

Brazil State of Circularity

An X-ray of Circularity in Brazil







MAY 2025

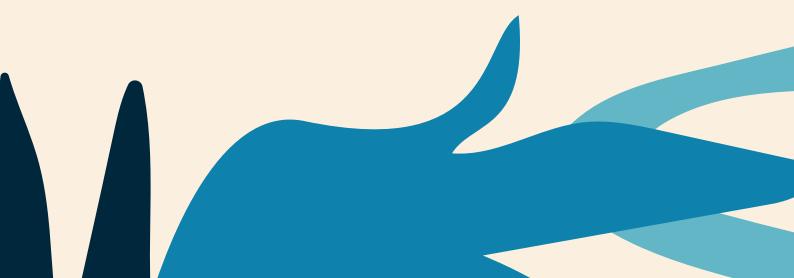




A specialized organization that aims to drive the transition to the Circular Economy in Brazil. Since 2015, it has worked with companies, governments and civil society to transform intentions into strategies with real impact. Under its leadership, the Circular Economy Hub (HubEC) has been consolidating itself as a multisectoral ecosystem that seeks to transform business culture based on new processes, metrics and relationships.



The Brazilian Institute of Circular Economy (IBEC) was created with the mission of expanding the scope of the Circular Economy in Brazil, demonstrating its importance as a key element for decarbonization and tackling climate change. Its activities are based on qualified education, aligned with global guidelines; on interaction with government agencies to strengthen the legal framework necessary to accelerate the transition in the country; and on building international partnerships and alliances aimed at conducting studies, research and roadmaps.







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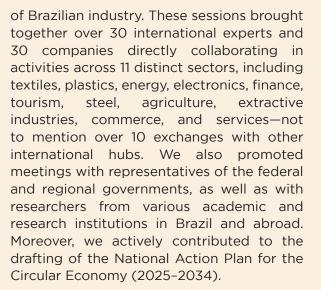
PRESENTATION

Working in favor of a Circular Economy in any country is not without obstacles, but it is an ambitious and necessary task. For the development of this guide, we drew inspiration from Circle Economy's vision of "an economy that aligns material use with the needs of our current society, within the safe limits of our planet." Our goal is to guide, inspire, and turn theory into action.

This is a deep dive based on the 10-year journey of Exchange4Change Brasil (E4CB), the practical experience of the Circular Economy Hub (HubEC)—which has been fostering multisectoral collaboration among companies of various sectors and sizes since 2020—and the legacy of Brazilian experts who came together to form the Brazilian Circular Economy Institute (Ibec) in August 2023.

Over this period, we created the first study group dedicated to the Circular Economy in Brazil, attracting professionals from across the country and resulting in the publication of the first book in Portuguese on the topic. We produced documentaries, participated in numerous interviews, and analyzed several international case studies during our technical missions to the Netherlands, Slovenia, Finland, and Bulgaria—including our participation in the Global Circular Economy Forum since 2019 and the first preparatory meeting for the development of the ISO standard, held in Paris in June 2019.

In addition, we held more than 20 engagement sessions within HubEC, dedicated to reflecting on the transformation



These encounters were key to strengthening our path and deepening our understanding of the challenges and opportunities of the Circular Economy in Brazil. Based on this critical and hands-on journey, we helped transform the mindset of many professionals and promoted a shared vision of prosperity and competitiveness rooted in circularity, while reflecting on the steps needed moving forward.

This guide brings recommendations and insights from both committed actors and representatives of sectors we identified as priorities. In short, it offers an approach that aims to position Brazil in the global context, elevate the level of discussion, and foster national and international alliances. A just transition—one that aligns environmental, social, and economic goals—requires global collaboration, and Brazil will play a vital role in this journey.

Beatriz Luz

Leader of the Brazilian Circular Economy Hub (HubEC) President of the Brazilian Circular Economy Institute (Ibec)

The country is hosting the World Circular Economy Forum (WCEF2025) for the first time in Latin America, and we are also preparing to host the world's most significant climate event: COP30 (30th United Nations Climate Change Conference – Conference of the Parties), which marks 20 years since the Kyoto Protocol came into force and 10 years since the adoption of the Paris Agreement. Therefore, this is an invitation for countries and companies to revisit their emission reduction commitments, embed circular principles into their NDCs, and come together to discuss solutions for a more just and regenerative economy.

The Circular Economy will be a key element in this discussion, as it presents a new way of developing products and services in balance with the planet—guided by closedloop systems thinking—and is fundamental to decarbonization. No country, company, or city will make the transition alone. We must come together to define a global economy that operates under new rules, values, and behaviors.

The time to act is now—for a global, just, and regenerative circular economy.

OVER TO THE MEMBERS OF HubEC

"Wise has been supporting plastic recycling and the advancement of the Circular Economy for over 15 years. HubEC is a national reference point for strategic discussions with a wide range of stakeholders — public, private, local, and international — with whom we seek to lay the foundations for the sector's evolution. It's a fertile environment for ideas and actions that generate positive impact."

