

MANUAL



# MEASURING & MONITORING CIRCULARITY IN EUROPEAN REGIONS

1<sup>ST</sup> EDITION - MAY 2023

## Experience from regions



*"Completing the tool with regional stakeholders gave us valuable insights on further accelerating the transition towards a circular economy. Plus it provides state of art information on circular policy interventions to be taken."*

**Sander Bos. Friesland, the Netherlands.**

*"This is really an interesting and useful assessement tool. It's very well thought out with a very ambitious take on how to promote circular economy in regions."*

**Carlos Silveira. Centro, Portugal.**

*"We gladly received the results of the Circular Benchmark Tool. It is a great job, thoroughly investigated and I really enjoyed your report. It has a deep scientific approach focusing always to the point, while the results provide valauble information for each participant."*

**Yannis Chatitakis. Crete, Greece.**

*"I found it really helpful an inspiring! It brought us a great idea of where to improve and which pathways to follow."*

**Mirko Kruse. Hamburg, Germany.**

*"CBT helped us to quickly visualize the first insights into the status quo without deep expert analysis. We will certainly use it together with more experts to collect recommendations and monitor progress."*

**Marcin Staniszewsky. Opolskie, Poland.**

*"We have performed the self-assessment on behalf of the North-East Region and we have tried to be very objective in the process of fulfillment of the criteria contained by the tool. For us, filling the tool and receiving the results represent an interesting way to assess our region and to select adequate pathways to develop the circularity of our region."*

**Adrian Andrei. North East, Romania.**

*"Filling in the Benchmark Tool was a very fruitful exercise with many features that we would like to further develop and implement."*

**Marius V. Niculae. West, Romania.**

*"The region is in the process of setting up a new strategy and a mechanism in the near future. So the tool as I understood it, help us to identify areas that we as a region must benchmark and monitor to set up a new organization unit as soon as possible."*

**Stavros Mantzanakis. Central Macedonia, Greece.**

# Meet the CBT team



**BART**

*Bart is the owner of and employed by ProActBlue, which is the co-developer and owner of the Circular Benchmark Tool for European regions. The tool was developed as a prototype in the INTERREG REPLACE project. The tool became an online self-assessment with the support of the ERDF, and it is now applied in the HORIZON EU GREEN DEAL project Frontsh1p. Bart have been working on several European projects funded by Horizon, INTERREG, and ERDF. In addition, he has been involved in the initiation and development of Circular Friesland, he is engaged in Circular Groningen and in the management of a cross-regional circular economy project in the Northern Netherlands.*

**CONTACT: [bart.volkers@proactblue.nl](mailto:bart.volkers@proactblue.nl)**



**ANNE**

*CE researcher and indicator developer, Anne co-created the CBT together with Bart and has been researching and developing relevant metrics to assess regional circularity. She has an extensive educational and professional background in circular economy and is involved in related initiatives as of 2013. Anne drives the transition taking a global mindset in various countries and sectors. Applying circular economy principles in practice is what Anne is most passionate about.*

*Anne is often invited to speak at events and is a visiting lecturer at various universities. She published a book and various articles related to circular economy. Apart from her business experiences, Anne is determined to apply circular economy principles also in her private life.*

**CONTACT: [anne@rademakerconsulting.com](mailto:anne@rademakerconsulting.com)**



**MATTIA**

*Mattia joined ProActBlue and the CBT team as a Circular Economy consultant when the tool was just ready to become an online platform. He has been working on the creation of a network of regions, knowledge institutes, and other organizations willing to use the assessment tool and support the transition towards circularity. Also, he has been creating content to promote the tool and facilitate its accessibility through presentations, webinars and sessions to support regions in the assessment. With a background in Urban Environmental Planning & Management he stands for the recovery of cities and regions. He is also passionate about graphic design, using his skills to support the CBT content.*

**CONTACT: [mattia@proactblue.nl](mailto:mattia@proactblue.nl)**



**TOM**

*Tom is an intern in Marketing and Communication and a student at Hanzehogeschool. He joined ProActBlue and the CBT team to improve the CBT dissemination and development. Tom recently joined the CBT team with a great passion for both online marketing and sustainability. As a Business and Administration student, he takes the opportunity to enhance his marketing and communication skills even further, especially in a context where sustainability and circularity are core topics. For these reasons, Tom is confident that this internship will serve as a stepping stone to a successful career.*

**CONTACT: [tom@proactblue.nl](mailto:tom@proactblue.nl)**

Thanks to all partners and initiatives that have been making the Circular Benchmark Tool possible

## Partners



## Regions



## Projects





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## Foreword

The transition to a **circular economy** is not a competition between regions, it is a competition that we can only win in cooperation. This was and is the central premise of the Circular Benchmark Tool (CBT). The transition to a circular economy is not a straight line from A to B, but it has many bumps and challenges along the way. Therefore, the only way we can succeed is through working together and sharing our knowledge.

In 2020, we began to develop the tool in partnership with several other regions as part of the Interreg Europe REPLACE project from the province of Fryslân - a province of 650,000 inhabitants in the North of the Netherlands. Fryslân has the ambition to be leading in Europe in the circular transition and has set the tone in recent years with several iconic projects. For us, the CBT is very important. By systematically going through the questionnaire and mapping the various indicators, we discovered that, in all our drive and enthusiasm, we still have important steps to take in multiple crucial areas. A valuable insight that we would not have gained without the CBT.

In addition, after reading this manual and by actually starting the CBT, you will find that the tool is very user-friendly. From its launch in 2019, this has been a key feature which has been amply met in our opinion. The questions are relatively easy to answer both by individual decision-makers and with a group of stakeholders. This gives you a very quick overview of the state of play in your region. We believe that the CBT can be a valuable asset for your region as well, and we look forward to sharing our knowledge and experiences with you. Let's work together towards a circular economy, one step at a time.



Sander Bos

Strategic advisor and project lead Circular Economy

Province of Friesland

## Executive summary

Regions have a significant opportunity to drive the transition towards a circular economy. They can do so by creating conducive environments for circular business models, mobilizing stakeholders to take action, and tailoring circular solutions to their specific needs and contexts. Citizen and stakeholder engagement is crucial to ensuring that the transition to a circular economy is inclusive, equitable, and beneficial for everyone.

The Circular Benchmark Tool (CBT) is a ground-breaking solution designed for and by regions to assess and compare circular economy performance. The CBT evaluates progress across six overarching themes: circular procurement, access to funding, circular society, value chain activation, good governance, and an integrated policy framework. The CBT provides a comprehensive and standardized approach for measuring circularity, generating insights and reports, and identifying areas for improvement.

The CBT was developed using an iterative process that involved early testing and feedback, as well as the implementation of continuous improvements. To complete the assessment, regions must answer 150 statements related to the six indicators. Once the assessment is complete, regions receive a PDF report that summarizes their performance based on the six indicators. The report includes various charts to visualize performance on each indicator and comparisons with other regions. Using the CBT positions regions as leaders in the transition to a more sustainable future. A user manual has been developed to guide users through every step of the process. By using the CBT, regions can take the first steps towards a sustainable and prosperous future.

The CBT is an invaluable resource for any region looking to improve its circular economy performance. Whether you are just starting your journey towards circularity or looking to enhance your current efforts, this tool can help you achieve your circular economy goals.

# 1. Introduction

The Circular Benchmark Tool (CBT) is an innovative solution that enables regions to achieve their circular economy goals. The tool was originally developed for the province of Friesland in the Netherlands, in their need to assess the current level of circularity and compare it with other regions. As the tool is designed by regions for regions, it has gained recognition as a valuable resource for any region looking to become a frontrunner on circularity.

