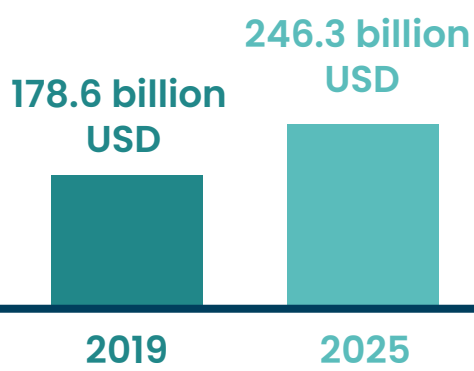


Global Packaging Sustainability

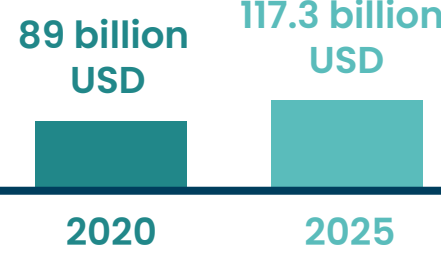
Turning Necessity into Opportunity



Global market value of green packaging:



Global market value of sustainable plastic packaging (naturally-biodegradable plastic materials)



The Four Reuse Models

Business-to-consumer reuse models differ in terms of packaging 'ownership' and the requirement for the user to leave home to refill/return the packaging.

Refill at home
users refill their reusable container at home (e.g. with refills delivered through a subscription service)

Refill on the go
users refill their reusable container away from home (e.g. at an in-store dispensing system)



Return from home
packaging is picked up from home by a pickup service (e.g. by a logistics company)

Refill on the go
users return the packaging at a store or drop-off point (e.g. in a deposit return machine or mailbox)

6 ways that these reuse models can bring significant benefits to both consumers and businesses:

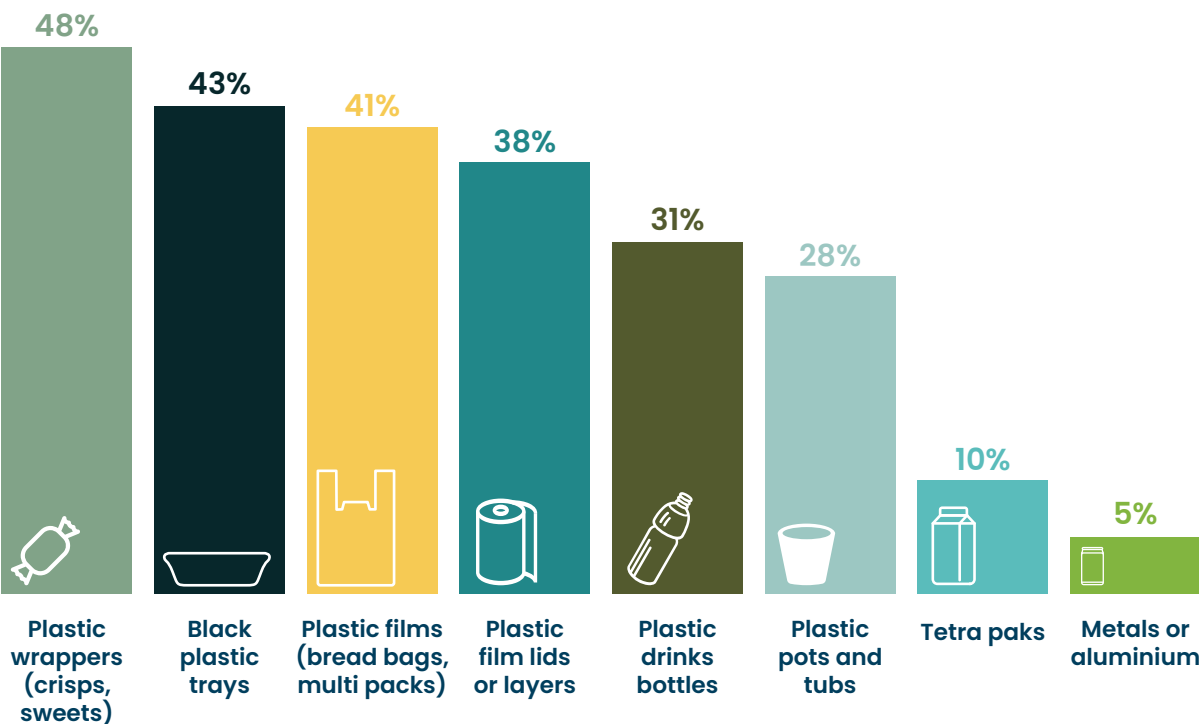
- ✓ Cut costs by making compact products
- ✓ Meet individual needs through customization
- ✓ Optimise operations by sharing designs
- ✓ Build brand loyalty with deposit and reward schemes
- ✓ Improve customer experience with superior design
- ✓ Gather intelligence by using smart systems

Converting 20% of all plastic packaging into reuse models represents a \$10 billion opportunity.