BRUNO IGEL

CEO of Wise Plásticos S.A.



"Delivering circular solutions and business models is a core value of the Electrolux Group, part of our For the Better 2030 plan. Collaborative environments with transparency and trust are essential to advancing this commitment, and HubEC has proven to be such a space—enabling intrasectoral connections that often go unnoticed in standard business models. These collaborations are even more crucial considering Electrolux Group's new circularity target, announced in early 2025, to increase the use of recycled steel and plastic, by weight, in our products to 35% by 2030."

JOÃO ZENI

Sustainability & ESG Director (Latin America) at ELECTROLUX



"Covestro's journey aligns with the early discussions on Circular Economy in Brazil. We believe in the power of collaboration to advance this agenda. HubEC fosters meaningful exchanges among players from diverse sectors, both nationally and internationally, multiplying perspectives and actions."

THAIS SABINO

Communications Manager at COVESTRO



"A participação da Purcom no HubEC reforça nosso compromisso com a inovação colaborativa. Unimos conhecimento em poliuretano (PU) à circularidade, contribuindo para redes que regeneram processos, conectam cadeias e constroem soluções sustentáveis para o futuro."

GIUSEPPE SANTANCHÈ

CEO of Purcom Química



"Our entry into E4CB's Hub marks a new chapter for Ideal Work Group. After 50 years of manufacturing uniforms, we vertically integrated our operations and launched Ecowork—a sustainable twill fabric made from repurposed used uniforms. Within the Hub's textile subgroup, we are actively pursuing circular solutions, engaging in public sector dialogue, and working to align the systemic reverse logistics chain with the sector's challenges."

KÁTIA SILVA

Ecowork Ambassador and Manager at Grupo Ideal Work





"At TOMRA Brazil, we believe that the Circular Economy is essential for a sustainable future. As Commercial Director, I have the privilege of leading a team dedicated to innovating and implementing solutions that promote efficient recycling and waste reduction. Our commitment to the Circular Economy goes beyond advanced technologies; we are devoted to educating and empowering communities and businesses to adopt sustainable practices. We believe that, together, we can transform the way we manage natural resources, ensuring a healthier planet for future generations.

One success story we are proud of is our partnership with a major beverage

company, where we implemented a plastic bottle sorting system. This project not only significantly reduced plastic waste but also transformed recycled bottles into new ones. This is just one of many examples of how the Circular Economy can create value and generate positive impact.

We are excited to collaborate with the Circular Economy Hub, sharing our expertise and learning from other industry leaders. Together, we can accelerate the transition to a Circular Economy, where waste is minimized and resources are continuously reused."

DANIEL GHIRINGHELLO Executive Director at TOMRA



Companies that have participated in all HubEC cycles since its beginning in 2020:

ABIT - CAPRICÓRNIO TÊXTIL - CASA DA MOEDA DO BRASIL - CBA - CEBRI - CEMPRE -CIPRIANO E CASTILHO - COVESTRO - ELECTROLUX - ELETROS - EQUIPA - FGV EAESP - FIBECYCLE - FIOSGOOD - FIT/FLEX/SINTRONICS - GERDAU - HUBPLAST - HYUNDAI - IDEAL WORK - INVESTSP - IPT - NESPRESSO - NITRO - PLASTIWEBER - PURCOM -RCRAMBIENTAL - RHEIN ADVOGADOS - SENAI CETIQT - TOMRA - WISE.

"THE CIRCULAR TRANSITION REQUIRES RADICAL COLLABORATION AND CONCERTED EFFORTS TO AVOID TRANSFERRING IMPACTS FROM ONE INDUSTRY TO ANOTHER AND ACROSS REGIONS AND MATERIAL CHAINS – A TRANSFORMATION THAT CHALLENGES THE FOUNDATIONS OF THE CURRENT PRODUCTION AND CONSUMPTION MODEL. NO SINGLE ACTOR CAN DRIVE CHANGE ALONE."

> Circularity Gap Report 2024 Circle Economy



THE BRAZILIAN INDUSTRY'S LEARNING JOURNEY

The transition to a Circular Economy requires coordination between the Global South and North, while respecting regional differences. Although emerging countries face specific challenges, they also offer major opportunities to foster fairer, more regenerative models with lower environmental impact.

It was with this vision that the Brazilian Circular Economy Hub (HubEC) was launched in 2020, expanding the conversation beyond material flows and product design. The aim was to build reverse supply chains, new business relationships, and a corporate culture capable of breaking barriers and enabling circular projects.

Over five years, HubEC has become a national reference for the circular transition in Brazil—connecting sectors, fostering national and international alliances, and adapting global concepts to local realities. This experience has revealed three key lessons that guide the next steps for Brazilian industry toward circularity:

1st LESSON The importance of a shared vision

The transition begins with a common purpose, supported by engaged leadership, capacity building, and an aligned organizational culture.

