



CircLean Open Innovation Workshop

Valencia, Spain - 27 May 2022

The workshop was held on 27 May 2022 at ADEIT, Fundación Universidad-Empresa, Valencia.

It was co-organised by the CircLean team, RedEco, ITC, Simbiosy, CETEM and IVACE. The event provided the opportunity to share experiences and knowledge regarding industrial symbiosis (IS) transactions among Spanish stakeholders. It also provided an opportunity to share views and suggestions for the European Commission to increase the uptake of IS in the EU and in Spain.

Highlights

EU Strategic Landscape and CircLean Benefits

- The **European Green Deal** and the **EU Industrial Strategy** have emphasised the potential of industrial symbiosis (IS) as an innovative business model. One of the EU objectives on IS to be pursued through the CircLean project concerns the development of a European industry-led monitoring and reporting system for IS transactions.
- IS brings **twofold benefits** in terms of environmental protection and climate mitigation (decreased use of primary materials; decreased landfilling; reduction of GHG emissions; reduction of energy use, etc.) but also in terms of competitiveness and industrial innovation (decreased costs for primary raw materials; fostering innovation and R&D; improved sustainability image of the companies).
- **CircLean** is a network of businesses and SMEs for IS. The purpose is to set up a network of businesses to seize IS business opportunities. CircLean is suitable for industry actors; business associations; public authorities; and R&I stakeholders. CircLean is EU-wide, flexible, industry-led, sustainable, voluntary, and needs-centred.

CircLean Toolbox

- The CircLean Toolbox comprises a Self-assessment module and a Matching tool. The Self-assessment module prepares businesses for engaging in industrial symbiosis, with a three-stage assessment process of their site, resources, and potential match opportunities. The user is guided through identifying waste streams and other under-utilised resources that can be repurposed by companies in different sectors, and how to gather evidence and data for these resources. Ideas are presented to help the user identify substitutes for inputs leading to a diversified and more robust supply chain. More information on the Self-assessment module is available [here](#). Companies that feel confident in these areas can move straight to the online Matching tool, which will offer them the opportunity to enter into regional or cross-border IS transactions.

Good examples of Industrial Symbiosis practices

During the event, several initiatives and projects were presented:

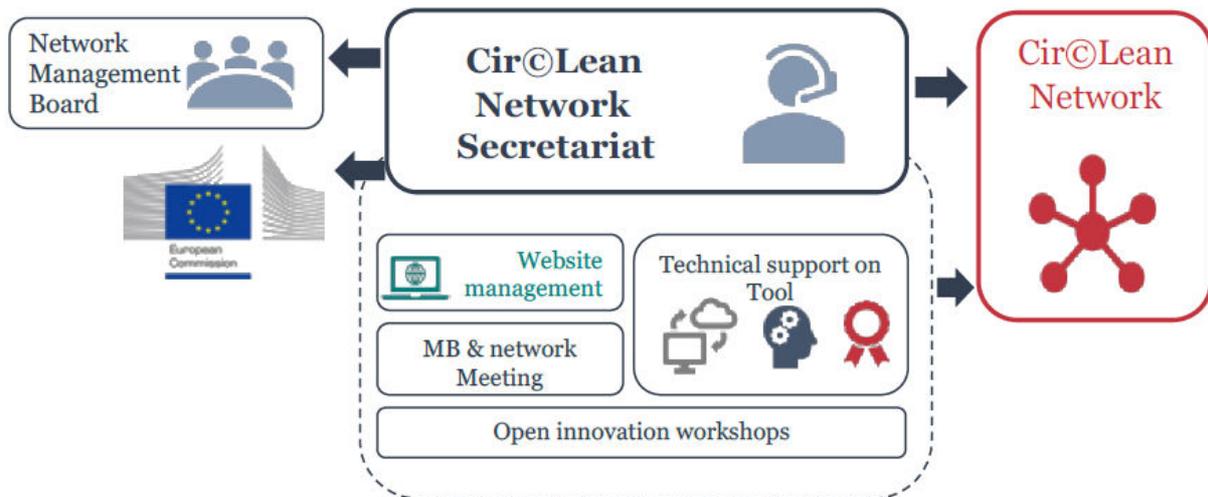
- **SIMBY** project, presented by FUNDECYT (CircLean member). The project supported the implementation of policy instruments and measures for the diffusion of industrial symbiosis, to add value, reduce production costs and relieve environmental pressures through increased resource efficiency and greenhouse gas emissions. Seven countries were involved; Spain, Poland, Italy, Slovenia, Greece, Hungary and Finland.
- **Symbiosis industrial in the Ceramic sector**, presented by ITC (CircLean member).
- **ACCIONA** presented several success stories of industrial symbiosis:
 - **FISSAC**: Fostering industrial symbiosis for a sustainable resource-intensive industry across the extended construction value chain.
 - **PAPERCHAIN**: New niche markets for the Pulp and Paper Industry waste based on circular economy approaches
 - **APSE**: Use of eco-friendly materials for a new concept of Asphalt Pavements for a Sustainable Environment”
 - **RE4**: Rese and Recycling of construction and demolition waste materials and structures in energy efficient prefabricated elements for building refurbishment and construction.

