

Circular Economy policy innovation and good practice in Europe



Authors:

Emanuele Di Francesco (WRFA), Mathias Schluep (WRFA), Veronique Van Hoof (VITO), Susanna Paleari (IRCrES-CNR)



Cover design: EEA
Cover image © Peder Jensen
Layout: ETC CE

Version: Final

Publication Date October 2024

EEA activity Circular Economy and Resource Use

Legal notice

Preparation of this report has been co-funded by the European Environment Agency as part of a grant with the European Topic Centre on Circular economy and resource use (ETC CE) and expresses the views of the authors. The contents of this publication do not necessarily reflect the position or opinion of the European Commission or other institutions of the European Union. Neither the European Environment Agency nor the European Topic Centre on Circular economy and resource use is liable for any consequence stemming from the reuse of the information contained in this publication.

ETC CE coordinator: Vlaamse Instelling voor Technologisch Onderzoek (VITO)

ETC CE partners: Banson Editorial and Communications Ltd, česká informační agentura životního prostředí (CENIA), Collaborating Centre on Sustainable Consumption and Production (CSCP), Istituto Di Ricerca Sulla la Crescita Economica Sostenibile, Istituto Superiore per la Protezione e Ricerca Ambientale, IVL Swedish Environmental Research Institute, Norion Consult, Università Degli Studi Di Ferrara (SEEDS), German Environment Agency (UBA), Teknologian Tutkimuskeskus VTT oy, Wuppertal Institut für Klima, Umwelt, Energie gGmbH, World Resources Forum Association.

Copyright notice

© European Topic Centre on Circular economy and resource use, 2024
Reproduction is authorized provided the source is acknowledged. [Creative Commons Attribution 4.0 (International)]

More information on the European Union is available on the Internet (<http://europa.eu>).

European Topic Centre on
Circular economy and resource use
<https://www.eionet.europa.eu/etcs/etc-ce>

Contents

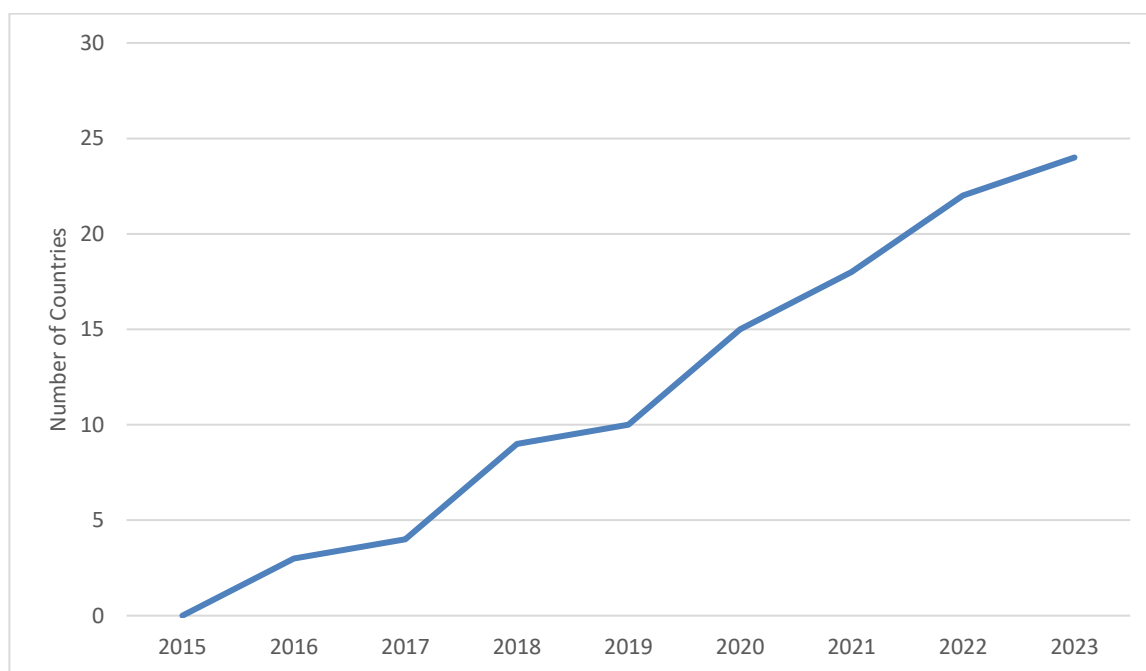
Introduction.....	1
1 Innovation in Public Sector Initiatives	3
1.1 Research and Innovation	4
1.2 Education and Awareness Raising	6
1.3 Financial Support Programmes.....	6
1.4 Product-related policies, including the R-strategies.....	7
1.5 Institutional and Regulatory Arrangements	8
1.6 Green, circular and sustainable public procurement	9
1.7 Taxation and Economic Instruments	10
1.8 Public-Private Partnerships.....	11
1.9 Producer/Supplier Responsibility.....	11
1.10 Spatial Planning and Urban Policies.....	12
1.11 Industrial Symbiosis	13
1.12 Change in Consumption Patterns and Consumer Behaviour.....	14
1.13 Circular Economy Criteria in Eco-labels	14
1.14 Sharing Economy.....	15
2 Innovation in Private Sector Initiatives	17
2.1 Construction Sector	18
2.2 Textiles	18
2.3 New Business Models	19
2.4 Food & Biomass	20
2.5 Waste and Secondary Raw Materials	21
2.6 Electronics & ICT	21
2.7 Plastics.....	22
2.8 Packaging	22
2.9 Industrial Symbiosis	23
2.10 Batteries and Vehicles.....	23
2.11 Other Sectors & Value Chains: from circular ports to circular tourism	23
3 Overview of Developments and Way Forward	25
3.1 Overview of Developments in Innovative Public Policy Initiatives	25
3.2 Overview of Developments in Innovative Private Policy Initiatives	25
3.3 The Way Forward.....	26

Introduction

The EU Circular Economy Action Plan¹ represents a cornerstone of the European Green Deal, setting ambitious goals for a more sustainable and resource-efficient Europe. Throughout its key priority areas, such as resource-intensive sectors, sustainable product design, and waste prevention, Member States are called not only to comply with EU regulations but also to advance national circular economy initiatives that push beyond the mandatory framework. This is essential to achieve Europe’s overarching climate neutrality targets by 2050, while preserving the integrity of the single market.

In response to these priorities, the European Commission has tasked the European Environment Agency with providing country profiles for each of the EU27 nations. These profiles deliver a comprehensive update on circular economy (CE) policies that Member States are implementing, with particular attention to innovative measures and good practices that exceed EU legislative requirements. Alongside EU27 countries, in 2024 country profiles were also developed for two non-EU countries: Switzerland and Kosovo².

Figure 1. EU27 Member States that have adopted national circular economy policies, by year and cumulative total



2015	2016	2017	2018	2019	2020	2021	2022	2023
0	3	4	9	10	15	18	22	24
	Belgium	Portugal	Denmark	Poland	Germany	Cyprus	Austria	Lithuania
	Finland		France		Latvia	Czechia	Bulgaria	Estonia
	Netherlands		Greece		Malta	Ireland	Italy	
			Luxembourg		Spain		Romania	
			Slovenia		Sweden			

¹ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

² This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Country profiles are based on information reported by the Eionet network and, in particular, the Eionet Group on Circular Economy and Resource Use in 2024. Responses to survey questions were successively reviewed and edited by the European Topic Centre on Circular Economy and Resource Use. This report provides an overview of initiatives that countries reported as good practice or innovative approaches to support the CE. The aim of this report is not to rank countries based on their level of innovation but rather to present an overview of developments that facilitate comparison and encourage peer learning. As a result, this report does not provide an exhaustive list of examples from each country; these can be found in the respective country reports³.

Countries were asked to focus on initiatives already in the implementation phase, falling within two categories: public policy and private policy initiatives. Public policy initiatives could include examples at national, regional or local (city/municipality) levels. For private policy initiatives, instead, the emphasis was on sectoral initiatives developed by specific industrial or economic actors, rather than individual company efforts. However, some examples of company-level solutions were also included.

In total, countries reported 177 examples of good practice in public policy initiatives and 108 in private policy ones. Due to their cross-cutting nature, some policies may overlap multiple categories. While alignment and consistency have been prioritized, slight differences in policy content may result in items being listed in different categories despite addressing similar topics. As this report focuses on presenting innovative practices, variations in category assignments should not affect the key messages of the report.

In parallel to this good practice report, the EEA is collaborating with member states to develop an online library of good practice case stories under the heading “Circular Economy Recipes”. This work aims to inspire and inform by gathering case stories and will be regularly updated with new material. The “recipe book” is aimed to launch online by the end of 2024 or early 2025. This new format will allow more detailed descriptions compared to a brief good practice report.

³ [Country profiles on Circular Economy in Europe — Eionet Portal](#)

1 Innovation in Public Sector Initiatives

The reported innovative approaches and examples of good practice in the public policy domain vary across a wide range of categories but present several commonalities across different countries:

- **Research and Innovation (R&I):** public sector efforts in research and innovation emerge as central drivers for advancing the circular economy across Europe. These initiatives span a diverse range of activities, from the development of digital tools and research frameworks that enhance circularity, to sector-specific programmes fostering collaboration between industry and research institutions. Key focus areas include the integration of digitalisation to boost circular economy efforts, eco-design principles, lifecycle assessments, and the application of advanced technologies like artificial intelligence. Many Member States channel R&I funding through national and European frameworks like Horizon Europe, LIFE programme and the European Innovation Council.
- **Financial support programmes:** governments often establish funding mechanisms to support circular economy projects and initiatives. These may include grants, loans, subsidies, and tax incentives. These programmes are designed to support investments in resource efficiency, waste reduction, and sustainable practices across multiple sectors. For EU countries, many of these financial resources are channelled through National Recovery and Resilience Plans, which play a crucial role in advancing circular economy goals. This underscores the commitment to integrating circular economy principles into economic recovery and growth strategy plans.
- **Extended Producer Responsibility (EPR) schemes:** EPR schemes mandate that producers are responsible for the end-of-life management of their products. This policy approach contributes to improving separate collection and recycling of waste and encourages manufacturers to take responsibility for their goods' environmental impact. In turn, this may incentivise the design of products that are easier to recycle or reuse. EPR schemes are being mandated and implemented in an ever-growing list of product categories.
- **Regulatory frameworks for waste management:** governments implement a wide range of regulations and policies governing waste collection, sorting, recycling and disposal. These frameworks often set targets for recycling rates, establish standards for waste treatment facilities, and outline requirements for hazardous waste management to ensure environmental protection and resource recovery.
- **Public procurement policies:** public authorities can leverage their purchasing power to promote sustainable and circular products and services. Green, circular and sustainable public procurement (G/C/SPP) policies establish criteria that prioritise goods with reduced environmental impact, higher recycled content, or longer lifespan, thereby driving demand for circular economy solutions. While the European Commission has been developing mainly voluntary GPP criteria for several products, an increasing number of countries are making GPP criteria mandatory for some product and service categories.
- **Education and awareness raising:** governments invest in public outreach campaigns and educational programmes to raise awareness about the benefits of the circular economy and promote sustainable consumption patterns. Increasing attention is also dedicated to the funding of training programmes for skills development to meet the greater availability and demand for green and circular jobs.