2nd LESSON A solução está nos dados e nas pessoas

Collective action and the strategic use of data are essential to generating impact. Organizational maturity and the role of facilitating hubs are decisive factors.

2rd LESSON Redefining roles and responsibilities

Redefining roles is essential. True collaboration and integrated management across the value chain are fundamental to breaking silos and transforming intention into action.

Tools developed by HubEC:

Discover the tools and content collaboratively and originally developed by HubEC to drive the Circular Economy in Brazil.

Educational Tool | Circular Manifesto

Created to align concepts and spread knowledge, the Circular Manifesto is an educational tool that establishes a common foundation for understanding and communicating the Circular Economy across different sectors.

Motivational Tool | Circular Engagement Badgel

Developed to recognize the progress and efforts of companies adopting circular practices, the seal serves as a concrete incentive, highlighting their commitment to sustainable transformation.

Management Tool | 7 Elements of Circular Governance Model

Designed to facilitate coordination among stakeholders and guide the practical application of circularity, this model provides a clear path to integrate circular governance into organizational strategies.

Visit E4CB's new website to explore these resources in full.





The white paper "Circularity in Practice in Brazil - Learnings and Recommendations from the Circular Economy Hub" illustrates the challenges of transitioning to a more sustainable model, but also demonstrates that success depends on collective commitment to innovation, datadriven strategies, and cultural transformation. Learn more

"THE PRIVATE SECTOR WILL BE CENTRAL TO THE IMPLEMENTATION OF CIRCULAR BUSINESS MODELS AND THE TRANSITION SHOULD BE IMPLEMENTED THROUGH INCREMENTAL STEPS. MORE THAN TECHNOLOGICAL PROGRESS, ITS PACE WILL BE DICTATED BY THE REMOVAL OF INSTITUTIONAL BARRIERS, NEW INTERNAL DECISION-MAKING PROCESSES, ACCESS TO QUALITY INFORMATION AND INCENTIVES THAT ALLOW THE WIDESPREAD ADOPTION OF CIRCULAR PRACTICES."

Squaring the Circle, World Bank, 2023.

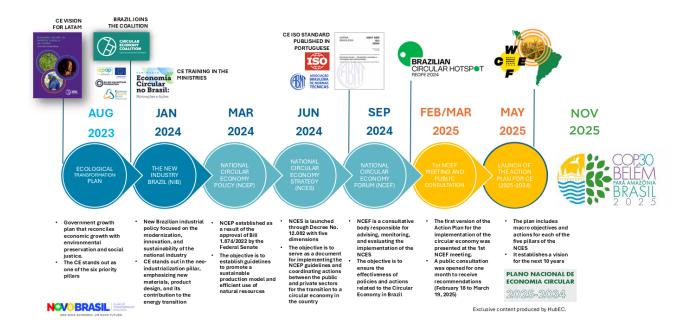
Brazil State of Circularity



THE EXISTENCE OF A FAVORABLE FRAMEWORK IN THE COUNTRY



The Circular Economy is no longer an option—it has become the urgent path to reinvent industrial development in Brazil. Its integration into the Ecological Transformation Plan and, subsequently, into the Nova Indústria Brasil (NIB) program elevates circularity to the status of a strategic policy. This advancement promotes, in a systemic way, the alignment between economic growth, social justice, and environmental preservation.



The National Circular Economy Policy (PNEC) was formally established and approved by the Federal Senate in March 2024, aligning innovation, sustainability, and social justice, and demonstrating Brazil's commitment to a growth model that not only avoids resource exploitation but actively promotes regeneration. Shortly thereafter, the National Circular Economy Strategy (ENEC) was launched as the implementation instrument of the PNEC. From it, the Circular Economy Action Plan (2025-2034) will be derived, formalizing the country's commitment to ambitious goals for the next ten years.

The 5 Strategic Objectives of the ENEC

THE AIM IS TO PROMOTE INNOVATION, COMPETITIVENESS, GREEN JOBS, AND REDUCED ENVIRONMENTAL IMPACT, POSITIONING BRAZIL ON THE PATH TOWARD SUSTAINABLE AND INCLUSIVE DEVELOPMENT.

The implementation and monitoring of the Action Plan will be coordinated by the National Circular Economy Forum (FNEC)—an intersectoral governance mechanism that brings together 34 representatives from government, the productive sector, and civil society. Its purpose is to ensure oversight, participation, and effectiveness in carrying out the actions outlined in the strategy.

The Brazilian Circular Economy Institute (IBEC), acting as a representative of civil society, positions itself as a strategic link between government, the private sector, academia, and the public. Its role is to help bridge the gap between public policy and effective implementation by promoting highquality education, knowledge production, and structured civic engagement. Alongside ministries, universities, and businesses, IBEC works to ensure that Circular Economy moves beyond rhetoric and becomes a foundational and enduring practice within Brazil's socio-economic policy.