Percentage of shoppers claiming to have switched their regular food brands because of their attitude to packaging



Types of food packaging that people worry about

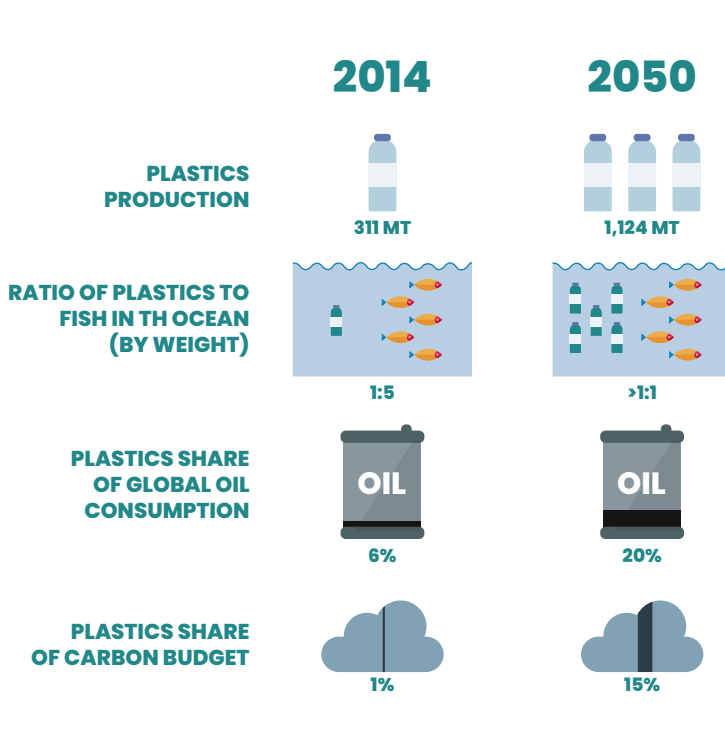


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Main Plastic Resin Types and Their Applications in Packaging



Forecast of Plastics Volume Growth, Externalities and Oil Consumption in a Business-As-Usual Scenario

