

Developing Circular Economy Strategies in Europe

Best practices

September 2022



JASPERS Working Paper

Best Practices - Developing Circular Economy Strategies in Europe

September 2022

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1. Introduction

Transitioning to a circular economy is high on the European Union (“EU”) political agenda, as advocated in the European Green Deal¹ and the New Circular Economy Action Plan 2020². Accordingly, circularity has been embedded in the policies and financial instruments of the European 2021-2027 programming period. The European cohesion, pre-accession policies and the Connecting Europe Facility are no exception. They all embrace the concept of a circular economy.

The central idea of the circular economy concept is to move from a production - consumption - disposal-based “linear” economic model, to a circularity model, in which the usage and lifetime of products are maximally extended and the loss of materials and energy are minimised. This can only be achieved if

“new products and assets are designed and produced in a way that reduces virgin material consumption and waste generation; new business models and strategies are applied that optimise capacity utilisation and extend the useful life of products and assets; and resource and material loops are closed through recycling of end-of-life products and materials”³.

The transition to a circular economy implies an economic transformation and applies to all sectors alike.

It is largely acknowledged that municipal and regional infrastructure projects play a pivot role in the transition towards a circular economy.

The Joint Assistance to Support Projects in European Regions (“JASPERS”)⁴ assists European Member States and pre-accession countries, throughout the entire cycle, to prepare and deliver these projects. JASPERS can provide up-stream support during the elaboration of national, regional and local sector and thematic strategies/plans and the programming phase. This is backed by the finding that good strategy making is key to develop good projects.

Throughout the years, and notably during the European 2014-2020 programming period, JASPERS has gained significant experience in providing this up-stream support, notably on strategy making at sector level (e.g. waste management plans, transport strategies etc.) and horizontal issues like climate change. In preparation of the European 2021-2027 programming period, JASPERS has started to advise national bodies managing European funds, referred to as managing authorities, on how to integrate the circular economy policy objectives in:

- the national, regional and/or local strategic frameworks,
- the European fund operational programs and the project pipeline development.

An initial JASPERS finding is that national circular economy strategies are a cornerstone to develop and embed circularity.

Some European member states have already established mature circular economy strategies, whilst others are only now starting to compose them. Several countries and regions have approached JASPERS to help them define their approach and methodology to prepare a circular economy strategy. To support this process, the present working paper provides an overview of existing circular economy strategies and of the emerging best methodological, implementation and monitoring practices.

¹ [A European Green Deal | European Commission \(europa.eu\)](#)

² [A new Circular Economy Action Plan \(europa.eu\)](#)

³ Definition of the circular economy in the EIB Circular Economy Guide, 2020 (p. 3)

⁴ [JASPERS](#)

This working paper builds on the 70 + circular economy national/regional/local strategies and strategic documents developed in Europe as of May 2021.

The 70+strategies were analysed from three different angles of the strategy life cycle, namely: the inception, the analysis and development and, finally, the implementation and monitoring:

- 1) Inception:
 - a. Motivation of countries, regions and cities to develop a circular economy strategy
 - b. Definition of objectives
- 2) Analysis and development phase:
 - a. Selection of focus areas
 - b. Focus areas retained
- 3) Implementation and monitoring
 - a. Implementation measures
 - b. Stakeholders for implementation
 - c. Monitoring

This working paper is meant to support strategy makers at national, regional and municipal level when developing their own strategy. There is no one-size-fits-all- approach. Therefore, rather than providing a recipe, this paper aims at supporting strategy makers by:

- 1) In the first part of the paper, providing an overview of the recent developments and common practice across Europe in the field of circular economy strategies. Statistics on **what** is done in the existing strategies support the analysis (Section 2: Overview of recent developments in circular economy strategy making in Europe).
- 2) In the second part of the paper providing concrete examples of **how** strategies were elaborated and implemented in selected best practice cases (Section 3: Best Practice in Circular Economy Strategies across Europe).

In working through the paper, strategy makers will understand which aspects and elements are attention points and key success criteria for the establishment of their own strategy.

This working paper comes with an accompanying Excel Database summarizing the 70+ circular economy strategies that have been reviewed in preparation of this paper.

2. Part 1: Overview of circular economy strategies in Europe and their key features

This section starts by explaining which strategic documents have been retained for the analysis carried out for this paper. It also presents the similarities and differences between the existing strategies across Europe, from different angles of a strategy's life cycle, namely, the inception phase, the analysis and development phase, and, lastly, the implementation and monitoring phase.

2.1 Selection of circular economy strategies considered in this paper

The attached Excel database provides an overview of published circular economy strategies and action plans⁵ across Europe (including both European and non-European member states) as of **May 2021**⁶.

As there is no up-to-date register of circular economy strategies in Europe, the following approach was taken to identify all relevant circular economy strategies and action plans:

- 1) All the strategies published on the European Union Circular Economy Stakeholder Platform⁷ and those from Signatories of the Circular Cities Declaration⁸ were considered;
- 2) Expert reviews with the Ellen MacArthur Foundation⁹ ("EMF"), Local Governments for Sustainability¹⁰ ("ICLEI") and Circle Economy¹¹, resulted in the addition of a few strategies.¹²

No "entry" criteria were applied to the strategies identified during the process described above. All strategies are therefore included, irrespective of their format (websites, legislative texts, presentation slides, policy briefings and lengthy strategy documents), maturity/stage of development/completeness. The section 2.3 hereunder on 'Document maturity and level of completeness of circular economy strategies' proposes a ranking system, indicating whether a strategy fulfils three, two, one or none of a set of pre-defined criteria.

The database comprises 21 national, 14 regional and 37 local circular economy strategies. The following map provides an overview of the number of strategies by country, irrespective of their administrative focus, namely national, regional and local.

⁵ Circular economy strategy documents differ greatly in character and granularity depending on geography, intended impact and governance. Circular economy terminology has yet to be universally defined and adopted. Strategy documents are variously titled roadmaps, plans, action plans or strategies. The choice of title is not a guide to the maturity of the document. In this document, the terms 'strategy' or 'strategic document' are used irrespective of a document's title or maturity.

⁶ Several strategy documents are currently being developed and are therefore not included in this report. They may, however, be published by the time this report is released.

⁷ <https://circulareconomy.europa.eu/platform/>

⁸ <https://circularcitiesdeclaration.eu/>

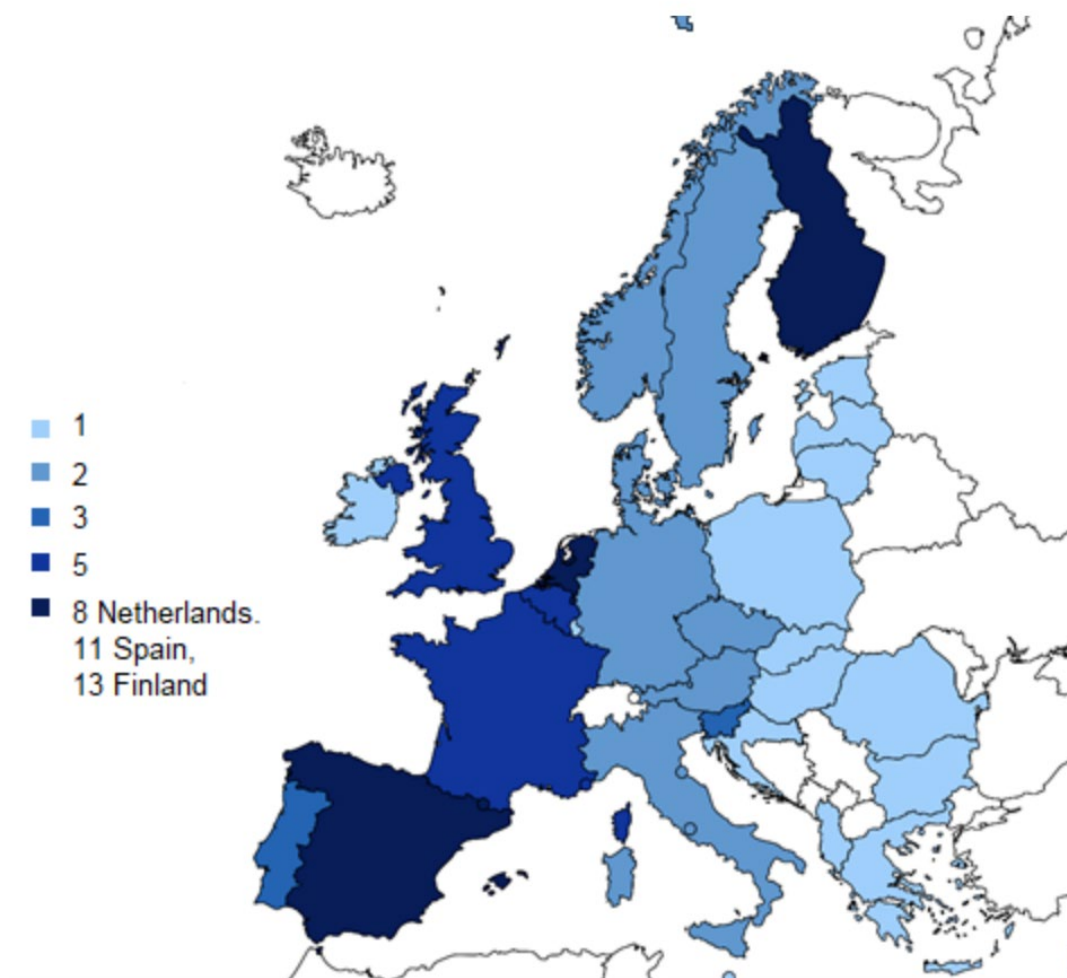
⁹ [Ellen MacArthur Foundation](#)

¹⁰ [ICLEI](#)

¹¹ Circle Economy - Practical, scalable implementation of the circular economy

¹² Pais Vasco (ES), Andalucía (ES), Murcia (ES), Valladolid (ES), Gelderland (NL), Tilburg (NL), Leuven (NL), Est Ensemble Grand Paris (FR), Nantes (FR), North Karelia (FI), South Karelia (FI), Southwest Finland (FI).

