Barriers to overcome to enable a circular economy for plastics

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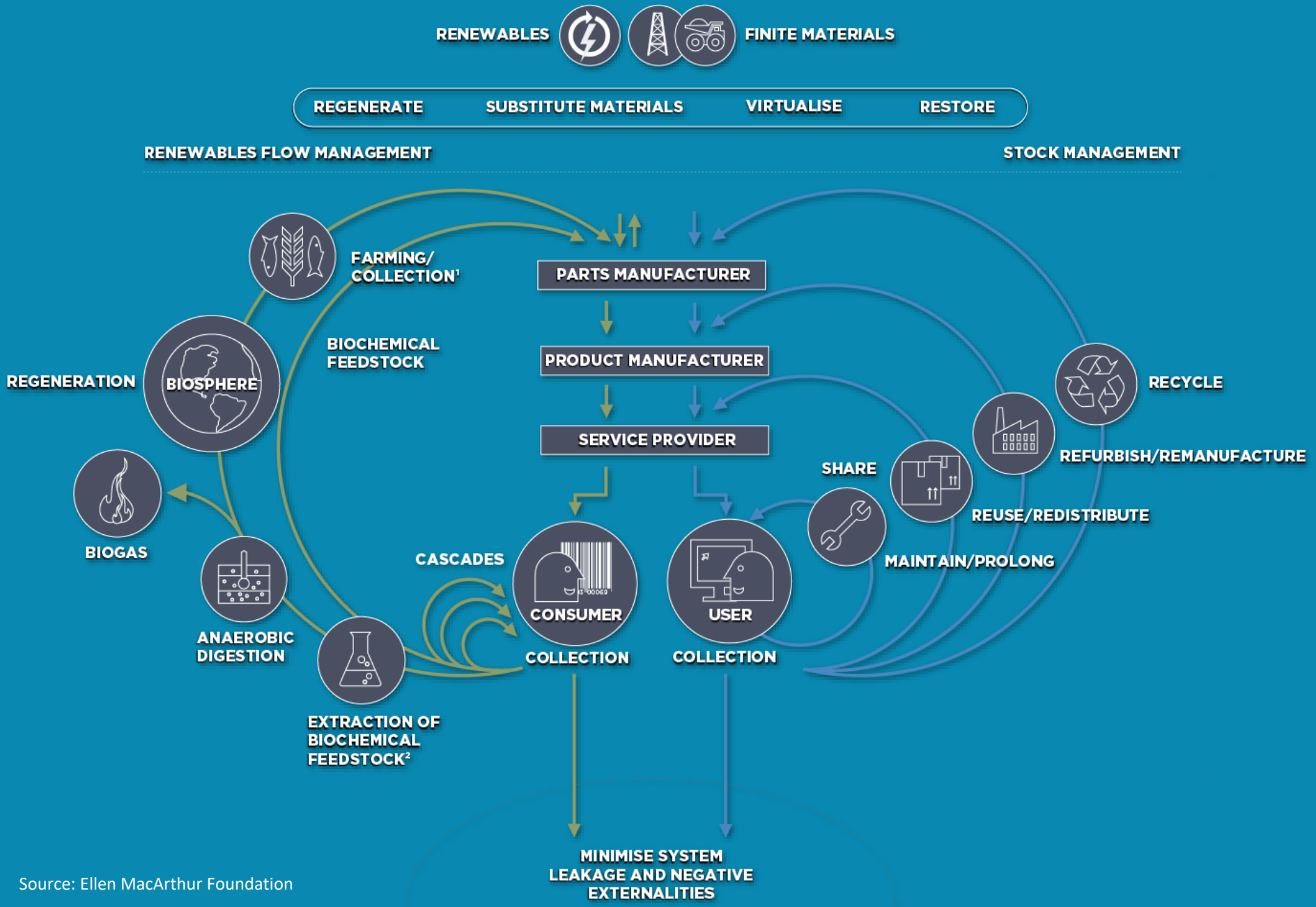
What is the circular economy?



The circular economy is a design framework for an economy that is restorative and regenerative by design

Source: Ellen MacArthur Foundation

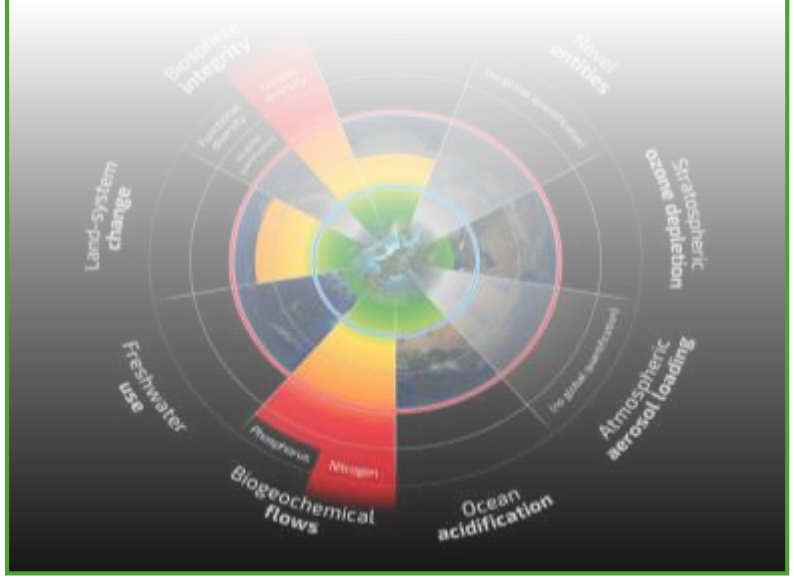
WHY?

