

MEASURING CIRCULARITY AT THE CORPORATE LEVEL

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Irene Martinetti is the Manager for the Circular Metrics project at the World Business Council for Sustainable Development. Irene joined WBCSD in 2017, she supports the development and global adoption of the Circular Transition Indicators with the objective to accelerate the transition to a circular economy. She has an MIA from the School of International and Public Affairs at Columbia University in New York, USA and extensive experience in stakeholder and project management in both the public and the private sector.

The WBCSD is a global, CEO-led organisation of over 200 leading businesses working together to accelerate the transition to a sustainable world.

Jarkko Havas leads the EMF's Insights & Analysis work (I&A). I&A consists of the Data & Metrics Initiative with a focus on measuring company level circular economy performance (Circulytics), and teams working on upcoming focus topics for the Foundation, as well as the case study programme. Prior to joining the Foundation, Jarkko was an Engagement Manager at McKinsey & Company, based first in Tokyo and then in Brussels. His consulting work focused on agriculture and chemicals industries in both private and public sectors. Jarkko's academic background is in environmental engineering and sustainability science.

The Ellen MacArthur Foundation is a UK-based charity, committed to the creation of a circular economy that tackles some of the biggest challenges of our time, such as waste, pollution, and climate change.

Indicators are essential for steering companies' circular economy strategies. Over the last ten years, many tools have been developed in this sense, which were mainly designed to assess circularity at the level of material flows and products. Without questioning the usefulness of these early tools, a need has emerged for more holistic tools that assess circularity at the level of the company as a whole. What are the appropriate tools capable of integrating the complexity inherent in circular economy practice?

The Ellen MacArthur Foundation and the World Business Council for Sustainable Development (WBCSD) have worked closely and coherently to develop tools to support companies in their transition towards more circularity. This cross interview outlines the design of two tools: Circulytics by the Ellen MacArthur Foundation and Circular Transition Indicators (CTI) by the WBCSD.

INTRODUCTION

As a new objective, the circular economy needs indicators to enable each stakeholder to understand where it stands in this transition, to measure the effectiveness of the actions implemented and to assess the progress that remains to be made.

The Ellen MacArthur Foundation and the World Business Council for Sustainable Development have made a major contribution to the development and dissemination of these new tools. These first tools were mainly designed to assess circularity at the level of material flows and products. A need has emerged for more holistic tools that assess circularity at the level of the enterprise across its operations. But what are the appropriate tools to apply at company level? What is the right data to look at?

This is a challenge as holistic tools need to aggregate complex material flow data, take into account the many interdependencies of the value chain and incorporate the complexity inherent in circular economy practice, while remaining easy to use for practitioners.

CIRCULTYCS: A HOLISTIC MEASUREMENT OF CIRCULAR TRANSFORMATION

The Ellen MacArthur Foundation has developed many tools in the past such as Material Circularity Indicator or the ResCom Project, why initiate a new tool?

Jarkko Havas: The Material Circularity Indicator tool (MCI) is primarily a product level circularity assessment tool, designed for internal decision making on product design aspects, and to think about tradeoffs that different design decisions bring.

At another level, the ResCom project developed a suite of tools to support organisations in identifying opportunities to shift to a circular economy. These tools ranged from high-level decision making about the type of business model that might be most beneficial for a product, to detailed life cycle analysis (LCAs), and analytical modelling of the business case. They were designed for use by organisations to inform specific aspects of their circular economy strategy and product development, rather than present a holistic measurement of progress against circular economy indicators.

Besides these tools, Circulytics was developed based on the demand from our network of companies to have a holistic, independently developed and free to access method to measure circular economy performance on a company level. We also used the wealth of knowledge gathered from developing MCI, ResCoM and other Ellen MacArthur Foundation initiatives, such as product design, innovation, the New Plastics Economy, and our Food initiative.

