

Unlocking a reuse revolution - scaling returnable packaging

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A vision for a circular economy for plastics



Eliminate
all problematic
and unnecessary
plastic items



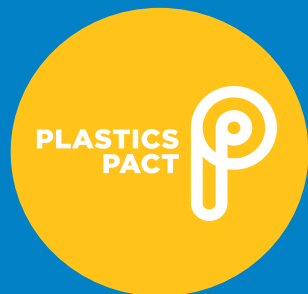
Innovate
towards new
materials and
business models



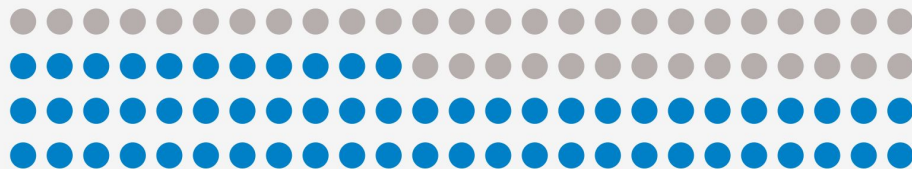
Circulate all the
plastic items we use
to keep them in the
economy and out of
the environment

Explore our full vision for a circular economy for plastics

Since 2018 more than 1,000 organisations mobilised behind this vision

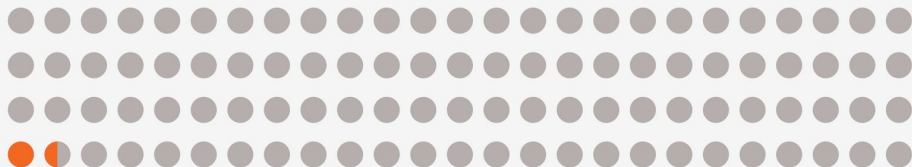


Despite increased momentum in reuse, the share of reusable packaging remains low



61%

of Global Commitment
signatories have reuse
pilots in place



<2%

of their plastic
packaging is reusable

How to design a **returnable packaging system** that delivers environmental and economic benefits over **single use**?



We have modelled 4 packaging applications switches:

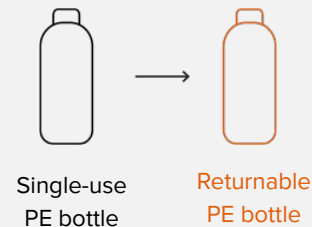
Beverages

e.g. soda, juice



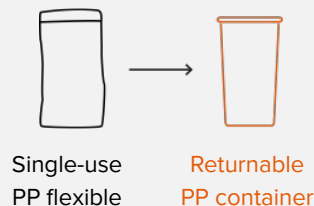
Personal care

e.g. shampoo,
shower gel



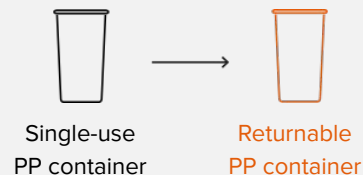
Food cupboard

e.g. rice, pasta,
cereals



Fresh food

e.g. yogurt,
cream



We have developed 3 scenarios:

	‘System change’ A visionary scaled, shared and standardised return system	‘Collaborative approach’ An established reuse system with potential to scale beyond	‘Fragmented effort’ A low scale and fragmented return system
Scale and shared Infrastructure	Market share: ~40% Large shift to reuse within a highly shared infrastructure	Market share: ~10% Possible through big volume shifts to reuse and some sharing of infrastructure	Market share: ~2% Due to low volumes and fragmented infrastructure
Packaging system	Pooled packaging 	Pooled packaging 	Bespoke packaging 
Return rate and average no. of loops	95% return rate enabling packaging to be reused ~15 times. 	90% return rate enabling packaging to be reused ~10 times. 	80% return rate enabling packaging to be reused ~5 times. 

Environmental benefits - how can reuse contribute to **achieving company sustainability objectives?**

- **GHG Emissions**
- **Material usage**
- **Water usage**

In a 'System Change' scenario,
returnable plastic packaging can...

reduce GHG emissions & water use

35 - 70%

and reduce material use by

40 - 75%

...compared to single-use.