Prevent resource depletion

- We have **~60 years of top soil left**, and current agricultural practices use vast amounts of finite resources to sustain productivity
- Key mineral deposits are almost depleted already
- **95%** of material value is **lost** to the economy on average after a **single use cycle** even if recycling

Stay within planetary boundaries

- Avoiding irreversible tipping points is crucial to maintain stable planetary systems (not just climate – biodiversity, water, acidification…)
- Circular economy models can **reduce** EU primary resource consumption with **32%** and GHG emissions by **48%** vs. baseline scenario **by 2030**



Sustain the economy

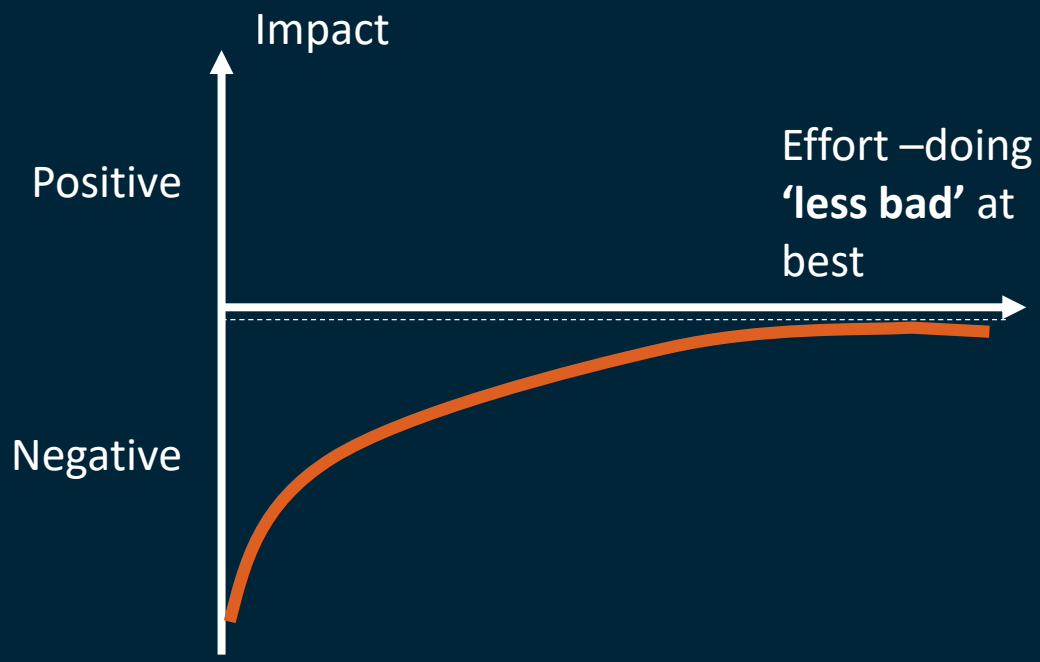
- Global **demand for food** set to **increase by 60%** by 2050.
- **1.7 bn new middle class** consumers by 2030
- Simply 'stopping the machine' won't work
- Circular economy can **boost** national **GDPs by 2-6%**

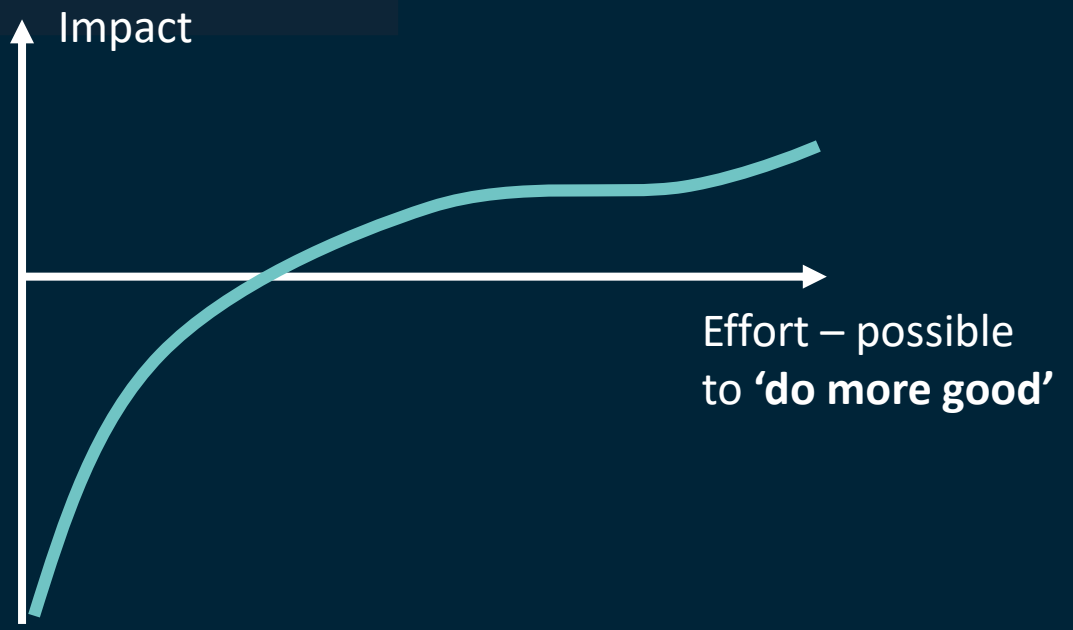
SOURCE: *Towards the Circular Economy: Business rationale for an accelerated transition* (2015); *Opportunities for a circular economy in the Netherlands* (2013); The circular economy and benefits for Society (2015); OECD; FAO, Stockholm Resilience Centre

