



Circular economy strategies and roadmaps in Europe: Identifying synergies and the potential for cooperation and alliance building

STUDY



European Economic and Social Committee



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Circular economy strategies and roadmaps in Europe

Identifying synergies and the potential for cooperation and alliance building

Final Report

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AUTHORS	<i>Giacomo Salvatori, Frank Holstein, Kai Böhme</i> <i>Language review: Tim Wills</i> <i>Graphics and layout: Sebastian Hans</i>
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CONTACTS	giacomo.salvatori@spatialforesight.eu frank.holstein@spatialforesight.eu
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Abstract

This report reviews circular economy strategies in support to the European Circular Economy Stakeholder Platform (ECESP). Circular economy strategies have been under development in European cities, regions, and countries in the last few years. 33 strategies have been adopted since 2014, and at least 29 more are under development. Existing strategies were reviewed to identify similarities and differences, assess the involvement of civil society organisations, and potential for collaboration. The documents reflect a period of defining and understanding the circular economy concept and its possibilities. In this evolving context, strategies are valuable endeavours which draw attention to the topic, kickstart initiatives and bring stakeholders together. The report argues that documents developed in the future should put more focus on including broader sections of value chains, and on ensuring inclusive partnership approaches in all phases of the strategy's cycle. To date, circular economy strategies show different degrees of inclusiveness in terms of value chains and partner involvement. Limited inclusive approaches can be explained by the exploratory nature of most documents. This includes a stronger involvement of civil society organisations in earlier phases of strategy development, and not just for dissemination and citizen involvement. The report highlights the ECESP's role in gathering and sharing civil society's knowledge and making sure it's fed into the policy cycle for circular economy.

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Executive summary

This report reviews circular economy strategies in support to the European Circular Economy Stakeholder Platform (ECESP). Similarities and differences between circular economy strategies are reviewed to assist the ECESP in becoming more effective, particularly through collaboration and the involvement of civil society organisations.

33 documents have been reviewed for this study: 13 cover national levels, 9 regional, and 12 local levels. A higher number of strategies was found in areas where there were early strategy development activities, such as Belgium, Finland, the UK, and the Netherlands. The number of strategies at all levels is growing and the pace at which they are adopted is increasing (9 were approved in 2017, 12 in 2018). At least 29 new strategies are under development, which will bring the total number of strategies to over 60 at the end of 2019. Most new initiatives are at regional level in Spain, Portugal, and France, and at national level in central and eastern Europe. Upcoming strategies at regional and local level will improve the relative low number of documents at this level when compared to the national level.

Different approaches to inclusive circular economy models and thematic focus

Strategies are more effective when they address the circular economy comprehensively and include broad partnerships. To date, circular economy strategies show different degrees of inclusiveness in terms of horizontal tools and policies, sectors approached and partner involvement. Limited inclusive approaches can be explained by the exploratory nature of most documents: the circular economy approach and understanding is being tested, and broad, all-encompassing inclusive approaches are intended as subsequent steps of these developments. All strategies aim to further the transition to a circular economy, with slight differences depending on the territorial context. Strategies follow different approaches, either aiming to close material loops in specific value chains, or focusing on integrated, horizontal approaches.

Following this differentiation the reviewed strategies are categorised in three types:

- Integrated strategies, like the ones for Päijät-Häme, France, Paris, Greece, Italy, Oslo, Poland, and Catalonia, largely focus on horizontal tools and policies. They aim at steering the public opinion toward the concept of circular economy.
- Strategies with a restricted sector focus, like Luxembourg, Amsterdam, Glasgow and London do not address a broad range of sectors. Including a large stakeholder base is also not a major concern, as normally only stakeholders directly linked to the selected loops are targeted.
- All-encompassing strategies with a clear setting of priorities, like strategies for Brussels, Denmark, and Scotland, keep a balance of the two approaches. Strategies of this kind most directly ensure the inclusion of both the broadest possible material loops and inclusive partnerships.

Strategies describe the economic sectors of manufacturing, food and feed and water processing in the most inclusive way. The most common economic sectors addressed are: manufacturing, construction, waste processing, and food and feed. The evolution of sectoral focus across geographies and time is analysed in the report. For instance, whereas early adopted strategies tend to focus on waste strategies and recycling, more aspects of value chains are increasingly considered in more recent strategies.

Horizontal topics introduce innovative concepts and practices that enhance circularity in multiple sectors. The implementation of horizontal sectors is closely linked to the capacity of strategies to be inclusive, both in terms of the comprehensiveness of value chains, and in stakeholder involvement.

The most recurring horizontal sectors are: repairing reusing, and refurbishing; public procurement; design and eco-design; urban planning and development.

Partnerships supporting circular economy strategies

Circular economy strategies benefit from inclusive partnerships. Different players capable of providing the knowledge, funding or improving the regulation need to work together to bring about a paradigm shift. Strategies consider partner involvement in different ways. Public authorities have a key role in the strategies. In most cases they draft the strategies and have important roles in implementation. Civil society organisations have diverse roles in the reviewed strategies. Not every strategy specifically addresses this type of player, and their role is often behind the scenes, and not always explicitly reflected in the strategies. Civil society involvement is currently higher during strategy implementation than during strategy development. Although civil society organisations perceive themselves as co-developers and co-creators of strategies, they often have a role limited to implementation and dissemination. Civil society organisations can initiate grassroots movements in support of a circular economy, encourage their development and build links between different movements to scale up the initiatives. They can also provide knowledge on which strategies can be based.

Current state of play of inclusiveness and potential for future collaboration

All-encompassing strategies with a clear priority setting of sectors show the most inclusive thematic approaches. The most inclusive strategies are those considering balanced partnerships, involving all types of partners in different roles across the different stages of strategy development, and using different instruments for coordinating partner engagement. Combining these two aspects shows that the strategies for Flanders, Maribor, Finland, Porto and Denmark are the most inclusive. The strategies for Greece, Italy, and Paris have less inclusive approaches. There is a need for strategies to further develop inclusive approaches. Different ways forward are proposed following the review of strategies, encouraging collaboration between strategies and providing guidance in the form of an adaptable model strategy.

Civil society engagement has proven to be a valuable asset for policy makers; however most strategies fail to include the civil society's point of view at the onset of strategy development. The ECESP acts as an aggregation point, and it should continue doing so by highlighting the potential for improved quality of circular economy strategies when knowledge from civil society actors is taken full advantage of. The ECESP coordination group members can support increasing inclusive approaches, for instance by further developing the opportunities for collaboration proposed in this study, by promoting the model strategy, and by liaising with EU institutions to provide technical assistance.

Model strategy illustrating ways to enhance inclusiveness

To provide guidance to strategy developers willing to develop new strategies, or updating existing strategies, the report outlines an adaptable model strategy illustrating the key elements and needs of circular economy strategies, and collecting learnings from existing strategies that can be used to develop new documents in a comprehensive way. Policy makers are invited to reflect on six elements of documents: rationale of the strategy; experience and links to other policies and strategies; strategy objectives; implementation measures; governance; and a monitoring and evaluation plan.

The use of the model strategy as a reference framework has the potential to improve the quality and consistency of strategies, contributing to a convergence toward a common understanding of the circular economy concept, eventually enabling a greater scope for collaboration between experiences in different territorial contexts. A convergence toward a more comprehensive and inclusive model strategy could also make for an enabling condition for more common tools and approaches at EU level.

1. Introduction

A circular economy differs from a linear economy by focusing on repairing, reusing and refurbishing materials. This type of economic system replaces an ‘end-of-life’ concept with reducing, reusing, recycling and recovering materials during production, distribution and consumption (Kirchherr et al., 2017). It operates at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), to further sustainable development. This includes simultaneously improving environmental quality, economic prosperity and social equity, for the benefit of current and future generations.

Authorities at all levels of government increasingly encourage the transition towards a circular economy. The European Commission adopted the EU Action Plan for the Circular Economy in 2015, detailing key measures, specific areas of intervention and targets for waste reduction and recycling. The Action Plan has been enhanced by amendments and directives to form the Circular Economy Package (for more details see Box 1.1). National, regional and local governments and authorities support the circular economy through sector policies as well as by setting up platforms or funding schemes.

Stakeholders interact and share experiences via the European Circular Economy Stakeholder Platform (ECESP). The platform was established in 2017 by the European Commission and the European Economic and Social Committee to promote the circular economy across territories, sectors and themes by gathering knowledge and fostering dialogue.

This report reviews circular economy strategies published across Europe. Similarities and differences between circular economy strategies are reviewed to assist the ECESP in becoming more effective, particularly through collaboration and the involvement of civil society organisations. The review is based on an inventory of existing circular economy strategies. Between 19 November and 31 December 2018 strategies were collected with support from ECESP coordination group members, national experts in the Spatial Foresight network and by assessing different sources. These strategies were reviewed and general characteristics, such as territorial and thematic scope, were collected where possible. More detailed information, such as objectives, implementation instruments, and governance structures, have only been specified for 12 selected strategies. The selection criteria included covering different government levels and a balanced representation of territories across Europe.

In addition, circular economy strategy authors, members of the ECESP coordination group and other circular economy strategy stakeholders in Europe were surveyed, with 18 respondents. Survey results support the analysis and provide more detail and understanding for the document. The survey questions and methodology are annexed to this report (Annex V).

This review highlights the need for inclusive approaches to further the transition to a circular economy, which current strategies reflect to differing degrees.

Chapter two presents the general characteristics of the strategies and compares their geographic focus and understanding of the concept. It illustrates conceptual variations, suggesting experimentation in ways to further the transition.

Chapter three discusses inclusive approaches, concerning both inclusive value chains to close material loops, as well as inclusive partnership promotion. Strengths and weaknesses of the existing strategies are discussed and conclusions on the current state of play presented.

Chapter four presents ways to advance the transition to a circular economy. It first presents collaboration opportunities between circular economy stakeholders as well as between existing strategy players and those developing or willing to develop a strategy. Collaboration enables learning experiences from practitioners and discovering elements that can be transferred between territories. Secondly, the chapter presents a model strategy with examples and good practices to inspire more players to develop circular economy strategies. Lastly, the chapter reflects on the role of the ECESP in fostering the transition, and possible action that it can undertake.

Box 1.1 European institutional framework for the circular economy

Efforts to promote a paradigm shift to a circular economy with an efficient use of resources have been promoted by European institutions over the years. The European Commission Thematic Strategy on the sustainable use of natural resources (European Commission, 2005) set the basis for developing current circular economy roadmaps and strategies across Europe, and pointed at coming challenges such as measuring resource efficiency. The Strategy set the general objective of working toward a *decoupling* of economic growth and natural resource use, by reducing environmental impact while improving resource productivity. The document mentions the need to ‘foster the application of strategic approaches and processes both in economic sectors and in the Member States and encourage them to develop related plans and programmes’.

The starting point for implementation came with the Roadmap to a Resource Efficient Europe (European Commission, 2011), which was a ‘first step towards designing a coherent action framework that cuts across different policy areas and sectors’. The document set steps towards integrating circular economy logic in EU-wide policy making and stressed the key success factor of involving a wide range of stakeholders in priority setting, implementation and governance. Subsequently, a European Commission support for the circular economy was highlighted in the Manifesto for a Resource-efficient Europe (European Commission, 2012), calling for a circular, resource-efficient and resilient economy.

The most recent EU level planning for a circular economy was the EU Action Plan for the Circular Economy (European Commission, 2015), part of the Circular Economy Package. This identified key measures and specific areas of intervention and set targets for waste reduction and recycling. The Action Plan was followed by a wide-ranging amendment of four directives on waste, approved in June 2018¹.

The Action Plan provides an overview of circular economy planning policy topics that are very important at EU level:

- production;
- consumption;
- waste management;
- market for secondary raw materials;
- sectoral action on plastics, food waste, critical raw materials, construction and demolition, biomass and bio-based materials;
- innovation and investments;
- monitoring.

Additionally, the European Commission started defining continent-wide strategic documents on specific sectors of the circular economy, an eminent example being the recently published European Strategy for Plastics in a Circular Economy (European Commission, 2018).

¹ Official Journal of the European Union, L 150, 14 June 2018 (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL%3A2018%3A150%3ATOC>)

2. Circular economy strategies at national, regional and local levels

Territories have different opportunities and challenges in moving towards a circular economy, such as density, industrial clusters, natural resources, etc. Likewise, public authorities address different aspects of the circular economy in their strategies, so this chapter examines the understanding of the circular economy in the reviewed strategies. This understanding forms the framework for analysing commonalities and differences between current efforts towards developing a circular economy to be discussed in the following chapters.

Understanding the views on circular economy models in strategies requires a common definition of such strategies. Strategies from different areas help to better understand variations in the concept, so the second section discusses these, based on territorial focus and time of adoption. The last section discusses the different ways to advance the circular economy, drawn from the strategies reviewed.

2.1 Defining circular economy strategies and roadmaps

Circular economy strategies or roadmaps aim to further the transition to a circular economy. In doing so, they present a clear strategic plan and define objectives or a desired outcome and include key steps or milestones.

Circular economy strategies or roadmaps are comprehensive and address the transition from multiple points of view in one document. All stages of the value chain such as production, consumption, waste management, secondary raw materials, and innovation and investments are considered². This comprehensiveness is a key added value of circular economy strategies. In addition, these documents:

- provide an overarching framework for ongoing initiatives, in different sectors, by different players, and at different stages of the value chain or different stages of development;
- provide a common objective for each activity - overall aims and clear objectives within a certain timeframe mean that documents set the ground for assessing progress;
- describe ways and approaches to further support the transition towards a circular economy - documenting different instruments and ways to further the transition as well as defining roles for players makes the transition clear and transparent for all stakeholders; and
- function as a source of inspiration for other players to get involved in the transition - by expressing ongoing or prospective ways to contribute, uninvolved players may see possibilities to join or initiate actions that help transform the economic model.

Other documents address parts of the circular economy but lack a comprehensive focus on the transition, so, they have not been included in the scope of this study. Examples include regional innovation plans (such as RIS3 strategies) with measures for innovation furthering a circular economy, or waste strategies.

2.2 Inventory of existing circular economy strategies

Applying the above definition, 33 finalised documents in 14 of the 28 EU Member States, plus one in Norway are presented in Table 2.1.

² 13 of 14 respondents to the survey “Research on European Circular Economy Strategies and Roadmaps”, carried out for this study in January 2019, fully support the hypothesis that all these aspects should be considered in circular economy strategies.

Table 2.1 *List of strategies identified for the study*³

Country	Strategy name	English translation	Territorial focus	Territory addressed
Belgium	Vlaanderen Circulair	Circular Flanders	Regional	Flanders
Belgium	Programme régional en économie circulaire 2016 – 2020 Gewestelijk programma voor circulaire economie 2016 – 2020	Regional programme for circular economy 2016 – 2020	Local/ Regional	Brussels
Belgium	Vers une Belgique pionnière de l'économie circulaire	Belgium as pioneer of the circular economy	National	Belgium
Denmark	Strategi for circular økonomi	Strategy for circular economy	National	Denmark
Finland	Päijät-Hämeen kiertotalouden tiekartta	Päijät-Häme Circular Economy Road Map	Regional	Päijät-Häme
Finland	Kierrolla kärkeen: Suomen tiekartta kiertotalouteen 2016-2025	Leading the cycle: Finnish road map to a circular economy 2016-2025	National	Finland
France	Feuille de route Économie circulaire : 50 mesures pour une économie 100% circulaire	Roadmap for the Circular economy - 50 measures for a 100% circular economy	National	France
France	Plan Economie Circulaire de Paris	Circular economy plan for Paris	Local	Paris
France	L'Economie circulaire en Poitou-Charentes	The circular economy in Poitou-Charentes	Regional	Poitou-Charentes
Germany	Deutsches Ressourceneffizienzprogramm II: Programm zur nachhaltigen Nutzung und zum Schutz der natürlichen Ressourcen	German Resource Efficient Programme II: Programme for the sustainable use and conservation of natural resources	National	Germany
Greece	Εισήγηση στο Κυβερνητικό Συμβούλιο Οικονομικής Πολιτικής (ΚΥ.Σ.ΟΙ.Π) Κυκλική Οικονομία	Transition to a circular economy model for sustainable production and consumption patterns	National	Greece
Italy	Verso un modello di economia circolare per l'Italia	Towards a Circular Economy Model for Italy	National	Italy
Luxembourg	Plan national de gestion des déchets et de ressources	National Waste and Resource Management Plan	National	Luxembourg
Norway	Strategi for bærekraftig og sirkulært forbruk i Oslo	Strategy for sustainable and circular consumption in Oslo	Local	Oslo
Poland	Mapa drogowa Transformacji w kierunku gospodarki o obiegu zamkniętym	Road map - transformation towards a circular economy	National	Poland
Portugal	Liderar a transição: plano de ação para a economia circular em Portugal 2017-2020	Leading the transition: a circular economy action plan for Portugal 2017-2020	National	Portugal
Portugal	Roadmap para a cidade do Porto circular em 2030	Roadmap for a circular city of Porto in 2030	Local	Porto
Slovenia	Strategija prehoda mesta Maribor	Strategy for the Transition to	Local	Maribor

³ 12 documents were reviewed more in-depth for their specific approaches, governance mechanisms and instruments, as highlighted in light blue in the table. Strategies were selected for in-depth analysis balancing territorial representation and governance levels. More details on the methodology are described in Annex I.

Country	Strategy name	English translation	Territorial focus	Territory addressed
	v krožno gospodarstvo	Circular Economy in the Municipality of Maribor		
Slovenia	Kažipot prehoda v krožno gospodarstvo Slovenije	Roadmap towards Circular Economy in Slovenia	National	Slovenia
Spain	Extremadura 2030. Estrategia de economía verde y circular. Plan de acción de la Junta de Extremadura	Extremadura 2030. Strategy for green and circular economy. Action plan of the Government of Extremadura	Regional	Extremadura
Spain	Impuls a l'economia verda i a l'economia circular	Promoting the Green and Circular Economy in Catalonia	Regional	Catalonia
Spain	España Circular 2030. Estrategia española de economía circular. Borrador para información pública	Circular Spain 2030. Spanish strategy for circular economy. Draft for public consultation	National	Spain
The Netherlands	Nederland circulair in 2050	A Circular Economy in the Netherlands by 2050	National	The Netherlands
The Netherlands	Circulair Den Haag - transitie naar een duurzame economie	Circular Hague – transition to a sustainable economy	Local	The Hague
The Netherlands	Rotterdam gaat voor circulair	Rotterdam for circular economy	Local	Rotterdam
The Netherlands	Noord-Nederland Circulair - routekaar naar een circulair Nederland	Northern Netherlands Circular - roadmap to a circular northern Netherlands	Regional	Northern Netherlands
The Netherlands	Amsterdam circulair - een visie en routekaart voor de stad en regio	Amsterdam Circular - a vision and route map for the city and region	Local	Amsterdam
The Netherlands	Bouwstenennotitie circulaire economie 2019-2028, Brabant beweegt in kringlopen	Stepping stones to circular economy 2019-2028 in Brabant	Regional	Brabant
UK	Making things last: a circular economy strategy for Scotland		Regional	Scotland
UK	London's Circular Economy Route Map		Local	London
UK	A Circular Economy / Zero Waste Strategy for Derry City and Strabane District Council		Local	Derry and Strabane, Northern Ireland
UK	Circular Glasgow: a vision and action plan for the city of Glasgow		Local	Glasgow, Scotland
UK	Circular Peterborough: Circular City Roadmap - an ambitious plan & performance monitoring framework towards 2021		Local	Peterborough, England

Source: *Spatial Foresight, 2019 based on desk research and questionnaires to December 2018.*
Strategies in light blue have been reviewed in-depth.

These circular economy strategies and roadmaps have a varied territorial focus, which supports analysis under a different basis, but there are enough examples to identify key commonalities and differences.

There are more national strategies than regional and local ones with 13 of the 33 covering national levels. These strategies have been found in all parts of Europe, with slightly more in northern and

western Europe. Nine are regional strategies and 12 are local, all of which focus exclusively on urban areas, except the strategy for Derry and Strabane. Regional and local strategies are mostly in northern, western and southern parts of Europe. The box below presents possible drivers to the development of strategies at the regional and local level.