- The **EcoCircularZF project** is an already implemented Symbiosis Industrial project in the industrial park of Zona Franca in Barcelona. The project approaches several types of resources, and it was facilitated by Simbiosy.
- In the context of the RIS3 plan of the Comunidad Valenciana, an observatory for industrial symbiosis was created (**Observatorio de Simbiosis Industrial de la Comunidad Valenciana**). Among its main objectives, the observatory aims at promoting the concepts of circular economy and industrial symbiosis as business tools.
- **Romica Circular** is a project with the aim of implementing industrial symbiosis activities in its industrial park, promoting collaboration between its companies to achieve a more efficient use of resources. The project was facilitated by Simbiosy.
- **INESCOP** presented their ongoing work on developing synergies between tractor sectors of the Valencian Community (Transport/Automotive, Footwear, Textile and Toy). INESCOP has a team of more than 120 specialised people, with facilities of 10,000 m², where its 10 laboratories are housed. They do research on the whole footwear lifecycle.

Main takeaways of the event

- **Research and innovation activities** are a paramount to amplify the scope of industrial symbiosis activities towards new materials and industries. Regional and national public authorities should play a key role supporting stakeholders, providing them with economic aids that support innovative approaches, activities, techniques, and collaborations.
- Moreover, facilitating the creation of national, international, and **cross-sectoral collaboration projects** was also recognised as a key feature for industrial symbiosis activities to be operational at a broader level. In this regard, the role of facilitators and public authorities can support the mapping of this networks.
- **Facilitators** play an instrumental role in the creation of industrial symbiosis ecosystems. They have the capabilities to map the industry players, analyse them and design the material flows that enable symbiotic transactions within the ecosystem.
- Additionally, both regional and national authorities need to set the right **framework conditions** for industrial symbiosis to be feasible. Legislations need to be *fit for purpose*, therefore adapted to the context and needs of the industry.
- **Universities are among the key IS stakeholders**. There is a need of specific **skills** that can respond to the needs of the industry. In this regard, educational institutions can support this need role by providing courses tailored to the need of the industry. Additionally, they have links to industrial parks and a role in product development that can facilitate connections among industry players.

CircLean Governance



How to join CircLean in 3 easy steps

Step 1: Express your interest by sending a **signed Letter of Intent** to the CircLean Secretariat at circlean.project@technopolis-group.com

Step 2: Fill in the **Membership Application Form** including information on industrial symbiosis activities; experience with industrial symbiosis, etc. There is a basic and an active membership.