Only by challenging how we design our economic system can we do better than just ‘less bad’

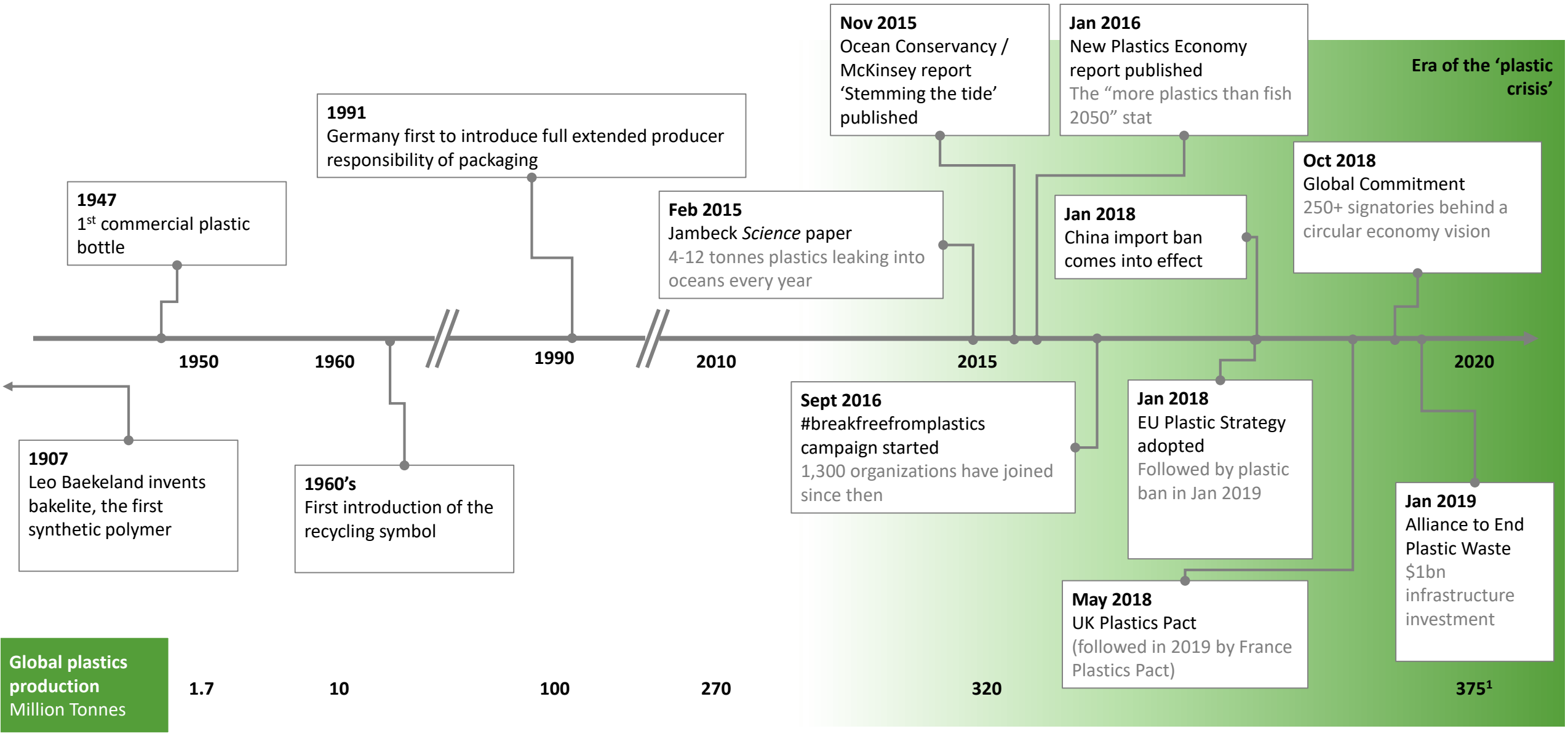
The linear economy

The circular economy – restorative and regenerative by design