Figure 1: Number of circular economiesstrategies, by country¹³, be they at national, regional and/or local level

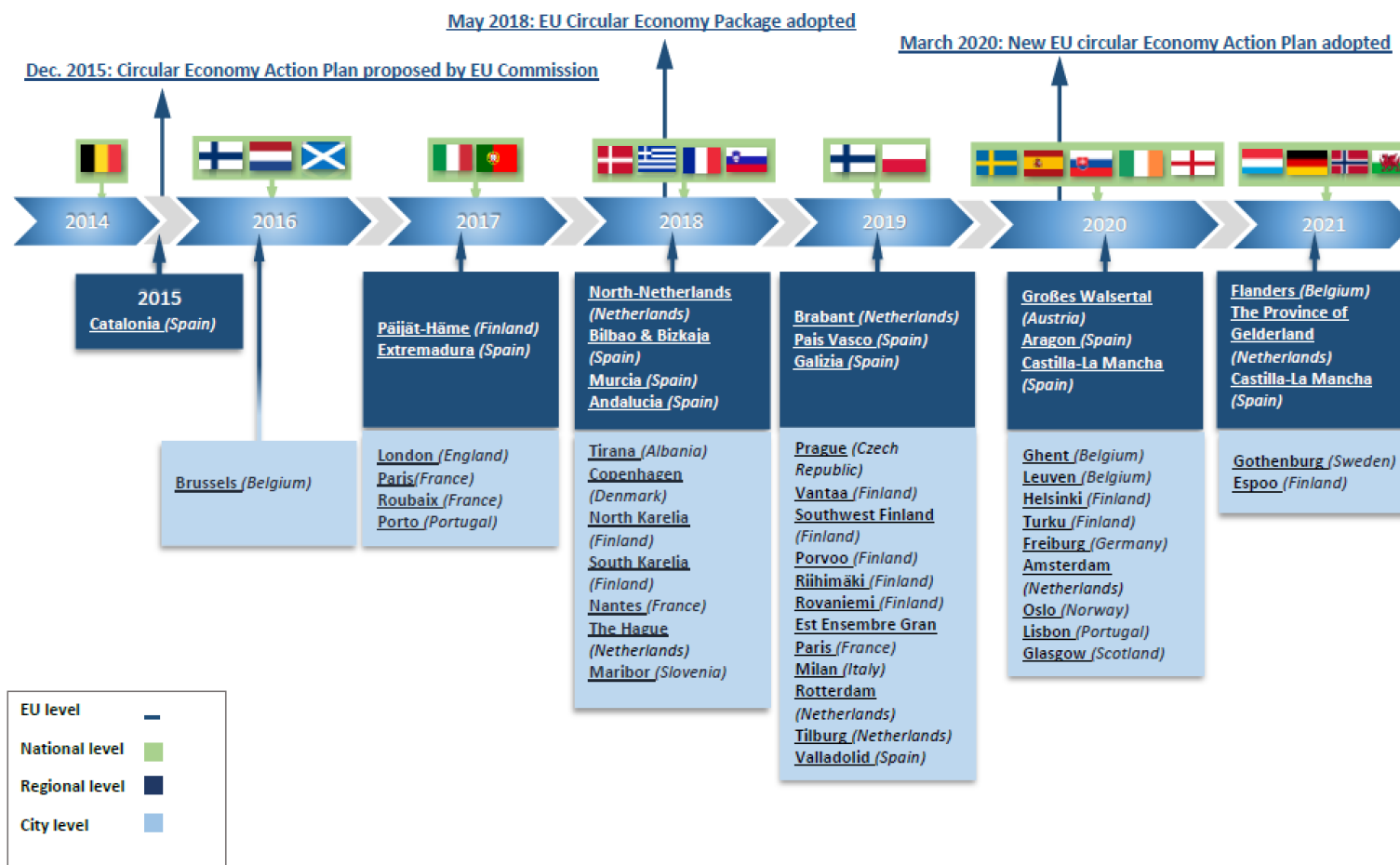


Source: JASPERS

The following figure shows a timeline of the emergence of the circular economy strategies in the different European countries at national, regional and city level.

¹³ Including former European member states, such as the UK.

Figure 2: Timelines of the elaboration of circular economy strategies in Europe



Source: JASPERS

2.2 Maturity and level of completeness of the circular economy strategies retained

As mentioned above, the level of detail, completeness, maturity and assertiveness of the circular economy strategy documents analysed varies greatly. Some strategies are detailed policy documents of 100+ pages¹⁴. Other strategies consist of a short slide¹⁵ deck or website¹⁶.

This report attempts to categorise the documents listed in the database by their level of completeness and conduciveness to a more environmentally friendly- circular- economy. To achieve this, a simple grading system was developed based on the definition of a circular economy strategy by Spatial Foresight¹⁷ in 2019 (see box below).

*Circular economy strategies or roadmaps aim to further the **transition to a circular economy**. 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 considered.”*

This definition is holistic enough to apply to the large variety of strategic documents considered for this working paper while highlighting the main characteristics of a balanced circular economy strategy. The use of this established definition as a baseline for the study also ensures consistency with existing research on the topic.

Three characteristics are derived from this definition that define a holistic -“complete”- circular economy strategy, namely: a strategy that defines objectives, elaborates/investigates several channels to reach circularity and includes key milestones. Based on the “key features” field considered in the Excel database (see table 2 below for more details), each document is assessed against these characteristics and tagged as fulfilling one, two or all of the three characteristics. This provides a clear initial distinction between strategies.

The following table juxtaposes the main characteristics of the definition with the “key features” assessed in the database.

Table 1: Characteristics of the Circular Economy Strategies

Key features grouping	Main characteristics per definition	Key features assessed in the database
Objectives	The document presents defined objectives...	The document analysed has defined objectives (quantitative and/or qualitative)
Development and Implementation	...it propagates a multidimensional transition...	A multidimensional transition is intended by a strategy if a variety of focus areas, implementation measures and stakeholders are included. The criteria is assumed to be met if the total sum of the options per key features addressed in the

¹⁴ Extremadura 2030 – Circular and Green Economy Strategy.
¹⁵ Milan Circular Economy Strategy within the Resilience Strategy.
¹⁶ Lisbon: the first European Green Capital in Southern Europe.
¹⁷ [HOME - Spatialforesight](#)

		strategy (such as implementation, measures utilised and stakeholder types, refer to Table 2 and the Excel Database) is greater than 8.
Success measurement/monitoring	...it includes key steps or milestones.	The document anticipates a measurement of success. This characteristic is considered met, even if it the success measurement is not fully detailed out.

The application of the definition to the 72 documents led to the following results:

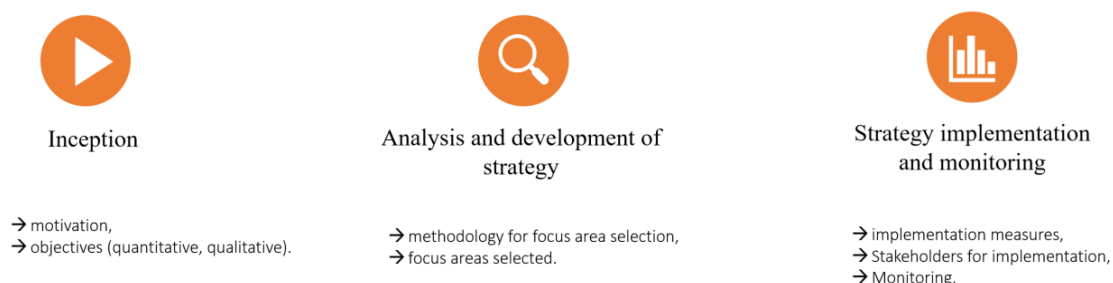
- 38 documents comply with all three characteristics;
- 21 documents comply with only two characteristics;
- 11 documents comply with only one characteristic; and
- 2 documents comply with no characteristics.

2.3 Analysis of existing strategies according to key features

2.3.1 Key features of circular economy strategies considered in the data-base

The attached Excel database gives a statistical overview of circular economy strategies against a set of key features. The key features are subset of the three stages of a strategy’s lifecycle defined above (inception, analysis and development, implementation and monitoring) and are : motivation, objectives, methodology for focus area selection, focus areas selected, implementation measures, stakeholders for implementation and monitoring (see figure below).

Figure 3: Key features of circular economy strategies considered in the analysis



Source: JASPERS

The key features were selected, as they help to identify differences and similarities between strategies. They reveal how strategies are built and the outcomes they deliver, providing a full picture of the landscape of circular economy strategies in Europe¹⁸.

Analysing the circular economy strategy documents sampled against these key features revealed recurrent themes and similarities, referred hereafter as “options” for each key feature. These options are both 1) sufficiently granular to deliver meaningful insights and 2) general enough to categorise the documents reviewed.

The following table details the key features - and the multiple options per feature – along which the circular economy strategy documents were assessed.

¹⁸ Please note that this paper intends to provide an overview of what is being done but does not provide guidance on what should be done (the latter will be part of a subsequent JASPERS paper).

Table 2: Key Features of the circular economy strategies analysed and the multiple options identified, by key features

Stages in strategies' life cycle	Key feature	Options per key feature
Inception	Motivation	<p>Access to funding: the strategy identifies measures eligible for (European) funding</p> <p>Reaching climate targets: the strategy addresses climate change mitigation¹⁹</p> <p>New economic opportunities: the strategy is geared to generating circular economic growth- a positive transition to a more environmentally friendly economy</p> <p>Compliance with waste regulations: the strategy helps to meet European waste management targets and requirements</p> <p>Not Mentioned: no distinct motivation/political context mentioned</p> <p>Others</p>
	Quantitative objectives	<p>Job creation: quantitative objective related to the creation of new jobs</p> <p>Raw materials: improved use of raw materials or higher material efficiency is quantified</p> <p>Carbon reduction: reduction of carbon emission is a quantitative objective</p> <p>Green procurement: (semi)-quantitative targets relating to green procurement</p> <p>Waste and materials: improved waste management and organisation of material flows (including semi-quantitative targets)</p> <p>Others</p>
	Qualitative objectives	<p>Leadership in circular economy: strategy aims at leadership in circular economy in its country/region/city of reference. Declared goal to not only have a circular economy, but to be among the leading country/region/city in making the transition</p> <p>Pioneering in circular economy: strategy focuses on investigating the logic and mechanisms of circular economy to develop and access new businesses and forms of value creation</p> <p>Social equality: strategy highlights social equality as objective to be achieved by circular economy</p> <p>Environmental protection: strategy focuses on reducing harmful impact of the economy on biodiversity and climate</p> <p>Economic competitiveness: strategy aims to lay the foundation for greater competitiveness of the country/region/city</p> <p>Economic savings: strategy aims at achieving monetary savings for individuals and business in a circular economy</p>

¹⁹ For memory, climate change mitigation consists of actions to limit global warming and its related effects.

