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Producer Responsibility in Priority Sectors - Plastics

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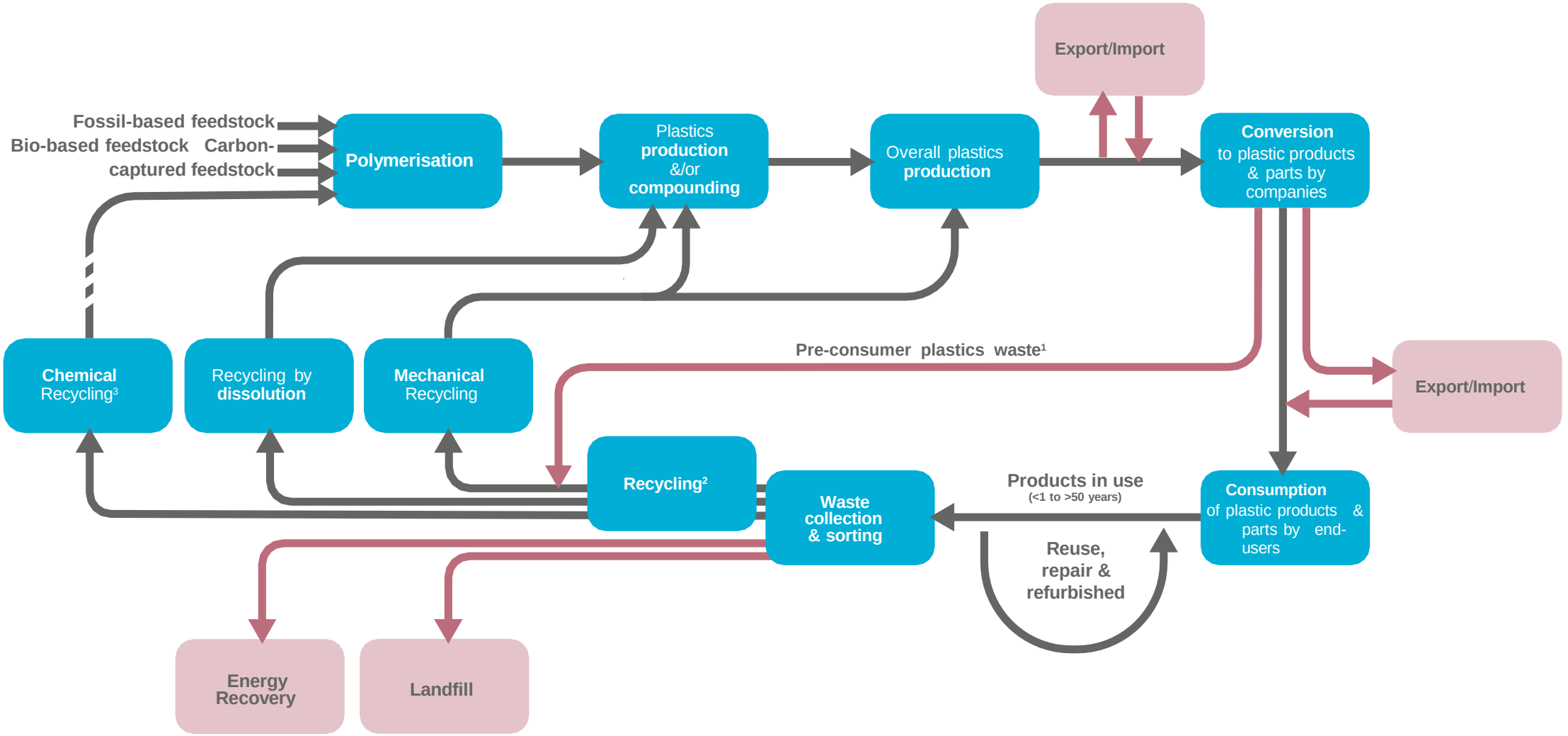
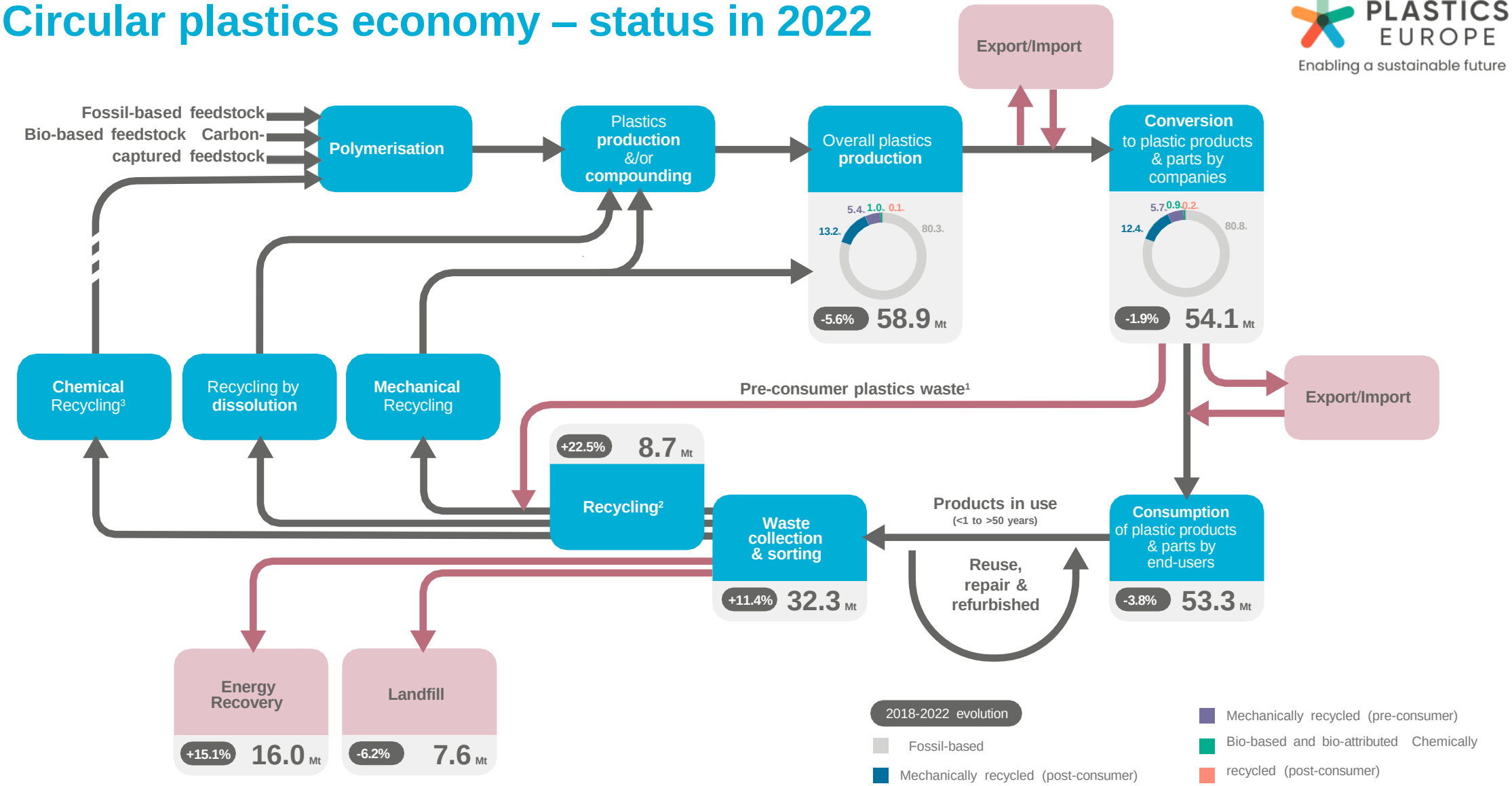
Circular plastics economy – a complex value chain