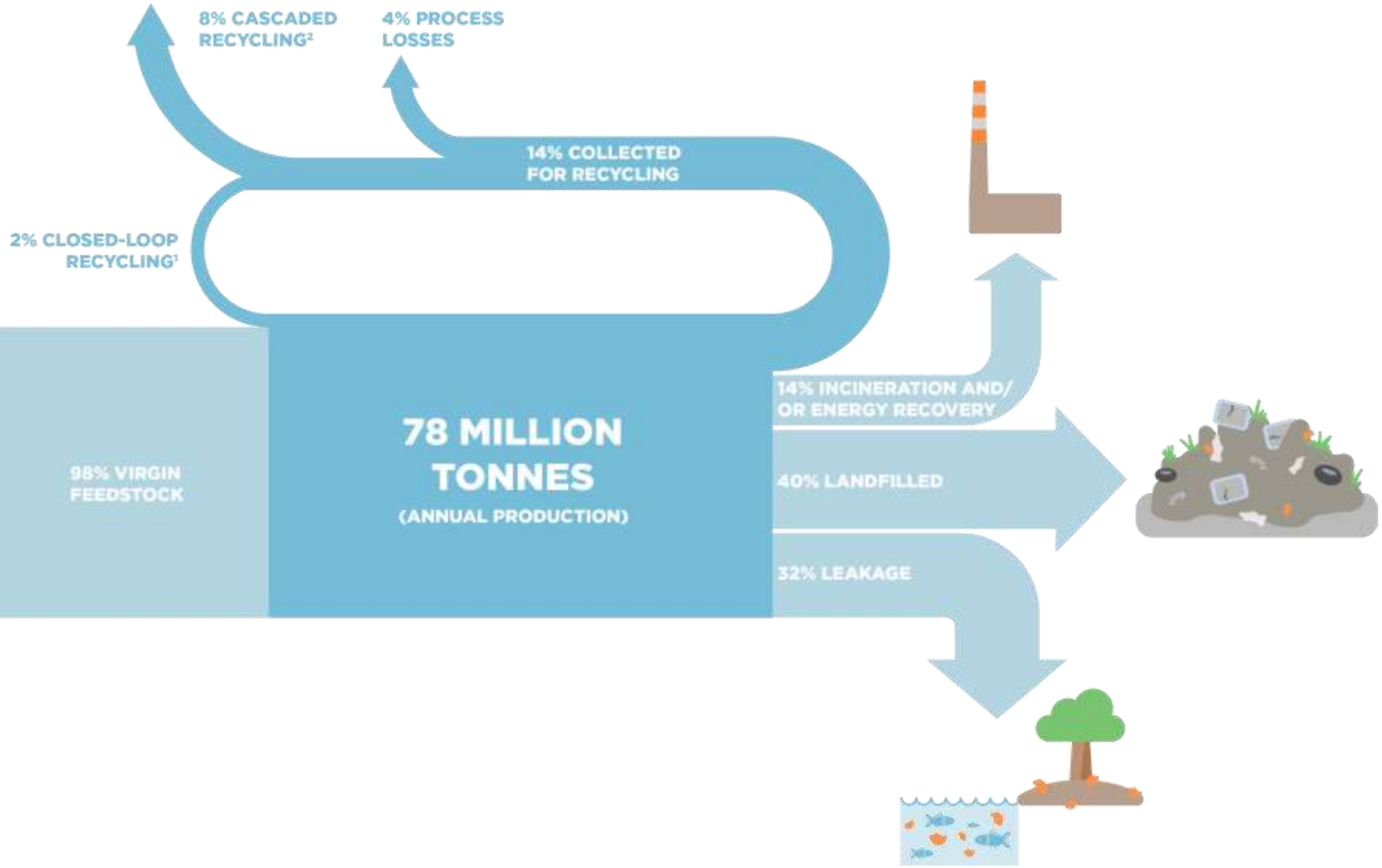


The plastic Century



1 Projected

The linear nature of the plastics value chain cannot be solved by just patching the leakage