Box 2.1 Territorial differences affecting circular economy strategies

There are local and regional strategies in the UK, the Netherlands, Belgium, France, Spain, Portugal, Finland and Slovenia, which could be explained by the presence of early activities and by the local governance structures.

Early circular economy activities include platforms, studies or strategies in Belgium, Finland, the UK and the Netherlands. These may have inspired players in these countries to develop a strategy. For example, the federal strategy in Belgium was adopted in June 2014, earlier than many of the other documents, followed by the Belgian regions of Brussels and Flanders in 2017.

Another explanation for the higher presence of local and regional strategies in certain countries could be governance. Local and regional authorities in countries with decentralised governments, such as Spain, may have more responsibility for supporting such a paradigm shift.

Comparing strategy development over time, the number of strategies appears to have accelerated since 2015 (see Figure 2.1). The topic is increasingly important and relevant, as highlighted by the number of expected strategies in the coming years (illustrated by the dotted line in the figure).

Figure 2.1 Adopted and expected circular economy strategies 2014 to 2019



Source: Spatial Foresight, 2019 based on a review of existing strategies and information on upcoming strategies.

29 initiatives or strategies under development were found while developing the inventory of adopted strategies. The expected strategies illustrate widespread interest in contributing to transforming the economy to more circular models across Europe (see Map 2.1). A number of new strategies are under development particularly in central and eastern Europe, as well as in Spain. New national strategies in

central and eastern Europe will contribute to a more balanced distribution of such documents across the EU. There is an increasing interest in developing local and regional strategies, which will increase the variety. Local and regional plans are particularly advanced in Spain, Portugal and France.

Box 2.2 Ongoing activities for circular economy strategies in Europe

New national, regional and local strategies levels are expected, increasing the balance between territorial levels.

The following national activities were observed:

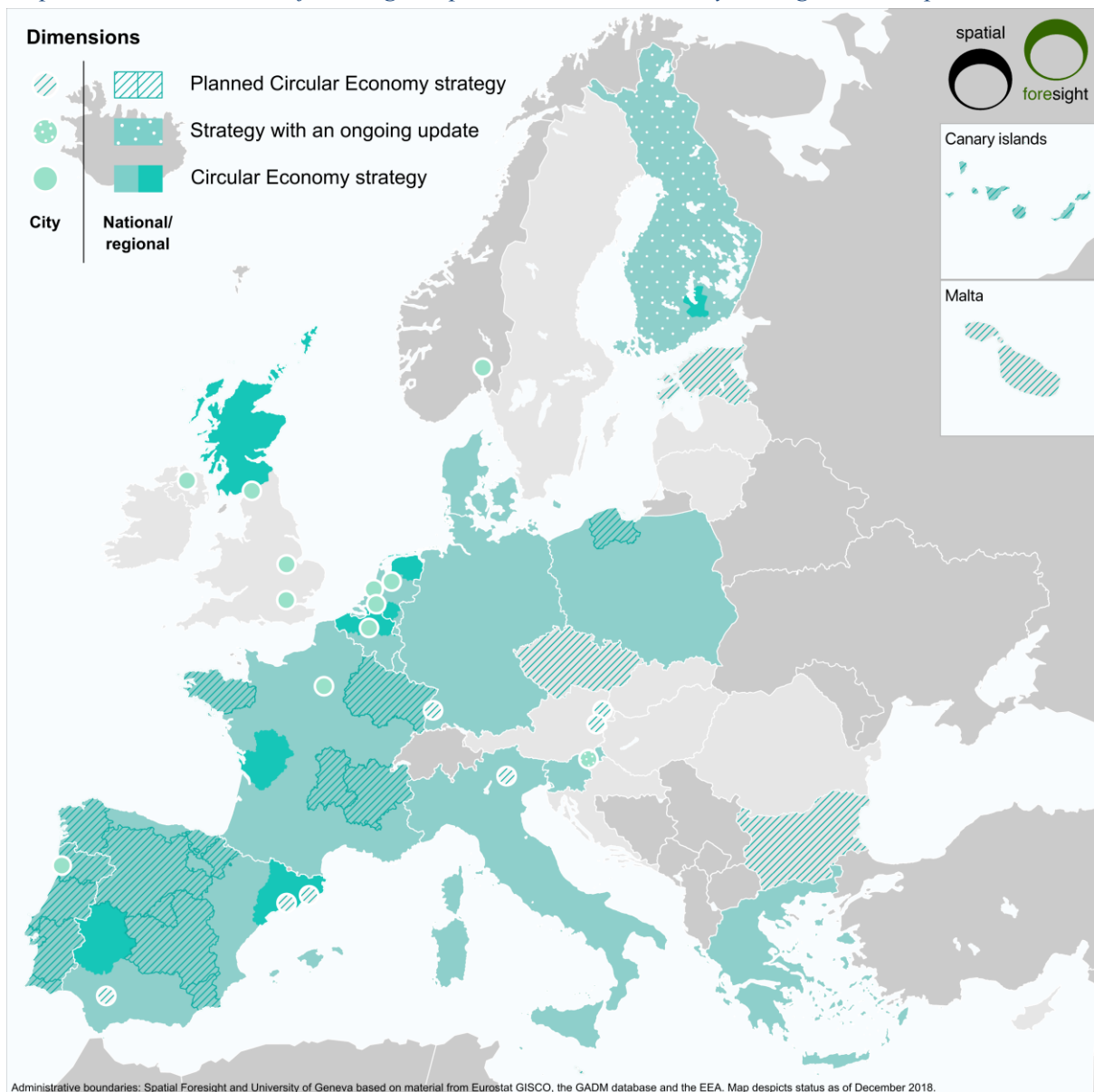
- the Czech Ministry of Environment is preparing a ‘Strategic Framework for Circular Economy (Czechia 2040)’ which should be completed by December 2019;
- the Estonian Ministry of Environment is preparing a roadmap which should be adopted in 2020. The roadmap builds on current circular economy principles in the national strategy on sustainable development ‘Sustainable Estonia 21’, the Estonian Environment Strategy 2030, and the national reform programme ‘Estonia 2030’;
- the German Federal government is developing a roadmap on change to a circular economy; and
- Bulgarian authorities have launched a public procurement process to prepare a strategy and action plan for the transition to a circular economy. The plan will support the authorities with programme development for the new programming period 2021-2027.

The following regional and local activities were found:

- several French regions published public procurement procedures to develop circular economy strategies in summer 2018, including Grand-Est, Auvergne, Rhone-Alps and Bretagne. This may be a reaction to the French national strategy to mobilise different stakeholders, including regional and local authorities, or in response to guidelines for regional authorities from ADEME, the French national agency for environment and energy management;
- in Portugal all regions except Madeira and Azores are currently developing regional circular economy strategies, following the national strategy. These regional strategies are expected to be adopted in September 2019;
- the Polish region of Pomorskie launched several studies that suggest the preparation of a circular economy strategy;
- local authorities in the Greencycle project under the Interreg Alpine Space cooperation programme (Vorau in Austria, Freiburg in Germany, Vienne in France, and Trento in Italy) will publish circular economy strategies following the example of Maribor in Slovenia which has already done so in the framework of the project; and
- in Spain, many regions and a few cities are developing circular economy strategies. In addition, the Federation of Municipal and Provincial Bodies (Federacion Española de Municipios y Provincias – FEMP) is developing its own strategy with a national scope as well.

Many other territories are active in the circular economy field without being committed to developing a strategy. This can be done, for example, via national or regional circular economy platforms, a clear focus on the circular economy in other strategies such as for waste or smart specialisation, or by supporting studies and sharing knowledge on the circular economy. In some cases, these initiatives evolve into strategies that are umbrella frameworks for different initiatives and activities.

Map 2.1 Overview of existing and planned circular economy strategies in Europe



Source: Spatial Foresight, 2019 based on the strategies collected for this study and information from stakeholders about upcoming strategies.

2.3 Different ways to advance the circular economy

Circular economy strategies aim to coordinate activities to address global challenges and international objectives. Frequently mentioned challenges are resource scarcity, climate change, global value chains and UN Sustainable Development Goals. Some explicit examples are the:

- French national strategy refers to the Paris agreement on climate change;
- Italian national strategy considers the positions of the EC, G7 and G8;
- Region of Flanders considers the circular economy strategy as their regional response to current economic models reaching their limits. Particularly given population and economic development in other parts of the world such as China and India, extracting and importing new resources will become increasingly difficult;

- Danish national strategy mentions the increasing pressure on the Earth's natural resources as a need to rethink ways of production and consumption.

The main expected result of the strategies is to initiate or contribute to the paradigm shift of moving towards a circular economic model. Establishing such a shift is a complex task demanding fundamental changes in culture, structure and practices in many subsystems of society (Vanner et al., 2014). So, each strategy defines different specific objectives in relation to the overall aim.

Local specific objectives illustrate differences in defining the circular economy concept, for example:

- Italy's national strategy aims to maintain the country's position in manufacturing in global value chains and limit the risks of increased environmental pressures in the country;
- the local strategy of Maribor, Slovenia aims at economic gains through resource efficiency;
- the Dutch national strategy aims at reducing the use of primary raw materials by 50% in 2030 by working together with a variety of stakeholders;
- the Danish national strategy aims at supporting economic growth and employment by taking more care of natural resources in production and consumption;
- the strategy for the city of Glasgow, Scotland, aims at improving material flows and stimulating innovation; and
- the strategies for Luxembourg and Germany perceive the circular economy from the perspective of resource efficiency and waste management.

A few strategies translated the challenges into more process-oriented objectives. For example, the roadmap for the city of Rotterdam, the Netherlands, aims to inspire and accelerate the circular economy and make the city more economically resilient. The rationale envisages that a circular economy would eventually bring new businesses and more jobs to the city. The French national strategy focuses on mass mobilisation of consumers, citizens, companies and local authorities to take action in favour of the circular economy.

Other strategies focus on closing loops in specific value chains via urban metabolism, innovative approaches, and waste management. For example, the strategy 'circular Amsterdam – a vision and action agenda for the city and metropolitan areas' defines a few priority sectors in which it aims to minimise waste streams, by seeking complementarities between players. One of the examples illustrates material flows for the construction sector. Waste in one part of the system becomes a resource in other sectors, matching demand and supply. There is a similar focus in strategies for Northern Netherlands, Maribor, and Glasgow.

The variety of specific objectives between the strategies illustrates an experimental phase as territories explore approaches for their transition to circular economic models. This becomes apparent when comparing the understanding of the circular economy depending on when the strategies were adopted.

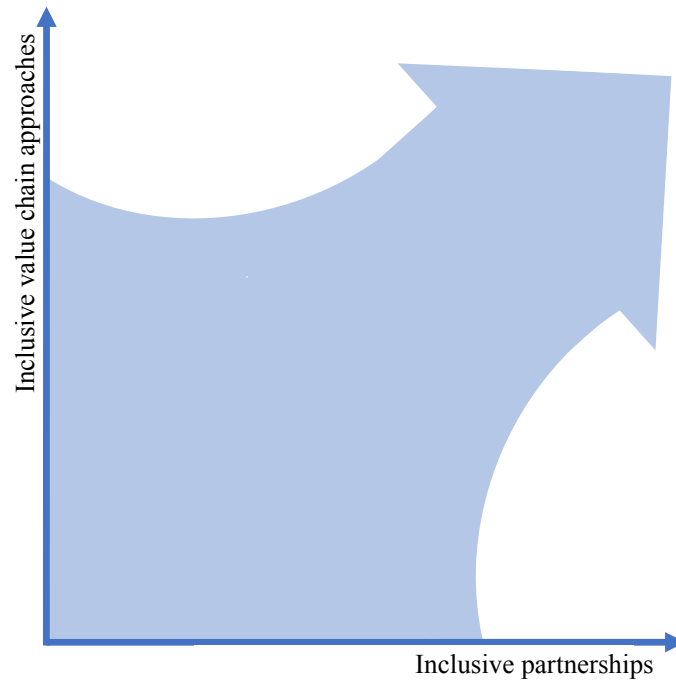
In general, more recently adopted strategies have a broader and more inclusive understanding of the concept.

The general objective of replacing the 'end-of-life' concept with an economic system that closes material loops implies the need for inclusive approaches. All parts of value chains need to be considered. If any one of the "five stages" – production, consumption, waste management and secondary raw materials, innovation, or investment – is not included, the circle is broken and the paradigm shift will not be reached. Each stage in the value chain requires input from stakeholders

including public authorities, university and research centres, businesses, civil society organisations, and citizens. Each type of stakeholder ideally needs to be involved in the strategy, implying an inclusive approach.

Figure 2.2 illustrates the increasing convergence of the circular economy concept as seen in the adopted strategies. The illustration supports analysing differences and commonalities in view of inclusive approaches. The following sections analyse how this is tackled in existing strategies, and suggest ways to improve this effort.

Figure 2.2 Increasing convergence in understanding the circular economy as an inclusive concept



Source: Spatial Foresight, 2019

3. Inclusive approaches to further the paradigm shift

Although all strategies aim to further the transition to a circular economy, each of them aims to address slightly different aspects depending on the territorial context. Bringing about a paradigm shift is a complex task that needs to cover value chains and different players comprehensively. Only combining different ways to advance the circular economy, including all the elements in value chains and all stakeholders, will result in a paradigm shift.

Circular economy strategies consider these two types of inclusiveness to different degrees. The following sections present similarities and differences between strategies concerning thematic focus and partnerships. Lessons learned regarding inclusive approaches are discussed in the final sections.

3.1 Thematic focus of circular economy strategies

Strategies follow two different approaches to inclusive value chains. One aims to close material loops in specific value chains, the other focuses on integrated approaches with horizontal topics and bottom-up initiatives. Either option or a combination of the two have specific benefits:

- focusing on a few value chains and adopting a sector focus should bring results relatively quickly. Then more initiatives and value chains can be supported, gradually moving the economy towards a circular model. Specific sectors with a clear link to the territory can also be prioritised;
- integrated or holistic approaches address the circular economy in its full complexity and aim to foster circularity through partnership and mutual learning. All kinds of initiatives can thus be supported by the strategy from the start.

3.1.1 Sectoral focus

Thematic scoping can catalyse public and business environment attention to the circular economy, expanding the initiatives beyond the initial scale and limited sectoral scope. This is often the purpose of pilot or demonstrative actions designed to prove the feasibility of an approach.

Various methods are used to select the most appropriate sectors including assessing material inputs, throughputs, and outputs, as well as the use of other resources such as water and air, and CO₂ or pollutant emissions. The criteria differ in the examples, though with three types of approach:

- quantitatively focusing on the economic importance of the sectors locally;
- quantitatively focusing on material flows and pollution (i.e. circularity potential), which may be more or less rigorous in its theoretical framing;
- a political approach where sectors are chosen according to the most politically pressing topics.

The two first two approaches, quantitatively or semi-quantitatively analysing data are suggested in the ‘Toolkit for Policymakers’ (Ellen MacArthur Foundation et al., 2015). The box below illustrates a strategy applying the full approach according to the ‘toolkit’. Depending on the availability of information, not all selection phases can be based on numerical quantities. For example, precise quantification of the circularity potential is a relatively burdensome analytical challenge. Alternatively, strategies can illustrate the importance of the existing business, civil and industrial environment to benefit from existing best practices, drawing on their knowledge and aiming to replicate, up-scale and spread to other sectors. In addition, many of the strategies prefer to prioritise sectors based on political decisions, rather than quantitative analyses.

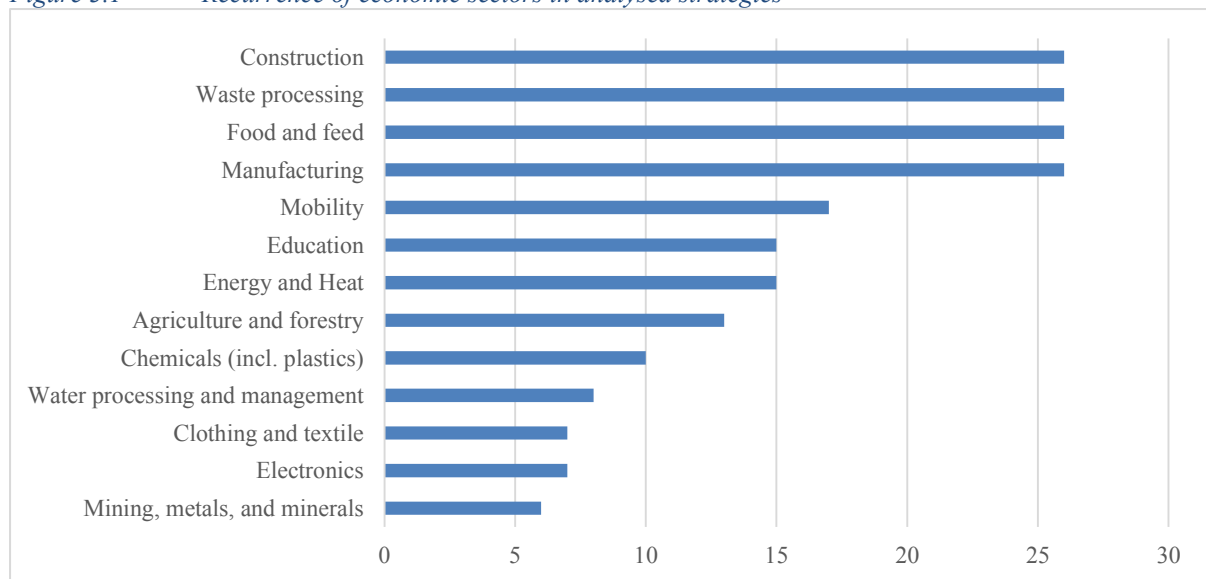
Box 3.1 Selecting a sectoral focus using approaches from the ‘Toolkit for policymakers’

The strategy for Glasgow, Scotland, uses an approach to selecting sectors as suggested by the Ellen MacArthur toolkit. The strategy identified healthcare, education and manufacturing as the most economically and politically relevant sectors. The focus was then narrowed down to four subsectors of manufacturing: food and beverage, ship-yards, chemicals, and wood products. The amount of resources used by the food and beverage sector was by far the highest, so the sub-sector was chosen for deeper analysis. This analysis identified nine priority secondary industries and the list was narrowed down, based on ‘the potential for success and the ability to deliver innovation in Glasgow. This allowed the creation of four pilot projects. The team chose easy-to-implement strategies that were understandable to a broader audience with the ability to show positive results in a short period of time. A focus was also placed on the pilot projects ability to inspire and motivate others to initiate innovative, circular projects’.

In this case, a rigorous quantitative approach was used to narrow down the scope from a ‘macro’ scale, while secondary industries and pilot projects were selected using more qualitative considerations of the highest potential for success and visibility.

Sectoral specialisation and focus result from prioritising specific sectors. 13 economic sectors appear frequently in the strategies (see Figure 3.1) In addition, ten niche sectors appear in less than five strategies each⁴.

