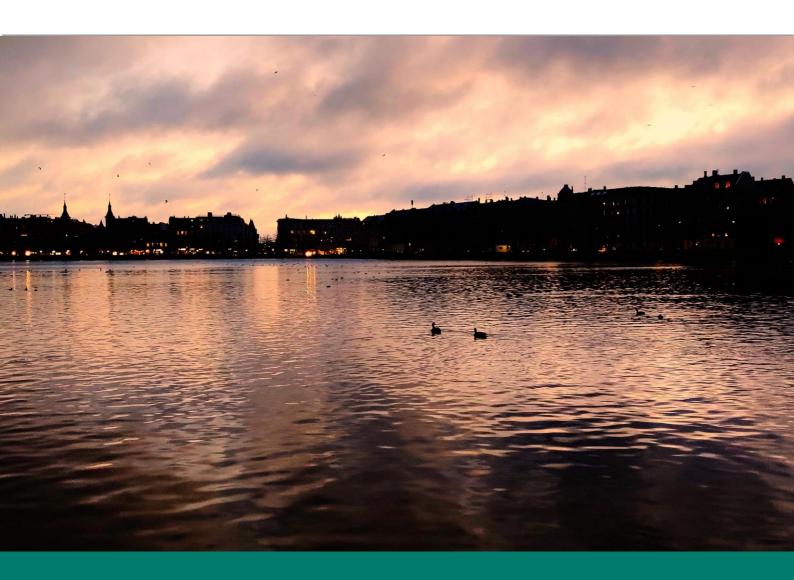
Circular economy country profile – Belgium





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Introduction

The European Commission requested the EEA to produce EU country profiles that offer an updated view of the following elements:

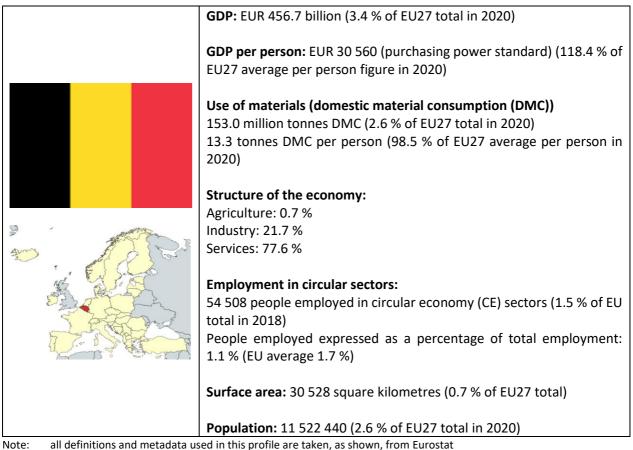
- circular economy policies being implemented at a national level with a particular focus on elements that go beyond EU mandatory elements; and
- best practice with a focus on policy innovation.

While implementing the EU Circular Economy Action Plan (CEAP 2020), Member States are encouraged to advance circularity at a national level by adopting policies and initiatives that go beyond EU regulations, while preserving the Single Market.

This circular economy country profile is based on information reported by the Eionet network and, in particular, the Eionet Group on Circular Economy and Resource Use in the second quarter of 2022. The information was reviewed and edited by the European Topic Centre on Circular economy and resource use (ETC CE). A selection of Eurostat data was made to further complement this country profile.

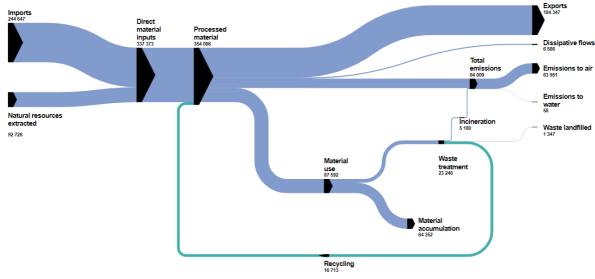
The information is current as of 1 September 2022 when members of Eionet verified the content of this profile.

Belgium – facts and figures



Source: Eurostat datasets, EU27 2020 (accessed 20 June 2022)

Figure 1 Material flow diagram for Belgium in 2020, '000 tonnes



Source: Eurostat (2022) [env_ac_mfa], [en_ac_sd], [env_wassd] (accessed 20 June 2022)

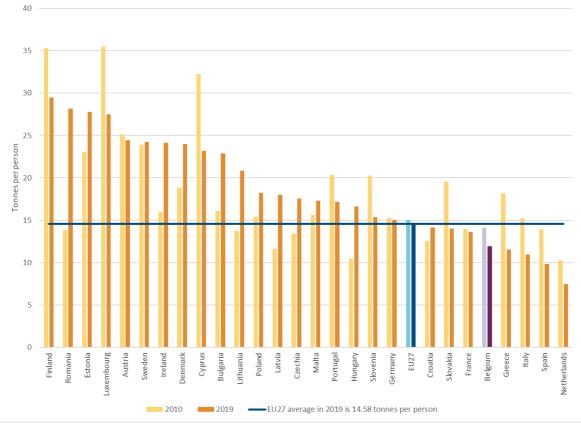
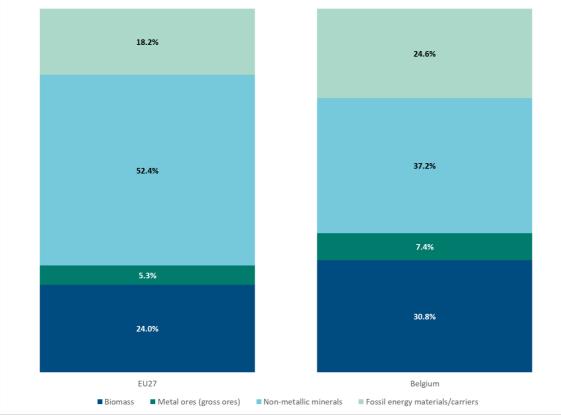


Figure 2 Material footprint (raw material consumption), EU27, 2010 and 2019, tonnes per person

Source: Eurostat (2020) [env_ac_rme] (accessed 4 July 2020)





Note: totals may not sum to 100 % due to rounding

Source: Eurostat (2022) [env_ac_mfa] (accessed 20 June 2022)

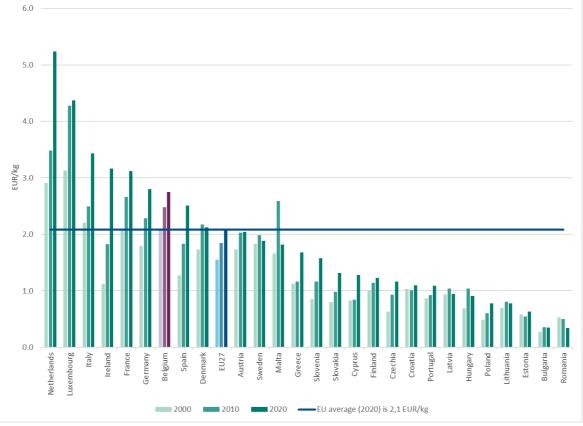
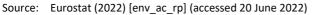
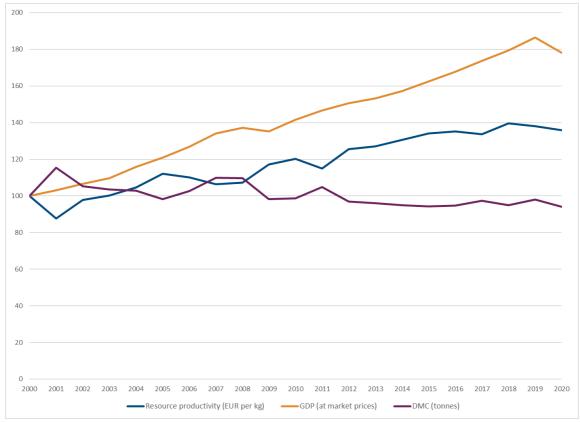


Figure 4 Resource productivity (gross domestic product/domestic material consumption), EU27, 2000, 2010 and 2020, EUR per kilogram







Source: Eurostat [env_ac_mfa], [env_ac_rp] & [nama_10_gdp] (accessed 4 July 2022)

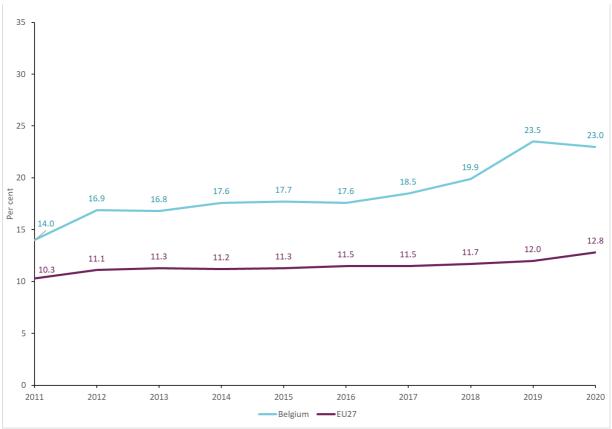


Figure 6 Circular material use rate in Belgium, 2011–2020, per cent

Source: Eurostat (2022) [env_ac_cur] (accessed 20 June 2022)

Existing policy framework

Dedicated strategy, roadmap or action plan for circular economy

Flanders

On 25 March 2016, the Government of Flanders approved the transversal policy framework **Vision 2050**, a long-term strategy for Flanders. It foresees an open, social, resilient and international region, that combines prosperity and wellbeing in a smart, innovative and sustainable manner, leaving no one behind. To realise this, seven transition priorities are explicitly defined, the circular economy being one of them (¹).

Shortly after, Circular Flanders (*Vlaanderen Circulair* (²)), the hub and inspiration for the CE was created in 2017 as part of OVAM (³), in the operational form of a partnership between government, the private sector, civil organisations and knowledge institutions, to implement and adopt the CE in Flanders. The current government confirmed this objective and voiced its ambition to transform Flanders into a circular trendsetter in Europe by 2030. To do this, it aims to decouple the material footprint of Flemish consumption from economic growth and reduce that footprint by 30 % by 2030.

In 2021, **Circular Flanders** implemented **a new governance structure** based on a policy liaison between the Ministers of Environment and the Economy and Innovation, with the objective of scaling up efforts. A Steering Group with 20 core partners was established, with members from the entire 'societal pentagram': government, private industry and business, civil society, knowledge institutes and the financial world. See the decision of the Government of Flanders⁴ concerning the new governance here (in Dutch).

