

Meeting Product Quality and Sustainability Targets in PET/Polyester Applications Using Back-to-Monomer Recycling

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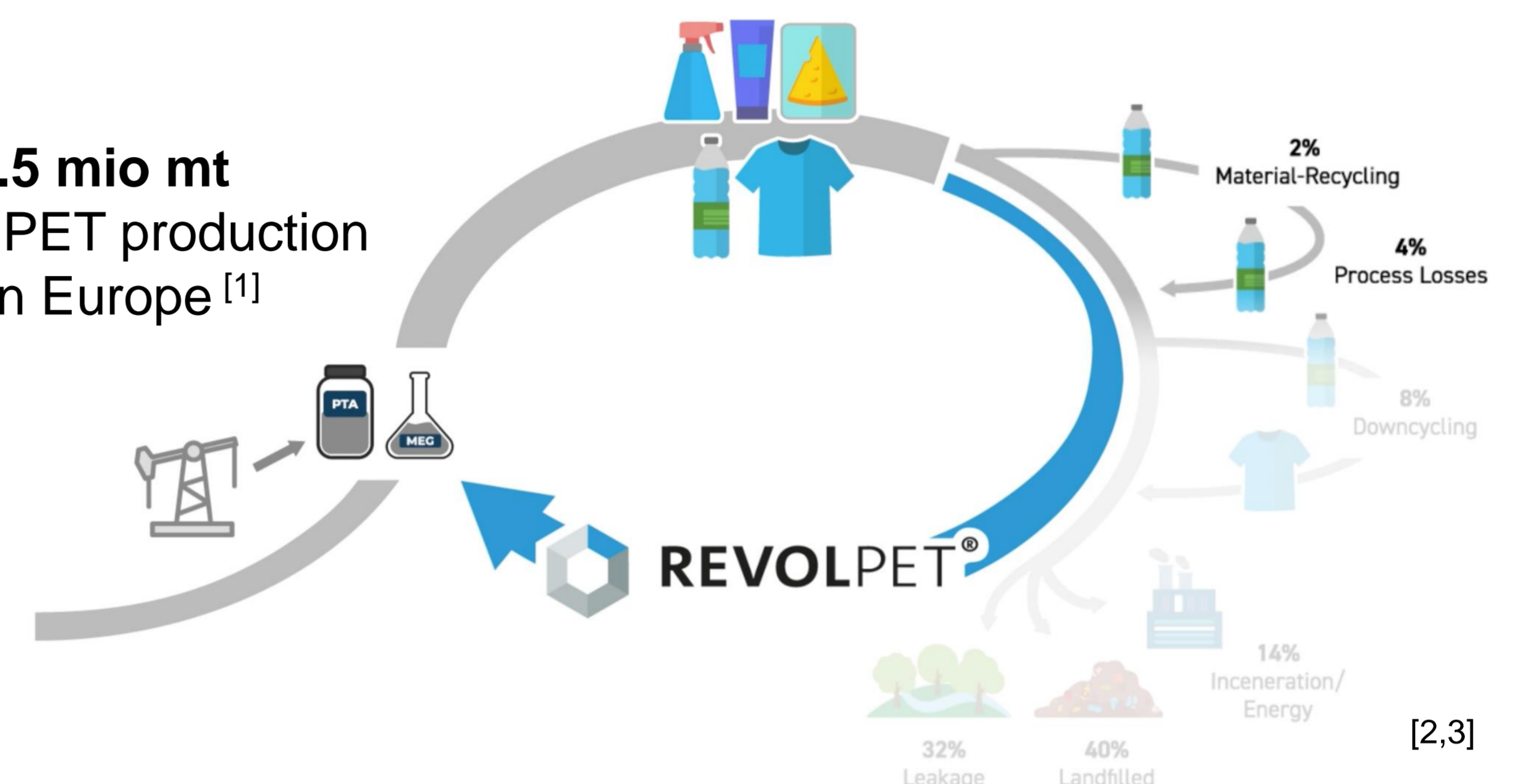
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The Recycling Revolution for Polyester

