

Advanced solvent-based technology for the closed-loop recycling of engineering plastics

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Problem

Engineering plastics and soft PVC are often used in products with complex material composition, which makes recycling challenging



Closed-loop recycling is the anchor of circular material supply

Current recycling methods based on mechanical recycling offer partial solution only and result in a loss of material properties

The application of recycled plastics in consumer products is lagging behind, mainly due to a shortage of high-quality recycled material

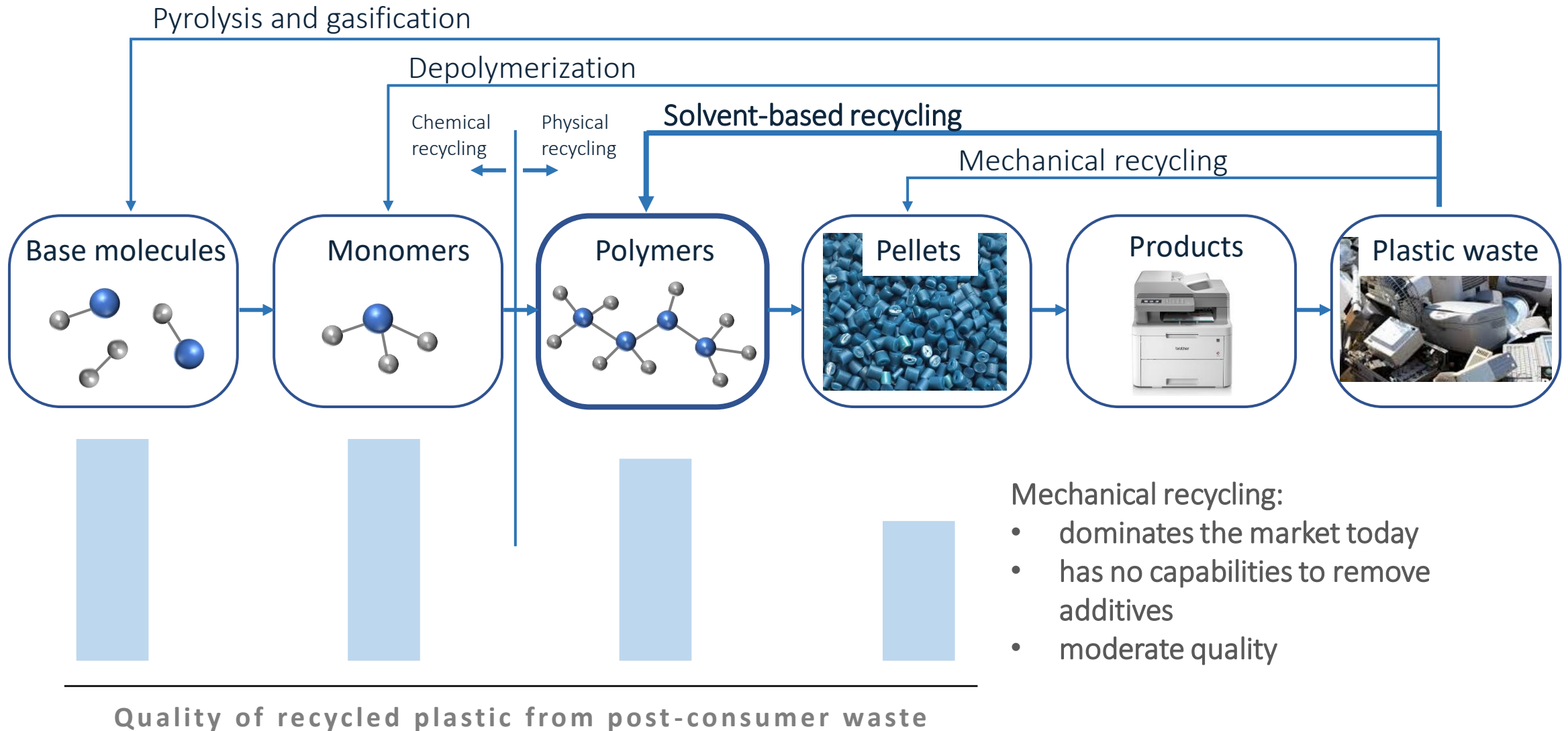
24%
EU target
in 2030



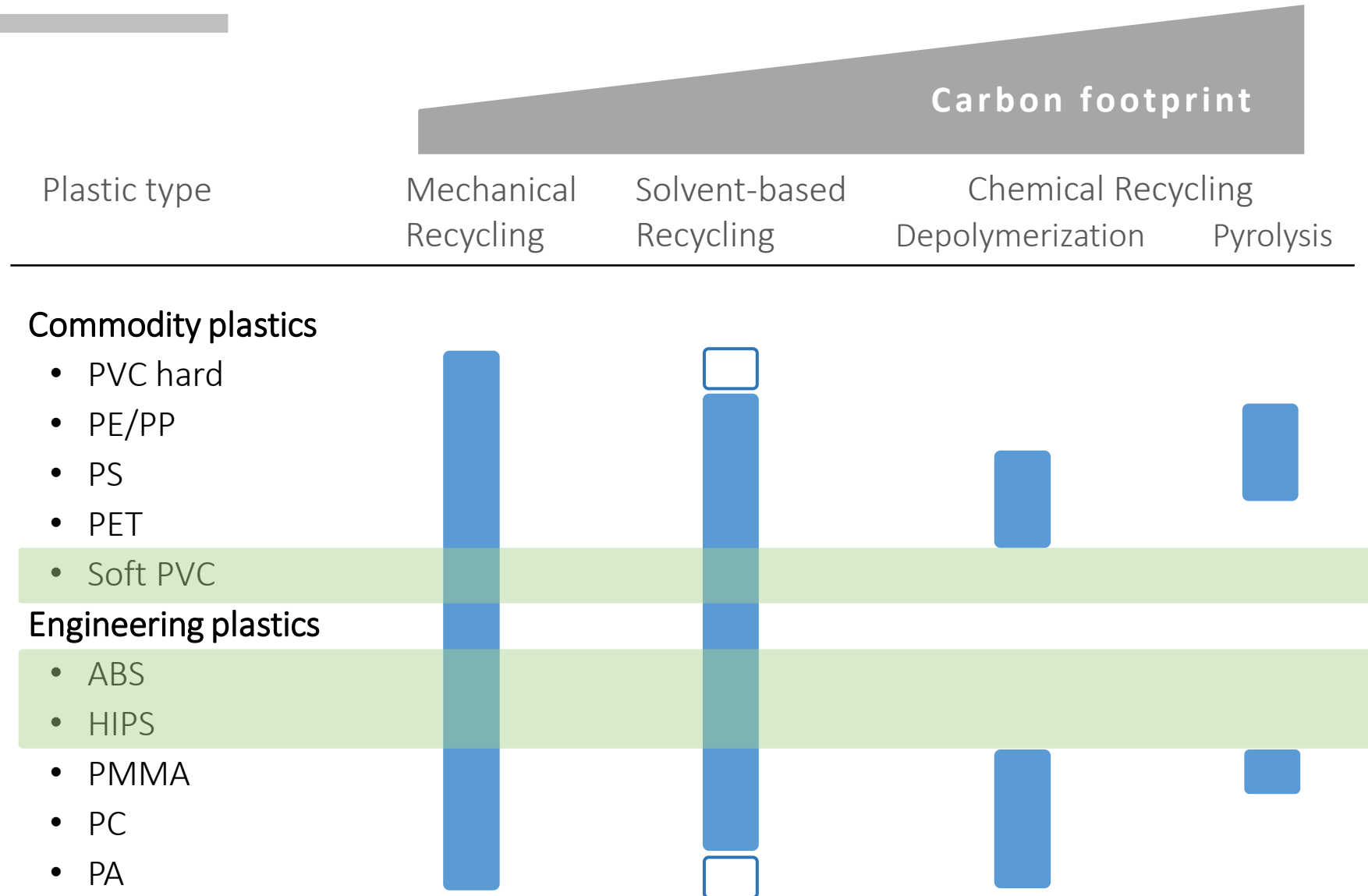
current recycled content in plastic parts