Figure 3.1 Recurrence of economic sectors in analysed strategies



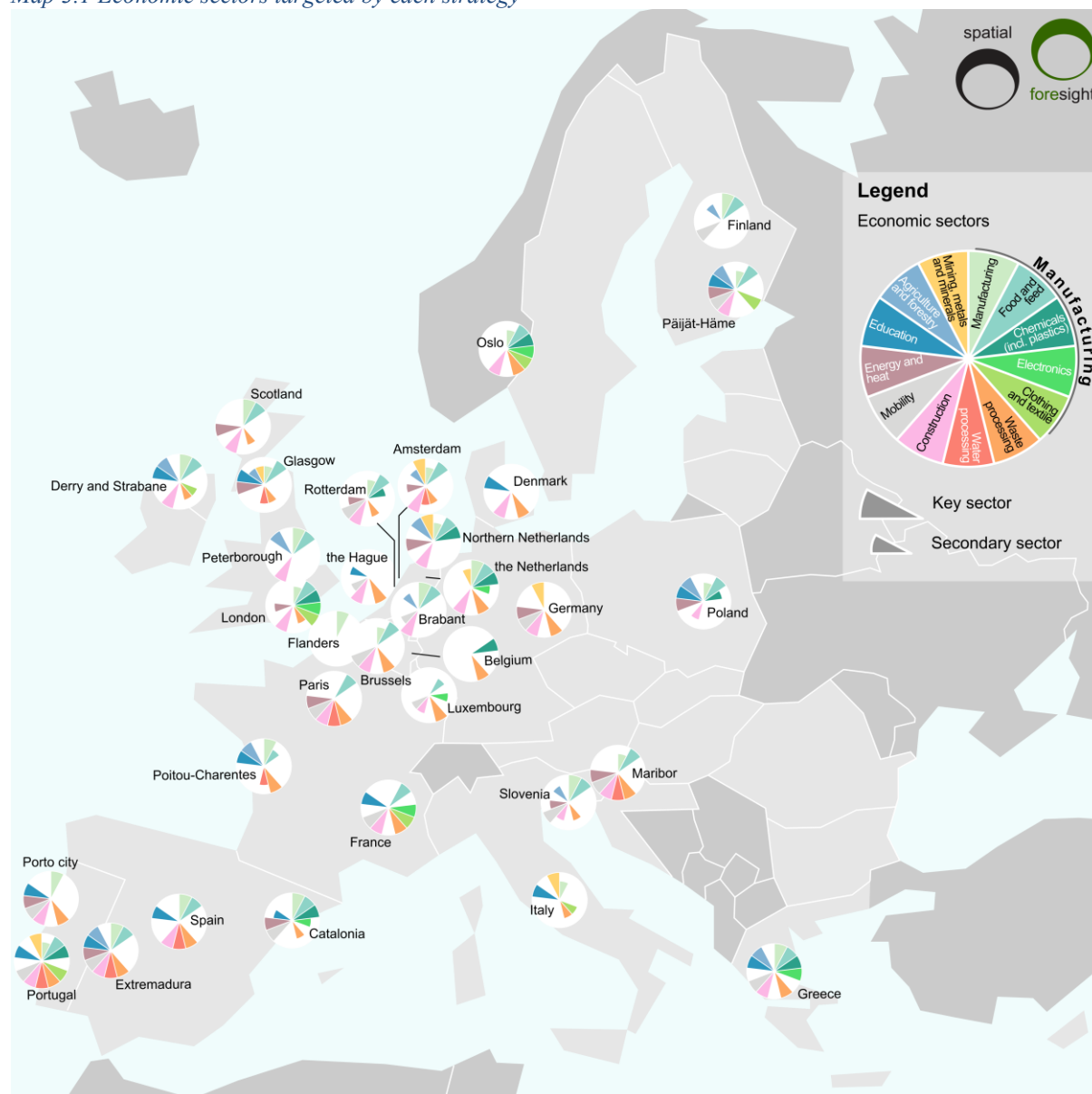
Source: *Spatial Foresight, 2019 based on a review of 33 circular economy strategies*

The distribution of priority sectors in strategies confirms the importance of the territorial context in priority setting. The geographical distribution of sectors illustrates territorial diversity across Europe. Map 3.1 depicts the geographical distribution and thematic focus of these economic sectors per strategy. Key themes are indicated with a large pie slice, topics that are mentioned but are not key

⁴ The niche sectors are healthcare, trade, restaurants and hotels, ICT, cultural enterprises, heavy industry, tourism, ceramics, other manufacturing and other services.

elements are shown with a half slice. Even if a topic is mentioned in the strategy, if it is less important, or only relates to specific examples or projects there is no slice. The methodology for the representation of sectors is detailed in Annex I.

Map 3.1 Economic sectors targeted by each strategy⁵



Source: Spatial Foresight, 2019 based on the review of 33 circular economy strategies

Each economic sector has different opportunities and challenges to closing value chain loops. So, the sector focus of a strategy indirectly illustrates the possibilities for inclusive approaches.

⁵ The map reflects this review of 12 strategies and is not an exhaustive representation.

Manufacturing

Manufacturing has some of the highest potential for circularisation due to its large material consumption and waste. A focus on manufacturing is often linked to efforts to ensure that waste is ‘designed out’ of products, and that product and process design enables material to be recycled, recovered, and remanufactured. All regional strategies target manufacturing to a greater or lesser extent, as do all but one city level strategies. Manufacturing is targeted by approximately half of the national strategies. This may be because strategies with a smaller territorial scope are closer to the local industrial context and so are more suitable for analysing the potential for circularity. Likewise, there may be more on-point examples making it easier to start pilot actions.

Many strategies further define their focus on manufacturing sub-sectors including food production, chemicals, electronics, textiles.

The **food** system is among the most frequently targeted given its high consumption of land, water and energy, as well as its large production of waste. Food loops can easily be tackled locally and are therefore often included as ‘quick wins’. Strategies generally consider all stages of the value chain for food:

- starting from the primary sector with land and water use, and opportunities for using recycled fertilisers or organic farming techniques;
- moving on to processing and manufacturing with preoccupations about, for instance, efficient energy use and packaging;
- to distribution with sustainable transport and stocking practices; and
- consumer behaviour including shaping choices about consumption and waste disposal.

Moreover, circular projects in food systems are relatively easy to implement and can effectively illustrate the feasibility of a circular economy locally. Circular food systems are closely linked to citizens, whose behaviour is integral to reducing much food waste, and therefore often include citizen outreach initiatives.

Flows related to **chemicals** manufacturing including plastic are included in several strategies, due to the economic importance of the sector and its environmental impact. There are various opportunities including monitoring and tracking material flows to find viable alternatives for natural materials, as highlighted in the national strategy for Portugal.

Focus on industrial loops in the **electronics** and electrical sector, as well as the **clothing and textile** sector, include measures to foster reuse and cross-loop interlinkages.

Other sectors

Strategies focus on production, secondary raw materials and to some degree innovation in the **construction sector**. This sector is the single largest consumer of resources (World Economic Forum, 2016) and is often regarded as one of the largest producers of waste, making it extremely important to ensuring circular material flows. A focus is on ensuring that the built environment is planned to be as long-lasting and adaptable as possible, with re-purposing, refurbishment, or disassembly of buildings or their components at the end of their useful life. Construction is a key sector for all but one city level strategy, but is less represented in national and regional strategies. Although the sector affects all types of territories, it may have more potential for circularity in certain areas than in others. Cities are closer to the adverse effects of construction, from waste production to disruptions to urban life.

Waste processing is an almost essential element of any circular economy strategy, in particular at national and local levels (see Box 3.3), targeting both municipal and industrial waste. Reintroducing waste in the production system, through reuse and recycling, is a way to close circularity gaps that waste reduction efforts cannot bridge. This requires waste management and processing to be able to receive and process different materials, diverting them from landfill or incineration as much as possible. Developing such capacity requires combining several interventions, from regulations to investment in processing plants.

Box 3.2 Reasons for selecting waste management as a priority

Waste processing is a concern for all but one city strategy and all but two national strategies, while only half the regional strategies target it. This could be due to two aspects: waste processing, and particularly municipal waste management, are common issues affecting whole national territories, unlike sector-specific concerns which may only be relevant for areas in which the sectors are more developed. In addition, waste management and opportunities to improve it largely depend on legislative issues at national or European level, making the national level the most appropriate.

Similarly, **water processing** is covered in some strategies, as water affects all economic sectors at multiple levels and is the focus of environmental concerns. Strategies that include this sector normally focus on territories with water shortages (Spain and Portugal) or on densely populated urban areas (Paris).

A concern with improving efficiency and environmental performance for **mobility** (or transport and logistics) is common in strategies at all territorial levels. This can touch many related topics, such as biofuels and electric mobility, increased logistical efficiency enabled by technology such as the Internet of Things, and sharing solutions for Mobility as a Service. Mobility was significantly targeted in earlier strategies (15 of the 19 from 2014 to 2017), but less in newer strategies (7 of 14 strategies from 2018). This trend shows another side of the evolving concept of circular economy. The lower importance in more recent years may be due to a change in the understanding of the circular economy, moving away from potentially overlapping with environmental sustainability, and focusing on closing material loops and concepts such as urban metabolism, where transport and mobility is less relevant.

Box 3.3 The concept of urban metabolism

The concept of urban metabolism provides a conceptual framework for the analysis and description of material and energy flows in cities. According to a definition by C. Kennedy and fellow researchers (Kennedy et al., 2007) urban metabolism is "the sum total of the technical and socio-economic process that occur in cities, resulting in growth, production of energy and elimination of waste."

Energy and heat production is a key environmental concern for many territories. Particularly in the urban context, there are often unexplored potentials for integrating industrial and residential flows to transfer excess heat from industrial processes. Other opportunities for circularity include the reuse of equipment from energy infrastructure, such as repurposing materials from wind turbines and decommissioned oil and gas plants, as proposed in the strategy for Scotland.

Box 3.4 Different understandings of using incineration to close material loops

There are diverging understandings of what is acceptable as a circular economy practice when it comes to incineration and energy from waste. In Maribor, Slovenia, incineration plants are not considered as viable solutions, as focus should be on eliminating residual waste. In other cases, such as Scotland, incineration is considered for materials with no higher value use. This refers to materials that cannot be fed into further reuse processes. The threshold for whether a material has sufficient value for reuse depends on the local industrial context and is not clear cut.

The different understandings suggest a need for careful planning. There is the risk that enabling energy from waste could hinder a more circular economy by creating a demand for material that could otherwise be reused, remanufactured or recycled.

Education can be a target both for its horizontal role in developing knowledge and awareness about circular economy approaches, and as an economic sector consuming resources and producing waste and pollution. The latter aspect is analysed in a few strategies, such in Glasgow, Scotland, where the sector was deemed to be one of the three economically most important sectors in the city, and was found to affect materials, emissions and wastewater to a similar extent as another key sector, healthcare. Most of the material waste from the education sector was food waste.

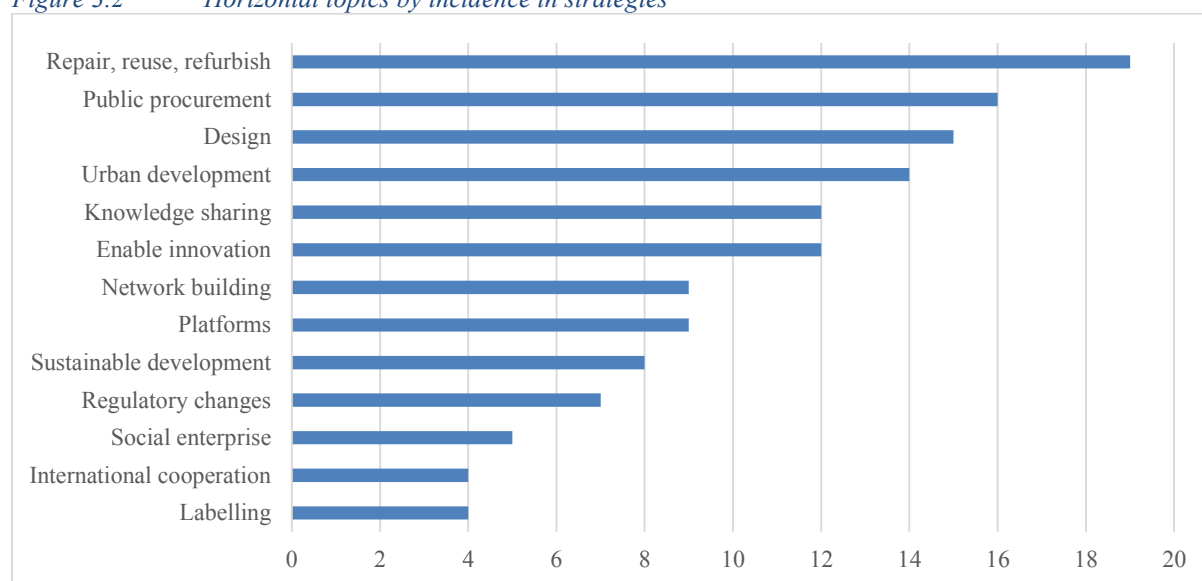
Agriculture and forestry are key areas for regional and national strategies, particularly where they make up a large part of the economy, including Extremadura for agriculture, and Finland for forestry. In Extremadura, pasture takes up a large share of the region's territory, and conserving this is seen as key for the region's long term economic performance. Similarly, some strategies consider **mining, metals and minerals**.

Strategies prioritise specific sectors to illustrate the added value of circular approaches. In doing so, they consider full value chain approaches or focus on specific parts of the value chain in a sector. Inclusive value chain approaches particularly concern manufacturing, food and water management. Strategies tend to focus on production and raw materials when looking at sub-sectors of manufacturing, waste processing and construction. For education and mobility, strategies generally focus on consumption and innovation.

3.1.2 Horizontal topics

Facilitating a paradigm shift toward circular economy models is a multifaceted endeavour, requiring a holistic approach looking beyond single material loops or industrial sectors. Documents show an understanding of this need and target horizontal concerns that affect multiple economic sectors at the same time. The horizontal relevance lies in the capacity to introduce innovative concepts and practices that can enhance circularity in multiple sectors, and in the possibility to build links across sectors. The implementation of horizontal sectors is closely linked to the capacity of strategies to be inclusive, both in the comprehensiveness of value chains, and in stakeholder involvement. A total of 13 recurring horizontal themes have been identified, as depicted in Figure 3.2.

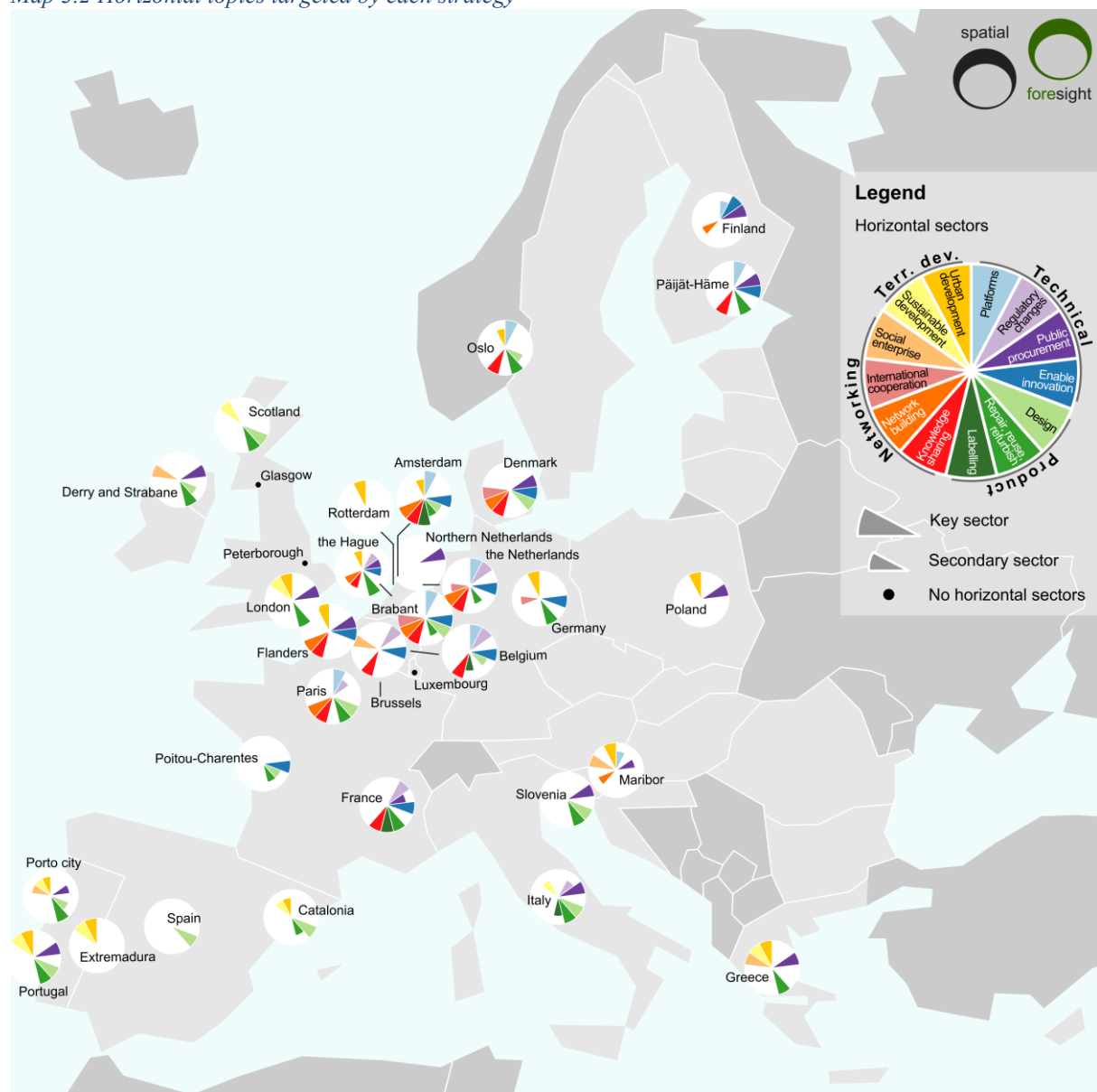
Figure 3.2 Horizontal topics by incidence in strategies



Source: *Spatial Foresight, 2019* based on a review of 33 circular economy strategies

Like the geographic distribution of economic sectors, the distribution of horizontal topics per strategy confirms the inclusion of these topics based on the territorial context (see Map 3.2). Although there is no obvious territorial pattern in the documents for including specific topics, the map illustrates that horizontal topics are concentrated more in north and west European strategies. A possible explanation can be identified in the fact that earlier strategies are located in this area, and strategies could have been mutually influencing each other in including more horizontal concerns.

Map 3.2 Horizontal topics targeted by each strategy⁶



Source: *Spatial Foresight, 2019 based on the review of 33 circular economy strategies*

Each horizontal topic illustrates different ways to support inclusive value chain approaches. Most strategies include horizontal topics which focus either on building links between players at different stages of the value chain and between different sectors, or on certain stages of the value chains. Horizontal topics can be grouped in four main categories: technical, product, networking, and territorial development. Each of them is described in detail below.

⁶ Topics in the map only reflects the authors' reading of 12 strategies and is not an exhaustive representation.

Technical topics

These topics deal with the technical framework conditions needed to enable circular economy approaches. These entail regulatory interventions, rules and practices for (circular) public procurement, framework conditions to enable innovation, and the establishment of platforms for the analysis and closure of material loops.

Regulatory changes are often cited as keys to unlock circularity potential. Legislative frameworks can complete value chains and encourage cooperation between economic sectors. This is sometimes related to technical issues affecting material flows in specific sectors, especially the legal definition of waste and waste treatment obligations. This sector-specific example mostly requires national or European level action. Given the different government levels, a discussion of regulation in circular economy strategies may concern advocacy, rather than direct normative innovation. Strategies mention incentives for promoting circularity, including tools for tracking raw materials, by-products, and waste, notably in the national strategy for Italy.

A recurrent regulatory action is **public procurement** and half of the analysed strategies propose introducing new rules for ‘circular’ public procurement, with varying degrees of specificity. Different administrative and legal environments influence potential application of the concept, but in general terms, providers of goods and services to the public sector should ensure adherence to circularity principles. This could range from a certain percentage of materials coming from recycling, to the requirement that goods and services are designed to enable high-value reuse.

A few strategies focus on **innovation** as a horizontal topic. By supporting innovation as well as research and development the strategies aim to find new ways to close value chain loops. This horizontal topic is usually targeted at multiple sectors at the same time.

Partnerships are also fostered via **platforms** focusing on closing material flow loops, for example, in the Netherlands, Belgium and the city of Paris.

Product related topics

Horizontal topics related to products target different aspects of production and of the products’ life cycle.

‘**Repairing, reusing and refurbishing**’ is the most frequently mentioned horizontal topic. This is not only relevant for consumption, as implementation requires establishing industrial and/or community ecosystems. It touches many other concerns including legislative action, network building, community development, skill development and training.

Another example of a horizontal topic policy instrument is the use of **labels**. Some strategies provide for unified labelling allowing identification of circular economy products. This is usually linked to tracking mechanisms and platforms, as discussed above.