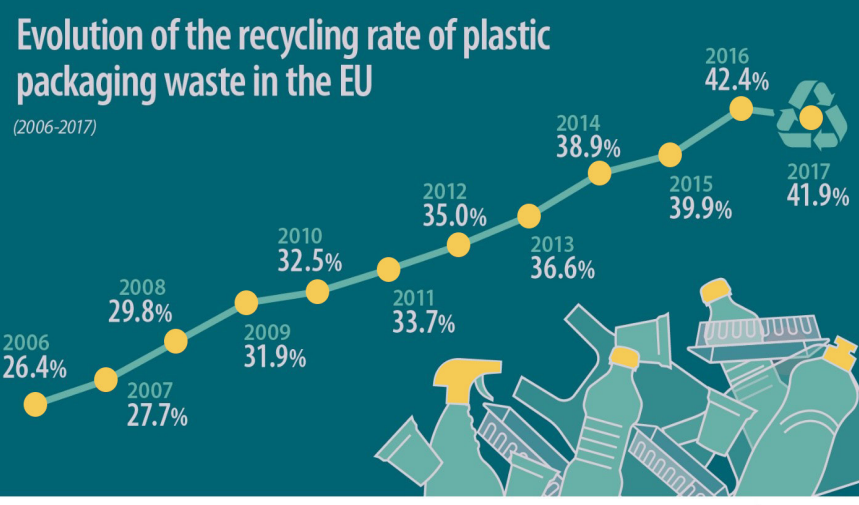


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EUROPE PRODUCES 25 MILLION TONNES OF PLASTIC WASTE



Evolution of the recycling rate of plastic packaging waste in the EU



Recycling rate of plastic packaging waste in the EU Member States

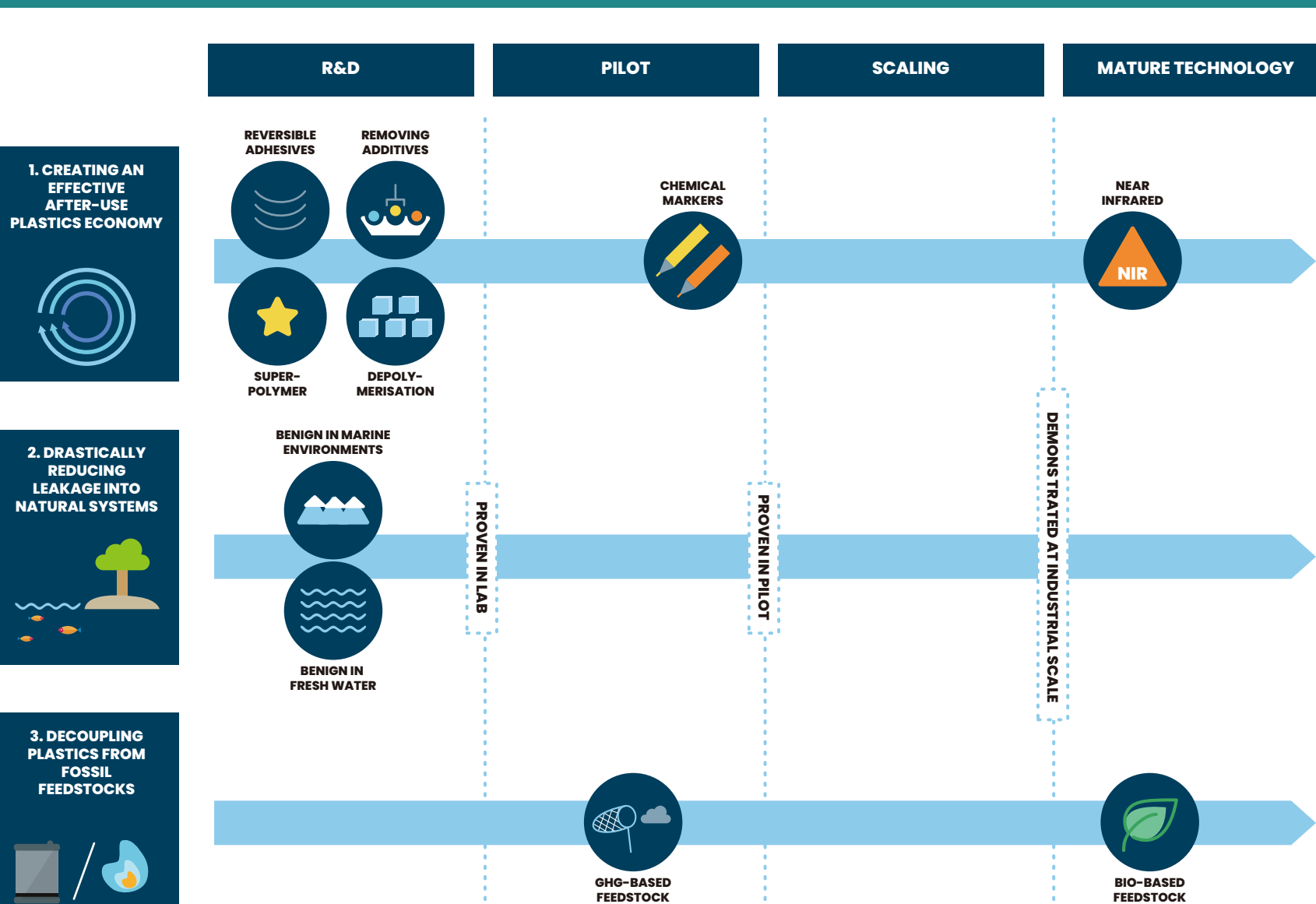


Promising Enabling Technologies for the New Plastics Economy

Innovation	Description
Removing additives	Separating additives from recovered polymers to increase recycle purity
Reversible adhesives	Recycling multi-material packaging by designing "reversible" adhesives that allow for triggered separation of different material layers
Super-polymer	Finding a super-polymer that combines functionality and cost with superior after-use properties
Depolymerisation	Recycling plastics to monomer feedstock (building blocks) for virgin-quality polymers
Chemical markers	Sorting plastics by using dye, ink or other additive markers detectable by automated sorting technology
Near infrared	Sorting plastics by using automated optical sorting technology to distinguish polymer types
Benign in marine environments	Design plastics that are less harmful to marine environments in case of leakage
Benign in fresh water	Design plastics that are less harmful to fresh water environments in case of leakage
GHG-based	Sourcing plastics from carbon in greenhouse gases released by industrial or waste management processes
Bio-based	Sourcing plastics from carbon in biomass

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Examples of Promising Enabling Technologies for the New Plastics Economy and Their Level of Maturity



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