

CIRCULARITY IN PRACTICE IN BRAZIL

Learnings and recommendations
from the Circular Economy Hub

2020 | 2023



BRAZILIAN
CIRCULAR
ECONOMY
HUB

FEBRUARY 2024

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INTRODUCTION



The volatility of commodity prices, scarcity of raw materials, and optimization models reaching maximum productivity limits pose risks to supply chains. New sectoral agreements demand business commitments that are naturally seen as additional costs to operations. Global pressures for ESG goals, NetZero, Decarbonization, and the use of secondary material are not reflected in effective action plans and often remain only on the leadership's agenda.

All these actions should serve as evidence for an urgent change in production, operation, and commercialization models. There is a need to change the current business culture, which has brought technological advances and convenience but has also left a trail of waste and pollution around us.

This **White Paper** brings the learning of how the Circular Economy is being shaped in practice in Brazil by a select group of pioneering organizations, from various sectors and sizes. The movement began with the independent journey of each of these organizations due to the need to adapt a strategy coming from the European market, a sectoral positioning aligned with global practices, risk management, the need to comply with new

legislation in the national market or a view towards gaining competitive advantage. Due to a common vision, the companies got connected and have realized that a collective action would make them achieve greater results and that the journey would be faster, easier, and more meaningful if they worked together.

In 2022, the first milestone for the Brazilian Industry was reached with the theme being presented as one of the 4 pillars of the decarbonization strategy of the National Confederation of Industry (CNI), and the following year, a milestone came from the public sphere with the inclusion of the theme as one of the six priority axes of the ecological transformation plan of the Brazilian Government. Currently, we have the Circular Economy as one of the objectives of the Neo-industrialization Policy of the Multi-Year Plan.

Brazil is now part of the Circular Economy Coalition for Latin America and the Caribbean, joining 17 other Latin nations in the commitment to the circular transition. We have the promise of launching a national strategy dedicated to the theme by the Brazilian government, serving as the basis for the New Industry Brazil Plan. With the leadership of the G20, we have a unique opportunity to

show the world our commitments to the sustainability agenda, climate, and biodiversity translated into good practices for society as a whole.

We would like to thank the member companies for their commitment, the shared information, the countless critical analysis meetings, and the technical visits that contributed to generating all the shared learning here in this **White Paper**. We hope that our journey can serve as inspiration for other industries and be the basis of evidence for strengthening public policies, developing financial instruments, technological research, and building consumer engagement campaigns.

Therefore, it becomes clear that the Circular Economy must be directly associated with discussions on climate, biodiversity, decarbonization, and responsible finance and that it can bring numerous opportunities for the Brazilian market. With an increasingly favorable framework, industries united with a common purpose, and the government engaged with the issue, we are confident that 2024 can become the year of circular action in Brazil.

Beatriz Luz



EXECUTIVE SUMMARY

Joining forces to make Brazil more circular

The transition to a circular economy has become increasingly urgent in a scenario where we produce and consume at a faster pace than the planet is able to recover. Supply chains are becoming increasingly globalized and interdependent, and if we want to change the business mindset, it is essential to have dialogue between the Global South and North so that guidelines are defined based on the needs and realities of each region.

Emerging countries bring new challenges, but also great opportunities to apply circularity to develop a path with less pollution and waste, just and regenerative. Experience shows us that we can learn a lot from each other and that even with such different geographic and cultural realities, only through collaborative initiatives, bringing together forces from different links in the supply chain, promoting exchange of experiences between countries, and committed engagement involving the public sector, private sector, academia, and society, will we build the circular economy that the world so urgently needs.

This **White Paper** presents an applied vision of the Circular Economy for the Brazilian reality, highlighting the importance of the Circular Economy Hub as a center of excellence for the

transition in the country. The experience of the last four years has been summarized, providing **three key learnings for an effective transition**.

The **first** learning highlights the need for a common vision, exemplified by the Circular Manifesto, which demonstrates the maturity of member companies in addressing the issue. The **second** emphasizes the importance of data and people in the transition, evidenced by the building of trustful relationships and the Circular Engagement badge. The third learning demonstrates the need to to redefine roles and responsibilities by building a circular governance, including the crucial role of the facilitator in engaging different actors, providing market inspiration, and scaling up solutions.

Furthermore, we take the opportunity to demonstrate the importance of creating a favorable framework for the transition and its key elements such as 1. Financing and incentives, 2. Supply chain integration, 3. Public policies, 4. Strategy and leadership, and 5. Communication and consumption. Finally, five cases are presented that materialize the learning from qualified articulation, the partnerships formed, and a unique collective intelligence that would not be possible in isolation. The goal is for this **White Paper** to serve as a

reference source for new discussions and perspectives for the future, positioning the year 2024 as the year of action to drive the Circular Economy in Brazil.



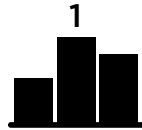
THE CIRCULAR ECONOMY HUB



Multisectoral ecosystem in operation since 2020, aimed at accelerating the transition to the Circular Economy in the country through structural changes, education, and practical actions.

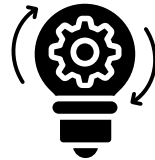
The Circular Economy Hub, Hub-CE, was born out of the need to broaden the perspective of material flow and product design for the construction of reverse chains, based on new commercial relationships along the chain. The goal was to demonstrate the potential of the Circular Economy to leverage business, disseminate learning, integrate the value chain, and share information to generate scale and enable circular chains.

With a pre-competitive approach, the focus of the Circular Economy Hub is to transform the business culture from a competitive model to a collaborative model, helping companies overcome barriers, break paradigms, and enable projects, accelerating the implementation of the Circular Economy in Brazil with more transparency and resilience, generating fewer risks and conflicts.



1st POINT OF CONTACT

To make the Circular Economy Hub a reference (Top of Mind) for the topic of circular economy in Brazil and the first point of contact for companies interested in the transition.



CREATE CIRCULAR LEADERSHIPS

Empower member companies and engage key actors in collaborative projects to drive the circular business ecosystem.



TRANSFORM BUSINESS MINDSETS

Promote a new business culture by empowering the various links of the production chains aiming for sustainable development and value generation for all.



Video of the launch of the HUB-CE at Sustainable Brands, Nov. 2019

PIONEERING INTEGRATION OF THE SUPPLY CHAIN

3 Categories of members



The major differentiation of the Hub-CE's working model is the structured framework that brings together not only large companies (ACTIVATORS) but also allows small and medium-sized enterprises (PROVIDERS), academia, financial institutions, and government (SUPPORTERS) to sit side by side sharing knowledge and challenges. It's a unique methodology, adapted to the Brazilian reality, based on the knowledge accumulated by Exchange 4 Change Brasil with international benchmarks (below), enabling the co-creation of collective intelligence that no single company could generate in isolation.

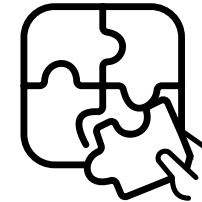
**CIRCULAR
ECONOMY
CANNOT BE
ACHIEVED
ALONE.
SOLUTIONS
MUST BE
COCREATED.**

THE 4 AREAS OF WORK

Since its launch four years ago, the **Hub-CE** has been working on four areas of work, initially aiming to **educate** member companies and their employees in line with the global context, **communicate** the importance of the agenda to the market, promote **engagement** from all parties by creating trustful relationships that facilitate the exchange of confidential information and sharing of knowledge so that **solutions** could be collaboratively built, adding value to all links in the production chain. A conducive networking environment among members occurs through the work of a specialized team that shapes conversations, providing individual circular diagnosis meetings, adapting technical scientific content to the Brazilian reality, and establishing a collective focus based on a circular articulation model that is both inspiring and practical, specific, and comprehensive.



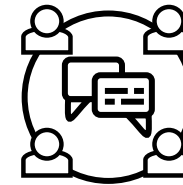
ENGAGEMENT



SOLUTIONS



EDUCATION



COMMUNICATION

OUR LEARNING JOURNEY

Each cycle was designed to have a minimum duration of 2 years, which means a minimum time to break the status quo and establish new practices and concepts.

1st CYCLE (2020-2021)

In this 1st cycle, all meetings were conducted online due to the unexpected COVID-19 pandemic, which led us to remodel the activities previously planned and adapt to the remote reality. However, this model ended up facilitating interactions among member companies located in different regions of the country, the participation of various departments within the same company, expanding internal knowledge exchanges and with international experts. The open and closed meetings contributed to the maturation of the circular mindset and the engagement of various actors. It is in these interactions, through structured conversation dynamics, that we define areas of convergence among some members and themes that can be practically and more deeply explored through thematic subgroups. In certain meetings, we were able to gather more than three departments from a single company, which made a significant difference in decision-making and information gathering.

2nd CYCLE (2022-2023)

In August 2022, we held the first in-person meeting with the members, which was a significant milestone in our experience. We got to know each other personally, evaluated the learning from the 1st cycle, and defined five future actions in an action plan to advance the transition in the coming years. It was a moment to get hands-on and highlight the value of time, effort, and commitment necessary for building circular solutions at scale. In this cycle, we demonstrated the benefits of circularity for reducing the impact of climate change and conducted technical visits among members. We strengthened our relationships, making exchanges and discussions even more robust and qualified. Based on this learning, we developed a series of “circular merit seals” aiming to qualify, congratulate, and demonstrate to everyone that the group’s achievements go beyond what each company could achieve working alone and in isolation.

LEADING COMPANIES




NOTE: Nespresso, Equipa, and Casa da Moeda do Brasil participated only in the 1st cycle. Neoenergia, Hyundai, and FGV joined for the 2nd cycle and have already committed to the 3rd cycle. Nitro participated only in the 2nd cycle.

COLLECTIVE INTELLIGENCE

At the first in-person meeting, we had the opportunity to conduct a **design thinking** session with the aim of analyzing the path taken and discussing steps for the future. The active participation of members was essential for us to define a common vision and build an action plan to advance our activities based on the Brazilian reality.

Sixteen learnings, eighteen challenges, and fifteen **insights** were identified to advance circularity in practice in Brazil. Based on this collective intelligence, five priority actions were defined to expand our scope of action, elevate the level of debate, and strengthen the role of the Circular Economy Hub as a transition broker.

Therefore, it was upon this knowledge, which reflects the Brazilian reality in practice and brings concrete recommendations to the market, that we were inspired to create this **White Paper**. An exclusive material that can serve as a basis for new discussions, leverage knowledge, and influence a favorable framework for the circular transition in Brazil.



HOW TO
IDENTIFY
CIRCULAR
BUSINESSES?

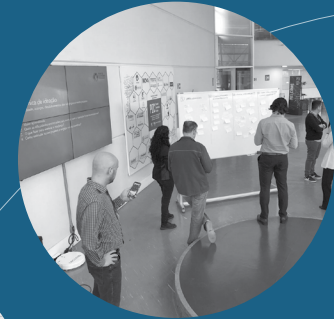
THE 15 INSIGHTS TO ADVANCE WITH CIRCULARITY IN PRACTICE



Video 1st in-person meeting at Flex:
Design Thinking session, Aug 2022.

