options could be:

- The Municipality of Groningen

- Universities and research centres (e.g. Northern Innovation Circular Economy lab, NICE; the Energy Transition Centre; Energy Academy Europe)
- Business sector
- -Chamber of Commerce

Connection with business and entrepreneurs

- The City of Paris launched in 2017 a circular economy Incubator, hosting 19 start-ups.

- Start:up Slovenia. Established in 2014, the initiative aims to raise the level of entrepreneurial talent by developing networks that encourage company growth on international markets, contribute to higher capital accessibility and activate various ecosystem stakeholders. The initiative mobilises a network of mentors from various backgrounds to provide entrepreneurs and young firms with tailored advice (Source: OECD, 2019 Industrial transitions)
- innovative start-ups and spin-offs with origins in public research. The initiative is managed by Finpiemonte, a regional development agency and investment firm, and is implemented by university incubators. The aim is to support the creation of new enterprises in three sectors: i) knowledge and technologyintensive manufacturing; ii) ICT; and iii) tourism and culture. The target groups,

Medium

- Piemonte, Italy, is supporting

- Incubators to foster knowledge sharing and pilot testing.
- -Entrepreneurship modules in formal education.
- Consultation activities with entrepreneurs and innovative thinkers
- Front-runner business models support
- Circular economy platform to share good practices at the municipal level and promote cooperation. This will create business opportunities and project acceleration by fostering trust and knowledge sharing.
- Economic incentives through subsidised loans and credit guarantees. Results of this partly public- private innovation should be open access (open code).

#### Triple Helix collaboration

- Based on the existent experiences of collaboration on digital society and healthy ageing topics, the creation of a "Circular campus or ecosystem" in Groningen could be explored to connect, start-ups and existing companies with academia and the municipality.
- Organise events, workshops, and fairs, where companies can share present their technology needs and scientists, can present the results of their research.
- Showcase the inter-connections (joints) between sectors (e.g. food, energy construction) and plan coordination not only by sector but by taking into account these interconnections.
- Arrange discussion and informative meetings with the university and business clusters to share experiences and results.
- Conduct active research of partners through campaigns for involvement on circular initiatives.

i.e. potential entrepreneurs, are academic researchers, youth and/or unemployed people with innovative ideas and a secondary-school diploma.( Source: OECD, 2019)

#### Connection with Universities

- The City of Phoenix (United States) created together with the Arizona State University a Resource Innovation and Solutions Network (RISN) Incubator for accompanying businesses in the shift towards circular economy.
- The Cantabria Entrepreneurship Centre (CISE) in Santander, Spain, started in 2012 as part of the Cantabria International Campus of the University of Cantabria. Its mission is to encourage creative, entrepreneurial and innovative skills among students interested in entrepreneurship and to а comprehensive promote entrepreneurship culture through the creation of networks among entrepreneurs. For this purpose, the centre operates in co-operation with programmes sponsored by public and private organisations to stimulate entrepreneurship. The programmes cover entrepreneurship training classes, individual mentoring support and networking events to facilitate connections between future and current entrepreneurs. (Source: OECD, 2019)

Sources: OECD Report University-Industry Collaboration New Evidence and Policy Options (OECD, 2019), Regions in Industrial Transition: Policies for people and places (OECD, 2019), OECD Policy Seminar (2019),

