

Projekt GreenChem4CE - Cirkulární Řešení Použití Plastů a Plastových Odpadů

Interreg
CENTRAL EUROPE



Co-funded by
the European Union

GreenChemForCE

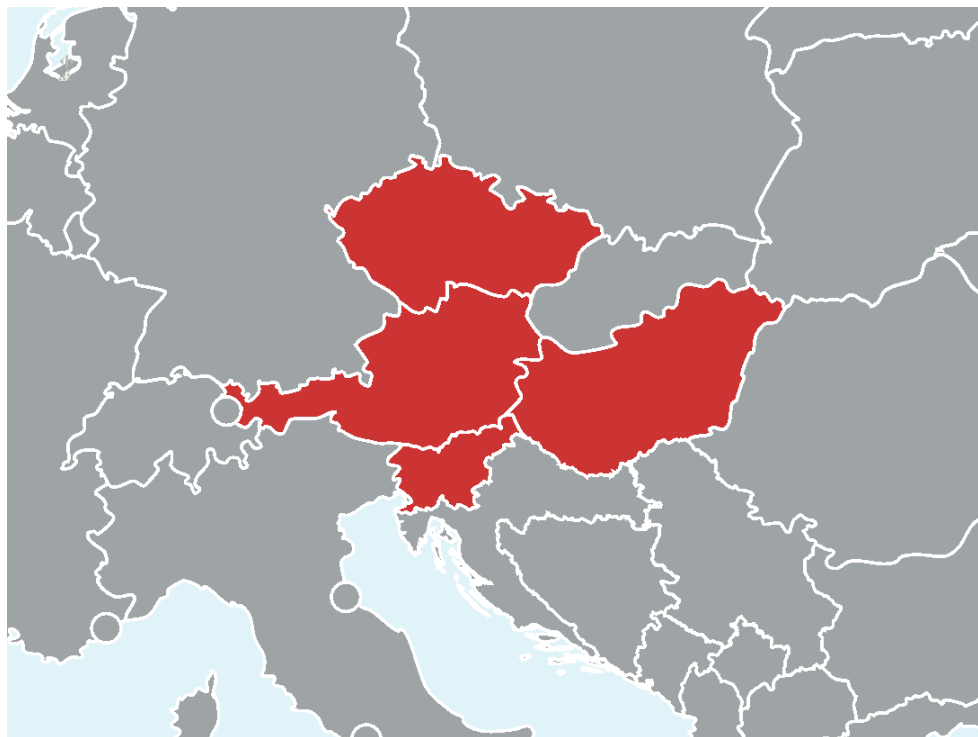
ICCT 2026

Mikulov, Czech Republic | 14 April 2026

Dr. Lukáš Rýček

Charles University, Prague

GreenChemForCE

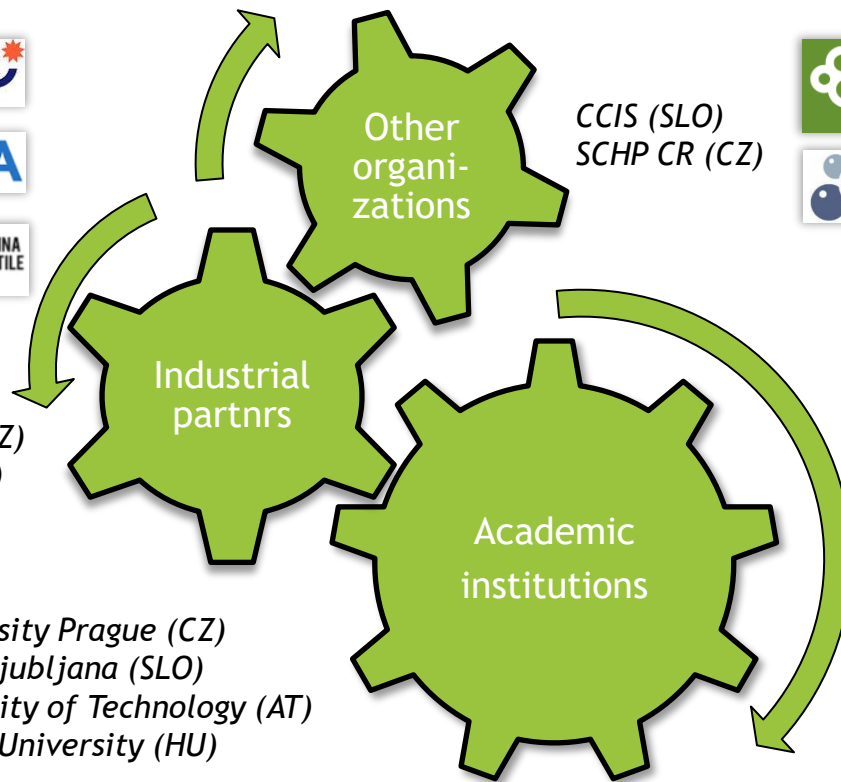


Who we are?



SRIMC (HU)
Zentiva k.s. (CZ)
VTL GmbH (AT)

Charles University Prague (CZ)
University of Ljubljana (SLO)
Vienna University of Technology (AT)
Eötvös Loránd University (HU)



CCIS (SLO)
SCHP CR (CZ)



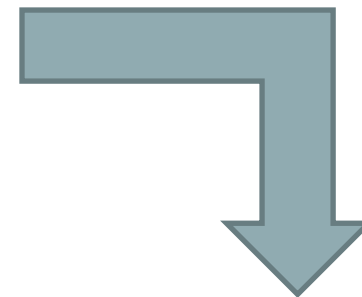
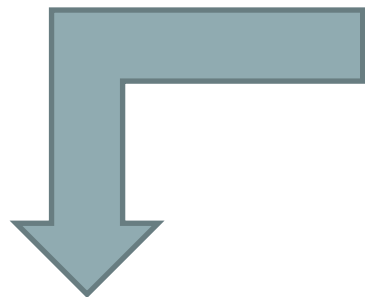
+ 6 associated partners