THE 5 PRIORITY ENGAGEMENT ACTIONS

- 1 GOING BEYOND OUR BORDERS:** We must expand the discussion to new departments and areas of the business, as well as engage new links in the chain.
- 2 EXPAND OUR COMMUNICATION:** It is important to advance our internal and external communication to gain visibility and reach for our actions, as well as to connect the circularity message with ESG goals.
- 3 PROMOTE MORE EXCHANGES AND ENGAGEMENT:** For building bridges and identifying new alliances, we understand that it's important to have more events for knowledge exchange and interaction.
- 4 INFLUENCE A FAVORABLE FRAMEWORK:** Our practice can serve as a basis for the development of public policies and financial instruments dedicated to the topic.
- 5 LEVERAGE KNOWLEDGE OF THE TOPIC:** Literacy and engagement of leaders, policymakers, and consumers are essential for advancing discussions. Good examples and international inspiration contribute to boosting interest in the topic.





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Organiza e coordena eventos institucionais e públicos, com o objetivo de promover a comunicação entre a instituição e o público.

Assessoria e Comunicação Cultural
Institucional e Eventos Públicos

civi
-co

Associação Civi-Co
Rua...
Cidade...

NOSSA JORNADA DE AÇÃO

HOJE DE ECONOMIA CIRCULAR

O CÍRCULO DA TRANSIÇÃO

HOJE DE ECONOMIA CIRCULAR

O CÍRCULO DA TRANSIÇÃO

THE EXPERIENCE OF THE BRAZILIAN INDUSTRY

The 3 key learnings for the transition

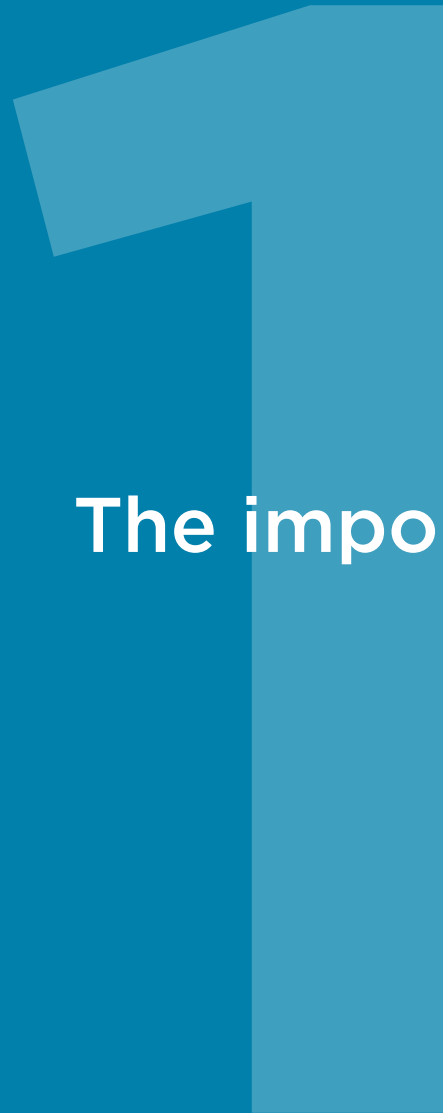
The practical journey of these past four years can be summarized into 3 key learnings that are here materialized in tools and models that can serve as a source of research and frameworks to be applied by any industry, in any country, with the common interest of advancing Circular Economy in practice.

1ST LEARNING:
The importance of having a common vision.

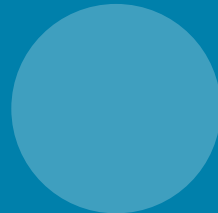
2ND LEARNING:
The solution lies in data and people.

3RD LEARNING:
Redefinition of roles and responsibilities.





The importance of having a common vision.



st LEARNING



1st LEARNING

The importance of having a common vision

To transform a business culture, both in large corporations and small to medium enterprises, we need time, effort, and a lot of resilience. An environment that encourages debate must be established on common grounds for all, with the understanding that each company has its own journey and a transformation speed that depends on internal business guidelines, the role of focal points, and the macro scenario directly affecting companies' decision-making. Once our foundations are strengthened, we can set goals and build integrated action plans. However, for the materialization of actions, we need to expand knowledge to other areas of the business and links in the chain. It was with this objective that the **Circular Manifesto** was elaborated, signed by members, and presented to the market.

The Circular Manifesto

The Circular Manifesto presents the foundations for understanding the new business mindset that needs to be absorbed by all sectors and links in the production chain, being a powerful tool for conceptual alignment among industry, government, academia, and civil society. It presents the mutual understanding of member companies, showing that circularity should be more than a marketing asset, but rather a strategic business agenda.



THE CIRCULAR MANIFESTO



The transition to a Circular Economy is no longer an option, but a key element for the survival and competitiveness of businesses. It is a daily choice made by leaders who work towards environmental regeneration and pave the way for a low-carbon future.

This manifesto is the result of mutual learning among companies committed to understanding the topic. It represents the construction of a unique collective intelligence and a demand in line with the global trend of impact ecosystems, to enable a new economic balance for products, processes, and business models.

WE UNDERSTAND THAT CIRCULAR ECONOMY IS:

It is a commitment that transforms supply chains and highlights managers willing to break away from linear logic and create a new business culture.

It should not be seen as a marketing asset, but as a priority to be discussed from the factory floor to the presidency: it involves engaging people and redesigning processes.

It is guided by a new model of governance and responsibilities. Industry and government, non-profit organizations, and civil society all must understand the sense of urgency and the need to establish new values, attitudes, and behaviors.

It brings new perspectives to profit definition and value generation for businesses, based on a new economic framework that includes design, raw material selection, use, and post-use phases.

It's a systemic model that transforms suppliers into co-creators of positive solutions for the market and society.

It needs to be conceived and executed through partnerships among various sectors and companies of different sizes. Trust and commitment are the foundation for sharing data and developing projects at scale.

It is strengthened through multidisciplinary teams, transcending proposals limited to technological development, material flow, reverse logistics, recycling, or process optimization, with an integrated and sustainable vision.

It must be part of a national strategic agenda to achieve the Sustainable Development Goals and contribute to a low-carbon economy, towards climate neutrality in line with global best practices.

We recognize the Circular Economy as a strategic agenda to be considered with suppliers, customers, and various partners in the production ecosystem, in the development of financial instruments by regulatory bodies, in business and government policies, and as a powerful tool to address climate change and achieve NETZERO strategies.

It's time to understand that isolated actions are no longer enough. It's possible to build a collaborative, profitable, and pioneering model for the circular transition in the country, built in synergy with each other and with the planet.

APRIL 2022

A STEP-BY-STEP GUIDE FOR THE CEO

International reference 1



Source: **CEO Guide to the Circular Economy**
(World Business Council for Sustainable
Development - WBCSD)

“The concept of Circular Economy is still not commonly understood by companies. Mobilizing this opportunity remains a challenge until a greater number of leaders adopt a circular mindset. Engaged leadership should promote a culture and governance favorable to the transition, to strengthen the circular mindset and make it permeate all areas of the business.”

While many reports on Circular Economy focus on discussing the use of technology, the guide published by the WBCSD (World Business Council for Sustainable Development) in 2017 served as a call to action directed at CEOs. The aim was to provide business leaders with the tools necessary to implement Circular Economy principles. The guide discusses the importance of leadership and introduces six fundamental elements for creating an action plan for the transition, starting with the need to establish a circular vision for the business, defining objectives and goals.

One of the key messages is that achieving transformation requires collaborative work involving all areas of the business, and the importance of conducting pilots to celebrate small successes and assess errors that can then be corrected to achieve scalability. In 2017, the message of collaboration being indispensable and the importance of participating in acceleration ecosystems to remove barriers and join efforts with different value chains in working together on solutions was already evident. Some companies stand out in the guide, showing how the Circular Economy approach is being applied to address social and environmental risks while also contributing to increasing the economic value of the business: Solvay,

a specialty chemicals company, showed that 30% of its revenue already comes from circular product solutions. International Flavors & Fragrances Inc. integrated Circular Economy thinking into its sustainability strategy and developed biodegradable and bio-based fragrances. Stora Enso transformed its pulp mill to extract lignin and use it as a source of renewable energy.

The guide was developed under the Factor10 program, a business collaboration program that brought together 30 global companies with the aim of finding innovative and scalable solutions for the Circular Economy. Factor10 aimed to bridge the gap between theory and practice, removing barriers and generating impactful and large-scale results through collaboration, promoting the intelligent use of resources and waste minimization.



Source: Guia de Mindset Circular, Hub-EC Dez 2020

14 CEOs from the following companies contributed to its development: Accenture, AkzoNobel, Danone, ENEL, IFF, DSM, Solvay, Stora Enso, Tata, Unilever, and Veolia. We found the message so important that it served as inspiration for the development of our **Circular Mindset Guide** launched at the end of 2020.

Therefore, it is clear that the Circular Economy approach offers economic benefits, contributes to corporate sustainability and helps companies adapt to policies and meet global commitments. Leadership plays a crucial role in the transition, encouraging collaboration between departments and fostering a supportive culture.

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The solution lies in data and people.

Two light-colored circles are positioned vertically in the lower right quadrant of the slide, one above the other.

and LEARNING

2nd LEARNING

The solution lies in data and people

The engagement meetings of **Hub-CE** and the knowledge exchange facilitated by the subgroups, are essential for solutions' creation, but it is the companies' commitment and practical dedication that will bring the expected results. Therefore, the role of each company member in being an "internal and external facilitator" of conversations, is essential to bring other peers, their team, leadership, suppliers, and clients to the discussion table. Dedicated and persistent engagement builds the foundations of solutions because it allows access to confidential data and promotes strategic debates for changing course, demonstrating a proactive vision for new achievements and gaining a competitive edge. A long-term vision in companies ensures the allocation of necessary time for their employees to participate in individual and collective meetings and not lose enthusiasm or be directed towards other actions throughout the process.





The Circular Engagement Badge

The circular engagement badge highlights the commitment of the member company and its unique contribution to the collective intelligence-building process to advance the transition. This was a demonstrative action to acknowledge the efforts of member companies that have been active since the 1st cycle of **Hub-CE** and remain engaged to this day. It was this demonstration of commitment that influenced new companies to join **Hub-CE** in the 2nd cycle.

GUIDELINES FOR RECEIVING THE CIRCULAR ENGAGEMENT BADGE

Have signed the Circular Manifesto

Have at least one focal point dedicated to the topic within the company

Have participated in virtual and in-person meetings for at least two years

Have engaged other areas of the business

Have contributed to technical visits and sub-groups

ENHANCING CIRCULAR SOLUTIONS

The individual contribution evidenced in practice



CBA supported us in building the legal framework of Hub-CE, engaging in discussions with members, emphasizing the importance of re-shaping relationships through new financial instruments, incentives, and legal frameworks.



