

(Re)Connecting the dots of the Circular Economy: Moving forward to building the bridges for a possible synergic framework among Western Europe and Brazil.

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I. Introduction

Circular economy has become an increasingly important topic in Western Europe countries, as they recognize the need to move away from a linear economic model of take-make-dispose towards a more sustainable and circular approach. This shift is driven by the need to address the negative environmental impacts of linear models, including resource depletion, pollution, and waste generation.

One of the key drivers of the Circular Economy in Western Europe is the implementation of the Extended Producer Responsibility (EPR) principle, which requires manufacturers to take responsibility for the entire lifecycle of their products, from design to disposal. This has led to the development of innovative business models, such as product-as-a-service and leasing, that prioritize the reuse and recycling of materials.

The majority of Western Europe countries have taken up these days significant steps towards achieving a more circular economy. The European Union (EU) has adopted an ambitious circular economy action plan, which includes a wide range of measures such as product design for sustainability, extended producer responsibility, and waste prevention targets. Several countries, such as the Netherlands and Denmark, have also developed national circular economy strategies and policies, while others are in the process of doing so.

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II. Western Europe initiatives taking place

In terms of specific initiatives, Western Europe countries have implemented a range of measures to promote circularity across various sectors:

For example, **the Netherlands** has launched a circular procurement program, which requires public authorities to consider circularity in their procurement decisions. **Finland** has implemented a circular economy road map, which includes targets for reducing the use of virgin materials and increasing recycling rates.

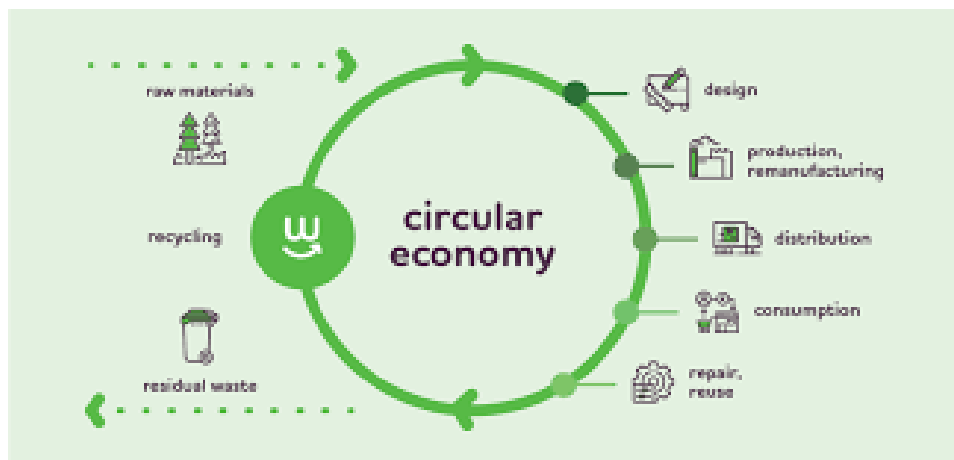
Bellow we can add other important ones as a short update:

1. The Ellen MacArthur Foundation: The Ellen MacArthur Foundation is a UK-based charity that promotes the transition to a circular economy. It works with businesses, governments, and academics to develop circular economy principles, strategies, and innovation. Its aim is to accelerate the transition to a circular economy globally, reducing waste, conserving resources, and promoting sustainability.
2. Amsterdam's Circular Economy Program: Amsterdam's Circular Economy Program is a municipal initiative in the Netherlands that promotes circular economy practices in the city. It works with businesses, residents, and other stakeholders to develop circular economy solutions for waste management, mobility, energy, and food systems. Its aim is to reduce waste, greenhouse gas emissions, and resource depletion while promoting economic and social opportunities.
3. Germany's Circular Economy Law: Germany's Circular Economy Law is a federal law that aims to promote circular economy practices and reduce waste in the country. It sets targets for waste reduction, recycling, and resource efficiency, and it establishes regulatory measures to support the circular economy, such as extended

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producer responsibility and eco-design requirements. Its aim is to reduce waste, promote sustainable resource use, and create economic and environmental benefits.