Circulytics has been received well by companies with over 600 sign-ups in the first nine months since launch and over 1,000 sign-ups to date, which is a testament to the timeliness to answering companies need to measure circular economy performance. Particularly since the Covid-19 crisis, many companies are looking to create strategies for better growth — to create economic opportunities that also address global challenges such as climate change and biodiversity loss. In order to create the right strategies, companies need the right data, and that is what Circulytics provides.

How does Circulytics work and what was the methodology to build this tool?

JH: It is an independent assessment of a company's circular economy performance, based on information that a company reports using a secure online platform.

The methodology mirrors the way in which many ESG methods have been built (e.g., using weighted averages to

aggregate indicator scores into themes) to make it familiar and easy to understand.

It is framed carefully around circular economy to avoid overlaps with other non-financial indicators, but so that it covers all aspects of what circular economy means on a company level. Of course, as it is a company level tool, it has its limits in assessing on a more granular level like products and projects.

All these three aspects of Circulytics are unique: It is the only independent analysis of circular economy performance on company level, done free of charge by a leading organisation fully focused on circular economy. The indicators make the tool one of the most comprehensive out there — it considers the enabling factors companies need for the transition to a circular way of doing business, it has service-specific outcome indicators, and it measures the circularity of water flows for water intensive industries.

What were the challenges in the development of Circulytics and in its implementation by companies?

JH: We encountered two main challenges in building Circulytics. First, finding a balance between being holistic while keeping the number of indicators low in order to make it meaningful but easy to use. Second, finding ways to develop a general set of indicators that apply to as many industries as possible, while being specific enough to be actionable.

We have managed to solve both of these challenges together with the 30 companies and other organisations that have been part of developing Circulytics, and the development will continue in order to

keep Circulytics as the most comprehensive, cutting edge method to measure circular economy performance for companies.

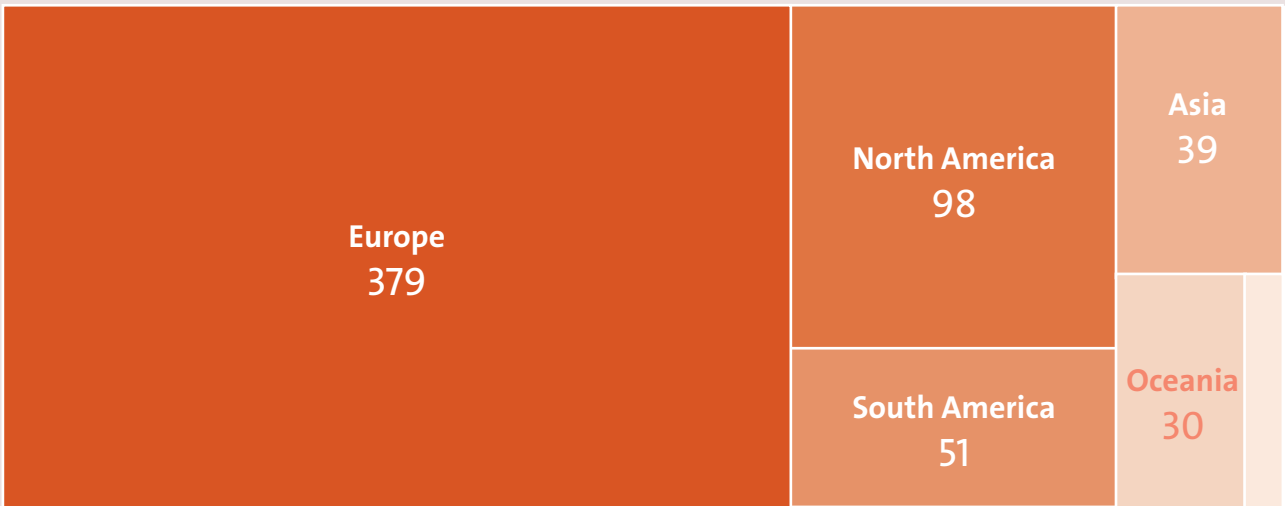
When it comes to using the tool, material flow data collection and aggregation into the right format on company level has been the most common difficulty. Most of the time, companies have all the data needed to use Circulytics, but because circular economy is a relatively new concept for accounting, procurement and other key functions, there is work needed to split material flow data in the right way (e.g., non-virgin vs virgin input).