By using the CBT, regions can assess their circular economy progress, generate valuable insights and reports, and identify areas for improvement. The tool also allows regions to learn from the experiences and best practices of other regions, facilitating knowledge exchange and cross-regional learning about the circular economy. Designed and developed in 2020, the CBT provides a comprehensive and standardized way of measuring circularity. The tool uses six overarching themes that are important for regions striving to improve their circular economy performance:

1. **Circular Procurement:** By increasing procurement based on [circular economy principles](#), regions can create a strong demand for circular products and services, thus stimulating circular [value chains](#) and supporting circular businesses.
2. **Access to Funding:** Adequate funding is crucial for supporting circular activities, projects, and organizations. By ensuring access to public and private finance, regions can incentivize circular economy innovation and accelerate the transition to a more circular economy.
3. **Circular Society:** The development and deployment of circular knowledge and skills are essential for fostering a circular economy. By creating awareness and motivating people, regions can encourage citizens to adopt circular behaviors and contribute to the circular economy.
4. **Value Chain Activation:** A systemic circular solution requires collaboration and cooperation among stakeholders within and across [supply chains](#). By stimulating circular value creation, regions can create a circular ecosystem where businesses can thrive, and stakeholders can benefit from circular innovations.
5. **Good Governance:** Effective governance is essential for facilitating and promoting the circular economy. By orchestrating and enabling the transition to a circular economy, regions can create a favorable environment for circular businesses and accelerate the adoption of circular principles.
6. **Integrated Policy Framework:** A coherent and integrated circular policy domain is necessary for aligning policy instruments and legislation with circular principles. By establishing a policy framework that supports the circular economy, regions can create an enabling environment for circular businesses to thrive, and stakeholders to benefit from the circular transition.

To help users get the most out of the CBT, this user manual has been created to guide them through every step of the process. The manual covers several important topics, including a step-by-step guide on how to start and set up a profile for the tool, how to retrieve and interpret results, and how to understand regional performance to identify areas for improvement. By using the standardized assessment approach around the six overarching indicators, regions can easily compare their circular economy performance with other regions and identify best practices for achieving their circular economy goals. Following the guidance provided in this user manual, regions can confidently take the first steps towards a more sustainable and prosperous future.

## 2. Motivation to change course

The transition towards a circular economy is becoming increasingly important for regions worldwide. The traditional *linear economy* is unsustainable, leading to resource depletion, environmental degradation, and economic instability. On the other hand, a circular economy offers a promising solution, providing a pathway to more sustainable, resilient, and prosperous regions. By embracing the circular economy, regions can play a vital role in creating a sustainable future that benefits both people and the planet. Are you ready to take action and join the growing movement towards a circular economy? This chapter dives into the rationale behind the shift from a linear to a circular economy and the role that regions can take to accelerate this transition.

### 2.1. Global need for changing course

The world's population is projected to reach 9.7 billion by 2050, accompanied by a significant rise in the middle class and an explosive demand for raw materials. This rapid growth in demand for resources is unsustainable in the long run. Therefore, people worldwide are beginning to recognize the need to shift from a linear economy, which is based on extraction, consumption, and disposal, to a circular economy, which prioritizes regeneration and restoration. This transition is essential for several reasons, as illustrated in Figure 1.



**Figure 1** – Regional benefits for transitioning to a circular economy

The benefits of a circular economy are significant and wide-ranging, from reducing waste and pollution to improving resource efficiency and creating new business opportunities. As a result, decision-makers in both the public and private sectors are prioritizing the transition towards a circular economy. National circular action plans are being implemented, and examples of successful policies and best practices from businesses can be found on the [EU Stakeholder Platform](#). By embracing a circular economy, regions can reduce their environmental impact, promote sustainable economic growth, create new business opportunities, and ensure a better future for generations to come.



## 2.2 Role of regions in the transition

Regions have a unique opportunity to drive the transition towards a circular economy and create sustainable, prosperous communities. As key players in driving circular economy innovation, they can lead the way in building local circular value chains, creating enabling environments for circular business models, and mobilizing stakeholders to act. By creating policies and incentives that promote circular practices and fostering collaboration among stakeholders, regional authorities can create a powerful force for change. By creating regional circular networks, regions can facilitate the sharing of resources, knowledge, and expertise, and support the development of circular value chains, leading to increased competitiveness, job creation, and economic growth. Regions are also ideally placed to address local challenges and opportunities, and to tailor circular solutions to the specific needs and contexts of their communities. By engaging with citizens and stakeholders, regions can ensure that the transition to a circular economy is inclusive, equitable, and beneficial for all. Therefore, it's time for regions to take action and join the circular economy movement.

## 2.3 Need for circular indicators

By taking action in line with the [Circular Economy Action Plan \(CEAP\)](#) and respective national CE plans, regions can unlock economic benefits, reduce waste, and create new business opportunities, all while promoting sustainable development. While setting targets may be relatively straightforward, monitoring and measuring progress towards a circular economy can be challenging, due to reasons mentioned in Figure 2.



**Figure 2** – Regional challenges in assessing circular economy

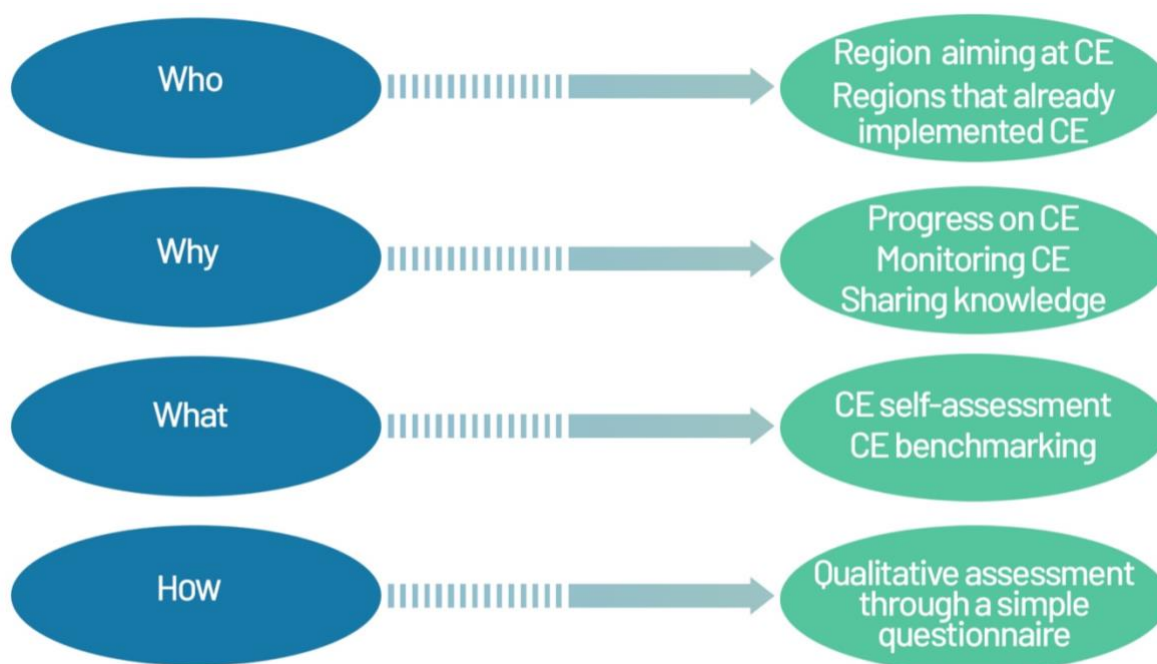
With determination and the right tools and frameworks, regions can overcome these challenges and achieve their goals. With the Circular Benchmark Tool (CBT), regions can deepen their understanding of circularity and accelerate their progress towards a more sustainable future, contributing to the global effort to create a more circular and resilient economy. The CBT provides a comprehensive and standardized way of measuring circularity. The tool uses six overarching themes that are important for regions striving to improve their circular economy performance: Circular Procurement, Access to Funding, Circular Society, Value Chain Activation, Good Governance, and an Integrated Policy Framework.