**All scenarios (except 1*) for returnable
plastic packaging...**

reduce GHG emissions & water use

and reduce material use

...compared to single-use.

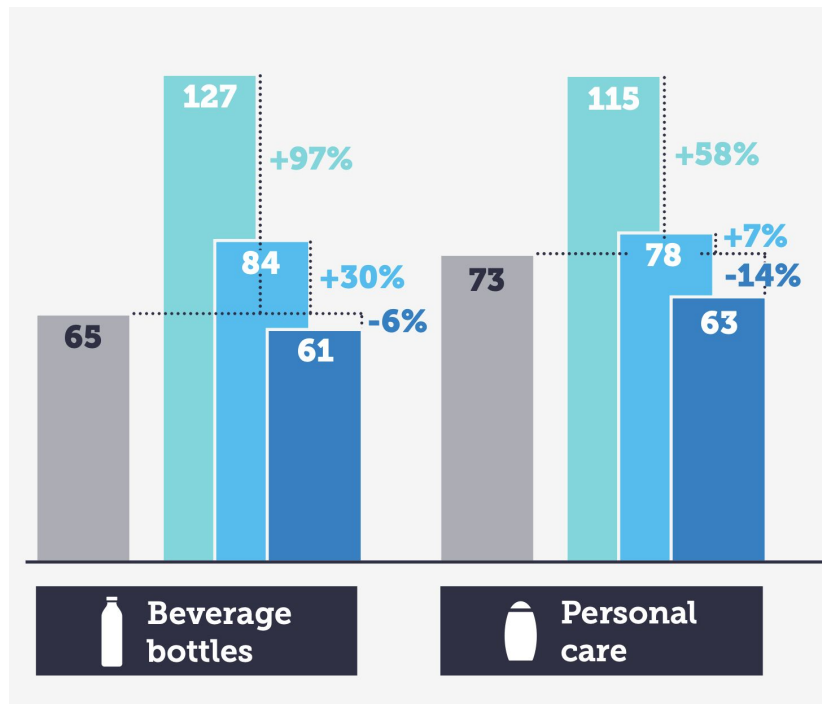


DRIVERS OF ENVIRONMENTAL BENEFITS

- **Production of packaging generates most GHGs**, so if you reduce material used, you significantly reduce GHGs
- **Reverse logistics GHGs have a low impact.** Opportunity to design the network for short distances and also to decarbonise the transport
- **Returnable less water intensive than Single Use** - To produce single use, you need 2-7 times more water than to clean reuse
- **Even with PCR in Single use, reuse still delivers lower GHG emissions** than PCR in SU