Design and eco-design. Design is an ambiguous theme, understood by some strategies as a focus on the design and fashion sector (such as the strategy for Brussels), and by others as a horizontal concern affecting each and every economic sector (including the Danish national strategy). Design as a horizontal topic is seen as applicable to all types of products and even services and requires integrating the circular economy into product policy. Eco-design can be interpreted at least as a policy

concerning aspects of products such as their energy efficiency, which is the key focus of the EU Ecodesign directive. At its broadest it would ensure integration of the product lifecycle in a fully closed loop, starting from the materials and ending with its re-usability, refurbishment, or transformation into another product.

Box 3.5 Increasing focus on design as a horizontal topic

Design as a horizontal concern is found more in recent strategies. Only two of ten strategies up to 2016 mention it, while 14 of 23 strategies published from 2017 onwards target design as a sector. This may signal a growing understanding of the importance of integrating the circular economy concept not only in the management of end-of-life products, but in the whole product life cycle with broad ranging impacts on the entire industrial context of target territories. Increased use of the theme can be therefore interpreted as a sign that the circular economy concept is growing.

Networking related topics

Fostering partnerships is a fundamental aspect of many circular economy strategies, and it is attained via a number of different tools and approaches.

Maribor in Slovenia, Flanders and Extremadura have **network building** deeply embedded from the start of the strategy development process, with different degrees of breadth. Maribor's strategy, for instance, stems from unprecedented cooperation between five municipal service companies and the strategy develops from the identification of material loops that could be closed between these companies. The strategic development process in Extremadura was centrally promoted but ensured the broadest possible range of stakeholders was involved in defining strategic priorities, with a specific focus on building networks between citizens and different types of stakeholders.

Some strategies foresee **international cooperation** as a priority for promoting the circular economy. For example, strategies for the Netherlands, Denmark and the Dutch region of Brabant see international cooperation as a means to encourage the circular economy in international value chains, and to learn from experiences elsewhere to further the circular economy locally.

Social enterprise and social entrepreneurship are important elements of some strategies, since concerns about environmental sustainability and circularity are often part of social entrepreneurial initiatives. Some strategies therefore encourage knowledge, expertise, and know-how from social actors, while in other cases social enterprises are considered as beneficiaries of policies promoted by the strategies as in Maribor, Slovenia, where unused property in the city has been assigned to social entrepreneurs.

Knowledge production and sharing is in all strategies, if only as part of dissemination and communication. Knowledge sharing can mean including circular economy principles in education and training, other awareness raising initiatives, or platforms for sharing good practices. In the strategy for Päijät-Häme (Finland), education is targeted for fostering awareness with education programmes and engaging the university in promoting and raising awareness of the circular economy. In the strategy for The Hague (Netherlands), education is understood as a tool to stimulate and engage consumers to take more action. Education is sometimes also targeted as an economic sector, as some strategic documents found a relevant output of waste, wastewater, and emissions. The potential for closing material loops within the education sector was analysed, for instance, in Glasgow's strategy.

Territorial development related topics

Urban development is cited as a tool to help close material loops, ensuring a logical distribution and proximity of businesses in the loop. A focus on the urban dimension of circular economy development is stressed not only in local strategies, but is part of many higher level ones, for example the regional strategy for Flanders and the national strategies for Portugal, Germany, and Poland. Many strategies stress the spatial dimension of urban material loops, often including stakeholder mapping. Urban planning is therefore chiefly seen as a horizontal concern, but can involve specific initial actions as in Maribor, where it is paired with regenerating degraded land, reduced land use, and circular models for construction.

Sustainable development. Circular economy strategies often feed into broader discourses and documents about encouraging sustainable entrepreneurship. These may include, for instance, the promotion of low-carbon alternatives for material that cannot be recovered from a material loop, or greater focus on socially sustainable practices such as corporate social responsibility to create a more equitable, diverse, connected and democratic community. Horizontal concerns in circular economy strategies take into account broad social and environmental sustainability goals and sometimes intertwine circular economy and sustainability goals, understanding the former as a lever for developing the latter.

Horizontal topics aim to build links between players in different stages of the value chain or to link different sector activities and more horizontal topics illustrates more inclusive approaches, as does combining horizontal topics with many different sectors.

3.1.3 Understanding the thematic focus of circular economy strategies

Combining different thematic focuses allows the circular economy strategies to be categorised by the degree of inclusiveness of their approaches.

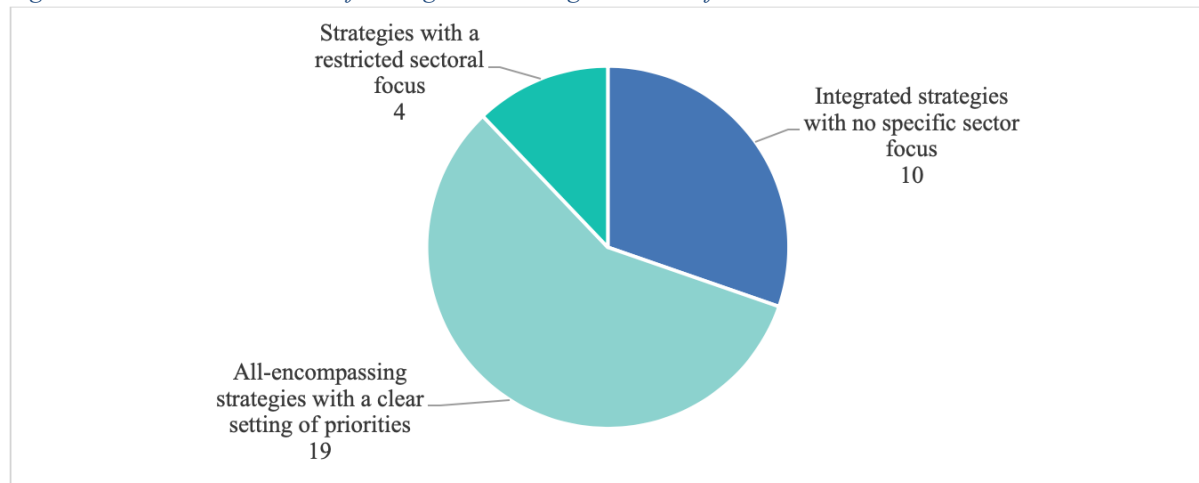
Strategies consider inclusiveness in different ways, from a more sectoral perspective or a more horizontal perspective⁷. Three types of strategies can be distinguished by their thematic focus as illustrated in Figure 3.3. In short, integrated strategies largely focus on horizontal tools and policies, while strategies with a sectoral focus apply these tools within the sectoral actions they describe. All-encompassing strategies with clear priorities keep a balance of the two approaches, often with a specific section tackling horizontal measures, and one focusing on the sectors to be addressed. More specifically:

- **Integrated strategies** are more likely to be found in territories where the circular economy concept is relatively new to the public debate, as they aim more at steering public opinion, rather than providing tools for implementing a full-fledged circular economy model. These strategies are often politically-driven, generally top-down, and are likely to focus on larger (national or, sometimes, regional) geographic scopes. Examples include the strategies for Flanders, Belgium, Päijät-Häme, France, Paris, Greece, Italy, Oslo, Poland and Catalonia. These directly aim at introducing the concept and bringing together different kinds of stakeholders. Indirectly, this may support a comprehensive and inclusive focus on value chains.
- The few strategies with a **restricted sector focus** include Luxembourg, Amsterdam, Glasgow and London. There is no broad range of sectors and including a large stakeholder base is also not a major concern, as normally only stakeholders directly linked to the targeted loops are targeted.
- **All-encompassing strategies with clear priorities** are the most numerous. Strategies of this kind are found at all territorial levels and at different levels of circular economy development.

⁷ Survey respondents confirm this contrast. Seven argue for more integrated approaches and eight for more sectoral approaches.

Examples include strategies for Brussels, Denmark, Finland, Poitou-Charentes, Germany, Brabant, the Netherlands, Northern Netherlands, Rotterdam, the Hague, Portugal, Porto, Maribor, Slovenia, Extremadura, Derry and Strabane, Peterborough and Scotland. Strategies of this kind most directly ensure the inclusion of both the broadest possible material loops and inclusive partnerships.

Figure 3.3 Distribution of strategies according to sectoral focus⁸



Source: *Spatial Foresight, 2019 based on a review of 33 circular economy strategies*

In more detail, a comparison of thematic focuses highlights their inclusive approaches. Following the hypothesis presented at the end of the previous section the strategies are categorised:

- by the number of themes addressed in the strategy - more sector and more horizontal topics suggest inclusive approaches; and
- by the inclusiveness of the value chains - certain sectors consider more inclusive value chain approaches.

In particular the strategies for Paris, Flanders, Greece and Extremadura consider a combination of many sectors and aligned horizontal topics. The strategies for Maribor and Glasgow consider complete value chains, as do the strategies for Northern Netherlands and Denmark. Taking these two aspects together shows the most inclusive value chain approaches are in the strategies of Flanders, Maribor, Porto, Paris, Glasgow and Rotterdam, followed by Finland, Denmark, the Northern Netherlands and lastly Extremadura, Greece and Italy.

3.2 Partnerships supporting circular economy strategies

Circular economy strategies benefit from inclusive partnerships. Common governance barriers prevent such partnerships and, related to these barriers, common governance needs include:

- better knowledge, for example regarding the concept of circular economy and why it is relevant, the multi sectoral perspective of the concept that goes beyond waste or environmental management, and the importance of stakeholder involvement as well as citizen awareness and participation;
- better funding, for example due to insufficient public funding for circular projects and programmes and insufficient private innovation;

⁸ Annex II presents the 33 strategies grouped according to the type of approach they adopt

- better regulation, for example with respect to current tax systems obstructing circular developments and current (waste) legislation hindering innovative re-use and recycling of products and materials (Jonker and Montenegro Navarro, 2018).

Different players capable of providing the knowledge, funding or improved regulation thus need to work together. Multi-level governance offers a way to review circular economy strategies regarding their approaches to partner involvement. Not least since the transition to a circular economy is a multi-level governance challenge, actions can be taken:

- at different geographical levels – EU, Member State, regional and local;
- across different policy sectors – e.g. economic, environmental, regional, climate, energy and transport;
- between different types of players – e.g. public, private, NGOs, citizens (Vanner et al., 2014).

Strategies consider five types of players, namely public authorities, universities and research centres, businesses, civil society organisations and citizens. So, two more types of players are considered in addition to those proposed by the Ellen MacArthur Foundation (see Box 3.6).

Box 3.6 Possible roles for different types of players

The EllenMacArthur Foundation specifies different roles for different macro-categories of players:

- businesses should develop or adopt new approaches and business models to make the economic model less linear with respect to product use (Ellen MacArthur Foundation et al., 2015). Businesses are seen as driving forces towards the circular economy;
- civil society promotes a paradigm change. Civil society organisation members have objectives and responsibilities that are of general interest and can act as mediators between public authorities and the public (Divjak and Forbici, n.d.). For the circular economy, civil society organisations may adopt education, organisation, motivation and facilitation roles. Involving civil society organisations is considered as a fundamental communication link between different players;
- public authorities act as mediators. Politicians and public authorities may adopt different roles with regards to establishing a paradigm shift in favour of a circular economy. They may initiate the transition to a more circular economic model, remove political and administrative barriers to new approaches, facilitate cooperation and innovation along the value chain, and stimulate initiatives in favour of the circular economy (Ellen MacArthur Foundation et al., 2017).

The inclusiveness of partnerships entails both the number of different players involved in the strategies and their roles, as well as their level of interaction. Good governance requires leadership, democratic legitimacy, public accountability, transparency, adaptability and territorial knowledge (Davoudi and Cowie, 2016) (Dijst et al., 2018).

Strategies consider partner involvement in different ways. Documents consider partner involvement via specific objectives (see Box 3.7), governance structures, or a combination of the two. Eight strategies dedicate specific sections to governance structures and processes, namely the strategies for Brussels, Catalonia, Luxembourg, Extremadura, Portugal, Porto, Paris, and Spain. Other strategies consider governance arrangements and stakeholder involvement in sector specific sections, without dedicating a specific chapter to it.

To identify the inclusiveness of partnerships in current strategic efforts, the following sections present findings on the types of partners involved and their balanced representation, their degree of involvement in strategies, and tools to support such partnerships.

Box 3.7 Examples of strategies explicitly aimed at the broad participation of stakeholders

Broad participation can be encouraged in different ways. The following examples include objectives for stakeholder participation:

- The main objective of the **Flemish** strategy is to actively connect and support all stakeholders. The approach includes six core activities: 1) connect and co-create, 2) build and share knowledge, 3) enable innovative initiatives 4) make it happen 5) align with local, regional, federal and EU agendas, 6) make it grow, inspire others with good examples.
- The **French** national strategy's principal objective is to reach mass mobilisation among consumers, citizens, companies, and public authorities.
- Two of the five specific objectives of the strategy for the Spanish region for **Extremadura** focus on participation. Namely, to create a process for citizen participation in building the strategy; and to identify, empower, and align actions of all actors in the region (citizens, organisations, public administration) on a circular and green economy.
- The **Dutch** strategy clearly looks to reduce the use of primary raw materials and realise this together with a variety of stakeholders.
- Three of the ten ways proposed in the **Paris** strategy focus directly on participation. Namely, to establish an open and partnership-based system of governance, to deploy cross-cutting organisations, and to design in collaboration with users.
- The strategy for **Porto** aims primarily to create incentives to move the municipality and other concerned actors towards a circular economy model.
- The regional strategy for **Brabant** in the Netherlands aims to halve the use of resources by 2030 with broad social support and active involvement of all types of stakeholders.

3.2.1 Partners in circular economy strategies

Successful transition to circular economy models requires shared governance (Circular Europe Network, 2015). This implies balancing collaboration and coordination between the players and their roles.

Strategy partnerships are largely unbalanced given the different roles of players. The roles of each of the five above-mentioned types of players differ greatly in strategy development and implementation.

Public authorities and politicians

Public authorities have a key role in the strategies. In most cases they draft the strategies and have important roles in implementation.⁹ 28 of the 33 circular economy strategies are directly issued by a public authority. More specifically, ministries or agencies responsible for environmental issues – including waste, resource efficiency and food – are leading players for developing and publishing circular economy strategies. In the remaining five cases, public authorities co-lead or indirectly engage with the issuing authority. For example:

- in Flanders, the association 'circular Flanders' was established to coordinate the strategy and its implementation. The association is coordinated by the regional public agency for waste and includes public, private, and civil society organisations;

⁹ 17 of 18 survey respondents agree to this key role of public authorities and see representatives from local, regional or national authorities as leaders and initiators of circular economy strategies. The remaining respondent specifies that other types of players can take the initiative and develop a strategy, but public authorities are needed for strategy development.

- the regional strategy for Pajjat-Hame, Finland, is coordinated by the local university in cooperation with the regional development agency;
- the Finnish national strategy is coordinated by an innovation fund established by the Finnish government;
- the local strategy of Peterborough, England, is coordinated by a local NGO owned by the city council;
- the strategy for Maribor, Slovenia, is issued and managed by the Wcycle institute, a newly established organisation created by local municipal service companies;
- the strategy for Glasgow, Scotland, is issued by the chamber of commerce in close cooperation with a business support organisation, local public authority and a local association.

Public authorities have the instruments and capacities to further the circular economy. Public authorities can bring together broad networks of players to build inclusive partnerships, reflecting all aspects of the value chain. Public authorities have the responsibility and mandate to improve the livelihood of citizens, including through sustainable development and a circular economy. Furthermore, policy-makers are more likely to consider the long-term perspectives required for a paradigm shift. Public authorities can engage multiple stakeholders in different ways, for example through seminars, public consultation, networking events, and studies collecting evidence and information.

Support from politicians can increase the commitment of certain players to circular economy strategies. Citizen involvement or commitment from different sectoral policy-makers may follow political support. However, political support is not paramount to fostering inclusive partnerships for strategies.

Politicians and public authorities are important players for circular economy strategies. However, neither strategy development nor implementation can fully rely on public authorities. Indeed, there is a risk of lengthy processes for strategy development and implementation when public authorities lead. Private actors could promote circular economy initiatives without having to wait for administrative procedures as they can normally move more quickly in mobilising resources.

Businesses

Businesses are involved in driving the transformation towards a circular economy. Following the concept descriptions by the Ellen MacArthur Foundation, several circular economy strategies focus on enterprises and entrepreneurs as the driving force for a circular economy. This type of player is therefore strongly represented in strategy partnerships. Businesses provide evidence of material flows and support implementation through projects, in most cases pilots. The strategies for Glasgow, Porto, Northern Netherlands, Rotterdam, Denmark, Finland, Italy and Flanders foresee businesses implementing projects or pilot projects in line with the strategy. In particular, the Danish strategy has a strong focus on businesses as described in Box 3.8.

Universities and research centres

Universities and research centres are more involved in strategy development and are seen as less important for implementation. During strategy preparation, these players conducted studies or helped define the circular economy concept. In Extremadura, university partners supported the public authority in drafting the strategy. Three strategies clearly mention a specific role for universities and research centres. The Finnish strategy identifies universities as players that could implement projects supporting the circular economy. The Danish strategy foresees a role for universities in providing knowledge for the circular economy, innovative solutions and value chains to SMEs while the

strategy for Porto mentions universities as education providers sharing more knowledge on the concept and encouraging more people to contribute to the transition.

Box 3.8 Business involvement in the Danish circular economy strategy

A seminar was organised in preparation of the Danish national circular economy strategy. Representatives of the government met with representatives of industry, construction associations, and the agriculture and food sector committed to the UN circular economy agenda.

During formulation of the strategy, CEOs of large Danish enterprises advised public authority representatives through their role in an advisory board to the Ministry on the circular economy, including their understanding of the concept and ways to enhance the transition in Denmark.

The strategy specifies the roles of different players. For example, the government is conceived as matchmaker for data and information between public and private parties. This supports SMEs and consumers which are key players in the transformation. These receive support from the government as well as from other players. For example, universities provide knowledge to SMEs and the government, and the business community will collaborate to find ways to get more value out of biomass.

Citizens

Citizen participation is important, but direct involvement makes strategy development complex. During development, citizens are mostly considered in public consultation processes. The development of the Paris strategy for circular economy included, for example, extensive consultation in the form of open fora. Through an open forum, ideas and initiatives for the circular economy were gathered to define the focus. Other strategies suggest indirect involvement of citizens in development and implementation. This can be via public authorities responsible for expressing citizen needs and through civil society organisations, which are particularly important for activating citizens.

Civil society organisations

Civil society organisations have diverse roles in the strategies as illustrated in Table 3.1. The table illustrates that not every strategy specifically addresses civil society involvement despite the added value expressed by the Ellen MacArthur Foundation and Divjak and Forbici (see Box 3.6).

Civil society involvement is higher during implementation than during strategy development. A perceived lack of capacities and authority may be reasons for this. Instead, civil society organisations perceive themselves as co-developers and co-creators of strategies, mostly in charge of building consensus and momentum with the public. Civil society organisations can initiate grassroots movements in support of a circular economy, encourage their development and build links between different movements to scale up the initiatives. Hence, the role of civil society organisations is often behind the scenes, and not always explicitly reflected in the strategies.

Specific objectives and the need for strategy development suggest other reasons for diverse roles for civil society organisations. For example:

- the Greek strategy focuses on policy coordination across sectoral policies to close loops. Hence, the partnership focuses on public authorities;
- the strategy for Porto, drafted with civil society organisation involvement, aims at mobilising the local public authority to create incentives in favour of the circular economy;

- the strategies of the Northern Netherlands and Rotterdam focus on defining the concept, so the partnerships focus on public authorities and research centres;
- the strategy for Paris focuses on actions by the municipality. In fact, the strategy mentions that actions are defined considering the competences of the local public authority.

These examples show the relation between strategy objectives and any civil society involvement. The presence of civil society in strategy development influences the choice of objectives. Strategies could benefit from a greater inclusion of civil society to diversify objectives. Instead, in several strategies civil society organisations are mentioned without identifying any specific role, not even as advisors, but as a target group.

Depending on their level of involvement during strategy development, commitment and engagement differs. Including civil society organisations in the development phase could be beneficial also for their role as a target group. Active involvement in development should mean they are more committed to implementation. The contrary may be true as well as low participation in the development may decrease active involvement in implementation. The scope of this study did not allow assessment of the validity of these hypotheses but opens the door to a potential area of further research.