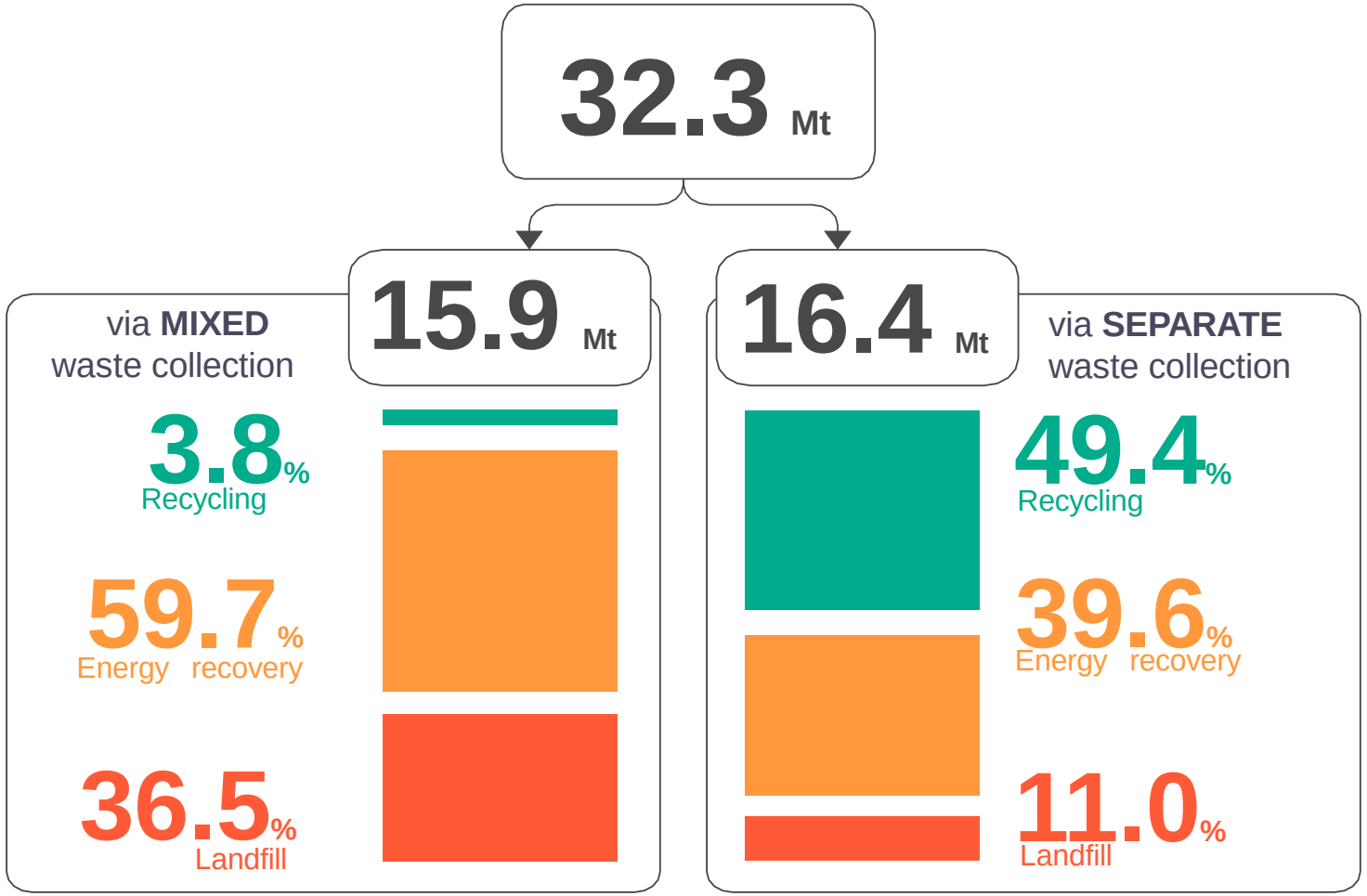
1. Pre-consumer plastics waste is mainly originating from the plastics conversion activities, and production to a lesser extent.
2. Including recycling of EU27+3 plastics waste abroad.
3. Several steps are needed between the input of plastics waste into chemical recycling and the input into polymerisation, also depending on the chemical recycling technology.