### 3. Introducing the Circular Benchmark Tool

The Circular Benchmark Tool (CBT) is developed to help regions achieve their circular economy goals by assessing their progress towards circularity, generating valuable insights and reports, identifying areas for improvement, and facilitating knowledge exchange and cross-regional learning. Do you want to confidently take the first steps towards a more sustainable and prosperous future? This chapter will introduce what CBT is all about, how it is set-up and how other regions experience working with the tool.

#### 3.1 Purpose and objectives of the Circular Benchmark Tool

No country, as of yet, satisfies the basic needs of its citizens while respecting the earth's **planetary boundaries**. Transitioning to a circular economy requires a global effort, and the CBT was developed to help regions measure and benchmark their circular performance. It promotes cross-regional learning and knowledge exchange through an accessible and practical tool, creating synergy and transparency without conflict of interest or competition. Refer to Figure 3 for a summary of CBT.



**Figure 3** – Summary of Circular Benchmark Tool characteristics

The CBT aims to include 50 regions by 2023, promoting cross-regional learning and knowledge exchange without stimulating competition. Its main users are regional administrators, many of whom are non-experts. To ensure clarity, the indicators are communicated in an understandable and meaningful way, simplifying the complexity and detail of the original data. See Figure 4 for design requirements.

User demands	Simple and easy to use and apply Tool for knowledge exchange, not competition
Input demands	Focus on what can be directly influenced by the region Complementary with existing quantitative tools
Output demands	Easy to compare results with other regions

**Figure 4** – Design requirements Circular Benchmark Tool



**Figure 5** – Coverage of Circular Benchmark Tool completion

### 3.2 Experiences from regions

Ever since the first launch of the CBT in 2020, various regions signed up and completed the assessment. As visualized in Figure 5 many regions around the world have used CBT to assess and benchmark circularity. The CBT has proven to be a valuable tool for regions, providing an 'eye-opening experience' that helps regions identify strengths and areas for improvement in their circular economy practices. The simple language and structured approach to measuring progress offered by CBT, have been praised by regions as they promote a more comprehensive understanding of circular economy principles. As a result, the CBT is considered a valuable resource that helps regions communicate their progress towards a circular economy more effectively. See Figure 6 for regional experiences captured in some quotes.



*'CBT helped us to quickly visualize the first insights into the status quo without deep expert analysis. We will certainly use it together with more experts to collect recommendations and to monitor progress.'*

Marcin Staniszewski, Opolskie, Poland.



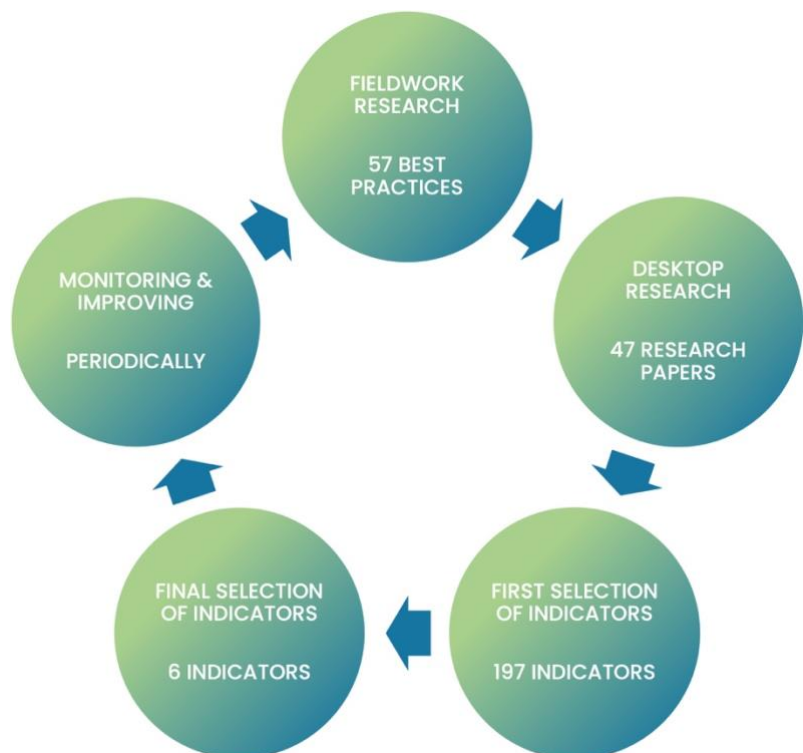
*'We have performed the assessment on behalf of the North-East region and we have tried to be very objective in the process of the criteria contained by the tool. For us completing the tool and receiving the results represents an interesting way to assess our region and to select adequate pathways to develop circularity in our region.'*

Adrian Andrei, North-East Romania.

**Figure 6** – Regional experiences and quotes

### 3.3 Methodology

The methodology behind the CBT was developed in a stepwise approach. This process was iterative by nature, allowing for early testing and feedback, and implementation of continuous improvements. In addition, uncertainty and risk were managed in an iterative process, as it allowed for adjustments and course corrections along the way. The five process steps were visualized in Figure 7 and described in detail in Annex A. The CBT was developed by collecting best practices from REPLACE consortium partners through surveys, workshops, and interviews. In addition, desktop research was conducted to gather information on how regions monitor circular economy progress globally. The findings from both the fieldwork and desktop research were used to identify potential and relevant indicators that were assessed against scoping requirements as mentioned in Annex A. Only indicators matching the scope of CBT were considered, and duplicates were removed. The remaining indicators were then categorized for a concise and understandable overview.



**Figure 7** – Stepwise methodology tool development



The CBT team continues to monitor and improve the indicators to ensure that the CBT remains relevant and effective over the long term, promoting circular practices and sustainable development.

### 3.4 Indicators

Six indicators were selected based on extensive fieldwork and desktop research and were designed to provide a comprehensive overview of circular economy progress within a region. These indicators were developed to be easily measurable, comparable, and relevant to regional authorities, policymakers, and non-expert audiences.

- 1 Circular Procurement: It is the extent to which a region and its stakeholders engage public and private suppliers to increase procurement (and do this themselves) based on circular economy principles.
- 2 Access to Funding: It is the extent to which a region enables (public and/or private) funding to finance circular activities, projects, and organizations that play a key role in the circular economy transition.
- 3 Circular Society: It is the extent to which a region creates awareness, motivates people, develops, and deploys circular knowledge and skills that contribute to the circular economy transition.
- 4 Value Chain Activation: It is the extent to which a region stimulates circular value creation among stakeholders (including businesses) within and across supply chains, resulting in or fostering systemic circular solutions.
- 5 Good Governance: It is the extent to which a region orchestrates, facilitates, promotes, and enables the circular economy transition.
- 6 Integrated Policy Framework: It is the extent to which a region establishes and integrates a coherent circular policy domain to align policy instruments and legislation with circular principles.