Table 3.1 Overview of civil society involvement in strategy development and implementation

Involvement during strategy development	Involvement in strategy implementation			
	Target group	Advisory role	Role in implementation	Not specified
	Receiving information	<i>Paris</i> – members of the general assembly that has an advisory and sounding board role.		<i>Italy</i> – replied to public consultation in preparation of the strategy, but no mention in strategy implementation.
	Review and discussion (advisory)		<i>Denmark</i> – participation in a seminar in strategy development. Think tanks and business associations advise in implementation.	<i>Finland</i> – participation in development processes and provision of examples and ideas for the roadmap. Envisaged partners of key projects and pilot projects for implementation.
	Drafting	<i>Porto</i> – business council for sustainable development, a business association, was a main drafter of the strategy. For implementation, partnerships and cooperation are encouraged but not specified.		<i>Flanders</i> – active involvement in the key partnership developing and implementing. <i>Extremadura</i> – business associations and labour unions involved in drafting; quadruple helix ¹⁰ model for implementation. <i>Glasgow</i> – The chamber of commerce was a primary proponent and main sponsor of the study.
Not	<i>Greece</i> –	<i>Northern</i>	<i>Maribor</i> – possible project	

¹⁰ A quadruple helix is a governance model to support research and innovation. In a quadruple helix public authorities, universities and businesses cooperation with civil society organisations, in which the latter represent the link to society

	specified	partnerships are envisaged for implementation, one aim is to include more partners to speed up delivery.	Netherlands – involved in the steering committee of Circular Friesland with the possibility to influence implementation.	partners during implementation, mainly focusing on the cooperative economy. Rotterdam –potential promoters of projects implementing the strategy.	
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Source: *Spatial Foresight, 2019 based on in-depth analysis of 12 circular economy strategies*

Zooming in on specific civil society organisations involved in the strategies illustrates another imbalance. Civil society organisations are very diverse but can be split into three main groups, following the differentiation of the European Economic and Social Committee: employer organisations, employee organisations, and other representatives and stakeholders of civil society, particularly in civic, professional and cultural fields. The first two groups contain organisations that represent their members and their views, including labour unions. The third group is diverse but generally contains organisations that represent social objectives such as environmental organisations, consumer organisations and associations representing the family, women and gender equality issues. Civil society organisations involved in circular economy strategies include mostly business associations and belong to the first group. This type of player may have a direct interest in the circular economy to ensure innovative approaches that support economic growth or to limit constraints on material use. Representatives from the third group are less often observed though some may have a specific interest in the circular economy and its impact, such as increasing resource efficiency.

The analysis for each type of stakeholders highlights how inclusiveness of partnerships evolves over time, and it shows different degrees of inclusiveness. At first, some players have more capacities and instruments to promote the transition to a circular economy, so they are more often expected to take a role in strategy development. Secondly, the degree of inclusiveness changes with the different development stages:

1. The topic is explored, and inputs gathered from multiple sources. For example, the strategy for Paris illustrates this by mentioning broad participation through public consultation. Other resources for input are universities and research centres or ongoing initiatives via businesses and civil society organisations;
2. Formulation: drafting the strategy demands clear leadership and narrow partnerships. Survey respondents agree on smaller partnerships to move the strategy formulation forward. Less inclusive partnerships may require balancing ambitious goal setting with finding ways to reach them given the existing capacities of various players;
3. Public authorities, including politicians, take the lead in adopting the strategy. This can follow public consultations as illustrated by the Polish and Spanish national strategies or can include consensus among the main partners, as illustrated by the Flemish strategy.
4. During implementation, the partnership becomes more inclusive as different players contribute to the strategy. Survey respondents acknowledge that inclusive partnerships are key enablers and a necessity, though not all strategies reflect this to the same extent.
5. Monitoring and evaluation. Survey respondents acknowledge the importance of this, though none of the strategies and roadmaps detail partner involvement during this step.

Among analysed documents, strategies for Flanders and Paris have the most inclusive partnerships, with a large variety of players, followed by Finland, Maribor, Porto and Denmark. Strategies for the Northern Netherlands, Glasgow and Greece, include the least variety of players.

Regardless of the strategy and its specific focus, there are more inclusive partnerships during implementation. As highlighted by survey respondents, from the beginning, inclusive partnerships start small and gradually grow in order to not delay the process.

3.2.2 Approaches to enhance inclusive partnerships

Strategies show a variety of approaches, instruments and tools to enhance inclusive partnerships. Respondents highlight the need to consider a mix of instruments, including:

- political and legal instruments, such as planning, contracts, urban development and environmental permits;
- economic instruments, such as taxes, grants and loans;
- facilitation instruments, such as communication and awareness-raising, education and training;
- technical instruments, such as organisation and implementation of waste collection and impact studies.

The specific mix of instruments depends on the capacities and competences of the respective authority.

Other sources propose similar use of various instruments. The Ellen MacArthur Foundation (2015) discusses six policy interventions to overcome barriers in implementing circular economy activities: education, information and awareness, business support schemes, collaboration platforms, public procurement and infrastructure, and regulatory and fiscal frameworks. The DG Environment scoping study on potential circular economy actions, priority sectors, material flows and value chain groups identified policy actions in three groups: regulatory instruments, public investment, and other instruments, among which are fiscal instruments, voluntary agreements, information, and multi-stakeholder engagement (Vanner et al., 2014).

Circular economy strategies focus predominantly on soft instruments which support bottom-up activities, for example via financial incentives, information or facilitation to coordinate actions and partnerships. They provide examples and incentives for more players to contribute to the transition to a circular economy model. The strategies include various examples:

- the national strategy for **Belgium** aims to set priorities that create awareness and inspire other stakeholders to become active in the circular economy;
- the **Flemish** strategy focuses on initiating activities, supporting them, and creating awareness with an internet hub platform where stakeholders can find information on the circular economy and practical examples;
- the strategy for **Rotterdam** differentiates between two phases. The strategy forms a backbone to the first phase and aims to ‘embed’, ‘act’, and ‘inspire’. In other words, the aim is to create awareness of the circular economy, to have it mainstreamed in policies and activities, and to inspire others to contribute. The second phase focuses on building stronger connections to existing structures, programmes, private sector networks, national and international programmes to further implementation through financial incentives. In reaction to this, the webpage ‘Rotterdam circulair’ functions as a one-stop-shop, providing stakeholders with information on the concept, example projects and ways to contribute;
- the **Glasgow** strategy focuses on implementing pilot projects that act as a starting point for implementation. Pilot projects function as good practices and sources of inspiration for other initiatives, which can learn from the first projects and further the circular economy.

Few strategies refer to funding sources to implement the strategy. Grants or tax exemptions are an incentive for players to get involved in circular economy activities. The strategies do not directly programme for these, but rather suggest different forms of support:

- the national strategy for **Italy** details potential tools that focus on fiscal and economic incentives, education and dissemination for behavioural change, and normative tools. In particular, a shift of the tax burden from income to ‘non-sustainable’ consumption is advised. Similarly, on the supply side, taxation could shift from the labour resource to the material resource. Other normative interventions include developing material traceability;
- the **Greek** national strategy proposes different funding sources including ESIF, Interreg programmes, Horizon2020, the Greek National Development Bank, LIFE, COSME, EIB, EFSI, InnovFin;
- the **Finnish** regional strategy of Päijät-Häme is part of the regional development plan 2018-2021 and funding can be channelled to circular economy initiatives via this programme;
- the **Danish** national strategy mentions that the Danish government has set aside EUR 16 million to accelerate the transition, lists existing public and private funds and proposes guarantees to enhance access for SMEs to finance.

Hard instruments are generally proposed in combination with soft instruments. Hard instruments give clear directions to stakeholders for example through legislative frameworks and taxation. Few examples of hard instruments were found in the strategies, but these develop or introduce circular public procurement. This enables public authorities to encourage initiatives for the circular economy via contracting. As depicted in section 3.1.2, public procurement is a horizontal topic in 16 strategies including the national strategies for Greece, France, Slovenia, Portugal, Italy, Finland, Poland, and Denmark, the regional strategies for Flanders, Päijät-Häme, Maribor, Northern Netherlands and local strategies for London, The Hague, Porto, and Derry and Strabane.

Other examples of hard instruments include:

- formal agreements among organisations participating in development of the **Extremadura** strategy, committing to the strategy for longer;
- the **Danish** strategy suggests liberalising the handling of electronic waste as well as green public procurement by establishing a joint secretariat on green public procurement. The latter shall ensure joint planning and coordination among authorities and purchasers. The strategy also suggests establishing funds to handle regulatory barriers to the circular economy;
- the strategy for the city of **Porto** mentions creating circularity obligations in urban interventions of the municipality as well as fiscal incentives and penalties as implementation tools. In addition, the strategy focuses on communication and awareness raising.

In short, strategies refer to different instruments to further the circular economy with its inclusive approaches and partnerships. A mix of hard and soft instruments best support the transition.

The above examples show that the strategies for Denmark, Flanders, Finland, Maribor and Glasgow have the most balanced roles for partners and approaches for inclusive partnerships. The strategies for Paris, Northern Netherlands and Greece include fewer concrete approaches.

Regardless of their approaches to enhance inclusive partnerships, many of the documents list or propose different instruments, suggesting limited competences or capacities of strategy issuers to implement all proposed instruments. Strategies can further enhance the proposed instruments and make them more concrete by reflecting on common governance (see Box 3.9).

Box 3.9 Overcoming governance barriers and enhancing inclusive partnerships

By addressing common governance barriers such as the need for better knowledge, funding and regulation, strategies can improve their approaches to enhancing inclusive partnerships.

To support increased knowledge, policy-makers could:

- develop and communicate a long-term, holistic vision about the circular ambitions;
- introduce cross-thematic coordination and promote a culture of cooperation and knowledge exchange also within their own public organisation;
- identify, address and include non-public stakeholders early in the transition process – crafting the process towards circularity together;
- analyse the urban metabolism as a basis for developing a strategic plan for the transition with defined priority sectors;
- educate consumers (and other stakeholders) in civil society, especially in particular cities based on an inclusive and participatory approach. For the circular economy to thrive, co-creation from the start with citizens is crucial.

To support better funding:

- use circular public procurement to create demand for circular innovations;
- identify external sources of funding/financing for circular economy initiatives and projects available at EU and/or national level to complement the public authority's own budget and get acquainted with their rules and procedures.

To support better regulation:

- facilitate spaces and funding for experimentation, (private) innovation, knowledge transfer and match-making for businesses, research institutions and interested citizens;
- create forums with like-minded cities at the national (and possibly also at EU) level to lobby for changes to EU and national legislation that currently block the transition to a circular economy;
- continuous monitoring and evaluation of implementation of circular projects and initiatives, with the aim to develop a solid knowledge base and provide feedback to guide/adjust the transition process.

(Jonker and Montenegro Navarro, 2018).

3.3 Conclusions on inclusiveness approaches

Reviewing the 12 strategies in-depth, and in light of the findings presented in the sections above, it is possible to draw conclusions on how circular economy strategies have been developed so far and what this means for future documents.

Existing strategies provide a broad range of approaches in many different fields, touching upon many different aspects of circular economy and providing a good understanding of the challenges and the way forward. There are numerous examples of strategies in an advanced state of implementation which have drawn attention to the topic, kickstarted initiatives and brought stakeholders together.

Some strategies are very effective in promoting inclusive approaches to develop broad inclusive partnerships and networks. Inclusive approaches, however, are not always the main concern of strategies, for including either all aspects of a circular economy across entire value chains, or a broad range of concerned players. Limited inclusiveness approaches can be explained by the exploratory

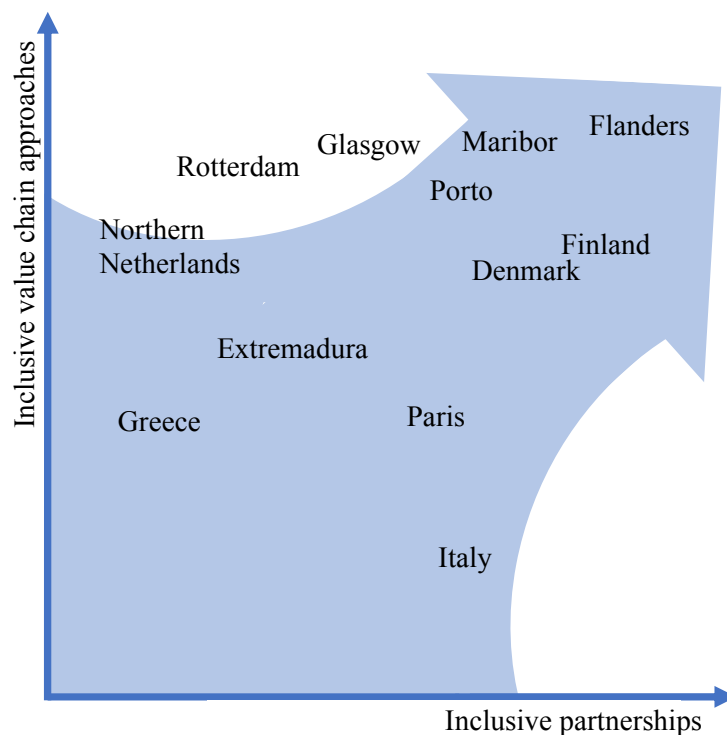
nature of most documents. A failure to tackle the full value chain or all stakeholders, risks being a major barrier to the full closure of loops.

Figure 3.4 illustrates the current degree of inclusiveness in the reviewed documents based on thematic focus and partnerships. The figure shows the variety of strategies, where some strategies have focused on inclusive value chain approaches, others on inclusive partnerships.

Each strategy includes different practices to support the transition to a circular economy. Given the tendency to address more inclusive approaches in recent circular economy strategies (see section 2.3) the strategies in the upper right corner of Figure 3.4 may serve as inspiration for future strategies.

The following sections highlight good practices and common weaknesses¹¹. These elements are used to identify collaboration opportunities and a model strategy, which are presented in the following chapters. Good practices illustrate a particular focus, instrument, or method that could inspire other territories. Barriers identify common shortcomings of certain approaches and are elements to be aware of when developing a new strategy, as presented in the section about the adaptable model strategy.

Figure 3.4 *Inclusiveness of circular economy strategies*



Source: *Spatial Foresight*, 2019

3.3.1 Overview of good practices

The elements discussed in previous chapters and elements identified when designing the online survey, form the basis for a list of good practices.

¹¹ A complete overview of strengths and weaknesses for each strategy is provided in Annex III

Elements of strategy focus and objectives that enable inclusive targeting of different sectors are:

- Ensuring a complete understanding of the circular economy concept, and the capacity to tailor it to local territorial specificities.
- Setting appropriate objectives, with a specific sectoral scope with good, comprehensive detail that can be implemented without undue burden.
- Selecting sectors based on sound criteria which are relevant to the territory (economic importance, employment creation, emissions and waste production, political importance).
- Envisaging an appropriate long-term vision with a credible time horizon, paired with concrete targets in the shorter term.

Governance enabling inclusive partnerships and appropriate management would include:

- Building incentives and momentum to bring together multiple actors, with different backgrounds, competences, cultures and interests. Enabling a circular economy means bridging gaps between loops that could not be closed before. Strategy proponents must remember that bringing actors together is not an ancillary concern, but a key enabling element of a circular economy. The strategy should strike a balance between top-down and bottom-up approaches, ensuring that actors at all levels are included in the process. This includes:
 - ensuring that inclusive partnerships are envisaged from the start, but start small and gradually grow, to not delay the process;
 - involving civil society organisations, for strategy development, dissemination, or both;
 - targeting and involving the general public.
- Centring governance on an established organisation that fosters the network, produces knowledge and communication, monitors the efforts, updates the strategy and brings it forward. This could be a newly established, special purpose organisation dealing just with this task, or an established unit within an existing organisation. Either way, it is essential to ensure continuity and sufficient resources.

Tools need to ensure:

- stakeholder involvement, including network building and incentives.
- appropriate skills and knowledge, both within organisations promoting the circular economy and among the target population and businesses. Circular economy development requires specific competences for monitoring and implementing innovative industrial processes, or cooperation and inter-institutional communication, and gaps in these competences should be identified and tackled at the appropriate levels.
- communication appropriate to the local context and that all stakeholders are appropriately informed and committed. Strategies often face a lack of public awareness that they have to counteract.

3.3.2 Overview of common barriers

Best practices can help overcome barriers identified in strategies which include a:

- Lack of a coherent and complete understanding of the circular economy concept especially the two aspects of inclusive approaches:
 - Strategies do not always address all circular economy aspects and often overrepresent some topics (typically, waste management).
 - Strategies often do not effectively include all actors involved in implementing a circular economy model. The impression from analysis of the strategies is that most could have benefitted from involving a broader range of stakeholders, although, as discussed, this

poses questions about ways to increase such involvement without making processes longer and more complex.

- Lack of political backing. Most strategies have more or less direct involvement of public authorities, which is not a concern when looking at strategies ‘here and now’, but refers to two dynamics:
 - Some strategies appear in a political void with imperfect alignment between policy makers at different government levels. This is sometimes the case for city strategies with respect to regional or national governments, while sometimes the bottleneck is at the European level.
 - Some strategies were developed by committed policy makers but not brought forward by successors. This can be partially counteracted by ensuring some autonomy in the implementing bodies, so they can bring work forward in the absence of a strong political lead.
- Lack of public awareness. Public awareness is fundamental to enabling a paradigm shift to a circular economy. For this reason, grassroots initiatives to foster awareness should always be included. Partnering with civil society organisations is an effective way to achieve this goal. However, this approach is rarely seen in existing strategies.
- Lack of provisions for scalability and transferability. Most strategies do not detail ways in which initiatives can be scaled up or transferred to other sectors or other territories. This kind of forward-looking approach, including quantitative estimates, should be further promoted when selecting initiatives.
- Lack of tailoring to the specific territorial context. Some strategies appear as a collection of examples, good practices and general principles, but have little connection to the local economic, social, and environmental context. Although a circular economy should be applied to all kinds of territories, it is important during the first steps to focus on elements that are relevant for the territory. This should include a complete review of existing circular economy initiatives: in most cases, existing strategies have examples but lack a comprehensive understanding of the current state of affairs in their territory. Ensuring the broadest possible inclusion of stakeholders is key.
- Lack of economic incentives. Without specific interventions, sustainable practices are often not economically viable (Post and Altma, 1994). To enable a paradigm shift with a broad scope, circular models may need to be made economically advantageous for individual economic players, which is often overlooked in current strategies. While pilot actions may demonstrate the technical feasibility of a circular approach, policy makers should always take into account that a mix of soft and hard tools may be needed to make the approach appealing to a larger audience. Strategies often focus on constraining methods such as Extended Producer Responsibility, circular public procurement and taxation, but positive tools involving financial or other incentives should be considered as well. Moreover, to ensure the effectiveness of incentives, collaboration between strategies is necessary to overcome the small critical mass that a single public authority can have.
- Lack of funding. Most circular economy strategies lack dedicated funds for implementation. While this not necessarily a barrier, specific resources, rather than reliance on external funding such as European programmes or support from local enterprises or NGOs, makes the approach more solid and unbiased.
- Lack of appropriate regulation. Deeper cross-level links and cooperation are needed.
- Lack of follow-up. Either due to a lack of permanent structures, monitoring and evaluation arrangements, or both, most strategies do not provide sufficient insight on ensuring follow up. This risks undermining the sustainability of the strategic effort in the long run.

4. Ways forward

The analysis in the previous chapters showed a multitude of approaches when cities, regions, and countries develop circular economy strategies. The differences are in part due to each strategy needing to be tailored to the territorial context, the different competences of players involved, different understandings of topics, different opportunities, including political circumstances, the involvement of different stakeholders during strategy development, the varying effectiveness of participatory approaches and the different degrees civil society organisations are involved.