			and OECD The circular economy in cities and regions. Key lessons learnt (2019).	
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Offer all information, services and dministrative support regarding ircular economy projects to usinesses, entrepreneurs, SMEs, nd other stakeholders willing to be art of the transition.	- Define a set of circular services, information and support offered by the Single-Window.  - Establish a simple and clear procedure for the interaction between the stakeholders and the Single-Window  - Specify the responsibilities of the circular economy single window and the co-ordination procedures with other departments (e.g. Environment, waste management).  - Single submission points for all required documentation. This may involve the provision of a variety of business services at a single site but more importantly, a single entry point (e.g. telephone number). The information should be accessible via the Internet (e.g. as a web portal).	- The Municipality of Groningen - Chamber of Commerce - Business sector - Entrepreneurs	In Romania, the National Trade Register Office (Ministry of Justice) operates a single-window shop (Biroul Unic) for business registration in a period of 3 days.  - In Singapore, all business registrations must be done online.  - Hungary has established a central electronic contact point to facilitate starting a business or providing services in Hungary (www.magyarorszag.hu) (OECD, 2013)	Medium
	<ul> <li>Provide information on registration, legal framework and investment climate.</li> <li>Provide services to speed up the granting of necessary permits and licenses in a centralised and comprehensive manner</li> <li>Provide specific assistance with registration procedures</li> </ul>		Sources: OECD Recommendations on One Stop Shops, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	
DECD Recommendation 13: Strengtl	hen the existing networks to grab the "low-hanging fruits" from co	o-operation of local businesses	3	
	<ul> <li>Identify existing networks by their main goal (e.g. waste treatment, re-use of materials and food, local community engagement).</li> <li>Determine local networks' necessities (e.g. space to develop</li> </ul>	- The Municipality of Groningen - Existing networks in the	- Umeå Municipality (Sweden) created the "Sustainable restaurants network" (Hållbara Restauranger) to promote the application of circular principles in the	Short

- The support to existing networks could be provided through instruments such as:
  - Open project calls
  - Cross-cluster and cross-sector collaboration.
  - Networking and platform events organised by local (public) stakeholders
  - Provision of online platforms

- Northern Innovation Circular Economy lab – NICE-
- The Food Network,
- BUILT-IN Groningen
- Circular Economy Club

restaurants with local producers. The municipality provides educational workshops (e.g. on saving energy, reducing waste, and replacing plastic items) and ad hoc sustainability coaching services for each restaurant. (Green Umeå, 2019)

- In 2018, the City of Amsterdam launched the "Circular Hotels Leaders Group" (Kloplopergroep). A total of 12 hotels have started cooperating among them and with actors along their different value chains (e.g. by exchanging knowledge; joint purchasing and bundling of waste streams) (CREM, 2018)

Sources: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

#### OECD Recommendation 14: Facilitate the connection between urban and rural areas

- Obtain a better understanding of the challenges and opportunities for rural and urban areas in their transition towards the circular economy.
- Develop a deeper knowledge of the benefits of the collaboration between the urban and rural areas.
- Foster a territorial approach of the circular economy and integrate the rural areas as part of the solution.
- Strengthen the dialogue between the urban and rural areas
- Foster regional changes in production and consumption

- Facilitate a social and urban-rural dialogue in order to get farmers, SMEs, consumers, business and knowledge institutions involved in the circular transition and foster new cross-cutting coalitions (e.g. some key sectors are food, construction, biomass, delivery, farming, agriculture, chemistry).
- Foster Urban Rural partnerships for collaboration in specific sectors (e.g. food, construction):
  - Clarify the partnership objectives, actions and roles of key urban and rural actors.
  - Share the knowledge and exchange good practices from the urban-rural partnership.
  - Evaluate the results of the partnership
  - Consider the following type of partnerships:
    - Economic transactions and innovation activity
    - Delivery of public services
    - Exchange in amenities and environmental good
    - Other types of partnerships

- The Municipality of Groningen
- Campus Groningen
- Farmers and rural associations
- Sectorial business associations with increased activity in rural areas
- Business sector (e.g. the Business Association West, the informal organisation "De Koepel", Suiker Unie, Attero, Smurfit Kappa, Avebe)

- In Tampere, Finland, Eco fellows are co-ordinating rural-urban partnerships related to biogas. They work as a hub that brings together different actors that have not been used to be in contact before (farms, power plant operators, logistics etc.).
- In Kitakyushu City, Japan, a foodrecycling loop between rural-urban areas has been established.
- Start-up Sweden, launched in 2016, is a boot camp for digital start-ups from rural areas in Sweden. The policy initiative connects start-ups from rural areas across Sweden with the entrepreneurial ecosystem in Stockholm. The boot camp takes place

Medium

practices (e.g. in the food, construction, biomass and delivery sectors.

- Promote co-operation experiences between SMEs, consumers and knowledge institutions. - Launch communication campaigns in urban and rural areas to present their role in the circular economy transition, the potential benefits of co-operation and to explain how each individuals can play a role in the circular transition.