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WP1

Sustainable
management of plastics



WP2

Circular carbon
dioxide

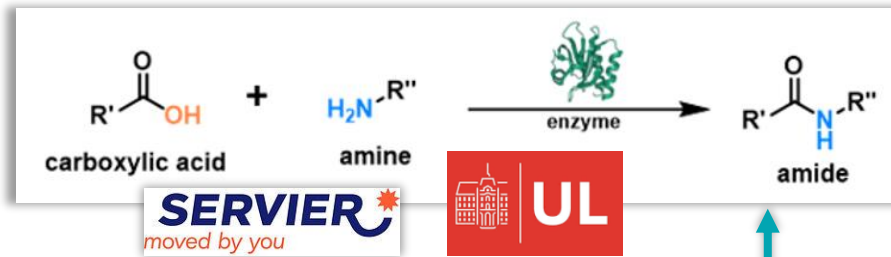


WP3

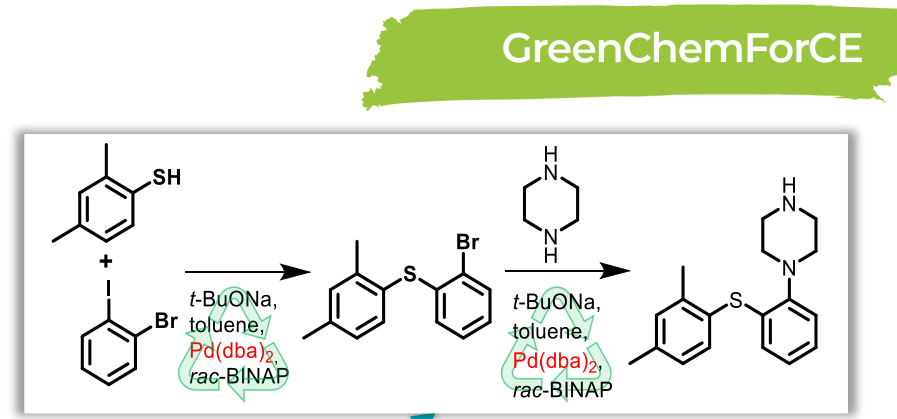
Circularity in fine
chemical synthesis



Our activities outside the plastic management



Biocatalytic transformations

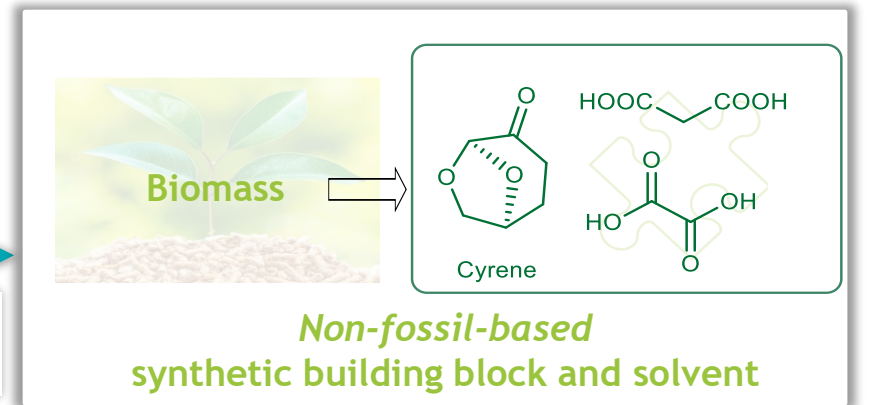
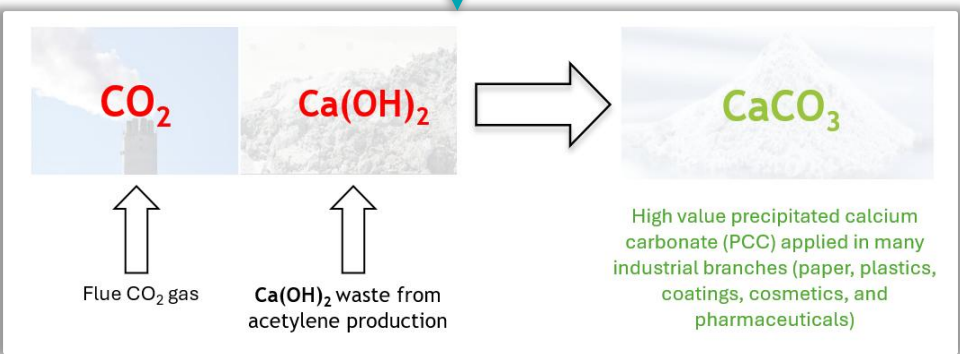