To some extent, differences can be explained by the exploratory character of existing circular economy strategies. Only recently has the circular economy concept become more mainstream, as highlighted by the number of proposed strategies. To support increased uptake of circular economy strategies and to further the inclusiveness of approaches for these strategies could involve fostering collaboration between circular economy players, and providing guidance based on lessons learned from existing strategies. This section discusses both ways forward based on good practices in existing strategies. The final section discusses the role and potential opportunities for the European Circular Economy Stakeholder Platform (ECESP) in support of this process.

4.1 Collaboration between circular economy players

Given the circular economy's general aim of closing material loops and ensuring a paradigm shift, building bridges and relations between different strategic endeavours can help by:

- enlarging the scope of loops to more territories, making them more effective or even enabling the closure of new loops;
- coordinating efforts across different governance levels and policy sectors;
- enabling knowledge sharing to spread existing approaches towards a circular economy.

The following section draws on the two maps in chapter 3.1, which can be used to identify potential collaboration partners. The maps present the horizontal and sectoral themes in the strategies with specific colours highlighting similar thematic focuses. These two elements can serve as a starting point for collaboration.

The maps help to discover potential for collaboration. The maps could be seen as a 'wheel of fortune' exploring strategies with similar thematic focus. As a map focuses on the most prominent sectors in each strategy, it is possible to draw links by looking at similarities, or complementarities in different horizontal approaches.

4.1.1 Collaboration on specific sectors

There is added value in collaboration between similar territories, including similar sectoral focus or priority sectors. Similarities in value chains could enable different territories to collaborate and quickly learn about specific elements relating to, for instance, the closure of material loops. Cooperation in economic sectors could kickstart a circular economy in areas that are new to the concept. However, this type of cooperation should be considered as enabling a starting point, rather than as a comprehensive approach for cooperating on circular economy implementation, which should include cooperation on horizontal themes. Moreover, players from different territories with a similar sectoral background may find it easier to collaborate despite different cultural backgrounds. Strengthening links between players from different territories in the same sector could stimulate new ways to close the loops. Collaboration can also be based on complementarities between sectors. Territories that have a strategy can collaborate with one another to pursue complementarities.

Map 3.1, depicting the main sectoral focus of each strategy, does not clearly highlight any geographical distribution of themes. The sectors reflect local topics with the most political importance and opportunity, with the additional filter of strategy authors decisions on including a specific theme. Nevertheless, Map 3.1 highlights a few strategies with similar sectoral focus:

- Several strategies focus on manufacturing sectors including food and feed, chemicals and electronics. All strategies that consider any of these topics focus to some degree on production.
- Strategies placing a substantial focus on water processing are in the south of Europe, possibly because this is a more pressing environmental concern there, especially on the Iberian Peninsula. Actors in Northern Europe can learn from these.
- Education was rarely targeted in the Netherlands and Belgium which have some of the older strategies, while it was relevant in more recent documents such as Pääjät-Häme, Derry and Strabane, Portugal, Spain, Poland, and Italy. More networking between these actors could help better define the role and relevance of education in promoting the circular economy.
- Mobility is not covered in any UK strategies and is rarely targeted by strategies on the continent.

The map supports policy-makers in finding sectors that are underrepresented in their own territory and circular approaches that are encouraged in other territories. As illustrated in some of the strategies, material flows and value chains cross different sectors. Collaboration with territories that focus on certain sectors may support closing loops.

Strategies with a clear sectoral focus can inspire other territories by illustrating ways sectors have been identified and selected. Players that are developing or looking to develop a circular economy strategy may benefit from the experience of existing strategies in defining a sectoral focus.

4.1.2 Collaboration on horizontal topics

Map 3.2 shows horizontal topics targeted by each of the reviewed strategies. In particular, collaboration on horizontal topics is useful to further circular economy strategies. Horizontal topics address multiple economic sectors at the same time and focus on building links between different parts of the value chain. Moreover, horizontal topics have close links to specific methods and techniques supporting inclusive approaches. These are valuable for collaboration since they are more easily transferred across territories (Stead, 2012).

The map illustrates cooperation objectives. Firstly, the map shows strategies with more horizontal topics, suggesting a focus on integrated approaches in the strategy. Players from different regions can learn from strategies in the Netherlands and Belgium as well as Paris and Denmark that include many horizontal topics. Secondly, the maps highlight certain horizontal topics, such as technical aspects, cooperation and network building, products and spatial planning.

Horizontal topics focusing on technical aspects concern closing material flows, regulatory interventions, public procurement, and enabling innovation. These aspects can be particularly useful for players developing or looking to develop a strategy. Collaboration on technical aspects can give access to knowledge tools to help understand and implement practical aspects of circularity.

Other horizontal sectors do not show a particular geographic concentration, as they appear to be more linked to local policy or to stakeholders involved in their development. This includes provisions on social enterprise, or transversal topics such as repairing, reusing and refurbishing.

Other horizontal topics for collaboration can be considered, even though these are less reflected in the reviewed strategies. Survey respondents provided a few examples of future potential topics. One concerns legislation, more specifically implementation of the Extended Producer Responsibility framework, as well as local taxes and subsidies. Some of these tools may be harder or impossible to use if there is a lack of coordination between policy makers. Inter-institutional cooperation then becomes an enabling condition for these tools.

Another opportunity for cooperation on horizontal aspects is the development of shared software for mapping resource flows. Solutions are under development as separate initiatives in various contexts but are often industry- and territory-specific. A modular, adaptable, IT tool for monitoring and mapping flows could make deployment of circular economy approaches quicker, more coherent, and less investment-intensive, as well as avoiding duplication.

Collaboration can also focus on approaches to governance. This type of collaboration may take the form of knowledge sharing on specific governance experiences and their related strengths and weaknesses, or tools. This kind of collaboration was not mentioned in the documents, however it could happen in interregional cooperation experiences such as the Greencycle project. A particular focus could be placed on transferring expertise from successful promotions of inclusive partnerships, as this type of approach could be relevant to all kinds of circular economy promotion.

4.1.3 Enhancing collaboration

At the European level, there are different initiatives and programmes that support collaboration. Players should explore and learn from these possibilities. Within these networks and programmes, sharing experiences can be for horizontal concerns and methods, or specific thematic issues. Tools for promoting cooperation can include workshops and conferences, technology missions, practical seminars, peer to peer programmes, shared IT tools and methodological approaches, and supranational platforms like the ECESP. The ECESP coordination group members can support players in developing the right competences through cooperation, turning differences in approaches into opportunities for learning rather than barriers.

Cooperation programmes, such as Interreg, UIA (Urban Innovative Actions), or Urbact, can support cooperation in the development of circular economy approaches. In at least one case (the Greencycle project within Interreg Alpine Space), projects have been established within the framework of Interreg to foster cooperation in developing circular economy strategies (see Box 4.1).

As the example of Maribor shows, international cooperation may be carried out at different levels and with different tools at the same time. Cooperating means taking opportunities that may arise on the basis of different characteristics, from similar-sized urban areas to similar industrial and economic environments. Strategy proponents should consider participating in several programmes, also on a project basis, to benefit from these opportunities as much as possible and engage in cooperation tailored to local needs.

Collaboration is possible for all territorial, political, administrative and policy contexts. Indeed, such differences should be explored to locally tailor the approach, once the competences have been established. Successful collaboration focuses on specific methods, techniques or instruments and the focus should be on good practices that can be transferred and translated to the local context.

Box 4.1 International cooperation in the strategy for Maribor, Slovenia

The strategy is integrated with the national circular economy strategy of Slovenia. Wcycle, the institute developing the strategy, is part of the consortium which developed the national strategy and both strategies were developed in parallel, with the same concepts applied to both.

The strategy was developed under the Interreg Alpine Space project Greencycle, which promotes the development of urban circular economy strategies in towns in the Alpine Space. The strategy for Maribor was the first to be published under this project. Trento (Italy), Vienne (France), Vorau (Austria), and Freiburg (Germany) will follow.

Moreover, the strategy is linked to the city's integrated sustainable urban development strategy, under which the Wcycle Institute was established.

Wcycle took part in the ESPON Targeted Analysis 'Stocktaking and assessment of typologies of Urban Circular Collaborative Economy initiatives (SHARING)', where the Institute will map the collaborative economy in the city. Wcycle also participates in the EU Urban Agenda partnership for the circular economy.

A flagship project in the Maribor strategy is the Urban Food 4 Soil project, which is in an advanced implementation status, also thanks to UIA¹² financial backing.

4.2 Building blocks for circular economy strategies

Lessons learned from the review of existing documents enabled the development of a model strategy. This includes good practices for inclusive circular economy strategies, such as ways to consider full value chains, participatory approaches and civil society involvement.

The aim of the model strategy is to guide players that are developing or looking to develop a circular economy strategy. A circular economy strategy for a specific territory can inspire players to contribute to the paradigm shift, provide ongoing initiatives to support circular economy strategies with common objectives and goals, and support initiatives and activities through a single document detailing potential instruments to further the circular economy. In addition, the model strategy guides civil society organisations to define their roles and support them in proactively engaging in the strategy development with their different capacities.

The model builds on lessons learned from existing guidance documents¹³. These include The Ellen MacArthur Foundation's Toolkit for policy makers (Ellen MacArthur Foundation et al., 2015), the Circular Europe network's general guidelines for integrated circular economy strategies at local and regional level (Circular Europe Network, 2015), the EIB circular economy guide (EIB, 2018), and the French methodological guide to develop regional circular economy strategies (Deschamps et al., 2014) which highlight points to consider for an adaptable model strategy.

¹² Urban Innovative Actions (<https://www.uia-initiative.eu/en>)

¹³ A more detailed overview of findings from guidance documents for circular economy strategies is in Annex IV.

The starting point for the development of the model strategy is the consideration that strategies pursue the main finalities of:

- providing information and increasing understanding about the circular economy concept – depending on the territory the strategy may focus on general awareness or on how to communicate understanding of a paradigm change to target groups;
- creating awareness and mobilising key players – depending on the territory the strategy may focus on governance arrangements and stakeholder involvement;
- providing practical examples of possible measures and instruments;
- positioning the circular economy strategy in relation to other strategies and policies – a cross-sectoral concept such as the circular economy must highlight these links to increase awareness, the number of actions and the effectiveness of actions.

The model strategy aims to guide national, regional and local authorities as well as other players in developing their own circular economy strategy, regardless of their experience. The model focuses firstly on building blocks for a circular economy strategy, then the different needs are considered so the model strategy is adaptable to different situations.

4.2.1 Structure for circular economy strategies

This review of circular economy strategies highlighted six key structural elements, which form the building blocks of the model strategy as shown in Table 4.1. The following sections provide more detail.

Table 4.1 Key elements for circular economy strategies

Building blocks for circular economy strategies	1. Rationale for the strategy
	2. Experience and links to other policies and strategies
	3. Strategy objectives
	4. Implementation measures
	5. Governance
	6. Monitoring and evaluation plan

Source: Spatial Foresight, 2019

1. What benefits can the circular economy bring to the territory?

The first stage is to define the rationale for focussing on the circular economy. In general, circular economy strategies aim to further the transition towards a circular economy. This requires considering full value chains, which is done to differing degrees in existing approaches (see section 3.1).

General rationales for circular economy strategies include contributions to international agreements such as the Paris Climate Change agreement, UN Sustainable Development Goals, and global resource scarcity (see section 2.2).

Depending on the need and expected result of the strategy, the specific rationale for the circular economy needs to be further specified in relation to territorial needs and characteristics. Linking general rationales to local needs helps engage a wider range of stakeholders. Examples of specific benefits can be to stimulate growth and jobs, or research and innovation, to reduce waste, or CO2 emissions, etc. More specifically, strategies should not be limited to components of the circular economy concept (e.g. waste management), nor be too overly ambitious in tackling all sectors at once, risking dispersion.

The pillars of circular economy strategies can be summarised as:

- Sustainable production (eco-design, business models, territorial/industrial symbiosis);
- Sustainable consumption (eco-consumption, reuse and preparation for reuse, collaborative economy);
- Material resource management (waste prevention, systemic eco-innovation, 'raw material' strategy, recycling).

The territory specific rationale could consider:

- circular economy development in the territory;
- existing experiences and best practices in the territory;
- active stakeholders;
- potential stakeholders;
- the potential for implementing circular economy approaches in industrial loops in various sectors.

The analysis should focus on developing a strategy that is relevant and confined to the circular economy. This means avoiding excessive focus on individual elements (typically, waste management) or extending the scope beyond circularity into the broader field of sustainable development.

2. Which other policies and strategies support these objectives?

The second building block supports embedding and aligning the circular economy strategy with other strategies and policies. The circular economy concept is multifaceted and the strategy can benefit from links with existing strategies and policies.

Such links can enable learning, the transfer of knowledge, and potential replication and adaptation of established approaches. This is applicable for national or regional strategies, as well as for cooperating transnationally. Links with existing strategies also enable integration of broader policy contexts, such as existing strategies in the same territory, national or macro-regional level strategies, as well as EU and UN strategies, including EU policies for the circular economy, and Sustainable Development Goals.

The levers to consider when planning a transition to a circular economy include the promotion of innovation, the facilitation and promotion of investments, environmental protection tools, economic development tools, transport policy, education and skills development. More details on the objectives, tools and methods for circular economy promotion are in the main analysis section of this report.

3. Which aspects should be prioritised?

The third building block concerns defining specific objectives. Decisions on the objectives should be based on an analysis of existing needs, experiences and opportunities, rather than on administrative considerations. Moreover, specific objectives should provide circular economy strategies with a common goal and tools to measure progress and therefore be:

- **Concrete**, each objective should focus on a single element. Multiple objectives are possible, but the strategy should remain focused.
- **Timely**, objectives should have a deadline. Some strategies align timing with the general rationale, e.g. 2030 for the UN Sustainable Development Goals.
- **Measurable**, progress towards the objective should be measurable using coherent and harmonised statistical data, surveys, etc.

4. How can the objectives be reached?

The fourth building block focuses on the implementation plan, including policy instruments to help achieve the specific objectives. The strategy should include a plan to ensure implementation. As the analysis has shown, successful implementation relies on the inclusion and involvement of a broad range of partners and stakeholders, as well as the general public (see section 3.2). More importantly, the implementation plan should include a mix of ‘hard’ and ‘soft’ instruments (see section 3.2.2).

Soft instruments focus on building partnerships, coordination and facilitation, this can be done via communication, awareness raising, spatial planning or financial incentives. Hard instruments require stakeholders to contribute to the objectives, for example via contracts, legislation, or taxation.

The strategy should detail a mix of instruments, the target group and responsibility for the instruments.

5. Who should be included?

The fifth building block helps identify the relevant players, including the main target groups. Strategies should include a specific section on governance, detailing the actors and stakeholders taking responsibility for the overall strategic effort, as well as methods for ensuring coordination, continued implementation and knowledge sharing.

To unlock the potential for broader impact, including a broad range of stakeholders is key, and broad involvement is a prerequisite for an effective paradigm shift to a circular economy.

6. When should the objectives be reached?

The sixth and final building block defines the timing for strategy, including specific milestones. The key milestones, targets and monitoring and evaluation timing should be clearly laid out in the document in a specific section, together with the arrangements to ensure their follow-up and the related responsibilities. In doing so the strategy may include a monitoring system and detail provisions for evaluation.

Although the reviewed documents do not explicitly express this element, a monitoring system was indicated by most survey respondents as key. The respondents highlight that including monitoring and evaluation in the strategy allows for proper follow up and ensures accountability for the implementation. Nonetheless, almost none of the circular economy strategies had such systems in place formally, and few in even a less structured way. With more interventions promoting a shift to a circular economy, monitoring mechanisms should become more common. However, they should not be limited to well-developed strategies, but be included at an early-stage, coherently with targets and objectives.

4.2.2 Adaptable model strategy

Details for each of above building blocks depend on the need for the strategy and the good practice examples may meet different needs.

Five main needs have been defined:

- **Create awareness of the benefits and needs of a circular economy** where limited ongoing activities and initiatives support the transition to a circular economy.

- **Mobilise stakeholders** where ongoing initiatives and activities are not connected.
- **Create leverage** of ongoing activities and initiatives which do not impact society or the economy, but which remain at grassroots level.
- **Diversify the scope and nature of circular economy initiatives** where ongoing activities focus on specific sectors or on certain aspects of the value chain, to upscale and extend to more sectors.
- **Focus the scope and nature of circular economy initiatives in preparation of programme development** where current strategies demand further specification and financial support.

Bringing together the different needs for a circular economy strategy and the six building blocks leads to a matrix that functions as the adaptable model strategy. Examples for details per building block (in the rows) are differentiated by need for the strategy (in the columns). The examples aim to inspire developers of circular economy strategies. In addition, specific examples for civil society involvement in strategy development have been included, allowing them to use the model to define their role and engage in strategy development.

When using the model, note the initial needs for the strategy are not carved in stone. Partnership or socio-economic changes, or other external factors may alter the need. During strategy development (see section 3.2.1) developers may benefit from reflecting and refining the needs.

The ECESP coordination group members can further support the development of future circular economy strategies with support for this adaptable model strategy. Its potential role is described in section 4.3.

Table 4.2 *Examples of elements to consider for circular economy strategies*

		Needs for strategy development				
		Create awareness of the benefits and need	Mobilising stakeholders	Leverage	Diversify circular economy initiatives	Focus initiatives for programme development
Building blocks for circular economy strategies	Rationale	Highlight the benefits of a circular economy to encourage activities, e.g. by providing evidence on current material flows in the territory, data on material consumption in the region, data repair, reuse, refurbishment in the territory, examples of innovative approaches to close the loop and the impact of circular approaches to climate change, growth and jobs etc.	Highlight the benefits of grassroots development e.g. by providing evidence and examples of current initiatives and their impact as well as potential links to close loops.	Highlight the possibilities to reach the territory's development targets with circular economy strategy initiatives as well as the contribution to international objectives, e.g. results of pilot projects. Focus on sector policies that can produce results quickly.	Illustrate the multifaceted concept of a circular economy that is applicable to different policy sectors. Highlight the possibilities to transfer ideas between policy sectors.	Highlight the need to achieve objectives and the possible impact of different initiatives. Specify the needs for intervention per policy sector.
	Experience and links to other policies and strategies	Illustrate current practices and benefits from other places. Illustrate the strategic framework for the strategy (such as international agreements).	Illustrate examples and initiatives in the territory from different stages of the value chain and different sector policies. Use stakeholder networks from other strategies to involve more players and partner up to create broader networks. Illustrate the possibility to use (financial)	Illustrate possibilities to transfer practices between the sector of focus and other policy sectors. Partner with other experiences to broaden the scope of loops and achieve greater efficiency and impact. Illustrate the possibility to use (financial) incentives from other policies and strategies.	Illustrate provisions and instruments for different policy sectors. Illustrate examples and activities that could be linked to the circular economy from a wide range of policy sectors, including economy, environment, transport, energy, water, health care, etc. Draw on synergies and complementarities with other strategies in other	Provide examples of activities that highlight results. Carry out an extensive review of existing programmes in other contexts to draw lessons.