Circular plastics economy – status in 2022



The above data are rounded estimations.
1. Pre-consumer plastics waste is mainly originating from the plastics conversion activities, and production to a lesser extent.
2. Including ~0.8 Mt recycling of EU27+3 plastics waste abroad. For more details, see page 71.
3. Several steps are needed between the input of plastics waste into chemical recycling and the input into polymerisation, also depending on the chemical recycling technology. A more detailed diagram is available on pages 42-43.

Driver for circularity – Exemplary deep dive into plastics waste sorting and recycling



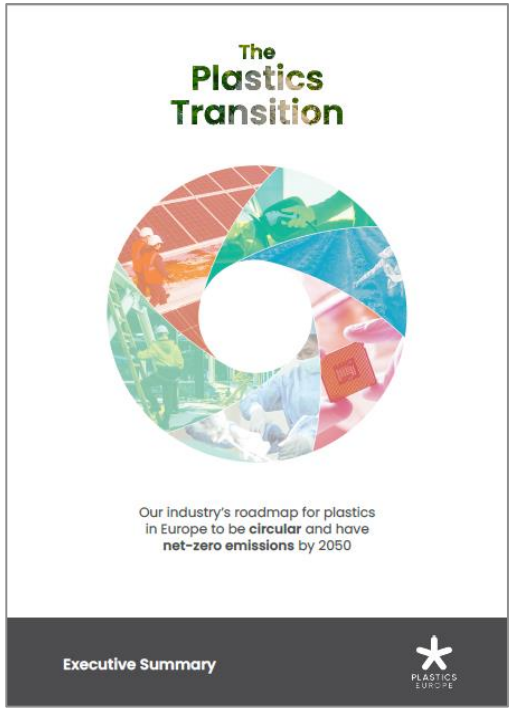
Separate collection is a key driver for recycling

➔ Extended producer responsibility (**EPR**) schemes have proven positive effect on collection and sorting rate

But, what about the upstream?

1. Post-consumer plastics waste: waste generated by households or by commercial, industrial, and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain or the installation of plastic products (e.g. cut-offs of insulation, flooring or wall-covering boards).
2. Recycled quantities were previously measured upon leaving the sorting centres. The measurement is now done when the recycling actually takes place, according to the Packaging and Packaging Waste Directive (PPWD) (EU) 2018/852. The calculation point therefore lies after impurities and unsuitable substances have been removed from the sorted materials.

Plastics Europe's Roadmap "The Plastics Transition"



An industry united around a common vision

"We lay out a potential pathway for a more circular and net-zero plastics industry in Europe. "

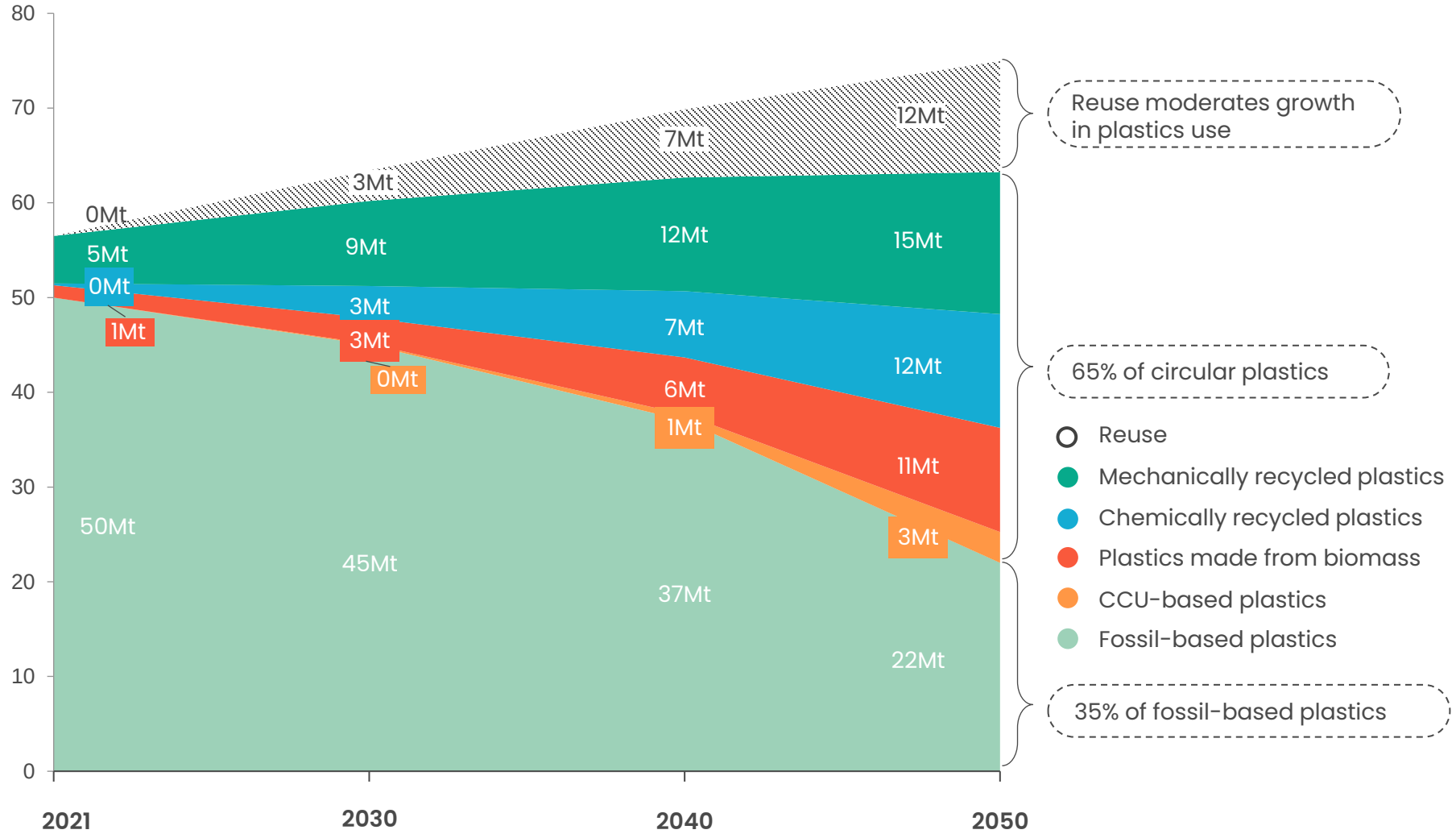
Project trends for 3 key metrics: GHG emissions, Capex & Opex and circularity of plastics