Cebri positioned Hub-CE in global discussions, highlighting the relevance of our work for leadership engagement and the importance of the topic on the climate agenda.



CEMPRE brought us a differentiated perspective on recycling, emphasizing the importance of public policies that promote scalability and the transformation of reverse logistics projects into reverse chains.



Covestro positioned participation in **Hub-CE** as a strategic action, bringing activities for discussion in meetings with the headquarters in Germany and strengthening our value proposition.



Electrolux showed us how essential it is to align business goals with sectoral guidelines, using insights gained from conversations with various stakeholders in the supply chain to drive actions across different areas of the business.



Flex opened the doors to their operation, demonstrating why they became a leader in the global “*Light-house*” community of companies by the World Economic Forum due to their use of 4.0 technology.



Gerdau showed us the importance of internal engagement, dedicating time and fostering a collaborative mindset for building circular systems.



Plastiweber brought the circular mindset to their customers and commercial area through engagement workshops and training.



RCR Ambiental engaged their value chain, bringing a client to materialize and give visibility to the importance of reverse logistics.



SENAI CETIQT provided us with a perspective that goes beyond technology, emphasizing the importance of scaling through partnerships, collective learning, and exchanges among supply chains.



Tomra offered an integrative perspective, sharing essential information for building our collective intelligence and facilitating the development of a common agenda among members.



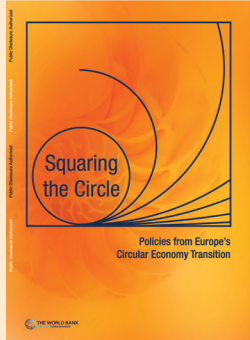
Wise contributed to engaging their technical and commercial team to demonstrate the role of the supplier as a co-creator of solutions alongside brand owners.



IPT demonstrated the importance of science for the transition, sharing with members knowledge about guidelines for resource mobilization and the need to broaden our focus on technological development in building circular solutions.

THE WORLD BANK'S PERSPECTIVE THE ROLE OF COMPANIES IN THE TRANSITION

International reference 2



Source: **Squaring the Circle - Policies from Europe's Circular Economy Transition**

“Circular Economy is an “extremely wicked problem” that demands coordinated action among actors who often do not have the same incentives.”

In the face of the growing scenario of raw material consumption worldwide, whose projections continue to accelerate, resulting in significant environmental consequences, the World Bank published its first report in 2023 dedicated to assessing the progress of the Circular Economy based on the experience of the European Union. The first highlighted point is that the transition should be implemented through incremental stages. More than through technological pro-

gress, its pace will be dictated by the removal of institutional barriers, access to quality information, and incentives that allow for the widespread adoption of circular business models. The report shows that it is possible to dissociate the growth of material consumption through a comprehensive set of public policies that contribute to the following points:

- 1.** Adequate pricing of natural resources aimed at their preservation and the strengthening of closed loops. The combination of fiscal incentives and regulatory policies to reduce economic distortions, such as cheaper prices for virgin resins compared to recycled resins, are essential to foster circular businesses.
- 2.** Conceptual guidelines for economic actors to make better decisions. Additionally, actions that promote data sharing among companies and their value chains help in understanding the benefits of new circular business models.
- 3.** Incentives for institutions to work on circularity at scale, demonstrating a common agenda to all ministries. The participation of commercial banks in credit lines for circular businesses is essential.
- 4.** Mechanisms to unlock investments that will promote demand both for entrepreneurs and producers, as well as for consumers. Regulatory

instruments that boost circularity, such as the right to repair, requirements for recycled content, product labeling, and extended producer responsibility, will accelerate the process.

The World Bank also highlights the role of industries in modifying their processes and describes the existing barriers both within the internal environment (micro), along the production chain (meso), and within the context of the city/country (macro) that need to be addressed for the implementation of circular business models (CBMs).

Finally, it brings two key points for the coordinated advancement of actions:

The importance of the company's Culture and Values: leadership is responsible for demonstrating commitment to the transition and promoting team training sessions.

The speed and scale of implementation: the private sector will be central to the implementation of circular business models, and the report emphasizes the importance of promoting communities, hubs, and networks to foster knowledge sharing and exchange experiences, as exemplified by our practice in the Hub-CE.



BARRIERS to CBMS

Source: Adapted from Garrido-Prada et al. (2023); Khan, Daddi, Iraldo (2021); Kirchherr et al. (2018); and Liu Bai (2014)

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Redefinition of roles and responsibilities.

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rd LEARNING

3rd LEARNING

Redefinition of roles and responsibilities

The volatility of commodity prices, scarcity of raw materials, ESG goals, and process optimization models reaching maximum productivity limits pose risks to supply chains. New sectoral agreements require business commitments that are naturally seen as additional costs to operations. Transforming waste into new raw materials requires not only a structured supply chain but also planned demand.

Therefore, what may appear as a cost at first glance should be seen as an investment. In the Circular Economy, the definition of cost, profit, and value must be measured by a new economic yardstick, with new processes, assessing the cost to the industry, but also the cost to our society.

Indeed, no company can internalize all the investment needed for the development of the solution and the business model alone. It is the integrated work, through hubs and with the help of independent facilitators, that often turns the switch from linear to circular. Exchanges of necessary information for process redesign only occur in trusted environments, and these ecosystems will enhance circular solutions by being able to build collective intelligence that would hardly be structured in isolation by companies alone. This is what we call circular governance, which redefines roles and responsibilities along the supply chain, brings together different actors, and balances multiple interests through qualified coordination.

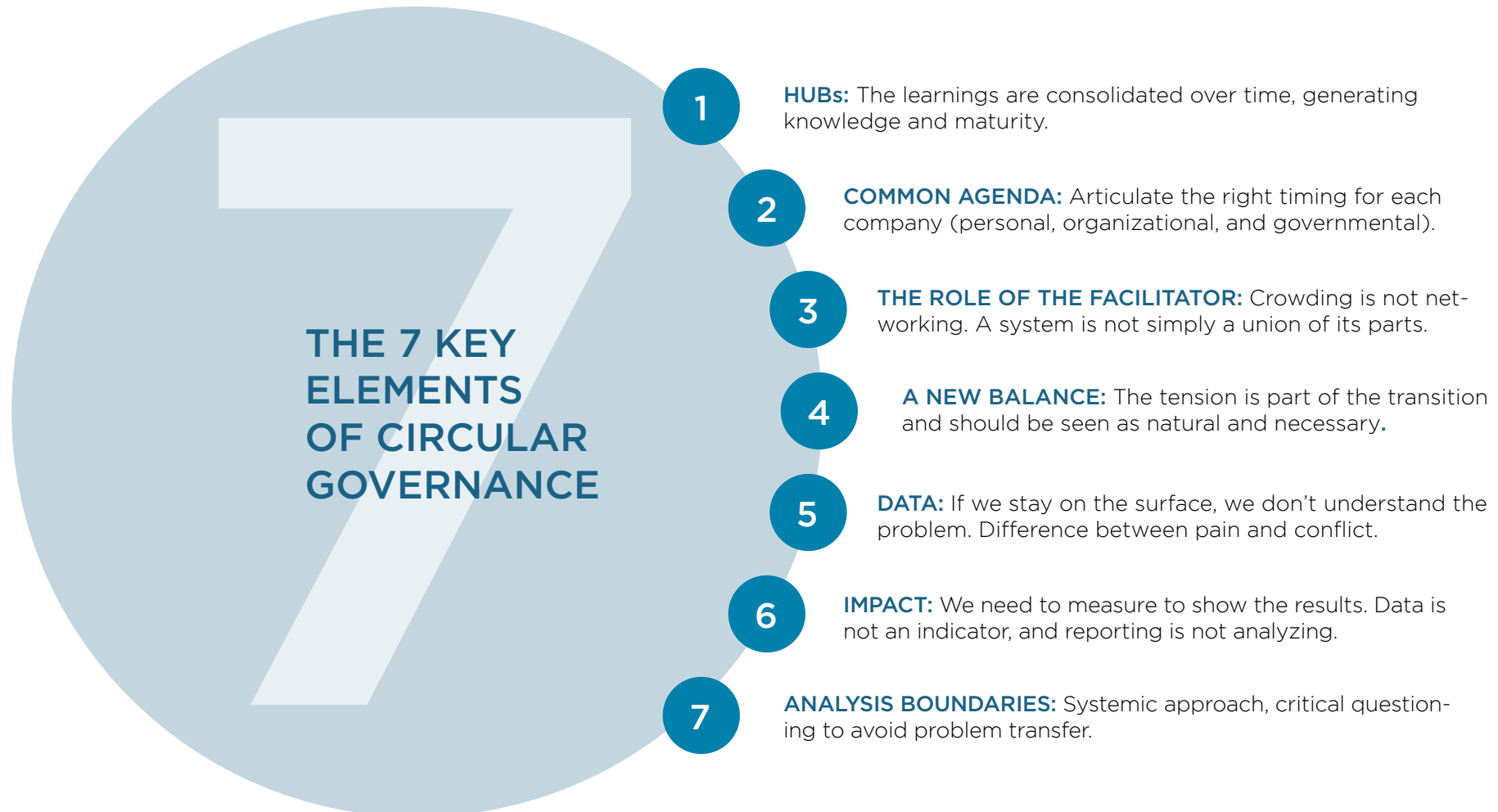
Circular Governance

Through debates in thematic subgroups and the effort to engage in data capture and design of circular solutions, we have designed a model that illustrates the seven key elements for the success of stakeholder engagement and progress in the circular process. No actor in the value chain will make the circular transition alone, and we believe that understanding these elements makes it easier to conduct discussions and advance towards concrete results.

In line with these points and inspired by the experience of the Netherlands, we are qualifying circular governance in the discussion of our projects to serve as the foundation for the implementation of the solutions we so greatly need.

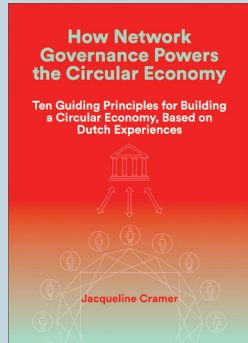
THE 7 KEY ELEMENTS OF CIRCULAR GOVERNANCE

Proprietary methodology of Hub-CE developed based on practical learning



CIRCULAR GOVERNANCE BASED ON THE EXPERIENCE OF THE NETHERLANDS

International reference 3



Source: **How network governance powers the circular economy** (Jacqueline Cramer, 2020)

“Network governance encourages positive forces in society and gives wings to individuals’ ideals. In today’s society, we tend to underestimate what people are capable of doing if they are empowered and taken seriously.”