	Needs for strategy development				
	Create awareness of the benefits and need	Mobilising stakeholders	Leverage	Diversify circular economy initiatives	Focus initiatives for programme development
		incentives from other policies and strategies.		sectors.	
Strategy objectives	<p>Increase understanding for agents and their role in value chains.</p> <p>Increase understanding of value chains and their complementarities</p> <p>Increase understanding of the impact of circular economy approaches.</p>	<p>Increase the different types of stakeholder initiating and promoting circular economy strategies.</p> <p>Increase the number of stakeholders from different sectors initiating and promoting circular economy strategies.</p>	<p>Reduce waste in specific value chains.</p> <p>Increase the budget to support innovative approaches for the circular economy.</p> <p>Upscale existing pilot or small-scale projects.</p>	<p>Increase number of policy sectors with activities in support of the circular economy.</p> <p>Promote research in unexplored policy sectors.</p>	<p>Increase the number of jobs in recycling.</p> <p>Increase the budget for R&D on circular activities.</p> <p>Decrease CO2 emissions by closing the loop of material flows.</p>
Implementation measures	Technical and communication instruments, such as impact studies, awareness raising campaigns, seminars, workshops or pilot projects.	<p>Set-up regular meeting platform.</p> <p>Ensure that stakeholders are engaged in all communication activities.</p>	<p>Incentives and political and legal instruments functioning as carrot and stick to create leverage.</p> <p>Tools generating incentives to move beyond pilot actions.</p>	<p>Facilitation and policy coordination instruments as well as political and legal instruments.</p> <p>Broaden partnerships to identify additional sectors or approaches.</p>	<p>Technical and political and legal instruments illustrating results to increase the impact.</p> <p>Ensure that the approach is coherent and integrated with potential programmes.</p>
Governance	<p>Receive input on the concept and its possibilities from a broad range of partners, e.g. via public consultation.</p> <p>Agree on leadership to communicate a clear understanding of the concept and design specific role for dissemination.</p>	<p>Involve different types of stakeholders at all stages of strategy development.</p> <p>Civil society organisations with their broad partnerships can disseminate information to much of the population. Increase the capacity of civil society</p>	<p>Selective partnership of stakeholders with the capacity to implement activities. In addition, partners that can disseminate results to create more awareness on the impact of the activities.</p> <p>Foster bottom-up</p>	<p>Include many partners representing different sectors and all stages of the value chain, including consumption and production. Balance roles and responsibilities, and include from the very beginning.</p> <p>Civil society</p>	<p>Selective partnership of stakeholders with the capacity to implement activities, for example a working group that can draft a programme.</p>

	Needs for strategy development				
	Create awareness of the benefits and need	Mobilising stakeholders	Leverage	Diversify circular economy initiatives	Focus initiatives for programme development
	<p>Civil society organisations have an important role in defining the circular economy concept, ensuring that inclusive value chain approaches are adopted and have an important role to disseminate the benefits and needs of the circular economy to society, beyond the main stakeholders.</p>	<p>organisations and support them to activate their followers.</p>	<p>approaches ensuring ownership that can unlock leverage and upscaling.</p> <p>Civil society organisations can be involved as promoters, initiators and implementers of circular economy activities. Moreover, their organised structures can help capitalise and disseminate results.</p>	<p>organisations can be involved as promoters, initiators and implementers of circular economy activities. Moreover, their organised structures can help capitalise and disseminate results.</p>	
Monitoring and evaluation plan	<p>Vision development for long term, e.g. 2050 for common objectives.</p> <p>Short term objectives for general awareness.</p>				

Source: Spatial Foresight, 2019

4.3 The role of the Stakeholder Platform in supporting strategies and collaboration

The European Circular Economy Stakeholder Platform (ECESP) coordination group has a role in fostering the development of new circular economy strategies, by helping networking and providing support to actors interested in developing this kind of strategic documents.

As discussed in section 3.2.1, civil society organisations are not involved in strategies as much as they could be. The ECESP coordination group has the opportunity to use its position bridging policy development between EU institutions, civil society organisations, and businesses, in order to improve and further encourage the development of strategic exercises. It could do so by working on two main branches: the relation with civil society actors on the one hand, and with EU institutions on the other.

As regards the first branch, the ECESP coordination group could work on advocating for a greater involvement of the civil society in the development of strategies. This could include various methods for raising awareness of the potential role of the civil society in the promotion of a circular economy, in particular with the aim to increase its involvement in the early stages of strategy development. The lack of involvement of civil society players in a role as partners in strategy development, rather than just as target groups or partners for dissemination, has been pointed out by this study as the most important gap in civil society involvement. For this reason, the ECESP coordination group should address the wider circular economy community by mentioning this gap.

On top of doing so via its typical channels such as the Platform's website and the annual conference, the ECESP could feed in the existing body of literature supporting policy makers in developing circular approaches. This includes the mentioned Ellen MacArthur Foundation's Toolkit for policy makers (Ellen MacArthur Foundation et al., 2015), the Circular Europe network's general guidelines for integrated circular economy strategies at local and regional level (Circular Europe Network, 2015), the EIB circular economy guide (EIB, 2018), and the French methodological guide to develop regional circular economy strategies (Deschamps et al., 2014). These documents have high visibility in the circular economy community, and the ECESP coordination group could consider producing a similar handbook taking the chance to update these approaches according to the latest developments, and to remark upon the importance of inclusive approaches involving broader ranges of stakeholders, including representatives of the civil society.

Such a document could take the form of a short guideline or brochure, and could be based on the framework, findings, and suggestions presented in sections 4.2.1 and 4.2.2, including the examples presented in Table 4.2 of this report. The document could help in providing a comprehensive framework for the consistent development of strategies, contributing to a convergence toward a common understanding of the circular economy concept, eventually enabling a greater scope for collaboration between experiences in different territorial contexts. A convergence toward a more comprehensive model strategy could also make for an enabling condition for more common tools and approaches at EU level, such as the application of common programmes or even larger scope strategies on the model of macro-regional strategies.

These considerations link to the second possible branch for ECESP action, which entails liaising with the European Commission and other EU institutions in order to push forward specific support tools.

As discussed above, some elements of strategy development require the production of complex knowledge, such as the economic assessment of circularity potential. EU institutions could step in in providing support such as funding mechanisms for some of the more burdensome elements of strategy

development. For instance, EU institutions could produce or support studies on the circularity potential of certain economic sectors, in order to showcase the technical methodology to be followed as well as gathering and providing data that could be used by policy to adapt to their respective local context. Civil society could be a valuable partner in producing this type of knowledge, given its vicinity to local business contexts.

Another example of an opportunity with a high potential is technical support on established methodologies that could be “ported” from established EU policy frameworks to the circular economy policy development field. This could include, for instance, sharing methodological tools from the European Structural Funds system on monitoring and evaluation, which this study found to be one of the weak spots in terms of competences demonstrated by policy makers. This includes work on the definition of indicators for the monitoring of circular economy, which is related to the technical studies on circularity mentioned in the previous point.

This study highlighted the need for strategies to develop inclusive approaches with regards not only to broad value chains, but also with respect to the widest possible range of partners. Civil society engagement has proven to be a valuable asset for policy makers; however most strategies fail to include the civil society’s point of view at the onset of strategy development. The difficulty in accessing and producing specific technical knowledge is one of the elements currently causing difficulties in the development of strategies. This kind of expertise and knowledge is widespread among civil society organisations, and civil society actors should find ways to make this knowledge visible to policy makers and feed it into the policy cycle for the circular economy. The ECESP acts an aggregation point for these instances, and it should continue doing so by highlighting the potential for improved quality of circular economy strategies when taking full advantage of the knowledge that civil society actors can provide.

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Annex I: Methodology for strategy analysis

This annex presents the methodology used for the selection of the strategic documents to be reviewed in-depth, and the one used for categorising topics addressed by the strategies.

Selection of strategies for in-depth review

Conclusions and findings in the study are largely based on an in-depth analysis of a selection of the 33 circular economy strategies. 12 strategies have been selected for in-depth review representing a territorial balance between European countries, regions and cities. The selection represents a variety of strategies rather than ‘best practice examples’. A balanced mix across territories enables the drawing of generic conclusions for cooperation and the level of civil society involvement. The mix includes strategies from the national, regional and local levels as well as from different parts of Europe (north, south, east, west). This mix presents different practices to the circular economy based on different traditions and governance structures such as a centralised, decentralised and federal systems.

The final selection of strategies for in-depth analysis (see Table 0.1) includes four national strategies, three regional strategies and five local strategies. Relatively more local strategies have been selected since they tend to be more focused and propose more concrete measures, making it easier to identify similarities and differences and cooperation possibilities.

The national strategies from Poland and Spain that are included in the overview of 33 strategies have been excluded from the selection, since they are formally still under consultation and thus not yet adopted.

Table I Selected strategies for in-depth review

Strategy	Territory	Justification
Transition to a circular economy model for sustainable production and consumption patterns	Greece	National strategy with a clear comprehensive understanding of the circular economy. Clear relation to current programmes, such as the national growth programme and ESIF programmes. Specific focus on enhancing partnerships and synergies in the strategy. The aim is to engage more stakeholders, including sectoral ministries and civil society organisations to the circular economy to coordinate the planning and implementation of the national action plan.
Leading the cycle - Finnish road map to a circular economy 2016-2025	Finland	National strategy with the aim to become a leading and pioneering territory for the circular economy. Focusing on five areas 1) a sustainable food system, 2) forest-based loops, 3) technical loops, 4) transport and logistics, and 5) joint actions. The envisaged snowball effect to inspiring other territories and stakeholder to move towards a circular economy already takes place as can be observed by the strategy in the Finnish region of Päijät-Häme and activities in the city of Kouvola.
Towards a model of circular economy for Italy - overview and strategic framework	Italy	National strategy with a holistic approach to circular economy. The strategy has been adopted after a public consultation. Furthermore, the strategy includes many examples of circular economy activities and instruments That may inspire stakeholders in Italian regions and cities.
Strategy for circular economy	Denmark	National strategy with 15 concrete initiatives to further the transformation to a circular economy in Denmark. The 15 initiatives are grouped six chapter illustrating a comprehensive understanding of the circular economy concept. Stakeholder involvement is explicitly mentioned in the different chapters.

Strategy	Territory	Justification
Extremadura 2030	Region of Extremadura, Spain	Comprehensive regional strategy detailing strategic objectives related to innovation and to engaging citizens and empower the population. The document recognises a weakness to engaging social stakeholders in the region, therefore limiting the possibility for their involvement and contribution towards the circular economy. Therefore, the improvement of citizen participation and empowerment are key horizontal principles in the strategy
Circular Flanders	Region of Flanders, Belgium	Regional strategy with a holistic approach has focusing on cooperation and supporting practical initiatives. The strategy is being implemented by a partnership of public and private partners.
Northern Netherlands circular – roadmap to a circular northern Netherlands	Northern provinces of the Netherlands	Regional strategy with a clear rationale for the thematic focus. The strategy is issued by a cooperation of three regional authorities.
Rotterdam for circular economy	City of Rotterdam, the Netherlands	Local strategy for the municipality of Rotterdam, including a focus on the added value for citizens to move towards a circular strategy. Moreover, the municipality of Rotterdam further developed its transition towards a circular economy, with a study on potential intervention, stakeholder workshops and an action programme
Circular economy plan Paris	Paris, France	Local integrated strategy presenting 10 levers towards a circular economy. The document makes explicit reference to national and international strategies and initiatives and proposes actions a governance approach and a pilot plan.
Strategy for the transition to circular economy in the municipality of Maribor	City of Maribor, Slovenia	Local strategy with a clear focus. The strategy acknowledges a poor understanding of key stakeholders as one of the challenges to address and has a specific section on cooperative economy network.
Roadmap for a circular city of Porto in 2030	City of Porto, Portugal	Local urban strategy among other developed with the support of external stakeholders through a workshop and survey. Integrated strategy with some key areas in four axis of the strategy: 1) promote sustainable production and consumption 2) ensure the availability of natural resources and the environment equilibrium 3) Create and maintain share infrastructure, rehabilitate the built environment, and create circularity guidelines for new infrastructure 4) Implement innovative solutions to transform waste to resources.
Circular Glasgow: a vision and action plan for the city of Glasgow	City of Glasgow, UK	Local strategy with a focus on urban metabolism and circular production systems with illustrative examples of circular economy across industries, e.g. Glasgow food and beverage industry. Strategy issued in cooperation by three organisations: business support organisation, local public authority and a local association.

Source: *Spatial Foresight*, 2019

Categorisation of circular economy themes in the strategies

The research team developed a categorisation of economic and horizontal sectors addressed by the strategy. The starting point was the official categorisation used on the Circular Economy Stakeholder Platform, but it was subsequently refined according to the frequency of sectors found in the strategic documents, and to the detail to which the topics were unpacked and analysed.

Economic sectors represent industries presenting relatively homogeneous patterns of production and consumption; therefore, they are often targeted by strategies with approaches that can, for instance, close material loops between subsectors. Nonetheless, examples of loops closures span also across completely different economic sectors.

Conversely, horizontal sectors are the measures and approaches that are proposed by strategies in order to foster the switch to a circular economy across multiple or all economic sectors. In some cases, there is some ambiguity on whether proposed actions fall under an economic or a horizontal sector: this is the case of education.

In most cases education has been targeted by strategies as an economic sector, for instance with measures for the reduction of waste in schools or universities. However, in some other cases, education was cited in its role of dissemination and awareness raising on the concept of circular economy. Given the predominance of cases in which the former understanding was preferred, in order to avoid confusion education has been understood as an economic sector, while related horizontal measures have been referred to other relevant horizontal topics, such as knowledge sharing, network building, and sustainable development. The opposite approach was used for “repair, reuse, and refurbish”: even though the business of repair shops is an economic sector of its own, in most cases repair was intended by strategies as a horizontal sector, and this is how it’s been understood in the present analysis.

In order to identify the intensity of sector targeting, the reflected in maps 3.1 and 3.2 by the presence or absence of the respective slice, and by the size of such slices, the following methodology was adopted.

- Large slices are attributed to sectors that are either mentioned in strategies as “key” or “main” focus sectors or are targeted by specific intervention axes – in most cases, these sectors are addressed in a specific chapter or section and an economic assessment of the sector is provided.
- Half slices are attributed to sectors that are either often mentioned throughout the strategy as relevant for the local context, or are presented as possible areas for an additional development of circular approaches, while not being thoroughly discussed by the document – in most cases, these sectors do not have a specific chapter or section and an economic assessment, but are consistently mentioned as particularly relevant and high-potential in the strategy.
- Sectors with no slices are either completely absent from the document or only mentioned in a few pilot actions or as generic references, but cannot be considered a main focus of the document.

Annex II: Circular economy strategies by type of sectoral approach

The 33 analysed strategies are hereby summarised according to the type of approach they adopt. It must be noted that only 12 of these strategies were analysed in depth, so the following table may be used as an indication only.

Table II Circular economy strategy by type of sectoral approach

a) Integrated strategies with no specific sector focus
<ul style="list-style-type: none"> • Belgium – Flanders. No specific economic sectors are highlighted. The focus is rather on horizontal measures; • Belgium – National. Measures at federal level are conceived chiefly as cross-sector; • Finland – Päijät-Häme. Under each of the five overall strategy goals, relevant sectors are mentioned according to their presence in the territory; however, no sectors are specific direct targets of the strategy; • France – National. The strategy's main objective is to mobilise citizens, companies and authorities, regardless of economic sector; • France – Paris. Essentially an integrated development strategic document. Sectors are only considered when existing actions are listed, but they are not part of a prioritisation of sectoral focus; • Greece – National. Action sectors of the strategy are the production, consumption, waste management and secondary raw material, not dedicated to specific economic sectors, but overall a support to sustainable and circular elements on different policies and actions; • Italy – National. The strategy builds a theoretical framework and outlines a number of tools and initiatives to adopt. Examples in sectors are mentioned throughout the document, but no clear prioritisation is given; • Norway – Oslo. The strategy is organised as a predominantly horizontal exercise, presenting different focus dimensions allowing for the development of a circular economy. Sectors are mentioned as examples; • Poland – National. The strategy focuses on four main horizontal themes without a specific sectoral focus; • Spain – Catalonia. Although the strategy refers to sectors identified by the RIS3 strategy, the focus on circularity is not sector-specific.
b) All-encompassing strategies with a clear setting of priorities
<ul style="list-style-type: none"> • Belgium – Brussels. The strategy adopts a mix between a transversal structural approach, a sectoral approach and a territorial/area-bound approach; • Denmark – National. Focus on priority themes, some of which are horizontal – companies as a driving force, data and digitalisation, design, consumption –, and some sectoral – municipal waste and construction; • Finland – National. Selected focus areas target broadly-defined sectors and embed them in a broader circular economy vision; • France – Poitou-Charentes. The strategy includes a transversal axis for the strategic orientation, and explicitly mentions specific sectors; • Germany – National. Cross-cutting instruments and overall strategic approaches are detailed, and some sectors that are capable of increasing resource efficiency are specifically identified; • Netherlands – Brabant. The multi-purpose integrated strategy includes a section on specific sectoral focus; • Netherlands – National. Integrated strategic document focusing on horizontal interventions, and some more sectoral priorities: biomass and food, plastics, the manufacturing industry, construction sector and consumer goods; • Netherlands – Northern Netherlands. Cross-sectoral transition paths are the main focus of the

strategy, but a few sectors are prioritised.

- Netherlands – Rotterdam. Four priority themes – medical, food, cleantech/maritime and development / construction – but also a focus on overarching cross-cutting actions;
- Netherlands – The Hague. Primarily targeting the sectors with most circularity potential – households, construction, trade and public authorities as well as material flows (construction, biomass, metals – there are cross-cutting methods and approaches between these sectors);
- Portugal – National. The strategy has strong elements of vision and horizontal tools, and a specific section on sectoral action (called actions at the meso level);
- Portugal – Porto. Largely horizontal in the focus of its four main axes – sustainable production and consumption, environmental balance and resources, shared infrastructure and the built environment, waste to resources –, it nonetheless includes a number of specific sectoral actions;
- Slovenia – Maribor. Focus on the fields of activity of five municipal service companies, as a starting point and flywheel, together with circular procurement, for the development of circularity in the private sector in all thematic fields;
- Slovenia – National. Focus is on some priority sectors, within a framework of broader circularity development;
- Spain – Extremadura. The strategy has a very broad-ranging scope, with a focus on horizontal objectives related to innovation, population engagement and empowerment. Some sectors, such as the rural economy, are clearly strategically prioritised;
- Spain – National. Broad overall scope with clear detailing of priority sectors for actions;
- United Kingdom – Derry and Strabane. Mainly horizontal focus with focus on recycling, secondary materials, education, and behavioural change, the strategy clearly defines 6 priority sectors;
- United Kingdom – Peterborough. Focus on vision and showcase of tools and initiatives, specified by demonstration projects in three broad sectors: Food, Drink & Agri; Manufacturing; Construction;
- United Kingdom – Scotland. Although the main focus is on waste reduction on four selected sectors, the strategy develops positions about a wide-ranging scope of the circular economy domain.

c) Strategies with a restricted sectoral focus

- Luxembourg – National. Clear indication of specific sectors and the ambitions to reduce waste in these sectors;
- Netherlands – Amsterdam. The strategy focuses chiefly on two main sectors (construction and organic waste), selected following a solid methodology. There is an overview of flows in the economy as a whole, but the focus is decidedly concentrated on the two sectors;
- United Kingdom – Glasgow. The strategy has a ‘pioneering’ concept. It therefore focuses strictly on a few priority sectors;
- United Kingdom – London. There is a strong focus on strategic sectors, but each of the sectors has strong links with a number of other themes. Cross-cutting themes are outlined as well. Sectors had already been identified in a previous strategic document, and the current strategy specifies the approach further.

Source: *Spatial Foresight*, 2019

Annex III: Strengths and weaknesses of the 12 in-depth reviewed strategies

Elements of good practice presented in section 0 have been deducted from the in-depth analysis of 12 strategies. Different ‘filters’ were applied to define whether an element can be considered as good practice or not. Comparing the different strategies along the following points supported the definition of elements of good practice:

- The element is coherent with the rest of the strategy and has a clear link with the strategy’s objectives, allowing to assess the context of the element;
- The element considers territorial characteristics or a response to territorial specific needs, illustrating the level of generalisation of the element;
- The element considers views from different players, illustrating acceptance by different types of players;
- The element has a potential to make a direct or indirect contribution to transforming the economy, illustrating the success of the element;
- The element is a follow-up of previous endeavours or is already followed-up after the publication of the strategy, illustrating the success of the element;
- The element has links with other strategies and policies, allowing to assess signs of transferability;
- The element has the potential to function in other contexts as well, illustrating the level of transferability to other territories.

One or multiple of the ‘filters’ must apply before considering the element a good practice. Possible elements of good practice have been discussed and reviewed internally and their aspects are included for review in the online survey. The analysis of survey results allowed a better idea on whether there is consensus among stakeholders involved in circular economy strategy development on the elements that are positive for sound circular economy strategy development.

The following table provides an overview of strengths and weaknesses found in each strategy.