Guided by a steering group (⁵), the operational governance was structured around six **strategic agendas**, in line with the priorities of the EU Green Deal:

- circular construction;
- chemistry and plastics;
- water cycles;
- bio-economy;
- food chain;
- manufacturing.

Each strategic agenda is an autonomous partnership with a public and private coordinating entity. They will formulate concrete ambitions, set out implementation strategies, and implement action on the ground.

Complementary to the six agendas, seven **strategic levers** were defined to support CE implementation, each of which has a coordinating entity:

- financing;
- communication;
- research;
- jobs and skills;
- circular procurement;
- innovation and entrepreneurship;
- policy and policy measures.

¹ See <u>https://publicaties.vlaanderen.be/view-file/23784</u> (in Dutch)

² See <u>https://vlaanderen-circulair.be/en</u>

³ OVAM Flanders' Public Waste Agency

⁴ <u>https://beslissingenvlaamseregering.vlaanderen.be/document-view/5F073D89FA87E000080006EF</u>

⁵ See <u>https://vlaanderen-circulair.be/en/approach</u>

The Circular Construction Strategic Agenda⁶ **of Circular Flanders** is led by the Confederation of the Construction Industry and OVAM. From a co-creation process, six ambitions towards 2061 were brought into focus in a vision text. The horizon of 2061, as opposed to the more usual 2050, was deliberately chosen because of the typical lifespan of a contemporary building: what is built today (then 2021) lasts for 40 years. In order to surmount challenges, the stakeholders have defined 10 working paths that were further translated into concrete actions, some of which are already taking shape, while others still need to be fully worked out.

A first rolling action programme, with commitments for 2022, will provide insights into the priorities and action of the building actors. At the time of writing, the process of gathering commitments for action is taking place through a survey⁷ of building actors and subsequent workshops.

Circular food chain strategic agenda

The Department of Agriculture and Fisheries and Fevia Flanders, the federation of the food industry, are leaders of the Circular Flanders strategic agenda for the food chain, as a public-private *duo*. They receive support in this from Circular Flanders. Together with relevant players from industry, government, academia and the social economy they form the Task Force Circular Food Chain.

The setup and ambition of the strategic agenda⁸ is broader than solely the prevention of food waste. It aims to build a fully circular food chain. Food waste prevention is a part of it. That is why the agenda is structured around three different, broader, pillars: the optimal use of bio-resources, food and residual flows. For these pillars, work paths have been defined per theme. Partnerships are central. All actors in the chain – farmers and horticulturalists, auctions, suppliers, food processing companies, retailers, the hotel and catering industry, households and waste processors – contribute to this and work from a zero-waste mindset on new business models. Policy makers create an enabling framework. Researchers look for innovative and implementable solutions.

A public-private *duo* with the Department of Economy, Science and Innovation and REO Auction lead the Circular Flanders Strategic Agenda for Bio-economy⁹.

The agenda has defined three work paths.

- 1 New collaborations for better valorisation
 - With this work path, the partners want to develop a better inventory of biomass waste streams, link supply and demand through cooperation, and build knowledge through research and experiment.
- 2 Supporting new crops

With this work path, the partners want to strengthen the basis of biomass, the crops. We are looking for more yield with fewer resources. The crops must also contribute to greater agrobiodiversity and be resistant to climate change. To this end, a clear innovation process is being worked out.

3 Linking up with broader residual flows

With this work path, the partners are investigating how residual flows from cities and industry that do not originate from the bio-economy, such as waste gases, residual heat, grey water, etc. can be used for the production of bio-material.

The Circular Flanders Strategic Agenda Chemistry and Plastics¹⁰ is led by OVAM and the Federation of the Chemical Industry and Life Sciences.

⁶ <u>https://vlaanderen-circulair.be/nl/onze-aanpak/werkagenda-s/circulair-bouwen</u>

⁷ <u>https://bouwen.vlaanderen-circulair.be/nl/bevraging-werkagenda-circulair-bouwen</u>

⁸ <u>https://vlaanderen-circulair.be/nl/onze-aanpak/werkagenda-s/voedselketen</u>

⁹ <u>https://vlaanderen-circulair.be/nl/onze-aanpak/werkagenda-s/bio-economie</u>

¹⁰ <u>https://vlaanderen-circulair.be/nl/onze-aanpak/werkagenda-s/chemie-kunststoffen</u>

The agenda focusses on a set of actions, which will help solve the main barriers on the transition to circular chemistry and plastics. In doing so, the partners focus on action that they can only tackle together, with multiple parties.

The agenda focusses on chemicals, mixtures and materials such as plastics. Increased recycling of plastics is a key theme within the agenda for the first two years. Other important themes are making the use raw materials more sustainable, ecodesign of (consumer) products containing plastics/chemicals and industrial symbiosis.

Manufacturing

The Circular Flanders Strategic Agenda Manufacturing¹¹ aims to make the production of electronics, machines, consumer textiles and technical textiles circular.

The strategic agenda focusses on specific value chains, each of which is driven by a different partner (social economy, the Federation of the Technology Industry, the Textiles Federation, OVAM, the Wood Industry Federation and the general Industry Federation). The value chains are:

- consumer electronics;
- professional electronics and machines;
- consumer textiles;
- technical textiles.

The partners aspire to ensuring that more than half of the Flemish manufacturing companies (in the regular and the social economy) will become actively involved in the CE by 2030.

Every subscribing partner of the thematic agenda, in addition to the lead partner, therefore organises at least five concrete actions or projects per year. Information about current and new projects will be shared, collaboration will be stimulated and the realisation of the proposed ambitions will be evaluated annually.

Water cycles

The Circular Flanders strategic agenda water cycles is led by Flanders' Environment Agency and Flanders' Employers Platform. The agenda will explore how circular water can be increasingly used as a tool for sustainable water use and for a robust water system in Flanders. The agenda makes links with other initiatives such as the Flemish Blue Deal, the government's plan to prevent drought and water scarcity.

Innovation and entrepreneurship

Flanders' Innovation and Entrepreneurship Agency (VLAIO) has an important role in the operation of Circular Flanders. Specifically, it is the (co-)leader of several strategic agendas including the strategic agenda for circular construction as well as coordinating the strategic lever for innovation and entrepreneurship.

To support circular innovation, VLAIO has opened up several of its existing policy instruments for CE activities and established several new dedicated instruments as well (¹²).

Examples instruments include:

- a grant 'circular manufacturing industry: life extension';
- a grant 'living labs for a CE';
- a growth grant for small and medium-sized enterprises (SMEs) for 'sustainable and circular business';

¹¹ <u>https://vlaanderen-circulair.be/nl/onze-aanpak/werkagenda-s/maakindustrie</u>

¹² <u>https://www.vlaio.be/nl/begeleiding-advies/duurzaam-ondernemen/circulaire-economie/waarom-circulaire-economie (in Dutch)</u>

- a grant 'piloting bio-based applications';
- an ecology grant;
- strategic ecology support (STRES);
- access to VLAIO business advisors dedicated to CE activities;
- Flanders' Innovation and Entrepreneurship Agency (FINMIX) financing matchmaking sessions for CE activities.

The governance structure of a public-private partnership has proved to be the most successful way of breaking borders between government and industry, and assuring social inclusion in the transition to a CE, while maximising the speed of its adoption by different levels of society. The principle of public-private partnerships for strategic, multi-stakeholder big transitions has proved to be successful in numerous European Joint Technology Initiatives/Joint Undertakings, with the adoption of 10 such partnerships recently – in February 2021. Within Circular Flanders, the public-private partnership model assures much greater reach (communication, action, etc.), impact (multi-sector organisations that participate, etc.) and faster bi-directional feedback loops between government and industry (on, for example, policy barriers faced by private partners, and obtaining a direct view on upcoming legislation and strategic preparation).

A Circular State of the Union event is organised annually, through which CE progress in various fields is presented to stakeholders and the general public, combined with renewed calls to action, setting the scene for the year ahead. With over 500 participants and more than 100 companies involved, this event stimulates wide interest and increases community-building (¹³).

The whole approach, described above, encompasses what is called the **Roadmap** to a CE in Flanders:

- 1. long-term general ambitions;
- 2. combined with short-term sectoral ambitions;
- 3. realised through action within strategic agendas and levers;
- 4. and tracked by a CE monitor and a yearly State of the Circular Union event.

Wallonia

Context

The Walloon region adopted a regional strategy dedicated to the CE (Circular Wallonia¹⁴). This was established in 2020 through a collaborative and participatory process that involved about 100 organisations from different levels of civil society (private, public, institutional, academic, research and associated sectors).

Circular Wallonia is a strategy divided into five main axes:

- 1. the supply and production of circular goods and services;
- 2. consumption and demand of circular goods and services;
- 3. stakeholder engagement;
- 4. waste and resource management;
- 5. priority value chains.

This action plan highlights 10 ambitions and provides 60 measures for implementing the CE in Wallonia. The Strategy activates 9 action levers to deploy the CE:

- norms and regulations;
- financing;
- public procurement;
- demonstration, innovation and digital;

See <u>https://vlaanderen-circulair.be/nl/circular-state-of-the-union-2022 (in Dutch)</u>

https://economiecirculaire.wallonie.be/sites/ec/files/user_uploads/Rapport%20Circular%20Wallonia_DEF _v6.pdf (in French)

- support;
- networks and voluntary approaches;
- education and training;
- information and awareness raising;
- collaboration and representation at the Belgian, European and international levels.

These levers can be found in the five axes of Circular Wallonia.

Key objectives

The Walloon region has a triple ambition: social, environmental and economic. The deployment of the CE will contribute to the achievement of this triple ambition by providing a sustainable response to societal challenges (poverty, global warming, loss of biodiversity and lack of natural resources, etc.).

The Walloon CE strategy aims to bring:

- more resilience to crises such as pandemics, natural disasters (floods, droughts, etc.);
- economic opportunities such as economic growth, competitiveness and innovation;
- the creation of jobs and businesses in Wallonia;
- the development of the social and solidarity economy¹⁵;
- a preserved and regenerated environment;
- the strengthening of the Walloon economic fabric;
- an alignment with European (European Climate Pact, Recovery and Resilience Facility (RRF), European Green Deal and CE Action Plan) and international (17 SDGs) dynamics.

Key sectors

Circular Wallonia is broken down into six priority value chains identified at the intersection of European ambitions and Walloon priorities. These value chains are:

- construction and buildings;
- plastics;
- textiles;
- industry and food systems;
- water;
- metallurgy (including rare/critical metals and batteries).