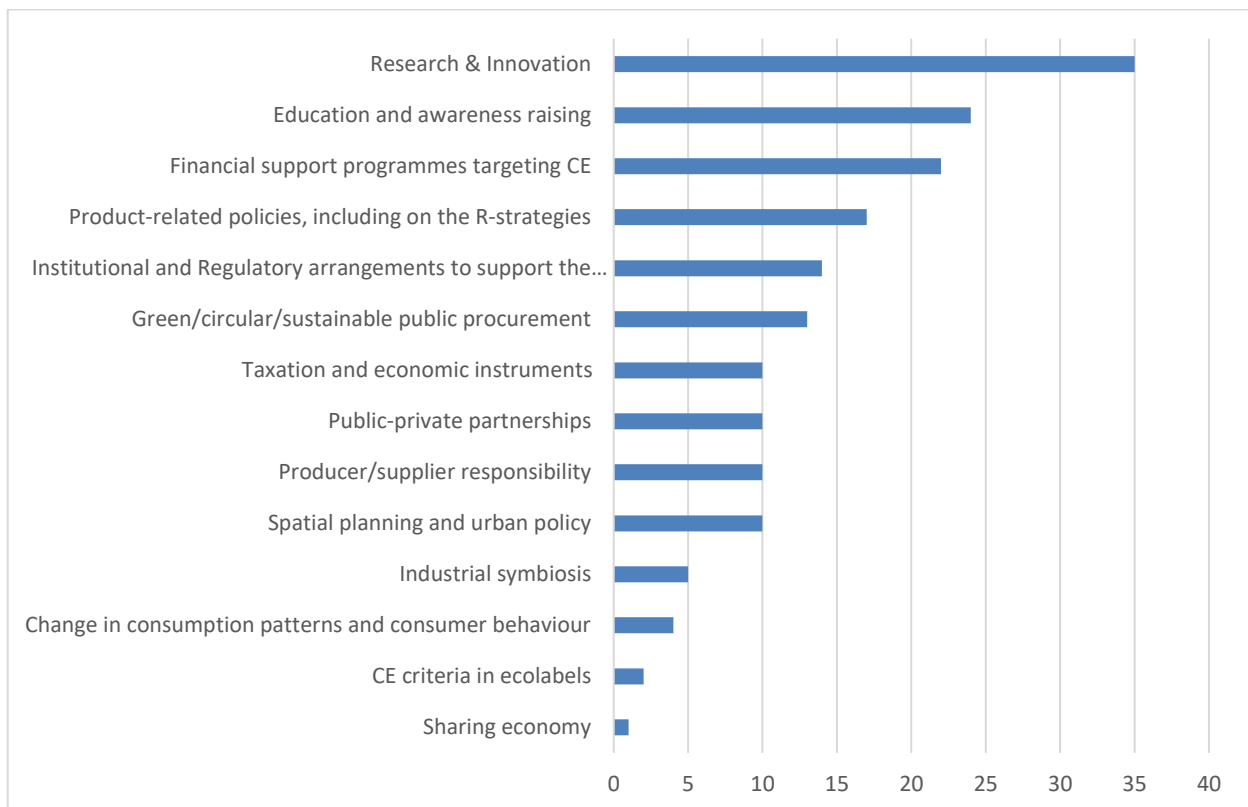
Based on inputs by Eionet country members, in total 177 good practices in public policy initiatives were reported. The top three categories with the highest number of policies reported are:

- Research and Innovation (35 policies)

- Education and Awareness Raising (24 policies)
- Financial support programmes (22 policies).

Among the least reported categories, instead, there are innovative initiatives for the sharing economy, circular economy criteria in eco-labels, and policies to influence consumption patterns and consumer behaviour. It is important to note that while these areas may have fewer examples, this does not necessarily indicate a lack of interest or relevance but rather reflects the variability in policy development and reporting across different contexts. Out of the 177 public policy initiatives reported, 152 were at the country level, 15 at the regional level and 10 at the municipal/city level.

Figure 2. Number of public sector initiatives reported by category



1.1 Research and Innovation

Research and Innovation are central to Europe’s efforts to transition towards a circular economy. As the circular economy paradigm shifts from theory to practice, public sector initiatives in R&I have emerged as critical drivers of innovation, enabling the development of new technologies, methodologies and business models that support sustainable practices across various sectors. The EU’s commitment to fostering a circular economy is reflected in substantial investments and strategic focus on R&I.

As in the latest report in 2022⁴, research & innovation public sector initiatives come up as the policy area where most innovative approaches have been reported. Public sector initiatives in research and innovation across Europe are driving the transition to a circular economy by leveraging digitalisation, collaborative research, and targeted projects across various sectors. Key areas of research and innovation initiatives include: i) digitalisation for CE, ii) collaborative research and sector-specific programmes, iii) advanced technologies and policy integration, iv) eco-design and lifecycle assessment, and v) policy assessment frameworks.

⁴ Circular Economy policy innovation and good practice in Member States. ETC CE working paper 2022, available at [draft-report-for-dg-env_final.pdf \(europa.eu\)](https://ec.europa.eu/eip/etcs/ce/wp2022/draft-report-for-dg-env_final.pdf)

A significant number of these initiatives focus on digital tools and frameworks, such as Austria's "Digitalisation to Boost CE" and Belgium Wallonia's "[Digital4Circular](#)," which aim to enhance CE through digital innovation. Luxembourg's "[Product Circularity Data Sheet](#)" (PCDS) and the "[DigitalDeConstruction](#)" project further exemplify the integration of digital solutions in promoting CE principles. Several countries have launched comprehensive programs to foster innovation and support SMEs, like Bulgaria's Programme "[Competitiveness and Innovation in Enterprises](#)" and Poland's "[GreenEvo Technology Accelerator](#)", which aid in the international transfer of environmental technologies developed by SMEs. Belgium Wallonia's "Proofs of Concept "(PoC) programme and Portugal's "[CIRCO Hub](#)" focus on specific sectors such as agri-food, metals, batteries, and circular design, highlighting targeted efforts to stimulate sector-specific advancements in the CE.

Denmark's "[GreenREFORM](#)" modelling for policy assessments and Finland's national-level material flow analysis illustrate the importance of research in informing policy and identifying impactful measures for sustainable resource use. Germany's initiatives, including the "[Green-AI Hub Mittelstand](#)" and "[CircEcon Campus](#)," focus on applying advanced technologies like Artificial Intelligence (AI) to achieve a greenhouse gas-neutral circular economy. France's "[Eco-Responsible Digital Acceleration Strategy](#)" and the Ireland "[DIRECT LIFE](#)" project emphasise reducing the carbon impact of digital communications and marketing, while Italy's cooperation between MASE (Ministero dell'ambiente e della sicurezza energetica) and ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) and the Arcadia Project aim to foster eco-design and develop lifecycle assessment tools. These initiatives reflect the critical intersection of digital innovation and sustainable practices.

Overall, these research and innovation initiatives are characterized by their strategic use of digital technologies, sector-specific focus, and strong support for SMEs. Through the integration of advanced digital tools and collaborative research across various industries, these efforts not only aim to accelerate the circular transition, but also enhance European competitiveness in the global market.

Artificial Intelligence (AI) and the Circular Economy

In the space of R&I, the intersection of AI and CE is opening new avenues for innovation, efficiency and sustainability across various industries. AI technologies, in fact, may offer powerful tools to optimize processes and assist decision-making. In Austria, the integration of AI into circular economy initiatives is being actively promoted through targeted research, technology development and innovation funding. For this purpose, the Austrian Research Promotion Agency (FFG) has launched and managed calls for tenders and funding for projects that leverage AI to advance circular economy goals. In 2022, a call for artificial intelligence for recycling was launched. In this context, some of the projects identified include:

- [KIRAMET](#): AI-based methods to increase the recycling efficiency of old metal scrap.
- [KI4Holz](#): Machine learning techniques and mathematical optimisations in the wood processing industry.
- [DeB-AT](#): Detect and reject waste batteries in mixed waste material streams to be treated using sensor and AI-based technologies.
- [RE:STOCK INDUSTRY](#): AI-algorithms in a FEM (finite element method) model, which is used for evaluating the re-use capability of industrial and commercial buildings.
- [MetTwin](#): AI to develop a digital twin of steel production.

AI is also a focus R&I area for Germany. With its "[Green-AI Hub Mittelstand](#)", the German Federal Environment Ministry sets up a pioneer for the use of AI for resource efficiency and material savings. It is aimed specifically at SMEs: practical, solution-oriented and directly on site. It identifies the potential of AI for efficient processes & develops prototype solutions together with SMEs. The applied AI itself will also be resource-efficient, in the spirit of Green AI. By offering mobile consulting and demonstration

services enabling networking and direct exchange with AI developers, the hub helps to save resources & costs for energy, raw materials, waste & repairs with AI.

Looking at these innovative initiatives, it appears that the potential of AI in the circular economy is promising, yet research and innovation is still at an embryonal stage. The intersection of AI and circular economy requires collaboration across disciplines, including data science, engineering, environmental science, and economics. Fostering such interdisciplinary collaboration will be key to unlocking the full potential of AI in the circular economy.

1.2 Education and Awareness Raising

Education and awareness-raising initiatives help bridge the knowledge gap between theoretical concepts and practical applications, empowering individuals, businesses, and communities to adopt sustainable practices. The aim of these initiatives is not only to inform but also to inspire action, building a circular economy mindset across society, ensuring that every citizen is engaged in the transition.

Education and awareness-raising initiatives span a spectrum from formal educational programs to public awareness campaigns. In many countries, governmental and non-governmental organizations collaborate to develop educational resources and platforms. For instance, Austria's "[Circular Economy Helpdesk](#)" and Bulgaria's professional qualification programs are examples of how countries are integrating circular economy principles into educational frameworks to prepare businesses and their workforce for the transition.

Public awareness campaigns play a vital role in informing citizens about the benefits of circular economy practices and encouraging behavioural change. Countries like Ireland and Spain invest in campaigns targeting various demographics, from students to the general public, promoting sustainable consumption and waste reduction. Moreover, regional collaborations and networks facilitate knowledge-sharing and best practices among cities and municipalities.

Portugal's "[Circular Cities Network](#)" is an example of regional collaboration aimed at promoting circular economy practices through education and information sharing. This network facilitates the exchange of best practices among cities and municipalities, empowering local communities to adopt sustainable practices. Latvia's "[Waste Audit Platform](#)" is an innovative tool that educates businesses and individuals on how to reduce waste and improve resource efficiency. This platform provides practical guidance on conducting waste audits and implementing circular economy practices.

1.3 Financial Support Programmes

Public sector financial support programmes targeting the circular economy in Europe reflect a commitment to fostering sustainable development through dedicated funding mechanisms. Austria has implemented several initiatives in this area, such as the "[Green Finance Agenda](#)", the Circular Economy Funding Programme under the Environmental Program, and a comprehensive database for funding CE projects, emphasizing a well-structured and accessible approach to financial support.