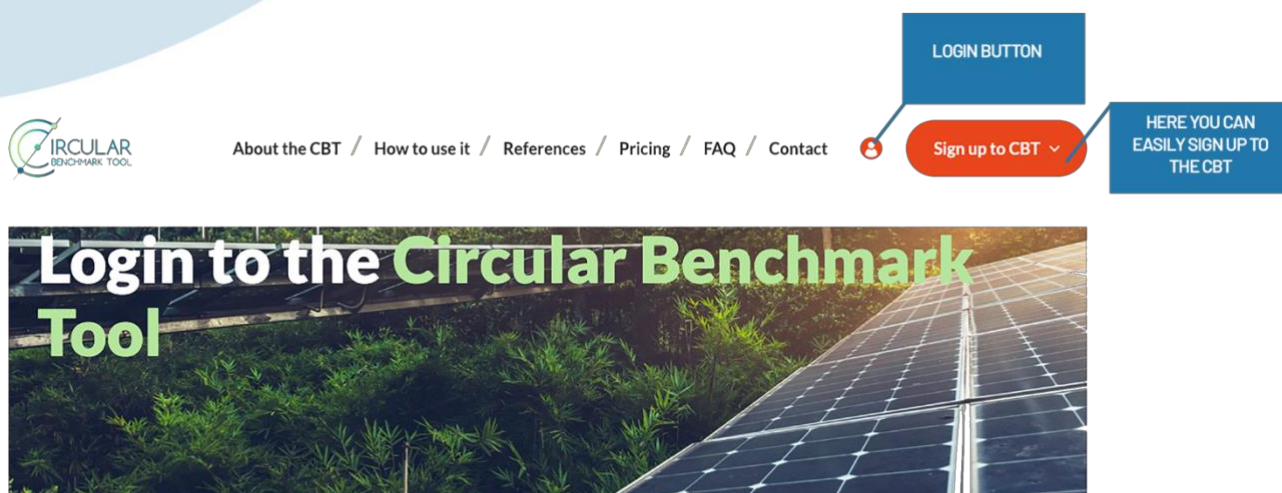
Please find detailed information on the indicators in [Annex B](#).

## 4. Getting started with the Circular Benchmark Tool

This manual aims to assist regions in utilizing the features available on the Circular Benchmark Tool (CBT) platform to their full potential. The platform is designed to be user-friendly, making it accessible to all users, regardless of their level of technical expertise. Are you ready to assess and benchmark your regional circularity? In this chapter, a practical approach to creating an account is provided and a step-by-step guide on how to take an assessment.

### 4.1 Setting up a regional account

Looking to assess and benchmark your region's circularity? Look no further than the CBT! Our user-friendly platform makes it easy to complete the assessment in just three simple steps. Please refer to Figure 8 for instructions and how to sign up/log in to CBT.



#### Welcome to the Circular Benchmark Tool

Fill in your credentials to login.

E-mail

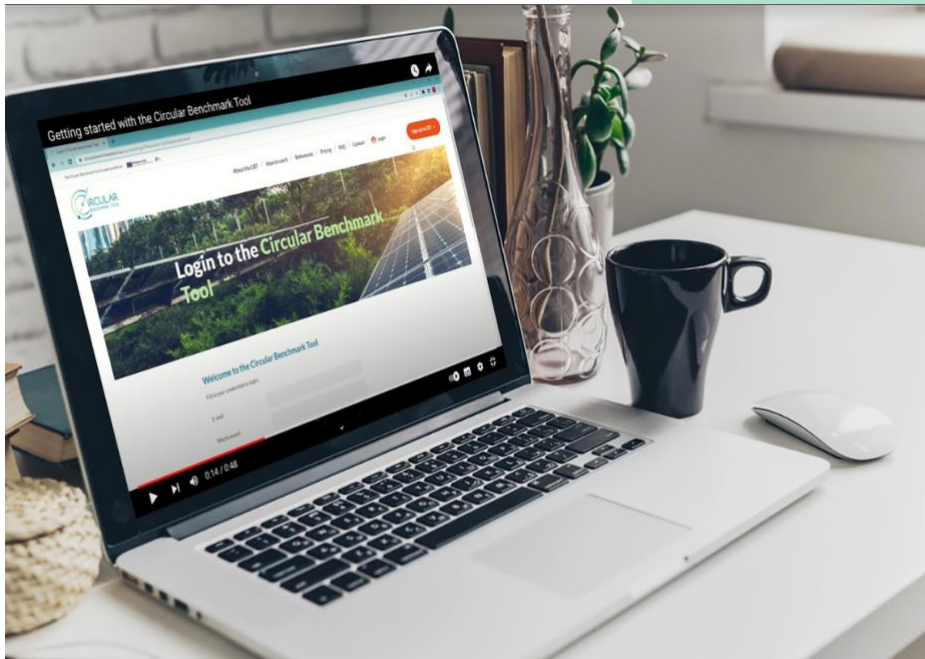
AFTER SIGNING UP  
INSERT YOUR E-MAIL  
AND PASSWORD HERE

**Figure 8** – Instructions for signing up and logging in

In three steps a user account can be created:

1. Visit our [website](#) where you'll be directed to the homepage and given the option to sign up as a region or service provider.
2. Create your account by providing some basic personal information and receive a confirmation email from the CBT team.
3. Log in and access the tool to start the assessment, where you'll be supported by a range of helpful mechanisms such as tooltips, extra information tools, and examples.

Don't just take our word for it - check out [our informative video](#) on how to set up an account and access the tool today!



## 4.2 Preparing the assessment

Before diving into the assessment, there are some important things to consider. First, decide who will access the account, as only one account can be set up per region. This individual will likely involve various relevant others and departments to perform the assessment. Next, collecting relevant information about the current state may involve various interviews with [regional administrator authorities](#) and their stakeholders. These authorities have a wide range of responsibilities, including the development of infrastructure and provision of services such as water, transport, healthcare, education, infrastructure, and environmental production. The CBT is suitable for various types of regions, including provinces, metropole regions, districts, NUTS level II, and more. However, it's important to note that the role of regional administrator authorities differs per country and is constantly expanding as economic, political, and social conditions change on global and European levels. Finally, make sure to read the [terms and conditions](#) and [privacy sections](#) on the CBT website before starting the assessment. This will ensure that you have a clear understanding of the guidelines and policies surrounding the assessment process. With these steps in mind, you're ready to assess and benchmark your regional circularity with the CBT!

## 4.3 Completing the assessment

Welcome to the CBT assessment!

Once you enter the assessment environment, you can start answering statements related to the indicators using short answers such as Yes, No, Partly, or Future intention. Please refer to Figure 9. The answers Partly and Future intention are meant for those regions that plan to include the content of a statement in their future plans or are not entirely applying it to their plans.

The assessment consists of 150 statements, 5 per maturity level (5x5) and per indicator (5x5x6). If you're not sure about how to answer a statement, you can use the Save Progress button, which allows you to ask for help or consult and continue the assessment when it's possible. Therefore, it is essential to complete the assessment without rushing, but rather with the time needed and by choosing the answers thoughtfully, to retrieve an accurate and truthful results overview. It is recommended to support answers with related documents when that is possible, in case they are not confidential.

The screenshot shows the assessment interface for '1 Circular Procurement'. It includes a 'Save Progress' button (with callout: 'YOU CAN ALWAYS PAUSE THE ASSESSMENT'), a 'Back to dashboard' button, and a 'Mapping Assessment' section. The 'Mapping Assessment' section contains text about procurement overview and competencies, with a callout: 'FURTHER INFO AND TOOL TIP ARE AVAILABLE HERE'. Below this is a dropdown menu for 'Answer' with options: Yes (checked), Partly, Future intention, No, and Yes. A callout above the dropdown says: 'IT IS POSSIBLE TO SUPPORT AN ANSWER WITH DOCUMENTS'. To the right of the dropdown are two 'Upload file' buttons, with a callout: 'If possible: Include documents'. At the bottom are 'Previous' and 'Proceed' buttons, with a callout: 'SUPPORT DURING THE ASSESSMENT'. On the right side, there is a vertical navigation bar with icons for help, information, email, and navigation, with a callout: 'INDICATORS ARE ALWAYS EXPLAINED'.

**Figure 9** – Instructions for completing the assessment

Remember to take your time and be thoughtful in your responses to retrieve the most accurate and relevant results. We wish you the best of luck on your circularity journey!