What are the feedback from companies using the tool?

JH: Almost 1,000 companies have signed up to use Circulytics since it was launched in January 2020 and we have gotten positive feedback on how it has helped companies in finding blind spots in their circular economy

Circulytics was developed to have a holistic method to measure circular economy performance on a company level

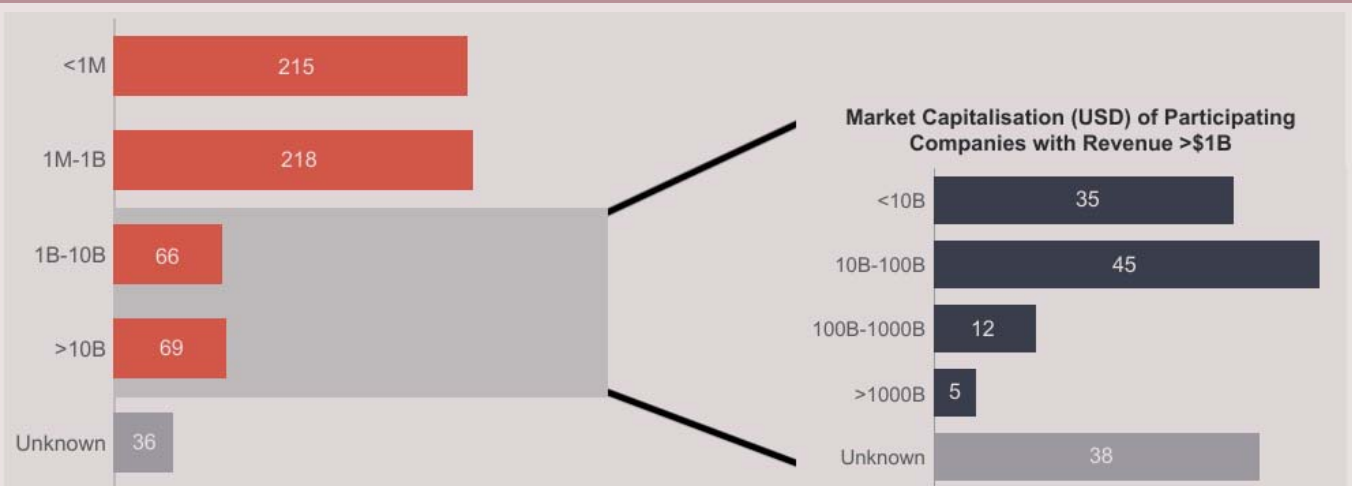
HQ Region of Participating Companies



Location of company headquarters for the 604 companies that signed up Circulytics 1.0 in the first nine months (today over 950 companies have signed up). The majority (63%) have their headquarters in Europe.

Figure 1

Annual Revenue (USD) of Participating Companies



On the left, the annual revenue in USD of the 604 companies that signed up to Circulytics in the first nine months (over 950 today). On the right, the market capitalisation in USD of the 135 companies (22%) with an annual revenue greater than USD 1B. The « unknown » bar in the market capitalisation chart includes all privately held companies as well as subsidiaries of publicly held companies.

Figure 2

strategies and informed their internal KPI setting. It has also been used as a tool to get CEO level buy-in to the importance of circular economy, amongst other things.

Of course, we also received constructive feedback from early adopters, which has been incorporated into a second V2.0 released in October 2020. V2.0 features an improved user experience, a new theme on the circular water economy, and has been translated into Chinese, Portuguese and Spanish to better suit audiences in different regions.

Although companies can (and do) disclose their results, as a way to talk about their circular economy journey with customers and stakeholders, we do not disclose company level results. However, we published anonymised data from Circulytics 1.0 company assessments in December 2020 to describe themes in aggregated company results (see Figures 1 and 2).