Belgium Wallonia's "[GO CIRCULAR](#)" and "[Construction Sites, Products and Circular Services](#)" programmes specifically target SMEs and the construction sector, respectively, illustrating targeted financial interventions to facilitate the transition to circular practices in key economic areas. Similarly, Bulgaria's extensive Programme "[Environment 2021-2027](#)", with a significant budget for waste management, facility development, and public awareness, underscores the importance of comprehensive support in promoting CE initiatives.

The Czech Republic's "Operational Programme Environment 2021-2027 and France's "[France 2030](#)" Investment Plan and "[ADEME Circular Economy Fund](#)" demonstrate substantial financial commitments,

with billions of euros allocated to projects ranging from energy savings and renewable energy development to waste prevention and circular economy advancements. These large-scale investments highlight the strategic prioritization of CE at national, regional and local levels.

Lithuania and Luxembourg provide tailored support to businesses and SMEs through programs aimed at advancing green transitions and sustainability, indicating a focus on fostering innovation and entrepreneurship in the CE sector. Romania's "[De minimis Aid Scheme](#)" and "[State Aid Scheme for the Manufacturing Industry](#)" further exemplify targeted financial incentives to support CE initiatives within specific industries.

Spain and Sweden's financial support programs, including the Recovery Plan Addendum and sector-specific programs, as well as the Regional Development Fund and "[Klimatklivet](#)", offer extensive funding for circular economy projects, integrating CE criteria across various sectors, from manufacturing to tourism. Overall, these financial support programs are innovative and varied, with a notable emphasis on large-scale investment plans, targeted support for SMEs, and sector-specific initiatives. The most prevalent themes include comprehensive funding allocations, strategic targeting of key economic sectors, and fostering business innovation for sustainability.

1.4 Product-related policies, including the R-strategies

Public sector initiatives regarding product-related policies encompass a broad spectrum of strategic efforts, with an emphasis on the R-strategies (specifically, Reduce, Reuse, Repair, Recycle). Among these, recycling initiatives are highly prevalent, such as Austria's deposit system for disposable bottles and cans, and Romania's deposit-return system, both aimed at enhancing recycling rates and reducing litter. Reuse is another significant focus, with projects like Croatia's management and reuse of mineral material post-earthquake and the Czech Republic's federation of furniture banks and reuse centres. Repair initiatives are well represented by Belgium Wallonia's "[Repair Together Association](#)" and Repair Cafés, and France's Repairability and Durability Score, highlighting efforts to extend product lifespans.

Reduction of waste, particularly food and packaging, is also prominent, as in the case of Croatia's "Reduce Food Waste" project and Italy's initiatives to curb food and packaging waste through localised efforts and technology-driven solutions. Furthermore, the establishment of reuse centres in Malta and Poland's regulation facilitating the transfer and reuse of state-owned property underscore a growing trend towards institutionalising reuse practices. These initiatives demonstrate a comprehensive and multifaceted approach to fostering a circular economy, with innovative aspects including the integration of technology in waste reduction and the institutional support for repair and reuse activities.

France's Repairability Score: Lessons learned and next steps

Since 1 January 2021, a [repairability index](#) is compulsory in France for five categories of electronic products and home appliances. This tool, introduced by the "[law against waste and for a circular economy](#)" (AGEC), aims to ensure that better information is available to the consumer about the repairability of purchases. Thanks to the display of a score from 1 to 10, the index informs customers about the repairability of purchases. Initially, the following product categories were affected: front-loading washing machines, smartphones, laptops, TV monitors and electric lawn mowers. From 4 November 2022, the index has been enlarged to include four new categories: vacuum cleaners, top loading washing machines, dishwashers and pressure washers. This tool is meant to raise consumer awareness of the possibility of extending the lifespan and use of their devices, in particular by directing their purchasing behaviour towards more easily repairable products. It aims at combating obsolescence – planned or not – to avoid the premature scrapping of products.

France recently assessed the influence of the repairability index on consumer purchasing behaviour, to identify and analyse the impact of the scheme. According to the study, the index has led to changes in

consumer purchasing practices, with consumers moving towards more repairable choices, and retailers seemingly keen to sell increasingly repairable products. Four results were identified:

- A positive, but not statistically significant, effect of the introduction of the index on sales of repairable products compared to less repairable products. There was a clear increase in sales of more repairable products, but this cannot be attributed with sufficient confidence to the introduction of the index alone.
- The introduction of the index had a positive and statistically significant effect on sales of more repairable products online, and a positive (but non-significant) effect on those sold in-store.
- Both retailers studied sold increasingly repairable products, and in greater proportions than less repairable products.
- Since the introduction of the index, product scores have risen, underlining the positive effects of the new, increasingly repairable models offered to consumers.

From 2025, the “[sustainability index](#)” (*Indice the durabilité*) will replace the repairability index for certain product categories, starting with televisions and washing machines (front and top). It includes new criteria, particularly relating to product reliability. By displaying a score out of 10, this index informs consumers about the more or less sustainable nature of the products concerned. The calculation of the sustainability index of each product model will be based on two families of criteria:

- One relating to the repairability of equipment, which takes into account the accessibility of technical documentation, ease of dismantling, as well as the availability and price of spare parts;
- The other relates to the reliability of the equipment, which takes into account the resistance to constraints and wear, the ease of maintenance and servicing, as well as the existence of a commercial guarantee and a quality process.

1.5 Institutional and Regulatory Arrangements

Institutional and regulatory arrangements play a critical role in advancing the circular economy by providing the necessary framework and guidance for transitioning from a linear to a circular economic model. Strong institutional support and clear regulations, in fact, are essential to minimise waste, maximise value from resource use, and keep materials in circulation for as long as possible. Effective regulations can facilitate the adoption of circular economy principles by making it easier and more financially viable for businesses to engage in activities like recycling, reuse and sustainable product design. Across Europe, several countries have established robust institutional frameworks and regulatory measures that support the uptake of the circular economy, particularly in waste management.

Austria exemplifies robust waste management regulations with ordinances such as the Landfill Ordinance and the End-of-Waste Ordinance, which aim to reduce landfilling and promote recycling by establishing criteria for when waste ceases to be considered waste. These measures align with Austria's comprehensive National Waste Legislation, providing a structured framework for sustainable waste management practices. Bulgaria addresses municipal responsibilities through specific regulations for household, construction, and biodegradable waste management. Additionally, Bulgaria facilitates waste management with Free Collection Sites for hazardous and bulky waste, enhancing convenience and compliance with environmental standards. Denmark's efforts focus on improving waste sorting and collection efficiency with Streamlined Pictograms, Sorting Criteria, and Collection Schemes for household waste. These initiatives aim to increase recycling rates by simplifying sorting processes and improving public participation in recycling programmes. Lithuania's legislative support includes a Legal Act for waste prevention and end-of-waste criteria for construction waste, aiming to reduce overall waste generation and promote reuse within the construction sector.

Spain's Circular Economy Strategy "[Circular Spain 2030](#)" targets a significant increase in reuse and preparation for reuse of municipal waste. The Draft Bill on Prevention of Food Loss and Waste emphasises prioritising food use hierarchy and obligations for food donation, addressing critical aspects of food waste reduction. Sweden mandates the reduction of food waste through national regulations and guidelines developed by the Swedish National Food Agency, underscoring a proactive approach to minimising food waste throughout the supply chain.

While waste management is a crucial component, most innovative policies in this space also emphasise other aspects of the circular economy, such as prevention of waste through the use as secondary materials, life extension and sustainable chain management. By doing so, institutional and regulatory arrangements can be further strengthened to support the widespread adoption of circular economy practices across Europe.

1.6 Green, circular and sustainable public procurement

Green, circular and sustainable public procurement is increasingly seen as a central strategy for promoting environmental sustainability and advancing the circular economy across Europe. In many countries, the government is the single largest purchaser of products, services and works. In the European Union, public procurement accounts for up to 14% of GDP⁵, representing a significant portion of economic activity and offering a powerful lever to influence market behaviour and stimulate demand for sustainable products and services.

The European Commission has emphasised public procurement's role in achieving the European Green Deal objectives. In this context, the Ecodesign for Sustainable Products Regulation (ESPR)⁶ entered into force in July 2024, enabling the European Commission to adopt implementing acts that set mandatory Green Public Procurement requirements for public buyers regarding the products it regulates. The ESPR, as a framework regulation, will progressively introduce concrete product rules and GPP requirements over time, either product-by-product or horizontally, based on product groups with similar characteristics.

In addition to the ESPR, other EU legislation already establishes mandatory public procurement requirements for certain product categories. These include the Clean Vehicles Directive⁷, which mandates minimum procurement levels for clean and energy-efficient road vehicles; the Energy Efficiency Directive⁸, which sets obligations for purchasing energy-efficient products and services; and, the Energy Performance of Buildings Directive⁹, which includes requirements related to energy efficient buildings.

By embedding sustainability criteria into procurement processes, European governments can set an example and drive market shifts toward more sustainable practices. Public sector initiatives in green, circular, and sustainable public procurement across Europe demonstrate a concerted effort to embed sustainability principles into governmental purchasing processes. Key areas of focus include:

- Integration of circular economy principles into public procurement tenders
- Use of eco-labels and environmental criteria
- Legislative and strategic frameworks

⁵ https://single-market-scoreboard.ec.europa.eu/business-framework-conditions/public-procurement_en#:~:text=Public%20procurement%20accounts%20for%20about,non%2Ddiscrimination

⁶ https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/ecodesign-sustainable-products-regulation_en

⁷ https://transport.ec.europa.eu/transport-themes/clean-transport/clean-and-energy-efficient-vehicles/clean-vehicles-directive_en

⁸ https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

⁹ https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en

- Target setting and monitoring
- Sector-specific initiatives

Luxembourg's [Circular Economy Strategy](#), which integrates eco-design and circular criteria, is a notable example of embedding circular economy principles into procurement policies. [Poland's Act of 11 September 2019](#) on Public Procurement includes provisions for considering environmental aspects, showcasing a legislative approach to promoting green procurement. Denmark's use of eco-labels and total cost of ownership in public procurement for certain product categories since 2022 highlights an innovative approach to ensuring sustainable purchasing. France's targets for purchasing products made from reused or recycled materials in public procurement similarly reflect a robust commitment to resource efficiency and waste reduction. Belgium Wallonia's [Responsible Public Procurement Strategy](#) and Bulgaria's Green Public Procurement effective from January 2024 represent strategic frameworks aimed at institutionalising sustainability in procurement processes. The Czech Republic's [National Strategy for Public Procurement 2024-2028](#) further underscores the long-term commitment to integrating green criteria into public procurement.

Portugal is particularly active in this domain, with initiatives like the [Green Public Procurement Awards - ECO360](#), the “Food Sustainability School Program”, and the “Green Deal Center” project, all of which integrate circular economy principles into various levels of procurement practices. These initiatives reflect a comprehensive and multi-faceted approach to green procurement, from school programs to regional procurement practices. Spain's integration of the EU Ecolabel into its [Green Public Procurement Plan](#), mandated by national laws across all levels of government, and Sweden's criteria and guidance from the National Agency for Public Procurement, which promote reuse, recycling, and sustainable material use, illustrate a broad and systematic adoption of green procurement policies across different governance levels.