		<p>No quantitative objectives</p> <p>Others</p>
Analysis and development of strategy	Method for focus area selection	<p>Circle flow analysis: holistic analysis of material flows and subsequent decision on focus areas</p> <p>Waste flow analysis: analysis of waste flows through a geography to identify opportunities for impact</p> <p>Expert/admin decision: selected focus areas recommended by circular economy /subject-matter experts</p> <p>Political decision: selection decreed by policymakers</p> <p>Citizens' decision: selection resulting from civic activism and participation processes</p> <p>Industry-tailored: selection based on dominant local industry showing interest in implementing new principles</p> <p>Not mentioned</p> <p>Others</p>
	Focus areas selected	<p>Waste and material circulation: improving waste management and circulation of material flows</p> <p>Construction: transforming the construction sector's adoption of circular economy principles: planning, building, maintaining, dismantling</p> <p>Food: avoiding/re-circulating food waste in production and consumption</p> <p>Natural economy: focusing on regional natural resources such as fisheries, agriculture and forestry as cornerstones in a circular economy</p> <p>Consumer goods: focusing on electronics, textiles, furniture, etc.</p> <p>Technologies: amplifying circular impact through development and use of new technologies in production, data processing and communication (cross-sectoral focus area)</p> <p>Mobility and logistics: new modes of transportation for individuals, for the public, and for logistics</p> <p>Trade/sharing: inducing change in trading, augmenting sharing models and changing the understanding of ownership through e.g. PaaS and EPR²⁰ (cross-sectoral focus area)</p> <p>Energy and utilities: making energy generation and water usage more efficient</p> <p>Impacting daily life/consumption: using behavioural, economic, and psychological insights to influence the behaviour of policy targets to achieve policy goals (cross-sectoral focus area)</p> <p>Others</p>

²⁰ Product as a Service Schemes (PaaS) describe service offerings which replace the need for physical ownership of products, such as car sharing services. Extended Producer Responsibility Schemes (EPR) aim at internalizing externalities into the cost of products and services.

Strategy Implementation and Monitoring	Implementation measures	<p>Research: investing in or researching circular economy - related topics (either for science or to increase country-specific knowledge base)</p> <p>Procurement: using (public) procurement as lever to influence the shift towards circular economy</p> <p>Legislation/policy: creating the right legal/policy context to enable circular economy</p> <p>Finance: lending or providing grants to circular economy initiatives</p> <p>Stakeholder engagement: activities to engage stakeholders and public through advertisements, open days, workshops etc.</p> <p>Training/consulting: target/skills-oriented training by/for public bodies (e.g. municipalities) or private enterprise</p> <p>Strategy/action plan: development and implementation of a circular economy action plan with distinct tasks</p> <p>Pilots/projects: supporting or running pilot projects for circular economy in the specific city/region/country</p> <p>Not mentioned</p> <p>Others</p>
	Stakeholders for implementation	<p>Political level: implementation through elected policymakers</p> <p>Administration: implementation through administrative bodies</p> <p>Utility provider: implementation through utility providers</p> <p>Industry: implementation through local/regional/national industries</p> <p>Citizen initiatives: implementation through active civic involvement</p> <p>Economic clusters: implementation through cross-sectoral economic clusters</p> <p>Knowledge institutes: implementation with on-going support from knowledge institutes</p> <p>Others</p>
	Success Measurement/Monitoring	<p>No success measurement/monitoring: no referral to measurement of circular economy transition in strategy</p> <p>Implementation of action plan: tracking the execution of a defined action plan foreseen, however no measurement of the economy's overall circularity</p> <p>Global KPIs: overall KPIs for an economy's overall circularity foreseen</p> <p>Sectoral/action KPIs: KPIs for output/outcome (per action or sector) outlined in the strategy</p> <p>Others</p>

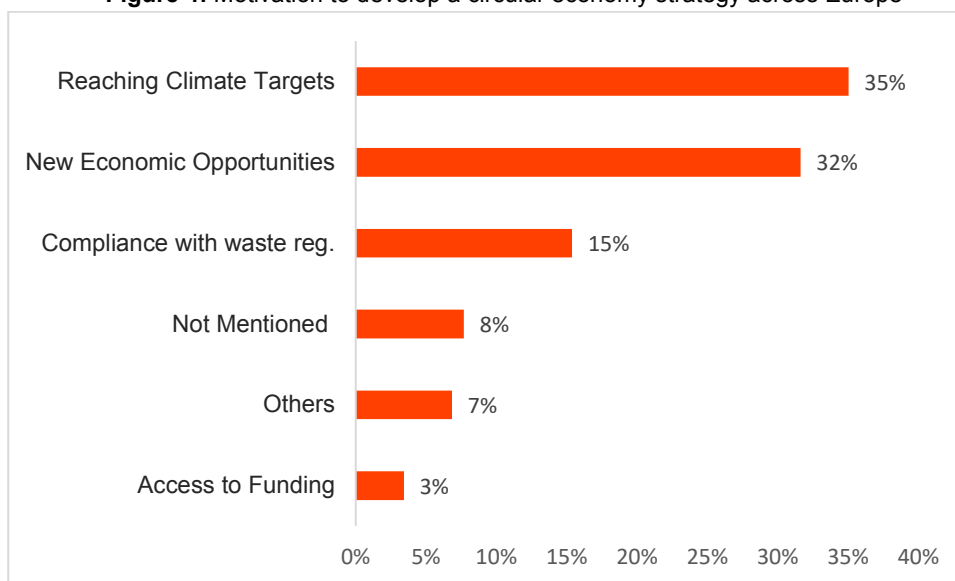
2.3.2 Motivation for developing circular economy strategies

The **motivation** for elaborating a circular economy strategy, according to the analysis carried out, is mainly related to:

- reaching climate targets, and
- generating new economic opportunities.

In fact, over half of the circular economy strategies reviewed were developed with a strong climate change mitigation aim and/or to create economic growth from a systemic shift to the circular economy.

Figure 4: Motivation to develop a circular economy strategy across Europe



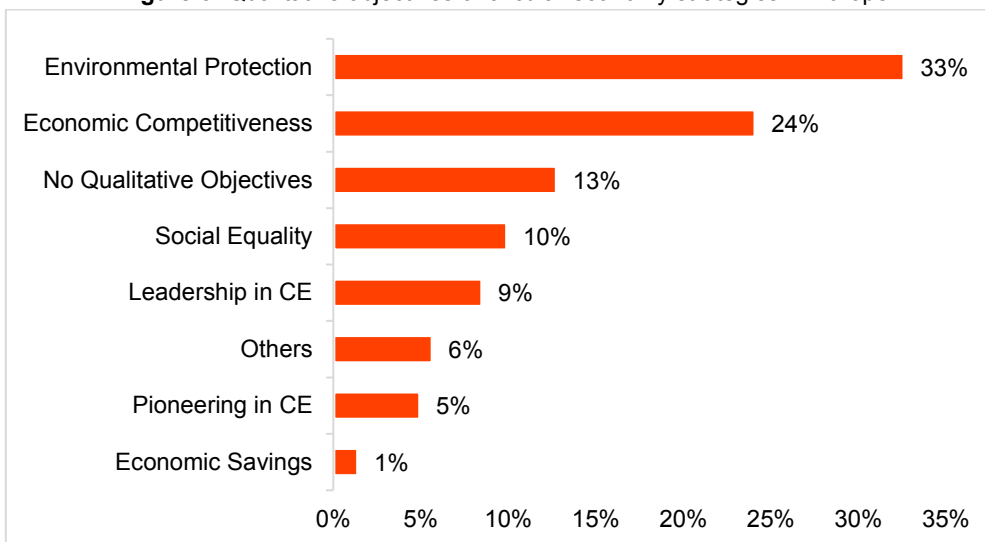
Source: JASPERS

Refer to Table 2 for a glossary of the categories used.

2.3.3 Objectives of circular economy strategies

There are two types of objectives: qualitative and quantitative objectives. Among the qualitative objectives pursued by European circular economy strategies, environmental protection is the main objective.

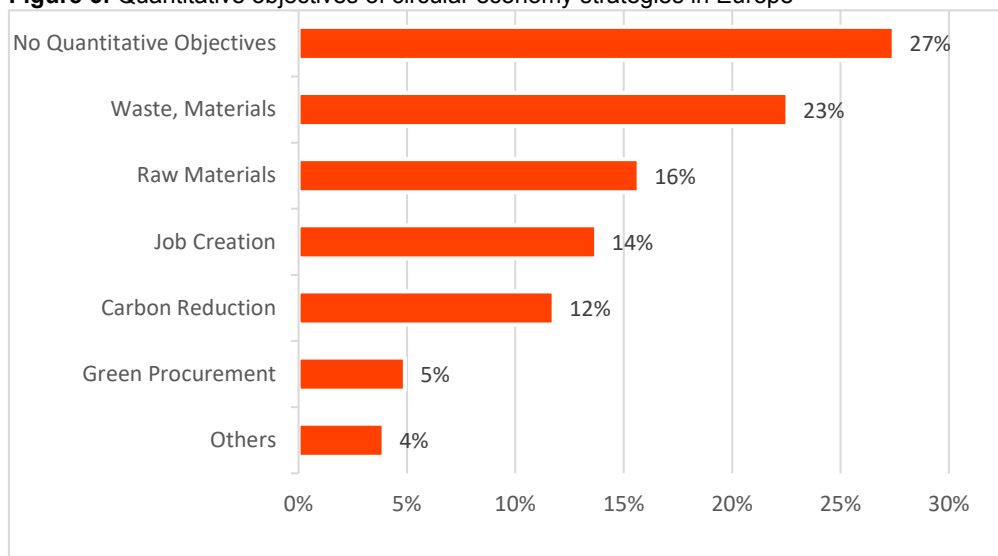
Figure 5: Qualitative objectives of circular economy strategies in Europe



Source: JASPERS

A significant percentage of strategies does not define any quantitative objective; and among those that do, the quantitative objectives are often related to improving waste management and the organisation of material flows. Refer to table 2 for a glossary of the categories used.