The Plastics Transition

Circularity – ambitious but achievable

Circular plastics use by European converters and their feedstock

2050, estimates, Mt



Key takeaways

- Through reuse, **12 Mt of plastics can be reduced by 2050**
- **Plastics made from biomass** will grow steadily until 2040 and will play a **key role** onwards
- While **plastics based on CCU and hydrogen** are poised to **grow towards 2050**, the limited maturity of the technologies and the high costs will not enable it to reach significant quantities

The Plastics Transition

Reaching net zero by 2050 requires investment all along the plastics life cycle

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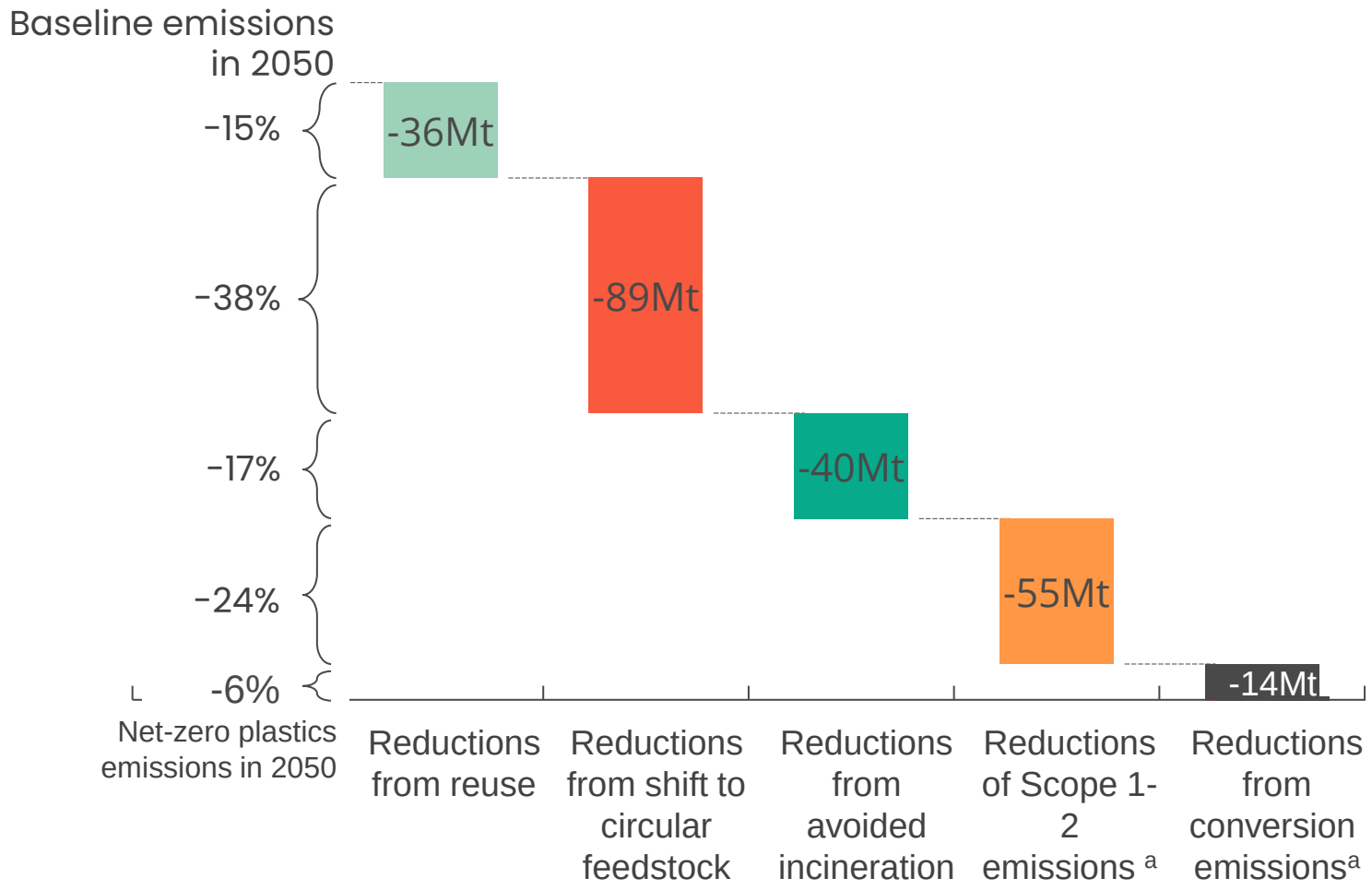
Reductions needed to reach net-zero in 2050 *(Baseline emissions in 2050: 233 Mt CO_2e)*