Overall, these public procurement initiatives are innovative in their systematic and strategic approach to embedding sustainability. The prevalence of eco-labels, the incorporation of circular economy principles, and the comprehensive legislative frameworks are particularly noteworthy.

1.7 Taxation and Economic Instruments

Taxation and economic instruments play an important role in incentivising the uptake of the circular economy in Europe. By altering financial incentives, in fact, governments can change the playing field and influence the choices of businesses and consumers alike. Governments can impose taxes on activities and products that are environmentally harmful, such as carbon emissions, waste generation or primary resource extraction. These taxes increase the cost of linear economy practices (like waste disposal or single-use products) and make circular practices—like repair, reuse and recycling—more economically attractive.

As an example, taxing the extraction of raw materials can encourage companies to use recycled materials or reduce material consumption, thus promoting resource efficiency and circularity. On the consumers' side, implementing deposit schemes for products like plastic bottles can encourage consumers to return these items for recycling or reuse. Similarly, offering tax deductions or credits to consumers who purchase ‘circular’ products, such as refurbished electronics or sustainably sourced goods, can drive demand for these products.

Public sector initiatives in Europe utilising taxation and economic instruments to promote a circular economy reveal a strategic use of financial incentives and penalties to drive behavioural change and support sustainable practices. The implementation of deposit return schemes in Hungary, Ireland, and Malta for beverage containers, including plastic, glass, and metal, showcases a widespread approach to

incentivizing recycling and reducing litter. These schemes are anticipated to significantly enhance recycling rates and resource recovery.

[France](#) and [Germany](#) have introduced repair bonuses, aiming to reduce waste by encouraging the repair of electrical and electronic equipment. These initiatives reflect a growing recognition of the importance of extending product lifespans as a means to mitigate environmental impact. Ireland's [waste recovery levy and increased landfill levy](#) represent a direct economic instrument to discourage landfill use and promote waste recovery. Similarly, Spain's taxation on non-reusable plastic packaging and landfill waste introduces financial disincentives for non-recyclable materials, encouraging a shift towards reusable and recyclable alternatives. Luxembourg's [updated tax relief system](#), effective from January 2024, supports digital transformation and ecological transition projects, highlighting the intersection of economic policy and environmental innovation. This approach underscores the potential for fiscal policies to stimulate investment in sustainable technologies and practices.

1.8 Public-Private Partnerships

Public-private partnerships (PPPs) leverage combined expertise and resources to address sustainability challenges and drive innovation. By aligning public goals with private expertise, PPPs can create scalable and impactful circular solutions.

In Flanders, Belgium, the "[Green Deal Sustainable HealthCare](#)" focuses on sustainable practices within the healthcare sector, demonstrating how PPPs can promote environmental stewardship in specialised industries. Similarly, Germany's "[PREVENT Waste Alliance](#)" and "[Recycled Raw Materials Dialogue Platform](#)" facilitate collaborative efforts to reduce waste and promote recycling practices, involving stakeholders from across sectors.

Hungary's River Rescue Center and Plastic Innovation Mobile workshop exemplify how PPPs can address environmental challenges through localized initiatives, engaging both public and private entities in innovative solutions to plastic waste management and environmental conservation. In Ireland, initiatives such as the "[Food Waste Charter](#)" and "[Circular Economy Hotspot Dublin 2030](#)" illustrate PPPs' role in coordinating efforts across the supply chain to reduce food waste and promote circular economy practices in urban development.

Luxembourg's "[Neobuild GIE](#)", established as a PPP, focuses on innovation in sustainable construction, promoting circular practices and digitalization in the building sector. This partnership model enhances collaboration between public authorities, private companies, and research institutions to accelerate the adoption of sustainable building materials and practices. Portugal's "[ECO.NOMIA Portal](#)" and Spain's Circular Economy Council and Circular Economy Pact serve as platforms for PPPs to facilitate knowledge exchange and collaborative projects among public, private, and academic sectors, driving circular economy initiatives at national levels. Sweden's "[Avfall Sverige](#)" acts as a stakeholder association representing both public and private sectors involved in waste management and recycling. This collaboration strengthens the sector's capacity to implement circular economy practices and meet sustainability goals.

1.9 Producer/Supplier Responsibility

Public sector initiatives focused on producer and supplier responsibility in the circular economy across Europe showcase a robust commitment to Extended Producer Responsibility (EPR) frameworks. These policies require producers to manage the lifecycle impacts of their products, from design to disposal. Belgium Wallonia's EPR "[Valumat](#)" for used mattresses exemplifies a targeted approach to specific product categories. Valumat is the management organisation for extended producer responsibility (EPR) for used mattresses. Established and financed by the sector, its mission is to collect all used mattresses efficiently (and profitably) and treat them sustainably. Through a "designed for circularity" working group, Valumat is funding the search for collective solutions for the sector aimed at fulfilling its mission. Valumat's

ambition is to encourage eco-design so that ultimately all materials from used mattresses can be reused and thus close the materials cycle within the circular economy.

In Bulgaria and Hungary, comprehensive EPR obligations span multiple waste streams, including packaging, vehicles, electronics, and textiles, ensuring widespread coverage and alignment with EU directives. France and Spain are advancing EPR schemes with an emphasis on construction materials and a diverse range of products. France's EPR for construction products and materials represents a critical step in addressing waste from one of the largest sectors. Spain has worked on an integrated digital system for tracking and compliance of EPR, called "[eSIR](#)" system.

Sweden's ten Producer Responsibility regulations highlight a mature EPR landscape, with several regulations in harmony with EU mandates like the Single-Use Plastics Directive¹⁰. These initiatives illustrate a comprehensive and evolving approach to producer responsibility, which also fosters innovation in product design, waste reduction, and recycling. The most innovative aspects are seen in the detailed and category-specific schemes, as well as the integration of digital systems for tracking and compliance, such as Spain's eSIR system.

1.10 Spatial Planning and Urban Policies

Spatial planning and urban policies can be leveraged to shape sustainable and circular cities and regions. Urban areas are at the forefront of resource consumption and waste generation, making them high priority targets for circular economy initiatives. Urban policies that incorporate CE principles focus on redesigning urban systems to minimize waste, optimize resource use, and enhance the resilience of urban communities. This involves rethinking how cities are planned, developed, and managed, with an emphasis on circular design, sustainable infrastructure, and the reuse of materials within urban environments. Similarly, circular economy in rural areas has the potential to contribute to economic development, regional cohesiveness and increased economic competitiveness.

Across Europe, several cities and regions are pioneering the integration of circular economy principles into their spatial and urban planning policies. Tartu City in Estonia has embraced circular economy principles in its urban planning by focusing on circular renovation. This initiative emphasises the reuse of existing buildings and materials, reducing the environmental impact of construction and demolition activities. Germany's "[Circular Rural Regions](#)" initiative extends the principles of the circular economy beyond urban centres, integrating them into rural spatial planning. This initiative focuses on creating synergies between urban and rural areas, promoting resource sharing, and enhancing the sustainability of rural regions.

Portugal's "[InC2 Initiative](#)" promotes circularity through collaborative city networks. By fostering cooperation between cities, this initiative aims to share best practices, develop circular economy strategies, and implement joint projects that enhance resource efficiency and sustainability. InC2 illustrates the importance of collaboration in scaling up circular economy practices across different urban contexts. Romanian cities like Buzau and Cluj-Napoca have implemented local strategies to enhance resource efficiency and sustainability. These strategies focus on promoting recycling, waste reduction, and sustainable urban development practices. Slovenia's "[NoviKrog](#)" project in Novo mesto is a leading example of circular urban development. This project uses material flow analysis and circular procurement practices to create a sustainable urban environment.

The "CENTOCÉ" project in Rome, Italy, represents a forward-thinking approach to urban development by creating smart urban districts that facilitate circular solutions. This project integrates circular economy principles into the planning and development of urban districts, focusing on energy efficiency, sustainable mobility, and resource management. CENTOCÉ serves as a model for how cities can incorporate CE principles into their urban fabric, promoting long-term sustainability and resilience. Based on the good

¹⁰ <https://eur-lex.europa.eu/eli/dir/2019/904/oj>

practices presented, innovation in spatial planning and urban policies can contribute to the uptake of the CE when the following elements are present: a comprehensive urban planning framework; enhanced collaboration across sectors; capacity building for public sector actors in urban and rural areas; and community engagement and awareness.

1.11 Industrial Symbiosis

Industrial symbiosis is a collaborative industrial approach where traditionally separate industries engage in the exchange of materials, energy, water and by-products in a way that benefits both the economy and the environment. It operates under the broader concept of the circular economy, focusing on closing the loop of resource use by turning waste from one process into a valuable input for another. Industrial symbiosis has the potential to enhance resource efficiency, increase economic competitiveness, reduce waste and GHG emissions, and lead to the creation of new business and employment opportunities.

In Europe, industrial symbiosis is increasingly recognised as a significant strategy for achieving sustainability goals and improving economic competitiveness. Several countries have launched public sector initiatives to promote industrial symbiosis, often supported by digital platforms that facilitate the exchange of resources between companies. Belgium Wallonia's "Promotion of Industrial Symbiosis – Call for Projects for Territorial Development Agendas" is a notable example that encourages regional projects aimed at fostering industrial symbiosis. By integrating industrial symbiosis into territorial development agendas, this initiative supports the sustainable growth of local economies while minimising environmental impact.

How do industrial symbiosis networks emerge? The example of Belgium Wallonia

In June 2022, a call for projects for territorial development agencies was issued with grants being allocated between October 2022 and June 2025. The 2022 call for projects aimed to support Territorial Development Agencies in their actions promoting the development and structuring of industrial symbiosis projects through the establishment of facilitators. The mission of the facilitators is to foster collaborative dynamics with the objective of leading to concrete, shared and multi-stakeholder actions aimed at the introduction of virtuous circles for the economic actors of a territory. The symbiosis facilitators play the role of intermediary between various stakeholders, particularly industry. Industrial symbiosis facilitators have several roles:

- They raise awareness and support companies through meetings;
- They analyse the potential for creating an industrial symbiosis of the company and its ecosystem (by mapping the company's flows, for example);
- They enable collaborations between companies of the same business park;
- They play the role of intermediary between different actors;
- They develop a climate of trust to promote exchanges and meet the needs of the company.

Sweden's "[Regenergy Frövi](#)" project exemplifies innovative industrial symbiosis by leveraging waste heat from industrial processes for agricultural purposes. This initiative not only improves energy efficiency but also supports local agriculture, fostering regional sustainability and economic benefits. In Luxembourg, a [new law](#) concerning the development of economic activity zones will be implemented to ensure the rational planning and harmonious development of business parks for example through the sharing of common infrastructures and the promotion of the circular economy and the rational use of energy and natural resources.