Implementing truly ambitious goals is the greatest challenge of a circular transition. No single company, government, or citizen can achieve this major change alone. Jacqueline Cramer, former Minister of the Environment of the Netherlands, in her book *“How Network Governance Powers the Circular Economy”* shows us that collaboration is the key: powerful collaboration with a clear objective, clear agreements, and a clear division of roles, called Circular Governance. The consolidation of properly oriented partnerships is essential because only through the joint efforts can we gain speed and expanded scale. We can change the direction the world is taking, as long as we join forces!

In Circular Governance, while stakeholders work closely together, transition intermediaries shape the process, driving the outcomes. Intermediaries, also known as transition facilitators, articulate alignment among all relevant stakeholders. It is the intermediary’s role to orchestrate the transition process from a neutral position. Their tasks include developing appropriate interfaces between different stakeholders, assisting in meeting necessary preconditions, and ensuring impactful circular initiatives can be established. Other important tasks include motivating most companies to

join circular initiatives and helping establish connections between regional, national, and international government. In the Netherlands, public authorities, industry, civil society organizations, knowledge institutions, among others, have agreed to establish a Circular Economy by 2050, acting together in five key sectors (construction, plastics, biomass and food, manufacturing, and consumer goods) for this purpose, using 10 guiding principles as useful tools to move from ideas to practice. When circular governance is well-designed and implemented, it ultimately becomes widespread to provide greater scale, and the linear economic system is successively dismantled to make way for the circular system.

The transition to a Circular Economy requires continuous transformational change, necessitating a careful and orchestrated approach from a network facilitator, in which all product chains (member companies) play an important role.

ENCOURAGING THE TRANSITION

Implementing circular initiatives requires a transformational change, involving the transition from a linear system to a circular system.

GUIDING PRINCIPLE 1

The circular initiative begins with a shared sense of urgency.

GUIDING PRINCIPLE 2

The implementation of circular initiatives occurs in four sequential, yet cyclical phases.

GUIDING PRINCIPLE 3

The tasks performed for each circular initiative are practically the same, but the focus is specific to each case.

GUIDING PRINCIPLE 4

Building a CE is a journey with a clear destination but without a predetermined path.

CONTEXT IS FUNDAMENTAL

When transitioning from a linear to a circular economy, it is crucial to consider various system variables and understand the context of the change.

GUIDING PRINCIPLE 5

Focus on the most promising and disruptive innovations.

GUIDING PRINCIPLE 6

Map out the key drivers and prerequisites for successful implementation.

GUIDING PRINCIPLE 7

Identify relevant stakeholders and assess their willingness to join forces.

SUCCESSFUL IMPLEMENTATION

After planning and constructing a circular initiative, the time comes for its implementation.

GUIDING PRINCIPLE 8

The new business models should benefit all partners in the network.

GUIDING PRINCIPLE 9

Transition brokers can accelerate circular initiatives.

GUIDING PRINCIPLE 10

A transparent division of labor among relevant stakeholders is indispensable.

THE CIRCULAR TRANSITION

CREATING A FAVORABLE FRAMEWORK THROUGH COLLECTIVE INTELLIGENCE

Understanding the pioneering role of the Circular Economy Hub and its role in empowering the market and engaging all stakeholders in building a common agenda, we conducted a training in the year 2023 with the purpose of expanding our reach and elevating the level of discussion. It was a decision by member companies to start the training with the value chain, extending the invitation to their suppliers, customers, and government representatives to strengthen the debate with different perspectives.

Starting with the value chain was a good strategy as it allows us to expand the adoption of the circular mindset and attract new actors. Creating a favorable framework at the macro level ultimately strengthens internal foundations and advances discussions across all areas of the business. With this, we also enhance the capacity of the Circular Economy Hub to identify synergies and opportunities among its members. We improve collaboration and increase the chances of fostering alliances and building bridges between different links in the production chain to scale up circular solutions. The other dimensions that we planned to work on later would be to increase the leadership's repertoire for debate and to train the operational team to develop indicators. We divided the training into two parts, bringing

both a strategic and practical perspective. We gathered various members and their guests for discussion in a collaborative dynamic that brought important insights, which we presented in a structured manner in this paper to serve as a basis for future discussions and to bring robustness to the development of financial instruments and public policies adapted to the practical reality of the Brazilian industry.

Five priority themes were chosen to be collectively addressed simultaneously to create a favorable framework for the transition. We invited a lead organization for each theme - either a member company or an external guest - based on their knowledge and ability to provide the Brazilian context in a concrete manner, with its positive and negative nuances, thus contributing to a practical debate on the barriers and opportunities. Through a structured multi-stakeholder group dynamic, we established two overarching objectives, identified challenges, and suggested some lines of action to advance the theme.



THE 5 PRIORITY THEMES



Anchor companies



Established objectives

Encouraging the growth of circular business

Incorporating the theme of Circular Economy into existing policies and instruments

Promoting integration among the different actors of the value chain

Making Circular Economy a business value

Improving society's perception of what is and what is not Circular Economy

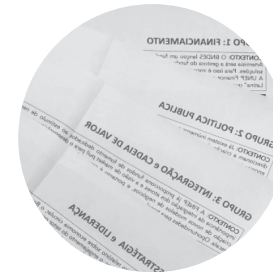
Ensure the innovation of the new financial instrument

Increase the level of maturity on the topic within ministries

Promote education among all stakeholders

Create demand for secondary materials

Clarify the benefits of circular solutions for consumers as well as the impacts and gains



FINANCING

The UNEP Finance and the Inter-American Development Bank (IDB) launched, in 2022, the study “Unlocking Financing for the Circular Economy in Latin America,” which introduces the concept of Circular Finance, highlighting the breadth of the topic compared to existing financing models. BNDES (Brazilian Development Bank) launched an exclusive fund to promote the Circular Economy with a pioneering blended finance model, aiming to advance the dissemination of circular businesses in Brazil. However, we face a dual-dimensional innovation. First, a financial instrument that requires new structuring and application models, and a selection process for circular businesses that requires a minimum level of maturity to ensure that resources are not allocated to existing models.

Anchor company:



OBJECTIVE	CHALLENGE	COURSE OF ACTION
Encouraging the growth of circular business	There is a lack of understanding and maturity to discuss the topic	Develop educational material and conceptual foundations, e.g., ISO
	Lack of evaluation criteria	Promote places for knowledge exchange and learning
Ensure innovation of the new financial instrument	Expand the participation of new actors in financing	Establish a multidisciplinary committee to evaluate projects
	Understand the trade-offs and implementation of the new financial instrument	Expand the scope of analysis and ask new questions

PUBLIC POLICIES

There are already bills dedicated to boosting the Circular Economy at both the subnational and federal levels. The two most significant ones propose the creation of a national Circular Economy policy and a Circular Economy dedicated to the plastic sector. New sectoral agreements are engaging new sectors, leveraging the debate more broadly and practically. The sectoral agreement for white goods launched by Decree No. 10,240 in 2020 brought new commitments for companies, which boosted engagement, technical debates, and greater commitment from the production chain to reverse logistics. However, it became clear that public policies must be established and integrated to avoid transferring problems and setting unrealistic goals for the geographical reality of our country. Public policies should be instituted to aggregate the perspective of all links in the production chain, the existence of appropriate infrastructure, and the availability of tools and financial technical support to achieve the goals.

OBJECTIVE

Inserting the topic of Circular Economy aligned with existing policies and instruments

Increase the level of maturity on the topic within ministries

CHALLENGE

Existing policies are not fully implemented

Insufficient knowledge among public managers about the topic

Lack of knowledge can lead to legislation that does not encourage change

Legal uncertainty generated in companies due to the multiplicity of policies

COURSE OF ACTION

Implement new public policies in an integrated manner with the existing system

Develop public incentives to support a new economic balance and investment returns

Create incentives to enhance the reverse value chain

Give voice to all actors to enable new processes

Anchor company:



VALUE CHAIN INTEGRATION

Anchor company:



Technological development is a key component in bringing solutions to the Circular Economy. However, it cannot be done in isolation, without a systemic and integrated view of all links in the production chain for its implementation. Funding dedicated to stimulating circular businesses should consider the market pull perspective (creating demand) for the development of scalable solutions. Therefore, it is important to create mechanisms that allow technological development through consortia and coalitions involving various actors of different sizes, integrating the supply chain with the buyer market. In this case, a differentiated guarantee mechanism for fundraising and a multi-sectoral approach will be essential for fostering reverse chains on a large scale in our country. FGV, through FGVces, has extensive experience in projects dedicated to integrating the production chain and in 2023, they partnered with the Spanish Chamber of Commerce and Industry in Brazil to work on two production chains based on the Spanish experience: telecommunications and energy.

OBJECTIVE	CHALLENGE	COURSE OF ACTION
Fostering the integration of chain links for circularity	Lack of public policies and incentives to stimulate partnership work Non-existence of fines for linear practices	Having an independent regulatory/supervisory body that represents all sectors/segments Creating a tax incentive to finance the transition
Promoting education for all stakeholders	The production chain is disconnected Lack of goals and incentives for collaboration	Increasing awareness through communication channels Using conventional and digital media to raise awareness among the population about the topic - government

STRATEGY AND LEADERSHIP

Anchor company:



In its first report on Circular Economy, the World Bank highlights two key elements for the transition: private sector engagement as a central element for the implementation of deep circular business models and the importance of breaking inertia by demonstrating companies' commitment to new values and a new business culture. Tomra Brasil, a member company of the **Hub-CE**, since its formation in 2020, brings a strong culture of circularity established in its headquarters in Europe and permeating operations around the world. Thus, the Circular Economy is presented to the market as inherent to the business strategy and important for the relationship with customers and suppliers.

OBJECTIVE

Circular Economy has to become a business value

Create demand for secondary materials

CHALLENGE

Decision-making cannot be solely based on cost

There is a lack of value perception and incentive policies for circular businesses

Secondary material is more expensive than virgin material. Need for scale and investment

There is a lack of value perception in the use of secondary raw materials

COURSE OF ACTION

Companies' commitment to this new business culture should be discussed within the board

Investment funds must demand circularity elements in business practices. Legislation also aids in strategy creation

The company should initially "sponsor" the process by seeing institutional value in the project, even if there is no immediate return

Create incentives to enhance reverse logistics and give voice to all stakeholders to understand and enable new processes

COMUNICACION AND CONSUMPTION

Anchor company:



Understanding the multidisciplinary necessary for the development of circular solutions and the changes in habits, behaviors, and values in all links of the chain, it is important that all actors understand their role in the transition. For this, different communication tools should be used, with different focuses and formats, as each person is inspired differently and each link in the chain has its perception of responsibility and impact. However, one point becomes clear in the transition process, both consumers and companies must be introduced to the topic of Circular Economy in a fun, attractive way with possibilities to influence decision-making change. ESPM brought its experience to discuss the new role of marketing in the transition. It is a fact that various actions must happen simultaneously, that's why they brought as the basis for the debate that the gains of the Circular Economy must be clear to everyone, as well as the impacts of remaining in the status quo if we want to leverage the production, use, and consumption of circular products and services. Furthermore, companies must maintain consistency and coherence in their actions and communications if they expect their products or services to be attractive to consumers.