The three modules of the Circular Transition Indicators methodology : Close the Loop, Optimize the Loop and Value the Loop

What are the next steps?

JH: In 2021, we will focus on further developing the digital product, to make it even easier to use and access results. We will also be working on linking Circulytics results to Sustainable Development Goals, to indicate how companies are working towards those. Additionally, we will work with financial institutions and non-financial accounting standards projects to bring Circulytics, or parts of it, to the use of financial decision making and broader non-financial accounting standards.

THE CIRCULAR TRANSITION INDICATORS FRAMEWORK: ASSESSING CIRCULARITY AT ALL LEVELS

The Circular Transition Indicators (CTI) framework was shaped by 30 WBCSD member companies representing 16 countries, 16 different industries and over 1.7 trillion in annual revenue to answer companies' needs to measure circularity and support them in their transition towards a circular economy.

How was this project developed with companies? What were the challenges of building a common framework?

Irene Martinetti: This work started in 2018 with the Circular Metrics Landscape Analysis¹ which concluded that there was an existing need for an inward facing, quantitative

approach and guidance to measure circularity for the whole company, business unit or product (group) with a framework that complements assessments and tools already used by companies today.

With that in mind, WBCSD member companies joined forces to design a framework that could provide quantitative, data-based insights into circular performance, associated risks and opportunities. We designed the Circular Transition Indicators (CTI) to be an inward facing tool, easy to implement and versatile in scope with an aim to empower companies in their circular transition by allowing them to better understand their circular economy potential. CTI is simple, applicable across industries and value chains, complementary to a company's existing sustainability efforts and agnostic as to material, sector or technology. CTI is an iterative framework, and it is regularly updated to respond to evolving challenges in circular economy.

To develop the framework, we worked in collaboration with an advisory group consisted of some of the most prominent organizations with expertise in the field of circular economy.

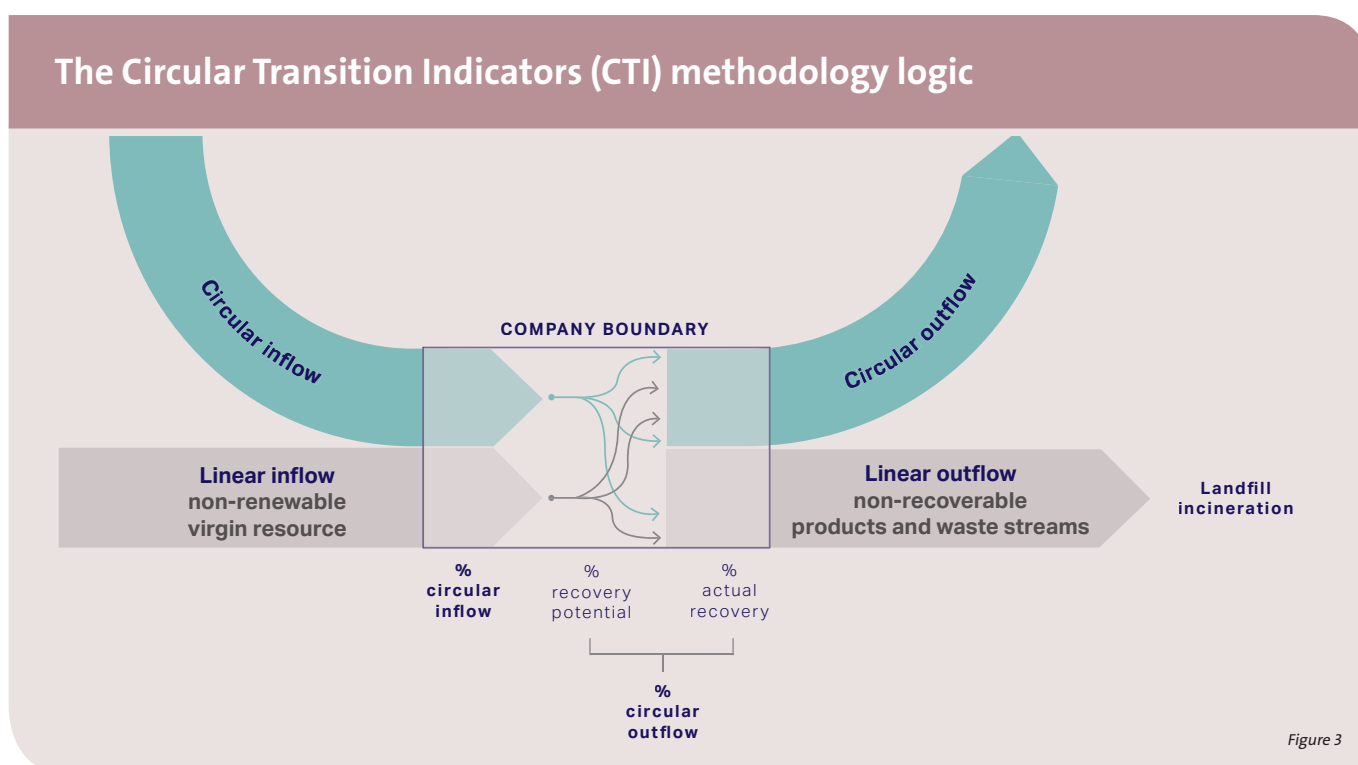
In January 2020, CTI v1.0, a first version of the report, was launched with a set of fundamental indicators for the three modules of the methodology (Close the Loop, Optimize the Loop and Value the Loop). Throughout 2020, WBCSD's water group developed additional metrics to measure water circularity while WBCSD members focused on developing an additional indicator to make the link between circular and financial performance and provide extensive guidance on how to apply CTI consistently for the bioeconomy.