What is the impact of industrial symbiosis networks? The experience of Aalborg, Denmark

Through the "Sustainable Synergies" project facilitated by [Port of Aalborg](#), [Aalborg University](#) and energy cluster House of Energy, 25 Danish companies have exchanged residual and surplus products

such as water, energy, or materials. The project was designed to improve the competitiveness of SMEs in Aalborg East by developing green business models that would improve energy efficiency and resource efficiency through a facilitated industrial symbiosis.

The companies involved in the symbiosis have experienced a range of benefits. For example, an exchange of surplus resources has resulted in direct benefits, such as reduced waste management and materials procurement costs. Additionally, extra income was generated through product innovation and new products, as well as creating new markets and/or customer groups.

Between 2017 and 2020, several positive environmental results have been achieved:

- Energy consumption was reduced by 11.000 gigajoules
- Materials consumption was reduced by approximately 2.600 tonnes of FE-equivalents
- Each company saved 264 MWh of energy – corresponding to the energy consumption of eight households
- The collaboration contributed to a reduction of annual CO₂ emissions by 10,000 tonnes
- Each symbiosis created reduced CO₂ emissions by 800 tonnes – corresponding to CO₂ emissions of 100 Danish residents

More information is available [here](#).

1.12 Change in Consumption Patterns and Consumer Behaviour

Traditional consumption models, characterized by a linear “take-make-dispose” approach are unsustainable and contribute significantly to environmental degradation, resource depletion and waste generation. Public sector initiatives across Europe are increasingly focused on shifting consumer behaviour towards more sustainable practices. By influencing consumer behaviour, governments can drive demand for sustainable products, encourage reuse and recycling, and promote responsible consumption. In Belgium Flanders, strengthened legislation on single-use catering materials represents a legislative approach aimed at reducing waste generation in the hospitality sector. This initiative encourages businesses and consumers alike to adopt reusable alternatives, thereby reducing the environmental impact of disposable items. Cyprus's measure for promoting the circular economy in hotel facilities targets the hospitality industry specifically. By implementing practices that minimize waste and encourage recycling within hotels, Cyprus aims at offering and highlighting more sustainable choices during travel and hospitality experiences.

Latvia's digital platform, “[lietovelreiz.lv](#)”, plays a pivotal role in promoting reuse opportunities for items. The platform facilitates rental, repair, and exchange of used items, encouraging consumers to opt for sustainable consumption practices rather than purchasing new goods unnecessarily. Malta's “[Bring Your Own Container Initiative](#)” is another notable effort that encourages consumers to bring their own containers for food and beverages, reducing single-use packaging waste. This initiative not only reduces waste but also raises awareness about the environmental impact of disposable packaging among consumers. Overall, these initiatives highlight diverse approaches to influencing consumer behaviour and consumption patterns towards sustainability. Legislative measures, digital platforms promoting reuse, and initiatives encouraging personal responsibility play a role in fostering a circular economy mindset among consumers and businesses.

1.13 Circular Economy Criteria in Eco-labels

Eco-labels focus on disclosing the environmental impact of products through criteria like energy efficiency, reduced use of hazardous substances, and lower emissions. Eco-labels act as credible markers for consumers looking for environmentally friendly products, while also pushing manufacturers to adhere to more sustainable and circular production processes. With the increasing emphasis on the circular economy, there is a growing need to extend these criteria to include aspects like recyclability, durability,

the use of recycled materials, and product life cycle assessments. Incorporating circular economy criteria into eco-labels is an emerging area with significant potential for promoting sustainable consumption and production across Europe.

Germany's "[Green Button](#)" (Grüner Kopf) for sustainable textiles is a prominent example. This label focuses on ensuring that textiles meet stringent environmental and social standards throughout their lifecycle. By setting criteria for sustainable production, the Green Button not only helps reduce the environmental impact of textiles but also promotes fair labour practices, aligning with broader sustainability goals. Italy's "[Made Green in Italy](#)" national scheme employs the Product Environmental Footprint (PEF) method to evaluate and communicate the environmental impact of products. This comprehensive approach considers various environmental indicators, such as carbon footprint, water usage, and resource efficiency. By utilizing the PEF method, the scheme provides a standardized way to assess and compare the environmental performance of products, thereby promoting transparency and informed consumer choices.

Both of these initiatives exemplify how eco-labels can integrate CE criteria to drive sustainability. The emphasis on lifecycle assessments and the adoption of rigorous standards encourage producers to improve their environmental performance, foster innovation in sustainable product design, and enhance resource efficiency. However, it should be noted that—so far—the integration of CE criteria into eco-labels has been limited, with only a few countries reporting notable innovations in this area. One of the main challenges in incorporating CE criteria into eco-labels is the complexity of establishing comprehensive and standardized criteria that can be applied across various industries and product categories, without becoming overly burdensome for producers and consumers alike.

In this context, the European Commission's [Green Claims Directive](#) aims to address the proliferation of unverified environmental claims and eco-labels by setting rules on substantiating and communicating these claims. This initiative seeks to improve transparency, standardise claims based on scientific evidence, and prevent greenwashing, ensuring that consumers can trust the environmental information provided by companies.

1.14 Sharing Economy

The sharing economy focuses on maximising the use of assets through shared access, rather than individual ownership, thereby reducing the demand for new goods and promoting resource efficiency. Despite common goals and overlaps (e.g. optimisation of resource use), the sharing economy and circular economy are often treated as distinct areas. Innovative public policies in sharing economy represent the least reported policy area by countries.

Luxembourg's initiative to promote the sharing economy through a call for projects represents a strategic effort to foster sustainability and community engagement. This initiative, launched in 2022, aims to establish physical spaces where equipment and resources can be shared among individuals and businesses, thereby reducing consumption, promoting resource efficiency, and enhancing social cohesion. One prominent project under this initiative is POST Luxembourg's "kiosque de partage", which facilitates the sharing of various items, including electronics, tools, and household goods. This initiative not only reduces the environmental footprint associated with producing new items, but also provides access to resources that may otherwise be underutilized.

The limited reporting of initiatives related to the sharing economy in European countries could be due to the perceived separation between the sharing economy and the circular economy in policy frameworks. Many public sector initiatives are likely categorised under one domain or the other, depending on the primary focus, which may result in the underreporting of sharing economy practices that contribute to circular economy goals. Additionally, varying understandings of what constitutes a "sharing economy"

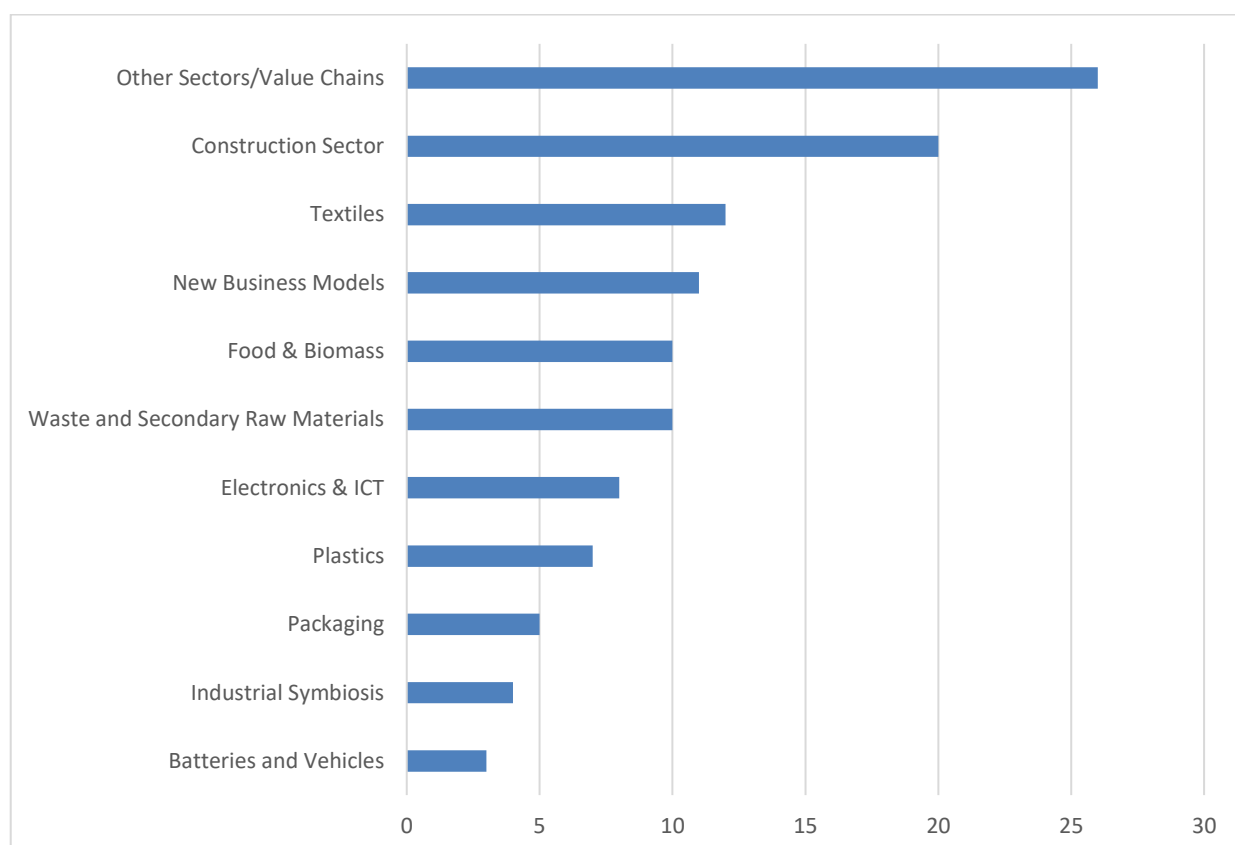
might also be at play. However, there appears to be a general lack of widespread public sector initiatives explicitly linking the sharing economy with circular economy goals across Europe. The sharing economy has significant potential to support circular economy objectives by promoting resource efficiency and reducing waste through shared access to goods and services.

2 Innovation in Private Sector Initiatives

Alongside public sector initiatives, countries were also asked to share examples of good circular economy practices developed by specific industrial and economic sectors. In total, 108 good practice cases of private policy initiatives were reported. The top three sectors/categories for policies reported are:

- Construction sector (20 initiatives)
- Textiles (12 initiatives)
- New business models (11 initiatives)

Figure 3. Number of private sector initiatives reported by category



Among the innovative cases reported in this category, countries also included individual company cases that highlight specific business models and strategies. While these examples are noteworthy and may enrich the exploration of the business case behind circularity, this report mainly focuses on sectoral policies and initiatives which focus on a wide range of economic actors.

Countries have shared numerous examples of good practices in various sectors, illustrating how private sector initiatives can effectively support CE objectives and address environmental and economic challenges. Notable sectors include construction, textiles, food and biomass. For instance, in the construction sector, initiatives such as preserving and reusing materials and promoting sustainable building practices are gaining traction. Additionally, the food and biomass sectors are exploring innovative business models that prioritize waste reduction and resource recovery. This chapter delves into the innovative practices reported by countries, highlighting key sectoral policies and initiatives that exemplify the commitment and creativity of the private sector to advancing circular economy principles.

