World Environment Center

Accelerating the Integration of Circularity into Business Practice

Executive Roundtable Summary

Amsterdam, Netherlands | October 15-16, 2024

Background

Circular Economy (CE) is a sustainability concept and potential business opportunity that has been extensively discussed for the past decade as an approach to address multiple planetary boundary issues and contribute to the SDGs.

The circular economy is defined by UNEP as one in which the value of products, materials, and resources is maintained in the economy for as long as possible, and the generation of waste is minimized. This contrasts with a 'linear economy,' which is based on the 'extract, make, and dispose' model of production and consumption.

With its focus on demand reduction and a fundamental respect for materials, wide embrace of the CE will enable scaled solutions and accelerate necessary changes. Circularity is not a sustainability challenge like climate change or biodiversity loss —it is instead an enabler of climate mitigation, biodiversity protection, and water resources protection. It goes far beyond innovations in design, business models, and shifts in consumer behavior and is considered one of the most effective strategies to advance corporate sustainability.

The WEC Executive Roundtable brought together 30 senior sustainability experts from ten countries with 73% from large companies of various industries, 17% from think tanks/NGOs, and 10% from specialized consulting firms.

Participants

Sponsor

CRH

Host

Eunice Heath, Chief Sustainability Officer, CRH
Frank Werner, Director of Global Thought Leadership and Director, WEC Europe

Moderators

Circle Economy: Marc De Witt
CRH: Dr. Ben Davies, Dr. Richard Leese
Metabolic: Eva Gladek
WEC: Margaret O'Gorman

Speakers

ABN Amro: Niina Pussinen
Accenture: Dr. Sylvia Feilhauer
Beveridge & Diamond: Paul E. Hagen
CRH: Elena Guede Vazquez
ISO: Hans Kröder
Jacobs: Dr. Robert Kleinjan
PACE (formerly): Ramona Liberoff
Philips: Harald Tepper
REMONDIS: Dr. Ansgar Fendel
Shell: Karen Westley
Vinci Construction: Bruno Paul-Dauphin
Volvo Construction Equipment: Sander Jahilo

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Key Points

1 Government regulation is essential to accelerating the transition to the CE by:

(a) Mandating sustainable product design (e.g. EU Eco-Design Directive and Extended Product Responsibility)

(b) Providing tax incentives and financial support for circular practices

(c) Standardizing circular economy metrics and labels

(d) Facilitating secondary material markets (to reduce resource scarcity and improve resilience)

(e) Promoting consumer participation in a CE

It was argued that mid-sized companies may not have the resources for the administrative work needed to comply: a suggestion was to waive parts of those requirements to enable companies to put their efforts directly into solving the problem (i.e., better products, better processes).

Some governments provide pragmatic support. Notably, the city of Amsterdam and partners initiated the CircuLaw—a knowledge platform aimed to help market players and policymakers utilize existing legal tools and make them more accessible to accelerate the transition to a CE. It identifies critical points within the legal system that can be leveraged to enhance sustainability efforts positively.

2 Pending regulation can also be seen as a detriment to the transition in the case of materials availability. Due to lack of collaboration, companies fear eventually there will not be enough "waste" to be recycled in new products. Given laws and regulations that require countries to keep materials of used products within their territories instead of allowing free movement for repurposing, it becomes challenging to design products made from used materials and build a circular economy. In some European countries, regulations require high recycling rates and demand, e.g. demand for used plastics is already higher than supply. Companies would like to see global agreements that support movement of materials. A formal proposal to amend Annex IV of the Basel Convention's legal framework may result in a major roadblock in global trade for repair, refurbishment, and reuse. The amendment is not limited to hazardous waste, but includes plastics and textiles ensuring all sectors engaged in the repair, refurbishment, remanufacture and reuse of products will be impacted.

3 Frameworks and standards for circularity have been developed by the International Standards Organization (ISO) which help companies transform their linear production into a circular production, and exchange data throughout the value chain. These are measurement frameworks, not tools, suitable to standardize approaches so the term "circularity" can be communicated in a clear and credible way. ISO's overall objective is to contribute to the Sustainable Development Goals (SDGs) by providing comparable methodologies. Other tools like Circulytics by the Ellen McArthur Foundation, the EU Circular Assessment tool, and the Global Circularity Protocol, under development by WBCSD, also support standardization.

4 Disclosure is a major challenge. To drive change towards a CE, the economy needs KPI's and reliable data throughout value chains. While the EU CSRD is already a major driver of data generation it doesn't address solutions for some key aspects to drive the CE. Many companies are still challenged with identifying, generating and collecting valuable data. Companies report that across their value chains, huge gap exists between their needs and expectations and the data delivered in response.

Financial institutes have progressed in evaluating those sectors with the greatest sustainability impact according to a sophisticated assessment based on the following four scopes:*

Scope 1: Resource use per product

Scope 2: Resource use for the largest material streams

Scope 3: Resource use throughout the full value chain

Scope 4: Impact avoided: Resource use on a system level

Dutch banks are planning to provide a standard for Circular Financing by 2030.