The main challenges during the development of the framework revolved around finding commonality across industries and value chain positions. We wanted to develop a set of metrics that each user could benefit from, regardless of where they are in the value chain or which industry they belong to. We found common ground by maintaining a balance of pragmatism and focusing on metrics that can provide information that would be valuable for more effective decision-making recognizing that CTI v1.0 would not be perfect and that further iterations would be needed.

How does the CTI framework work and what are its limits?

IM: The CTI framework is based on a self-assessment of material flows within company boundaries (see Figure 3), combined with additional indicators on resource efficiency and efficacy, as well as the value added by circular business. In addition to the ability to close the loop, CTI provides insights into overall resource use optimization and the link between the company's circular material flows and its business performance.

¹ WBCSD (2018). Circular Metrics – Landscape Analysis. World Business Council for Sustainable Development (WBCSD). Retrieved from: <https://www.wbcd.org/Programs/Circular-Economy/Factor-10/Metrics-Measurement/Resources/Landscape-analysis>



The framework does not evaluate the environmental and social impacts of the company's circular activities. However, understanding mass flows is a major step in knowing their impacts. Moreover, in its current set-up, this is not a methodology designed to share or celebrate achievements but rather to measure progress regularly as circular solutions are identified and tested across products and facilities.

The framework has been developed around 5 core principles: to be as simple as possible within the context of the circular economy (Simplicity), to use one common, cross-industry language that provides consistent insights into circular opportunities and linear risks regardless of organization size, sector or value chain position (Consistency), to offer a complete set of metrics with the flexibility of accommodating diverse business needs (Completeness), to complement other existing sustainability and business metrics (Complementarity) and to refrain from prioritizing specific materials insofar as they all contribute to the circular economy (Neutrality).

How was the CTI methodology received by companies?

IM: The CTI methodology has been very well received by companies globally. With CTI, business now has a clear and common language for circularity with a set of quantitative metrics. Companies find the methodology straightforward and intuitive, user-friendly and comprehensive, complementing companies' existing sustainability efforts.

The CTI online tool counts over 1,000 organisational accounts since its launch in January 2020. User groups from diverse sectors and positions in the value chain are piloting the methodology, enriching it with sector specific application and providing feedback for further upgrades to the indicators.