Carbon Capture and Utilization

Transition metal recovery

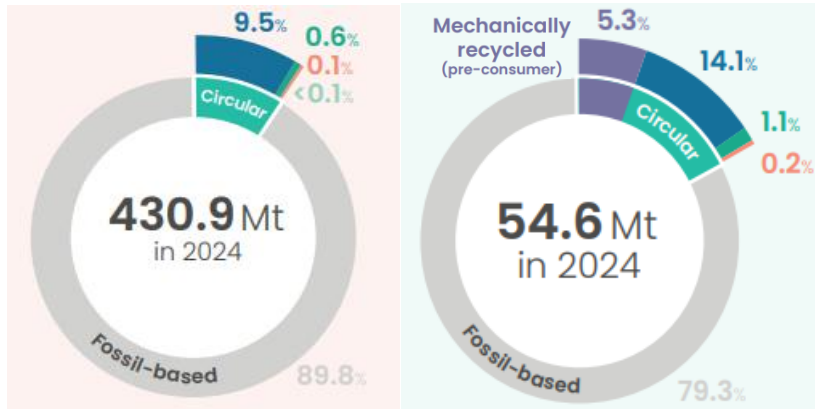


Renewable feedstock for synthesis



Management of plastics

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- Fossil-based
- Mechanically recycled (post-consumer)¹
- Bio-based (including bio-attributed since 2022)
- Chemically recycled (post-consumer)²
- Carbon-captured