## 5. Retrieving and interpreting results

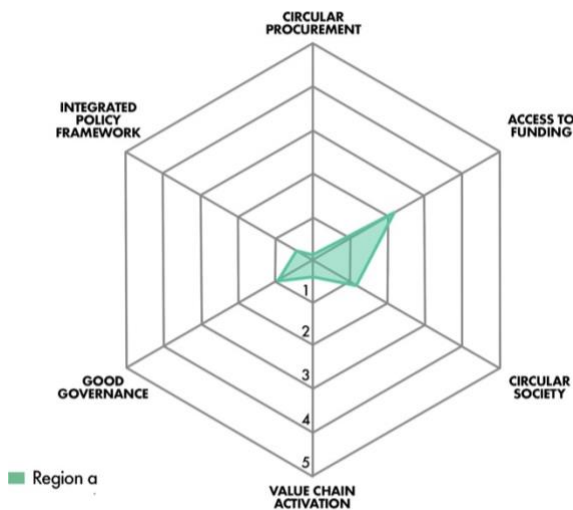
*It is essential to remember that the Circular Benchmark Tool (CBT) results should not be viewed as a final verdict on your regional circularity, but rather as a starting point for identifying strengths and weaknesses and developing strategies for improvement. Therefore, it is crucial to approach the interpretation of results with a critical mindset and use them as a tool for continuous improvement. It is important to keep in mind that the CBT tool is only a means to an end, and the real value lies in the insights gained from the assessment results. Are you ready to dive in and explore how to make the most out of your CBT assessment? In this chapter, we will guide you through the process of retrieving and interpreting your CBT results. We will discuss how to access your results, the different formats they are presented in, and how to interpret them in the context of your regional circular economy goals.*

### 5.1 Report and charts

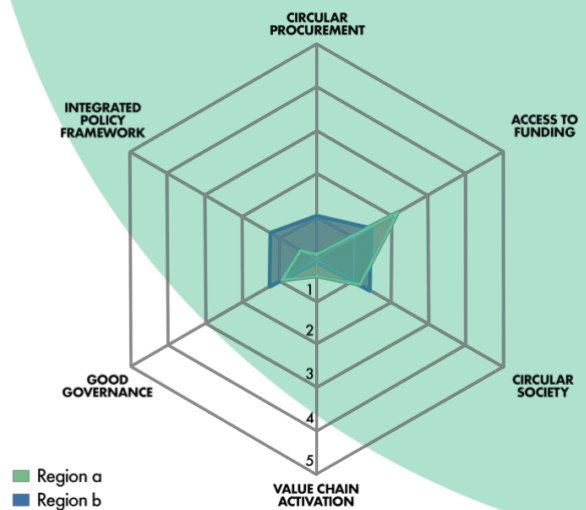
Regions that complete the CBT receive a PDF report that outlines their circular economy performance based on the six indicators. The report includes a summary of the assessment results, including the user's overall score, individual section scores, and performance on specific questions. The CBT report is also a valuable tool for communicating with stakeholders and demonstrating the region's commitment to sustainable development. By completing the CBT, regions signal their willingness to take concrete steps towards a circular economy and position themselves as leaders in the transition to a more sustainable future. Furthermore, regions that participate in the CBT benefit from access to a network of peers and experts, which allows for cross-regional learning and knowledge sharing.





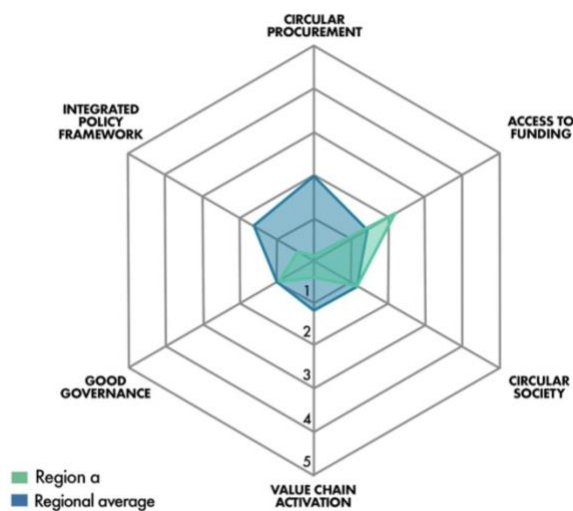


**Figure 10** – Example of visualization of regional performance

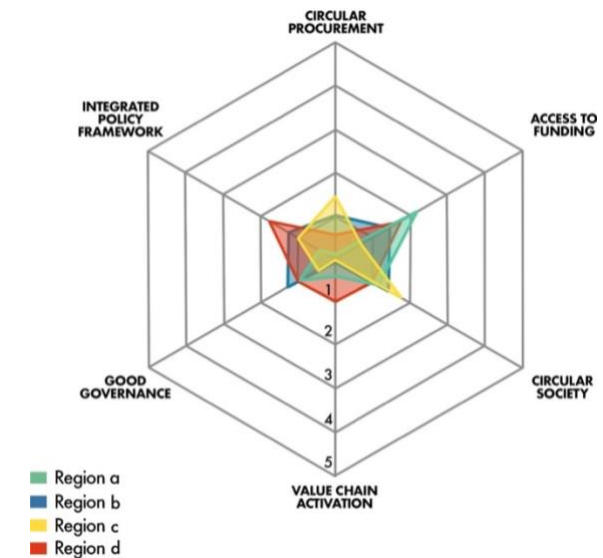


**Figure 11** – Example of visualization of regional benchmarking between two regions

The report includes various charts. Regions have the possibility to visualize their regional performance on circularity (Figure 10), and to compare their performance with another region (Figure 11).



**Figure 12** – Example of visualization of regional benchmarking with regional average



**Figure 13** – Example of visualization of regional benchmarking between multiple regions

Furthermore, there is the opportunity to compare a regional performance with the regional average based on other regions' performance (Figure 12), and to obtain a comparison between more regions to enhance the benchmarking experience (Figure 13). This experience is meant to motivate regions in learning from each other by exchanging knowledge and insights about their activities within circular economy.

## 5.2 Explanation of maturity and average score

The maturity score ranges from 1 to 5, where level 1 corresponds to "Mapping," and level 5 corresponds to "Leading by example." This score evaluates the region's performance until the first non-"Yes" answer is given. If an indicator receives a score of 0, it means that there was already a non-"Yes" answer during the Mapping assessment. Thus, no points are given for the Mapping maturity level or the higher levels (Planning, Doing, Checking & Acting, and Leading by Example). On the other hand, the average score ranges from 0 to 1, where 0.2 corresponds to Mapping, 0.4 to Planning, 0.6 to Doing, 0.8 Checking & Acting, and 1 to Leading by example. This score takes into account all answers given during the assessment, including those that were "Yes," "Partly," or "Future intention." However, no points are given for the "Partly" or "Future intention" answers. Refer to [Annex C](#) for a detailed explanation of the maturity types. An overview of the results is provided in table format (with stars) in both the PDF generated report, as well as in the online dashboard. Refer to Figure 14 for an example. In this overview both the maturity and average score are shown.

[Back to dashboard](#)

### Circular benchmark results

Indicators	Rating	Maturity score	Average score
1 Circular Procurement	☆☆☆☆☆	0	0,16
2 Access to Funding	★☆☆☆☆	1	0,28
3 Circular Society	★★☆☆☆	2	0,44
4 Circular Value Chains	☆☆☆☆☆	0	0,2
5 Good Governance	★★☆☆☆	2	0,4
6 Intergrated Policy Framework	☆☆☆☆☆	0	0

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**Figure 14** – Overview of circular scoring per indicator

## 5.3 Pricing

The CBT is a powerful and free online tool that aims to accelerate the circular economy transition in regions. The CBT was initiated by the Province of Friesland and further developed by various projects, such as REPLACE Interreg Europe, SNN, European Regional Development Fund, and Frontsh1p. The tool is co-developed and currently owned by ProActBlue and Rademaker Consulting. The CBT assessment and benchmarking functionalities are freely available for regions. This means that regions can easily assess their current circular economy performance and benchmark it against other regions. In addition, the CBT provides guidance and recommendations to help regions accelerate their circular economy transition. To further support the adoption of the CBT, various workshops and webinars are taking place periodically to introduce new regions to the tool and share best practices.