Figure 6: Quantitative objectives of circular economy strategies in Europe

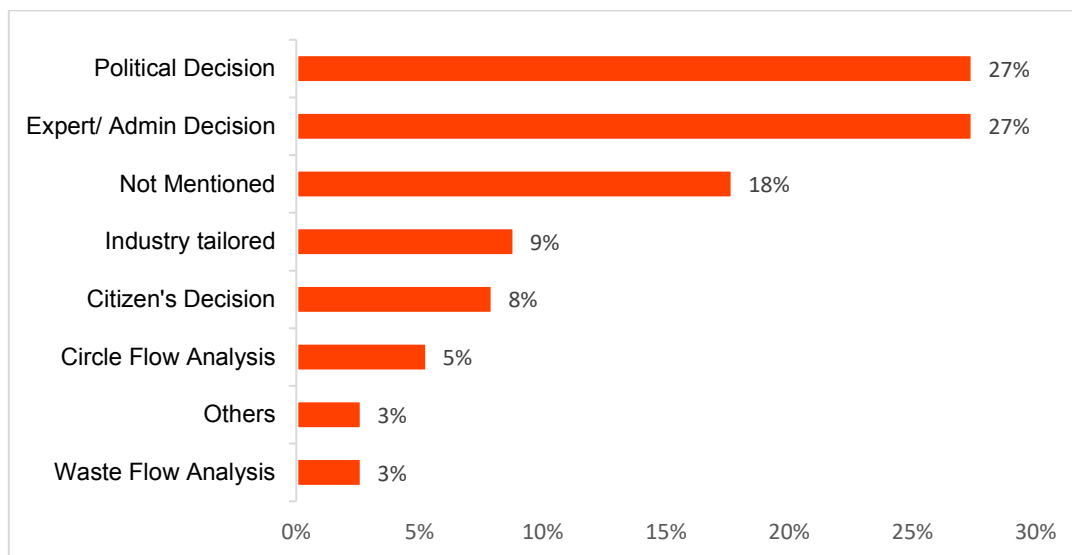


[Source: JASPERS]

2.3.4 Selection of focus areas

One of the key concerns when elaborating a circular economy strategy, given its cross-sectorial nature, is the **selection of focus areas**. A large percentage of the countries, regions and cities selected the focus areas according to the recommendations provided by circular economy/subject-matter experts (Expert/Admin Decision) and/or policymakers (Political Decision). The following chart illustrates how the focus areas of the circular economy strategies were decided. Refer to Table 2 for a glossary of the categories used.

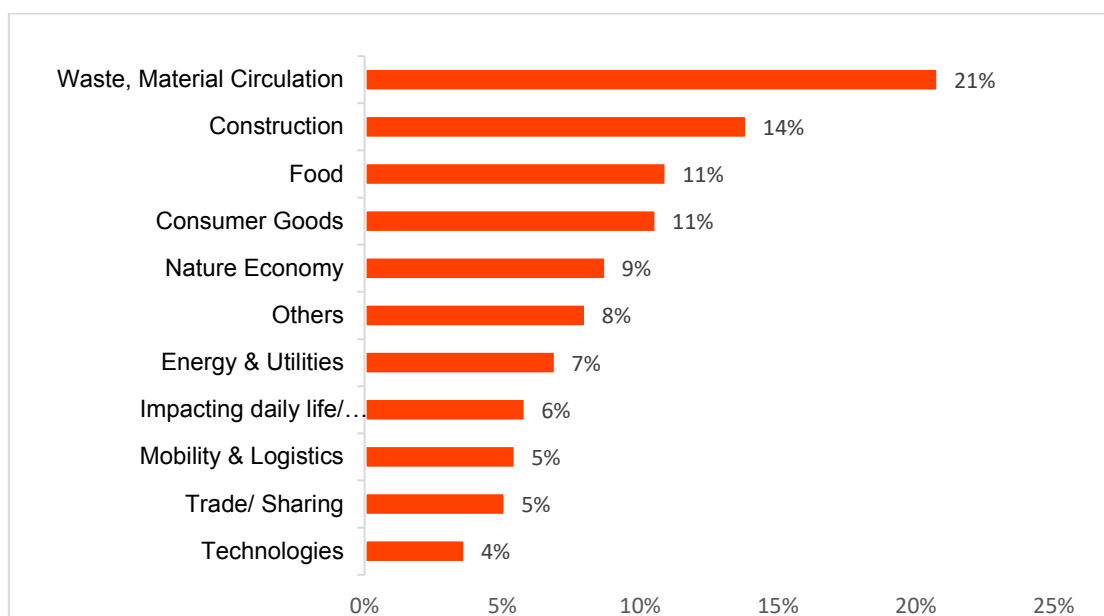
Figure 7: Focus areas selection (process) during the elaboration of circular economy strategies across Europe



Source: JASPERS

When it comes to analyzing which focus areas were actually retained, there is a broad range of focus areas/sectors, as illustrated by the chart hereunder. Nevertheless, the waste and construction sectors lead the ranking followed by food and consumer goods. Refer to Table 2 for a glossary of the categories used.

Figure 8: Focus areas of circular economy strategies in Europe



Source: JASPERS

Available methodologies

EU member states used different tools and methodologies to define their strategy. The following table provides an overview of the main methodologies:

Tool Kit / Methodology	Description	Link
City Circle Scan Method (Amsterdam Strategy 2015)	(Tool for sector selection): a mapping of the flows of different materials through a system (e.g. a city) and associated changes in values to determine the strategic sectors and actions for most effective action.	City Circle Scan
EMF Policymakers Toolkit (Toolkit for CES development 2015)	(Tool for sector selection and strategy development): Selection of priority sectors based on mapping of <i>Circular Potential</i> and <i>Role in National Economy</i> of sectors.	EMF Policymaker's Toolkit
ORÉE (2015) guidelines	A flow and channels approach towards a territorial ecosystem.	Association ORÉE
ADEME (2015)	Overview document on Clean Energy Standards consideration (French).	ADEME 2015
OECD (2018) RE-CIRCLE	Qualitative and modelling analysis workstream to identify and quantify impacts of policies increasing resource efficiency and furthering transition to the circular economy.	Re-Circle OECD

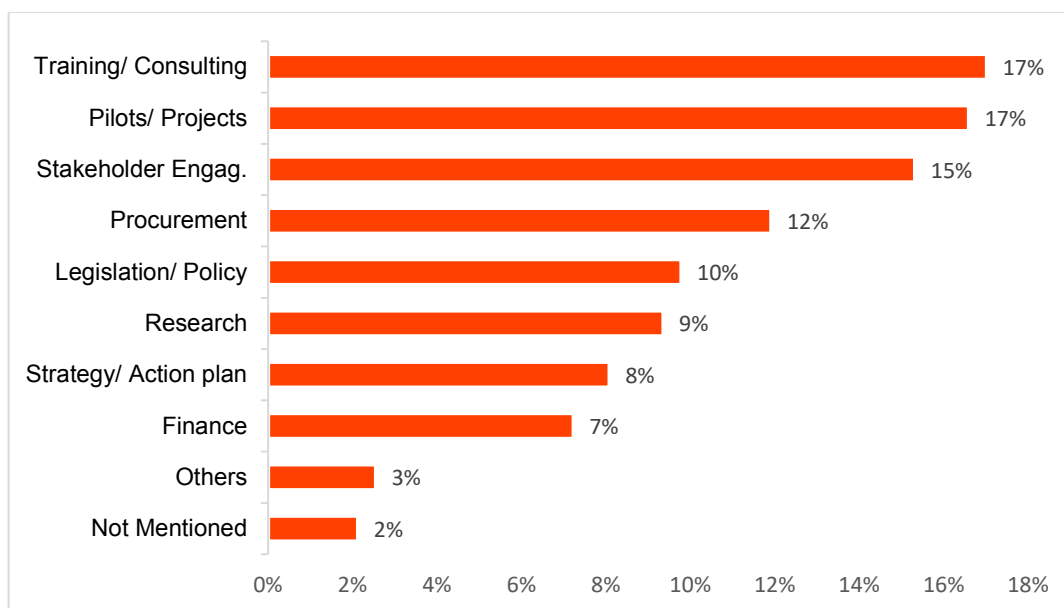
2.3.5 Implementation measures

The **implementation measures** are also diverse across the different circular economy strategies and most of the strategies opt for several measures at once. In this respect, the most common measures are:

- to implement target/skills-oriented training by/for public bodies (e.g. municipalities) or private enterprise;
- to support or run pilot projects for circular economy in the specific city/region/country;
- to use (public) procurement as a lever to drive the shift towards circular economy.

Refer to Table 2 for a glossary of the categories used.

Figure 9: Implementation measures of circular economy strategies in Europe

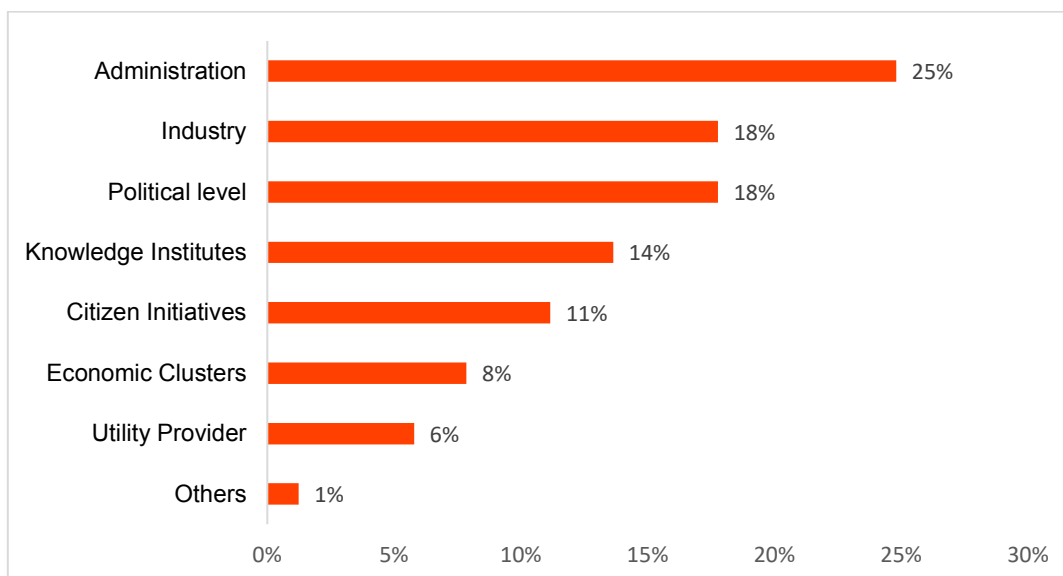


Source: JASPERS

2.3.6 Stakeholder involvement

During the implementation of a circular economy strategy, the **stakeholder involvement** is a key aspect. According to the analysis carried out, the elaboration of circular economy strategies across Europe mobilises in 25% of cases the national/regional/local administration. Their involvement is essential, same as other stakeholders such as the industrial/business partners and policymakers. Additionally, it is worth mentioning the role of knowledge institutes. Refer to Table 2 for a glossary of the categories used.

