

## Output Factsheet

### Output title:

**O.1.3 Transnational strategy regarding circularity in plastics industry**

### Summary of the output (max. 2500 characters)

The transnational strategy proposal outlines a comprehensive approach to fostering circularity in the plastics industry across the Danube region, focusing on four key pillars: Innovation and Technology, Regulation and Policy, Collaboration, and Societal Awareness. The strategy emphasizes equitable development, harmonized regulations, cross-border cooperation, and public engagement to create a resilient and sustainable circular plastics economy. Strategic investments in technology and infrastructure, particularly in economically weaker regions, are essential to ensure inclusive progress. Embracing digitalization and Industry 4.0 technologies can significantly reduce costs and streamline the adoption of sustainable alternatives. These technologies enable real-time monitoring, predictive maintenance, and efficient resource management. Advanced recycling technologies, including chemical recycling and enzymatic depolymerization, are expanding the range of recyclable plastics. Bioplastics and bio-based polymers are emerging as viable alternatives to fossil-based plastics. However, widespread adoption requires coordinated efforts in funding, regulation, and knowledge transfer. A harmonized regulatory framework is crucial for the successful implementation of circular practices. Aligning standards and regulations, including the integration of EU candidate countries, ensures consistency and facilitates cross-border cooperation. Clear and specific rules are needed to address complex challenges. Embedding circularity principles into public funding and procurement criteria is a critical lever for accelerating the transition. Collaboration is the backbone of a successful circular economy. Joint projects that bring together stakeholders from across the value chain are essential. Societal awareness and education must be prioritized to support the transition to a circular economy.

This are some of the suggestions within the transnational strategy proposal. By aligning efforts across borders and sectors, the Danube region can become a model for circular innovation in plastics. This strategy lays the foundation for a unified, resilient, and future-ready industry that benefits both the environment and the economy.

### Contribution to the programme and project objectives, output and result indicator, as well as to the targets set for the Priority Area concerned (max. 2000 characters)

The transnational strategy for circularity in the plastics industry directly supports the Interreg Danube Programme's mission to foster innovation, environmental sustainability, and regional integration. By addressing systemic challenges across legal, technical, economic, and societal dimensions, the strategy contributes to programme priority 1: "A more competitive and smarter Danube Region", particularly its specific objective of enhancing innovation and technology transfer in Danube region.

The strategy consolidates regional findings into a unified framework that enhances cross-border cooperation and knowledge transfer. It operationalizes project objectives by offering SMEs practical guidelines for circular innovation, including design thinking, prototype development, and business model transformation. These outputs directly support result indicators such as increased SME capacity for circular practices and improved policy alignment across partner countries.

The strategy's four pillars, Innovation & Technology, Regulation & Policy, Collaboration, and Societal Awareness, translate into measurable impacts: fostering eco-innovation, harmonizing regulatory frameworks, and building transnational networks. It also supports the uptake of EU directives like the Packaging and Packaging Waste Regulation (PPWR), ensuring coherence with broader European goals.

Ultimately, the strategy strengthens the Danube Region's resilience and competitiveness (Smart-Priority 1 "A more competitive and smarter Danube Region") by embedding innovation and circularity into industrial ecosystems. Further the output contributes to Priority Area 8 (Competitiveness) of the EUSDR, as it directly supports regional transformation through industrial innovation and knowledge exchange.

It not only meets Plan-C's targets but also exemplifies how transnational collaboration can drive systemic change toward sustainability and economic renewal.

**How can the output be used and by whom (target group), what is the benefit and the impact for these target groups and the target area / Danube Region? (max. 1500 characters)**

The transnational strategy for circularity in the plastics industry serves as a strategic guide for multiple target groups across the Danube Region. It is primarily intended for SMEs, large enterprises, business support organizations (BSOs), sectoral agencies, and public authorities. These stakeholders can use the strategy to align their operations, policies, and support mechanisms with circular economy principles.

For SMEs and industry actors, the strategy (together with the handbook, D1.3.2) offers a practical framework to adopt circular design, recycling, and reuse practices, enhancing competitiveness and sustainability. BSOs and sectoral agencies benefit by gaining a structured tool to support their members with targeted services, training, and funding guidance. Public authorities can use the strategy to inform regional and national policy development, ensuring alignment with EU goals and RIS3 strategies.

The impact on the Danube Region is significant: the strategy fosters cross-border cooperation, harmonizes circularity efforts, and accelerates the transition to a resource-efficient economy. It strengthens innovation ecosystems, reduces environmental impact, and enhances the region's resilience and economic integration.

**How can the sustainability of the output be ensured and where and to whom is it going to be transferred? (max. 1500 characters)**

The sustainability of Output 1.3, the transnational strategy for circularity in the plastics industry, is ensured through its integration into the broader Transnational Action Plan (Output 3.2) and its alignment with regional and EU policy frameworks, including RIS3 strategies and the EU Circular

Economy Action Plan. It is designed as a living document that can be adapted and updated by stakeholders beyond the project's lifetime.

The strategy will be transferred to key target groups: SMEs, large enterprises, business support organizations (BSOs), sectoral agencies, and public authorities across the Danube Region. These actors are involved throughout the project in co-creation, piloting, and validation processes, ensuring ownership and readiness for uptake.

To maximize its reach and durability, the strategy will be disseminated through regional uptake events, policy workshops, and the final project conference. It will also be promoted via digital platforms and integrated into educational materials and policy recommendations. This ensures that the strategy continues to guide circular transformation efforts, supports innovation, and strengthens cross-border cooperation in the Danube Region well beyond the project's duration.