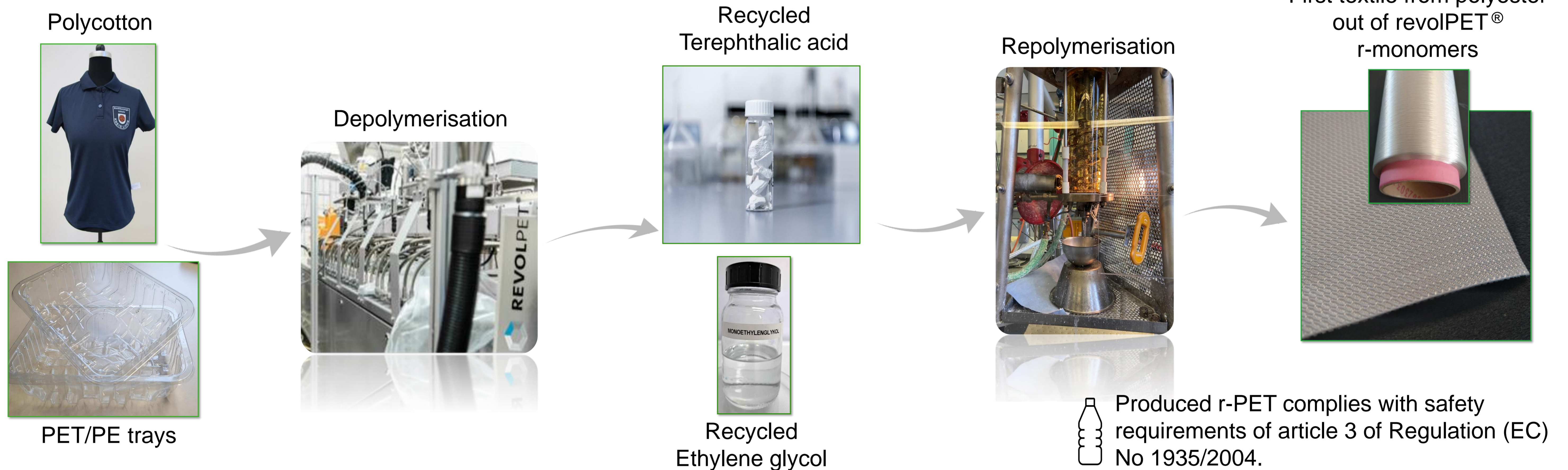
Our revolutionary revolPET® technology transforms the recycling landscape by efficiently converting previously non-recyclable PET mixed plastics and polyester-rich textiles into high-purity monomers. These monomers are then utilized to create new, superior-quality products, marking a significant advancement in sustainable manufacturing practices.

- Mixed waste streams
- Continuous depolymerisation
- No solvents or catalysts
- Food-grade PET
- Ecologically beneficial