- Universities and research centres (e.g. Northern Innovation
- (e.g. Northern Innovation Circular Economy lab, NICE; the Energy Transition Centre; Energy Academy Europe)
- Provinces of Groningen, Drenthe and Friesland.
- Groningen-Assen Regional Alliance,
- Northern Netherlands Alliance (SNN)
- Economic Board of the Northern Netherlands (EBNN)

4 times a year, with each bootcamp providing 10 companies with the opportunity to go to Stockholm and expand their networks via contacts with other companies, financiers, potential customers and partners. (Source: OECD, 2019; Swedish Agency for Economic and Regional Growth (n.d.), Homepage, https://tillvaxtverket.se/english)

Sources: Rural-Urban Partnerships: An Integrated Approach to Economic Development (OECD, 2013), OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).



## Enabler

## OECD Recommendation 15: Identify gaps and ways forward on how to adapt laws and regulations

Objective	Actions	Possible champions/partners	Relevant experiences	Timeline
Objective Clarify the regulatory framework for circular economy practices to address the overlaps and gaps in regulatory functions  Unlock the circular economy potential enabling ideas like reuse, remanufacturing or the use of waste as a resource, become business as usual	- Organise ad hoc meetings or public consultations to build a dialogue between the city council, civil society and the private sector to detect the main regulatory and legal barriers and identify the sectors where action can be taken (e.g. energy system, second hand materials, the actual regulation that conceives school waste as "company waste" or the actual limits to grow mushrooms from coffee waste).  - Establish a dialogue with the national and regional governments to identify regulatory instruments that can encourage the transition to towards the circular economy, as well as gaps (in particular, when the regulatory and fiscal responsibilities go beyond that of the municipality).  - Share the identified main regulatory barriers and potential alternatives with the regional and national regulatory authorities.  - Maintain a proactive role on the definition of new legislation instead of being a follower of the actions taken from the National government.  - Identify areas for opportunities to set specific requirements on land allocation (e.g. energy use, water requirements, demolition, circular construction, flexible zoning)  - Explore friendly regulatory environment through simplified regulations and registration procedures:  • One-stop-shops and web portals (see Recommendation 16).  • Regular consultations with firms to identify regulatory	Possible champions/partners  - Municipality of Groningen (e.g. the legal department).  - Provinces of Groningen, Drenthe and Friesland.  - Groningen-Assen Regional Alliance,  - Northern Netherlands Alliance (SNN),  - Economic Board of the Northern Netherlands (EBNN),  - Circular Friesland  - National Government (e.g. Ministry of infrastructure)	Relevant experiences  - The city of Amsterdam, The Netherlands, developed tenders for land allocation, primarily for new-build projects ("Roadmap Circular Land Tendering" in City of Amsterdam, 2019).  - Another example in the city is the development of a circular neighbourhood, the Circular Buiksloterham. Once one of the most polluted areas in the city, it is now turning into a circular area for living and working.  - The City of Barcelona (Spain) connected land use and mobility for greater liveability of the city and reduction of negative emissions.  - In the Netherlands, the legal and regulatory framework at local and regional level is expected to adapt in order to make the Netherlands an economy without waste in 2050, as defined by the National Circular Economy.  Source: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Short

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#### OECD Recommendation 16: Identify financial conditions and opportunities

- Improve access to finance for circular economy projects in their starting, implementation and scale-up phases.
- Liaise with the national government's areas to clarify the existent funding opportunities and with other cities to learn about their experience.
- Facilitate access to finance and broaden the range of financial instruments for entrepreneurship considering the available funding options and budget capabilities of the city:
  - Traditional instruments: grants, soft loans, loan guarantees
  - Alternative and non-bank sources of finance: crowdfunding, peer-to-peer lending, business angel networks, venture capital
- Strengthen financial literacy:
  - Training and mentoring programmes, provision of accessible information and guidance
  - Support entrepreneurs with information, training, coaching and mentoring: One-stop-shops and information centres
  - Entrepreneurship training courses provision
  - Dedicated mentoring programmes