In Mt CO_2e, 2050 (Deloitte analysis, 2023)



[A] *Reductions through net zero plastics production levers; maximizing energy efficiency, electrifying production with low-carbon electricity, using low-carbon fuels and investing in carbon capture & storage*

Conclusions

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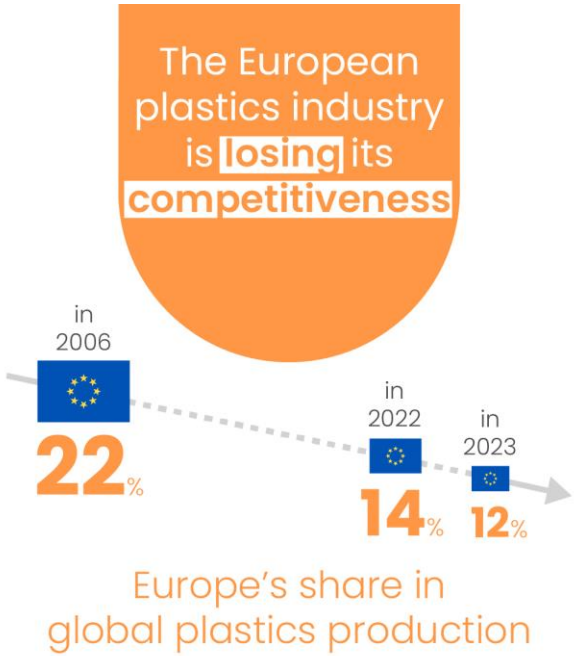
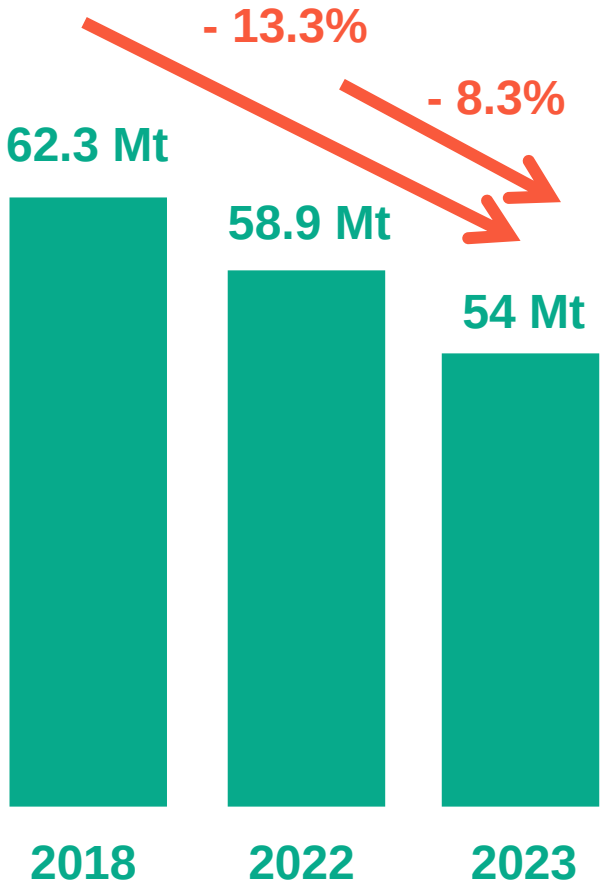
Transitioning the European Industry to Circularity and Climate Neutrality will need all levers