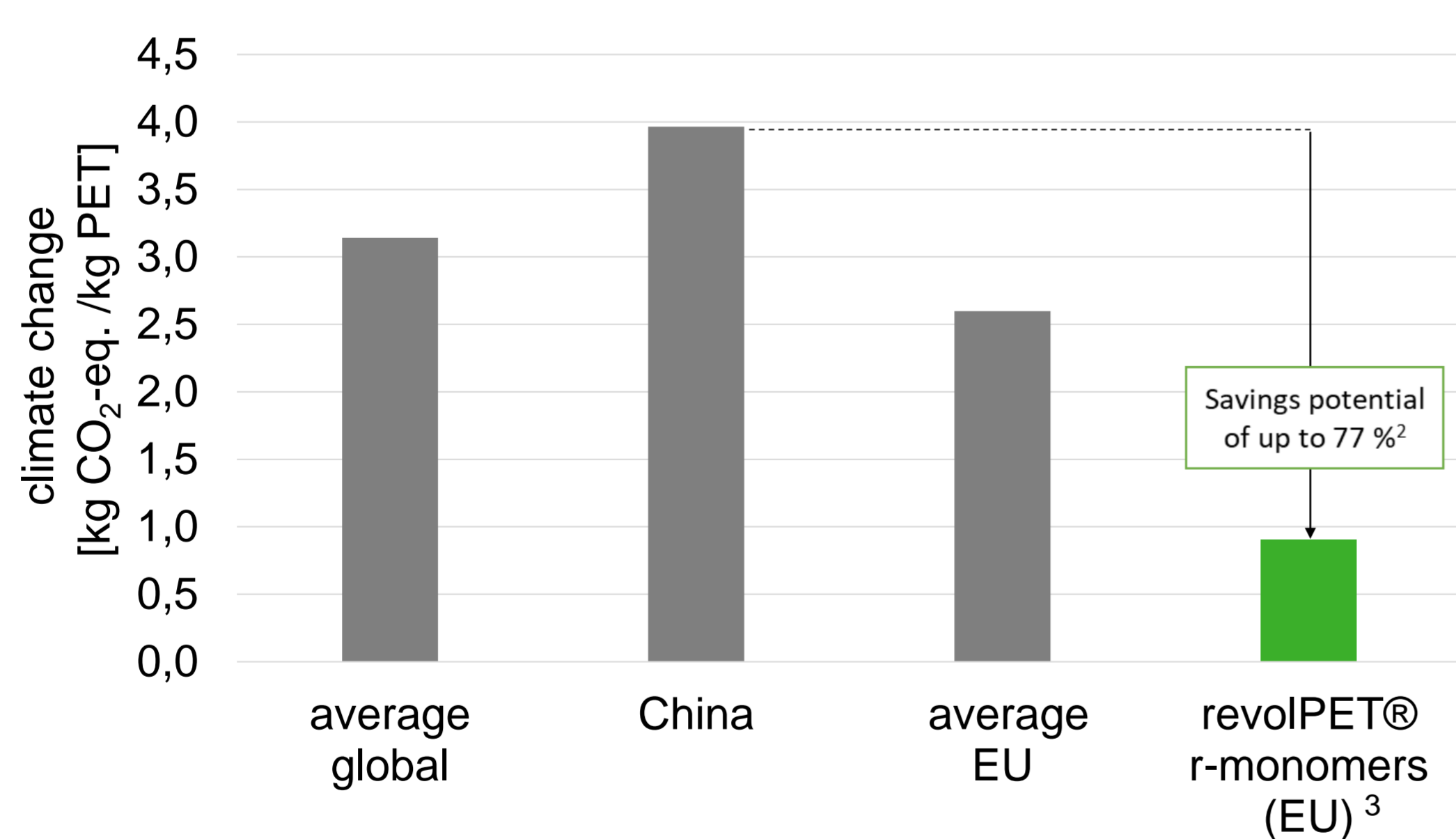
5.5 mio mt annual PET production in Europe [1]



revolPET®: High Product Quality of Recycled Monomers and r-PET



Life Cycle Assessment: CO₂-emissions PET Production¹



¹ Production of amorphous PET granulate (ecoinvent v3.9.1)