Figure 10: Stakeholder involvement in the implementation of circular economy strategies in Europe

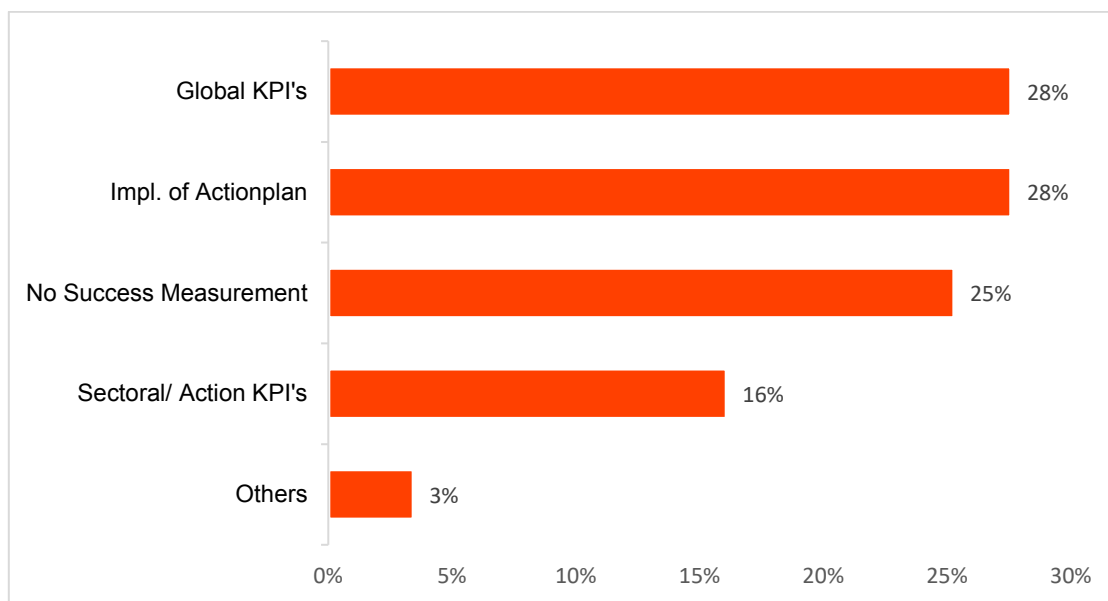


Source: JASPERS

2.3.7 Monitoring

The common way to monitor the implementation of objectives is to track the execution of a defined action plan (by measuring the economy's overall circularity) and to use KPIs. The review carried out concludes that a quarter of the circular economy strategies do not foresee a success measurement at all. Refer to Table 2 for a glossary of the categories used.

Figure 11: Success measurement of circular economy strategies implementation in Europe



Source: JASPERS

3. Part 2: Best Practices in Circular Economy Strategies across Europe

3.1 Selection of Circular Economy Strategies to identify best practices

A sub set of the circular economy strategies studied for this paper were used as case studies to illustrate best practices. The purpose of the case studies was twofold, to: 1/better understand and identify key success factors and, 2/ assess how tangible impact can be delivered.

The selected cases represent different governance levels (national, regional, local) and geographies (representing Europe’s southern and northern member states). The following selection criteria were applied to the entire sample of circular economy strategies considered for this paper to identify which circular economy strategy would be the most relevant to illustrate best practices for the “key features” identified in the first part of this paper:

- the strategy is in line with the Spatial Foresight definition (2019, see section 3.2 above);
- the strategy has already been implemented;
- the strategies targets a holistic transformation to a more circular model (i.e. they cover value chains and sectors and consider biological and technical cycles);
- the strategy follows data- and evidence-driven approaches;
- the strategy follows a clear and consistent methodology;
- the strategy entails some co-ordination between administrative layers and between the different line ministries; and
- the strategy precedes funding opportunities.

Based on these criteria, the following list of circular economy strategies, depending on the “key features” at stake, were selected for the detailed review:

Table 3: Case studies to identify best practices, by key features

Key Features	Selected best practice
Definition of objective	Sweden
	The Netherlands
Selection of focus areas	Amsterdam
	Slovenia
Stakeholder alignment	The Netherlands
	Flanders
Implementation measures	France
	Maribor
Success measurement	Netherlands
	Finland

3.2 Best practice: definition of objectives

3.2.1 Sweden

The document ‘Circular Economy – Strategy for the transition in Sweden demonstrates how strategic objectives can be defined with reference to pre-existing national and international frameworks with up to date goals and targets. Linking the circular economy strategy to national and international policy/sector objectives and commitments helps to understand that it is a process/a motion (not an end in itself) and that the path to an ecologically strong economy will be achieved by implementing already defined societal, economic and environmental goals.

Sweden’s circular economy strategy is authored by the Ministry of the Environment and the Ministry of Enterprise and Innovation. The document does not state the methodology used, making it difficult to comment on the process used for its production. Nevertheless, using the outputs as a guide, it is possible to infer the following logic:

- The UN Sustainable Development Goals (“SDGs”) provide a framework and a set of targets which define the economy and society Sweden is aspiring to;
- A transition to a Circular Economy is identified as a tool that will support Sweden in achieving those targets;
- Specifically, the strategy identifies four ways in which the transition to a circular economy can be implemented (‘focus areas’). It connects each of these to specific goals from the UN’s SDG framework (Table 4: Alignment of focus areas to SDG targets in Sweden’s circular economy strategy).

Table 4: Alignment of focus areas to SDG targets in Sweden’s circular economy strategy

Four focus areas	SDG 2030 targets
Sustainable production and product design	3.9, 8.4, 9.4, 12.2
Sustainable ways of consuming and using materials, products and services	8.4, 12.3, 12.7
Non-toxic and circular material cycles	11.6, 12.4, 12.5, 14.1
Driving force for the business sector and other actors through measures to promote innovation and circular business models	8.2, 9.4

This approach to defining objectives has several strengths:

- Adopting an internationally-recognised framework for defining Sustainable Development allows for benchmarking and monitoring of progress against other countries.
- Choosing metrics that are already agreed - and against which Sweden has committed to report - avoids duplication when determining indicators, collecting data and producing national statistical reports.
- Since 1999, Sweden has defined its own Environmental Objectives Systems. These are aligned to the UN’s SDG targets.²¹ Sweden has shown flexibility by referencing this country-specific system in its strategy whilst still choosing to align with the UN’s internationally-recognised system.

In the **absence** of available evidence, the following hypothesis can be formulated: the co-authoring of the circular economy strategy by two **different** ministries (the Ministry of the Environment and the Ministry of Enterprise and Innovation) led to a decision to associate the circular economy strategy with existing SDG targets. It is worth underlining that Sweden’s Ministry of the Environment has responsibility for all aspects of environmental and climate policy. This creates an institutional remit that allows circular economy topics to be connected to wider SDG targets.

The study of Sweden’s circular economy strategy document suggests:

- The UN’s SDGs provide an existing framework for the definition of outcomes to be used when elaborating/defining circular economy strategy objectives.
- Mapping circular economy implementation strategies against SDG targets avoids the duplication of metrics.
- It may be that successful cross-ministry collaboration and a combined responsibility for both SDG goals and the drive to a circular economy makes it easier to connect these agendas.

²¹ History of the environmental target system, Swedish Environmental Goals, <https://www.sverigesmiljomal.se/sa-fungerar-arbetet-med-sveriges-miljomal/miljomalssystemets-historia/#0>, accessed 26.10.21

3.2.2 The Netherlands

The Netherlands' circular economy strategy ('A Circular Economy in the Netherlands by 2050', published in 2016) is a good example of clearly defined objectives. Specifically, the Netherlands' example strikes a balance between setting a longer-term trajectory while introducing scope for flexibility and responsiveness in the shorter term. The strategy is authored by the Dutch government and is a joint publication of the Ministry for the Environment and the Ministry of Economic Affairs. It is published as a statement from the Cabinet, the collective decision-making body of the Netherlands' government.

The Government identifies two main objectives in their strategy. These objectives have distinct time horizons - one mid-term (2030) and the other one long term (2050):

- **Decreasing the national demand for raw materials by 50 % by 2030.** This provides a tangible mid-term objective closely related to the origin of circularity in waste and material management. It serves to motivate urgent and rapid action.
- **Becoming fully circular by 2050.** This satisfies the need for a strategic, visionary and easy to communicate long-term objective. It acts as a decision-making guide across stakeholder groups. It builds on a not-yet-fully defined state of circularity, anticipating the development of more detailed concepts and solutions over the coming decades.

The combination of these objectives enables to fulfil the more immediate achievable policy targets and requirement with more challenging ones. The objectives are measurable, engaging, and easy to communicate:

The circular economy strategy is not explicit about how these objectives/targets were set but a reference in the document suggests that they are equivalent to those set in similar countries.²²

Strengths of the Netherlands' strategy are:

- The clear indication of the government's long-term objective. This enables longer-term planning for all stakeholders, including the business community. It also clearly communicates the government's conclusion that the transition to a circular economy is a "necessity" not a choice.²³
- The alignment of the circular economy policy and climate policies, with the Intergovernmental Panel on Climate Change (IPCC) also choosing 2030 and 2050 as key milestone years for action to mitigate global emissions.
- The long-term, aspirational goal. They are useful to create a high degree of confidence in the public policy environment/administration and to also create buy-in over time.
- The short-term quantified goals. They are useful to motivate urgent action and focus attention on easy, early wins.

²² The reference given is European Environmental Agency: More from less – material resource efficiency in Europe, 2016

²³ A Circular Economy in the Netherlands by 2050, p.9

3.3 Best practice: selection of focus area

3.3.1 Amsterdam

‘Circular Amsterdam – A vision and action agenda for the city and metropolitan area’ (2016) is a good example of using quantitative and qualitative data to channel the selection of circular economy focus areas. The document follows a clear methodology and includes feedback loops to validate the results of the team’s data driven analysis.

Circular Amsterdam (2015) was the city’s first roadmap to a circular economy. After a phase of experiment and testing, it was replaced with the current **Amsterdam Circular 2020-2025 Strategy**.

In October 2015, the Municipality of Amsterdam commissioned Circle Economy and Fabric TNO to collaborate on a circular economy vision for the city based on quantitative insights. The team were the first to apply a City Circle Scan (CCS) - a process with several steps to determine/identify key circular economy stages/activities of the (sector/economic) value chains and easy, early wins for the transition to a circular economy.

As a first step, the team assessed the status quo of circularity across 30 sectors of the Amsterdam Metropolitan Area. This assessment collated existing data according to four key indicators. Each indicator was substantiated by further quantitative²⁴ or qualitative²⁵ sub-indicators. This step helped to identify sectors with a high economic and ecologic impact as well as a high potential for value retention.