EU Plastic Postconsumer Waste

~42.5 Mt



Incineration Emissions

252.1 Mt CO₂

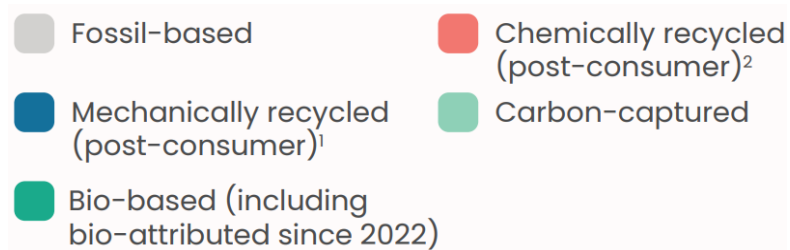
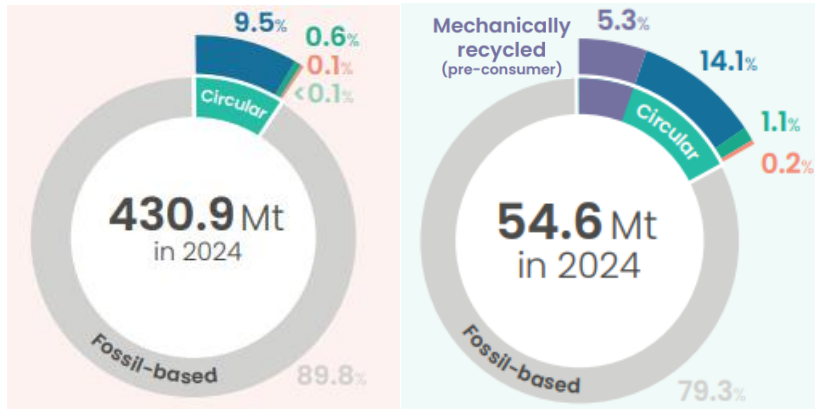
<https://plasticseurope.org/knowledge-hub/plastics-the-fast-facts-2025/>

1. Data developed for 2018; data for following years are based on estimations and statistical projections.

2. Chemically recycled plastics production is estimated at 0.37 Mt, based on available data, with the fuel-use exempt mass balance attribution rule. This method includes secondary chemicals which can be used for the production of plastics and other materials.

Management of plastics

GreenChemForCE



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- Development of strategy for sustainable plastic management
- Pilot action for sustainable plastic management

<https://plasticseurope.org/knowledge-hub/plastics-the-fast-facts-2025/>

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Strategic Framework “4 for 4” : Four Pillars vs. Four Technological Topics

Technology Pillar	Circular value chains	Waste valorisation	Sustainable raw materials	Eco-design of products
Regulation and governance	Prevention targets, EPR, bans	Waste rules and quality criteria	Mandatory recyclate content	Eco-design requirements, DPP
Regional cooperation	Cross-border standards, logistics	Industrial symbiosis	Joint procurement of recyclates	Co-creation networks and pilots
Education and behaviour	Skills for prevention and sorting	Training on quality and control	LCA and sustainability requirements	Eco-design in practice in product development
Technology and infrastructure	Collection, sorting, recycling	Advanced recycling technologies	Bio-based, CO ₂ -based plastics	Digital tools, product passport

Strategic Framework “4 for 4” : Four Pillars vs. Four Technological Topics

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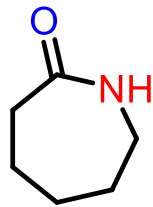
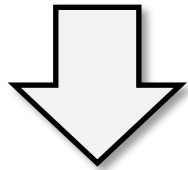
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Circularity in nylon 6, enabled by chemical depolymerization

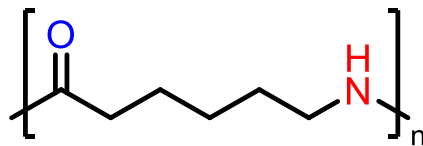
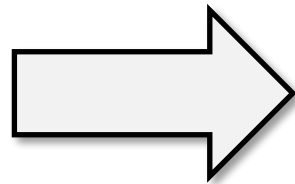