OBJECTIVE

Improving society's perception of what is and what is not Circular Economy

Making the benefits of circular solutions clearer to consumers as well as the impacts and gains

CHALLENGE

The theme does not reach all social classes

Communication only highlights the usage phase and there is no communication about the post-usage phase

Lack of knowledge about the topic in agencies, companies, and society in general

There is no clear mechanism for measurement and differentiation

COURSE OF ACTION

Implementing education on Circular Economy in schools

Highlighting the problems of the linear economy, trade-offs, and strengthening the systemic mindset

Defining technical standards for advertising and taxonomy to avoid "greenwash"

Creating incentive programs for consumers, or social currencies



All at once and now!



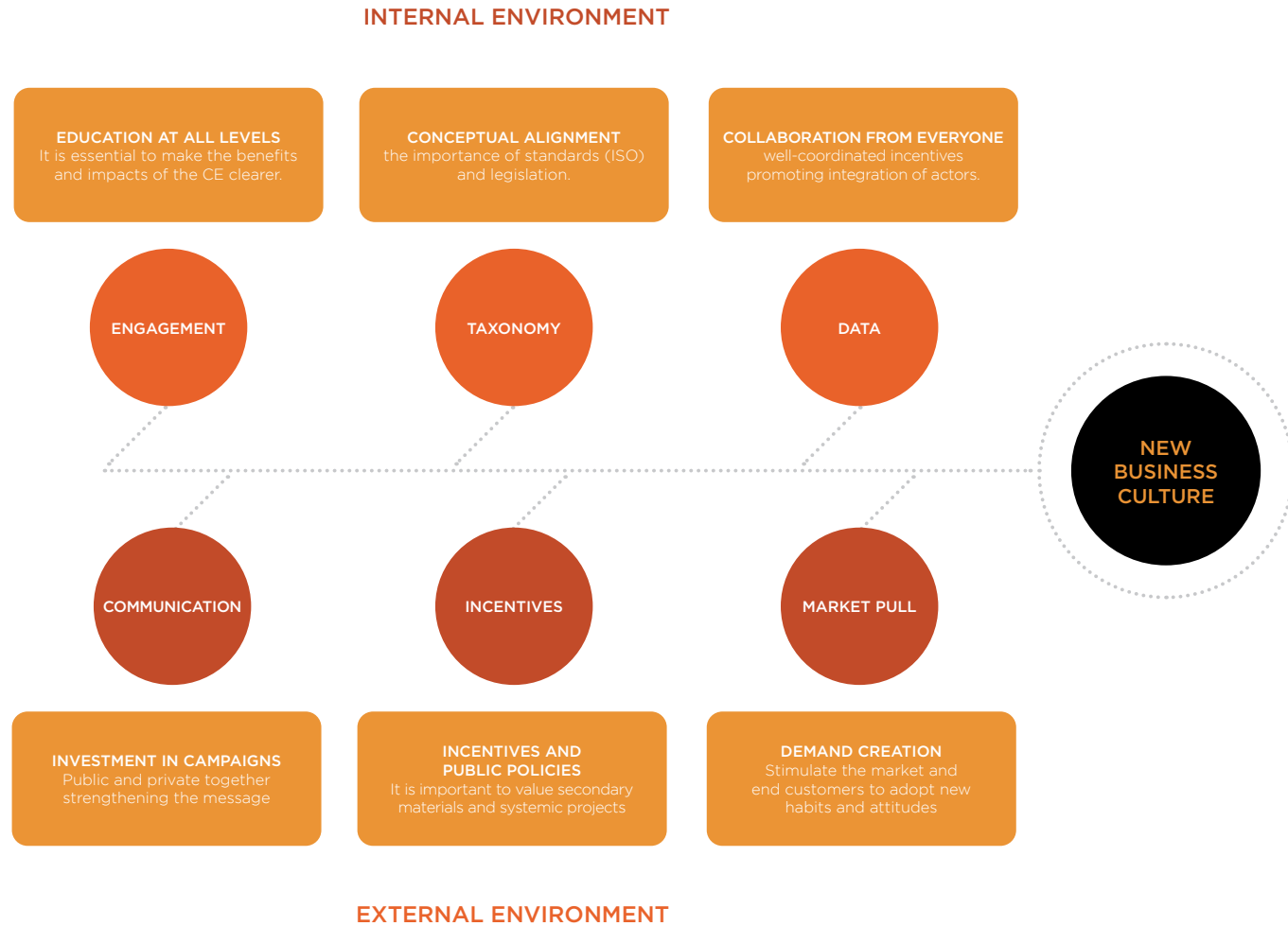
In summary, if we want to advance in practice towards the implementation of the Circular Economy in Brazil, many actions must happen simultaneously. We cannot wait for the action of one actor or another. We need a multisectoral, collaborative effort bringing together the public sector, private sector, academia, and consumers to advance the topic.

The government developing robust public policies, the industry redefining roles and responsibilities along the production chain, innovative financial instruments dedicated to technological development in an integrated manner, considering the role of facilitators and Circular Hubs to ensure demand creation and consumer behavior change.

Therefore, if we want to strengthen a new business culture for our country, it is important to understand the necessary changes that must occur both internally and externally within companies.



THE ELEMENTS NEEDED TO STRENGTHEN A NEW BUSINESS CULTURE



EXPANDING THE VIEW AND DEEPENING THE DEBATE

Recognition and independent validation

Over the past four years, we have traveled various paths, engaged in discussions with over 15 international experts, welcomed 47 guests from six industrial sectors, and hosted 24 representatives from national research centers, funding agencies, banks, and government officials, who brought us a diversity of perspectives and learning. After two years of virtual work, it was possible to experience the problems and solutions in practice through six thematic groups and 17 technical visits among members, creating more focused discussion environments, providing a broader view of the opportunities under discussion, accelerating access to confidential data, and boosting the engagement of new areas and links in the chain. We had never seen in the Brazilian market an ecosystem that brought together small and large companies to jointly discuss strategic issues. We built important trust relationships for sharing crucial data. We reached a level of knowledge and created a collective intelligence that no single company could have achieved working alone. We are already a reference within and outside the country. Internationally, we were interviewed by former Minister of the Environment, Jacqueline Cramer, for her research on the role of hubs in the transition, selected as the only hub in Latin America, and identified by the Ministry

of Development, Industry, and Trade in the Circular Economy roadmap study as one of the 4 initiatives driving the debate in Brazil.

The role of individuals as agents of transition and the strength of the ecosystem.

A scientific and independent analysis was conducted by researchers from Middlesex University led by Dr. Patrick Elf from the Centre for Enterprise and Economic Development Research (CEEDR) in England, who used the hub case to demonstrate the role of individuals as agents of transition and the strength of the ecosystem in the market transformation process. Fourteen interviews with member companies were conducted between December 2021 and March 2022 aiming to clarify the “why” and “how” professionals drive circularity within companies and along supply chains. Members were classified on an analysis matrix that evaluated the company’s positioning regarding the business’s strategic vision for circularity (short term vs long term) and the connections the company has established within its value chain (disconnected vs connected). We observed the difference in circularity structure presented by member category (activator vs provider) and obtained important insights from interviews with rep-

resentatives of member companies about the essential role of the **Hub-CE** in mediating interests, building trust relationships, and facilitating data sharing, being a relevant actor to influence the much-needed collaboration among companies for Circular Economy to happen in practice.



Summary of the research presented in the Hub-CE's 2022 annual report with further information about the matrix: “Organizational Circularity Frameworks (OCFs)”

THE LEARNING OF SUBGROUPS:

5 Cases

The cases presented in this chapter illustrate essential elements for the transition to happen in practice. We perceive that the barriers and challenges experienced by member companies in the journey of building circular solutions are the same as those being evidenced and discussed in other global hubs. Therefore, this is evidence that we are on the right path. The first step to progress towards a new path is to break paradigms, tear down barriers, and transform challenges into proactive actions for the creation of a framework favorable to the transition.



CASE 1

CIRCULARITY CANNOT BE LIMITED TO JUST ONE DEPARTMENT

We already know the power of marketing to drive change. However, any action can be reduced to a one-off campaign with limited reach if it's not connected to operations. One of the first reverse chains we worked on to drive was plastic film, considering Plastiweber's need to seek new sources of supply to increase recycling process gains and meet the increasing demand for recycled plastic film. Initially, together with Tomra, we assessed the collection of plastic film removed from automated recycling machines, but requiring an extra washing step. Then came the first opportunity for technological discussion with IPT researchers. However, who should invest in the process: the waste manager or the recycler? A gap still to be defined in terms of marketing. But it was with the Hub-CE engagement methodology capturing the intelligence of small and medium-sized enterprises that we created opportunities for larger ones. We realized that Adimax, a company that produces pet food and a Plastiweber customer using recycled plastic film in its secondary packaging, could have its unpacked product's secondary packaging returned for recycling. It was RCR Ambiental that brought us the opportunity to speak with Retail and show them the opportunity they would have, with a small change in the operating model, to increase

the material capture capacity in the loading and unloading process and still tell the consumer about the closed material cycle story. Retail, through its purchasing department, could also influence other brands by creating requirements for the percentage of recycled content in packaging, thus providing suppliers with an opportunity to increase product sustainability and further drive the market by creating new closed loops. However, in the end, we observed some obstacles that prevented scale and change of the status quo: marketing wanted the narrative but lacked the power to influence neither the commercial nor the operational area. With the awareness that 95% of retail impact comes from the supply chain, we highlight here a latent potential that can be achieved if goals are developed in an integrated manner by different departments, a common agenda established by leadership, and a circular governance structured for the design and practice of actions.





The first time I was invited by Bia to participate in the Circular Economy Hub, I didn't have much of an idea of what I would find, but by the end of the event, it became very clear the work that is being done and the opportunities we have to evolve. In the second meeting I attended, I met more people and companies, excellent connections, and noticed the movement gaining strength and structure. I believe a lot in the work being done and am sure that the union of the companies/people involved in the different stages of the production chain will bring good results.