5 Globally, there is a lack of collaboration and leadership needed to drive the Circular Economy forward at the necessary pace. Currently, there is a need to discuss practical steps to transition from an optimized linear economy to a circular economy in the making. Despite the many small firms, think tanks, and the UN International Resources Panel (IRP) who provide inspirational, innovative solutions and insightful studies, companies still lack a global platform for open discussion on materials, value chains, and new business concepts. To have the desired impact, such a platform requires a strong financial position and be seen as a pre-competitive business investment, facilitating a reduction in CE costs and an increase in innovation and optimization. While some companies reported that they currently work along value chains to train business partners to adopt circularity as a cost-effective tool to reach decarbonization targets, they would benefit from sharing and discussing their work with companies who undertake similar approaches.

6 Economists are essential in the CE to support engineers with innovative mindsets and business models. While engineers have successfully innovated materials, services and processes that can be regenerative, the economic value is often less clear. These innovative solutions are often opposed by vested interests in legacy products optimized to continue to sell well. Scaling innovations faster is fundamentally important to address ecosystem degradation and climate change. Systems thinking is crucial to prevent negative rebound effects and to identify true pathways to decouple economic activity from resource use and environmental impact. Economists can help reveal and explain the value of collaborations (in value chains and between sectors) open innovation, shared success stories, local sourcing, digitization and government support. Economists can also explain the value of going beyond standards and help change mindsets.

Within companies, a corporate culture that inspires individuals to take their own initiative is beneficial. However, non-appreciation for new ideas from line-managers, as well as cost for new solutions have been identified as main barriers for employee engagement in solution design. Successful companies organize cross-functional platforms to communicate, share ideas, and collaborate on the CE beyond sustainability departments. Companies seeking to transition to circularity open both process and products for innovation.

7 When designing more sustainable products successful companies use a systemic approach. Engineers develop technical solutions considering new material use in value chains upstream and downstream. At times, a technological solution for a "product as a service" exists but cannot be implemented because regulations must be adapted first, or customers are not yet ready for it. Thus, companies are advised to evaluate how customers use the product and if circular services are possible during the use-phase.

The greatest challenge for materials recycling is the high complexity of the compound nature of materials. To what extent AI may help is not yet established, but AI may be able to help identify rebound effects, scale innovative solutions for product design, and find new applications for by-products and waste materials.

8 Cost is an important aspect of circular product design. Who pays the extra cost for design innovation and the steps needed to keep materials in circles? Participants agreed that it's most likely not consumers, therefore producers will have to determine how to finance those investments. Banks and investors provide sustainable innovation bonds or may otherwise

invest in certain solutions. New markets for used products can be developed. One of the most important sources of capital seems to be the growing reputation of the brand, which helps to attract consumers and investors equally. The long term return value of these investments is significant within the corporate quarterly earnings cadence.

Several roundtable participants agreed that circular solutions should be leveraged for public procurement through statements of preference, regulation in bidding for government projects or, with other industries, through subsidies like those recently provided in many countries to increase uptake in electric vehicles. A prerequisite for government support is a viable solution that has already proven its potential and practicality.

9 Companies implement processes for the CE with respect to the desired impact. Circularity must help to achieve goals like decarbonization, waste reduction, nature protection, water protection, and help solve social issues, among others. As one company representative put it, they often face dilemmas, e.g. when a diesel machine should be exchanged with a new battery electric machine. Which improvement outweighs the disadvantages? Does the reduced use of diesel have a greater positive impact on the climate than the production and use of a new electric vehicle? For large product groups such as electric vehicles these data exist, many products have not yet been assessed for trade-offs. More alternatives exist if older products can be refurbished or remanufactured. Decisions that inevitably rest on cost and company values become more complex when external costs to society and reputation are also considered. The decision trees become even more complex with more products.

10 The 9R framework was discussed as a hierarchy:

1. Refuse — make a product redundant
2. Rethink — make a product use more intensive e.g. through shared use
3. Reduce — increase product efficiency
4. Reuse — by another consumer
5. Repair — and maintain to lengthen product life
6. Refurbish — restore and update older products
7. Remanufacture — use parts of a discarded product in a new product with the same function
8. Repurpose — use discarded parts of a product in a new one with a different function
9. Recycle — process material into a different use
10. Recover — incinerate old product and capture the energy

Circular processes are easier to implement in business-to-business relationships than if consumers are involved. That is because business customers constantly want to optimize for heavy utilization of the product while consumers often tend to decide emotionally.

11 Circularity is a strategy to plan for uncertainty. "My investor is not interested" has never been more obsolete, according to roundtable participants who agreed unanimously that courageous leadership collaboration within and across companies and sectors is required. Ultimately people will, and must, drive the necessary change.

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*Other resource mentioned during the event and in Summary Item 6: *Circular Economy Due Diligence Guidelines (2024). Slides presented during the event.*

Related WEC Executive Roundtables:
Managing Resource Streams Sustainably: Company Practices in Packaging and the Use of Electronic Components (2018)

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