CTI's Value the Loop module has been particularly welcome by the investors community as it is the only methodology to provide a solid grasp of value created through circular investments allowing to recognize and reward companies that make progress on circularity.

What are the challenges in the implementation of the CTI and its use by companies?

IM: Probably the most significant challenge for companies relates to data collection. This may be because it is the first time that it is gathered or because the range of products assessed is very broad and with a complex supply chain. It is key to set the correct scope at the onset and begin by products or product groups for which data may be already widely available. In many cases, data along the supply chain resides with suppliers who may be reticent to share confidential data externally. To address these challenges, WBCSD developed the CTI Tool which supports companies in structuring data and allows them to invite suppliers to provide their data for relevant products in a confidential manner. Expert guidance is available to support companies to set up their first assessment in the form of advice from

experts or coordination of user groups by WBCSD and its partners. User groups are especially helpful as companies can share challenges, solutions and best practices.

What are the first results?

IM: Based on feedback, companies find that it allows them to analyze their circular performance through a structured process. Applying CTI helps them translate their vision into a strategic roadmap and monitor progress as they embark on their journey towards circularity.

CTI supports innovation. When used in the early stage of products development, CTI helps evaluate possibilities to improve its circularity before it goes to market. Additionally, companies found that using CTI not only helped them characterize how circular their product, product lines, facilities or entire company is but also to identify more efficiently risks and opportunities. By using it at corporate level, CTI can help companies identify opportunities for improvement and highlight areas that can have highest impact on closing company's loops.

Finally, beyond internal communication, companies find that CTI helps them communicate more responsibly and more transparently with suppliers and clients, building close relationships and developing a common understanding of priorities. The process of data collection to calculate the indicators fosters collaboration across the value chain.

Find feedback from companies that have applied CTI on our CTI case studies page.²

What are the next steps to improve the CTI methodology?

IM: In February 2021 WBCSD published an updated version of the CTI methodology. CTI v2.0 features three main additions to the existing methodology, including:

- **Water Circularity:** New calculations for Circular Water Inflow/Outflow and Onsite Water Circulation.
- **CTI Revenue:** Acknowledging growing investor interest for metrics that link circular and financial performance, the new CTI Revenue indicator provides a consistent way to credibly respond to investor inquiries.

- **Bioeconomy Guidance:** CTI now includes extensive instruction and interpretation on the bioeconomy across all indicators and process steps.

The new content builds on CTI's existing data and makes it easier and more valuable to companies that apply the methodology.

What are the differences between Circulytics and CTI and how are the tools complementary?

IM: CTI is a self-assessment framework that provides insights into overall resource use optimization and the link between the company's circular material flows and its business performance.

CTI is a fully quantitative methodology based on demonstrable data. Its objective is to empower companies in identifying linear risks and circular opportunities and which effectiveness can be measured and monitored in reoccurring (annual) cycles.

Circulytics is based on the combination of quantitative data and qualitative insights on a company's readiness to do business in a more circular way, for example in terms of strategy and business functions. Circulytics helps

companies explore their circular potential through the scoring of "outcomes" (i.e., how circular you are today) and "enablers" (i.e., how ready you are to be more circular in the future).

No company can drive the transition to a circular economy on its own. The circular economy requires a larger industry, value chain and cross-sector effort. To transform, companies must speak the same language, regardless of size, industry or value chain position.

Having a common approach to measuring and monitoring circular performance is essential. This will allow value chains to become value cycles, progressing towards a shared vision. Collaboration and coordination in the context of circular metrics is essential for accelerated and higher impact results. WBCSD and the Ellen MacArthur Foundation methodologies and definitions are aligned so that companies can use similar data sets in their calculation for material flows and benefit from both approaches in their journey towards circularity if they so choose.

No company can drive the transition to a circular economy on its own. The circular economy requires a larger industry, value chain and cross-sector effort

² <https://www.wbcsd.org/Programs/Circular-Economy/Factor-10/Metrics-Measurement/Circular-transition-indicators/Case-studies>