In addition to these six main value chains, the bio-based economy is also considered as a cross-cutting theme used to strengthen the transition to the CE of the different value chains.

Initiatives

Since February 2022, the strategy and implementing actions are deploying:

- stakeholder mobilisations through participatory governance;
- multiple calls for projects related to CE;
- barometer to measure and evaluate the level of knowledge of the CE within Walloon companies;
- a regional communication strategy to raise awareness, inform and educate the target public about the concept of the CE;
- a mapping project of Walloon actors involved in the CE to reinforce synergies, networking and identification of partners or innovative circular projects in Wallonia;
- CE weeks 2 weeks dedicated to the CE in Wallonia;
- a dashboard for the implementation of the strategy;

¹⁵

In Wallonia the term social and solidarity economy is used to refer to all economic activities whose purpose is the collective interest, the strengthening of social cohesion and sustainable development. The solidarity aspect is particularly relevant to entrepreneurial models based on cooperation between actors (cooperatives, etc.).

• partnerships with local, regional and national authorities to accelerate Wallonia's transition to a CE.

State of progress

2022 is the year of the real deployment of the strategy: the majority of its actions will be deployed this year and in the years to come. Cruising speed for the implementation of Circular Wallonia has now been reached. A large part of the governance bodies, operational working groups and communities have been launched. Projects are being implemented step by step according to planning and political priorities.

Circular economy policy elements included in other policies

Flanders

Circular economy policy element	Included in policy
Decrease of residual waste incineration	Flemish Energy and Climate plan
Implementation plans and prevention programmes:	
Waste management	The Flemish Prevention Programme and Waste Management Plan for household waste and comparable company waste 2023–2030 (yet to be adopted)
Construction	The Flemish policy programme 'moving towards circular construction 2022-2030' (in Dutch)
Food loss and biomass residues	The Flemish Action Plan Circular food loss and biomass residues 2021-2025
Bio-economy	The Bioeconomy Policy Plan
Plastics	The Flemish Implementation Plan for Plastics 2020- 2025 (in Dutch)

The circular economy is an important aspect of the Flemish climate strategy. Waste management is one of the sectors in the Flemish Energy and Climate Plan 2021-2030 that highlights the need to reduce its emissions in order to achieve the Flemish CO₂-reduction targets. Furthermore, CE measures are included in several sectoral policy programmes (see below).

• CLIMATE

Flemish Energy and Climate Plan 2021-2030:

- 1. Decrease Flemish Material Footprint by 30 % by 2030.
- 2. Decrease residual waste production from households from 146 kg to100 kg per person by 2030.
- 3. Achieve a comparable reduction of residual waste production by companies by 2030

IMPLEMENTATION PLANS AND PREVENTION PROGRAMMES

In implementing the EU's Waste Framework Directive, Flanders has a number of plans and prevention programmes that give substance to its waste and materials policy within a CE. Unlike the CE working agendas, these are official policy plans that have been approved by the government after public consultation. The plan is a policy-preparing and supporting instrument within the framework of the waste and materials policy, while a strategic agenda is a dynamic partnership with a broader focus. Both are mutually reinforcing.

Waste management

These objectives in the Flemish Energy and Climate Plan 2021–2030 will be implemented through different policy measures and actions, many of which will be included in the **Flemish prevention programme and**

waste management plan for household waste and comparable company waste 2023–2030, which is yet to be adopted.

Construction

The Flemish policy programme **moving Towards Circular Construction 2022-2030**¹⁶ brings together an array of actions and measures in so-called 'sites' that tackle the main challenges to the transition of the construction sector to a CE. These efforts are aimed at building trust in circular materials and solutions and stimulate more cooperation with building materials' value chains. A better use of data and the transfer of information are considered as key success factors for this transition. This policy programme was adopted in 2022 and will be notified with the European Commission as a prevention programme.

Food loss and biomass residues

The Flemish Action Plan Circular Food Loss and Biomass Residues 2021–2025 (¹⁷) focusses on action on food loss and waste in the whole food chain: producers (primary sector), producer organisations (hereafter called horticultural cooperatives), the food industry, distributors, catering and consumers. Closing loops is a central principle in the biowaste management policy. The emphasis in the Sustainable Materials Management Policy is on the separate collection of biowaste from households and businesses.

The three pillars that are central to this action plan follow the materials hierarchy and the cascading principle. They form the basis for managing the biological cycle.

- Pillar 1 more prevention, less loss;
- Pillar 2 better sorting and collection;
- Pillar 3 higher value valorisation.

Pillar 1 Prevention and re-use

The focus of Pillar 1 is prevention. Every action must contribute to reducing food loss by 30 %. After prevention and re-use, the emphasis is on the separate collection of biowaste from households and businesses. Every link in the chain must contribute. Collaboration in the chain is the new focus of this action plan.

To prevent food losses, this plan sets out the following action programmes:

- encourage collaboration within product chains;
- creation of sector-specific programmes;
- reduce food loss at the consumer end of the chain;
- scale up social circular entrepreneurship;
- support food loss start-ups.;
- support local authorities in their local role to prevent food loss;
- stimulate domestic recycling.

Pillar 2 Better sorting and collection

Improve separate collection of kitchen and food waste from businesses. This action programme focusses on improving the separate collection of kitchen and food waste from businesses. The focus is on providing information on correct collection and sorting rules, raising awareness, stimulating sorting and separate collection through appropriate pricing, and monitoring. The optimisation of the separate collection of vegetable, fruit and garden waste (VFG) waste from households is included in the Implementation plan for household waste and comparable industrial waste 2016–2022.

Pillar 3 Higher value valorisation

¹⁶ <u>https://ovam.vlaanderen.be/documents/177281/925821/Circulair+bouwen-beleidsplan_def.pdf/494fbee8-95f0-c555-5855-</u> 010080d020872version=1.08 t=16512361165008 download=true (in Dutch)

919089d02087?version=1.0&t=1651236116509&download=true (in Dutch)

¹⁷ See <u>https://ovam-english.vlaanderen.be/action-plan-for-circular-food-loss-and-biomass-residual-flows-</u> 2021-2025

Increase the circularity and sustainability of the recycling market. This action plan consists of different ways of increasing the circularity and sustainability of the recycling market. The flows must be as pure as possible in order to produce outputs with higher added value.

Increase the added value of the market. The focus on quality and circularity can stimulate the development of a differentiated market for the finished products of biological processing. The goal here is to increase market trust in these recycled products, thus ensuring demand for them.

Bioeconomy

The Bioeconomy Policy Plan was adopted (¹⁸) in early 2021. Making useful products from biological waste, for example for the food, cosmetics or pharmaceutical sectors, will be one of the priorities for making Flanders' economy circular. The plan emphasises research, innovation and cooperation between industry and agriculture. A total of EUR 10 million is provided for this.

The plan contains three elements:

- 1 research;
- 2 innovation; and
- 3 stimulating closer cooperation between industry and agriculture.

There is still a lot of potential for new sustainable activities in innovative collaboration between these sectors.

To structure action within the Bioeconomy Policy Plan, the field is shaped around four themes.

- 1 Innovative biomass production, searching for new crops and increasing yields. For example, using plants such as the rubber dandelion as an alternative to rubber.
- 2 Synthetic biology and biological prospecting, for example using shellfish to make chitin, a raw material for medicines.
- 3 Technological transformation of biomass and waste streams, for example, using biomass to develop biodegradable cups.
- 4 Technology for new value chains, which means better purifying existing waste streams to extract even more useful substances.

Plastics

The Flemish Implementation Plan for Plastics 2020–2025 provides a framework and overview of action that contributes to the sustainable management of the plastics cycle. The plan applies to all types of plastics and has five targets, each of which is to be achieved through 37 specific actions. These range from prevention measures, research and investment in a sustainable recycling market to the deployment of recyclate as a fully-fledged raw material, knowledge and data gathering and the role governments can play in promoting the sustainable use of plastics through circular procurement policies. The main objective of this plan is to reduce the amount of plastic waste and stimulate the reuse of plastics.

There follows a brief overview of the objectives and some of the measures adopted.

1. Reduced and more efficient use of plastics. This objective includes the implementation of the EU's Single-Use Plastics Directive and the phasing out and/or banning of microplastics. OVAM also aims to promote distribution methods that reduce the use of packaging, including a Green Deal with the distribution sector. The aquatic environment also receives attention, with action to limit the loss of pellets and the provision of resources for Flemish ports and waterway operators to avoid and clean up floating waste. The plan also foresees international cooperation, set up with one of the five countries responsible for more than half of the influx of plastic waste into the oceans.

¹⁸ See <u>https://www.ewi-vlaanderen.be/nieuws/beleidsplan-moet-bio-economie-verankeren-vlaanderen</u> (in Dutch)

- 2. **Create a sustainable recycling market for plastics.** Additional efforts for the collection of specific plastics, for example through the roll-out of the P+MD plan¹⁹, should further reduce residual waste, which will also allow the reduction of waste incineration and CO₂ emissions. It should be possible to process what is collected in Flanders. The ban of the importation of plastic waste imposed by China and other southeast Asian countries may present an ecological and economic opportunity in this respect. An important part of the plan is that the government frees up resources to invest in additional sorting and recycling capacity in Flanders. Meanwhile, OVAM is also pleading at the European and Organisation for Economic Co-operation and Development (OECD) levels for more transparency in the export of plastic waste.
- 3. Using plastic recyclate as a fully-fledged raw material. The plan provides for action to increase the demand for plastic recyclates. For instance, detecting and tackling barriers in product standards and quality standards, investigating the need for fiscal instruments and actively searching for applications in which the use of plastic recyclate can promoted.
- 4. **Knowledge and data gathering.** There is still too little data available on the processing of plastic waste, both at home and abroad. The use of recycled plastics in end products, plastic litter in rivers and seas and the presence of microplastics will also be monitored.
- 5. The role of governments in circular procurement policy. Governments can use their procurement policies as a lever to promote the use of recycled plastics or discourage the use of throw-away materials.

Wallonia

The CE is a very broad topic with a lot of elements, concepts and opportunities for action.

The fourth axis of Wallonia's strategy is dedicated to waste management, recycling and waste prevention. This axis is implemented in partnership with colleagues from the Soil and Waste Department and contribute to the implementation of the Walloon Waste-Resources Plan (Plan Wallon des Déchets-Ressources/PWD-R²⁰), the Walloon Action Plan for Waste Prevention and Waste and Resource Management.