LEANDRO FARHA - Fiosgood Founder



The Circular Economy Hub meetings are always extremely enriching because Circular Economy begins with collaboration. The process starts with two links of the chain coming together, we assess the demand and supply, bring new actors to the table to discuss opportunities, work together, and thus unlock existing opportunities



JOÃO ZENI - Director of Sustainability /
ESG for Latin America at Electrolux

CASE 2

PUBLIC POLICY AS A LEVER FOR NEW PROCESSES AND INDICATORS

Discussions around the opportunities of the reverse cycle of electronics, especially in the white goods sector, arose at the end of the 1st year of the Hub-CE based on the demand from Electrolux to meet the goals established in February 2020 by Decree No. 10.240, which regulated the Reverse Logistics System for Electronic Appliances. Early in the conversations, we realized that Electrolux's challenge could become an opportunity for Gerdau, which is interested in metal scrap. As the discussions progressed, we found that we had the potential to leverage both the steel and plastics reverse chains, which end up as waste and a cost to the white goods scrap recycling process. Thus, we identified a focus area to build a pilot, with new members joining the discussion (Covestro, Wise, Tomra, and Flex), as well as invited experts (Hausthene). We sought regional actors (Ikone Global and UFPE) who could optimize the collection and disassembly process for stoves, refrigerators, and washing machines, and gradually structured the working model in a coalition format, which in this case brought together 9 companies among members and invited guests. We organized numerous meetings among the companies, signed a confidentiality agreement to access internal business data essential for designing indicators, defining new circular processes, meas-

uring potential gains, and thus defining the responsibilities of each actor and the necessary investments. With this working group, we materialized the concept of circular governance and translated practical experience into a Circularity Map, which became the Hub-CE's proprietary methodology capable of offering a step-by-step guide for other companies wishing to join a coalition and form the appropriate governance for the development of circular solutions at scale. This case defines the meaning of collaboration in building circular chains. It also shows that the market becomes more agile with the strength of a well-designed and monitored public policy. Finally, we aim to show that it is possible to transform the cost of reverse logistics into investments in reverse supply chains for new high-value raw materials, productivity gains in new processes, higher returns for all involved, and the creation of more qualified jobs.





The year 2023 was very challenging in the context of solid waste valorization; the downfall in commodity prices, especially in cardboard, posed even greater challenges in the transition process to Circular Economy in this segment. An extra dose of resilience was required, but after making the necessary course adjustments, we are confident in accelerating projects in 2024/2025 and convinced that the collaborative environment of the HUB will once again be a valuable instrument in every sense.



ANDRÉ CASTILHO NAVARRO - Partner /
Director of RCRambiental



Being part of the HUB has been a very enriching experience for Tomra because through discussions and interactions with members and guests, it was possible to identify the different challenges and opportunities brought by the new way of thinking, circular thinking. Another important point to highlight is the great responsibility of the HUB to seek solutions for complex problems still ignored by markets. The HUB has a great ability to bring together different stakeholders and propose solutions involving companies, academia, and government to create more sustainable alternatives.



DANIEL GHIRINGHELLO - Head of Sales Tomra Brazil

Did you know that the first report analyzing Circular Economy opportunities for Brazil was published in 2017 by the Ellen MacArthur Foundation?



The report highlights the electronics sector as one of the three priority sectors and mentions our member Flextronics as a success case. However, it already pointed out that the existing infrastructure for the reverse cycle could be improved to recover additional value from products, components, and materials. It also emphasized one of the key points of our pilot, which refers to the formalization of scrap dealers operating in the informal sector, who, upon receiving structured training, can potentially unlock larger volumes of materials with higher quality standards, thereby preventing them from leaking out of the system and promoting social inclusion at the same time. The paper also emphasized that multisectoral collaboration is the way for small actors to start meeting certain standards and quality rules, build new skills and competencies, generate greater capacity to restore material flows, and also create social benefits for the production chain. It's an opportunity to unite the best of both worlds: integrating the efficiency and operational capacity of the formal industry with the agility, scale, and reach of the informal sector.

CASE 3

FROM A BILATERAL NEGOTIATION TO MARKET GUIDANCE

The plastic sector was the first to be highlighted in the context of the Circular Economy due to the liability it has been leaving behind in the face of the convenience, ease, and low applicability cost of the material. Targets for the use of recycled resin are being established by major companies, using examples from the Hub-CE, such as Hyundai and Electrolux, as a way to drive the reverse chain. However, there is a disconnect between the purchasing and institutional areas that sets the volume target but does not highlight the economic and structural factors necessary for this target to be achieved. In our experience working on increasing the recycled resin index in durable products, it was not the lack of material in the Brazilian market or the quality of the recycled material for its applicability that was the barrier, as evidenced by Wise. The existing barrier lies in the economic indicators of the purchasing area. Therefore, it is not through a bilateral negotiation of buying and selling that we will be able to drive the reverse chain if the decision base is always the need to achieve a lower price than the virgin material. In this case, pioneering brands that want to see market transformation must connect their commitments with more strategic and long-term negotiations, turning their supplier into a co-creator of solutions. Over time, the new commercial

relationship can provide not only economic gains in the purchasing area but also add value to the brand due to its responsible positioning, attracting conscious consumers and even avoiding fines or barriers to access certain investment funds. With a new economic negotiation basis, brands can become significant market drivers.





The journey of the Circular Economy has been incredible for us, a new path filled with ups and downs. However, it is only thanks to the guidance and understanding created through the HUB-CE that we remain focused and successful on this path. It's truly something new for all involved, and we have transitioned from learners to disseminators of knowledge to the market, becoming part of the change as influencers of a new mindset. We are moving away from the logic of selling packaging to presenting a solution to one of the biggest challenges facing companies today: being part of the solution and not the problem of plastic pollution in the environment.



MOISÉS WEBER - VP of Circular Economy at Plastiweber



Participating and working in harmony with the group of excellent professionals at the Circular Economy HUB is a unique opportunity for Hyundai Motor Brazil! Being the first automaker to join the HUB, it's incredible to be able to structure ideas and dreams that gain scale and significance in reality, reinforcing the commitment associated with sustainability and the brand's consolidated pioneering spirit in this journey. Indeed, the present and the future are circular!



DAVI COSTA MARQUES - Environmental Supervisor at Hyundai Motor Brazil

CASE 4

ENERGY TRANSITION WITHOUT CIRCULARITY WILL NOT BE SUFFICIENT

The International Energy Agency predicted, in a 2016 report, that Australia would generate 145,000 tons of photovoltaic panel waste by 2030. However, this number is now certainly higher, given the exponential popularity of large-scale solar installations. This would be equivalent to 214 Mount Everest and an estimated investment forecast in the range of US\$10 million for recycling. Nowadays, solar energy stands out as a significant ally in the energy transition, gaining remarkable momentum in Brazil, where its development already equals the size of three plants like Itaipu. In Europe, targets have already been set for energy producers and distributors for panel recycling. The discussion topic in this working group, introduced by Neoen-ergia, raised the challenge of the circularity of photovoltaic panels and the question of which mechanisms could be implemented in future project investments in Brazil to avoid a scenario similar to what has been observed in Australia. Flextronics, at one point, invested in local solar panel production, but due to the lack of incentives, had to close its operations. A recent study by the Ministry of Mines and Energy on the potential for solar panel recycling highlighted the challenges of creating a market for secondary materials for the Brazilian scenario. However, we already

see initiatives from Brazilian startups, such as SunR, that are committed to creating solutions for this market. However, there is a risk that these companies may not reach the necessary volume and economic viability due to logistical challenges and the scale of appropriate technologies. This scenario highlights the importance of taking a circular approach to investments for the energy transition, avoiding designing and implementing projects that generate waste and neglect closing the loop. In light of this, there is an excellent opportunity to establish new guidelines, ensuring that investments in innovative solutions are always guided by a systemic perspective. Banks and development agencies can play a crucial role by adopting a systemic view that encompasses reverse cycle and post-use of packaging and equipment, considering a new temporal and geographical frontier. Additionally, it is necessary for governments, companies, and civil society to promote and support the creation of new incentive instruments for the circular transition.





Being present at Circular Economy Hub events is always a pleasure, and a moment of great knowledge and learning. Everyone is focused on the same goal of increasing material circularity, bringing together industries with all links of the supply chain.



ANA TOLEDO - Commercial Director at Wise Plásticos



Circular economy as a guiding principle is driven by collaboration. The pioneering spirit of the HUB-CE articulates and fosters the exchange of knowledge and challenges among its members, enhancing mutual learning, synergies, and building bridges between various partners nationally and internationally, aligning with our commitment to cocreate solutions, joint solutions, a fundamental pillar to realize our vision of being #FullyCircular.



HERNAN CHAVEZ - Sustainability and Market Development for Specialty Films in Latin America at Covestro

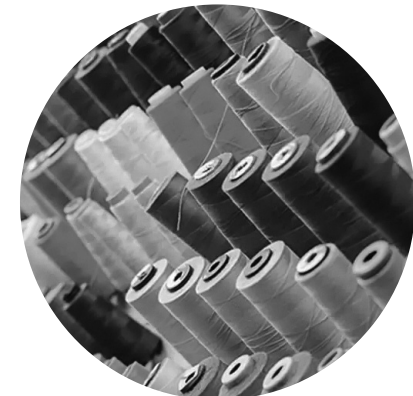
CASE 5

TECHNOLOGY IS JUST ONE PART

The textile industry has been under strong pressure from society due to its environmental liabilities and the mountains of textile waste that accumulate, especially in regions of Latin America. Although Brazil benefits from having a complete supply chain, with all actors in the production chain, and therefore, ease of integration and communication, actions are still dispersed. Conversations in this group began with Hyundai's demand to enhance the reverse cycle of its uniforms, which are often made with mixed fabrics (cotton and synthetics), making recycling difficult. SENAI CETIQT, a research center specializing in Education, Technology, and Innovation for the Textile Industry and Market, was immediately interested in the challenge as they already had the capacity and engagement in similar technological development projects. We are exploring different possible routes for the material and talking to various actors to identify bottlenecks and opportunities for the Brazilian market. In conversations with artisan Romildo Ferreira and Gabi Nora from Galeria Botânica, the option arose to add value to recycled fibers with design and social value. In this context, we had conversations with Malwee, who shared their experience with us from the DES.A.FIO movement. Ideal Work, the largest company specialized in uniform manufactur-

ing in Brazil and supplier of uniforms to Hyundai, joined the training with the value chain and brought us the importance of regulations to create demand for the sector. They, who already offer complete reverse logistics services for material reuse to their clients, highlighted that having the technology is useless if there is no effort to drive the market in this direction. A similar message was brought by Fiosgood, pioneers in offering fabrics made from waste fibers from the food industry such as pineapple leaves, corn straw, banana trunks, among others, to the Brazilian market. They also participated in the value chain training offered by Hub-CE to suppliers and partners of members, making us reflect on the need for investments in important stages of the fiber production process, a fact confirmed by SENAI CETIQT. Despite having the sources of raw materials used in their fabrics on scale in Brazil, they end up importing all their products from India because there is no infrastructure in the Brazilian market capable of producing the material locally (wet spinning). Therefore, in this journey of knowledge with the various members and guests of HUB-CE, it becomes clear that technology is only part of the solution because creating new businesses requires a systemic view, both in terms of scale for residual material collection and

in creating demand. Therefore, the circular chain must be built in coordination between companies, governments, innovation centers, investors, entrepreneurs, and even engaged consumers inspired to have access to new circular products. Here, we have the opportunity to create another coalition of companies willing to drive the circular economy of textiles in our country, generating new businesses by uniting industry and agribusiness.