These regulatory advances represent a historic turning point. However, the consolidation of Circular Economy in practice still requires overcoming structural obstacles, as highlighted in recent assessments carried out by key stakeholders.

According to Circle Economy, a successful transition demands a systemic shift—with active participation from governments, engagement from financial actors, and the involvement of society at large—ensuring that workers are properly equipped with new skills and competencies.

A recent survey conducted with HubEC members revealed that 85% of companies already view circularity as part of their mission and purpose. However, 80% identified "Good Practice Guides" as one of the tools that could support their transition journey—underscoring the importance of seeing theory put into action. Moreover, 86.6% stated that the regulatory framework in Brazil is now more favorable to the transition, yet 33% still do not feel ready to take practical steps.

Given this scenario, we identified education, technical training, the expansion of hubs, the development of roadmaps, and communication campaigns as the most relevant elements to ensure high-level networking, access to qualified information, and coordinated engagement. These factors are essential to align concepts, develop solutions, products, and services, and to encourage new habits, behaviors, and attitudes within Brazilian society.



To support this effort, our publication **"Communication Guide to Make the Transformation Happen in Brazil"** highlights four communication dimensions to help various actors prepare the market for action. The guide emphasizes the role of major events in driving engagement and commitment and features exclusive interviews with representatives from industry, government, and academia. Learn more.

"WE ARE USED TO CLEAR DIVISIONS OF TASKS, DIFFERENT ACTORS ARE USED TO WORKING IN SILOS, BUT FOR THE TRANSITION WE NEED TO REDESIGN ROLES AND RESPONSIBILITIES. HENCE THE IMPORTANCE OF PROCESS FACILITATORS OR TRANSITION BROKERS"

How network governance powers the circular economy, 2020.

NATIONAL CIRCULAR ECONOMY STRATEGY

The 5 Objectives

220MOTE

JOPOSE

The primary guideline is to ensure **JUST, INCLUSIVE, AND EQUITABLE,**

CREATE

transition that addresses gender, racial, ethnic, and socioeconomic disparities. Source: Brazilian Institute of Circular Economy – Ibec

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PRESERVE

FEDERAL GOVERNMENT LAUNCHES THE NATIONAL CIRCULAR ECONOMY STRATEGY — MINISTRY OF DEVELOPMENT, INDUSTRY, TRADE, AND SERVICES

GUIDELINES OF THE NATIONAL CIRCULAR ECONOMY STRATEGY:

- I elimination of pollution and reduction of waste and residue generation;
- II preservation of material value;
- III environmental regeneration;
- IV reduction of dependence on natural resources;
- V sustainable production and consumption;
- VI extension of the lifecycle of all materials
- VII ensuring a just, inclusive, and equitable transition that addresses gender, racial, ethnic, and socioeconomic disparities



CREATE | A Favorable Framework

- Establish quantifiable goals, standards, and indicators to monitor circularity in industries
- Develop markets for circular products
- Create guidelines aligned with existing policies and international commitments

FOSTER | New Skills for Product and Service Redesign

- Co-creation of training programs for industries
- Co-creation of research incentives
- Circular education fostering critical and systemic thinking
- Promote sustainable practices in the industry
- Co-creation of incentives for reuse and extending product lifespan

PRESERVE | The Value of Materials by Minimizing Resource Use and Waste Generation

- Circular design, eliminating waste from the outset
- Creation of incentives for the establishment of recycling facilities across the country
- Foster investments in infrastructure and technologies that support circularity
- Align waste management policies with circularity principles

PROPOSE | New Financial Instruments

- Circular financing
- Circular public procurement
- Tax incentives

PROMOTE | Interfederative Coordination and New Circular Jobs

- Integration of informal activities into circular value chains
- Institutional support to strengthen collection and recycling initiatives
- Public policies that recognize and empower waste pickers
- · Stimulate regional economic development focused on recycling and circularity

THE STEPS TOWARD A CIRCULAR FUTURE IN BRAZIL We have arrived in 2025 with a vision of a more innovative, inclusive, and circular Brazil. Having a Circular Economy Action Plan in place for the next ten years fills us with hope and expectations, representing a first step toward placing the country on a new development agenda.

Technological innovations are frequently cited as the most essential elements to overcome climate and environmental challenges. However, while necessary, they are only part of the equation. Efficiency gains often lead to rebound effects that increase material consumption, and technological analyses tend to be reactive and unidimensional, focusing on isolated problems. Solutions must be viewed more holistically considering value chain integration, fostering cross-sector collaboration, and building a new geopolitical framework for investment and behavior. Technology alone, without new incentive structures and an integrated approach, will not be enough.