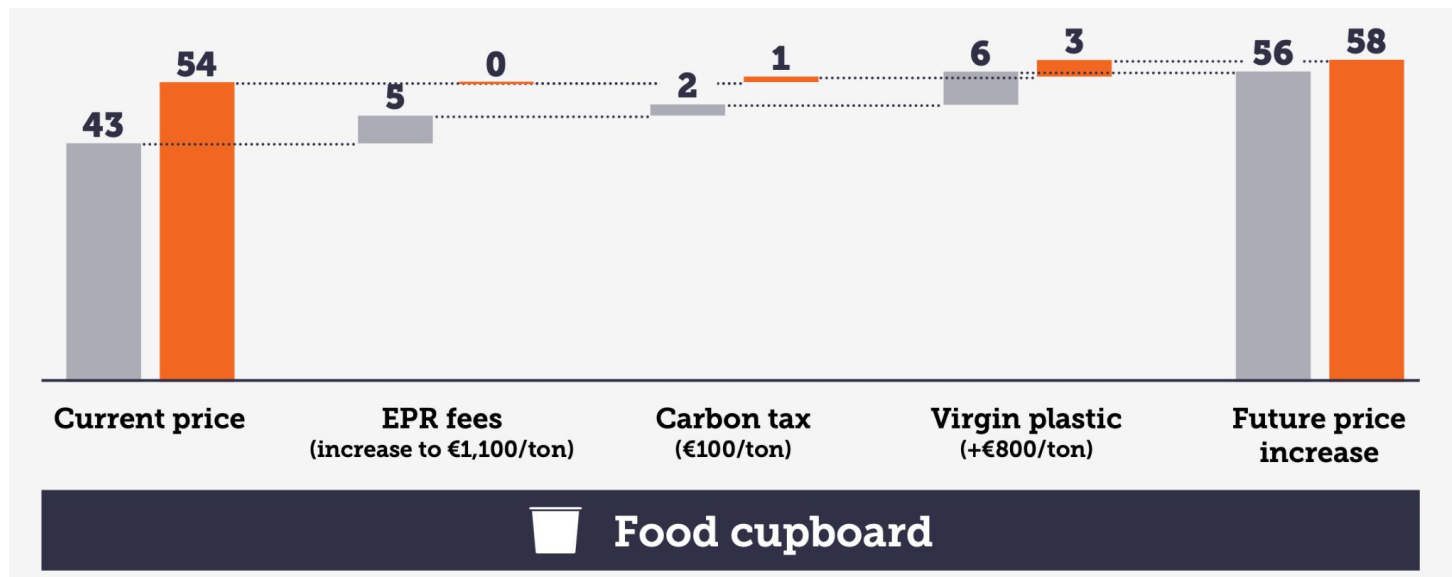
ECONOMIC INSIGHTS

When designed collaboratively and at high scale, return systems can compete **economically** with single-use for beverage and personal care applications



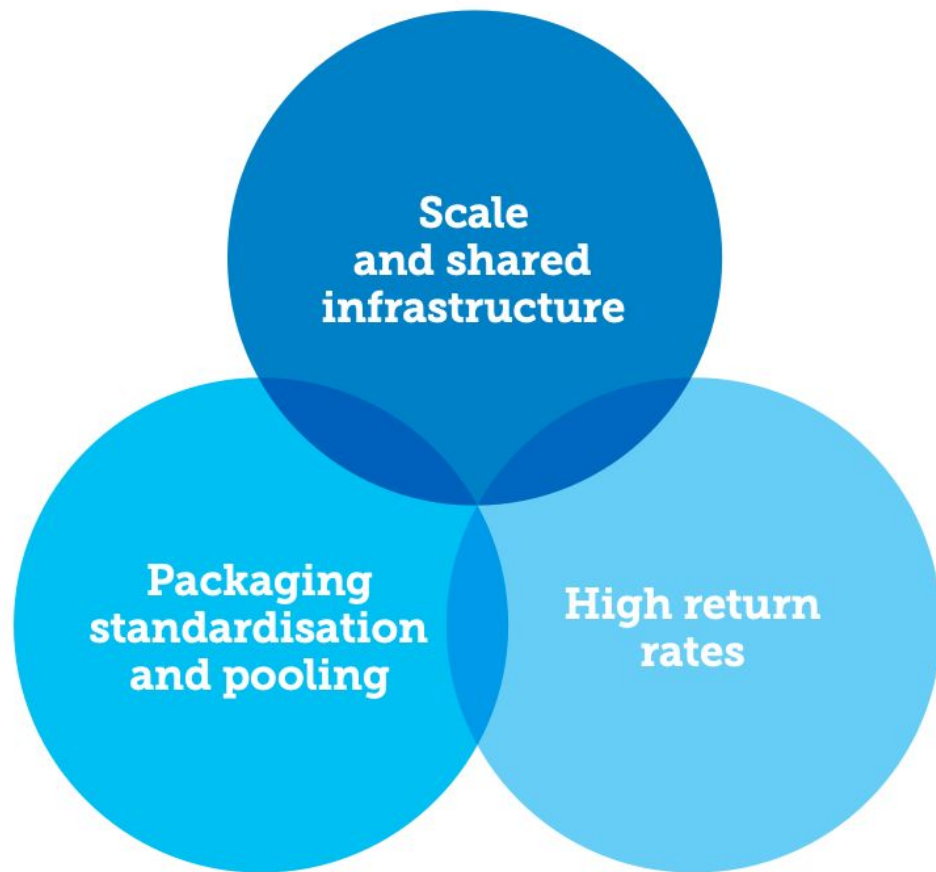
Cost of returnable packaging, compared to single-use
Euros / 1,000 use cycles