The HUB has been an important environment for connections and promotion of actions to accelerate the transition journey towards the Circular Economy. At Flex, we believe in these connections for building strategic partnerships that accelerate this transition, and together, we can achieve great results for a more sustainable world.



JOSUÉ GRATON - Manager of ESG and Circular Economy at FIT - Institute of Technology



Participating in the Circular Economy HUB has been an incredibly enriching experience for SENAI CETIQT. Being immersed in this environment has provided us with a privileged view of circular practices in action in Brazil. At SENAI CETIQT, we are committed to promoting circularity in all aspects of the textile and fashion industry. From research and development of new materials to the implementation of more sustainable production processes, we are constantly seeking ways to close material loops and minimize waste. Being in the Circular Economy HUB has not only given us the opportunity to share our own experiences and best practices but also to learn from other members of the community. Collaboration and knowledge exchange within the HUB have been instrumental in driving our efforts towards a more circular and sustainable economy. We are excited about what the future holds and confident that, together with other HUB participants, we can continue to drive innovation and promote positive transformation towards a more circular economic model in Brazil.



CAMILA COSTA - Coordination of activities at NuSEC, the Sustainability and Circular Economy Center of Senai CETIQT



We are in the right path.



Participating in the Brazilian Circular Economy Hub is an opportunity for companies that aim to work with innovation and sustainability. The knowledge exchange and joint learning promoted in such environment are important levers for the integration of value chains and the creation of a collective intelligence. The Hub facilitates the connection between different sectors and actors, boosting the circular economy in the country. We are proud to be part of such transformative movement.



NAIARA COMENALE LOPES
Environmental Manager Brazil, Gerdau

PERSPECTIVES FOR THE FUTURE

Engagement, trust and collaboration

The path to transformation begins with the awareness that the Circular Economy can bring a competitive edge, ensure the survival of the business, and that it is a necessarily interactive and partially time-oriented process. This path should be flexible and adaptable based on internal and external dynamics throughout the project.

As we look at our journey, we see the important role that the Circular Economy Hub has played in engaging the industry for circular transition and its motivating and coordinating role in inspiring and bringing together other relevant actors in our society for debate.

Furthermore, it became evident that the ability to orchestrate the entire network and set a common agenda among all participants is one of the most important functions of the Circular Economy Hub and the first step to be taken. When we share our knowledge and interests, we open the doors to recover precious inputs, driving reverse logistics, remanufacturing, and the creation of closed loops of value. This sharing of information is the backbone of success, but it requires a solid foundation of trust among members to sustain this network governance effectively. To ensure this reliability and enable joint projects

to flourish, a point of differentiation for Hub-CE discussions was to promote the signing of NDAs to shield shared strategic data and offer a guarantee of confidentiality. This allowed collaboration to flow securely and productively, generating deeper discussion and enabling the advancement of technical and commercial discussions.

But the process only gains traction when concepts and objectives are aligned in defining a common agenda. Therefore, it is essential to have a broader conceptual alignment in our society, increasingly qualified engagement at national and international levels, and an understanding that circularity must be integrated into discussions on climate and decarbonization.

Thus, at the end of 2023, we highlight the launch of the Brazilian Institute of Circular Economy (IBEC) with the mission to increase awareness on the subject and position circularity as a strategic agenda for Brazil. IBEC will join forces with Hub-CE playing an important role in the market education axis.

Finally, considering the perspectives for the future, observing the evolution of maturity gains of member companies, the movement

of the public sector, and the demands of society, we conclude that now is the ideal time to move forward into practice.



2024, THE YEAR OF ACTION

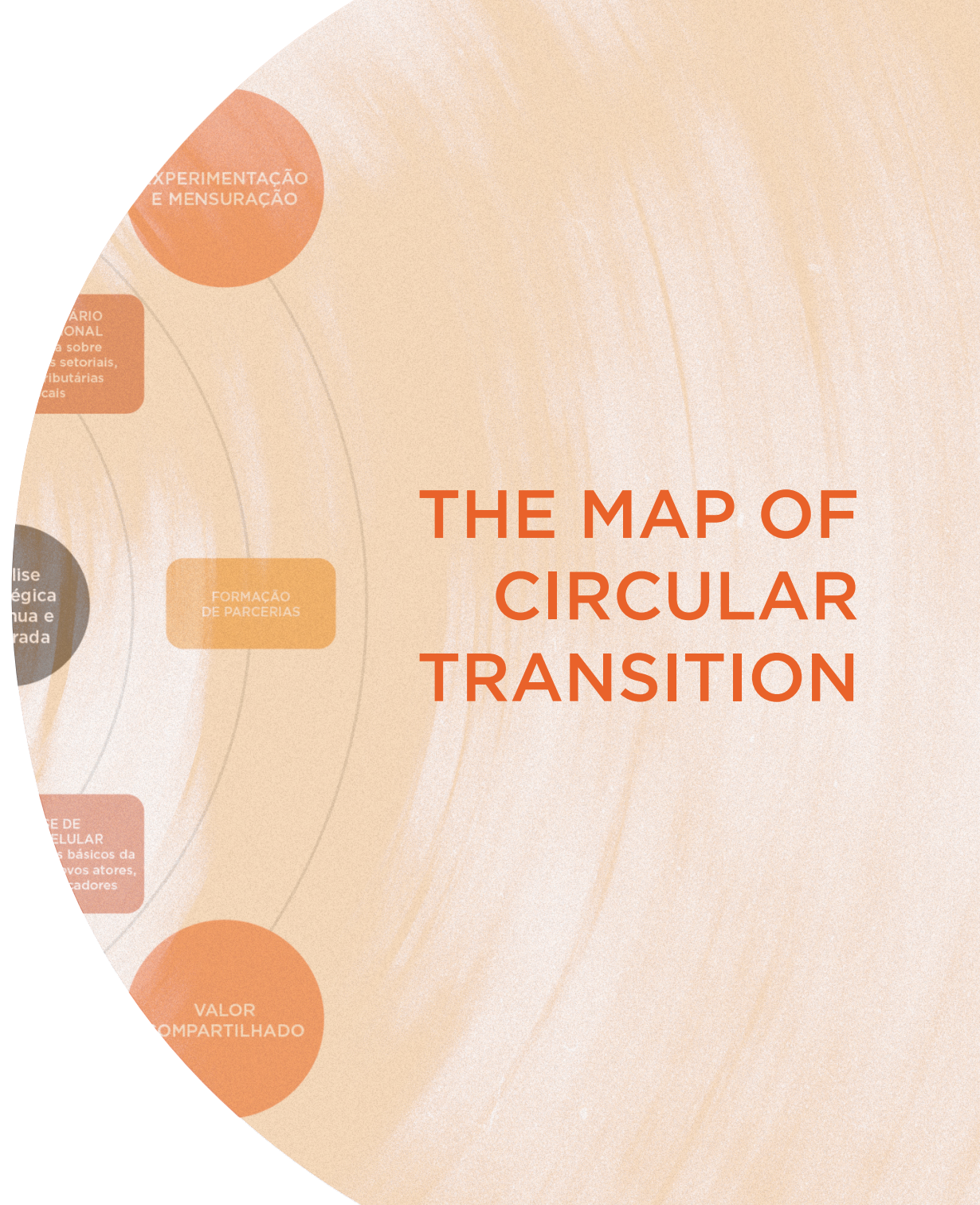
The ability to orchestrate the entire network and define a common agenda among all participants is one of the most important functions of the HUB-CE.

Based on our practical experience, we have developed a model that can serve as a functional, comprehensive, and solid approach to the development of circular processes, products, and services characterized by four stages: engagement, diagnosis, planning, and implementation.

Investments in startups, in voluntary drop-off points, waste collection systems, and traceability are important actions, but they may only represent a sigh in the face of the engagement and scale necessary for the transformation of production chains. It is essential to develop capacities and adapt competencies to develop and expand new practices, technologies, and business models.

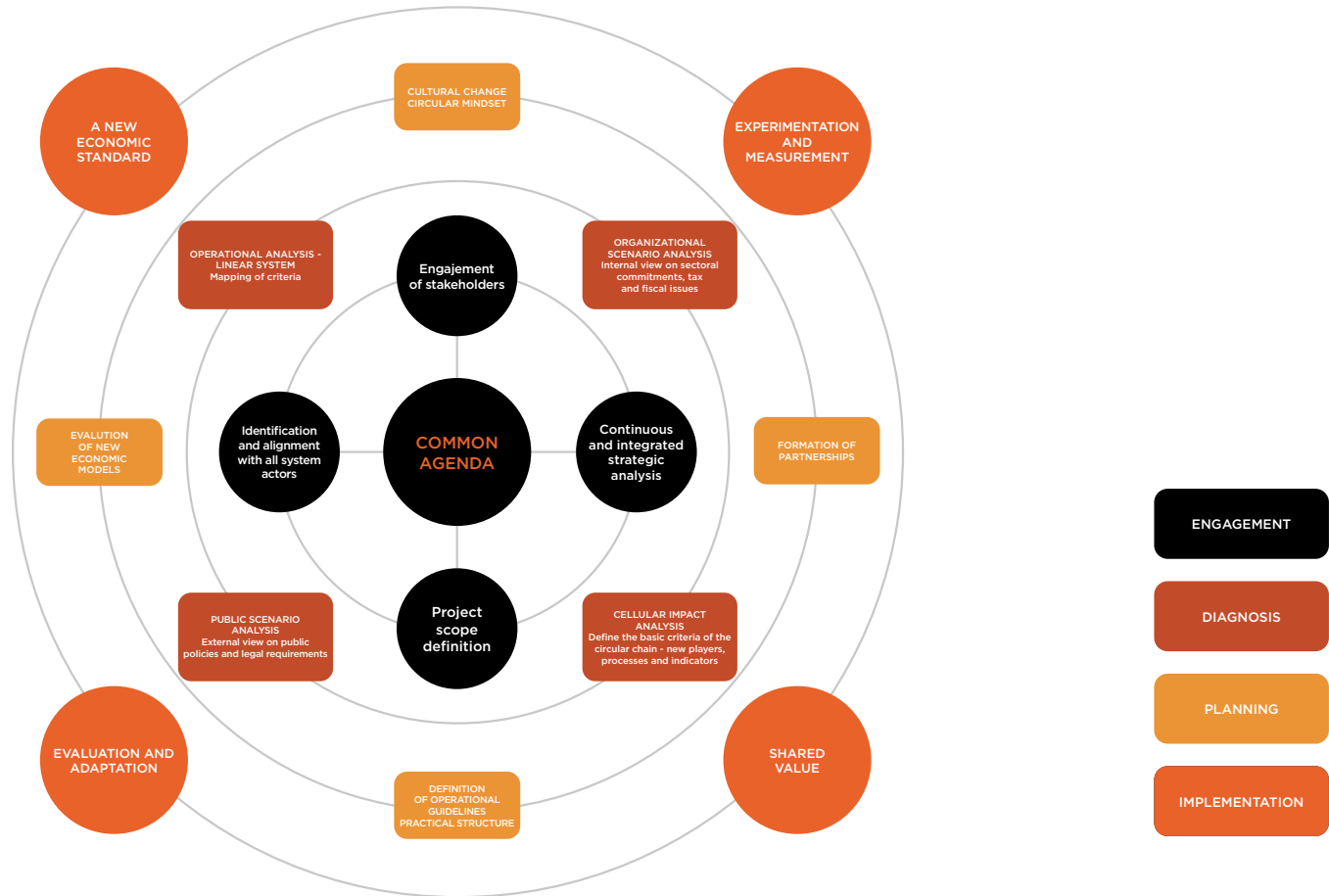
The new IRP/UN “Global Resources Outlook 2024: Bend the Trend: Pathways to a Liveable Planet” report demonstrates a sense of urgency and presents support for ecosystems that can share knowledge and structure coalitions for the development of solutions as a crucial priority. Network governance* is necessary for everyone to participate, thus helping to define a common agenda and implement the circular economy.