Table 5: Indicators and data source for status quo assessment in Amsterdam Metropolitan Area

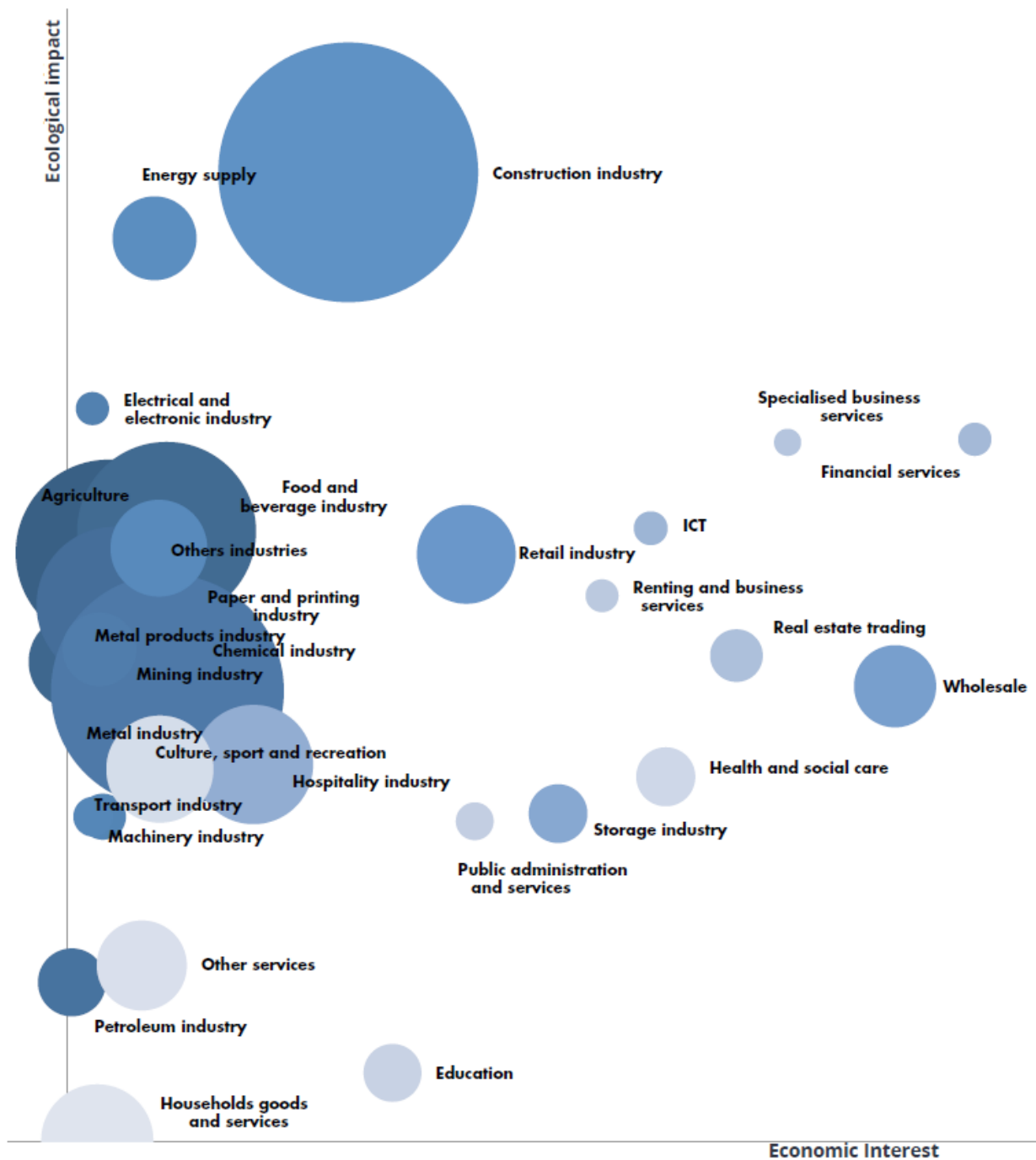
Key indicator	Sub-indicators: assessing the sectors according to their impact / potential
Ecological impact (quantitative)	Metal exhaustion; fossil exhaustion; abiotic depletion; acidification; eutrophication; global warming; ozone layer depletion; human toxicity; fresh-water aquatic toxicity; maritime aquatic toxicity; terrestrial toxicity; photochemical Oxidation; Land use
Economic Impact (quantitative)	Added value
Conservation potential (retention value) (quantitative)	Resource efficiency; valuable waste generation; dispersion factor; recycling rate
Transition Potential (qualitative)	Transition readiness; organisation and culture; visibility and impact

Source: *Circular Amsterdam*, p.76

²⁴ Quantitative data provided by CBS – The Netherland’s central Bureau for Statistics (CBS); *Circular Amsterdam*, p.76

²⁵ Qualitative insight was gathered by stakeholder interviews; *Circular Amsterdam*, p. 76

Figure 12: Scores obtained by 30 sectors, based on the three quantitative indicators (ecological impact, economic impact and conservation potential)

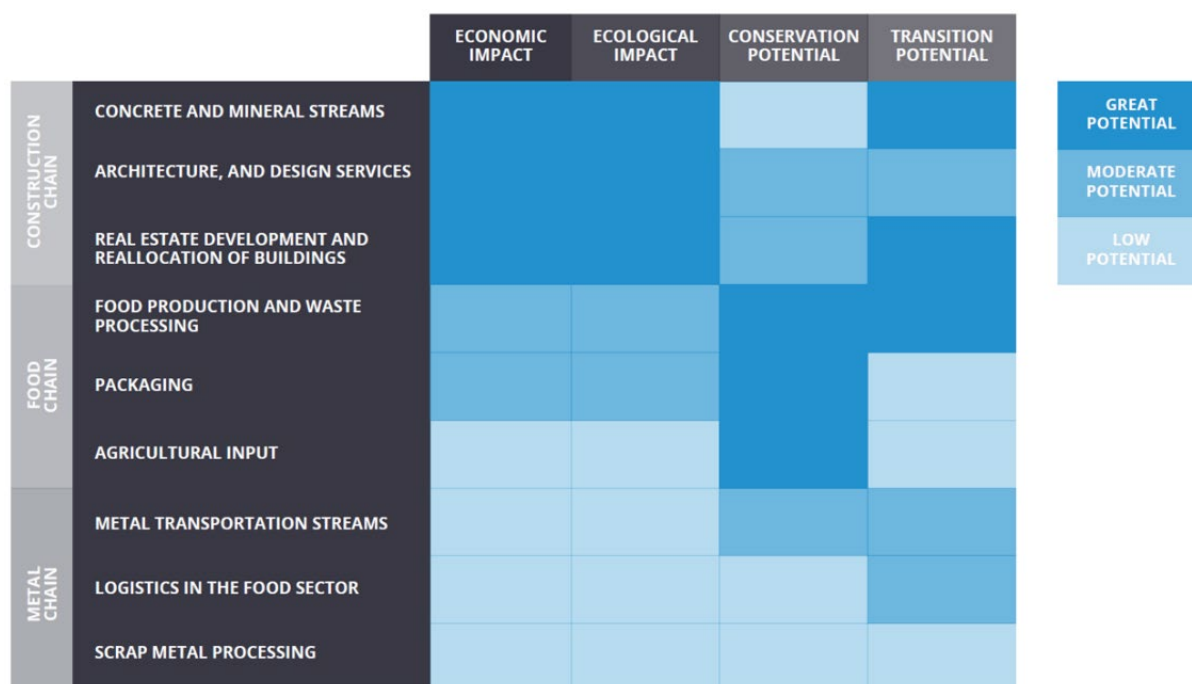


(X-Axis: Economic Impact; Y-Axis: Ecological Impact; bubble size: Conservation Potential within a sector)

Source: Circular Amsterdam, p. 77

As a second step, sectors were considered as being part of broader economic value chains to make sure that the transition is not limited to sectoral boundaries. These value chains were then ranked qualitatively according to their impact and potential (great, moderate, low) against the four indicators mentioned above (Figure 2). Circle Economy and TNO nominated the 10 highest-ranking chains. Through consultations with the municipality and local stakeholders, two value chains (construction chain and organic residuals chain) were selected as the focus areas for the development of an action plan.

Figure 13: Results of the qualitative ranking of sectors grouped into value chains in Amsterdam Metropolitan Area



Source: Circular Amsterdam, p. 82

Following the CCS process, the city of Amsterdam conducted two municipality-wide programmes to test approaches to circularity (*Learning by doing* and *Circular Innovation Programme*), before drafting its circular economy strategy in 2019 (Amsterdam Circular 2020-2025 Strategy).

The construction value chain, the organic value chain and the consumer goods value chain are the focus areas of the 2019 circular economy strategy. No further information regarding the selection or confirmation of the focus areas is provided in the 2019 strategy. All the three focus areas of the Amsterdam’s Strategy are featured in the Netherlands’ national circular economy strategy. It is likely Amsterdam also adopted these specific focus areas given their alignment with the national strategy.

3.3.2 Slovenia

The ‘Roadmap towards a Circular Economy in Slovenia’ (2018) is another good example of the selection of focus areas. Slovenia followed a participatory process, involving stakeholders from all regions and organizational levels in the country. As a result, the roadmap is informed by the stakeholders’ needs and awareness on the opportunities it might generate.

The Slovenian government’s Office of the Prime Minister contracted Circular Change (a Ljubljana-based private non-profit organisation) to prepare its circular economy roadmap in 2018. Circular Change developed an approach for the selection of focus areas which paid attention to local stakeholders’ perspectives, specific national circumstances and existing private sector ecosystems. Data points - where available – were used to inform the selection, and case studies featuring leading firms in each area were used as evidence of current best practices. The details of the process used to identify focus areas are provided hereunder²⁶:

- A public announcement with support from senior members of the government (Prime Minister).

²⁶ Roadmap towards the Circular Economy in Slovenia, p. 49

- 12 regional consultations organised with the support of the Prime Minister's office and the Ministry of Environment and Spatial Planning to provide inputs on an initial draft the roadmap (consultation attendees and locations not provided).
- The preparation and circulation of a first draft.
- Meetings and engagement around the first draft (engagement details are not provided).
- An updated version of the roadmap is prepared, launched and disseminated during a conference organised by Circular Change.

Data points used to inform the selection of the roadmap's focus areas include²⁷:

- Materials consumed domestically that are imported (%)
- Domestic recycling rate (%)
- Material productivity (PPP/kg)
- Share of renewable energy in gross final energy consumption (%)
- GDP per total greenhouse gas emissions (PPP/kg CO₂e)

The roadmap gives no detail on how these metrics were used to inform the selection of the focus areas. The outcome of the selection process is explained by a narrative for each focus area retained. These narratives cover the following eight – typically qualitative – metrics²⁸:

- Economic activities included in the focus area
- Reasons for choosing it
- How it can be measured
- Existing relevant strategic research and innovation partnerships
- Examples of good practice
- Qualitative areas of potential
- 'Promising prospects': trends, technological innovations or areas of environmental damage which provide opportunities for a new approach to reverse damage or add value
- Case studies of existing firms or Slovenian initiatives active in this focus area.