- The Municipality of Groningen
- Netherlands National government (e.g. Ministry of Infrastructure)
- Banks and financing institutions
- Revolving funds: the City of Amsterdam through the Amsterdam Climate & Energy Fund (ACEF) and the Sustainability Fund invested in more than 65 projects related to climate, sustainability and air quality for a total of 30 million EUR. These are revolving funds, allowing to reinvest revenues within 15 years to fund additional sustainable energy production, energy efficiency, or circular economy projects. Each of the funded projects must contribute to the aims of the Sustainability Agenda approved by the City Council in 2015. Regarding the nature of the financing, the ACEF provides funding in the form of loans, warranties and/or share capital, subject to a maximum of €5 million per project.
- Venture capital and growth capital: the London Waste and Recycling Board (LWARB) supports circular business through the "Circular Economy Business Support Programme". The venture capital fund supports circular economy SMEs with Series A and Series B capital for scaling up businesses that are already in the market. Moreover, the LWARB through the Circularity European Growth Fund 1, operated by Circularity Capital, seeks investment opportunities in circular businesses with proven cash flow and profit, which need significant capital to scale.
- Loans: the European Investment Bank (EIB) provides financing tools, supporting public and private sector in the transition to the circular economy. The EIB offers medium and long-term loans for large-scale circular economy projects and indirect financing through local banks and other agents for smaller

projects, particularly related to SMEs. Other new circular economy project models can also be financed by the European Fund for Strategic Investments (EFSI), InnovFin and other specific financial instruments.

- Subsidies: In 2017 and 2018, in Valladolid, Spain, the municipality launched two calls for projects to finance circular economy initiatives aiming to stimulate local businesses and entrepreneurial activities, while raising awareness on the circular economy. The local government financed a total of 61 projects (22 and 39 respectively in 2017 and 2018) allocating a budget of EUR 960 000 (EUR 400 000 and 560 000, respectively in 2017 and 2018). Additional EUR 600 000 Euros are planned for 2019. The municipality finances between 40% and 85% of the project's total cost. The beneficiaries of the grants are private companies, associations of private companies.

- In the Netherlands, at the national level, the 50% of the Ministry of infrastructure's total budget is available to fund circular economy related projects, while the national regional strategies and the SDGs implementation programmes also provide financial opportunities to promote the circular economy transition.

Sources: OECD (2019) Regions in Industrial transitions, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

#### OECD Recommendation 17: Put in place Green Public Procurement

- Include circular economy criteria in public tenders as a way of fostering the circular transition through direct public purchases
- Reduce the environmental impact of public purchases at the city level
- Incentivise businesses to apply more circular ways of production and business models.
- Include circular standards in the technical specifications, procurement selection and award criteria, as well as in contract performance clauses:
  - Consider designing tenders with a focus on functionality exploring opportunities where services would be more useful than purchasing goods.
  - Adapt the public procurement evaluation system increasing the value of social and environmental ratings in comparison with the price criteria.
  - Set circular standards to foster different goals:
    - Design of products that enable dismantling (e.g. modular products).
    - Increase in cycling of products and raw materials.
    - Minimisation of value destruction.
    - Promotion of new business models.
    - Elimination of hazardous chemicals and harmful substances
    - Promote circular construction given the growing population trend expected in the city that will demand 20 000 of new houses by 2030
  - Establish clear requirements in tenders in order to foster the change of the materials, quality, maintenance and design.
  - Explore the introduction of innovative solutions for tenders (e.g. the support for the development of circular business models or product-as-a-service schemes).
  - Several tools could be applied:
    - Life cycle costing (LCC) for cost calculation.
    - Eco-label criteria or Green Public Procurement (GPP) criteria can be applied to recycling, reuse, recyclability, non-toxicity, etc.
    - Eco-design.

