

Plan-C

CIRCULARITY IN PLASTICS INDUSTRY

The plastics industry is one of the key sectors of modern economy, while also facing significant environmental, economic and regulatory challenges. The growing amount of plastic waste, fluctuating raw material prices, the vulnerability of supply chains, and increasingly strict EU regulations all encourage companies to rethink the way they operate.

A circular economy focuses on keeping materials in use for as long as possible. The aim is to create a closed-loop system in which materials retain their value through reuse, repair, recycling, or repurposing, rather than being discarded after a single use.

This means that products should be designed from the very beginning to be durable, repairable, reusable, recyclable or, where appropriate, compostable.

Why is Circularity Important in the Plastics Industry?

Circular operations offer both environmental and business benefits. They help companies to:

- decrease dependence on virgin raw materials,
- reduce the amount of plastic waste,
- use energy and resources more efficiently,
- develop new products, services and business models,
- increase the share of recycled and secondary raw materials,
- comply with new regulatory and ESG (Environmental, Social, and Governance) requirements.

Companies that take action in time can create a stronger market position, more stable operations and new revenue streams.

The Role of the Plan-C Project

The aim of the **Plan-C – Moving Plastics and mACHine iNDustry towards Circularity** project is to support plastics producers and processors as well as machine manufacturers in the Danube Region in their transition towards circularity.

The project is implemented through the cooperation of **14 partners from 9 countries**, offering practical solutions, guidelines, handbooks, prototypes and methodologies, primarily for enterprises with a focus on small and medium-sized ones, as well as for business support organisations, professional and strategic stakeholders.

Plan-C approach is co-creating circular plastic solutions, innovation and long-term value retention through transnational collaboration and applying the design thinking methodology.

How can the Plastics Industry become more Circular?

The transition to circularity is not a single step, but a conscious development process. The Plan-C publication highlights four key pillars that help plastics companies build more sustainable operations.

1. Recyclability

Products should be designed so that they can be easily processed at the end of their life cycle. Appropriate material selection, easy disassembly, clear labelling and solutions that enable multiple recycling cycles are all essential.



2. Recycled Content

The use of secondary raw materials reduces the need for virgin raw materials, lowers environmental impact and contributes to maintaining material circulation. For companies, this may also mean new supplier relationships, innovative product development and more sustainable production processes.



3. Reuse

The reuse of products, packaging and plastic components can significantly reduce waste generation. Refillable, repairable, modular or longer-lasting solutions not only protect the environment but can also increase product value and customer satisfaction.



4. Collection and Reintegration

Efficient collection, sorting and take-back systems are essential to ensure that plastics truly return to the economic cycle. Well-functioning systems support material recovery, reduce landfilling and incineration, and promote high-quality recycling.



Design Thinking for Creative Problem-Solving

towards Circularity

One of the key methodological foundations of the Plan-C project is the design thinking approach, which helps to create new, practical and marketable circular solutions based on joint thinking among companies, designers, manufacturers, recyclers, researchers and policymakers.

Rather than focusing solely on technical efficiency but also on business and organisational levels, design thinking emphasizes understanding the real needs and behaviours of people who interact with plastic products throughout their life cycle. This makes it especially valuable for driving circular innovation in the plastics industry.

Let's move towards a Circular Plastics Industry together!

You would like to find out more about:

- Identified challenges and opportunities in the plastics industry
- Real life best practice circular economy examples
- Plan-C Design Thinking application for circular transformation
- Prototype concepts and demonstration cases for more circularity in the plastics processing companies

Take a look to Plan-C library and learn more

- Piloting co-creative design-thinking workshops to transform plastics industry towards circularity (Output 1.1)
- Guideline on how to develop a circular plastics prototype, including demo case factsheets (Output 1.2)
- Transnational strategy regarding circularity in plastics industry including comprising a Handbook for circular plastics industry and a joint plan (strategy) to boost circularity in the plastics industry (Output 1.3)



Plan-C Library

Partners

The Plan-C project brought together 14 partners from 9 countries to support companies on this journey with practical knowledge, international cooperation and innovative solutions.



Let's close the loop – together!

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Lead Partner:

Danube Region Programme

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