The strengths of this approach for selecting focus areas are that:

- They relate to Slovenia's perceived or evidenced strengths in terms of natural resources, infrastructure and geographic location. These are quantified by data points, when available. For example, Slovenia's forest cover is 60%, the 4th highest in Europe²⁹. This led to the selection of forest-based value chains as a focus area.
- Existing activities in each area are identified, included and promoted in the roadmap.
- Local stakeholders are a valuable source of insight on where to centre measures on. Their involvement in the drafting of the roadmaps helps to simultaneously inform the document and engage the public.

3.4 Best practice: stakeholder alignment

3.4.1 The Netherlands

The Netherlands' government's approach to stakeholder engagement and alignment for its circular economy strategy document ('A circular economy in the Netherlands by 2050') followed a structured process.

This process was initiated by a cabinet decision and contains a clear definition of who is authorised to contribute to each phase of the strategy's development.

²⁷ Roadmap towards the Circular Economy in Slovenia, p. 19

²⁸ Roadmap towards the Circular Economy in Slovenia, p. 32, following

²⁹ Roadmap towards the Circular Economy in Slovenia, p. 34

Following the publication of the cabinet's decision, the strategy cascaded down to more granular levels of decision making. The more detailed and sector-specific the decisions taken, the greater the number of stakeholders involved in the consultation.

The Netherlands' circular economy strategy is at the crossroad of a number of additional documents that are continuously in development. Each of these describe key aspects of the country's transition in greater detail and involves relevant stakeholders:

- A Circular Economy in the Netherlands by 2050 (core strategy -2016)
- National Agreement on the Circular Economy (letter of intent resulting from a national consultation - 2017)
- Sectoral Transition Agendas (Biomass & Food, Plastics, Manufacturing Industry, Construction, Consumer goods – 2018)³⁰
- Circular Economy: What we want to know and can measure? (monitoring framework - 2018)

The process chosen effectively combined political decision at cabinet level with engagement of various stakeholder groups into more granular decision making entities:

- 1) In 2016, the cabinet presented the government-wide 'Programme for a Circular Economy', which described the government's commitments to laying the foundation for the transition.
- 2) This government-wide programme stated that a national consultation on the Circular Economy Programme would have to be held within a year. The intent for this consultation was to engage and mobilise stakeholders for the development of the subsequent detailed sectoral transition agendas. The consultation included a wide range of political, administrative and public stakeholders as drafting partners, which committed to develop sectoral transition agendas, namely:
 - The Confederation of Netherlands Industry and Employers;
 - The Dutch Federation of Trade Unions;
 - The Trade Union Federation for highly educated professionals;
 - The Nature and Environment Foundation;
 - The Association of Netherlands Municipalities;
 - The Association of Provincial Authorities;
 - The Association of Dutch Regional Water Authorities;
 - Several ministries.

Additionally, supporting partners from financial institutions, environmental groups, entrepreneurs, employees, and knowledge institutes were enlisted to endorse the agreement, thereby signalling their support. They were not, however, attributed a clear/defined role in the process.

- 3) Drafting partners/contributors then grouped into transition teams and appointed a chairperson to guide the development of sectoral transition agendas. These teams benefited from access to public research budgets and secretarial resources.

The approach of combining a cabinet decision on Circular Economy with a subsequent public consultation meant the Netherlands' transition was considered a high-profile political initiative when stakeholders were being called to contribute to the initiative. This approach certainly helped create interest amongst stakeholders and opened doors to a wide range of groups and individuals, ensuring the stakeholder group was representative of the Dutch society. The stakeholders were also key to balancing the strategies ambition with what they considered practically achievable.

³⁰ <https://hollandcircularhotspot.nl/news/all-transition-agendas>

3.4.2 Flanders

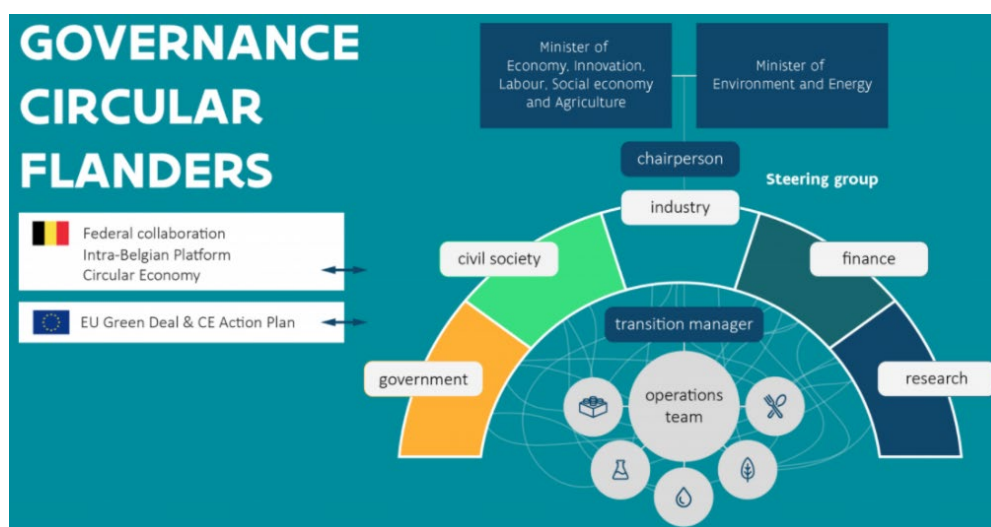
'Circular Flanders'³¹ ("CF") is Flanders approach to guide the transition towards a more circular economy. A delivery team is located at Flanders' public waste agency (OVAM) and jointly funded by the Ministry of the Economy and Innovation and the Ministry of Environment. Its self-stated purpose is to be the hub and the inspiration for action on the circular transition in Flanders.

CF was established in 2017 by merging three complementary initiatives related to circular economy into a joint group. This brought together the following entities:

- **Plan C.** It was created as a non-profit organization by OVAM in 2012. Its aim was to develop a vision, establish a learning network and support innovative projects around the Circular Economy.
- **SuMMa.** It is the Sustainable Materials Management policy research centre. It brings together universities and independent research groups to support evidence-based policy in this multi-departmental domain.
- **Agenda 2020.** It was OVAM's initiative for short-term action on materials management.

CF was subsequently headed up by a public-private steering committee. This steering committee grouped representatives from 18 organisations, government, academia, civil society, finance and industry, with the addition of a chairperson and transition manager. The committee reflects the 'Social Pentagon' (Figure 14: Governance structure for Circular Flanders).

Figure 14: Governance structure for Circular Flanders



The strengths of this approach are that by engaging a broad range of stakeholders, many diverse projects can be pursued at once and many organisations are engaged in the process.

- This approach has notably resulted in a high intake. As illustrated by the 'Green Deal Procurement' initiative, carried out by CF with three other Flanders government agencies. It was signed by more than 85 purchasing organisations in public and private sectors and supported by 50 academic/third sector bodies.³²
- Several initiatives being carried out at the same time- in a coordinated way. Out of the 45 activities defined in Agenda 2020, 10 projects are run by OVAM, 20 by industry associations and 15 by other organisations such as the Department of Economy, Science and Innovation.³³

³¹ <https://vlaanderen-circulair.be/en/blog/detail/circular-flanders-moves-into-a-next-phase>

³² Case Study Report Circular Economy Flanders (Belgium), p. 8

³³ Case Study Report Circular Economy Flanders (Belgium), p. 7

- Access to funding. CF has been able to access funds from a wide range of partners, as well as subsidies. From 2012 to 2015, CF generated a budget for activities of €5.5m.

The findings from the Flanders example are:

- Merging existing initiatives builds institutional weight and avoids competition.
- Involving a wide range of stakeholders in governance arrangements ensures the strategy can influence a large number of organisations.
- Having a large number of supporters and significant influence improves access to funding.

3.5 Best Practice: implementation measures

3.5.1 France

France's 'Roadmap for a Circular Economy' (2018) is a good example of:

- alignment of policy drafting and national legislative efforts, to support timely implementation of the measures advocated in the circular economy roadmap,
- using circular economy to trigger positive changes in different national development streams.

France's 'Roadmap for the Circular Economy', published in 2018 by the French Ministry of the Ecological Transition brings together various governmental development plans/policies such as the Energy Transition Law for Green Growth, the French Climate Plan and requirements of the European waste directive.

The roadmap considers the mobilization and active participation of stakeholders as a main challenge for the successful transition to a circular economy.³⁴

A consultation process with relevant -though not specified – stakeholders, experts and a public online participation defined 50 key measures for a Circular Economy. The measures are grouped along key themes:

- **Better Production** (7 measures – e.g. through Extended Producer Responsibility schemes ("EPR"))
- **Better Consumption** (9 measures – e.g. through the development of certification schemes for reparability of products)
- **Better Managing our Waste** (24 measures – e.g. through unification and improvement of waste collection system)
- **Mobilizing all Actors** (10 measures – through public procurement and information campaigns).

The development of the roadmap (October 2017 - April 2018) was coordinated with the subsequent drafting of France's Anti Waste and Circular Economy Law (April 2018 - July 2019) which transposes the European Waste Directive into national law in France.³⁵ This led policymakers to adopt legislative change to implement the ambitious measures of the roadmap.

In addition to enforcing an ambitious legislative package on effective waste management, the Anti-waste Law also implemented novel EPR schemes. These schemes provide a good example for the holistic transformation of the society towards a more Circular Economy, while producing positive social effects³⁶: While EPR schemes previously financed waste management, newly implemented EPR schemes support reuse-centres, providing goods and employment for people in precarious conditions.

³⁴ French Roadmap, p. 5

³⁵ French Roadmap, p. 5

³⁶ French Roadmap, p. 4

The following findings can be drawn from the French example:

- Circular economy roadmaps can effectively shape the transposition of European waste sector directives into national legislation.
- EPR schemes can be used in the context of Circular Economy to bring about benefits for the society as a whole.

3.5.2 Maribor

The ‘Strategy for the Transition to Circular Economy in the Municipality of Maribor’ (2018) sets municipal utility- and service providers in the centre of the city’s transition to a circular economy, drawing on established collaboration across different public bodies.

To coordinate actions across organizations, the Wcycle institute was established jointly by five communal companies. Wcycle targets the effective, citywide management of waste, excess heat, wastewater, unused space and the more abstract resource of ‘social environment’ in a closed urban environment.

