A will and a way

With several collaborative projects in progress, along with its own corporate strategy, one global brand owner is pushing ahead on several fronts. **Dominique Huret** talks to three of the company's R&D and sustainability heads about the future of its packaging

Back in 2018, Procter & Gamble (P&G) announced several sustainability objectives as part of its Ambition 2030 goals. The brand giant pledged to reduce its virgin plastics usage by 50 per cent and reach 100 per cent recyclability or reusability by 2030. And, in March of this year, the company shared important progress updates on carbon neutrality.

Based in the company's Brussels headquarters, Gian De Belder, technical director for R&D packaging sustainability, sets the tone: "We at P&G have become quite vocal in stressing the importance of cross-value-chain collaboration. The whole fast-moving consumer goods industry has similar challenges and we need to find solutions collectively. Our commitments take shape in the different global projects.

"But let's start with our packaging strategy for the circular economy and Ambition 2030. We have divided our portfolio of packaging into two different groups: single-use and recycle[-ready] packaging; and multiple-use packaging. For the latter, it is important to mention that these packs have to be created with design-for-recycling in mind, as one day they will also have to follow the recycling route.

"For single-use, we start by designing our packaging for recycling. The Lenor bottle is the last illustration of the digital watermark technology, allowing effective sorting at materials recovery facilities and/or recycler, as part of the HolyGrail project."

The latest initiative supported by P&G is RecyClass, a certification approach for recycling requirements to help deliver the goal of making plastics packaging circular with traceability along the whole value chain. It is a platform to develop science-based and industry-aligned recycling terms and norms.

This is crucial for the future. Consumer demand for packaging with post-consumer recyclate (PCR) is growing, but there isn't enough PCR on the market. There is also a tendency for packaging producers to seek the highest PCR quality, which is even scarcer, while some categories could in fact benefit from lower PCR quality without creating issues for their products.

P&G's portfolio includes single-use and recycle[-ready] packaging and multiple-use packaging, explains Gian de Belder

The Circular Plastics Alliance sets a target of 10 million tonnes of recycled plastics for 2025, and today only around half that amount is available. Improving packaging collection is, therefore, crucial, claims De Belder, and this is the second pillar of the company's strategy.

"Our work with the Alliance to End Plastic Waste goes in this direction," he says. "Then, education on how to recycle and on consumer participation takes place. Finally, for sorting with separation, we are working hand-in-hand with recyclers and brands through the HolyGrail 2.0 initiative facilitated by AIM, the European Brands Association."

As one of the founding members of RecyClass, P&G obtained 12 product and technology approvals on packaging across its hair care, home care, and fabric care brands, confirming that they meet the design-for-recycling guidelines determined by RecyClass.

Jürgen Dornheim laments the scarcity of qualitatively-acceptable PCR

Above and below right: Following an initial pilot of the Loop platform, several P&G brands are now available in metal bottles with recyclable pouch refills. Refillables are becoming increasingly important

Two recent packaging innovations are good illustrations of the P&G strategy. The Lenor Ultra concentrated laundry detergent launched in February in the UK features a floatable sleeve with double perforation to allow its easy removal, decoupling decoration from the bottle body. The use of floatable sleeves, inks that do not bleed, and a clear or light blue bottle are critical to the conditional approval obtained from the European PET Bottle Platform.

The next hurdle to clear is the presentation of clear consumer instructions in order to ensure that the sleeve is removed and both packaging elements are then collected correctly.

The second innovation comes from P&G's fabric and home care brands, which include Ariel, Lenor, and Dash. Pod bags and Fairy Automatic Dishwashing capsule bags are transitioning from multilayer, difficult-to-recycle flexible packaging to a single-material packaging made of PE. The company reports that more than 10,000t of recycled plastics is now used every year across P&G fabric and home care brands under the Fairy, Mr Proper, Swiffer, and Lenor names.

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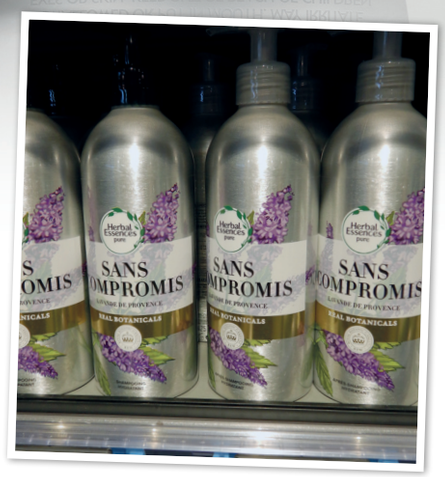
De Belder continues: "If we want plastics packaging to remain successful in the future, we all need to speak the same language at the company, association and personal level, and this is where I see the critical role of RecyClass through its members."



Elsewhere, P&G's 100 per cent polymer aerosol is interesting in terms of materials substitution. There are proposals for two systems: the dip tube or the bag-in-bottle, both of them designed for recycling. A weld provides a permanent seal, eliminating the need for a ▶

metal valve, while still meeting industry requirements. A base cup is optional for both systems. The packaging is approved in the US but not currently in Europe.

"As a major brand owner, we must take a wider view on the future of our packaging," adds Jürgen Dornheim, who is director of corporate packaging innovation and sustainability, based at P&G in Frankfurt, Germany. "Of course, the best packaging is no packaging. At the same time, plastics have their place. Packaging is there to protect the product, and we are not creating it for its own sake.