Basic membership

- Contribute to the development of the CircLean resource tool with their details and availability for matchmaking
- Contribute to the overall progress of the network
- Register details and resources in the CircLean tool and agree to contribute to the "Network" of resources shared online
- Active involvement in the more-advanced network activities (e.g. network meetings) is not compulsory

Active membership

- Register details and resources in the CircLean tool and contribute to the "Network" of resources shared online
- Involvement in the Management Board and in specific network meetings playing a more prominent role in the activities organised to develop the network, establish it as a sustainable hub for industrial symbiosis in the EU, and expand its membership base.

Step 3: Sign the **Network Charter/Code of Conduct** which includes mutual respect, integrity-based relationships among members, etc. More information is available [here](#).

Frequently Asked Questions (FAQ)

- ✓ **What will happen to the CircLean network after the end of the funded coming from the European Commission in November 2022?**

The CircLean network was designed with the ambition to become self-sustainable after the three years of EU funding. There are ongoing discussions with the members of the network that will be intensified in the coming months regarding this aspect, as the continuation of the network depends on the engagement of its members. The European Commission and the consortium implementing the CircLean project are supporting this process. The CircLean website and toolbox will remain online for one year after project end.

- ✓ **What are the benefits for my company/organisation in joining the CircLean network?**

Getting free access to an EU endorsed industry-led community of peers equipped with robust tools to discover, engage in, monitor and report about industrial symbiosis transactions across the EU, i.e. a self-assessment module, a matching tool to identify suitable opportunities for IS transactions, a common reporting methodology, and a EU label.

Opportunity to share views and suggestions for the Commission to increase the uptake of industrial symbiosis in the EU.

- ✓ **What are the benefits for my company/organisation to engage in industrial symbiosis?**

Reducing cost: Decreasing costs associated with inputs to production and waste disposal improves profitability and competitiveness.

Fostering innovation: Industrial symbiosis produces a demand-pull on innovation as industry identifies novel uses for underutilised resources. The OECD and UNEP identify industrial symbiosis as supporting eco-innovation.

Increasing revenue and competitiveness through diversification: Creating new business opportunities to sell what used to be a 'waste', thus converting the cost of waste management and disposal into a revenue opportunity.

Mitigating resource risk: Finding alternatives to traditional inputs, often outside the usual sector boundaries, decreases reliance on critical materials.

Creating jobs and encouraging entrepreneurs and new business start-ups.

Reducing emissions and contributing to climate neutrality targets.

- ✓ **To what do I commit by agreeing to become a member of the CircLean network?**

CircLean is a voluntary network and by joining it you only commit to respecting the CircLean Charter/Code of Conduct. Your active participation and contribution will be appreciated. Membership is free of charges.

- ✓ **Will I have any benefit if I follow the CircLean voluntary reporting methodology? When will it be developed?**

The protocol for the voluntary reporting methodology is ready. The main benefit associated to its implementation is the award of the EU CircLean label. The label will not only help businesses to participate in communicating their sustainability efforts, but will also signal that they are trustworthy partners to other operators.

- ✓ Who holds the copyright of the Self-assessment module and the Online matching tool?

The European Commission holds those rights.

Other resources on IS

- [European Resource Efficiency Knowledge Centre](#)
- EC, [Cooperation fostering industrial symbiosis: market potential, good practice and policy actions, 2018](#)
- [Industrial Symbiosis in the Baltic Sea Region, Nordregio Policy Brief](#)
- [FISSAC Project](#)
- [Guidelines on how to capitalise GPP as an enabler of industrial symbiosis](#), SYMBI project
- Interreg Europe Policy Learning Platform, [Policy brief on industrial symbiosis](#)
- Interreg Europe Policy Learning Platform, [Policy brief on circular economy business models](#)
- Interreg Europe Policy Learning Platform's [webinar](#) on circular economy business models