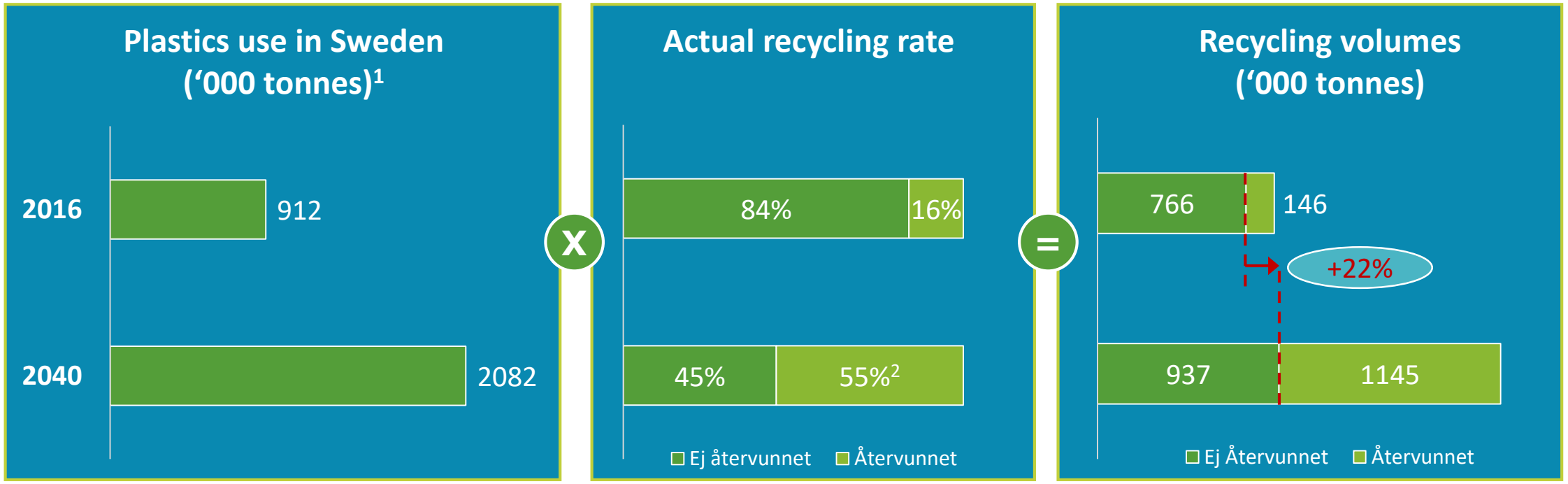


Treating the **symptom**, not the **cause**, is unlikely to solve the negative impacts

Source: *The New Plastics Economy: Rethinking the future of plastics* (2016)

Ambitious recycling targets are not enough to stop the plastic leakage

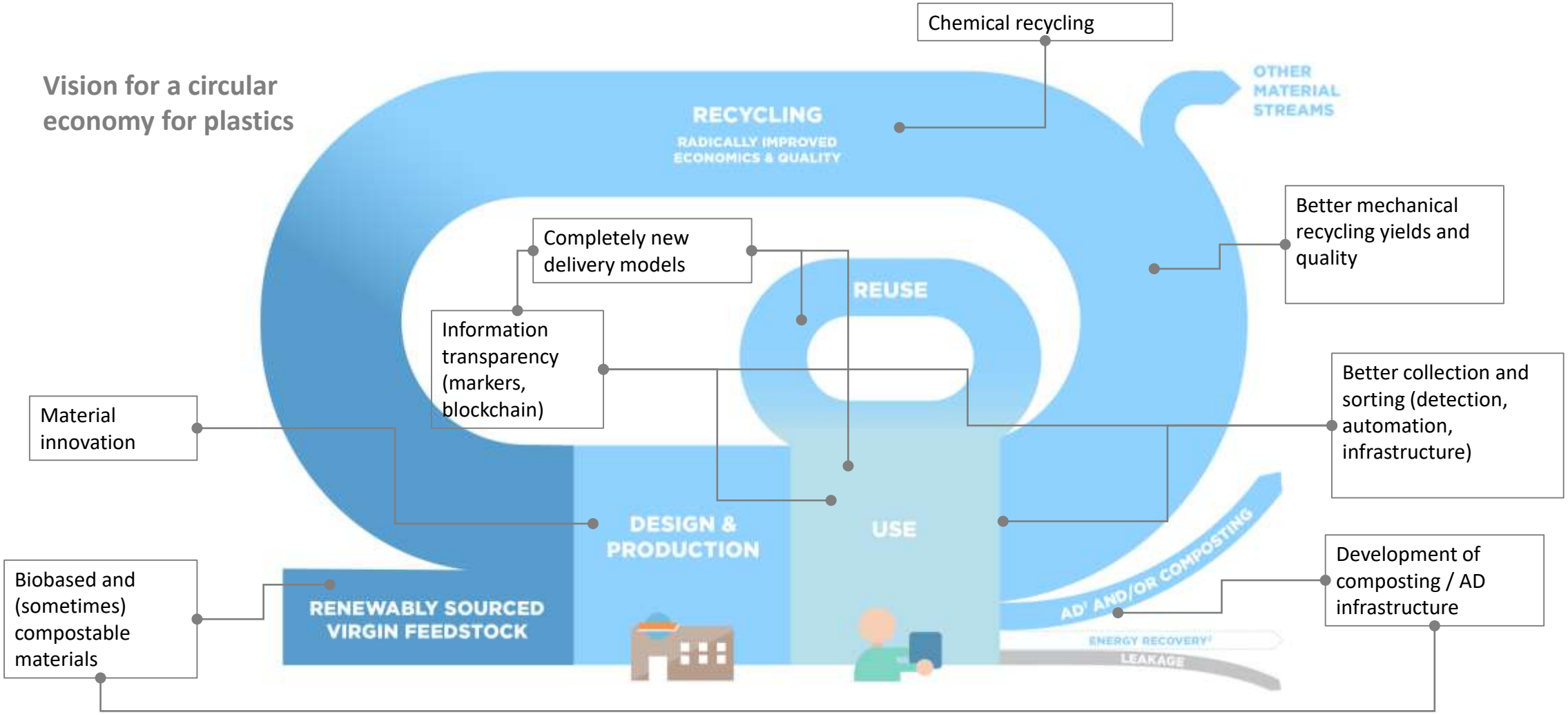
The amount of plastic waste increases even if we increase mechanical recycling drastically in line with current development