"But one of the most serious problems is the scarcity of qualitatively-acceptable PCR and this is central to the CosPaTox (Cosmetics, Packaging and Toxicology) initiative. The use of PCR in the context of a growing circular economy is limited, with a few exceptions, to the approved food-grade recyclates for which there are legal regulations within the framework of the European Food Safety Authority.

"It is to be expected that in the non-food consumer goods industry, the demand for plastics recyclates for packaging alone will increase within the next five years, roughly fivefold to well over 1mt a year. However, existing sources of usable recyclate are largely exhausted across the EU – especially in the area of polyolefins – so new sources and/or new capacities have to be found."

It is clear there is more than enough generally-usable post-consumer plastics waste that

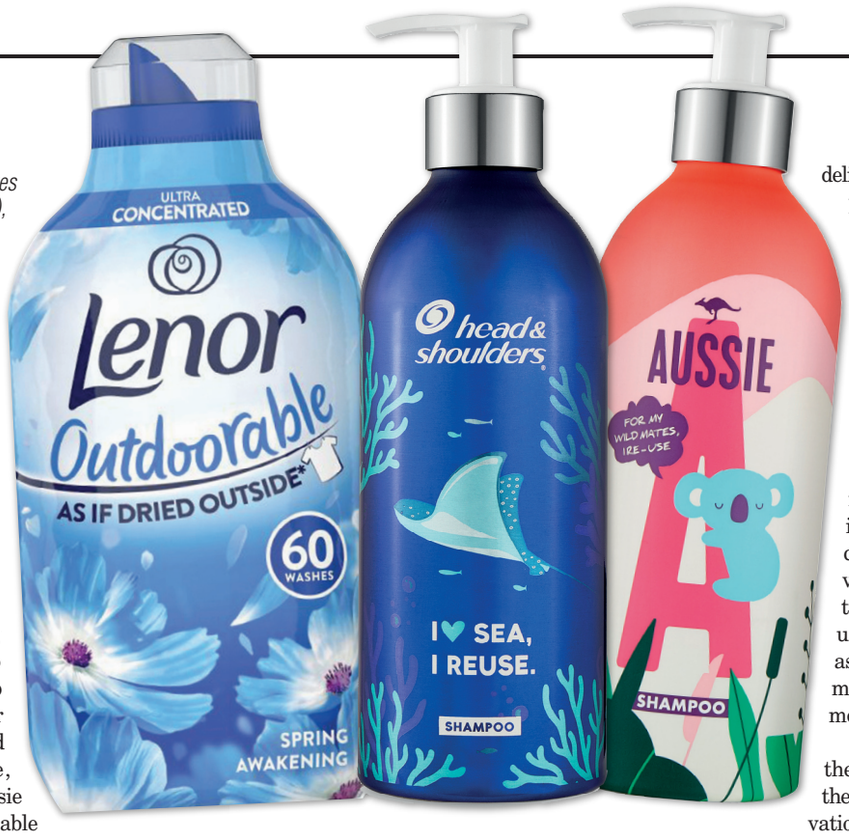
Sustainability lead Loukia Tzekaki claims the company is exploring several reuse consumption models

> **"We want to accelerate the development of the circular economy: from the HolyGrail intelligent sorting concept to the reduction of virgin petroleum plastics, and increase the use of recycled material, as well as the development of alternative refill models"**

is already being collected and processed separately in many EU countries. However, these qualities do not meet the legal requirements for food safety. A promising approach that has been considered numerous times over the years is the creation of new additional quality definitions, which then also enable the safe use of non-food plastics for packaging in the categories of cosmetics, detergents and cleaning agents, for example.

The objective is to define the following three quality grades within the framework of CosPaTox: the highest 'top' cosmetic grade for leave-on products such as creams and skin protection; the 'mid' cosmetic grade for rinse-off product such as soaps, shampoos and conditioners; and the 'low' detergent grade for laundry and cleaning detergents.

The order reflects the descending demands on recyclate quality. In addition to the determination of toxicologically-safe limit values, the project objective also includes the creation of test and measurement methods that can be used quickly on-site by recyclers. "And for this initiative too, we want a collaborative cross-



Left and right: Tearable sleeves (such as for the Lenor brand), refillable shampoos, recyclable tubes and flexible refills are among the innovations heralding the future for P&G

industry, non-competitive effort," adds an enthusiastic Dornheim.

A strong believer in testing and pilot projects, P&G Europe is also exploring consumer reuse consumption models. Following the initial pilot of the Loop platform in partnership with TerraCycle, P&G's hair care shampoo brands Head & Shoulders, Pantene, Herbal Essences and Aussie are now available in reusable aluminium bottles with recyclable pouch refills.

P&G is exploring consumer reuse consumption models and hopes to breathe longevity into existing products to minimise waste, says Loukia Tzekaki, the company's senior director for corporate communications and sustainability.

"The changes across our shampoo brands deliver up to 60 per cent plastics reduction," Tzekaki explains. "According to our calculations, this could result in 300 million fewer plastics bottles being produced annually.

"We want to accelerate the development of the circular economy: from the HolyGrail intelligent sorting concept to the reduction of virgin petroleum plastics, and increase the use of recycled material, as well as the development of alternative refill models."

Time will tell whether these initiatives inspire the type of action and innovation needed at a collective level to promote larger-scale positive change.

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