2.1 Construction Sector

Innovative initiatives in the construction sector are aimed at reducing construction and demolition waste, promoting sustainable building materials, and adopting circular construction practices. These initiatives are driven by the need to address the environmental impact of construction activities, which are major contributors to resource consumption, waste generation and greenhouse gas emissions. The construction sector, in fact, is responsible for over 35% of the EU's total waste generation and for about 50% of all extracted materials. Furthermore, GHG emissions from material extraction, manufacturing of construction products, as well as construction and renovation of buildings are estimated at 5-12% of total national GHG emissions¹¹.

Many countries, including Portugal, Germany, Slovenia, Switzerland, France, Belgium and Austria, have developed sectoral roadmaps to transition the construction sectors towards a circular economy. France's "[Circular Economy Roadmap for the Construction Ecosystem](#)", for instance, outlines strategies for improving the environmental performance of construction activities, including better material management and lifecycle assessments.

The integration of digital technologies in construction is becoming increasingly important. In Slovenia, for instance, the "[ReBuilt](#)" project aims to introduce circular and digital practices in the construction sector by developing educational programs and strategies that enhance the use of recycled materials and promote sustainable construction practices. Austria's specifications for tenders under Social Urban Mining prioritize the use of secondary materials and promote circular economy principles in urban development projects. This approach involves integrating social and environmental considerations into urban development and construction projects.

Denmark is currently developing the "[Circle House](#)", its first circular social housing project located near Aarhus. This innovative project aims to serve as a model for circular construction, with 90% of its materials designed to be demounted and reused or resold without loss of value. To minimize its carbon footprint, the project incorporates alternative materials such as cork and old newspapers (for the building's façade), eelgrass and granules (for insulation), and used car tyres (for the flooring's underlay).

In Croatia, the "[BLOOM](#)" project aims to enhance the circular economy in construction by building capacity, especially in earthquake-affected areas, by offering education and support to SMEs in the local construction sector. The project encourages the adoption of circular practices by focusing on financial frameworks, digitalisation, and agility in the business processes. Germany's Deutsche Gesellschaft für Nachhaltiges Bauen (DGNB) [Building Resource Passport](#) initiative aims to create transparency in material use and promote the reuse of building materials, supporting circular construction practices

In Austria, Switzerland and Spain, the private sector is working on advancing material recovery and reuse in the construction sector, with a focus on specific materials like gypsum, steel and cement. In Austria, industrial actors aim to establish the first gypsum-to-gypsum recycling plant. Scheduled for completion by 2025, the plant is designed to handle 60,000 tonnes annually, primarily serving Eastern Austria. In Switzerland, the Swiss Business Council for Sustainable Development (oebu) is promoting the reuse of steel through the "[Re-Use of Steel Sections](#)" (RUSS) project. In Spain, finally, the "[Circular Economy Observatory in the Cement Industry](#)" provides comprehensive data on material and energy recovery at cement plants.

2.2 Textiles

Private sector initiatives in textiles are driving innovations in textile recycling, sustainable material development, and circular supply chain management. Austria's pilot projects in textile recycling explore new technologies and processes for recovering fibers from textile waste, aiming to reduce the

¹¹ https://single-market-economy.ec.europa.eu/industry/sustainability/buildings-and-construction_en

environmental impact of textile production and consumption. This collaborative project has successfully collected household and clothing textiles, producing pulp from them that is then processed into new lyocell and viscose fibers. This initiative is claimed to represent the world's first large-scale recycling process for blending fabric waste.

Belgium Wallonia's "[Centexbel](#)" initiative focuses on extending the lifespan of textile and leather products through innovative recycling processes and sustainable design practices. For this purpose, Centexbel is coordinating an inventory of the existing economic and industrial fabric in the Walloon region, identifying the most common materials in the territory and developing recycling channels. Besides this, the initiative trains companies active in the collection, sorting and resale of end-of-life textiles. The project also prepares the region for the upcoming European Commission regulations under the EU Strategy for Sustainable Textiles.

Portugal's initiatives under the "[be@t – Bioeconomy at Textiles](#)" Integrated Project aim to develop new materials from waste for the textile sector. The project emphasizes the creation of new recycled polymeric and plastic materials for use in textiles. This includes the development of materials for footwear, such as soles and fully injected footwear. This project has also created an online platform for industrial symbiosis, allowing industries to exchange waste and by-products for reuse. For instance, it is developing new materials and functional ingredients for textiles from waste streams such as eggshells and peanut skins. The "be@t" project involves collaboration among various stakeholders including industry players, research institutions and governmental bodies.

In Bulgaria, the [Bulgarian Association Circular Textile](#) (BACT) has made progress in relation to textile waste collection and recycling. BACT collaborates with over fifty companies and has implemented a nation-wide system of containers for textile waste. The organisation processes over 6,000 tonnes of textile waste, focusing on reuse and recycling. Germany's "[Partnership for Sustainable Textiles](#)" is a multi-stakeholder initiative focused on promoting a socially and environmentally sustainable textile industry. Its Circular Economy Expert Group works on sustainable design, recyclability and the use of recycled fibers in textiles, aiming to reduce waste through sustainable design.

2.3 New Business Models

Private sector initiatives across Europe are embracing circular business models to tackle resource scarcity and environmental impact. New business models mainly focus on the R-strategies, Product-as-a-Service, collaborative consumption platforms, and take-back and recycling programmes.

Belgium Flanders' "[Vlaanderen Circulair](#)" showcases diverse case studies of businesses adopting circular strategies, ranging from product-as-a-service (PAAS) models for reusable wall systems in construction to innovative approaches in the textile sector. These models not only prioritize reducing waste but also aim to generate new revenue streams through innovative reuse and recycling processes. Sweden has seen circular business models gaining traction, as highlighted in a recent report from the Confederation of Swedish Enterprises¹². "[Circular Sweden](#)", a business forum including both major companies and innovative start-ups and SMEs, promotes sustainable consumption and the shift to circular business models. In Kosovo, circular business models focus on six sectors: food, forestry, manufacturing, creative industries, retail, and construction.

In Austria, initiatives like "[Circular Mattresses](#)" highlight efforts to design and produce mattresses with extended lifecycles, focusing on materials that can be easily recycled or repurposed. In Hesse, Germany, the "[NÖK](#)" network connects organic farmers with compost producers, addressing trust issues by ensuring high-quality compost for farming. The "[CINDARELA](#)" project in Slovenia focuses on developing and

¹² https://www.svensktnaringsliv.se/english/how-can-sweden-become-more-circular-policy-instruments-and-measur_1207842.html

demonstrating a new business model that assists companies in creating successful circular economy business cases based on waste-to-resources opportunities for more sustainable urban construction.

In the Czech Republic, companies are pioneering various innovative circular business models. These include initiatives focused on repurposing byproducts such as coffee grounds, offering reusable food and beverage containers, and reusing textiles in creative ways. Additionally, companies are turning waste materials into valuable resources, such as using recycled textiles and plastics to create durable composite materials for construction and other industries.

2.4 Food & Biomass

Food and biomass are often grouped together in sustainability and circular economy discussions because both revolve around organic materials, making them integral to systems of waste management, energy production, and resource efficiency and recovery. This commonality offers synergies in processes such as composting, bioenergy generation, and the use of agricultural by-products. However, they clearly address different challenges as food focuses on human consumption, nutrition and waste reduction, while biomass is often integrated in renewable energy and bio-based materials strategies. For the sake of this report, food and biomass are grouped together. However, specific challenges and solutions unique to each sector are highlighted.

In the food sector, great attention is posed on the prevention of food waste. In the Czech Republic, initiatives like [“Zachraň jídlo”](#) and [“Nesněženo”](#) aim to minimize food waste through education campaigns and platforms for surplus food distribution, encouraging sustainable consumption behaviors. As part of the government’s broader food waste reduction agenda, Sweden’s [“SAMS”](#) initiative, a voluntary industry agreement, aims to reduce food waste by bringing together actors from all parts of the food supply chain.

In relation to biomass, Austria’s [“BioBASE Compass”](#) is an innovation platform that connects the bioeconomy with material flow processes, aiming to maximise the use of raw and residual materials for bio-based products. The initiative supports the development and implementation of innovative technologies that enhance biomass processing, fosters multi-stakeholder collaboration and raises awareness about the importance of biomass sustainable practices.

Slovenia has several innovative biomass projects. The [“CEL.CYCLE”](#) programme focuses on maximising the potential of biomass by creating new value chains that prioritise advanced materials and bio-based products. This initiative taps into technologies for bio-based materials, secondary raw materials and energy production, and promotes cross-sectoral collaboration in industries like chemicals, paper and wood processing. Another Slovenian initiative is the [“BAmBI”](#) project, which pioneers the development of bio-butylated amino resins from renewable raw materials. This project aims to replace fossil-derived resins with bio-based alternatives for applications such as automotive coatings and packaging.

Slovenia is also working on biotechnological development through the [“High Throughput Microfluidic Platform for the Selection of Microorganisms for Bio-refinery Application \(AciesBio\)”](#), which accelerates the development of highly efficient industrial microorganisms, which are essential for bio-refineries that can turn organic waste into high-value bio-molecules. Lastly, the [“Alps4GreenC”](#) project explores biomass conversion opportunities across the Alpine region, by developing a biochar-based value chain. The synergies between the food and biomass sectors are well exemplified by the work of [Wagralim](#), the agri-food innovation cluster of reference in Wallonia. One of its projects focuses on identifying organic material streams from the agri-food sector that are underutilised, with the aim of developing proof of concept strategies to convert by-products like brewer’s grains and rapeseed cake into valuable biomass, addressing challenges like storage and transport.

2.5 Waste and Secondary Raw Materials

Initiatives in waste management and secondary raw materials aim to improve recycling rates, reduce landfill waste, and promote resource recovery. An innovative recycling example comes from Austria's establishment of a large-scale metal smelter, planned to treat around 100,000 tons of secondary waste annually from shredder residues. Thanks to a EUR 60 million investment, this plant will use a pyrometallurgical process to recover copper, precious metals, and produce slag for potential construction use, alongside energy production in the form of heat and electricity.

In Portugal, the "[myWaste](#)" digital resource management platform enables municipalities and waste management companies to better track waste generation and recovery efforts. By utilizing data analytics and digital tools, "myWaste" allows for real-time monitoring of waste streams, which helps optimize collection routes and schedules, ultimately reducing operational costs and environmental impact. The platform also empowers citizens by providing them with information on waste disposal options and recycling facilities, fostering greater community engagement in sustainable waste practices. Latvia has introduced several initiatives, such as the "Broken? Don't throw it out!" campaign, which focuses on collecting and repairing electronic waste. The campaign successfully gathered over 226 tons of electronic waste while promoting repair and reuse practices. Additionally, the "[NOMALES](#)" waste sorting and exchange point encourages recycling and reuse of construction materials by offering free disposal in exchange for recycled resources like soil and gravel.

In Sweden, the Swedish Recycling Industries Association fosters collaboration among businesses, policymakers, and researchers to develop and implement effective waste management strategies. Their efforts include advocating for policies that encourage recycling and resource recovery, as well as facilitating knowledge sharing and best practices among members. Finally, in Luxembourg, the "[SuperDrecksKëscht](#)" initiative, supported by the government, promotes ecological waste management by disposing of problematic household waste and assisting businesses in setting up sustainable waste plans. It also organizes waste collection and promotes repair and reuse through campaigns like "Repair and Share."