With expected changes in **regulation**, the business case for returnable packaging is set to become stronger



If it was designed

it can be redesigned





This can substantially reduce transport costs and associated emissions



Beverage bottles

Bespoke packaging



Average distance:
180km

Pooled packaging



Average distance:
60km



Personal care

Non-pooled packaging



Average distance:
520km

Pooled packaging

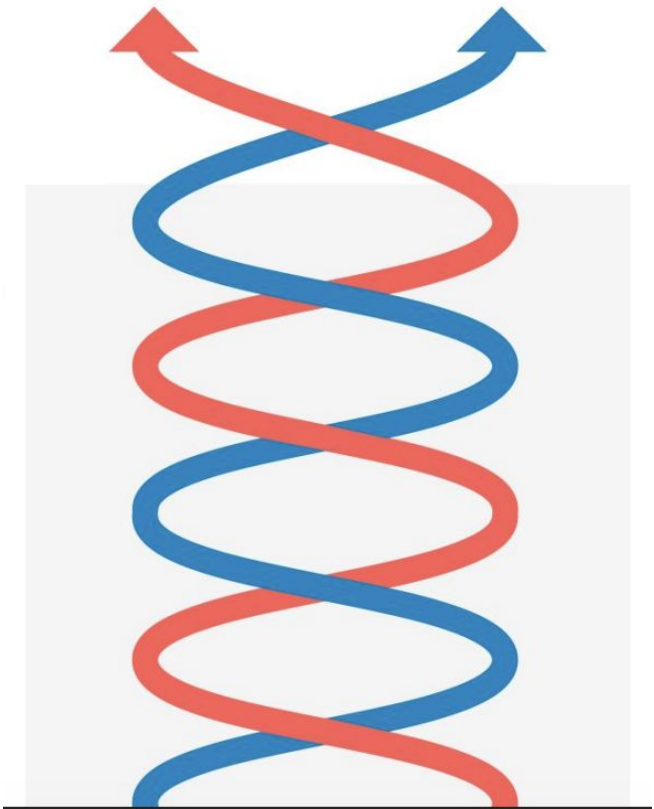


Average distance:
90km

Scaling reuse needs concerted action

Business Action

Policy Engagement



New phase - collaborative action + informing policy

Collaborative projects at scale



[Citeo](#) - France
[CGF](#) - Ottawa
[UK Retailers](#)