Circular economy policy element	Included in policy
	Complete version (in French): <u>Plan wallon des déchets-</u> ressources (wallonie.be)
Waste prevention and waste management as resources (PWDR)	Non-technical summary: https://sol.environnement.wallonie.be/files/PWDR/WWRP- NTS-EN.pdf

The Walloon waste plan, adopted on 22 March 2018, is called the **Walloon Waste-Resources Plan** (Plan Wallon des Déchets-Ressources/PWD-R) to highlight the need to take the new European orientation on the CE into account. The measures provided for by the PWD-R have been developed and selected so that they contribute to the most efficient application of the principles of the CE and the waste management hierarchy. The PWD-R includes six strands.

- Strand 1: the strategic framework of the Plan, which includes a programme of structural measures relating to data management (capture, use, traceability and simplification), issues of taxation, and the fight against environmental violations (inspection and penalties).
- Strand 2: the programme for prevention and the reuse of waste, which covers both industrial and household waste.

¹⁹ It used to be PMD: Plastic **bottles**, Metal packaging and Drink cartons. With P+MD Flanders collects separately: Plastic **packaging**, Metal packaging and Drink cartons.

²⁰ <u>https://sol.environnement.wallonie.be/files/PWDR/WWRP-NTS-EN.pdf</u>

- Strand 3: the specific management plan for household waste.
- Strand 4: the specific management plan for industrial waste.
- Strand 5: the plan for public cleanliness and the fight against litter and fly tipping.
- Strand 6: surveys environmental and socio-economic impacts.

The PWD-R continues the action developed in previous plans, but with the stated objective of applying the principles of prevention and reuse and incorporating the experience of the CE into the selection and implementation of measures.

The Plan contains 157 measures of which 93 are closely linked to material resource efficiency and the development of a CE, in particular the development of reuse, sorting and separate collection for recycling and the implementation of the concepts of by-products and end-of-waste status²¹.

The presence of target values and numerical objectives in the PWD-R varies from one strand to another, depending on various factors:

- coherence with the objectives already defined at the European level and/or the desire of Wallonia to be more ambitious and exceed these objectives;
- thoroughness and the level of data mastery: where, for certain waste flows, the level of uncertainty regarding waste supply or the rates of recycling or energy recovery is deemed too significant, the choice was made not to define precise objectives, since the first measure to be implemented is the improvement of the quality of data;
- levels of performance achieved and prospects for improvement: when a waste flow has already been almost fully optimised and recovered, it is unrealistic to set more ambitious objectives in relation to the current situation;
- level of expertise of the public authorities regarding the expected effects of certain measures: *a priori*, it is difficult to predict whether measures relating to research and development (R&D) will be successful, or to assess with certainty the impact of information, awareness-raising or inspection campaigns.

These factors explain why, for certain situations, the PWD-R proposals for action are not accompanied by numerical objectives leading to 2025. Moreover, for those which will probably have an indirect effect on improvements in the prevention and management of waste or public cleanliness, assessment of the expected effects can often only be qualitative. More information on objectives and targets in PWD-R can be found on the website (²²).

In terms of achievement, the following PWD-R actions should be mentioned in relation to the circular economy:

- the establishment of a repair observatory²³;
- calls for projects²⁴ to support and strengthen waste prevention, reuse and preparation for reuse practices;
- as well as selective waste collection;
- the development and promotion of composting²⁵;

²¹ As in Art.6 Directive 2008/98/CE

The Walloon text: <u>http://www.ejustice.just.fgov.be/mopdf/2019/04/05_2.pdf#Page108</u> (in French)

²² <u>http://environnement.wallonie.be/dechetsressources/docs/WWRP-NTS-EN.pdf</u> (non-technical summary in English)

<u>http://environnement.wallonie.be/rapports/owd/pwd/index.htm</u> (various documents, including the fulllength version of the Plan (in French)

²³ <u>https://sol.environnement.wallonie.be/fr_FR/home/accueil-dechets/observatoire-de-la-reparation.html?msclkid=223e5b0acf9611ecb088bb4cb21f6129</u>

²⁴ http://moinsdedechets.wallonie.be/?msclkid=f3629dbbcf9611ecab496eddfff48817

²⁵ <u>http://moinsdedechets.wallonie.be/fr/je-m-engage/composter-les-dechets-organiques</u>

- a management and traceability framework of excavated soil²⁶ to promote its recovery;
- the redefinition of the waste status²⁷ of various materials including recycled construction aggregates.

Circular procurement is also addressed in the strategy, but no specific plan is developed to include circular criteria in green public procurement in Wallonia. This topic is one of the priorities for 2022/2023 in order to provide a global guide to help the public sector to procure in a more sustainable way, including circular solutions.

Public procurement is also addressed in the Green Deal Circular Purchasing²⁸, which is more of a Walloon learning network for more circular procurement than a real strategy.

Information and communications technology (ICT) issues are also addressed in the strategy, along the metal value chains, but also through the Walloon region's involvement in the Circular and Fair ICT Pact²⁹ (CFIT), an international partnership focused on public procurement. The CFIT is an international network but is not considered a strategy in itself for the Walloon transition.

²⁶ <u>https://sol.environnement.wallonie.be/home/sols/presentation-generale-du-decret-sols-2018/lagw-terres-excavees.html?msclkid=907b5a74cf9911ecae05a227c39db731</u>

^{27 &}lt;u>https://sol.environnement.wallonie.be/home/accueil-dechets/sortie-du-statut-de-dechet---sous-produits.html</u>

²⁸ <u>https://economiecirculaire.wallonie.be/green-deal/activites</u>

²⁹ https://circularandfairictpact.com/

Monitoring and targets

Assessment of circular economy performance

Flanders

It is difficult for assess the Belgian figures and evolution, and to evaluate the effect of policy measures on these figures and evolutions. Environmental policy is a regional responsibility, but EUROSTAT has Belgian statistics that cannot split easily into three regional indicator values.

To measure the CE in Flanders, OVAM together with the CE Centre have developed a Flemish CE Monitor³⁰.

This CE monitor contains several indicators at the Flemish level. Many of these are similar or comparable to the indicators used in the EUROSTAT CE Monitoring Framework. In the Flemish monitor, evolutions are shown and explained if these are linked to policy. Benchmarks with the European indicators are planned in the further development roadmap where the indicators are readily available and calculated in a comparable way.

It remains to be seen whether Flanders will benchmark some other selected European regions in addition to the EU27 average.

Wallonia

Being at the very beginning of the implementation of the strategy, Wallonia launched a barometer to survey Walloon companies to understand their level of knowledge towards the circular economy at the end of 2021. This barometer was a first state-of-play in T0³¹ and provided a snapshot of companies – their understanding of the stakes, opportunities, obstacles and benefits to be derived from the implementation of the CE in their activities. The results will be available in the second half d 2022.

Some surveys have also been launched to observe the evolution of circular practices in Wallonia, such as repairing, reusing, recycling, raw material consumption, bio-sourced potential and sourcing, jobs of the futures, circular procurement in Wallonia, etc. Those studies are beginning to collect data and will help provide a more global overview of the progress of CE in some specific fields such as furniture, textiles, electronics, etc. The results will be published in 2023.

Different entities are responsible for collecting CE relevant data:

- the Soil and Waste Department of SPW Environment³² is generally responsible for collecting, analysing and reporting data on waste prevention and management;
- the Soil and Waste Department of SPW Environment has also set up a repair observatory as part of the Walloon Waste-Resources Plan; a report on the state-of-play is available (³³);
- data on land reclamation are collected by the Soil and Waste Department through the organization WALTERRE. The latest report is available (³⁴);
- data on the collection and treatment, and, in particular, the recycling of waste subject to extended producer responsibility, are collected through VALIPAC for industrial packaging; FOST-PLUS for
- household packaging; RECYTYRE for tyres; RECUPEL for waste electrical and electronic equipment; PVCYCLE for photovoltaic panels; FEBELAUTO for traction batteries for electric and hybrid vehicles and end-of-life vehicles; VALORLUB for used oil; RECYMAT for used mattresses; and BEBAT for

³⁰ <u>https://cemonitor.be/en/indicator/</u>

³¹ At "time 0", before any change

³² SPW = Service public de Wallonie/Public service of Wallonia is the regional administration of Wallonia in charge for CE related issues

³³ <u>https://sol.environnement.wallonie.be/home/accueil-dechets/observatoire-de-la-reparation/pagecontent.html (in French)</u>

³⁴ <u>https://walterre.be/wp-content/uploads/3.%20Informations/RA2021-FINAL.pdf</u> (in French)

batteries. The Soil and Waste Department publishes reports on some of these flows on the environment.wallonie.be portal (³⁵);

- The Interregional Packaging Commission publishes an annual report on its website³⁶ with the most important data on packaging waste. The Soil and Waste Department also publishes data on municipal waste collected by the public sector (see environment.wallonie.be³⁷, and data on company waste collected through the REGINE survey³⁸);
- the draft decree of the Walloon Government promoting the waste hierarchy, adopted in 1st reading by the Walloon Government on 24 February 2022, provides for the establishment of a waste-materials inventory before deconstruction, whose data must be communicated to the Department of Soil and Waste. It is planned that all the data will be made available;
- the ambition of the Soil and Waste Department is, in accordance with the Walloon Waste Plan, to gather and publish a stream of data on waste deposits and their destination in one place, which will allow, amongst other things, support for investments in circularity.

In 2020–2021, in order to monitor the implementation of the PWD-R, about 100 highest priority actions have been identified and monitoring indicators established. A report on these indicators has been published (³⁹).

Circular economy monitoring frameworks and their indicators beyond the ones from Eurostat

Flanders

An academic CE policy research centre – named the CE Centre – was launched in 2021, supporting the transition to a CE by providing policy-relevant research. It builds on the research results of the previous CE research centre that was active between 2017 and 2021. The CE Center (⁴⁰) brings together researchers from the universities Antwerp, Gent, Hasselt and Leuven, and the research organisation VITO.

An extensive multi-layered CE monitoring framework has been created by the CE Centre and published in 2022. It provides indicators on macro- and intermediate levels as well as figures for specific product groups, showing progress towards a CE for Flanders (⁴¹).