4. Circular Flanders: Circular Flanders is a regional initiative in Belgium that promotes circular economy practices in Flanders. It works with businesses, governments, and civil society organizations to develop circular economy strategies, innovation, and networks. Its aim is to reduce waste, conserve resources, and promote economic and social opportunities in Flanders.



III. The Irish CE 's Showcase

In the Programme for Government and the Climate Act, 2021, Ireland committed to halving our emissions by 2030 and reaching net zero by 2050 at the latest, placing climate action at the heart of all Government plans and policies over the next decade and beyond. The Environmental Protection Agency (EPA) The EPA-led Circular Economy Programme 2021-2027 is driving Ireland's move-to a circular economy and the programme supports the whole of government Circular Economy Strategy.

Here are four significant examples of the circular economy framework in Ireland, along with their importance and aimed impact:

1. Rediscovery Centre: The Rediscovery Centre is a social enterprise that operates as a center for environmental education, research, and innovation. It promotes the principles of the circular economy by implementing a range of waste reduction and resource efficiency measures. The center has a dedicated circular economy hub that offers training, consultancy, and research services to businesses, communities, and schools. Its aim is to demonstrate the economic, (Re)Connecting the dots of the Circular Economy: Moving forward to building the bridges for a possible synergic framework among Western Europe and Brazil. Prof. Dr. Jose Luiz Esteves, DBA. April/2023. LinkedIn at <https://www.linkedin.com/in/jose-esteves-2a53127/> email: jlestevesbr@gmail.com / www.exponentialis.com.br / Phone: +55(31) 92002-1223

social, and environmental benefits of adopting circular economy practices.

2. Repak: Repak is an industry-funded, not-for-profit organization that manages Ireland's packaging recycling scheme. It works with businesses to reduce packaging waste, improve recycling rates, and develop circular economy solutions. Its aim is to create a more sustainable packaging system that reduces waste and protects the environment.
3. FoodCloud: FoodCloud is a social enterprise that connects businesses that have surplus food with charities and community groups that need it. It operates a technology platform that enables businesses to donate their surplus food, and it works with local community groups to distribute the food to people in need. By redistributing surplus food, FoodCloud is reducing food waste and supporting local communities.
4. The Circular Economy Innovation Partnership: The Circular Economy Innovation Partnership is a collaboration between the Irish government, businesses, and academia. Its aim is to accelerate the development and implementation of circular economy solutions in Ireland. It provides funding and support to innovative projects that demonstrate the economic, social, and environmental benefits of the circular economy. The partnership aims to create a more sustainable, resource-efficient, and low-carbon economy in Ireland.

These brief examples demonstrate Ireland's commitment to creating a more sustainable, circular economy. They show that businesses, communities, and governments can work together to reduce waste, improve resource efficiency, and create economic, social, and environmental benefits. By adopting circular economy practices, Ireland is positioning itself as a leader in sustainability and innovation.



IV. Tackling a Brazilian Circular Economy Agenda

In contrast, the development of the circular economy in Brazil is still in its early stages. While there is growing interest and awareness of the need to transition to a more circular economy, there is currently no national strategy or framework in place to guide the transition. This is partly due to the fact that Brazil faces different challenges to those of Western Europe countries, such as high levels of poverty and inequality, which can limit the resources available for circular initiatives.

Despite these challenges, there are several examples of circular initiatives in Brazil. For example, **the city of São Paulo** has introduced a composting program, which collects organic waste from households and converts it into compost for agricultural use. There are also examples of circular business models emerging in Brazil, such as the rental and repair of electronic devices.