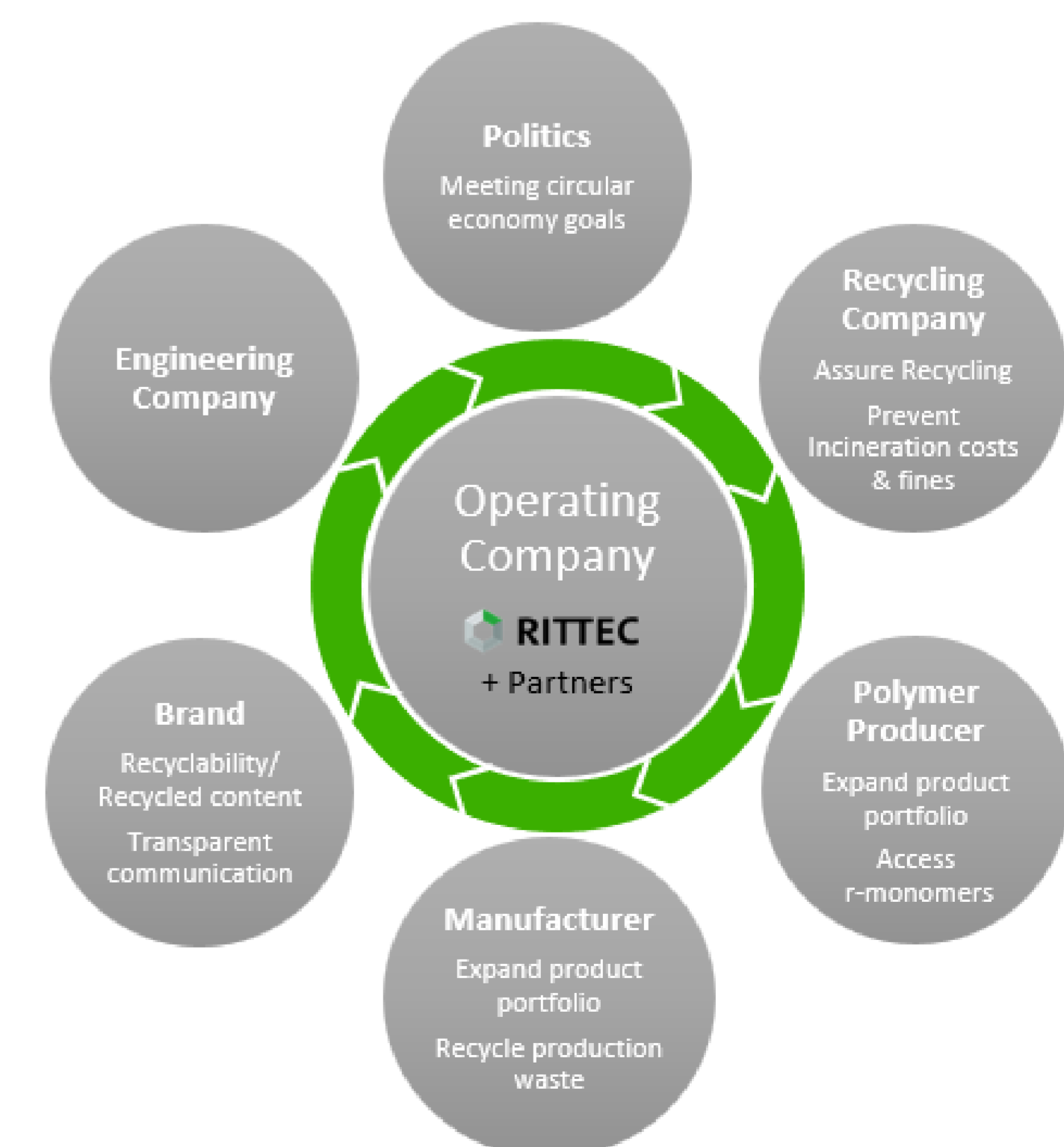
² Depending on the location

³ TRL 7, Electricity mix: 59.5% green electricity, 37.2% nuclear energy, 3.3% fossil energy sources

- Results show an excerpt of the LCA study, here for a technology readiness level (TRL) 7
- Use of r-monomers for the production of amorphous PET pellets significantly reduces the environmental impact
- By increasing the TRL and integrating the technology into existing site infrastructure, a further reduction in environmental impact is expected

Be Part of Our Story!

RITTEC unites stakeholders in the circular economy, multiplying the industry's impact. We're a key technology provider, actively forming consortia to establish (pre)industrial plants worldwide, advancing sustainable innovation.



Join us in closing the loop for a sustainable tomorrow!

Literature

[1] Eunomia, „How circular is PET“, Report February 2022

[2] RITTEC 8.0 Umwelttechnik GmbH, www.rittec.eu

[3] Ellen MacArthur Foundation „The new Plastics Economy: Rethinking the future of plastics“ (2016)

Find out more

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