Collective advocacy



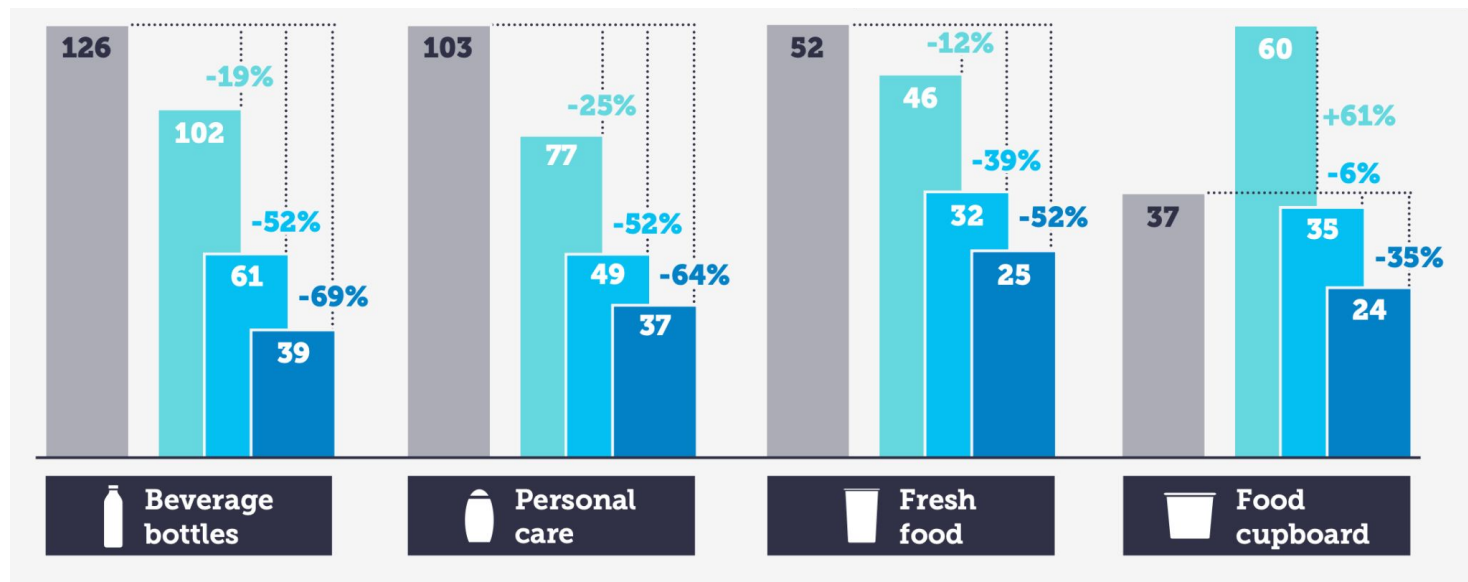
Thank you



Appendix

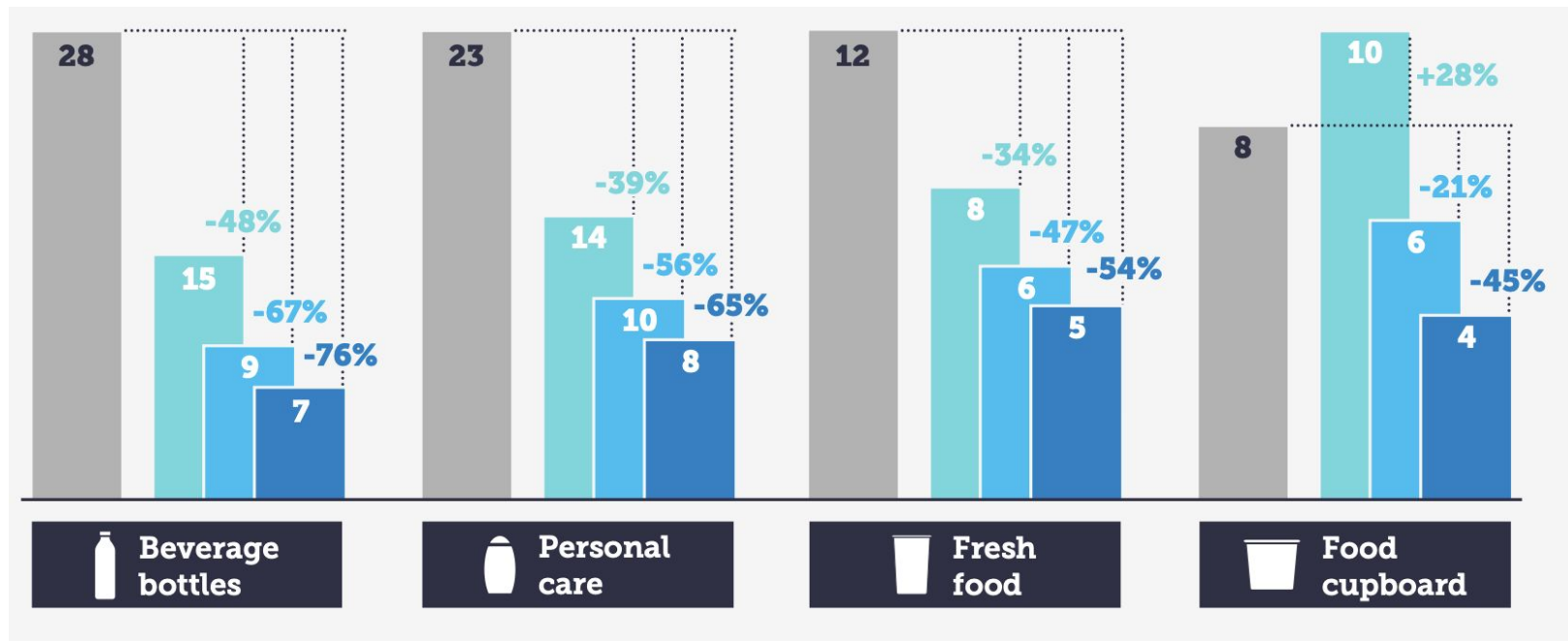


Switching from single-use plastic to returnable plastic packaging can offer substantial GHG emission savings



kg CO₂e/ 1000 use cycles

...and a significant reduction in plastic usage



kg / 1000 use cycles

Waste generation reduction

Figure 11:

Waste generation for returnable applications across the three modelled scenarios, compared to single-use