Moreover, it is critical that business leaders stop seeing the Circular Economy merely as a marketing tool, a waste/ materials issue, or a compliance requirement. Adopting a strategic perspective—one grounded in solid data and anchored in new geographic and temporal analytical frameworks—is essential to navigate complexity and uncertainty, balance trade-offs, and avoid creating new problems in the future.



PRIORITY SECTORS FOR THE CIRCULAR ECONOMY IN BRAZIL

With significant economic and environmental relevance, certain key sectors of the Brazilian economy have taken on a leading role in the transition to a more circular model. This guide highlights the Plastics, Textiles, Electronics, Metals and Minerals, and Energy sectors, positioning them as strategic hubs of this transformation in the country—each facing specific challenges and identifying unique opportunities. The perspectives shared by these sectors illustrate the various stages and possible pathways for building a more circular Brazil.

METALS, MINERALS, AND MINING

Due to their high energy demand, the steel and mining industries are under increasing pressure to reduce their significant carbon emissions, largely driven by the use of fossil fuels. At the same time, the sector is establishing itself as a strategic supplier of critical materials for the green economy. In 2024, Brazilian mining resumed its growth trajectory, generating R\$129.5 billion in revenue in the first half of the year, with iron ore accounting for 62% of total income. The sector created 5,447 new jobs early in the year and is expected to receive US\$64.5 billion in investments by 2028, focusing on infrastructure, socio-environmental projects, and strategic minerals such as nickel, copper, lithium, and rare earth elements. Brazil stands out for its capacity to recover scrap metal and for its use of charcoal as a renewable fuel source. International initiatives—such as green steel production and the use of hydrogen-have shaped ongoing discussions, which also address the circularity of steel, a 100% recyclable material that still faces barriers to its full reintegration into sustainable production cycles.

"The mining and metallurgy sector is characterized by intensive use of natural resources, high waste and by-product generation, and the production of highly recyclable metals. In this context, the adoption of Circular Economy principles is already part of strategic planning and decision-making among companies in the sector. Embracing circularity is becoming essential to remain competitive in a globalized world where adherence to sustainability principles will be mandatory—not only for access to markets and capital, but also for acceptance by society."

By Valdomiro Roman da Silva Operations Director, ABM (Brazilian Metallurgy and Materials Association)



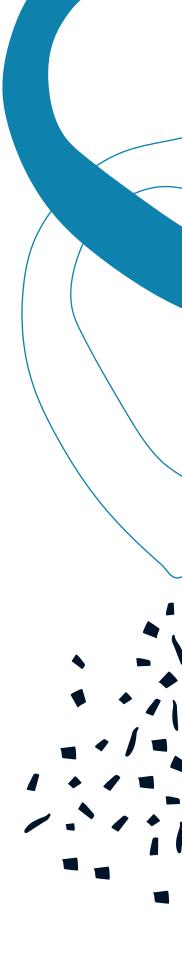
PLASTICS (POLYMERS)

No setor de plásticos, iniciativas como o Pacto Global In the plastics sector, initiatives such as the Global Plastics Pact have driven engagement and commitment to eliminating problematic materials and advancing recyclability, especially in light of the significant volume of waste ending up in seas and oceans. Brazil has played an active role in global negotiations and is also mobilizing efforts nationally through the Network for Plastics Circularity, launched in 2018 to provide governance for the issue. This initiative brings together various actors across the value chain, promotes collaborative actions, fosters business opportunities, conducts studies, and supports the development of public policies. The sector has developed tools and fostered partnerships to strengthen the emerging circular plastics economy. The Retorna Platform assesses the recyclability index of plastic packaging by considering both technical characteristics and market conditions within Brazil's regionalized recycling infrastructure. Meanwhile, the Recircula Brasil Traceability Platform-developed in partnership with the Brazilian government and the Brazilian Agency for Industrial Development (ABDI)—ensures legal security for companies by verifying the amount of recycled content used. This enhances competitiveness and helps prevent "greenwashing." Brazil's plastics industry continues to grow, having recorded a 6.8% increase in the first half of 2024. In 2023, the sector generated R\$123 billion in revenue and created 363,000 jobs, reaffirming its commitment to innovation, production efficiency, and the responsible use of plastic materials-including increasing investments in the circular economy.

"A ABIPLAST believes that developing circular plastic products means creating new business models that drive innovation, jobs, and opportunities for plastic transformation and recycling companies. Plastics are designed to be circular, and for this cycle to be effective, product design is essential and strategic. It must promote materials, structures, and products developed to close the loop—using circular inputs, renewable sources, monomaterials, or compatible materials aligned with the most advanced mechanical recycling routes, as well as new materials linked to natural cycles like biopolymers."