Fishing Nets

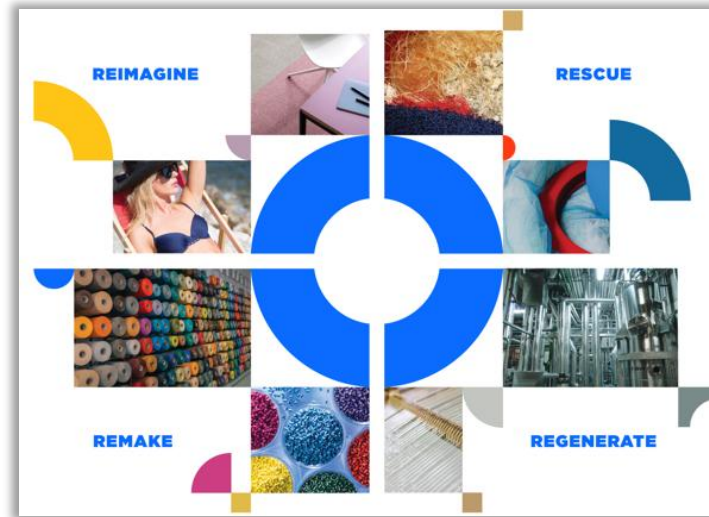
Old carpet



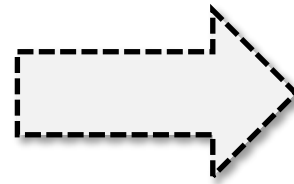
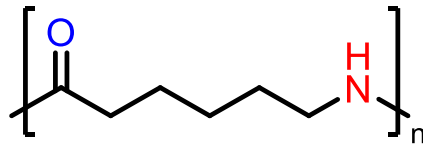
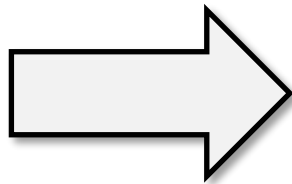
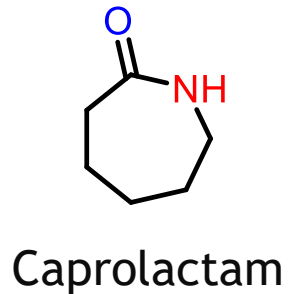
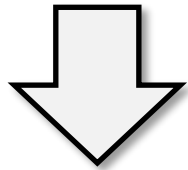
Caprolactam



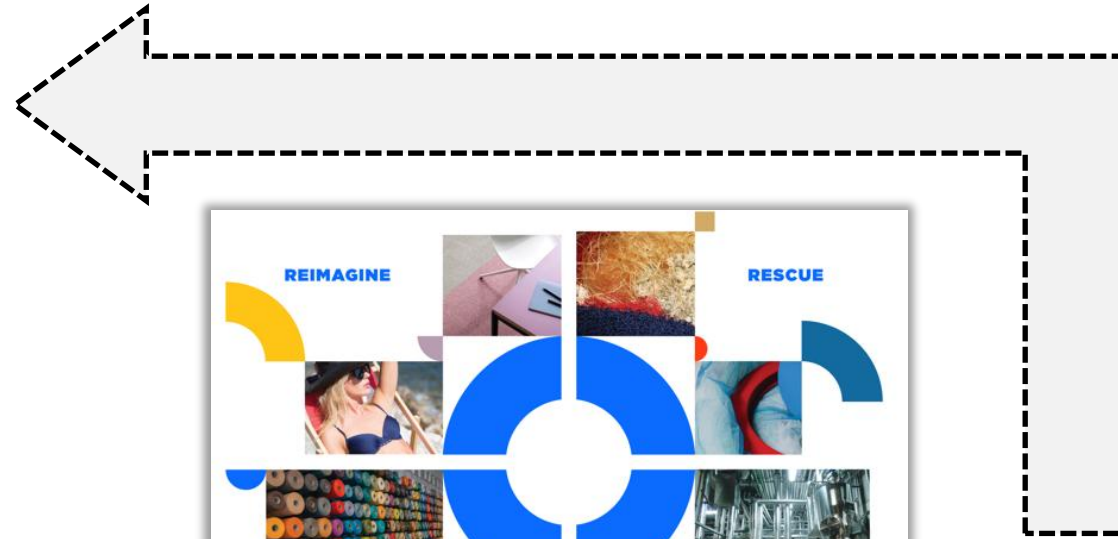
Econyl®



Circularity in nylon 6, enabled by chemical depolymerization



Etc.