*The Power of Circular Economy Hubs, a report published by the leadership group on Network Governance of the European Circular Economy Stakeholder Platform (2021)



THE CIRCULAR TRANSITION MAP

A practical approach in four stages



THE EVOLUTION OF THE HUB AND THE YEAR OF ACTION

Source: Exchange for Change Brasil, Annual Report of the Circular Economy Hub



The G20 is an international forum for economic cooperation formed by 19 countries from five continents, plus the European Union, with the aim of strengthening the international economy and global socio-economic development by bringing together nations considered developed and developing.

Brazil assumed the presidency of the G20 at the last Summit held in India and committed to organizing a series of sectoral meetings coordinated by various ministries culminating in the Summit of Heads of State at the end of 2024, in the city of Rio de Janeiro.

The work is organized into two parallel tracks of discussions that interact with each other:

Sherpa Track: led by personal emissaries of the G20 leaders, who oversee negotiations and discuss the points that form the summit agenda;

Finance Track: addresses strategic macroeconomic issues led by finance ministers and central bank governors of member countries.

Within the Environmental and Climate Sustainability Working Group, the circular economy is one of the priority areas (axis 4) to

be discussed, including the need to establish guidelines for an inclusive circular economy. The G20 has already included the Circular Economy as one of the priority areas (priority 4) to be discussed, including the need to establish guidelines for an inclusive Circular Economy.

In line with the Sustainable Development Goals, particularly SDG12 on sustainable production and consumption, the three recommendations highlighted by the working group for discussion are: new waste management models, product recyclability, and the creation of circular business models. The document formalizes a direct invitation to G20 members to engage in discussions on solutions to reduce waste generation, promote proper management, and encourage more circular practices. Taking a pragmatic approach, the document suggests that members bring forward projects and activities already implemented in the areas of waste and circular economy, especially focusing on solutions addressing plastic pollution. The objective is to identify solutions and projects that can be replicated in other developing countries.

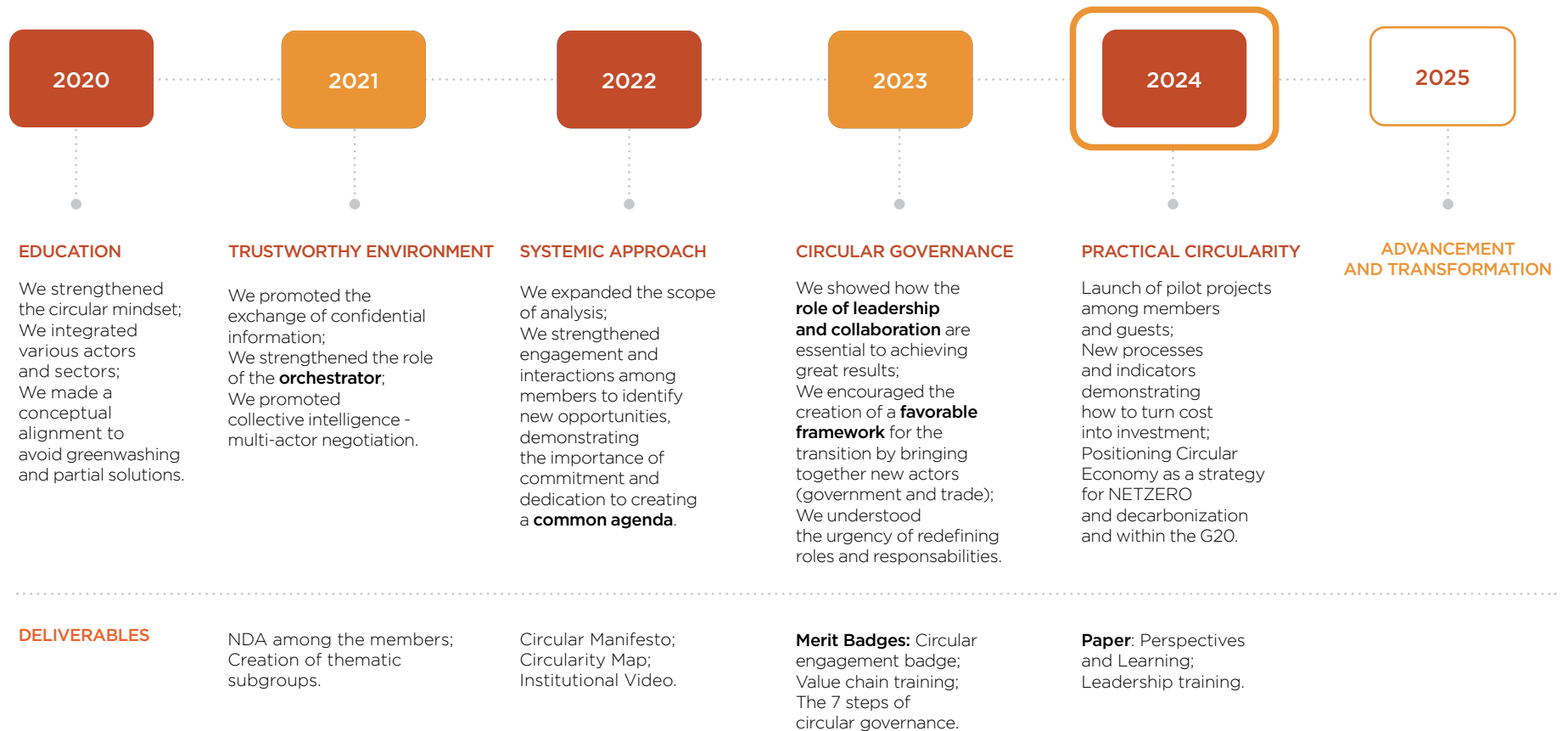
The Brazilian presidency aims to actively engage civil society, businesses, and academia

in the discussion and achieve the following outcomes:

- Development of a G20 inventory of technical and technological solutions for waste reduction and management, as well as Circular Economy;
- Development of a compendium of best practices and successful experiences from the G20 aimed at promoting and implementing policies that create economic instruments and credits to incentivize recycling actions, improvements in workers' rights, including waste pickers in the recycling and waste management sectors;
- Development of principles for an inclusive Circular Economy.

PREPARING THE MARKET FOR THE CIRCULAR TRANSITION IN BRAZIL

Our legacy of education for practice



CONCLUSION



The year 2023 witnessed discussions on Circular Economy reaching unprecedented levels of maturity in our country, permeating various sectors of industry, academia, civil society, as well as various representatives of the Brazilian government in a proactive engagement culminating in Brazil's inclusion as a member of the Circular Economy Coalition for Latin America.

Globally, as highlighted by the recent Circularity Gap Report 2024, the discussion leads us to three key elements that must coexist to drive the transition in practice: policies, finances, and behaviors. The Circular Economy Hub in Brazil plays a fundamental role in placing us in this position, elevating the level of debate in the industrial sector, engaging different actors, and primarily demonstrating the relevance of the systemic thinking necessary for the transition.

Over the past four years, we have traversed various paths, engaged with over 15 international experts, hosted 47 guests from 6 industrial sectors, and welcomed 24 representatives from national research centers, funding agencies, banks, and government representatives who brought us a diversity of perspectives and learning. After two years of virtual work, it was possible to experience the problems

and solutions in practice through 6 thematic groups and 17 technical visits, providing a broader view of the opportunities under discussion, accelerating access to confidential data, and driving engagement from new areas and links in the chain.

We summarize our journey into three major learnings: **the importance of having a common vision to advance into practice, the solution lies in data and people, and the need to define new roles and responsibilities for the scalability of solutions.**

Amidst the many crises experienced by humanity today, we have no choice, systemic thinking is crucial for understanding the synergies between the Circular Economy and climate, decarbonization, ESG, Netzero, and biodiversity agendas. The Circular Economy helps us address challenges in an integrated and multidimensional way. We need to change existing incentives in discussions between the Global North and South to accelerate the transition to a global Circular Economy, ensuring the well-being of all, reducing biodiversity loss, and promoting a model of production and consumption that develops without exceeding planetary boundaries.

There is an urgent need to establish an integrated vision for the development of products and services, considering the reduction of impact not only in the design and use phases but also in the post-use phase. The goal is to drive a new business culture anchored in the principles of the Circular Economy, focusing on actions such as reuse, repair, remanufacturing, sharing, and dematerialization. In short, an economy that generates no waste, is inclusive, and capable of generating value in a balanced manner for all. With this promising scenario, 2024 presents itself as a favorable year to advance circularity strategies. The Circular Economy Hub strengthens us and demonstrates the power of the collective for transformation.

We have created an evidence base to assist in the development of public policies, financial instruments, technology, and insights for consumer education and engagement campaigns. We are ready for practice. Are you ready?

Come with us!

MORE INFORMATION

Material didático do HUB de Economia Circular



Operating since 2015, E4CB's mission is to drive the circular transition in Brazil through knowledge exchange, adapting global solutions to the Brazilian reality. With numerous knowledge partners spread across all continents, E4CB ensures conceptual alignment with global practices and Brazil's positioning in the international context. Additionally, it operates as an independent link, facilitating interaction with all market actors and promoting debate across public, private, and academic sectors. E4CB conceived the Hub-CE in 2019 and spent one year conducting individual and collective meetings, visiting and engaging with international benchmarks to define the model existing today.



Available for consultation on the website
www.e4cb.com.br/hub

International Reference



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We would like to thank ABDI for the support received on the translation of the present material allowing us to expand our learnings to a wider audience positioning Brazilian industry on the forefront of the discussion.



The role of the Circular Economy
is not to solve problems,
it is here to change the system
and prevent problems.

Beatriz Luz