1 2040 scenario is based on an average increase in plastic demand by 3.5% per year
2 Based on EU commission targets and Material Economics estimates

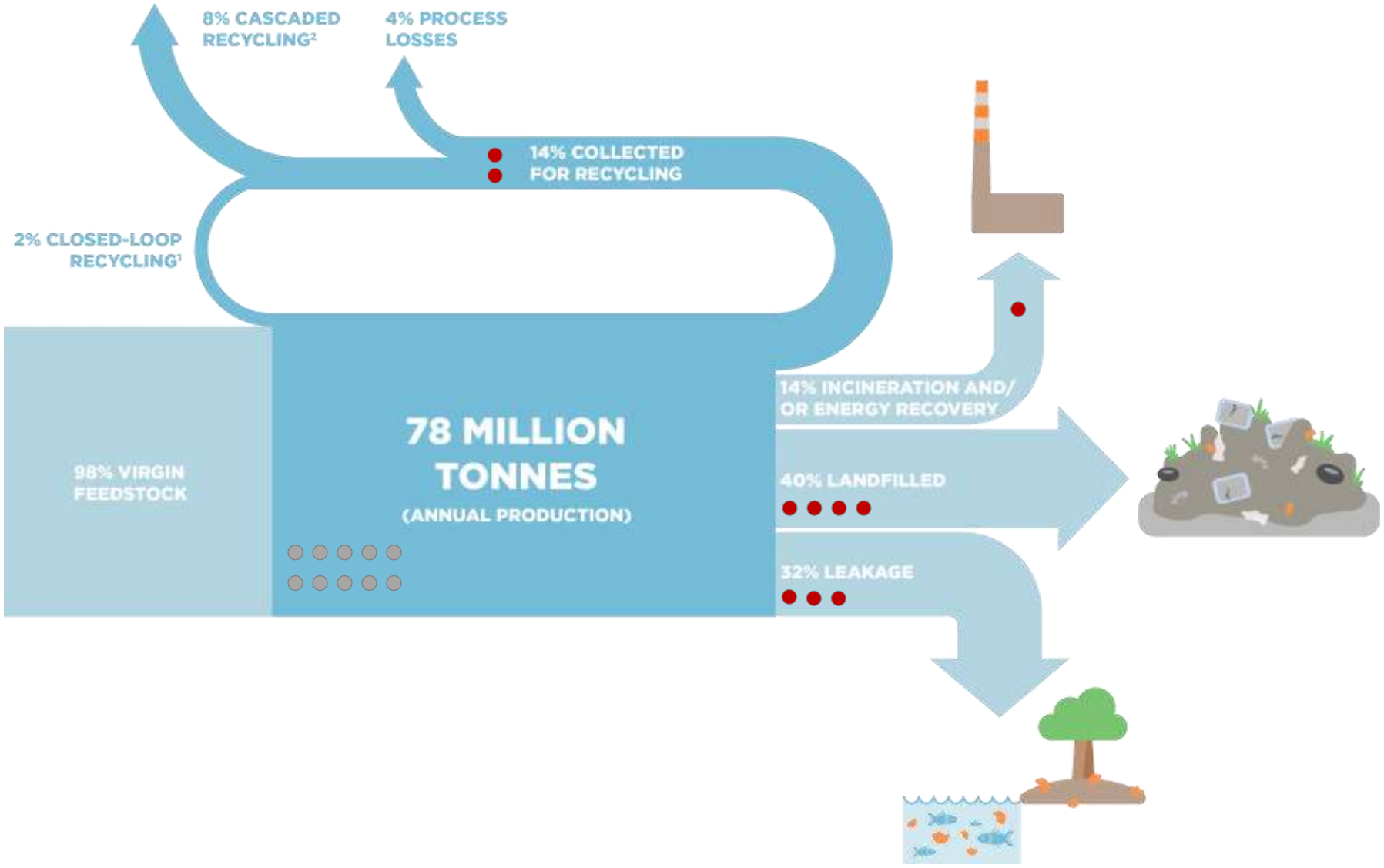
Source: Material Economics, Plastics Europe

A circular economy for plastics entail a systems redesign as well as innovations on all fronts



Underpinned by: Regulatory incentives, consumer sentiment, sustainability commitments

But what about the chemicals?