- Municipality of Groningen
- SMEs (e.g. the Business Association WEST)
- Business sector
- Entrepreneurs
- The city of Ljubljana has been including environmental requirements in its tenders as part of the technical specifications, as a condition for determining the qualifications of the provider or as a criterion for selecting the most favourable bid
- Paris: one of the first cities to adopt a scheme for responsible public procurement in February 2016. In 2018, 43% of the city's purchases were linked to the circular economy and 14% of them included "circular economy" criteria.
- The strategic procurement principles of the City of Tampere promote SMEs tender participation. In 2018, SMEs were partners in 82 % of all the city's contracts.
- The City of Toronto (Canada): Circular Economy Procurement Implementation Plan and Framework to use its purchasing power as a driver for waste reduction, economic growth, and social prosperity (City of Toronto, 2019).
- In 2016, the municipality of Copenhagen defined a number of environmental criteria for public building and construction projects, "Miljø I Byggeri og Anlæg 2016" (MBA2016). The MBA2016 includes procurement criteria for resource efficiency, recycling and reuse of materials. The criteria that promote recycling and reuse require a life cycle assessment (LCA) for different materials to be conducted. Those

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- Assess the diffusion of information about call for tenders among local and regional authorities and key stakeholders.
- -Create a help desk to provide specialised technical support for the preparation of the procurement process.
- Provide capacity-building programmes to procurement officials in order to monitor and evaluate tenders.
- Develop a more in depth monitoring process of the tenders and allocate the necessary resources to carry out this evaluation
  - Allocate the necessary human and financial resources for monitoring and evaluating the results of tenders
  - Develop a set of indicators for procurement, for example:
    - Percentage of waste diversion as a result of procurement activities
    - CO2 savings as a result of procurement activities
    - Percentage of recycled content used in materials
    - Number of City contracts evaluated using Circular Economy principles
    - Raw materials avoided
    - Number of green jobs created and secured
    - Number of City staff trained on Circular Economy procurement principles
    - Waste reduction savings
    - Cost saving

municipal departments planning a building project would need to include at least two alternative materials for each building part when doing the LCA. The department needs to choose the constructions with the lowest negative environmental impact. At the same time, the reuse of old bricks is being promoted thorough public procurement (Source).

- Nordic Council of Ministers (2017) Circular Public Procurement in the Nordic Countries (Source). This report presents the state of the art of public procurement in the Nordic countries (Denmark, Finland, Norway and Sweden) and provides concrete examples.
- The City of Melbourne's procurement policy stipulates that the council should use procurement to support local businesses and economic diversity by: generating local employment; taking into account the life cycle impacts of products purchased (purchase, operation and disposal); building relationships and encouraging purchasing from local suppliers, including social enterprises.

Sources: OECD (2019) Regions in Industrial transitions, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

#### OECD Recommendation 18: Create spaces for experimentation

- Provide suitable spaces to test and pilot new circular economy projects and stakeholder collaborations.
- Stimulate new ideas and new business models to foster innovation
- Make the case for the necessity to update certain legal and regulatory barriers
- Create spaces for experimentation with more flexible rules (e.g., land use permits). These spaces could be conceives as:
  - Circular districts, streets, or areas such as a free space for Circular Innovation
  - Living labs
  - Incubators
  - Events or festivals that the city can provide and (co-) create.
- Establish partnerships with the private sector for co-working spaces for innovation and experimentation.
- Develop an evaluation mechanism to test and prototype innovations that includes future users in order to validate innovations.

- The Municipality of Groningen
- Campus Groningen
- Universities and research centres
- Sugar Factory
- Entrepreneurs and start-ups
- Civil Society Organisations.
- Relevant stakeholders from different sectors (e.g. construction and demolition, design, artists, ICT, creative industries, etc.)

- Amsterdam "Free Zones" provide suitable spaces to test and pilot new system and stakeholder collaborations. The free zones applies to the following:
- Use public space without a permit or exemption.
- Broader rules for events.
- Space for a maximum of 8 food trucks, stalls or other mobile points of sale at 4 locations in the area.
- Urban Lab in Paris. Since 2010 the Urban Lab has accompanied more than 200 experiments and consolidated a methodology to support effective experimentation in four main stages:
- 1. Definition of the experimental project and its evaluation; 2. Search of the experimental site; 3. Deployment of experimentation; 4. Valuation and transformation. In order to facilitate access to these experimental sites, the Urban Lab is based on a legal framework that has been working for 10 years, including a public space occupancy agreement, a legal framework ready to use (Source)

Sources: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

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#### OECD Recommendation 19: Generate an information, evaluation and monitoring system