The macro-level indicators provide insights into the consumption of materials, water, soil and space, and the emissions this produces. On the intermediate level, the CE monitor measures four systems of need for the economy – housing; food and water; consumer goods; and mobility. Finally, the macro- and intermediate layers are complemented by figures for specific product groups and services (⁴²).

Each indicator has been carefully selected and validated by scientific analyses by the CE Centre. Results have been systematically made available in both academic publications and others aimed at the general public (⁴³).

Al indicators are visually attractive and are publicly available (44).

- http://environnement.wallonie.be/cgi/dgrne/plateforme_dgrne/visiteur/FrameSet.cfm?Page=http://environnement.wallonie.be/cgi/dgrne/plateforme_dgrne/visiteur/anims_v2.cfm?pere=489
- ³⁹ <u>Évaluation de l'efficacité et de l'efficience des actions du plan wallon des déchets-ressources (cahiers 2 et 3)</u> (wallonie.be) (in French)

³⁵ <u>http://environnement.wallonie.be/dechets/conventions.htm</u> (in French)

³⁶ <u>https://www.ivcie.be/fr/category/telechargements/</u>

³⁷ <u>http://environnement.wallonie.be/data/dechets/menagers/index.htm</u> (in French)

⁴⁰ See <u>https://ce-center.vlaanderen-circulair.be/en</u>

⁴¹ See <u>https://cemonitor.be/en/about/about-this-monitor/</u>

⁴² See <u>https://cemonitor.be/en/how-circular-is-the-flemish-economy/</u>

⁴³ See <u>https://ce-center.vlaanderen-circulair.be/en/publications</u>

⁴⁴ See <u>https://cemonitor.be/en/indicator/</u>

Wallonia

No monitoring framework has yet been put in place in Wallonia. As Circular Wallonia was only launched in 2021, such a tool is yet to be developed for Wallonia. No agency or researcher within Wallonia is currently working on this monitoring, but all are well aware of the existence of Eurostat's CE indicators. A monitoring framework will be developed in the coming years and there are plans to hire a data analyst in 2022 to monitor the implementation of the CE at a macro level in Wallonia. The ambition is now very clear, Wallonia will not reinvent the wheel: the goal is to capitalise on other regions and countries that are more advanced in monitoring the CE within their borders. The European, Belgian and Walloon monitoring frameworks will be aligned in the very near future.

The only monitoring framework in Wallonia at the moment is a dashboard for monitoring and evaluating the region's strategy using indicators of achievement as data to measure effectiveness or efficiency are not collected. This dashboard has already been developed but is yet to be tested with partners. A first report will be produced in the second half of 2022.

Circular economy targets

Flanders

Climate

Flemish Energy and Climate Plan 2021–2030:

- decrease Flemish material footprint by 30 % by 2030;
- decrease residual waste production in households from 146 kg to 100kg per inhabitant in 2030;
- achieve a comparable reduction of residual waste production in companies by 2030.

Construction

The Flemish policy programme Moving Towards Circular Construction 2022–2030:

- recovery through re-use and recycling of 95 % of the stony fraction and 70 % of the non-stony fraction of debris, of which more than half will be used in a high-end application by 2030;
- By 2030, at least 25 % of new or renovated buildings are designed using the principles of adaptable (dynamic) construction.

• Food chain

Overview of the targets of the Action Plan Circular Food Loss 2021–2025

FOODLO	OSS AND FOOD WASTE FLOWS FROM PRODUCER TO CONSUMER
Targets	for the end of 2023
	All food retail (specialised and non-specialised), all food wholesalers and all food distribution
	centres to contribute to food donations and/or some other form of redistribution of food
	products for human consumption.
►	Businesses to collect food waste separately.
Targets	for the end of 2025
•	The entire chain aims to avoid, re-process as food or valorise with higher value (45) 30 % of food
	losses compared to 2015.
	Residual waste from businesses (hotels, restaurants, caterers, hospitality and retailers) to be
	reduced by 20 % compared to 2019.
	Optimum valorisation of food waste flows; where this is not yet happening although it is
	possible and legally permitted, the aim is to valorise them higher up the cascade (46) (higher
	cascade index compared to 2015).

⁴⁵ Indicative target that applies to the EU27

⁴⁶ Subject to what is logistically justifiable in the case of small quantities or, for example, an exceptional food crisis situation.

Targets for the end of 2030

Flanders contributes to the UN Sustainable Development Goal 12.3 through action to reduce food loss and waste in primary production, horticultural cooperatives, the food industry, food retail and distribution, restaurants, catering and households. SDG 12.3 aims to halve food waste per person worldwide by 2030 at retail and consumer levels. SDG 12.3 also aims to reduce food losses throughout the food production and supply chain.

Plastics

Flanders' Implementation Plan for Plastics 2020–2025 contributes to a number of overarching objectives laid down in the Flemish Energy and Climate Plan 2021–2030, which are to be achieved by 2030.

Wallonia

Wallonia's strategy aims to achieve several targets in the coming years. All these targets have a tight link to the CE. Those strategic objectives are then divided into operational objectives and then measures, action and projects.

- Replace fossil or unsustainably produced resources with renewable and widely available ones wherever possible by 2050.
- Increase resource productivity, the ratio of gross domestic product to domestic consumption of resources in Wallonia, by 25 % between 2020 and 2035, which implies an absolute decoupling of the evolution of GDP and raw material consumption.
- Decrease the direct material demand (DMI) and the internal material consumption (DMC) of Wallonia by 25 % by 2030 compared to 2013.
- Increase Walloon jobs contributing directly and indirectly to the CE by 20 % by 2025, i.e., an evolution from 6.8 % in 2017 to 8.2 % in 2025.
- Double the number of Walloon companies with CE practices by 2025.
- Reduce the average annual production of gross household waste in Wallonia to less 100 kg per person by 2025.
- Reduce the waste of electrical and electronic equipment by 2 kg per person by 2025, i.e. from 22.5 kg to 20.5 kg per person, thanks to repair services and the economy of functionality.
- To reach a minimum quantity of reused goods of 8 kg per person per year by 2025.
- Collect and recycle at least 95 % of household packaging waste by 2025.
- For household and industrial packaging materials, recycle more than 90 % by weight for glass, paper/cardboard, beverage cartons and ferrous metals, 75 % by weight for aluminium and 80 % by weight for wood by 2025.
- By 2030 to recycle a minimum of 70 % by weight of plastic packaging waste from households and 65 % by weight of plastic packaging waste from industry.
- Reaching a recovery rate for end-of-life vehicles of more than 95 % by 2025.
- Use at least 30 % of recycled aggregates in public works.
- Reduce waste incineration by at least 50 % between 2019 and 2027.

The achievement of these objectives will be evaluated at the level of the strategy's dashboard. A new formulation of the objectives may be proposed during the monitoring of the implementation of the strategy. This strategy will also contribute to the following objectives of the Regional Policy Statement 2019–2024.

- Reduce greenhouse gas (GHG) emissions by 55 % from 1990 levels by 2030.
- Halt the decline of biodiversity by 2030 in Wallonia.
- Improve the employment rate by 5 % by 2025⁴⁷.
- Increase the secondary sector from 15 to 20 % of GDP⁴⁸.

⁴⁷ Compared to the last published survey in Wallonia on direct and indirect employment in circular economy, dating from October 2019.

⁴⁸ Relative to 2019 GDP

Innovative approaches and good practices

Examples of public policy initiatives (national, regional or local)

Flanders

→ Good practice example: Change consumption patterns – product related policies

Single use catering material

In 2020, legislation was introduced prohibiting the serving of drinks in single-use packaging by government at own organised events and within their daily operations. Events not organised by governments can still serve drinks in disposable packaging if a system that guarantees 95 % separate collection for recycling in place. Since 2022 the prohibition for governments has been expanded to the serving of drinks and prepared food in single-use catering material.

Some cities and municipalities such as Ghent, Leuven, Lochristi, Lokeren, Moerbeke, Wachtebeke, Zele and Zelzate expand the 100 % prohibition of serving drinks in single-use packaging to all events in their areas.

In line with this legislation and in the context of preventing littering and encouraging reusable systems, a number of Flemish municipalities and organisations have carried out pilots with reusables. Below are some examples.

- Tielt a pilot reusable system for take-aways with local restaurants (⁴⁹).
- Mechelen a reusable system for take-aways with some 10 local restaurants (⁵⁰).
- Leuven a subsidy of up to EUR 750 for hotels, restaurants and caterers who introduce a system of reusable coffee cups.
- University of Brussels implementation of reusables for all warm drinks and takeout meals, and Metsense social restaurants group which has set up of its own system for reusables for take-aways (⁵¹).
- University of Antwerp set up of its own system of reusables (⁵²).
- Examples of Flemish events that use reusables (⁵³).

→ Good practice example: Green Deal - producer responsibility/supplier responsibility - change consumption patterns

Green Deal Anders Verpakt

On 11 March 2022, about 80 organisations signed the Green Deal Anders Verpakt (⁵⁴). With this Green Deal, OVAM, Comeos, Fevia, VIL, Detic and the other stakeholders want to shift the focus from increasing the collection and recycling of waste to more attention on other distribution and consumption models. With a focus on prevention – omitting packaging – and the reuse of packaging, the Deal aims to reduce single-use packaging and thereby decrease environmental impacts.

Why is this being done through a Flemish Green Deal? Companies – and certainly not just Flemish ones – are aware of the fact that a reduced environmental impact and the sustainable use of raw materials are necessary. Making the shift from single-use packaging to no packaging or reusable packaging involves much more than just changing the packaging. It has consequences for the entire business model. A Green Deal focusses on a chain approach in which companies, governments, knowledge institutions and citizens work together and make an effort to take steps towards common objectives. This ensures an efficient

⁴⁹ <u>https://www.tielt.be/product/883/basta-laat-je-niet-inpakken-kies-voor-duurzaam</u> (In Dutch)

⁵⁰ <u>https://red-use.be/mechelen/</u> (In Dutch)

⁵¹ <u>https://ovam.vlaanderen.be/praktijkvoorbeelden-wetgeving-cateringmateriaal</u> (in Dutch)

⁵² <u>https://youtu.be/nyXdBHcE2-4</u> (in Dutch)

⁵³ <u>https://ovam.vlaanderen.be/praktijkvoorbeelden-wetgeving-cateringmateriaal</u> (in Dutch) and

https://ovam.vlaanderen.be/web/kappen-met-wegwerp-is-top/kwitten-op-evenementen (in Dutch)

⁵⁴ <u>https://ovam.vlaanderen.be/web/green-deal-anders-verpakt/in-de-kijker</u> (in Dutch)

approach. Combining networking and communication with the implementation of projects makes the Green Deal a strong instrument for seeking solutions jointly and putting them into practice. More information about Green Deals in Flanders is available (55).