Waste generation

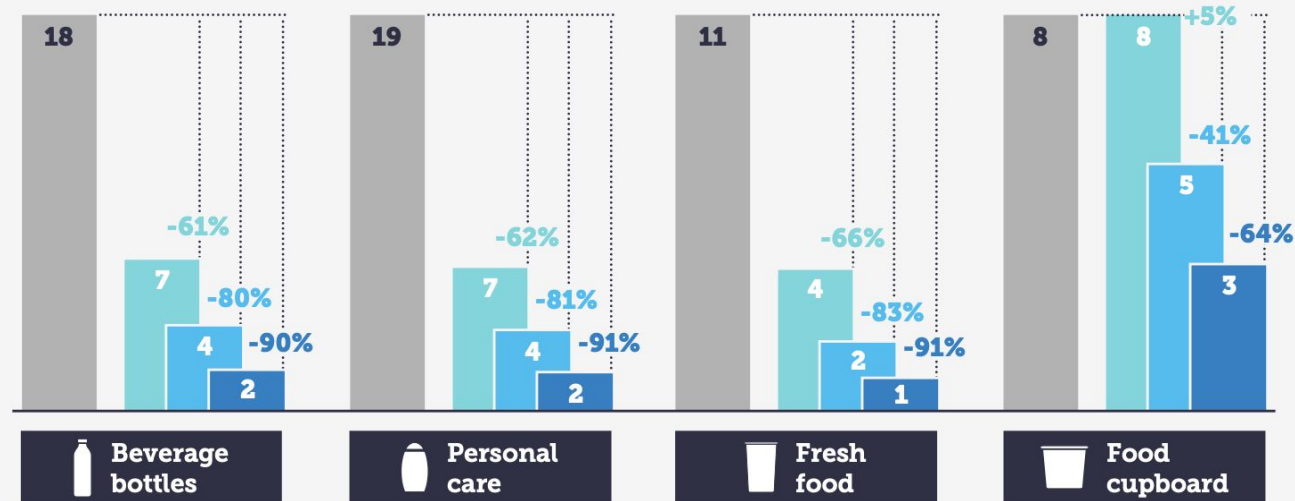
kg / 1,000 use cycles

■ Single-use

■ Fragmented Effort

■ Collaborative Approach

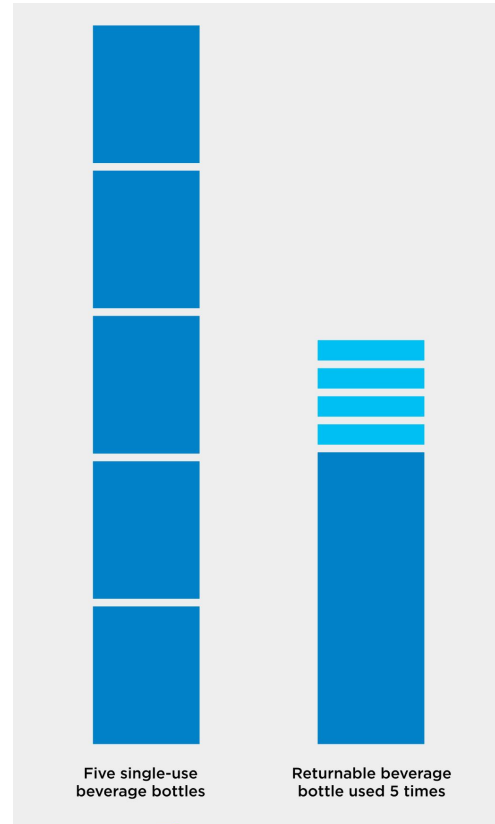
■ System Change