Videos and user manuals are also available to help the regions understand the purpose of the tool, how to start and complete the assessment, and how to interpret results. If you require additional support, customized consultancy services or knowledge exchange sessions between regions are available on demand. We understand that every region has unique needs and challenges, and we are here to help you overcome them. We are currently exploring the continuity of CBT in potential membership forms. We believe that this tool has the potential to revolutionize the circular economy transition in regions, and we want to make it easily accessible to everyone. Please reach out to us if you need support by your regional circular economy action plan, if you want or need to share knowledge, or simply if you want to collaborate. We can guide your journey and link you with regions to accelerate the journey. Let's work together to create a more circular and sustainable future!

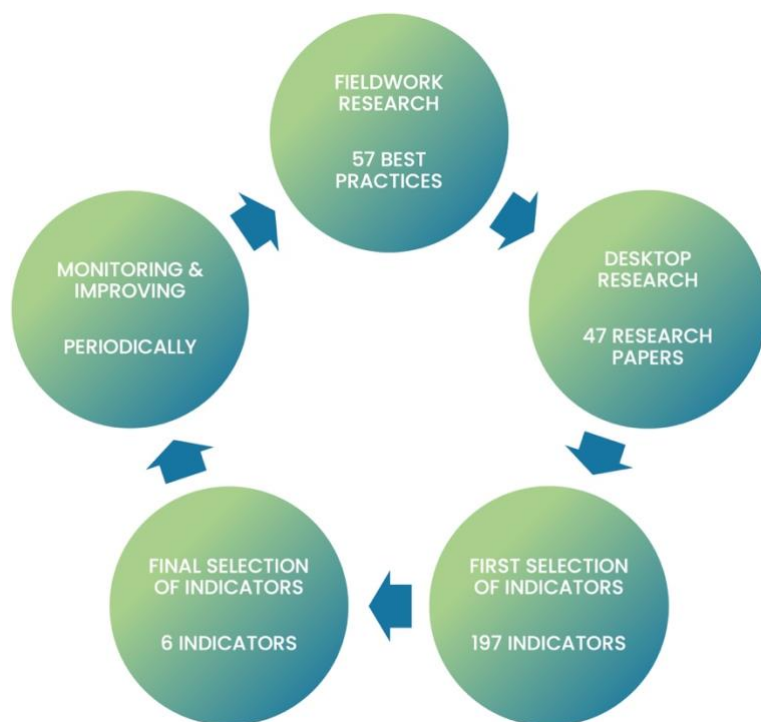
#### **5.4 Ongoing monitoring and improving**

CBT is a powerful tool that can be used to continually reassess and improve upon regional contribution towards a circular economy. It enables regions to benchmark their performance, identify areas of improvement, implement changes, and share their best practices, all towards the goal of creating a more sustainable and circular future. The development team of CBT also ensures that indicators stay relevant over time, by periodically reassessing existing metrics.

# Annexes

## A. CBT Methodology

The process of setting up an easy-to-use assessment tool for regional circularity based on best practices and research, followed a stepwise methodology. The process steps taken to create the Circular Benchmark Tool can be summarized as follows:



### Fieldwork research

The first step in creating CBT involved a detailed fieldwork search, a type of research method that involves collecting data and information through direct observation and interaction with people, places, or phenomena in their natural settings. CBT developed within REPLACE, the best practices of REPLACE consortium partners were collected by means of surveys, workshops, and some interviews. A total of 57 best practices were collected and assessed. The summarized results were used as a starting point for the first selection of indicators.

### Desktop research

The next step conducted was desktop research to gather additional information about how regions monitor progress toward a circular economy. This involved online searches in reviewing academic research, industry reports, and regional publications around the globe. Key search terms included amongst others: 'circular economy', 'monitor circular economy', 'benchmark circular economy', 'measure circularity', 'circular indicators', and 'mapping criteria'. In total 47 research papers were collected and assessed. The summarized results were used as a starting point for the first selection of indicators.

### First selection of indicators

Based on both fieldwork- and desktop research, an overview of all potentially relevant indicators resulted (total: 367 indicators). As each level of monitoring requires different types of indicators, all collected items were carefully assessed against the scoping requirements set. Only indicators matching the scope of CBT were taken into consideration and further narrowed down by removing duplicates. The summarized results (total: 197 indicators) were used as a starting point for the next process step in CBT methodology, the final selection of indicators.



### Final selection of indicators

All 197 indicators resulting from the deep dive research steps described above were categorized to ensure that all aspects of circularity are being considered and that no important factors are overlooked. The categorization was done in the following steps:

- Review the 197 indicators to identify patterns or themes that emerge
- Ensure that the patterns/themes accurately reflect the key areas of focus and are comprehensive enough to capture all relevant indicators.
- Translate the patterns/themes into clear categorization.
- Summarize the most important or relevant indicators within each category in a concise and understandable way.

By following these steps, it was possible to distill many indicators into a concise and understandable overview that highlights the most important elements.

User demands	Simple and easy to use and apply Tool for knowledge exchange, not competition
Input demands	Focus on what can be directly influenced by the region Complementary with existing quantitative tools
Output demands	Easy to compare results with other regions

### Monitoring and improving

The circular economy is a constantly evolving concept, and tools for assessing and benchmarking circularity must be flexible enough to adapt to changing circumstances and emerging best practices. Ongoing monitoring and improvement of the indicators ensure that the Circular Benchmark Tool remains relevant and effective over the long term and that it continues to promote circular practices and sustainable development.

## B. Deep-dive CBT indicators

The relevance of each CBT indicator is elaborated in the sub-sections below.

### Circular Procurement

Circular procurement refers to the practice of procuring goods and services from public and private suppliers, while also promoting circular economy principles. In other words, it involves sourcing products and services from suppliers who use sustainable and circular practices, such as using recycled or renewable materials, designing for durability and repairability, and minimizing waste and pollution.

Circular procurement is important for regions to focus on for several reasons:

- **Sustainability:** Circular procurement promotes sustainability by encouraging the use of recycled, renewable, and biodegradable materials. This helps to reduce waste and pollution, as well as conserve natural resources.
- **Cost savings:** Circular procurement can help to reduce costs by promoting the use of more durable and long-lasting products, reducing waste disposal costs, and encouraging more efficient use of resources.
- **Social responsibility:** By adopting circular procurement practices, regions can demonstrate their commitment to social responsibility and sustainability, which can enhance their reputation and attractiveness as a place to live, work, and do business.

### Access to Funding

Access to Funding refers to the ability of regions to secure financial resources to support the transition to a circular economy. This funding can come from various sources, such as public-sector grants, private-sector investment, and international development funds. The process around funding is critical for regions to drive the transition to a more circular economy.

Access to Funding is important for regions to focus on for several reasons:

- **Investments:** Regions can invest in the infrastructure, technology, and human capital to transition to a more sustainable and circular economy. Examples may involve investments in renewable energy, waste management, sustainable agriculture, and other areas that support circularity.
- **Research and Development:** Support innovation and entrepreneurship is key in the circular economy. For example, funding can be used to support research and development of new circular products and services, as well as to provide seed funding for circular startups.
- **Overcome barriers to circularity:** By providing financial support for circular initiatives, regions can help to create a more supportive ecosystem for circular businesses and entrepreneurs. Access to funding can help to overcome some of the barriers to circularity, such as high upfront costs and the lack of established markets for circular products and services.

### Circular Society

A circular society involves a fundamental shift in the way we consume, produce and dispose of goods and services. This requires systemic change, where all actors in society including individuals, businesses, and governments work together to create a circular economy.