→ Good practice example: awareness raising

Inspiration and awareness raising using the Circular Flanders case database (⁵⁶)

A case database of organisations that take concrete CE action in Flanders provides inspiration for starters, peer pressure from sector colleagues, and a podium for leading examples.

Organisations often await first movers before jumping into action themselves. Providing visibility on such first CE experiments is an important way of taking pilot cases to impact at scale:

- It provides pressure by peers in the same sector, and increases the sense of urgency;
- It provides valuable lessons to be shared, and community building amongst organisations;
- Circular Flanders has created a searchable database of so-called 'doers': organisations that take CE action. It allows searches per sector, geographical region, etc.

→ Good practice example: public procurement

Circular procurement

As public procurement accounts for 15 % of global greenhouse gas emissions (⁵⁷), public agencies could provide important leverage to sustainable change and lead by example. Inclusion of CE procurement provisions in public procurement tenders has been adopted in a variety of fields. An example is the public tender for mid-sized windmills by the Flemish Energy Company (*Vlaams Energie Bedrijf* (VEB)), incorporating special consideration in the evaluation of circular construction, end-of-life management, maintenance, etc. More and more windmills are now approaching the end of their lives, and it is generally known that used materials, glass fibre composites in windmill blades, for example, form problematic waste as there are no decent recycling solutions for them. The target is to introduce a circular design and construction approach from the start, thus avoiding such problems for new-generation windmill installations.

General strategies for circular procurement in the Flemish economy have been published, with the ambition of developing standard contract templates (⁵⁸).

To assist organisations in the move to a CE supply chain, a comprehensive database of circular suppliers has been created and can be consulted (⁵⁹).

Another flagship example of circular procurement is the construction project ZIN in No(o)rd (⁶⁰) in the heart of Brussels. ZIN in No(o)rd – the name of the innovative building project that will repurpose the iconic World Trade Center (WTC) I and II towers in the North Quarter of Brussels. The Flemish government, which will lease the office building, included specific circular criteria in its tender dossier. The office towers from the 1970s will not be demolished, rather they are being regarded as material banks to be dismantled with care. It is the future of building and building for the future.

The WTC towers will be completely dismantled with only the underground level and the core retained. Anything demolished will not, however, end up on the rubbish heap but will be given a new lease of life.

⁵⁵ <u>https://omgeving.vlaanderen.be/green-deals</u> (in Dutch)

⁵⁶ See <u>https://vlaanderen-circulair.be/en/cases</u>

⁵⁷ United Nations Convention on Climate Change greenhouse gas data 2019

⁵⁸ See <u>https://aankopen.vlaanderen-circulair.be/en</u>

⁵⁹ <u>https://aankopen.vlaanderen-circulair.be/en/suppliers</u>

⁶⁰ <u>https://vlaanderen-circulair.be/en/blog/detail/zin-redevelopment-project-elevates-circular-construction-</u> <u>to-a-higher-level</u>

And the figures are staggering: 63 % of materials from the former WTC buildings is being reused on site, and for those materials only suitable for recycling, around 16 % will be used in the new building. In total, an incredible 95 % of materials from the current towers will be reused or recycled – a first for a project of this size.

Wallonia

→ Good practice example: research and innovation

Innovation is one of the priorities of the Walloon CE strategy, Circular Wallonia. Moreover, the renewal process of the Walloon Smart Specialisation Strategy (S3) led to the identification and selection of strategic innovation areas (SIAs). One of the five SIAs selected is dedicated to circular materials.

Walloon innovation actors (research centres, competitiveness clusters, companies, universities, etc.) participate in numerous collaborative projects, such as Interreg and BIC, to create new value chains. For example:

- projects that aim to use renewable resources from the Franco-Belgian region: wood and natural fibres, such as hemp and flax;
- the recovery of waste from the dairy industry (whey) and its transformation into high valueadded products such as polylactic acid (PLA), a bio-based and biodegradable plastic;
- the production of algae and the development of extraction processes for compounds of interest;
- the valorisation of beet pulp in new value chains such as in the food and chemical industries detergents, paints, composites, etc.;
- the development of bio-based packaging.

→ Good practice example: data and digitalisation

In Circular Wallonia, particular attention is paid to digital tools and uses, which constitute levers or accelerators for the transition to a CE, while taking into account their energy and environmental impacts. This is focussed on the implementation of digital platforms that facilitate sharing and community engagement, flow management platforms, traceability and logistics optimisation technologies, blockchain technology, as well as issues related to data processing and sharing, the dematerialisation of resources and their accessibility, and smart cities. Wallonia is developing a set of support systems for this.

→ Good practice example: product-related policies, including on the R-strategies (repair, reuse, remanufacturing, etc.)

Reverse metallurgy platform, a platform of industrial, technological and scientific excellence, is developing a new portfolio of projects in line with current policies and in particular circular, energy and digital transitions. These new projects aim to pursue a **metallurgy of the future**, **based on the CE to promote the upcycling of materials on the one hand**, and increase the selective collection and recovery **of metal waste on the other**. They will make it possible to position the Wallonia as a centre of excellence in terms of recycling and eco-responsible maintenance, and as a producer of raw materials and an exporter of technologies linked to these materials.

Several consortia have positioned themselves to broaden the results generated by the **Reverse metallurgy** project, extending the dynamics of the innovation partnership to other sectors, including construction. Since the energy intensity of production, and therefore the carbon footprint, of metals and minerals obtained through reuse and recycling is significantly lower than that of metals obtained from primary ores, the technologies promoted by the project will contribute to the ecological transition. In addition, the experience of industrial partners with certain metals and materials essential to electric mobility further strengthens this positioning. In addition, the **reuse or upcycling of certain material flows** makes it possible to retain the added value of raw materials for longer, without going through highly energy-intensive industrial processes.

Wallonia is developing numerous **measures to support activities promoting reuse and to cover the region with a network of social and solidarity economy actors active in the recovery of textiles, bicycles, everyday objects, furniture, various equipment and construction materials**. At the end of 2021, several concrete actions were carried out, such as the creation of the '<u>Ressources'</u> association, which is a federation representing 48 companies active in the field of social economy and circular economy, as well as the creation of a label (Label Rec'UP) intended to guarantee the quality of products and services. Municipalities and inter-municipal waste management companies were also encouraged to establish collaborations with reuse actors. By the end of 2021, 148 out of 259 municipalities offered a bulky waste collection service for reuse, covering more than 60 % of the Walloon population. Following a <u>pilot project</u>, a donation area/bring site is being set up in the recyparcs.

In terms of **repair**, the development of <u>repair cafés</u> is promoted by the **Repair Together Association**: 165 Repair Cafés are active in Wallonia-Brussels. A mobile repair café has also been established to travel around Wallonia and develop the repair spirit and skills.

→ Good practice example: producer responsibility/supplier responsibility

Wallonia, together with the other Belgian regions, has decided to set up an extended producer responsibility scheme for mattress producers. <u>Valumat</u> asbl. is in charge of developing the mechanism for the recovery of mattresses.

Examples of private policy initiatives (sectoral)

Flanders Green Deal Circular Construction (⁶¹)

The Green Deal emphasises that a combination of practice and learning is at its core. The more than 300 participants start experiments and bring their accumulated knowledge and experience together in a learning network. Tools, methodologies and new forms of chain cooperation are tested.

In addition, a research group is making a concerted effort to develop the so-called preconditions to a CE, i.e. the legal, economic and other barriers to be faced and tackled along the way. Data and experience from the experiments feed into this research and together solutions are formulated.

About four times a year, the participants in the Green Deal gather to inspiration one another through presentations on Flemish and foreign cases. Concrete issues that the participants put forward, such as tools and measuring instruments, are worked on over the course of this event. The point is to work as a team to find out what the transition to a CE implies for the construction sector.

Participants in the Green Deal Circular Construction must:

- carry out at least one pilot project during the term of the Green Deal possibilities include carrying out a construction project, offering a site, carrying out research, offering circular products or services, developing circular materials, facilitating circular building processes, etc.);
- actively participate in the learning network through which knowledge and experience is exchanged with the other participants;
- agree that the researchers of the Circular Building living lab should have at their disposal all relevant data, results and lessons from the pilot projects;
- take the necessary steps to structurally embed the principles of circular construction in their own organisations.

⁶¹ See <u>https://bouwen.vlaanderen-circulair.be/en</u> and <u>https://bouwen.vlaanderen-circulair.be/nl</u> (in Dutch)

Circular shift in the technology sector (⁶²)

The technology sector federation, Agoria, actively introduced CE support into its activities. Agoria has more than 2 000 technology companies from manufacturing industry and the digital and telecom sectors among its members, 70 % of which are SMEs. This makes Agoria the largest federation within the Federation of Belgian Enterprises. Supported by Sirris – the technical support centre of Agoria - the technology sector can now lean on a vast portfolio of services, including CE tools, individual support and coaching, and training.

Green Deal Anders Verpakt (see Section Innovative approaches and good practices – Examples of public policy initiatives (national, regional or local)

Wallonia

Circular Wallonia, the Walloon strategy for the deployment of a CE was adopted in February 2021 by the Walloon Government.

The key economic players in the CE in Wallonia are members of the waste collection and treatment, and construction sectors, the chemical industry, including manufacturers of plastics and metal products. Water and textiles were also identified as important sectors. These value chains have many strengths and advantages. In a desire to strengthen the competitiveness of Wallonia, the selection of priority value chains for the Walloon Strategy for the Deployment of the Circular Economy took place at the intersection of European themes with the strengths and ambitions of Wallonia. Thus, six priority value chains have been defined, each of which is organised around a taskforce, coordinated by a sector expert, that is responsible for operationalising action.

Between September and November 2020 during the development of the strategy, these taskforces were formed to conduct round tables for the co-construction of action with the main stakeholders. Each has a representative panel of actors and brings together key players and pioneers on whom to rely to strengthen or initiate projects and identify opportunities.

Now in the implementation phase, the strategy was adopted in February 2021, the mission of monitoring and coordinating action is the responsibility of the sector experts.