By José Ricardo Roriz Coelho Chair of the Board ABIPLAST







TEXTILES

Driven by growing demand for sustainable practices and the need to structure an efficient reverse logistics system, Brazil's textile sector has made significant progress. Currently under discussion is the Sectoral Agreement for the Reverse Logistics of Textile Products and Waste, being developed within the framework of the National Solid Waste Policy. This agreement aims to define commitments and responsibilities among manufacturers, importers, distributors, and retailers. It represents a milestone for the sector, as it may lay the foundation for proper waste management, promote circular business models, and ensure traceability of materials throughout the value chain. In 2024, the sector recorded 3.6% growth in fabric production and 1.3% in apparel, generating 25,700 new jobs across the textile and clothing industries. However, this progress comes amid structural challenges, such as competition with foreign e-commerce platforms and high credit costs. Despite growing pressure for sustainability, less than 1% of recycled clothing is transformed into new garments, highlighting the urgent need for more effective solutions to advance circularity in the sector.

"Circulareconomy is not just a trend—it's a necessary revolution for the textile sector. Given the environmental impacts caused by human activity, rethinking the 'extract-produce-discard' model is now urgent. From production to post-consumption, systemic changes are required. Companies that embrace circular principles—such as fiber recycling, upcycling, and new business models-not only reduce environmental impact but also become more competitive in a market that demands sustainability. We must rethink the entire value chain: from regenerative design to reverse logistics. In the coming years, leaders who view this as an integrated ecosystem-where environment, economy, and technology converge—and who prioritize regenerative design, supply chain transparency, and innovative partnerships will lead the way. Consumers are already demanding it, legislation is advancing, and technology is ready. Circularity is the path to fashion that respects the planet while creating value—and the time to act is now."

By Camila Gisele Araujo da Costa Technical Consultant- SENAI CETIQT

SENAI CETIQT

ELECTRONICS

The sector operates under a regulatory framework that sets clear targets for collection and recycling, fostering more efficient and circular value chains. Decree No. 10,240/2020, which regulates the Reverse Logistics System for Electronic Products and Their Components under the National Solid Waste Policy (PNRS), establishes progressive collection and recycling targets and assigns specific responsibilities to different actors across the chain. This legal framework has driven the creation of structured systems for the collection and proper disposal of these products, promoting the recovery of valuable materials and reducing the environmental impacts associated with improper waste disposal. Brazil's electronics industry showed strong performance in 2024, recording R\$ 249.7 billion in revenue, a 13% increase compared to the previous year, along with a 13.3% rise in physical production. This expansion was accompanied by a growth in direct employment, with the number of workers rising from 265,500 to 284,500, reflecting the strengthening of the production chain. Given this momentum, the sector is well-positioned to reassess its practices and ensure a growth model grounded in responsibility and sustainability.

"The Brazilian electronics sector is genuinely committed to the circular economy. We have already adopted practices such as component recycling and structured reverse logistics. By combining technological innovation with environmental responsibility, the sector is actively working to reduce waste and promote the rational use of natural resources. In our industry, the circular economy is not just a concept—it's an integral part of our industrial strategy, preparing us for a more sustainable, technological, and inclusive future."

By José Jorge do Nascimento Junior Executive President Eletros



Brazil State of Circularity

ENERGY

Renewable energy sources are the cornerstone of the transition to a low-carbon economy. Brazil, leveraging its predominantly renewable electricity matrix and significant investments in solar and wind energy, has positioned itself as one of the global leaders in clean energy. Since its first operation in 2017, BNDES has reached R\$11.8 billion in financing for photovoltaic power plants and has strongly supported the expansion of wind farms across the country, which now boast an installed capacity of 34 GW (2025), with 90% located in the Northeast region.

Brazil has been recognized as a wind power powerhouse and currently ranks fifth in the Global Wind Energy Council (GWEC) Installed Capacity Ranking. However, the rapid advancement of these technologies also presents circularity challenges. These include not only access to critical minerals required for equipment manufacturing but also the repair and end-of-life management of these components.

It is estimated that, in the coming years, an increasing number of solar panels and wind turbine blades will reach the end of their useful life, demanding solutions for their disposal and material recovery. Proper waste management will be essential to ensure that the energy transition is also a circular one.

"Circular economy has become one of the strategic pillars for the sustainable future of Brazil's wind energy sector. Although it is still a relatively young industry in the country, the sector has been improving in terms of decommissioning and component recycling, with notable initiatives focused on the reuse of wind turbine blades at the end of their life cycle. The circular model helps reduce environmental impacts, optimize resource use, and strengthen the sector's image as a key player in the energy transition.

This discussion is already influencing decision-making among industry leaders, who must integrate sustainable practices throughout the entire production chain. While challenges remain — such as the lack of regulatory frameworks and dedicated infrastructure — there are significant opportunities for innovation, the development of new markets, and the strengthening of the social license to operate. Circular economy is, therefore, an essential path to align competitiveness with socio-environmental responsibility in the wind energy sector."