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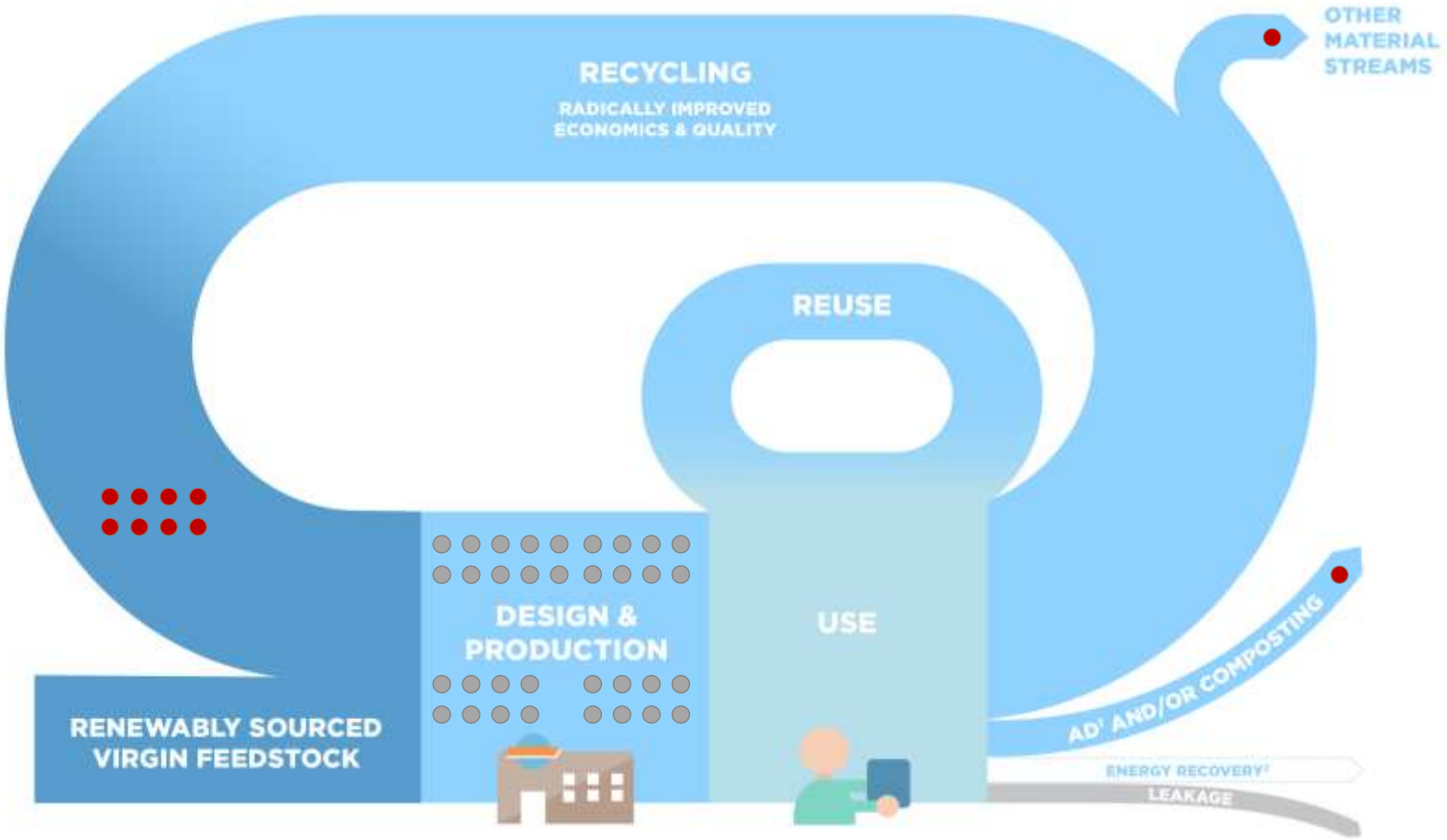
In a circular economy, contaminants are designed out, need to removed, or accumulate

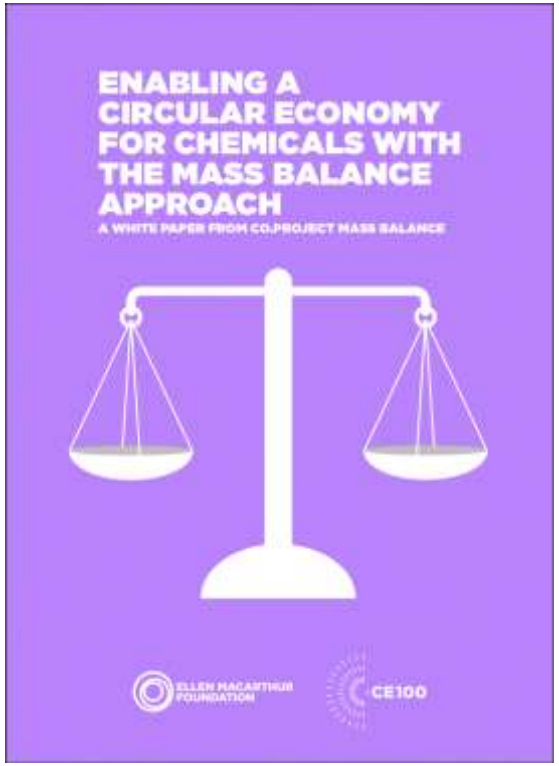


3 strategies to deal with this:

- **Design out –** decrease performance or find alternative material
- **Remove –** develop efficient purification technologies
- **Leave in –** only use chemicals that are safe even in higher concentrations