Agenda from the event

Time	Session	Additional details	Speaker
9:00 – 9:05	Introduction	<i>Presentation of the agenda</i>	Nazim Kuyer , RedECO Carmen Moreno , Technopolis Group
9:05- 9:20	Speech from the representative of the European Commission/Secretariat about the ambition underpinning CircLean		Anestis Filopoulos , Policy Officer – Sustainable Industrial Policy, Circular economy and Construction Unit, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, DG GROW, European Commission
9:20-9:40	The CircLean network, how to join it and why	<i>A presentation introducing the CircLean project, how to join the CircLean network, and the opportunities offered to CircLean members. The participants will be able to ask questions</i>	Carmen Moreno , Technopolis Group
9:40-10:00	Presentation of the CircLean toolbox (i.e. Self-assessment module and Matching tool)	<i>The CircLean team will present the Self-assessment module and matching tool. The participants will be able to ask questions.</i>	Rachel Lombardi , International Synergies
10:00-11:00	Good examples of local industrial symbiosis	<i>SYMBI project</i>	Maika Diaz , EU Project Manager, FUNDECYT

Time	Session	Additional details	Speaker
	initiatives and projects – Part I	<i>Simbiosis Industrial en el Sector Cerámico: ¿una realidad?</i>	Dra. Mónica Vicent Cabedo , Investigadora del Área de Materiales y Tecnologías Cerámicas y experta en Simbiosis Industrial, ITC
		<i>Aplicación de estrategias de simbiosis industrial innovadoras en infraestructuras de obra civil: casos de éxito de ACCIONA</i>	Blanca Juez Sánchez y Daniel Hiniesto Muñoz de la Torre , Dirección de Innovación de Acciona Construcción
		<i>EcoCircularZF project</i>	Bea Tena , Adjunta Dirección Urbanismo, CZF
11.00-11.15	Coffee break		
11:15-12:00	Good examples of local industrial symbiosis initiatives and projects – Part II	<i>Presentación del Observatorio de Simbiosis Industrial de la Comunidad Valenciana</i>	Jordi Sebastià , Director de Relaciones Externas, IVACE
		<i>Romica Circular</i>	Teresa Palacios , Gerente de ADEPRO
		<i>Economía Circular y Simbiosis Industrial entre sectores tractors de la Comunitat Valenciana (Transporte/Automoción, Calzado, Textil y Juguete)</i>	Borja Mateu , Investigador en Medio ambiente y Sostenibilidad, INESCOP
12:00-13:25	Roundtable about the opportunities and challenges for the uptake of industrial symbiosis in Spain	<i>The roundtable will discuss the opportunities and challenges for the uptake of industrial symbiosis in Spain.</i>	<ul style="list-style-type: none"> • Veronica Kuchinow, CEO y fundadora de Simbiosy • Francesc Hernández, Catedrático de la Universidad de Valencia (UV) y Director de la Cátedra de transformación del modelo económico: Economía Circular en el Sector del Agua - Universitat de Valecia • Ana Hurtado, Dra. en CC. Químicas, Valencian observatory for industrial Symbiosis (AIDDIME) • Diego Romà, Gerente de FEPEVAL • Almudena Muñoz, R&D Project Manager en CETEM • Francisco Ferrando, Jefe de Unidad Programas Europeos en IVACE • Ana Belén Arzo Cabrera, Jefa Servicio Promoción Económica y Relaciones Internacionales en la Diputación de Castellón
13:25-13:40 (15 min)	Presentation of the communication toolbox for CircLean Ambassadors	<i>A presentation of the communication toolbox that can be used by CircLean</i>	Anya Gregory , Arctik

Time	Session	Additional details	Speaker
		<i>members and other industrial symbiosis stakeholders.</i>	
13:40-13:55	Q&A	<i>Open session for any remaining questions from the audience on-site and online</i>	
13:55-14:00	Wrap up and conclusions	<i>Takeaways messages and next steps</i>	
14:00 – 15:00	Lunch & networking End of the day		