

Output 1.1 Factsheet

Pilot Action 3: Smart City, Germany

Output title: O 1.1 Transnational Circular Economy Pilots in the Areas of Food, Battery, Textile, Packaging and Smart City

Summary of the output (max. 2500 characters)

Output 1.1 refers to the implementation of pilots that demonstrate and validate circular economy practices with the DECIDE toolbox in the areas of food, battery, textile, packaging and smart city (A1.4). These pilots serve as real-world experiments and practical demonstrations of CEBMs. The output showcases the feasibility and benefits of adopting circular economy approaches in diverse sectors, fostering innovation and sustainability, resource efficiency, and economic growth. It is scheduled for delivery in Period 4 and has a target value of five pilot actions.

The pilot actions were jointly developed through a structured transnational co-creation process ("Tandem Approach"). For each of the five pilot actions and based on best practice cases (A2.1) and partner exchanges (meetings and calls), the DECIDE Steering Committee selected and approved one real-life pilot case from the DR. In line with the AF, they represent transnational pilots addressing circular economy approaches in the sectors of food, batteries, textiles, packaging, and smart cities, as presented in the table below.

		Food	Smart City	Batteries	Textile	Packaging
EU	Germany		Pilot			
	Croatia					
	Slovenia					
	Bulgaria					
	Hungary					
	Romania	Pilot				
	Austria				Pilot	
Non-EU	Moldova			Pilot		
	Serbia					
	BiH					Pilot

Further key characteristics of the jointly developed concept and implementation by the project partnership include the application of a common methodology with defined KPIs, supported by a centralised data system (MS Teams) and standardised data collection. These ensure continuous monitoring and iterative review, enable cross-dimensional analysis, and provide a validated basis

for transfer, replication, and future recommendations.

The implementation was supported by two onsite Train-the-Trainer sessions (May and July 2025), in which all project partners actively participated, contributed their expertise, and ensured knowledge exchange and consistent application across all pilot actions.

This factsheet presents the joint pilot action for the German pilot case in the Smart City sector. It was implemented by applying the jointly developed DECIDE Toolbox tools and methods (A1.2) to the real-life business model "Sourcing energy from biomass". The pilot delivers a structured documentation package, including a poster, presentation, BM20D description, DECIDE Service Catalogue entry, modelling outputs (BMC, BPMN, e3Value and System Dynamics), complemented by an impact assessment with KPI-based evaluation and qualitative expert inputs, providing a consistent basis for comparison, validation and transfer.

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 pilot action for the pilot case "Sourcing energy from biomass" contributes significantly to Programme Output Indicator RCO84 "Pilot actions developed jointly and implemented in projects" by fulfilling both key requirements of the indicator. It was jointly developed through a structured transnational co-creation process involving all project partners, including the collaborative identification and selection of pilot cases, the development of a common methodological framework, and the application of the tandem approach and Train-the-Trainer sessions. The pilot was implemented within the project by applying the jointly developed DECIDE Toolbox tools and methods to a real-life case in Germany, ensuring full implementation within the project duration.

The pilot action contributes to the Result Indicator ISI "Organisations with increased institutional capacity due to their participation in cooperation activities across borders". The organisation beyond the project partnership strengthens its capacities through the modelling of its business model within its own organisational and regional context. The outputs enable the development and deepening of an understanding of the circular economy. In addition, new insights into the analysis and further development of circular business models are gained, and practical experience in using business model tools and methodologies is provided.

As a result, the pilot action supports innovation and technology transfer in the Danube Region by translating jointly developed tools and methodologies into practical applications. The integration of results into the DECIDE Service Catalogue and their dissemination through project meetings and public conferences further enhances their accessibility and uptake. Thus, the pilot action is linked to the result indicator RCR 104 "Solutions taken up or upscaled by organisations". This contributes to strengthening a more competitive and smarter Danube Region by enabling organisations to adopt innovative, resource-efficient and sustainable business models.

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 output can be used by municipalities, regional authorities, energy providers, local SMEs, farmers, and infrastructure developers. It also targets policy makers, planners, and environmental organisations aiming to implement circular and low-carbon energy and smart city solutions.

Municipalities and regional planners can use the model to design integrated energy systems by

combining waste biomass and district heating. Energy companies and plant operators can apply it to develop decentralised, efficient energy production and increase the percentage of circular energy within the system. Local farmers and forestry actors benefit by supplying biomass residues, creating additional revenue instead of waste streams. Industrial energy users gain from stable and predictable energy prices, which are critical for maintaining competitiveness and jobs.

The main benefit lies in increased resource efficiency through the reuse of agricultural residues and waste heat, reducing dependency on fossil fuels. Economically, the system strengthens regional value chains, supports local income generation, and stabilises energy costs. Socially, it fosters local employment, community engagement, and rural resilience. Environmentally, it reduces greenhouse gas emissions, avoids biomass waste, and supports carbon-negative solutions.

For the Danube Region, the impact is high due to similar agricultural structures and available biomass resources. The concept is transferable and scalable, supporting regional energy security, circular economy practices, and climate targets. It contributes to reducing rural depopulation by strengthening local economies and improving on energy supply stability as well as enabling cross-regional cooperation for sustainable energy systems.

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 the output is ensured through its integration into the DECIDE Service Catalogue, which provides long-term access to the developed tools, methodologies and pilot results. In addition, the Digital Learning Concept and training materials enable continued use and capacity building beyond the project duration.

The output will be transferred through project partners, who act as multipliers in their regions, including business support organisations, clusters, and regional development agencies. Furthermore, the results will be disseminated to SMEs, start-ups, policymakers, and actors from research and education through training activities, workshops, advisory services, study visits, and integration into curricula and applied research. To ensure the effective transfer, uptake and long-term use of outputs beyond the project duration, each partner has defined specific measures within dedicated implementation plans ("DECIDE Sustainability & Transferability Implementation Plan" attached).

The practical and modular structure of the DECIDE Toolbox enables its adaptation to different sectors and regional contexts, ensuring a high level of transferability and scalability across the Danube Region. The results are further disseminated through project meetings, public conferences and networks, enhancing visibility, facilitating uptake and supporting the wider application of the outputs. This contributes to long-term sustainability and ensures a lasting impact beyond the project duration.