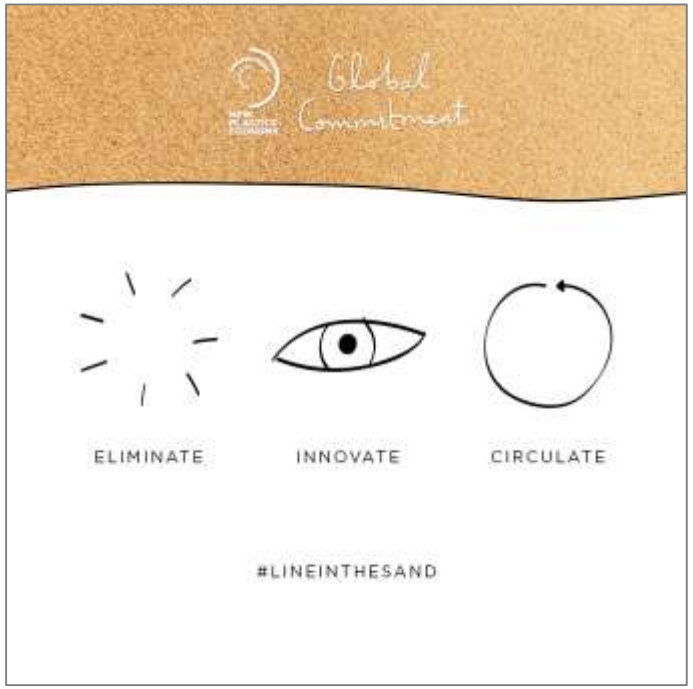
Each strategy has implications for regulatory framework

The discussion has at least started



The bar has been raised for what it takes to be a leader

New Plastics Economy Global Commitment



- 400+ signatories and endorsers behind a common vision
- Quantitative commitments for 2025

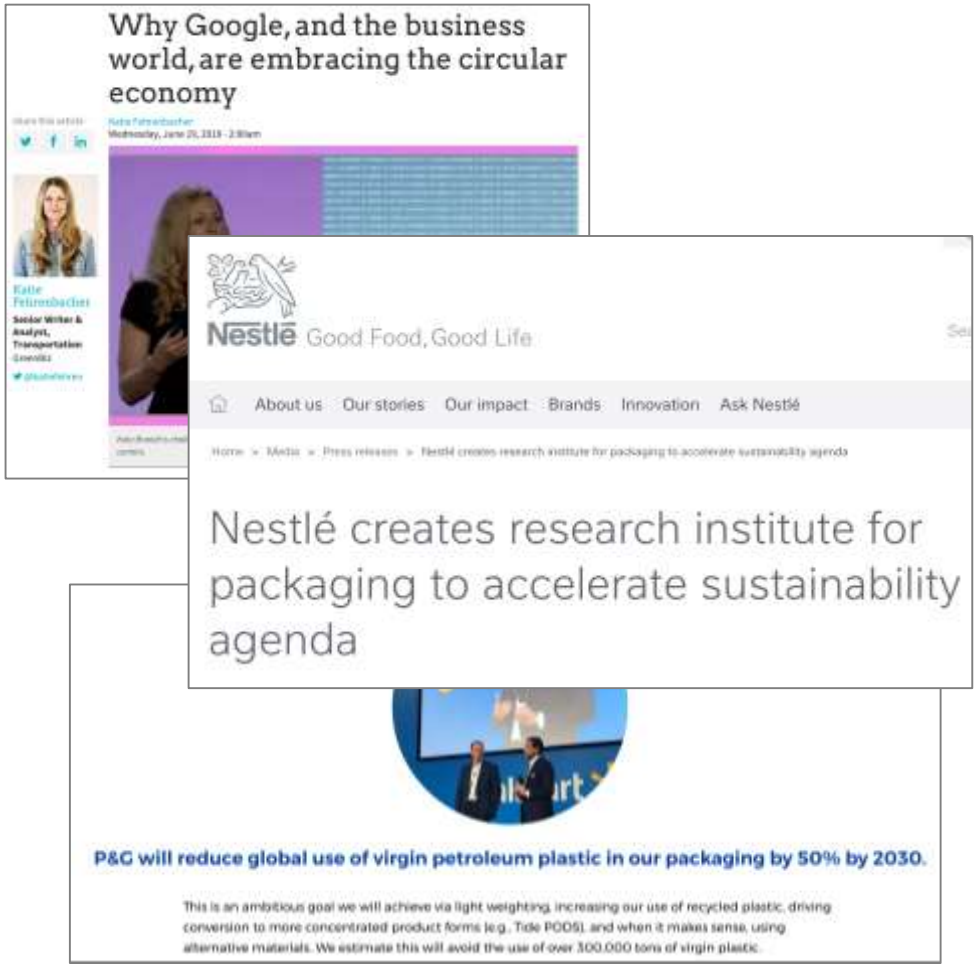
Brands moving towards circular business models

Unilever + Algramo

Coca Cola universal bottle

LOOP platform

Publicly committed circular economy strategies



Thank you

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