- There is **no "silver bullet"** solution to significantly reduce waste disposal and GHG emissions.
- The transformation of a complex and interconnected plastics system is very ambitious but achievable - Upstream and downstream solutions are complementary and are most effective when deployed **together**.
- Shift to more circular practices through **recycling and better design**
- European **access to circular feedstocks** is a key factor for the future development of **circular plastics**.

- To deliver on ambition, we will urgently need an **enabling policy and regulatory framework** to ensure success and safeguard our European **competitiveness**.

EU Plastics production 2023 – challenging times





European plastics production continues to decline

For the first time, recycled plastics production decreases in Europe

Closures (incl. announcements) of production facilities* since 2023

(Status Sept 2025)

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Belgium:

- Celanese Mechelen (Engineered materials compounding site)
- TotalEnergies Antwerp (Ethylene cracker by 2027)

France:

- ExxonMobil Gravenchon (chemical production, including steam cracker and related derivatives units)

Germany:

- BASF Ludwigshafen (several lines; adipic acid used to produce PA, PU, coatings and adhesives; cyclododecanone (CDon) used to produced PA12 and UV stabilisers; cyclopentanone (CPon) used in several applications)
- Celanese Uentrop (High-performance material plant)
- Trinseo Stade (polymer production plant)
- Dow (Ethylene cracker & Cl/alkali assets)

Italy:

- LyondellBasell Brindisi

Netherlands:

- SABIC Geleen (cracker closure)
- Trinseo Terneuzen (polymer plant closure)
- Vynova Beek (intention to cease - PVC production capacity)

Portugal:

- Indorama Ventures Sines (monomer plant)

Spain:

- SABIC Cartagena (one of the two production lines)
- Cepsa Huelva (polymer line)

UK:

- CF Fertilisers Bilingham (one chemical line)
- Fertilisers Mitsubishi Chemical (chemical plant)
- Versalis Grangemouth (chemicals plant)
- INEOS Grangemouth (refinery)
- Sabic – Teesside (Olefins 6 ethylene cracker)
- DOW (siloxanes)