- Identify how "circular" the Groningen is, what works, what does not work and what can be improved
- Produce, update, and share timely, consistent, comparable policy-relevant and circular economy-related data and information to inform policymaking and implementation
- Enable circular decision making, measure progress and improve policy implementation
- Monitor and evaluate circular strategies
- Obtain valuable information to adapt and implement the strategy
- Monitor the strategy's goals and targets
- Provide citizens and stakeholders with information whether the efforts carried out by the government (human and financial resources) are producing the expected results
- Help public officials and citizens understand why and how the circular strategy has the potential to be successful
- Set progressive and precise targets to prioritise Groningen's main challenges in the circular economy for the short, medium and long-term
- Foster a culture of monitoring,

- Identify available indicators and data for the monitoring of progress and assessment of results of the circular economy strategy. Some examples could be:
  - Existing data on empty buildings, materials used for construction and waste streams.
  - Economic and governance variables (e.g. inventory of laws and regulations that can foster the transition from the linear to the circular economy).
  - Open data as enabler of innovation (e.g. the use of municipal data on transport enabled the development of innovative new start-ups and applications, including those that mixed publicly collected data with other sources.
  - Material streams identified in the regional metabolic study.
- Organise discussion events to identify the relevant indicators for the City and the key sectors involved in the circular transition.
- Create an information, monitoring and evaluation framework, considering environmental (e.g. resources, waste and circulation processes), flows (water, energy, products, food, transportation, information, people) and social (number of circular jobs created) indicators. Potential indicators could be:
  - Waste diverted from landfill
  - CO2 emission saved
  - Raw material avoided
  - Use of recovered material
  - Energy savings
  - Water savings
  - Jobs created from circular activities
- Foster synergies with national and subnational statistical institutions and city governments to:
  - Advance towards a common/shared information, evaluation and monitoring system.
  - Establish what needs to be measured how to do it and for which objectives.
  - Identify the available human and technical capacity to perform a regular monitoring of goals and targets

- The Municipality of Groningen
- Municipal statistical office
- National and subnational statistical offices
- The Greater Porto Area, Portugal, has developed the "Circular Economy framework Monitoring report" which include indicators such as: Number of tender books with circular criteria (production and consumption); level of implementation of Environmental Action Plan; level of implementation of the training plan; level of implementation of the Bio waste strategy; Recycling rate.
- Flanders Region (Belgium) developed a monitoring tool has been created to help Green Deal Circular Procurement (GDCP) buyers to determine circular goals and accompanying strategies for their circular procurement projects, keep track of progress and visualise the effects of their circular procurement projects (OECD, 2019). Circular Flanders (Belgium) also developed an indicators inventory identifying relevant indicators to monitor the transition to a circular economy and to measure effects of new policy and trends (Circular Flanders, 2019).

Sources: OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).

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evaluation and learning among public officials	Incorporate the information system to the online circular economy information platform that should be regularly updated and easily accessible.      Share with citizens and with stakeholders the results of outcomes of the strategy and the real benefits (e.g. Public website, social media)      Regularly follow up the development of circular indicators by international organisations and analyse the feasibility of using them in Groningen.			
OECD Recommendation 20: Enable	the circular economy transition beyond electoral cycles			
Enable that the circular economy policy will overcome future changes in the city government     Obtain a clear commitment from the public and private sector to achieve a common vision and objective and provide funding for the transition	<ul> <li>Develop a strategy on the circular economy with long terms goals</li> <li>Establish a circular agenda agreed by the different political parties.</li> <li>Define the "Groningen principles". Following the "Almere principles" experience, this entails defining around 10 guiding lines for the city future development in economic, social and environmental terms.</li> <li>Engage key stakeholders in the design and implementation of the circular economy agenda and the Groningen principles.</li> </ul>	- The municipality of Groningen - City Council Civil Society Organisations	- Amsterdam, last circular economy strategy was planned further away from the end of the government implementing it and the commitment with the topic continued after the change of authorities  Sources: OECD (2019) Regions in Industrial transitions, OECD Policy Seminar (2019) and OECD The circular economy in cities and regions. Key lessons learnt (2019).	Long