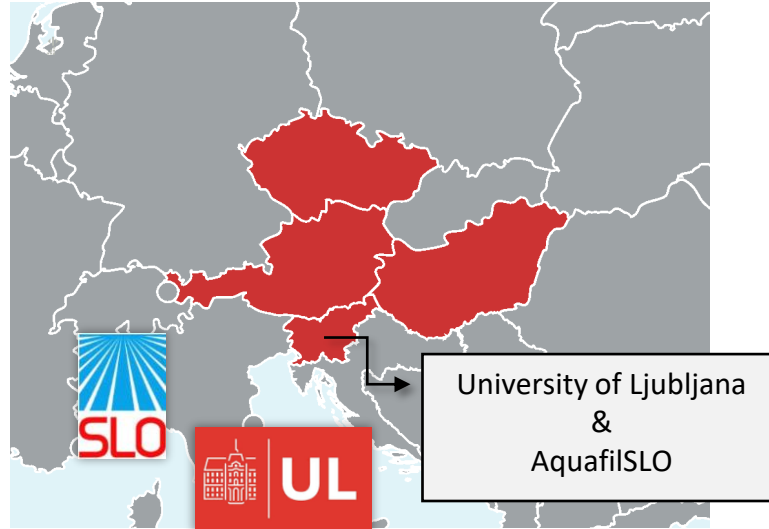


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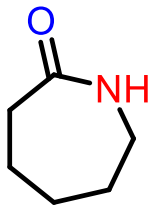
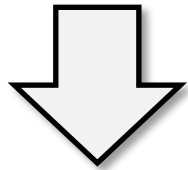


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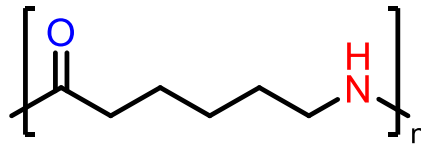
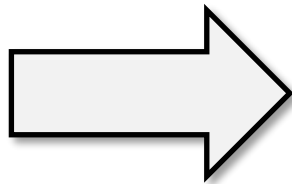
Old carpet



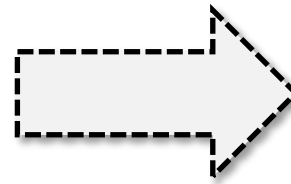
University of Ljubljana
&
AquafilSLO



Caprolactam

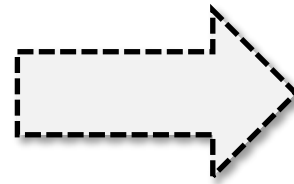
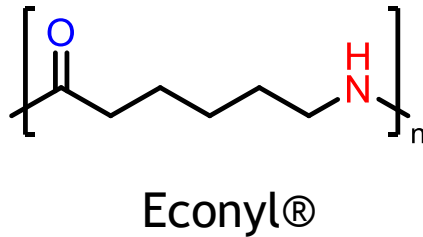
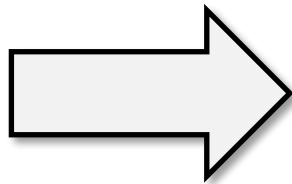
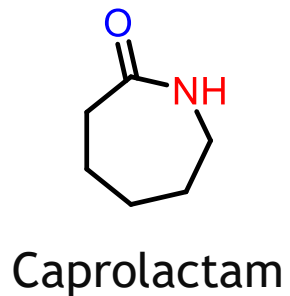
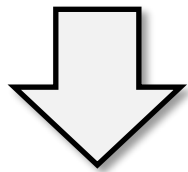


Econyl®



Etc.

Circularity in nylon 6, enabled by chemical depolymerization



Etc.





SRIMC



Zentiva



Vienna Textile Lab



Chamber of Commerce of Štajerska



Czech Association of Chemical Industry



Charles University



Vienna University of Technology



University of Ljubljana



Eötvös Loránd University



EGIS Pharmaceuticals



Belinka Perkemija



AquafilSLO

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<https://www.interreg-central.eu/projects/greenchemforce/>



Thank you for your attention!