*Production lines or plants specified between brackets

Circular plastics production in the global context

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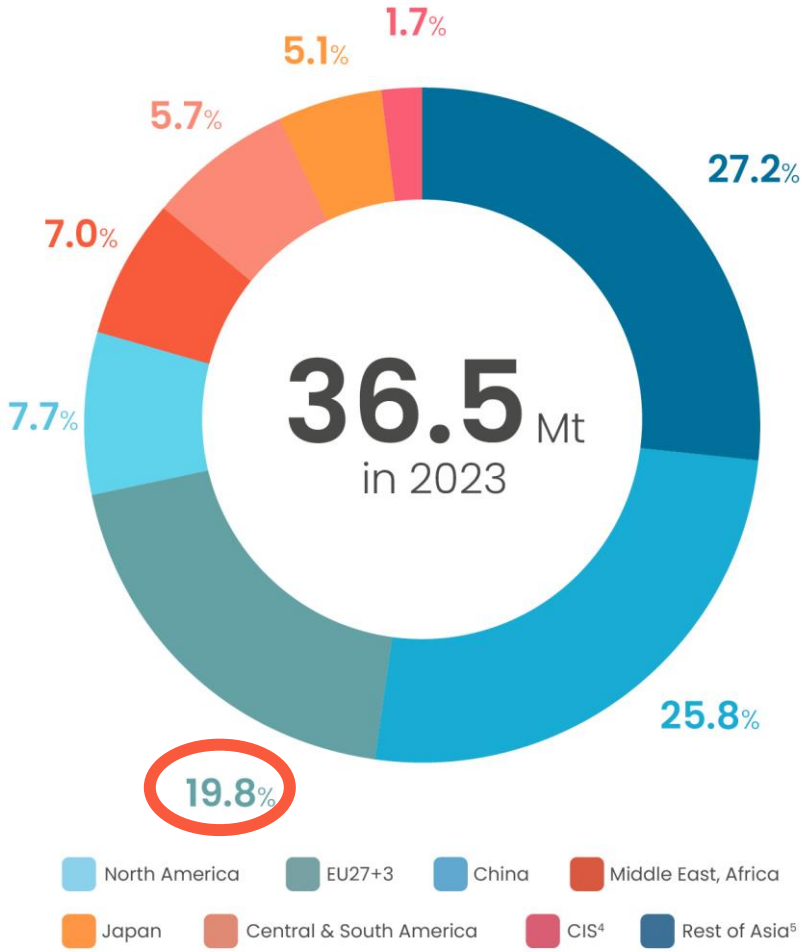
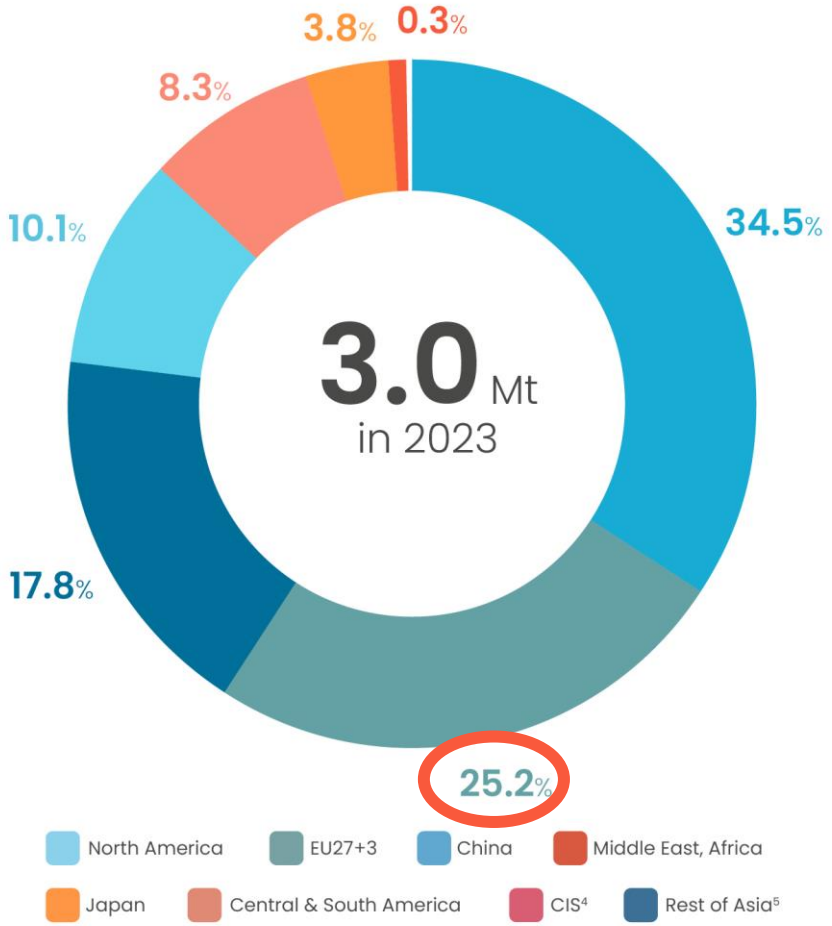
World recycled plastics production in 2023



World bio-based and bio-attributed plastics production in 2023



Plastics Value Chain Demands Immediate Action to Save EU Industry

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Sector makes six strategic recommendations to fight market recession

01	02	03	04	05	06
Restore Fair Competition - Promote 'Made in Europe' Circular Plastics Now	Cut Energy Costs - Empower and support Circular Plastics to Compete Globally	End Loopholes in Verification and Enforcement	Tackle Fragmentation - Implement and Enforce EU Law	Break the Deadlock - Catalyse Innovation and Private Investment	Enhance EPR for a Fair Circular Market

Conclusion

Plastics Europe is steadfast in its dedication to the strategies outlined in the “Transition Roadmap” towards achieving circularity and net zero emissions.

The transition will necessitate the revitalisation of EU competitiveness to ensure the continued existence of the European plastics sector

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Thank you

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