2.6 Electronics & ICT

Across Europe, various initiatives are contributing to the circular economy in electronics and ICT, focusing on repair, reuse, and sustainable business models. These projects often target both environmental and social goals, through inclusivity, education, waste reduction and enhanced recycling infrastructures. In Latvia, the "[LAB!](#)" electronics repair workshop receives electrical devices from residents and partner companies in Riga. The workshop repairs around 200 pieces of equipment each month, which are then donated, resold, or made available on the second-hand market. This is presented as Latvia's first systematic initiative offering second-life opportunities for electrical devices.

In Luxembourg, the [Digital Inclusion](#) NGO has established a system for recovering, repairing, and redistributing IT equipment, with a focus on digital literacy and social inclusion, particularly among displaced persons and refugees. The NGO collaborates with national stakeholders, including recycling centres and IT producers, promoting digital access and environmental responsibility. In Spain, the "[Eco Rating](#)" system, developed in collaboration with European telecom operators, assesses the environmental impact of mobile phones over their entire life cycle, promoting sustainable production and disposal practices. Meanwhile, the "[LEVEL-UP](#)" project focuses on upgrading and repairing obsolete heavy industrial equipment, extending its operational lifespan through digital solutions.

In Slovenia, the "[LIFE Turn to e-circular](#)" project (2020-2024) raises awareness on circular economy practices, encouraging reuse of still-functioning devices. They have built collection points and an online platform for connecting stakeholders involved in electronic products reuse and repair. In addition, the "[Circthread](#)" project focuses on data sharing across product life cycles, by developing methodologies on sharing data on the environmental, social and economic impacts of electronic devices. Ultimately, this

project aims to enable better decision-making in terms of recycling and reuse, helping to close the loop in electronic product cycles.

2.7 Plastics

Plastics are a major environmental concern, and several European regions are taking concrete steps towards a circular economy in plastics, advancing initiatives that combine innovation, eco-design and recycling technologies. Austria's "[Plastics Cluster Upper Austria](#)", for instance, has set a 2030 target to become a model region for the circular economy in plastics, by fostering collaboration among stakeholders to advance innovations in plastic recycling and promote sustainable plastic use. France's 3Rs Strategy on Plastics focuses on reducing plastic waste, improving recycling infrastructure, and promoting the use of recycled plastics in manufacturing processes.

In Slovenia, the "[POLY Circularity](#)" focuses on developing chemical and biochemical processes to recycle packaging waste into high-quality secondary raw materials. By employing advanced recycling technologies such as enzymatic and chemical hydrolysis, the project separates materials like PET and cellulose, producing valuable by-products for various industries. In Belgium Wallonia, the "[Circular Design in Plastics](#)" programme led by Plastiwin, in collaboration with other organisations, aims to support companies in the plastics sector to adopt eco-design practices. The initiative focuses on assisting companies in the production, conversion, and recycling of plastics, ensuring they meet circular economy requirements while maintaining competitiveness. The programme—with a 1.6 million EUR budget allocated over five years—offers three types of support: diagnostics, one-off assistance, and long-term guidance, tailored to individual company needs.

In Spain, the "[LIFE Plasmix](#)" project addresses the challenge of recovering and recycling mixed plastics, such as polypropylene (PP) and polystyrene (PS) from municipal solid waste. The project employs innovative technologies for the optical separation, washing, and extrusion of plastics, transforming them into high-quality pellets suitable for new products, including food packaging. The initiative, supported by the EU's LIFE programme, aims to reduce the amount of plastic waste incinerated or landfilled by increasing the recycling rate from 31% to 42%. The project's recycling plant in Granada is expected to process over 3,700 tonnes of plastics annually, with the potential to scale up by 2026.

2.8 Packaging

Innovative initiatives in the packaging sector are increasingly centred on reducing packaging waste, promoting reusable and biodegradable materials, and improving recycling rates. In the field of biodegradable materials, one biotechnology startup in Czech Republic is producing 100% natural packaging materials from fungal mycelium and agricultural waste. By using local, renewable inputs they create fully biodegradable packaging that can even serve as fertilizers when decomposed. Two Estonian companies are pioneering packaging alternatives, such as repurposing textile waste into packaging material and producing compostable packaging to replace single-use plastics.

In Slovakia, a company offers reusable e-commerce package solution for online shoppers. After receiving their goods, customers can return the reusable packaging to any Slovak Post box, ensuring that the packaging is reused instead of discarded. The "[Vidro+ Platform](#)", launched in 2022 in Portugal, is a collaborative initiative designed to improve glass recycling rates. By bringing together government entities, NGOs, and the private sector, this platform establishes targets for increasing the sustainability of glass packaging through better collection and recycling practices. In Spain, "[Circularcaps](#)", a non-profit organisation formed by coffee producers, manages the collection and recycling of used coffee capsules. This system recycles materials such as aluminium and plastics, giving them a second life as compost, furniture and everyday items like pens.

2.9 Industrial Symbiosis

Initiatives in industrial symbiosis focus on resource sharing, waste exchange, and collaboration among industries to optimize resource use, increase competitiveness and reduce environmental impact. Bulgaria has been implementing successful industrial symbiosis practices across various sectors. One company, for instance, has effectively used technical gypsum, a by-product from the flue gas desulfurization unit of a power plant, in its production of gypsum-based products. In the Devnya industrial zone, a fertiliser producer is collaborating with a producer of phosphate-based feed products. The fertiliser producer supplies phosphoric acid, which undergoes additional refining to meet food-grade standards for animals.

In Latvia, the “[sinergia.lv](#)” platform helps companies collaborate to find sustainable and profitable waste reduction solutions. This platform connects businesses, offering opportunities for information exchange and training. In Portugal, under the “[be@t – Bioeconomy at Textiles](#)” programme, one project is developing an online platform to promote industrial symbiosis. This platform facilitates collaboration across sectors by enabling the exchange of waste and by-products, effectively reducing raw material consumption. Digital technologies such as machine learning and blockchain ensure precision in matching synergies between companies and provide transparency in material exchanges.

In Denmark, the “[Sustainable Synergies](#)” project aims at fostering industrial symbiosis among SMEs. The project encourages companies to exchange residual and surplus products, such as water, energy and materials. Companies involved in the symbiosis have reported direct benefits, including reduced waste management costs and lower materials procurement expenses. Additionally, the collaboration has led to new product innovations and the creation of new markets.

2.10 Batteries and Vehicles

The batteries and vehicles sectors are increasingly focused on sustainability, aiming to reduce environmental impacts and create value through innovative mobility solutions and enhanced recycling processes. Concerning batteries, R&D efforts are being directed towards improving battery technologies, particularly lithium-ion batteries. In the case of vehicles, instead, the shift towards sustainable mobility is characterized by the promotion of shared transportation models, such as car-sharing and ridesharing.

In Germany, the “[CE:Bat Circular Economy: Li-ion batteries and rechargeable batteries](#)” seeks to improve transparency regarding the materials used in lithium-ion (Li-ion) batteries, with an emphasis on incorporating them into a circular economy. The initiative also involves creating a trend radar to track developments in battery technologies and recycling, helping stakeholders adopt more sustainable practices in the production and disposal of batteries.

In Belgium Wallonia, the “[Pôle MecaTech](#)” competitiveness cluster is working on circular design in the metallurgy, battery, and transport sectors. Through training and support programmes, companies are encouraged to integrate circular economy principles into their business strategies. This cluster has been working on “reverse metallurgy”, a process where used metal products are recovered, recycled, and repurposed as raw materials.

Finally, in order to reduce the number of vehicles on the road and limit resource consumption, Austria has embraced shared mobility solutions. The Austrian Ministry for Climate Protection published the “Sharing Strategy in the Passenger Mobility Sector” in 2023, which supports the implementation of car-sharing and ride-sharing initiatives.

2.11 Other Sectors & Value Chains: from circular ports to circular tourism

Initiatives included in this category span various sectors including ports, metallurgy, water management, and standards for circular economy practices. Belgium Flanders’ “[Circular Ports](#)” initiative promotes sustainable practices in port operations. Created as a collaborative platform for sharing best practices and

peer learning, it encourages experimentation and actionable solutions. Some of its activities include sessions on Circular Ship Design and monitoring progress in implementing the CE in sectors like shipping and logistics.

In the wind energy sector, Denmark's "[DecomBlades](#)" project focuses on addressing the challenge of decommissioning aging wind turbines. The project is centred on recycling the glass fibres found in turbine blades, with successful trials conducted in a large-scale pyrolysis plant. This innovative approach not only reduces waste but also generates high-quality remelted glass fibres for new applications.

Several countries are also working on frameworks and certifications to recognise companies' performance in the circular economy. The "[eCIRCULAR](#)" system, developed by the Agency for Energy (ADENE) in Portugal and launched in 2023, is a comprehensive framework designed to assess and improve the circular economy performance of organisations. Through detailed audits, eCIRCULAR evaluates how companies manage resources such as materials, energy, and water, while also reviewing strategic circularity initiatives. Organizations receive a classification ranging from A+ (best) to F (worst), accompanied by specific recommendations for enhancing their sustainability practices. To date, 38 organizations have been classified, with 240 improvement measures proposed. The system is applicable across multiple sectors, making it a versatile tool for promoting circularity.

In Slovenia, the "[Green Star](#)" certificate serves as a recognition for companies implementing sustainable practices, particularly those focused on ESG principles and climate action. Through the "Engage" project, the Malta Competition and Consumer Affairs Authority has launched initiatives to support environmental standards development and business transformation.

Italy has established robust multi-stakeholder platforms aimed at fostering the circular economy. The [Italian Circular Economy Stakeholder Platform](#) (ICESP) brings together key sectors—institutions, companies, civil society, and academia—focusing on critical sectors such as Waste Electrical and Electronic Equipment (WEEE), plastics, textiles, construction and agri-food. Furthermore, in the field of Critical Raw Materials, Italy has relaunched in 2023-2024 the "[Italian Phosphorus Platform](#)", targeting the sustainable management of phosphorus.

Spain's tourism sector is adopting circular economy practices with the help of a manual published by SEGITTUR in 2023. The guidelines focus on transforming tourist destinations into circular economies by providing a roadmap that aligns with existing sustainable tourism strategies. The manual emphasizes practical actions and offers examples to help establishments reduce waste, improve resource efficiency, and promote sustainability in tourism—a sector not typically associated with circularity.

3 Overview of Developments and Way Forward

The biennial creation of country profiles enables to monitor innovative developments and good practices in public and private sector policies across European nations. This chapter offers an overview of advancements in both policy areas. Drawing on contributions from various countries and an analysis of the innovative cases presented, areas for further progress are also outlined.