The taskforces are:

- construction and buildings: Greenwin, a competitiveness cluster;
- plastics: Greenwin, a competitiveness cluster;
- metallurgy and batteries: Mecatech, a competitiveness cluster;
- water: the Public Water Management Company (SPGE);
- food: Wagralim, a competitiveness cluster;
- textiles: the scientific and technical center of the Belgian textile industry, Centexbel.

More specifically, the mission of the value chain coordinators is to: ensure the operationalisation of the action of the value chain concerned, mainly by promoting networking and industrial synergies, facilitating the exchange of good practice and offering technical support to project promoters. They are responsible for coordinating the network of companies, research centres, universities, etc. in order to bring out commercial opportunities, investment in industrial projects and R&D. And finally, they promote the participation of actors in projects and action at European level.

Significant action currently being carried out within value chains includes the following.

• **Construction** - call for circular projects with two distinct categories: **circular construction sites** (new construction and renovation), and **circular products and services**. The first call for projects, was launched in the summer of 2021, had a budget of EUR 600 000. Sixteen applications were submitted: five projects for new construction, one for renovation and 10 related to the

⁶² See <u>https://www.agoria.be/en/climate-environment-energy/circular-economy/news</u>

implementation of circular services for the construction sector. Of the 16 project applications submitted, seven were selected and funded. These will be carried through until the end of 2023.

- Awareness-raising, training and support action for actors linked to the metallurgy value chain in order to support them on the circularity, recyclability and lifecycle of their products. For details of the call for waste resources projects is available at https://www.wallonie.be/fr/demarches/participer-lappel-projets-dechets-ressources-2021-2022 (in French).
- In addition, for these two value chains, a **call for projects** was also launched in summer 2021, registered by the Walloon Government within the framework of the National Recovery and Resilience Plan (PNRR) as well as within the framework of the Walloon Recovery Plan. It is a response to the challenges mentioned in Circular Wallonia and aims to accelerate the development of platforms of industrial, technological, scientific and operational support, positioning the Wallonia as a centre of excellence. The winning projects will benefit from regional support.
- In the **textiles sector**, action is being taken to better assess the environmental impact and the circular potential of new techniques, promote eco-design in the training of inventory designers and assess the state of the second-hand textile market.
- Within the **plastics value chain**, particular attention is paid to plastics in healthcare, with a particular focus on medical and hospital plastics. This is based on opportunities identified by stakeholders and there are the skills and key players in Wallonia to help strengthen the circularity of these types of plastic. The identification of an application market to valorise recovered/recycled materials will be a major focus
- In the **food sector**, the work focusses on the development of a database of organic materials from the agri-food system to help obtain investment to achieve optimal valorisation.
- In the **bio-based sector**, work focusses on the development of business development activities to detect market needs and stimulate demand for bio-based products; position sectors, in particular the hemp sector; and support initiatives, especially in the field of construction and textiles. Another aim is to optimise existing value chains and develop complementary ways of recovery for the Walloon industries using biomass to strengthen their connection with the highest added-value sectors, such as the extraction of molecules of interest to the cosmetics and nutraceutical markets from forest-wood related products.
- Finally, in the **field of water**, the work aims to study the feasibility of developing green zones near treatment plants to reuse treated wastewater.

All of these activities will continue over the coming months until the end of 2022 or the beginning of 2023. Other action mentioned in the strategy will be rolled out gradually from the end of 2022. Finally, the ambition of activities aimed at regional structuring is to strengthen the regional anchoring of those sectors of activity, strengthening the competitiveness of the companies concerned, developing employment and their turnover by targeting, in particular, higher added-value activities.

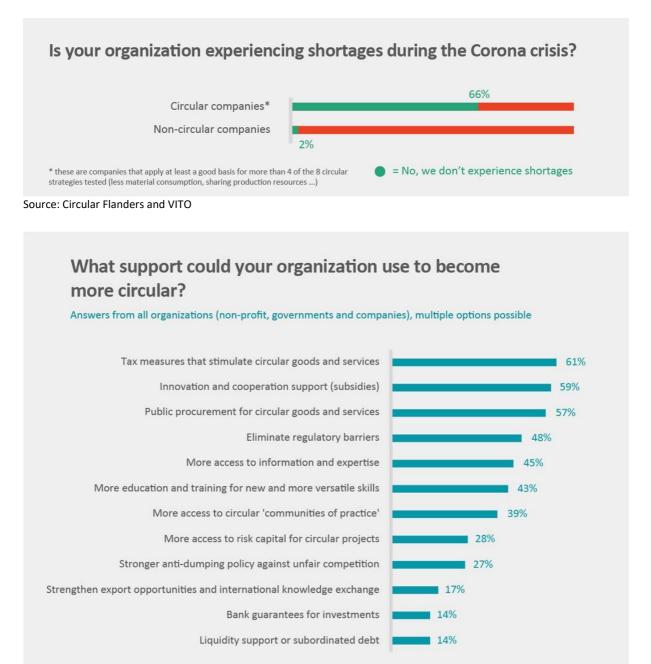
In addition, within the specific framework of waste policy, other measures are being developed in relation to the flows and value chains mentioned by the European Commission. In particular, the extended producer responsibility framework for packaging waste has evolved over the last few years to strengthen the selective collection and recycling of plastic packaging waste. A technical committee brings together the actors of the construction value chain to discuss the sorting of construction waste, selective deconstruction and the creation of waste-material inventories before major deconstruction and renovation works. For textiles, a study focusses on the economic instruments needed to support reuse and recycling beyond the existing systems.

The way forward

Addressing barriers and challenges

Flanders

In June 2020, Circular Flanders and VITO held a poll on resilience amongst different organisations from the private, government and not-for-profit sectors (⁶³). Five hundred and forty respondents formulated their biggest need for support to become more circular.



Source: Circular Flanders and VITO

Additionally, the Social and Economic Council Flanders (SERV) carried out a survey amongst 1651 organisations investigating barriers to circular production practices (⁶⁴).

⁶³ See: <u>https://vlaanderen-circulair.be/src/Frontend/Files/userfiles/files/Dossier%20Veerkracht.pdf</u> (in Dutch)

⁶⁴ See <u>https://www.serv.be/stichting/publicatie/circulaire-economie-ondernemingen-en-organisaties-</u><u>vlaanderen (</u>in Dutch)

Institutional

Legislative hurdles currently prohibit the use of materials classified as waste from being used as secondary raw material. Technical and economical examples exist where such waste materials could be a perfect input as raw material for an organisation from a different sector. Waste regulations, however, currently limit such re-purposing/re-use.

The study by the Social and Economic Council Flanders recently revealed details of these regulative hurdle.

- Uneven application among EU Member States and regions: definitions of waste, no unambiguous criteria for end of waste and no unambiguous application of the classification of hazardous waste.
- Lack of definitions and gaps: an absence of delineation/descriptions of recyclates, quality labels or product standards, and eco-design standards for reparability and longevity.
- Administrative obligations and safeguards: barriers to international trade in valuable wastes.
- Mismatched regulations: the Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (REACH), the Classification, Labelling and Packaging Regulation (CLP), food safety, public health, hygiene, competition, climate legislation, etc.
- Alignment with the principles of the linear economy: rental and purchase regulations not suitable for use-oriented business models, accounting rules, for example, depreciation rules do not take value retention into account.
- A lack of regulation of the sharing economy covering such aspects as insurance, liability in coownership and (public) commons.
- Public procurement and tendering regulations: limited attention to and sometimes explicit exclusion of circular solutions.
- Gross domestic product (GDP) is an inadequate indicator of value retention.

Market

The following economic and financial hurdles were found by the survey carried out by the Social and Economic Council Flanders on barriers to circular production practices (⁶⁵).

- Market failure for certain recyclates: supply and demand vary widely.
- Unequal playing fields compared to the linear economy.
- Price ratio between primary and recycled materials: some recycled materials are relatively more expensive than primary materials and raw materials and/or energy.
- Products from recycled or bio-based raw materials: often more expensive because not yet scaled up.
- Incomplete internalisation of environmental and health costs.
- Raw material prices are relatively cheap compared to the cost of labour: hinders labour-intensive activities such as repair.
- Financing of use-based circular business models.
- Direct and indirect rebound effects in, for example, the sharing economy, and 3D printing.
- Cost of reverse logistics and associated take-back warehouse space

Social

The following social hurdles were found by the survey carried out by the Social and Economic Council Flanders on barriers to circular production practices (⁶⁶).

- Lack of knowledge for technical, social and ecological system innovation.
- Non-circular behaviour among citizens and professionals.
- Lack of awareness and sense of urgency.

⁶⁵ See <u>https://www.serv.be/stichting/publicatie/circulaire-economie-ondernemingen-en-organisaties-</u><u>vlaanderen (</u>in Dutch).

⁶⁶ See <u>https://www.serv.be/stichting/publicatie/circulaire-economie-ondernemingen-en-organisaties-</u> <u>vlaanderen (in Dutch)</u>

- Resistance to reuse/sharing/use, absolute preference for ownership.
- Vested interests that benefit from maintaining a linear economy.

Furthermore, a lack of access to information, lessons learned, and education/training proved to be a hurdle to CE adoption.

Companies

The following hurdles for companies were found by the survey carried out by the Social and Economic Council Flanders on barriers to circular production practices (⁶⁷).

- Knowledge about material flows and in-use stocks.
- Knowledge of how to redesign production processes to optimise the use of raw materials.
- Knowledge for the development of sustainable alternative materials.
- Knowledge about the link between ecology and inequality.
- Knowledge about the possibilities of new circular business models.
- Alignment problems in value chains.
- Complex, international value chains.
- Low trust between companies not used to working together.
- Focus on short term by, among others, shareholders, buyers and consumers.

In order to present a positive business case, the CE often needs to adopt a value-chain approach, with cooperation between companies along that chain. This is not, however, current practice, with most companies having no view on what happens to their product after they have sold it. Such co-operation is definitely outside the comfort zone of most companies and requires thinking beyond their core business.

Without being exhaustive on the **possible policy initiatives to mitigate the listed barriers**, the following items can be listed, supported by the SERV study on policy recommendations for a circular transition⁶⁸.

In the governance field, following items must be sustained.

- Adopting a multi-pronged strategy with simultaneous efforts on technology, product design, revenue models and socio-institutional change.
- Obtaining commitment of all relevant actors.
- Leverage digitalisation.

The following aspects need reinforcement.