Following these leads, we can move forward and take a look at significant examples of the circular economy framework in Brazil as follows:

1. **Ecycle:** Ecycle is an online platform that promotes the recycling and reuse of electronic waste in Brazil. It connects consumers with certified e-waste recyclers and refurbishers, encouraging them to dispose of their electronic devices in an environmentally friendly way. The platform also provides information on how to recycle e-waste and advocates for more responsible e-waste management practices in Brazil. Its aim is to reduce e-waste pollution and promote resource conservation.
2. **Movimento Circular (The Circular Movement):** Movimento Circular is a network of businesses, civil society organizations, and government agencies that work together to promote circular economy practices in Brazil. It provides a platform for collaboration and knowledge sharing, and it advocates for policies and regulations that support the circular

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economy. Its aim is to accelerate the transition to a more sustainable, circular economy in Brazil.

3. Remade in Brazil: Remade in Brazil is a social enterprise that promotes the reuse and recycling of industrial waste in Brazil. It works with businesses to develop circular economy solutions for their waste streams, and it provides training and support for waste pickers and recycling cooperatives. Its aim is to create new economic opportunities and reduce waste in the industrial sector.
4. Fábrica Verde: Fábrica Verde is a project that aims to transform waste into energy and organic fertilizers in Brazil. It uses anaerobic digestion technology to generate biogas from organic waste, which is then used to produce electricity and heat. The project also produces high-quality organic fertilizers from the digestate, which can be used to improve soil health and reduce the need for chemical fertilizers. Its aim is to reduce waste and greenhouse gas emissions while promoting renewable energy and sustainable agriculture.

These examples demonstrate Brazil's growing interest in circular economy practices and its potential to become a leader in sustainable development. By promoting resource conservation, waste reduction, and new economic opportunities, the circular economy can contribute to Brazil's social, economic, and environmental goals.



V. Contacts and information: Just follow the links

Rediscovery Centre: The Rediscovery Centre is located in Dublin, Ireland. Its website is <https://www.rediscoverycentre.ie/>

Repak: Repak is based in Dublin, Ireland. Its website is <https://repak.ie/>

FoodCloud: FoodCloud is based in Dublin, Ireland. Its website is <https://food.cloud/>

The Circular Economy Innovation Partnership: The Circular Economy Innovation Partnership is a national initiative in Ireland. Its website is <https://www.circulareconomy.ie/>

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Ecycle: Ecycle is a national initiative in Brazil. Its website is <https://www.ecycle.com.br/>

Movimento Circular: Movimento Circular is a national network in Brazil. Its website is <https://www.movimentocircular.org.br/>

Remade in Brazil: Remade in Brazil is based in Sao Paulo, Brazil. Its website is <https://remade.com.br/>

Fábrica Verde: Fábrica Verde is located in Belo Horizonte, Brazil. Its website is <https://fabricaverde.org.br/>



VI. Additional References and Literature Review

"Circular economy business models: A review and agenda for future research." by Rizos et al. (2018) - This article provides an overview of circular economy business models, including the rediscovery center's work as a center for environmental education and innovation.

"Packaging waste management in Ireland: A review of contemporary challenges and future solutions." by Cavanagh et al. (2020) - This article discusses the role of Repak in managing Ireland's packaging recycling scheme and reducing packaging waste.

"The role of social enterprises in the circular economy: Moving towards a sustainable development agenda." by Gómez-Navarro et al. (2021) - This article discusses the work of FoodCloud as a social enterprise that promotes circular economy practices by connecting businesses with surplus food to charities and community groups in need.

"The circular economy in Brazil: A systematic literature review." by Barbosa et al. (2020) - This article provides an overview of circular economy practices in Brazil, including the work of Remade in Brazil as a social enterprise that promotes the reuse and recycling of industrial waste.

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"Green entrepreneurship and circular economy: Emerging trends and research directions." by Durand and Morales-Alonso (2021) - This article discusses the circular economy innovation partnership as a national initiative in Ireland that promotes green entrepreneurship and circular economy practices.

"Circular economy and energy transition: An exploratory study of the biogas production from municipal solid waste in Brazil." by Fiuza and De Oliveira (2019) - This article discusses the Fábrica Verde project as an example of circular economy practices in Brazil, specifically using anaerobic digestion technology to generate energy from organic waste.



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