By Elbia Gannoum CEO of ABEEólica (Brazilian Wind Energy Association)





"BRAZIL APPROVES NATIONAL CIRCULAR ECONOMY PLAN: INITIATIVE AIMS TO TRANSFORM THE COUNTRY'S PRODUCTION MODEL"

On the 8th, the federal government approved the National Circular Economy Plan (PLANEC), a milestone that promises to redefine Brazil's production and consumption model. The document, which underwent public consultation via Participa + Brasil, is expected to be published in the first half of 2025 as part of the implementation of the National Circular Economy Strategy (ENEC) — the country's commitment to sustainability and economic innovation.

The Importance of a Shared Agenda for Brazil

The ability to orchestrate a network of actors and establish a shared agenda among all participants is one of the most critical roles of change agents—and represents the first and most decisive step for the circular transition to happen effectively and at scale.

When we share knowledge and align interests, we create pathways to recover valuable resources, strengthen reverse logistics, promote remanufacturing, and expand the potential for generating new value cycles. This flow of information is the backbone of success, but it requires a solid foundation of trust among stakeholders to support effective networkbased collaboration. Friction will arise throughout the journey—and in the process of transforming our mindset to seek new solutions and business relationships, such friction is not only natural but also healthy and necessary.

The true innovation lies in the power of coordination. More advanced markets have already shown that Circular Economy is realized 25% through technological innovation and 75% through social innovation, considering the way we behave and relate to one another. Based on all the insights gathered, this report highlights three main bottlenecks in the Brazilian market that may limit or delay the transition:

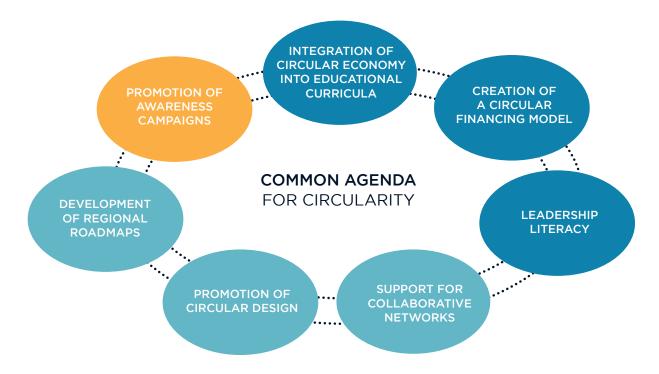
The three main bottlenecks **STRATEGY** MARKET LITERACY The transition The adoption of new It is necessary to align will require the values, attitudes, and concepts and strengthen development of new behaviors by society narratives to engage and is essential for circular educate all stakeholders skills, competencies, involved. and metrics in order products and services to co-create business to be appreciated and strategies that go demanded.

beyond the boundaries of individual companies or sectors.

Brazil State of Circularity

Seven structuring actions to advance the transition in Brazil.

Based on the main bottlenecks identified, the following are the guidelines and recommendations to advance the transition to a circular economy in Brazil.



1.INTEGRATION OF CIRCULAR ECONOMY INTO EDUCATIONAL CURRICULA

The concept must be incorporated from primary education through to higher education, preparing citizens for the challenges of the new economy.

2. CREATION OF A CIRCULAR FINANCING MODEL

It is essential to develop financing mechanisms suited to the Brazilian context that can stimulate circular projects and businesses.

3. LEADERSHIP LITERACY

Training public and private sector leaders is key to building a shared agenda and promoting decisions aligned with circular principles.

4. SUPPORT FOR COLLABORATIVE NETWORKS

Foster multi-sectoral, interinstitutional, and international exchange ecosystems to strengthen connections that drive innovation and scale solutions.

5. PROMOTION OF CIRCULAR DESIGN

Encourage the redesign of products from a systemic perspective, ensuring repairability, sharing, and the creation of closed-loop value cycles.

6. DEVELOPMENT OF REGIONAL ROADMAPS

Continuously engage strategic actors to define local goals and priorities based on the evaluation of international best practices.

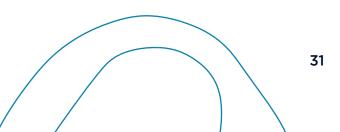
7. PROMOTION OF AWARENESS CAMPAIGNS

Raising awareness and mobilizing society is essential to consolidating a new value perspective, rooted in circular experiences, products, and services. In summary, among the priorities for advancing the Circular Economy in Brazil, a key focus is the integration of the topic into primary and higher education curricula, ensuring that its principles are embedded in the formation of future generations. At the same time, it is essential to promote literacy and capacity building for public and private sector leaders, broadening the understanding and practical application of circular concepts across various sectors of the economy. Efforts should also support the strengthening of multi-sectoral and interinstitutional collaboration networks, as well as innovation and design driven by circularity. The mobilization of civil society is equally strategic-through awareness campaigns that encourage new consumption and disposal habits. In addition, the development of regional roadmaps is necessary to account for territorial specificities and to guide transition strategies adapted to local realities. Finally, for all these actions to materialize, the creation of innovative financing models is crucial to enable the implementation of circular solutions at scale.