3.1 Overview of Developments in Innovative Public Policy Initiatives

As seen above, public policy initiatives encompass a variety of instruments such as financial support programs, extended producer responsibility (EPR) schemes, regulatory frameworks for waste management, public procurement policies, and educational campaigns. This diversity reflects a holistic approach to addressing different aspects of the circular economy. Many initiatives emphasize resource efficiency, which incentivizes producers to minimize waste and promote product durability and recyclability. Based on the good practices reported, it appears that European governments are increasingly integrating circular economy principles into their policies. These initiatives span national, regional and local levels, and are applied across a wide range of sectors.

One of the most innovative aspects of these developments is the strategic emphasis on **digitalisation and advanced technologies**. Countries are leveraging digital tools to enhance resource efficiency and promote sustainable practices. This integration of digital solutions facilitates better data management and process optimization and fosters collaboration across industries enabling a more cohesive approach to circularity. Moreover, the focus on **research and innovation (R&I)** stands out as a critical driver of progress. Many countries are investing in collaborative research initiatives that bring together academia, industry, and government entities to develop new methodologies and technologies that support sustainable practices. This interdisciplinary collaboration is essential for unlocking the full potential of circular economy strategies, as it encourages the sharing of knowledge and best practices across different sectors.

Another notable trend is the **targeted support for small and medium-sized enterprises (SMEs)**. Several countries have established programs aimed at fostering innovation within SMEs, recognizing not only their key role in the European economy, but also in driving the circular economy transition forward. Most importantly, many of these initiatives show an increased awareness of the specific challenges faced by SMEs in making the switch from linear to circular practices and aim to provide a multi-faceted support including financial resources, capacity building, and business networking opportunities.

Furthermore, the emphasis on **education and awareness-raising initiatives** is crucial for building a circular economy mindset among citizens and businesses alike. Countries are increasingly recognizing the importance of informing and inspiring action at all levels of society. This includes formal educational programs and public awareness campaigns that promote sustainable consumption and waste reduction, ensuring that the principles of circularity are understood and embraced by a broad audience. Another critical component of education is related to skills development for professionals in the circular economy, with innovative programs being developed for circular design, waste management and green technology.

3.2 Overview of Developments in Innovative Private Policy Initiatives

Europe's private sector is demonstrating innovation and commitment in advancing the principles of the circular economy across various industries. These developments span various industries and are characterized by collaborative efforts, innovative technologies and a commitment to reducing environmental impact. A notable area of policy developments is the construction sector, where initiatives are increasingly focusing on reclaiming materials, promoting sustainable building practices, and integrating circular economy principles into urban development projects. These efforts highlight a strengthened approach to reducing construction waste and environmental impact, though challenges remain in scaling these initiatives to achieve broader adoption and impact.

Another prominent feature across sectors is the emergence of **new business models** designed around sustainability. From product-as-a-service offerings to innovative recycling technologies and collaborative consumption platforms, businesses are prioritizing resource efficiency, waste reduction, and extending product lifecycles. These models not only showcase technological advancements but also underscore a shift towards more sustainable business practices.

Technological innovation plays an important role in driving circular economy goals forward, particularly in areas such as waste management, recycling, and materials recovery. Innovations like digital resource management platforms and advanced recycling technologies are facilitating the closing of material loops and reducing environmental footprints. Despite their potential, uneven adoption rates and high implementation costs pose challenges to widespread deployment. Collaborative research and development efforts, alongside targeted investments, are crucial to overcoming these barriers and accelerating technological adoption.

Multi-stakeholder engagement through forums, conferences, and collaborative platforms is fostering knowledge-sharing, innovation, and policy development. These initiatives bring together businesses, governments, academia, and civil society to drive systemic change towards circular economy principles. While these platforms are effective in generating ideas and partnerships, their impact on policy implementation and tangible outcomes varies. Stronger regulatory frameworks and measurable commitments from stakeholders are needed to translate collaborative efforts into substantial progress.

3.3 The Way Forward

As Europe aims to advance its progress towards a circular economy, several challenges and obstacles have been identified by countries in the design, implementation and uptake of both public and private policies. Recognizing these challenges is essential for putting in place effective policy frameworks. This section outlines key areas for further progress while acknowledging the innovative strides already made.

- **Systemic integration of circular economy principles in policy initiatives:** One of the primary challenges is the integration of circular economy principles into existing regulatory frameworks. While many countries have made significant progress, there remains a need for systemic policies that align with CE objectives across various sectors. Innovative policies, in areas such as waste management, public procurement and R&I, have begun to address this issue by embedding CE principles into the fabric of regulatory frameworks.
- **Measurement and evaluation of impact:** A critical area for improvement is the measurement and evaluation of the impact of CE initiatives. Countries have reported difficulties in quantifying the benefits of circular practices, which hampers the ability to assess their effectiveness and scalability. Innovative cases, such as the development of standardised metrics in certain countries and industries, have shown promise in tracking progress and proving the business case of successful CE implementation.
- **Financial and technical support:** Access to financial and technical support remains a significant barrier, particularly for SMEs looking to adopt circular business models. While public funding and incentives are often available, there is a need for even more targeted support mechanisms that cater specifically to the unique challenges faced by SMEs. Innovative funding and skills development models have emerged in some countries, demonstrating effective ways to provide the necessary resources.
- **Awareness and education:** Raising awareness and educating stakeholders about the benefits and success stories of the circular economy is essential for fostering a culture of circularity. Many

countries have identified a gap in knowledge and understanding among businesses and consumers, specifically regarding how to implement circularity and what benefits it can bring. Innovative educational campaigns and training programs have shown how to successfully engage stakeholders, increase awareness and influence consumer behaviour. Expanding these initiatives and promoting peer-learning opportunities can enhance knowledge-sharing and encourage broader participation in circular initiatives in Europe.

- **Multi-stakeholder collaboration:** Effective collaboration among various stakeholders, including governments, industry, academia, and civil society, is vital for driving systemic change. While there is an ever-growing number of platforms for knowledge-sharing and collaboration, enhancing these networks and fostering stronger, cross-sectoral partnerships can lead to more impactful outcomes. Innovative cases, such as collaborative research projects and multi-stakeholder fora, have demonstrated the potential for collaborative action. Supporting widespread implementation and replication across different contexts can drive progress on a larger scale.
- **Technological innovation and adoption:** Technological innovation plays a central role in advancing circular economy goals. However, uneven adoption rates and high implementation costs pose challenges to widespread deployment. Countries may further focus on facilitating the development and uptake of innovative technologies. In this regard, successful examples powered by advanced digital and cleantech technologies have emerged, showcasing the potential for technological solutions.

In conclusion, it should be recognised that significant progress has been made in advancing circular economy initiatives across Europe. It is now of paramount importance to ensure that innovative policies can be further tested and assessed in a variety of contexts, to increase their adoption, implementation and effectiveness. The commitment to continuous improvement and adaptation will be essential in overcoming obstacles and realising the full potential of the circular economy. Emphasising peer-learning and further experimentation will not only enhance the effectiveness of existing policies but also inspire new approaches that can drive systemic change towards circularity.

Annex 1 – Country Profile Questionnaire

Existing Public Policy Frameworks

Question 1

Has your country adopted a dedicated national and/or regional and/or local circular economy (CE) vision, strategy, action plan or roadmap?

If so:

a: Describe the key elements that have changed since 2022

b: What new initiatives have been implemented?

c: How do these policy measures mainstream circularity across sectors and actors? Is your institutional set-up adapted to this? And if so, can you please elaborate on your successful approach for making circularity mainstream or becoming the norm across sectors and actors?

d: Do you have 'circular cities' or possibly zero-waste cities? If so, can you please specify which cities and whether they have a direct link to the national or regional circular economy strategy or have they evolved in parallel? Do you have cities participating in [the Circular Cities and Regions Initiative \(CCRI\)](#) and what is their strategy?

Where applicable, include major milestones and policy targets including their (planned) moments of achievement, and if these have changed since the last questionnaire in 2022.

Question 2

a: Which CE policy elements have your country included in other policies (currently applied), as one topic among various others?

b: What are the related key objectives, main initiatives and planned action?

Where applicable, include major milestones, including timelines for their achievement. Please focus on those elements that are new or adapted since 2022.

Examples of Innovative Approaches and Good Practices

Question 3

Please share examples from your country – national, regional or even local (city/municipality) – of public policy initiatives which you consider to be good practice or an innovative approach to support the CE. Please focus on initiatives already at the implementation phase.

If you have knowledge-base information on impacts (quantitative or qualitative), please include them in your reply. We would be very interested to know whether the good examples you provide are accompanied by evidence/assessments that they do deliver benefits, both from economic, environmental and social perspective.

Question 4

Can you share examples of good CE practice developed by specific industrial or economic sectors in your country?

Please provide details of the sectors, their main CE objectives and milestones.

Monitoring and Targets

Question 5

In May 2023, the Commission adopted a revised EU monitoring framework¹⁰ for the circular economy, together with an accompanying staff working document explaining the indicators. The EU Circular Economy Monitoring (¹¹) Framework is filled with data at the individual country and EU level:

a: How do you assess progress in your country in terms of observed trends over the last 5 years?

b: What country characteristics or policy actions may explain differences between your country and the average EU performance?

c: The dimension on Competitiveness and innovation contains values on persons employed in the CE sectors, expressed as a percentage of total employment. Do you have any idea/estimate for the informal/voluntary economy and/or better information/data on employment in CE related sectors, than what is now being captured in the Eurostat data?

Question 6

a: Do you use any other national or regional CE monitoring frameworks or are you currently developing one?

b: Which set of indicators¹² do you use? Do you plan on developing more indicators, and if so, which ones? Do your indicators also include social aspects¹³?

c: Is this data available to the wider public? How do you reach a broader audience than policy makers and experts with this information?

Question 7

a: What specific CE targets (measurable goals with a specific timeline) have been adopted in your country?

b: Have there been any new targets adopted since the 2022 round? What is the status of reaching the CE targets mentioned in the previous survey?

c: What actions/implementing measures are being taken to achieve the defined targets? And what have you learned from this so far? (for instance the set targets are too ambitious and might have to be redefined, or additional measures need to be implemented to make sure target Y can be attained in year Z, ...)
Again, if any ex-post impact assessments of CE policy (elements/measures) are available, we would be very interested in them.

d: If you do not have a legal target, have you already identified an objective for a circular material use (CMU) rate, such as the one mentioned in the CEAP 2020: “the EU needs to [...] strive to reduce its consumption footprint and double its circular material use rate in the coming decade”?

Barriers, Challenges and Future Developments

Question 8

a: In your country, what are the main barriers and challenges, perceived or discussed, to the implementation of a CE?

b: What new (types of) policy initiatives, at European, national, regional or local level could address the main barriers and challenges?

Question 9

a: Did your country define any CE-related activities in your national recovery plan submitted under the Recovery and Resilience Facility ⁽¹⁶⁾, either as stand alone or in combination with the required climate and digitisation transition?

If so,

b: What are their key objectives and main initiatives? In case actions have been implemented already, please explain which ones and how.

We are especially interested in updates since 2022.

European Topic Centre on
Circular economy and resource use
<https://www.eionet.europa.eu/etcs/etc-ce>

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.

European Environment Agency
European Topic Centre
Circular economy and resource use