Available recycling approaches for plastics

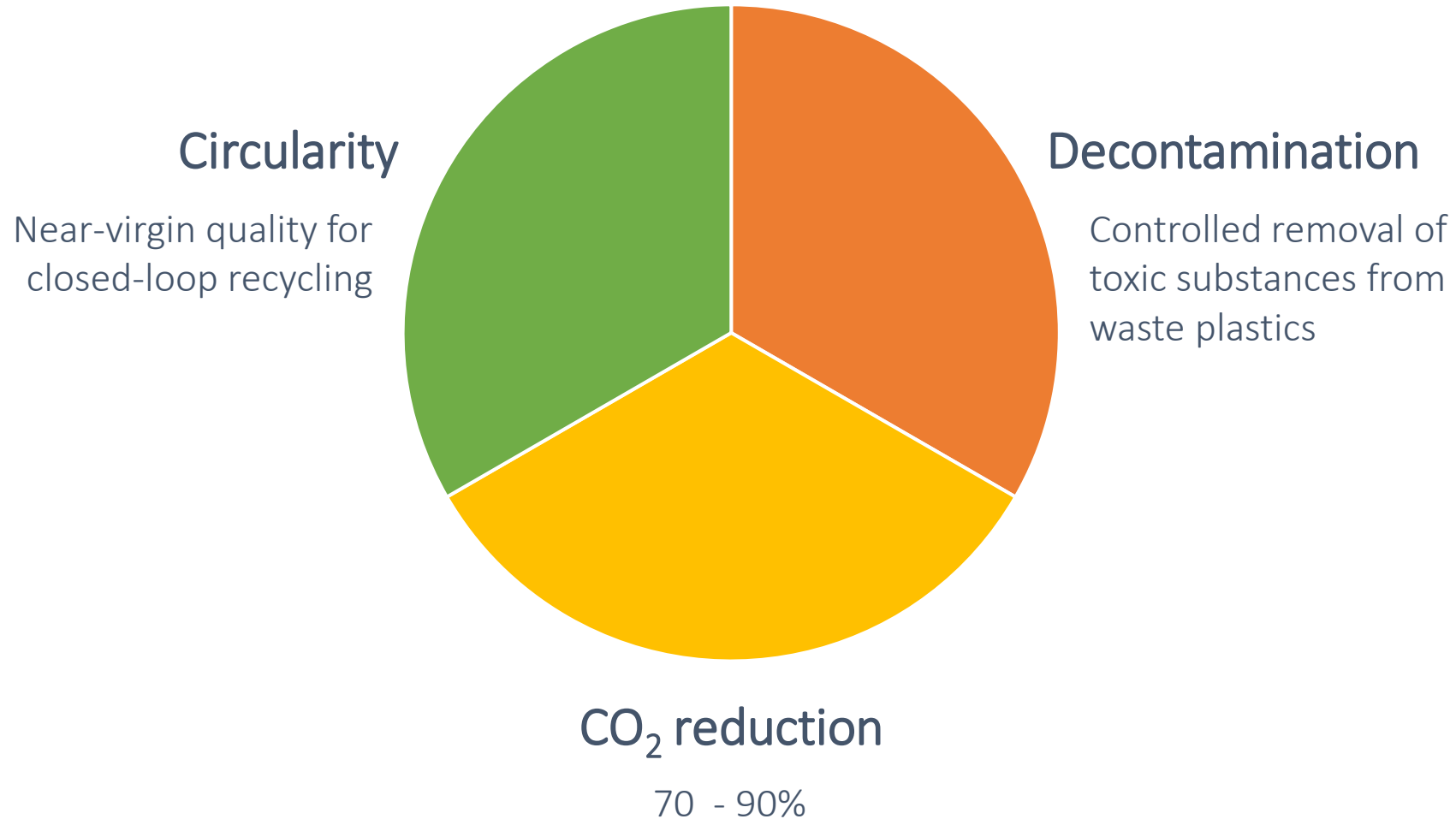


Application field of available methods

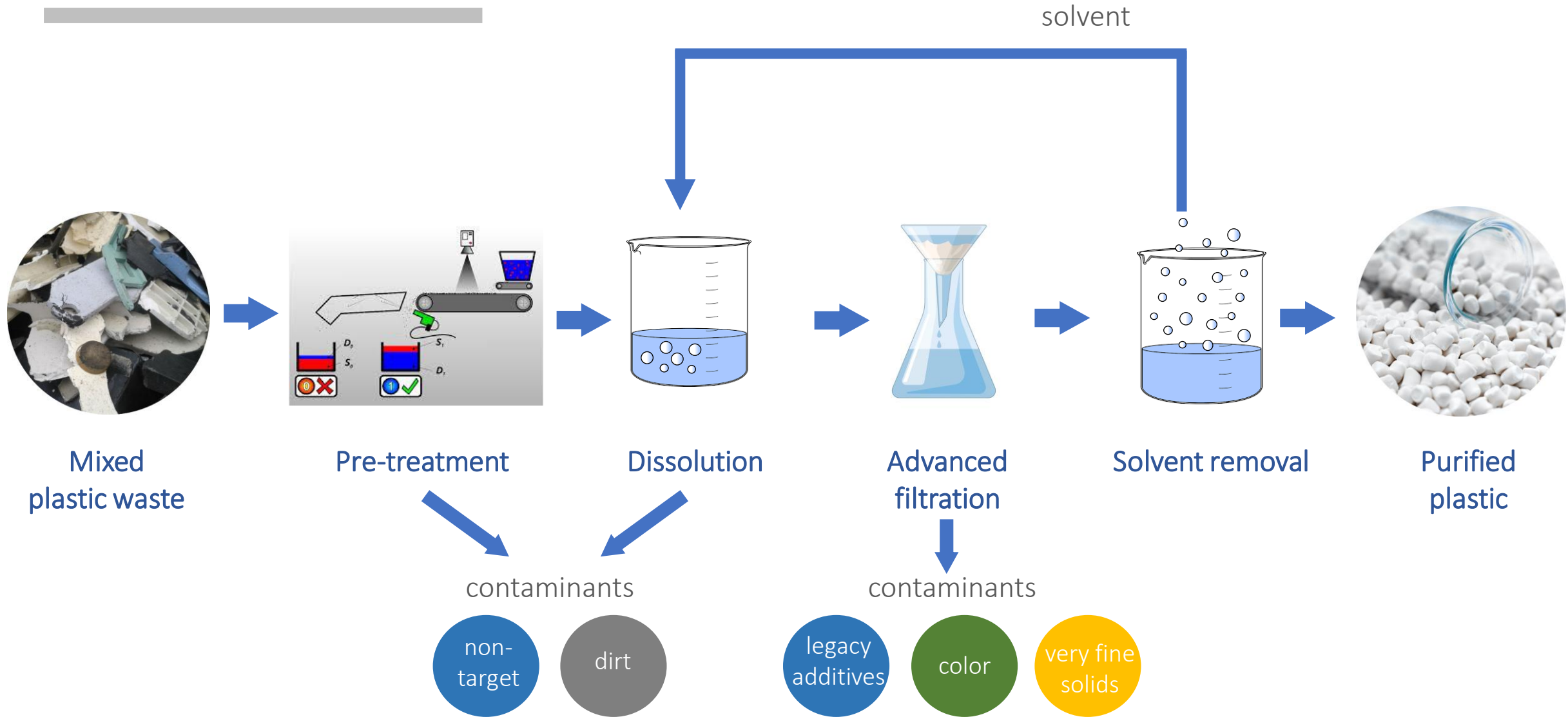


SBR is the only alternative to mechanical recycling of ABS, HIPS and soft PVC

Solvent-based recycling - Triple benefit



Improved contaminant removal in hybrid approach



ReSolved: Building on proven technology

ReSolved pilot plant (2000 – 2015):

- Basic solvent-based modules
- 600 tons/a output capacity
- Extensively tested

Additive removal is now being tested



Progress to date and planning



Bench scale

50 g



XL-Lab scale

2 kg



Improved
pilot plant

500 kg

Q1 2024



Demo plant

4.000 tons/a

Q1 2025

Thank you!