Name of strategy	Strengths	Weaknesses
Circular Flanders (Flanders, BE)	<ul style="list-style-type: none"> - A holistic approach has been adopted with a focus on cooperation between different actors and supporting practical initiatives; - Broad and detailed methodology for inclusion of stakeholders in all phases; - Effective inclusion of civil society organisations. 	<ul style="list-style-type: none"> - The strategy relies on a distributed bottom-up implementation model, without resorting to specific tools for either incentivising or regulating actors' activities. This may result in a potential threat of dissolution of the effort in case some actors drop out or become less active.
Transition to a circular economy model for sustainable production and consumption patterns (Greece)	<ul style="list-style-type: none"> - Setting of comprehensive long term goals; - Establishment of a permanent organisation for the strategy's further promotion and implementation, with the responsibility to bring actors together. 	<ul style="list-style-type: none"> - The strategy does not put in place concrete actions, including necessary regulatory changes; - Implementation is devoted to local government levels, while the strategy is developed at national level; - The inclusion of a broader set of actors is foreseen for future action, inclusion at early stages has not been extended to a broad range of stakeholders.
Strategy for the Transition to Circular	<ul style="list-style-type: none"> - Positive engagement of different local actors not used to cooperating; - Peculiar governance setting with an ad-hoc 	<ul style="list-style-type: none"> - Difficulties in engaging and fostering cooperation between actors remain in spite of efforts;

Economy in the Municipality of Maribor (Maribor, SI)	<p>organisation established by the actors mainly involved also in implementation ensures concrete applicability of the strategy;</p> <ul style="list-style-type: none"> - Substantial focus on the involvement of the cooperative and social economy, including interventions that enable and empower this type of organisations; - The strategy was drafted in parallel with the national one, improving coherence between the two. 	<ul style="list-style-type: none"> - Much of the potential can be unlocked only via additional actions at higher government levels, such as the national and European one.
Extremadura 2030 (Extremadura, ES)	<ul style="list-style-type: none"> - Very broad ranging strategy tackling the matter in an extremely comprehensive way; - Strong focus on citizen and civil society participation; - Extensive and concrete linkages with other strategies both at higher levels and within the territorial context. 	<ul style="list-style-type: none"> - The strategy's scope is broader than that of circular economy, including multiple elements of a sustainable development strategy in a broader sense. This makes the strategy dispersive at times: for example, it lacks focus on some of circular economy's key aspects, such as the closure of material loops; - The strategy mentions a difficulty in engaging with social actors due to the weakness of their representation in the region.
Towards a Model of Circular Economy for Italy - Overview and Strategic Framework (Italy)	<ul style="list-style-type: none"> - The document describes many instruments and best practices, and covers a relevant amount of topics; - The strategy includes in particular many potential measures from the economic/incentivisation point of view, including measures on taxation such as a shift of the tax burden from income to 'non-sustainable' consumption, or a shift of taxation from the labour resource to the material resource. 	<ul style="list-style-type: none"> - The document is overall rather descriptive and therefore appears to be more of a reflection/vision paper rather than a programmatic document. For this reason, the actual inclusion of different kinds of stakeholders beyond a public consultation exercise, is not clear.
Leading the cycle - Finnish road map to a circular economy 2016-2025 (Finland)	<ul style="list-style-type: none"> - The strategy has the peculiarity to put a lot of focus on the importance of complementing policy actions with key existing projects and pilot projects. These are used to prove a point and to cause a snowball effect, allowing up-scalability. There are several pilots and projects described involving a broad range of stakeholders; - Implementation is guided by a dedicated steering group, monitoring and evaluation is planned. 	<ul style="list-style-type: none"> - The model relies on impact via up-scaling of pilot projects, but it is not clear how this will be realised. Although there are evidences of the envisaged 'snowball effect' already taking place, the strategy is still in a 'testing ground' phase.
Strategy for circular economy (Denmark)	<ul style="list-style-type: none"> - Focus on interventions that are relevant for the business sector, especially with a strong emphasis on competitiveness and employment. 	<ul style="list-style-type: none"> - Few concrete measures are proposed; - No explicit section on governance.
Rotterdam for circular economy (Rotterdam, NL)	<ul style="list-style-type: none"> - Strong focus on the involvement of stakeholders at all levels; - Care about linkage with other policies and programmes, as well as research and business; - Focus on transparency. 	<ul style="list-style-type: none"> - Challenges mentioned include existing shortcomings in political will, insufficient funding, insufficient public awareness.
Circular economy plan Paris	<ul style="list-style-type: none"> - Linkage to national targets for energy transition and green growth; - Sound governance arrangements in place 	<ul style="list-style-type: none"> - Even though the strategy plans for a broad involvement of stakeholders at all stages, the initiative appears to be essentially top-down.

(Paris, FR)	focusing on participation, including joint development and regular monitoring; - Use of formal agreements.	
Northern Netherlands Circular - roadmap to a circular northern Netherlands (Northern Netherlands, NL)	- The initiative was a joint intervention by three provinces together; - Different instruments are proposed in the frame of the competence of local and regional stakeholders in the area, mostly initiation, facilitation, knowledge provision, awareness creation and coordination.	- Being a research-oriented document, the strategy is currently not as such implemented, although different non-coordinated initiatives related to the document are on-going.
Roadmap for a circular city of Porto in 2030 (Porto, PT)	- The strategy presents a number of focus areas and visions for 2030: attention is put on the necessity to produce information, data, and studies, on the state of circular economy in the urban area and surrounding region, for which the municipality and local universities and research organisations are foreseen to be in charge; - A focus is put on incentivisation tools driven by legislative acts.	- Legislative acts such as fiscal policy and rules on topics like water and construction are foreseen as key implementation tools, however they are not planned in detail in the document; - The governance structure is not specified in the document. The lead is on the Municipality of Porto; - No overall time plan and milestones is indicated.
Circular Glasgow: a vision and action plan for the city of Glasgow (Glasgow, UK)	- The strategy is different from many other documents analysed, in that it starts from general considerations and it subsequently narrows the focus down to a single sector (food and beverage) and to four very specific strategies within it. This has the advantage to provide feasible and insightful applications of the concept while keeping an eye on the general sense of circularity, without trying to be an all-encompassing work, but rather constituting a model and exemplary starting point.	- No insight is given on how the approach could be up-scaled or transferred to other sectors involving diverse actors, therefore the strategy appears quite narrowly focused.

Source: *Spatial Foresight*, 2019

Annex IV: Findings from existing guidance documents for circular economy strategies

Different guidance documents for developing circular economy strategies have been published in recent years. A selection of five guidance documents specifically targeting regional authorities or European regions have been reviewed, each with its own specific focus.

The Ellen MacArthur Foundation's Toolkit for policy makers (Ellen MacArthur Foundation et al., 2015) introduces the relevance of the circular economy concept and provides a methodology for policy makers to identify policy options based on country- and sector-specific characteristics. In short, the toolkit proposes:

- selecting focus sectors;
- identifying sector-specific circular economy opportunities;
- quantifying the impact of these opportunities;
- assessing the barriers preventing the opportunities;
- analysing policy options to overcome barriers.

The Circular Europe network's general guidelines for integrated circular economy strategies at local and regional level (Circular Europe Network, 2015), first sets-out what an integrated circular economy encompasses. After building this understanding, it provides six steps for developing a circular economy strategy at local or regional level. These steps include to:

1. develop a cross-sector approach at the political and administrative level;
2. identify potential stakeholders;
3. identify parallel policy actions in progress or planned;
4. establish diagnosis of the territorial metabolism;
5. gather information on experience from similar territories;
6. organise co-creation.

Besides these six steps, the guidance document presents some instruments to use for transversal and thematic measures. Finally, it illustrates some possibilities to monitor the strategy.

The action plan for circular economy by the European urban agenda stakeholder group (Partnership on Circular Economy, 2018), focuses on concrete measures that can support better regulation, better funding and better knowledge. It provides different possible measures, practical examples as well as examples of good policies, governance and links with other commitments and policies.

The EIB circular economy guide (EIB, 2018), has been developed in support of the urban partnership on circular economy. The document illustrates different financial possibilities with regards to stimulating the circular economy. The document has four main objectives:

1. to promote a common understanding of the circular economy concept and related challenges and opportunities among the EIB's financial and project partners;
2. to raise awareness about and promote circular solutions among project promoters and other stakeholders;
3. to facilitate and harmonise due diligence of and reporting on CE project by our financial and project partners;
4. to communicate the EIB's vision to support the transition to a circular economy.

The French methodological guide to develop regional circular economy strategies (Deschamps et al., 2014) focuses on defining the concept, different governance arrangements and how to create awareness.

Taken together, the existing guidance documents highlight a few points to consider for the adaptable model strategy.

- There is a need to provide information and increasing the understanding about the circular economy concept. Depending on the territory the strategy may focus on general awareness or focus on how to communicate the understanding of a paradigm change to its target groups.
- There is a need to creating awareness and mobilising key players. Depending on the territory the strategy may focus on governance arrangements and stakeholder involvement.
- There is a need for practical examples on possible measures and instruments.
- There is a need to position the circular economy strategy in relation to other strategies and policies. In particular for a cross-sectoral concept as the circular economy, highlighting these linkages may be beneficial to increase awareness, the number of actions and increasing the effectiveness of actions. Hence, illustrating this aspect may be considered for the adaptable model strategy.

These findings match some of the best practice elements discussed in the study, which were identified from the review of strategies. The combination of the findings from literature review and from the analysis of existing strategies forms the basis for the conceptualisation of the proposed model strategy.

Annex V: Survey methodology

A survey was sent out to a total of 53 recipients on the 7th of January 2019, and it was open to collect responses until the 1st of February. Reminders were sent on the 14th and on the 28th of January. Recipients included ECESP coordination group members, authors of the identified circular economy strategies, representatives of the European Commission's DG Regio, and other stakeholders linked to the drafting of circular economy strategies in Europe. A total of 18 usable responses was collected and used for the analysis. Survey questions are hereby reported.



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The following survey aims at collecting opinions on the development and implementation of circular economy strategies across Europe. The survey intends to gather views on stakeholder involvement in Circular Economy strategies and the possibility to cooperate across European cities and regions on strategy development and implementation.

The European Economic and Social Committee has commissioned Spatial Foresight to conduct the study “Circular Economy Roadmaps: Identifying synergies and the potential for cooperation and alliance building”. The study reviews present circular economy roadmaps and strategies across Europe, identifies commonalities and differences and assesses potentials for cooperation and alliance building between these strategies. The results of the study contribute to further the work of the [Circular Economy Stakeholder Platform](#).

For the purpose of this study, the definitions of “strategies” and “roadmaps” are not differentiated. Both types of documents present concrete measures to working towards a circular economy in the territory.

Your knowledge, views and experience with circular economy strategies will help the study to better understand effective strategy development and implementation, and to reflect upon preferred elements for working towards circular economies.

Completing the survey will take approximately 25 minutes and will be possible until January 28th 2019. All answers will be kept confidential and analysed anonymously.

In case you would like to have more information about the study, please don't hesitate to contact Giacomo Salvatori (giacomo.salvatori@spatialforesight.eu) or Frank Holstein (frank.holstein@spatialforesight.eu)

Thank you in advance for completing the survey.



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About the respondent

1. Please provide your contact details.

Name:

e-mail address:

Organisation:

Country/-ies in
which your
organisation is
active

Your contact details will only be used in the frame of this research and will not be saved for other purposes. We may contact you to specify some of your answers.

2. What type of stakeholder do you represent?

- ☐ Civil society
- ☐ Business
- ☐ Trade Union
- ☐ Think Thank
- ☐ Public body
- ☐ Other (please specify)



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Stakeholder involvement in circular economy strategies

Please share your opinion on the following statements on stakeholder involvement in circular economy strategies. You are asked to indicate your agreement with a set of statements, and to complement with comments, suggestions, and personal takes. Please use the open question fields to provide some more in-depth discussion of the topics. Afterwards, please rank the statements by level of importance.

3. Top-down initiatives. Public authorities should initiate and lead processes to shift the economy to more circular models. Other stakeholders such as businesses, research centres and civil society organisations should be actively involved and implement the processes.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

4. Timing of stakeholder engagement. All relevant stakeholders should be included from the beginning of strategy building and policy making processes supporting commitment and ownership even if this risks lengthy and complex processes.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

5. Role of local and regional authorities. Through circular economy strategies, local public authorities should focus mostly on soft instruments, facilitating processes, coordinating actions and encouraging cooperation.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

6. Role of national authorities. Authorities at national levels should focus on hard instruments such as financing, taxation and legislation encouraging other stakeholders to take action for a shift toward a circular economy.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

7. Representation role of civil society. A highly relevant contribution of civil society organisations to the development and implementation of circular economy strategies is their “upstream” role, representing citizens and societal issues and contributing their point of view. This role should be further strengthened and promoted.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

8. Dissemination role of civil society. The “downstream” role of civil society, to diffuse, utilise and communicate circular approaches towards citizens, creating more awareness about the concept and changing the behaviour of consumers and producers, is of key importance. This role should be further strengthened and promoted.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

9. Civil society as leaders. The focus of circular economy strategies is on changing economic processes, including changing cultures, structures and practices. Hence, civil society organisations should take a leading role in strategy development and implementation. Circular economy strategies should include capacity building measures to ensure this bottom-up approach.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

10. Please provide some specific examples or best practices for the involvement of the civil society.

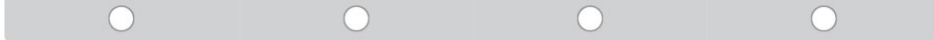
11. Political support. Political support is paramount and if this is lacking, it is extremely difficult (almost impossible) to pursue a circular economy agenda in a territory.

Fully agree

Somewhat agree

Partially disagree

Fully disagree



Please feel free to specify your answer:

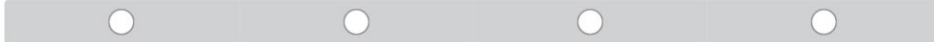
12. Citizen participation. Citizen participation has to be ensured at all stages of policy development and implementation.

Fully agree

Somewhat agree

Partially disagree

Fully disagree



Please feel free to specify your answer:

13. What are the phases or tasks for which citizen participation is most important?

14. Please rank the important statements (1 most important - 9 least important):

<input type="text"/>	Top-down initiatives
<input type="text"/>	Timing of stakeholder engagement
<input type="text"/>	Role of local and regional authorities
<input type="text"/>	Role of national authorities
<input type="text"/>	Representation role of civil society
<input type="text"/>	Dissemination role of civil society
<input type="text"/>	Civil society as leaders
<input type="text"/>	Political support
<input type="text"/>	Citizen participation



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Synergies and cooperation between strategies

The [Circular Economy Stakeholder Platform](#), among others goals, aims at strengthening the cooperation among stakeholders' networks to facilitate the exchange of expertise and good practices on the circular economy.

Please share your opinion on the following statements on synergies and cooperation potential between circular economy strategies. You are asked to indicate your agreement with a set of statements, and to complement with comments, suggestions, and personal takes. Please use the open question fields to provide some more in-depth discussion of the topics. Afterwards, rank the statements by level of importance.

15. Sharing experience on practices. Cooperation between stakeholders of different circular economy strategies should focus on practical tools and instruments (such as circular procurement, awareness raising campaigns, introducing thresholds for secondary material use, etc.).

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐☐☐☐

Please feel free to specify your answer:

16. Sharing experience on themes. Cooperation among stakeholders from different circular economy strategies is most effective when focused on specific thematic fields (e.g. manufacture, power and utilities, agriculture, etc.).

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

17. Alliance building between territories. Alliance building is most beneficial when territories can mutually learn from each other. Cooperation should be prioritised between territories with diverse socio-economic, environmental and geographical contexts.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

18. Alliance building between civil society organisations. Alliance building across civil society organisations from different territories should focus on sharing experiences on their outreach role, such as practical and innovative solutions to better convince consumers and producers to work towards a circular economy.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

☐ ☐ ☐ ☐

Please feel free to specify your answer:

19. Bottom-up processes to sharing experiences. Regions that are leading on working towards a circular economy shall actively seek partnerships with other regions in their country and other European countries to share experience on the circular economy.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

20. Cooperation programmes to encourage all regions. European cooperation programmes, such as Interreg, are needed to support the exchange of experience between territories to develop circular economy strategies.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

21. Evidence in support of cooperation. Common understanding and knowledge on the circular economy helps to establish communication routines among stakeholders with different backgrounds. Cooperation among European territories should focus on developing and generating sufficient evidence on circular economies and instruments to encourage the transition.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

22. How could cooperation be further encouraged? Can you provide examples of effective tools or approaches?

23. Please rank the important statements (1 most important - 7 least important):

<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Sharing experience on practices
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Sharing experience on themes
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Alliance building between territories
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Alliance building between civil society organisations
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Bottom-up processes to sharing experiences
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Cooperation programmes to encourage all regions
<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div> Evidence in support of cooperation



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Ideal structures for circular economy strategies

The study team is investigating the elements defining an ideal circular economy strategy. The following questions relate to the features that should be included when developing such a strategy.

You are asked to indicate your agreement with a set of statements, and to complement with comments, suggestions, and personal takes. Please use the open question fields to provide some more in-depth discussion of the topics.

24. The ideal circular economy strategy addresses all aspects of a circular economy (production, consumption, waste management, secondary raw materials and innovation and investments) in an integrated way.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

25. Prioritising a few policy fields helps to formulate better implementation measures. The ideal circular economy strategy addresses only a few selected policy fields.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

26. The ideal circular economy strategy includes clear objectives and measures to reach them in a predefined time frame.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Please feel free to specify your answer:

27. The ideal circular economy strategy includes a governance section in which it details the cooperation among public authorities, businesses, knowledge providers and civil society organisations.

Fully agree

Somewhat agree

Partially disagree

Fully disagree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------

Please feel free to specify your answer:

28. The ideal circular economy strategy includes the following elements and instruments.

	Fully agree	Somewhat agree	Partially disagree	Fully disagree
Facilitation and cooperation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project promotion / initiation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good practices and examples from the region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good practices and examples from other regions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formalisation of agreements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific financial allocation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other financing sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to specify your answer:



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Expert opinion on present circular economy strategies

29. Please share your expert opinion on currently published circular economy strategies you know. Which are the areas of strength and those of possible improvement of current efforts?

	Advanced – exceeding expectations	Appropriate – according to expectations	Somewhat sufficient but largely improvable – falling slightly short of expectations	Insufficient – failing to meet expectations
Comprehensive understanding of the circular economy considering production and consumption aspects and covering waste management, secondary raw materials and innovation and investment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scope of the strategies, resulting in concrete measures and detailed proposals easy to grasp for a wider public.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Potential for swift and smooth implementation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Links with other strategies at national, regional, and local level in the strategy's country.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Links with other strategies at national, regional, and local level in other countries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Advanced – exceeding expectations	Appropriate – according to expectations	Somewhat sufficient but largely improvable – falling slightly short of expectations	Insufficient – failing to meet expectations
Coverage of different policy themes in the strategy relevant to the territory.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance between involvement of public authorities, enterprises, research and education, civil society organisations, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Degree of involvement of civil society organisations in strategy development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Degree of involvement of civil society organisations in strategy implementation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to specify your answer:

30. Based on your knowledge, what is the current status of the circular economy strategies you are aware of?

- ☐ Development phase
- ☐ Consultation phase
- ☐ Promoting the adopted strategy
- ☐ Implementation phase
- ☐ Specific programmes have been developed to implement the strategy / roadmap
- ☐ Other (please specify)



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Your contribution to circular economy strategies

31. To what extent have you (or members of your organisation) been involved in the development and implementation of circular economy strategies in your territory?

- ☐ No involvement
- ☐ Drafting of substantial parts
- ☐ Contribution to drafting
- ☐ Commenting or critical review
- ☐ Participation in general discussions
- ☐ Receiving information on it
- ☐ Please feel free to describe your involvement

32. To what extent have you (or members of your organisation) been involved in an advising or consulting role for the development and implementation or circular economy strategies in other territories?

- ☐ No involvement
- ☐ Drafting of substantial parts
- ☐ Contribution to drafting
- ☐ Commenting or critical review
- ☐ Participation in general discussions
- ☐ Receiving information on it
- ☐ Please feel free to describe your involvement

33. Please list the strategies in which you (or members of your organisation) have been involved:



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Rue Belliard/Belliardstraat 99
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BELGIQUE/BELGIË

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