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Brazil State of Circularity





KEY MESSAGES FROM THE OFFICIAL LETTER BY ANDRÉ CORRÊA DO LAGO

President-Designate of COP30 — A Global Call to Fight Climate Change

THE AMAZON IN COLLAPSE: THE WORLD MUST WAKE UP

For the first time, COP will be held at the heart of the climate crisis — the Amazon, now on the brink of an irreversible tipping point. If we don't act now, it will be too late.

ENOUGH TALK. IT'S TIME FOR ACTION

For 35 years, science has warned us about the climate crisis and its impacts. Now, we are living the consequences: droughts, floods, and cities in chaos. COP30 cannot be just another meeting of promises. It must be the turning point where words become action.

FORESTS ARE NOT VICTIMS - THEY ARE THE SOLUTION

Stopping deforestation and regenerating the Amazon could be the world's climate trump card. To unlock this extraordinary potential, global support is essential — through financing, technology, and capacity building. Will we turn the bioeconomy into reality or keep watching the destruction unfold?

GLOBAL COOPERATION OR COLLECTIVE COLLAPSE

Inspired by Indigenous peoples, Brazil proposes a "planetary task force" — governments, businesses, academia, and civil society working together. Small actions in key areas can change everything. Are you in, or will you just watch?

THE PARIS AGREEMENT IS IN FORCE. WHERE ARE THE RESULTS?

The current climate targets (NDCs) are not enough. At COP30, countries must arrive with real commitments — or admit they are condemning future generations. There is no more room for delays or excuses.

See the <u>first letter</u>, published in March 2025 by COP30 President Ambassador André Corrêa do Lago, issuing a global call for climate action, and the <u>second one</u>, released on May 8, 2025, marking the shift from vision to action with a strong appeal for global collective efforts against the climate crisis. COP30 IS NOT JUST ANOTHER CONFERENCE. IT'S OUR LAST CHANCE TO TURN THE TIDE.





FINAL CONSIDERATIONS Global warming is advancing relentlessly. The planet can no longer regenerate at the same speed with which it is being exploited. Global supply chains are under increasing threat. The world is more connected than ever — and change must be collective and global.

Brazil is beginning to understand and define its role in this global transition. However, this transformation cannot happen in isolation. It is the entire system that needs to evolve — from metrics of success to processes, from values to attitudes. The great challenge of this century will be to face multiple crises in an integrated manner. And an inevitable question arises: how do we change what is already so deeply rooted in the decisions of companies, governments, and society itself? The answer lies in people, in data, and in the power of the collective.

Basic and professional education must keep pace with the changing world of work. New skills will be required, and preparing workers to co-create circular businesses is not only necessary — it is urgent. Developing capabilities aligned with circularity will be essential so that everyone feels part of this transition. Opportunities only have real meaning when they are accessible, both within and beyond major urban centers.

The transition to a Circular Economy demands more than good intentions — it requires clear incentives and a solid regulatory framework to accelerate the structuring of reverse supply chains and stimulate the creation of circular products and services. At the same time, a strong social policy is essential to support and accompany this new scenario. This means rebalancing the public policy field: creating laws that reward sustainable practices, discourage polluting activities, and adjust fiscal policy to reflect the true environmental cost — while ensuring resources for circular solutions. Across all sectors, we must be assured that this transition will result in better living and working conditions. Because a just transition only becomes real when no one is left behind. THE TIME TO ACT IS NOW — FOR A GLOBAL, JUST, AND REGENERATIVE CIRCULAR ECONOMY. Brazil is already a global reference in clean energy, has strategic access to critical minerals for the energy transition, and holds one of the world's largest reserves of fresh water. Our Amazon goes far beyond biodiversity — it holds a unique cultural heritage from Indigenous peoples, whose knowledge and values are fundamental to building a new world that is fairer, regenerative, and in harmony with nature.

This X-ray of circularity in Brazil reveals an important step forward in understanding the issue — but we are still falling short when it comes to turning knowledge into strategy and behavioral change. It's time to accelerate. Only then can we move from discourse to action, sparking interest in new raw materials, products, and services — and positioning Brazil and its leaders as protagonists of this transition.

"EDUCATION IS THE KEY TO BRAZIL'S INTEGRATION. IT IS THE TOOL FOR RAISING AWARENESS AND FOSTERING SENSITIVITY TOWARD SUSTAINABILITY. THE CONSTRUCTION OF QUALIFIED COMMUNICATION IS, THEREFORE, WHAT WILL EITHER MAINTAIN THE STATUS QUO – OR INSPIRE EVERYONE INTO ACTION.A AÇÃO."

Communication Guide to Make the Transformation Happen in Brazil Exchange4Change Brasil and Ibec, 2025



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