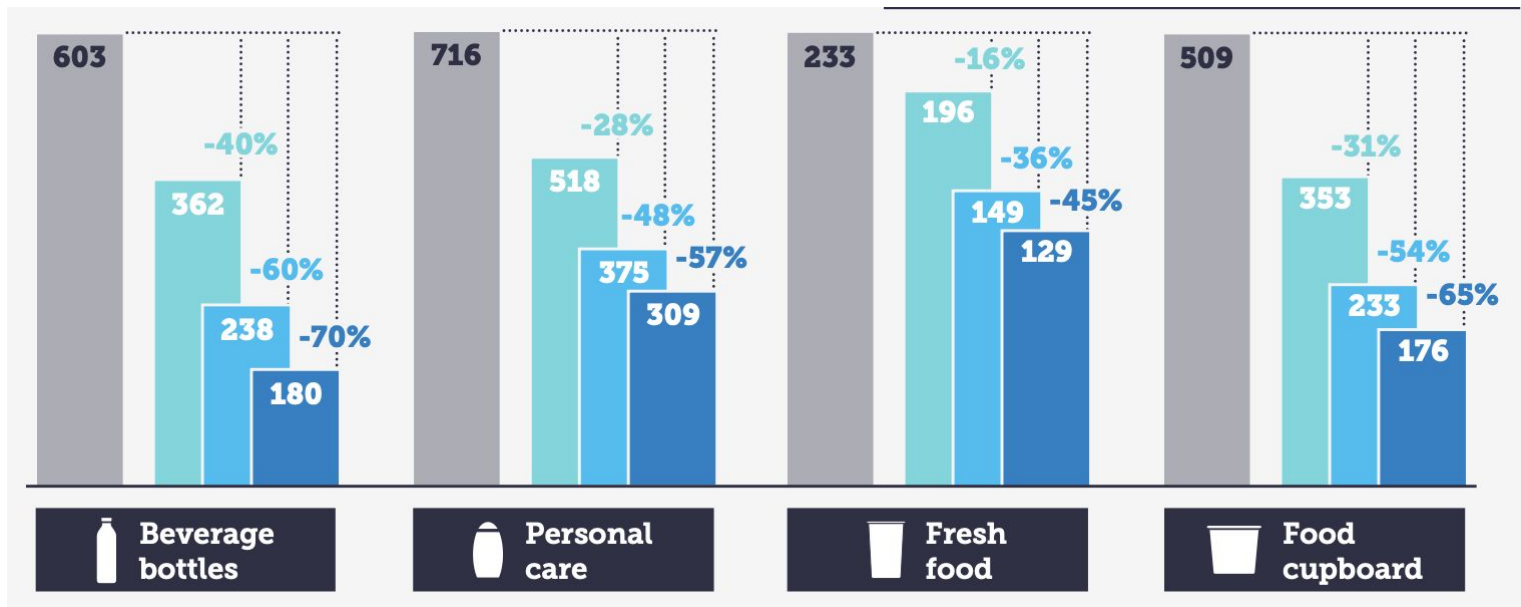
kg / 1000 use cycles

ENVIRONMENTAL INSIGHTS

Producing packaging
is much more **water**
intensive than
washing it for reuse.



Our modelling shows considerable water savings



litres / 1000 use cycles