- Removing legal, economic, financial, social and institutional barriers.
- Achieve policy coordination between and within policy levels.
- More strong links to the climate transition
- Leverage the innovative use of innovative policy arrangements.

In addition, specific attention is needed on the fiscal incentives for social and repair/re-manufacturing activities. These still have systemic difficulties in competing with massive-scale linear production practices. Fiscal incentives on tax setting may be a useful way to incentivise repair and re-manufacturing.

Moreover, preparation of the active labour force for the circular transitions is needed in terms of job projections and new skills.

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⁶⁷ See <u>https://www.serv.be/stichting/publicatie/circulaire-economie-ondernemingen-en-organisaties-vlaanderen (</u>in Dutch).

https://www.serv.be/sites/default/files/documenten/SERV 20190225 Transitie naar circulaire economi e_Beleidsagenda_en_aanbevelingen.pdf (in Dutch)

Ranking types of barriers

High barrier	Institutional challenge to develop policy for a complex cross-sectoral issue
▲	Market barriers for recycled resources
	Companies' ability to grasp opportunities
Low barrier	Consumer behaviour and awareness
	Good indicators and targets

Wallonia

In Belgium, **competences related to the circular economy are regulated at different levels**. To obtain a common, national policy, it is important to align the strategic objectives of the three regions that make up Belgium. Moreover, the economic and industrial ecosystems are sometimes different from one region to another, which makes evolving national strategies more complex. To solve this problem and **improve coherence** in Belgium at the national level, Wallonia is implementing an **institutional platform to coordinate the implementation of CE in Belgium by bringing together federal and regional institutions**.

The CE is a very broad and confusing term that makes it difficult to understand. It is observed that the definition and perception of CE are different from one organisation to another. There is a lot of work to be done to promote, sensitise, popularise and inform society as a whole – the private and public sectors as well as citizens – on the concept. The CE is not only recycling, it is much more than that. This lack of understanding of what CE is often leads to an inability in companies to seize opportunities. Stereotypes are also deeply rooted and make life difficult for CE deployment.

In Wallonia, there is a lack of visibility of support and financing tools for companies. Companies do not even know that public aid exists and could support them in the development of their CE projects. The landscape of assistance and financing should be more accessible and easily understandable for companies.

Legal and institutional barriers are also an issue in the implementation of the CE, especially in regard to waste and its status as waste. Repair or reuse behaviour is not sufficiently supported by incentives or positive taxation. The legal framework needs to be improved to strengthen the production and consumption of circular goods. This is not only the case for Wallonia but also for Belgium as a whole.

- Regarding **institutional barriers**: new bodies are being established in Belgium to increase collaboration between regions and with federal institutions.
- Concerning **legal barriers**: a group at the federal level has been set up to address issues related to waste, taxation, etc. The Walloon region will also launch a working group to remove legislative barriers. This will be done in collaboration with our colleagues from the Soil and Waste Department
- Regarding **awareness**: a major communication strategy will be launched in September 2022 to increase the knowledge and awareness in companies, public authorities and among citizens of CE concepts.
- Regarding **support and financial tools**: a new website will be launched in September 2022 that will be the first information gateway about public assistance related to the CE.

High barrier	Companies' ability to grasp opportunities
	Market barriers for recycled resources
	Institutional challenge to develop policy for a complex cross-sectoral issue
Low barrier	Consumer behaviour and awareness
	Good indicators and targets

Ranking types of barrier

Future policy plans

Flanders

Flanders included four CE related activities in the national recovery plan.

1) **New governance Circular Flanders:** in Circular Flanders (*Vlaanderen Circulair*) Flanders has a central platform whose mission it is to facilitate the transition to a CE in collaboration with industrial partners, knowledge institutions, governments, banks and civil society. In this reform, the existing formula has been drastically improved and expanded. This public-private partnership has a renewed governance, and will now focus on and invest in a combination of strategic agendas on circular construction, chemistry/plastics, bioeconomy, other product chains in the manufacturing industry, the food chain and the water cycle, and a number of strategic levers – financing, innovation, circular procurement, research, awareness, etc. It will use a common **Roadmap** Circular Flanders as its compass.

2) **Recycling hub**: the recycling hub project aims to achieve at least six major investments, totalling of EUR 30 million, in new recycling facilities that enable local recycling and closed loops. It aims to focus on missing links in a number of value chains to make local circular production possible, for example, by investing in the recycling of diapers for which the feasibility of selective collection is currently being investigated; mattresses for which a new EPR came into force on 1 January 2021; textiles tonnages of which piled up during the COVID 19 crisis due to a lack of local processing facilities; etc. Investment is also needed in the plastics and chemical sectors. The processing of removed asbestos cement also offers opportunities. A number of techniques show promise that destroy harmful asbestos fibres and convert them into new usable additives for the construction sector. These are just examples. The call is open for all good recycling projects.

By offering such subsidies, Flanders wants to make forward steps in realising the following objectives.

- A reduction in the amount of residual waste to 100 kg/person of household residual waste by 2030 and an equivalent reduction in industrial residual waste, thus contributing to a reduction in CO₂ emissions by 25 % from waste incineration by 2030⁶⁹ this target is from the national climate plan.
- A reduction in the material footprint of Flemish consumption by 30 % by 2030⁷⁰.
- A contribution to the ambition of the EU's Plastic Strategy by quadrupling the sorting and recycling capacity for plastics by 2030 and the EU's SUP Directive by increasing the use of recyclates.
- The removal and destruction of asbestos, producing harmless new materials that can be used again.
- A surge in the steady supply of secondary raw materials available as resource for new products.

In a first phase, OVAM developed an assessment framework to support recycling activities in a selection of priority sectors. Projects are evaluated on their maturity/risk level, quality, environmental and economic impacts, and their policy relevance. Projects must demonstrate a substantial environmental gain (per Euro of subsidy) such as an environmental gain in the form of a reduction of residual waste, the detoxification of a cycle such as asbestos destruction, or reused quantities of recyclates. According to European requirements, it is also mandatory to adhere to the DNSH principle (⁷¹), demonstrating that no project does significant harm to any of six major environmental goals.

- 1) the mitigation of climate change;
- 2) adaptation to climate change;
- 3) water and marine life (including groundwater);
- 4) circular economy;

⁶⁹ Relative to 2018

⁷⁰ Relative to 2018

⁷¹ DNSH Do no significant harm

- 5) pollution prevention and control, and
- 6) biodiversity and ecosystems.

In the second phase two calls are to be launched. Applicants are ranked and subsequently selected according to the aforementioned assessment framework. The first call closed in March 2022 (⁷²); the second will end in December 2022.

3) **Circular construction** (EWI/VLAIO): circular construction pays attention to two important aspects: urban mining on the one hand and forward-looking building on the other. It is important to focus specifically on construction, since

- 30 to 40 % of waste comes from this sector;
- renovation and new construction require a lot of material and energy, so circular building practices have a great potential for savings;
- accelerating the renovation rate of the Flemish building stock is one of the biggest challenges within the Flemish climate and energy policy;
- there is great potential for efficiency gains in the construction sector through adapted building practices and digitisation.

The challenge is to increase the renovation rate of buildings by a factor three so as to make them more energy-efficient and at the same time reduce the environmental impact of construction materials and their treatment as waste. The goal is to invest EUR 10 million in pilot and demonstration projects for substantial developments in the field of circular construction, in coordination with the strategic agenda for construction within Circular Flanders, with a focus on both urban mining, and future-oriented design and construction.

4) **Circular manufacturing** (EWI/VLAIO): circular concepts need to be promoted throughout manufacturing industry. In the context of Circular Flanders, a strategic agenda on circular manufacturing is being developed for, amongst others, electronic waste, textiles and batteries. The challenge is to stimulate every company to function in a circular ecosystem, including SMEs. This project sets up specific project calls to distribute EUR 15 million in subsidies in line with innovation and entrepreneurship in the VLAIO instruments, in particular for studies, within collective instruments and for pilot and demonstration projects in accordance with the roadmap to be developed in the strategic agenda.

Wallonia

Some of the measures of Circular Wallonia have been included in the Walloon Recovery Plan. This package gathers 17 measures from the circular economy strategy and aims to boost economic development. Axis 3 of the Walloon Recovery Plan aims to boost Wallonia's economic development through digitisation, reducing the number of brownfield sites, an ambitious industrial policy and strengthening the CE. Two main aspects are concerned here: the realisation of the potential of the CE and support for the prevention, reuse and recycling of waste.

The objectives are as follows:

- Realising the potential of the CE through the implementation of Circular Wallonia.
- Setting up innovation partnerships in two of the six priority value chains for metallurgy and building materials.
- Develop and strengthen the collaborative and functional economy, eco-design, eco-innovation and the collection and sorting of waste flows, selective collection/sorting of material flows starting with priority value chains and with a view to promoting reuse, preparation for reuse and recycling. Create an aircraft dismantling industry.
- Continue and accelerate the digitisation of data communication processes and the use of data related to waste management.

⁷² <u>https://ovam.vlaanderen.be/eerste-call-de-resultaten</u> (in Dutch)

- Strengthen controls, in particular on illegal waste management practices and channels.
- Develop the eco-design of products, dematerialisation, the transition to zero waste and the economy of functionality.
- Fight against over packaging and develop reusable packaging and containers.
- Maintain products and equipment in service for as long as possible promote reuse and repair.
- Develop an approach that promotes the prevention of professional waste and the reuse of materials within companies.
- Reduce losses and (non)food waste and promote quality composting.
- Support the development of recycling centres in Wallonia in collaboration with the Fédération Ressources.
- Extend sorting and selective collection to new waste fractions organic waste, plastics, used mattresses, furniture, toys, reusable equipment, certain construction waste, asbestos at home, etc.
- Encourage sustainable construction: develop and generalise selective deconstruction promote the reuse and recovery of construction, demolition and renovation waste.
- Promote quality recycling support the development and improvement of techniques for decontamination, material extraction and treatment.
- Develop the recovery of by-products undertake action on the ground to encourage companies to create partnerships for the exchange of by-products in coherent territorial areas and support the establishment of synergies.
- Support the sorting, collection of and innovative logistics for professional waste, in particular through calls for projects and the setting up of material libraries.

European Topic Centre on Circular economy and resource use <u>https://www.eionet.europa.eu/etcs/etc-ce</u> The European Topic Centre on Circular economy and resource use (ETC CE) is a consortium of European institutes under contract of the European Environment Agency.