Measures and actions by the service providers are organized along two principles³⁷:

- Available resources (excess heat, unused space, etc.) owned by utility providers are to be mutualised amongst them to enable a more efficient performance, namely limit waste. Gains will benefit Maribor’s citizens equally, as they improve basic public services.
- If these resources can’t be utilized by the utility providers, they are directed to Maribor’s private sector. This ensures that potential gains remain within the city and potential negative impacts aren’t externalized.

Maribor’s circular economy strategy defines seven “strategic project areas” in which public service providers can define actions of intervention, namely³⁸:

- Municipal waste services.
- Use of processed soil and construction and demolition waste in urban buildings.
- Management of surplus heat and renewable energy.
- Sustainable mobility, urban transport and joint service.
- Reuse of recycled water and alternative water resources.
- Sustainable land management and regeneration of degraded areas.
- Co-operative economy network.

The strategy describes activities for each “strategic project area”. These activities are all within the competence of public companies. The proposed activities range from smaller administrative changes (unification of public fleet requirements to ease reparability and management) to actions requiring a longer time horizon, such as adapting the city’s water network to handle recycled urban water.³⁹ The private sector is involved in the transition to a circular economy through a network of co-operative partners. The municipality of Maribor signals its intention to support non-governmental organizations that are part of the network of private partners with legislation and more favourable terms⁴⁰, however no further specifications are available on this aspect in the circular economy strategy of Maribor.

³⁷ Strategy for the transition to Circular Economy in the Municipality of Maribor, p. 13

³⁸ Strategy for the transition to Circular Economy in the Municipality of Maribot, p. 16

³⁹ Strategy for the transition to Circular Economy in the Municipality of Maribor, p. 29

⁴⁰ Strategy for the transition to Circular Economy in the municipality of Maribor, p. 29

3.6 Best practice: monitoring

3.6.1 The Netherlands

The monitoring framework of the circular economy, as elaborated by the Netherlands, assesses the country's transition to circular economy, as well as the abiotic resource⁴¹ consumption across different metrics per focus area.⁴² The framework sets out to present in a visual manner the progress achieved and to highlight links between actions and their impact on material consumption.

In 2018, The Netherlands' Environmental Assessment Agency, Statistics Netherlands (CBS) and the National Institute for Public Health and the Environment (RIVM) published a common monitoring framework ("the monitor"). The monitor tracks both the character and quality of the actions already implemented and their effect on resource consumption. Information is collected at different aggregation levels (national, focus area, product groups) to enable targeted action.

The measurement of the effects of the circular transition primarily focuses on natural resource consumption and uses indicators such as material use, carbon emission (direct and indirect) and self-sufficiency.⁴³

Significant effects on national resource consumption are anticipated with a delay of several years, as circular measures need time to generate and demonstrate impact. These are, however, difficult to attribute to individual actions or policies. To counter this, in addition to monitoring resource consumption, the monitor assesses the transition in the Netherlands according to two other dimensions⁴⁴:

- **Transition dynamics.** This dimension quantitatively and qualitatively assesses the changes of/for specific product groups (proportion of circular products/ linear products, level of co-operation between chain partners, removal of restrictive rules).
- Progress made on the **implementation of the government-wide policy programme** to increase the speed of the transition dynamics. The actions of the government programme are described along SMART (Specific, Measurable, Achievable, Realistic, Timely) criteria to enable clear tracking of their progress.

The monitor will be continuously updated to fill gaps which currently cannot be measured such as the impact of autonomous factors (e.g. economic growth) on resource consumption. Sectoral transition agendas will also be developed to develop additional dimensions/ information to feed the monitor by focus area.⁴⁵

3.6.2 Finland

Finland measures its success in the transition to a circular economy by tracking the implementation of a clearly defined action plan and by measuring the overall circularity of the country through a set of global indicators.

⁴¹ These are all non-renewable, non-recyclable resources of natural origin that are usable in one or more production processes.

⁴² The monitor tracks the countries overall resource consumption, however, biomass is not included, as bio-based material solutions are to replace abiotic materials in many sectors and therefore are expected to increase.

⁴³ Circular Economy: What we want to know and can measure: System and baseline assessment for monitoring the progress of the circular economy in the Netherlands, August 2018; p.8

⁴⁴ Circular Economy: What we want to know and can measure: System and baseline assessment for monitoring the progress of the circular economy in the Netherlands, August 2018; p.9

⁴⁵ Transition Agenda: Circular Construction Economy, p. 26

Finland's "Leading the cycle- Roadmap towards Circular Economy (2016-2025)" (2016) sets out a specific plan to initiate pilots and research projects over a nine-year period. The roadmap sets dates for securing project funding, defining implementers and sets annual targets for the number of pilots to be launched in a specific year⁴⁶. This allows to visualize and to monitor the speed at which circular economy actions are implemented and also provides a foundation for the assessment, at a later stage, of the effectiveness of policies. In addition, an intermediate assessment of the roadmap's implementation was scheduled for 2018⁴⁷. However, no report on these results is publicly available. A post-implementation assessment to understand the transition's impact on competitiveness, growths and jobs created will be carried out in 2025.

In parallel to the drafting of the Finish Roadmap by the Finnish Innovation Fund SITRA, the following entities - the Finnish Prime Minister's office, the World Bank, OECD, UNEP and the Green Growth Knowledge Platform (GGKP) - defined a set of integrated indicators. These indicators track the progress, at international, national and regional level and across different policy paths (circular economy, bio-economy, clean-tech, national sustainable development, program of green growth) of the national and international pledges of the Finnish authorities ⁴⁸.

The Key Indicators for Green Growth and Material and Resource Efficiency in Finland (developed in 2014-2016) group 19 indicators along the following three themes:

- A low carbon and resource efficient society
- Ecosystem activities and the sustainable use of natural services
- Economic possibilities and policy instruments

⁴⁶ Leading the Cycle, 2016, p. 34

⁴⁷ Leading the Cycle, 2016, p. 34

⁴⁸ Key Indicators for Green Growth and Material and Resource efficiency in Finland, 2016, p. 6

Table 6: Indicators for Green Growth in Finland

Theme	Goal	Key Indicator	
A low carbon and resource efficient society	Climate Change mitigation	A1 Greenhouse gas emissions	
		A2 Energy use	
		A3 Share of renewable energy in final energy consumption	
	Resource efficiency	A4 Raw material consumption	
		A5 Amount and recovery of municipal waste	
		A6 Amount and recovery of industrial and construction waste	
Ecosystem activities and the sustainable use of natural services	Soil and primary growth	A7 Change of land cover (%)	
		A8 Annual increment of growing forest stock and annual drain	
		A9 Growth of agricultural biomass	
	Water resources	A10 Ecological status of surface waters	
		A11 Fish production in Baltic Sea and inland waters	
	Air quality	A12 Annual mean particulate matter PM2.5 concentrations	
	Biodiversity	A13 Threatened species % of the total estimated number of species	
	Economic possibilities and policy instruments	Research and development	A14 Government R&D budget related to environment
			A15 Environment related patent applications
Green products and services		A16 Gross value added in the EGS sector (% of GDP)	
		A17 Gross value added in the bio-economy sector	
		A18 Environmental protection investment and expenditure in industry	
Policy responses		A19 Environmentally related taxes	

30 additional background indicators help to create a more holistic picture of the transition by providing related indicators such as material efficiency (economic growth related to material consumption, broken down to material level).⁴⁹

⁴⁹ <https://www.sitra.fi/en/articles/how-are-we-progressing>

4. Conclusions

Circular Economy is a new thematic approach and in many respects still developing. This makes the design of strategies for its implementation particularly challenging, and therefore the analysis of experiences from pioneering countries, regions and cities is extremely relevant to reduce “trial-and-error” approaches.

Iterative processes designed to ‘learn by doing’ on small scale pilots have helped early movers refine their approach, whilst acknowledging their specific context and vision of the Circular Economy. The effects of the initiatives adopted by these early movers on material consumption and the character of a country’s economy are not yet clearly visible, as they require time to materialize. However, the success of a variety of policies, incentives and conditions related to their implementation can be drawn from case studies:

- A clear and precise definition of objectives with varying time horizons such as those set out in the Netherlands’ Circular Economy Strategy enables effective day-to-day steering of the strategy and lays the foundations of a framework to monitor/measure success.
- Setting clear responsibilities and time horizons for the implementation of measures - as Finland’s Roadmap to a Circular Economy - is a precondition to ensuring their successful implementation.
- Using the Circular Economy as a means to achieve global policy objectives - as Sweden’s Circular Economy strategy - allows for the meaningful integration of national/regional/local measures into the bigger (economic) development picture.
- Applying a clear and data-informed methodology for the selection of focus areas – as Amsterdam’s Circular Economy strategy helps to identify low hanging fruits and easy wins.
- The Netherlands’ example shows the value of a phased process of stakeholder involvement, starting with a strong political commitment. This has helped to generate momentum and engage stakeholders further down the line when they could not be reached during the elaboration stage.
- Flanders successfully involved all five stakeholder groups in its ‘social pentagon’ (government bodies, industry and business, civil society, knowledge institutions and the financial sector) and integrated them into a steering committee for circular economy transition, ensuring a change of mind-set of the entire society and a momentum on circular economy.
- As shown by the Flanders example, setting up pilot projects and learning during this first phase helps to minimise risks and to target actions for a subsequent scaling phase.
- Service and utility providers are ideal candidates to help place Circular Economy firmly at the core of a municipality. As the Maribor example shows, these players can draw on existing processes for communication and decision making.
- Focussing circular measures on economic clusters (e.g. hotels, harbour, and large events) as Amsterdam did, is an effective way to link different value chains and generate cross-sectoral momentum.
- The Netherlands’ example demonstrates that a consistent framework for measuring progress and effects of the transition to circularity is key to identify the actions that need to be targeted/prioritised.
- Using a global set of Key Performance Indicators for green growth – as Finland has done with its Key Indicators for Green Growth and Material and Resource Efficiency - allows for the monitoring and assessment of progress across the various sectorial and horizontal policies.

While more and more circular economy strategies are drafted across Europe, early movers are often entering a new level of policy cycles, which could be referred to as the second phase of circular economy strategies. Following the initial phase of testing and piloting, this second round of consultations and efforts are set to scale up circular measures and efforts and to maximise impact.

By now, a solid set of core best practices in strategy making has been established across Europe, as reflected in this working paper. Similarly, barriers and challenges to the implementation of a circular economy are clearly outlined. One of the challenges in the upcoming policy cycles/consultations will be to remove these bottlenecks to push the circular economy agenda forward and achieve more circularity.

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