By building a circular society, regions can accelerate the transition to a circular economy by creating an enabling environment for circularity.

Building a circular society is important for regions to focus on for several reasons:

- Behavior change: Changing behavior as consumers, producers, and citizens is considered a lengthy process. Regions play a key role as they can encourage behavior change by raising awareness and providing incentives for circularity.
- Job creation: Regions can encourage innovation and entrepreneurship in the circular economy and create new opportunities for economic growth.
- Resilience: A circular society is more resilient to shocks and disruptions, such as resource scarcity, natural disasters, and economic downturns. By focusing on a circular society, regions can enhance their resilience and adaptability, creating a more sustainable and prosperous future for their citizens.

### Value Chain Activation

Value Chain Activation refers to the optimization of value chains at the regional level, to increase resource efficiency, reduce waste and create economic, social, and environmental benefits. It involves transforming linear value chains into circular value chains, where resources are used and reused in a closed-loop system, rather than being disposed of as waste.

Value Chain activation is important for regions to focus on for several reasons:

- Economic benefits: By optimizing value chains for circularity, regions can create economic benefits, such as cost savings, increased competitiveness, and new business opportunities.
- Efficiency: By optimizing the value chain, regions can reduce waste and improve resource efficiency, creating economic and environmental benefits.
- Collaboration: Value chain activation requires collaboration between stakeholders from different sectors of the economy, including producers, suppliers, retailers, consumers, and waste managers. By working together, regions can create a shared vision for a circular economy and develop the policies and strategies needed to achieve this vision.
- Social benefits: Value chain activation can also have social benefits, such as improving working conditions, promoting social inclusion, and enhancing the well-being of citizens. By creating a more circular economy, regions can contribute to the achievement of the United Nations Sustainable Development Goals, such as reducing poverty and inequality.

### Good Governance

Good Governance refers to the effective and efficient management of resources, policies, and institutions at the regional level, to enable and accelerate the transition to a circular economy. It involves creating an enabling environment for circularity and ensuring that policies and regulations are in place to support circular business models and practices. Regional good governance is critical for creating an enabling environment for circularity, and ensuring that the circular economy transition is effective, efficient, and equitable at the regional level.

Regions should focus on good governance to accelerate the circular economy transition for several reasons:

- Policy coherence: Good governance can ensure policy coherence and alignment across different sectors and levels of government. This can help to create an enabling environment for circularity, by removing barriers and providing incentives for circular business models and practices.
- Capacity building: Good governance can build the capacity of government officials, businesses, and civil society to understand and implement circularity. This can include providing training and education, as well as creating networks and partnerships to share best practices and knowledge.
- Transparency and accountability: Good governance can ensure transparency and accountability in the circular economy transition, by providing information and data on progress, and by establishing mechanisms for monitoring and evaluation. This can help to build trust and confidence in the transition and ensure that it is effective and equitable.

### Integrated Policy Framework

An Integrated Policy Framework refers to a comprehensive approach to policy-making that takes into account the interrelated and interconnected nature of the economic, social, and environmental dimensions of a circular economy. It involves developing policies and strategies that integrate and balance these dimensions, to achieve sustainable and inclusive outcomes.

Regions should focus on an integrated policy framework for several reasons:

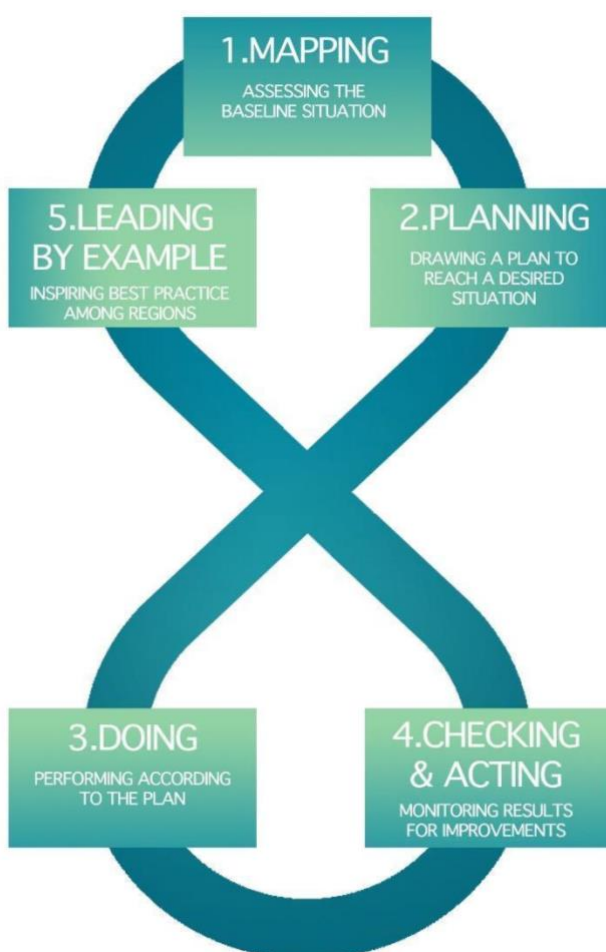
- Coordinated and consistent policies: An Integrated Policy Framework enables regions to coordinate and align policies across different sectors and levels of government, ensuring consistency and coherence in policy-making. This can help to avoid conflicting policies and promote a shared vision for circularity across the region.
- Maximizing synergies: An Integrated Policy Framework can help regions to identify and maximize synergies between different policy areas, such as energy, waste, and water management. This can lead to more efficient and effective use of resources and greater environmental and economic benefits.
- Monitoring and evaluation: An Integrated Policy Framework can provide a framework for monitoring and evaluating progress towards circularity, and for identifying areas for improvement. This can help regions to adjust their policies and strategies as necessary, and to continuously improve their performance.

## C. Maturity levels

Maturity levels are developed to assess each of the six indicators of the CBT.

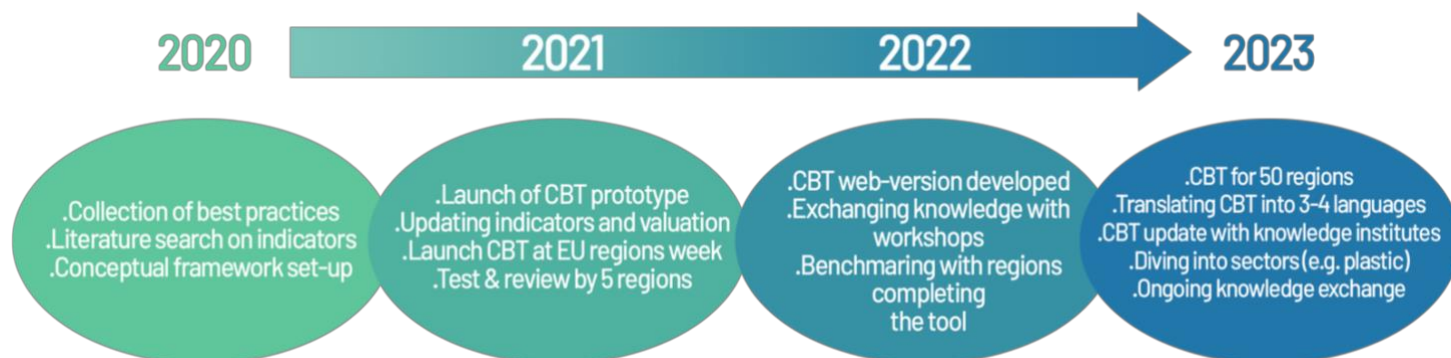
- 1 Mapping: In this level, the indicator is identified, and the current state of the region is mapped in relation to the indicator. In practice, this indicates that there is an overview within and across regions and that present and clear objectives are set. This involves understanding the current processes, practices, and systems that impact the indicator.
- 2 Planning: At this level, a plan is developed to improve the region's performance in relation to the indicator. This plan should include the objectives and processes required to deliver the desired results. The plan should include specific actions and targets with policy support to move the region from the current state to the desired state.
- 3 Doing: At this level, the plan is put into action. This involves implementing the specific actions identified in the planning stage and ensuring that they are carried out effectively.
- 4 Checking & Acting: At this level, progress is monitored and evaluated to ensure that the desired outcomes are being achieved. If necessary, adjustments can be made to the plan to ensure that the organization stays on track. In addition, improvement activities linked to each indicator can be set up.
- 5 Leading by Example: At this level, the region has achieved a high level of performance in relation to the indicator and can serve as a leader or model for others in the field. This helps other regions to see what lies ahead and to act quickly to counter any challenges along the way.

Note that similarly to the need for constant updating indicators, also the maturity levels work as a loop that needs to be constantly updated. In other words, a region that is "Leading by Example" today in a circular economy thanks to certain performances, might be in the "Mapping" maturity level in a few years, because standards, regulations, and even indicators might change through time.



## D. CBT Development process and partners

The CBT started as part of the Interreg Europe REPLACE project driven by the European Union Regional Development Fund. The prototype was launched in 2020 and ongoing development took place to transform it into a web-based tool and user-friendly environment.



Next areas for development in upcoming years are found around content optimization, for instance, the regional sector focus such as plastics. Collaborations with knowledge institutions play an important role in this, not only to involve the next generations leaders, but also to ensure up-to-date CBT indicators and questions based on the latest publications. In addition, some improvements are to be developed around user-friendliness, for instance, the translation of CBT into Spanish, Italian, and German.



## E. Data collection and management

Collecting data for a circular economy assessment can be challenging, especially if the region does not have all the information at hand. However, there are several strategies that regions can use to collect the necessary data. For instance, conducting a gap analysis in order to identify the key information that is needed for the circular economy assessment and highlight any data gaps that need to be filled. Once the data gaps have been identified, the next step is to identify potential data sources. This may involve reaching out to relevant stakeholders who may have access to relevant data. Regions can also collaborate with other regions that have similar characteristics or face similar challenges to share data and best practices.

Please note that the CBT team can access your assessment as the data collection process flows in an online survey with yes/no answers. They are ready to help you in case you need any support in collecting the data. The web-based tool is automatically collecting and cleaning the data, analyzes the results, and generates a PDF report. The use of online survey tools and software can help to streamline the process and improve data accuracy and efficiency.

Data privacy and the existence of a privacy policy are important for protecting personal information, building trust, complying with regulations, providing clarity, and facilitating communication. A privacy policy is a statement or legal document that outlines how an organization collects, uses, shares, and protects personal information collected from individuals. Please find the Privacy policy of CBT [here](#).

## F. FAQ

All frequently asked questions (FAQ) are described on [our website](#) and dive into topics around setting up accounts, pricing structures, report generation, and data security. This chapter highlights some of the questions that are most relevant for setting up accounts, performing the assessment, and data management.

Why do I need to assess the regional circularity?

One of the key objectives of the new Circular Economy Action Plan (CEAP) is to make circularity work for people, regions, and cities and lead global efforts on circular economy. The CBT provides regions with an instrument to assess their performance on Circular Economy. Also, it inspires regions to improve their performance by allowing them to compare their results with those of other regions. By doing so knowledge and best practices can be exchanged.

Who are the users of the tool?

Regional administrator authorities and their stakeholders as they enjoy a wide range of responsibilities, including the development of infrastructure and provision of services (e.g. water, transport, healthcare, education, infrastructure, and environmental production). Examples include provinces, metropole regions, districts, NUTS level II, etc. The role of regional administrator authorities is constantly expanding as economic, political, and social conditions are changing on global and European levels. As mandates of regional administrator authorities differ per country.

How can I create an account and perform the assessment?

You can easily sign up via the [CBT website](#) homepage. After the user account is created you can easily access the tool via [this link](#). Please check [this](#) explanatory video on how to do this step by step.

What features are included in the free version?

In the free version, you can access and complete the CBT tool. You are able to request a PDF report with your results and respective feedback on your results. If you need more support or want to work with the results of the assessment, you can choose between two types of paid accounts:

1. Reflect & Improve
2. Exchange & Learn

See all details of the account types [here](#).

What differentiates the CBT from other tools?

The CBT is designed in a qualitative manner; hence it is not competing with existing instruments focused on quantitative parameters (e.g. material, waste). The tool is simple and easy to use and apply. It is considered an instrument for knowledge exchange, not competition. Indicators are assessed in a way that can be directly influenced by the region. The results of the assessment are easy to compare results with other regions.

## G. Glossary

As the CBT includes a wide range of concepts, the following list of terms is explained extensively to give more clarity to the readers and avoid misunderstandings.

**Circular Economy:** "The circular economy is a system solution framework. A circular economy decouples economic activity from the consumption of **finite resources** to stay within planetary boundaries. It's a model that maintains the highest possible value of raw materials, components, and products, either by lengthening their lifetime or by looping them back in the system to be reused. Waste is eliminated or used as a resource, both by smart circular design and value retention processes (R strategies). Also, a circular economy aims to prioritise the regeneration of nature so that resources can restore, renew, or revitalise their own sources of energy and material".

Source: [TULIPS](#)

**Circular Economy Action Plan (CEAP):** The European Commission adopted the new circular economy action plan (CEAP) in March 2020. It is one of the main building blocks of the European Green Deal, Europe's new agenda for sustainable growth. The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss.

Source: [European Commission](#)

**Circular Economy Principles:** Circular economy is based on three principles, driven by design:

- 1) Eliminate waste and pollution
- 2) Circulate products and materials (at their highest value)
- 3) Regenerate nature

It is underpinned by a transition to renewable energy and materials. A circular economy decouples economic activity from the consumption of finite resources. It is a resilient system that is good for business, people, and the environment.

Source: [Ellen Macarthur foundation](#)

**Finite Resources:** A resource that is concentrated or formed at a rate very much slower than its rate of consumption and so, for all practical purposes, is non-renewable.

Source: [Oxford Reference](#)

**Linear Economy:** The linear economy, sometimes referred to as the take-make-waste economy, is a system where resources are extracted to make products that eventually end up as waste and are thrown away. Products and materials are generally not used to their full potential in a linear economy and, as the name suggests, always move in one direction – from raw material to waste. It is a polluting system that degrades natural systems and is the driver of global challenges, including climate change and biodiversity loss.

Source: [Ellen Macarthur foundation](#)

**Planetary Boundaries:** The planetary boundaries map out key environmental systems, within which the earth should remain stable, livable, and healthy, and where humanity can continue to develop and thrive. Inside the boundaries is our "safe operating space".

Source: [Metabolic](#)

**Regional administrator authorities:** Regional administrator authorities have a wide range of responsibilities, including the development of infrastructure and provision of services such as water, transport, healthcare, education, infrastructure, and environmental production. Note that the role of regional administrator authorities differs per country and is constantly expanding as economic, political, and social conditions change on global and European levels.

Source: CBT extensive research

**Supply & Value Chain:** A 'supply chain' refers to the system and resources required to move a product or service from supplier to customer. The 'value chain' concept builds on this to also consider the manner in which value is added along the chain, both to the product / service and the actors involved. From a sustainability perspective, 'value chain' has more appeal since it explicitly references internal and external stakeholders in the value-creation process. It also encourages a full-lifecycle perspective and not just a focus on the (upstream) procurement of inputs. Value is generally used in a narrow economic sense, but it can be interpreted to encompass 'values', as ethical and moral concerns as well as other non-monetary utility values such as closing material loops, the provision of ecosystem services and added customer value.

Source: [University of Cambridge](#)