



PACKAGING INNOVATION

BRIEFING REPORT
JUNE 2023



Welcome

Welcome to ThePackHub's Packaging Innovation Briefing Report for June 2023.

In this comprehensive and unique monthly report, created exclusively for Innovation Zone members, you'll find a wealth of information on the latest packaging innovations and industry news.

With 128 pages of content, including 100 new packaging innovations for the month, you can be sure that you'll stay informed and up-to-date on all the latest developments in the packaging industry.

[Next Page →](#)

Summary

Our latest monthly report underscores the latest advancements in packaging innovation, highlighting key areas such as bio-based packaging, tech-enabled solutions, e-commerce packaging, functional packaging, recycling initiatives plastic reduction, and refillable and reusable packaging. Sustainability remains the primary focus, with approximately 80% of the latest initiatives being eco-centric.

The bio-based packaging industry, particularly seaweed-based packages, is seeing rapid expansion, and consumer-centric packaging continues to be vital. Furthermore, the surge in e-commerce offers increasing opportunities for brands and retailers to provide packaging solutions specifically designed for this platform. The trend towards refillable and reusable packaging is picking up steam, with a plethora of initiatives observed in the dry food, household, and personal care sectors.

Recycling initiatives continue to be among the most dynamic sustainability actions, fuelled by the stringent commitments of global Plastic Pacts and packaging taxes.

The innovations featured track ThePackHub's nine trend areas:

[Naturally Done](#)

[The Online Surge](#)

[Making Life Easy](#)

[Materially Changed](#)

[Protect and Preserve](#)

[Recycling Resurgence](#)

[Getting Noticed](#)

[Refill Revolution](#)





Naturally done

Naturally done

This month, we've seen a continued emphasis on biobased packaging, with an introduction of 17 initiatives in this area. The development of biodegradable, compostable packaging, and novel biobased substitutes to plastic are continuing unabated. Nevertheless, the absence of widely available industrial composting infrastructures in many markets significantly hinders widespread adoption.

Moreover, there is an ongoing concern that compostable and biodegradable packages might contaminate existing recycling processes. Despite these hindrances, the bio-based packaging industry is experiencing strong growth, with numerous new projects underway, many of which may never hit store shelves.

However, the adoption of these innovative packaging solutions is not yet widespread among major brands, and their use is primarily confined to small, emerging brands seeking to establish a unique sustainable angle.

In recent times, the development of seaweed packaging has emerged as a particularly robust area.



Naturally Done

[Back to Start](#)

[Bio-based coating is waterproof and heat-resistant](#)

[Partnership optimises PHA dispersions for barrier coating applications](#)

[Bio-based cups from recycled PLA launched to enhance sustainability in packaging](#)

[Paper product range launched using sustainable hemp](#)

[First fully compostable, plant-based water bottle introduced in Spain](#)

[Four-way collaboration results in unique travel kit](#)

[Turning crop waste into eco-friendly packaging solutions](#)

[Nanocoatings extend shelf life and reduce plastic waste](#)

[Project aims to create bioplastic from cocoa husk waste](#)

[Collaboration results in the development of compostable coffee capsule](#)

[Coffee capsules and lids are certified home compostable](#)

[Chocolate carton uses bio-renewable direct-contact inks](#)

[Students develop edible packaging from eggshells](#)

[Mushroom producers move to tray containing 40% grass](#)

[Biodegradable additive for plastic packaging developed](#)

[Barrier coating for paper-based packaging is home compostable](#)

[Australian company offers injection-mouldable bioplastic made from seaweed](#)

[Next Trend →](#)

Bio-based coating is waterproof and heat-resistant

German researchers at Hohenheim University, Stuttgart have announced the development of a new coating system that is both waterproof and heat-resistant. It is also reported to be mechanically resilient, suitable for consumption and compostable. As part of a product development competition, the team developed 'Crumbsticks', chicken drumsticks with an edible "bone" made from a crispy bread stick. Oleogels were used in the development of the consumable protective layer. These are fats that are structured by certain gelling agents. According to the researchers, existing production processes can be used to manufacture oleogels. The layer can be applied either by glazing, laminating, coating or spraying and is suitable for food as well as in the food packaging sector. By changing the composition or adding additives, the oleogel layer can be adapted to the respective application.



Partnership optimises PHA dispersions for barrier coating applications

Two companies have announced a partnership to progress PHA dispersions for paper and paperboard barrier coating applications. Pennsylvania-based Trinseo and RWDC Industries from Singapore aim to further the development of paper and board packaging solutions by bringing polyhydroxyalkanoates (PHA) dispersion technology to target markets. PHA dispersion technology creates water-based barrier coatings that are recyclable in traditional paper processes, organically recyclable via composting and biodegradable in soil and marine environments. RWDC manufactures organically recyclable or home-compostable Solon PHA using plant-based oils such as post-consumer and waste cooking oils, while Trinseo is a speciality material solutions provider that serves industries such as building and construction, consumer goods and medical and mobility. A spokesperson for RWDC said that the partnership was a critical step in their journey to bring PHA forward as an innovative material solution for an application with high-performance requirements while being environmentally safe.



Bio-based cups from recycled PLA launched to enhance sustainability in packaging

TotalEnergies Corbion, in collaboration with COEXPAN, has developed a bio-based cup using recycled PLA (Polylactic Acid). The cup was validated and tested at COEXPAN's INNOTECH centre in Madrid, Spain, and is available in white and high transparency options. The innovation employs Luminy rPLA, a bio-based polymer produced from sugarcane by TotalEnergies Corbion, with equivalent properties to virgin PLA. This bioplastic also has food contact approval in the EU, USA, and China. TotalEnergies Corbion aims to save manufacturers from additional investments in form-fill-seal facilities, whilst promoting carbon neutrality by keeping the carbon captured from the sugarcane in the cycle. TotalEnergies Corbion also promotes energy-efficient advanced recycling of PLA.



Paper product range launched using sustainable hemp

West Bengal, India-based OG Hemp produces hemp paper for packaging applications. The business offers a range of customizable products, including business cards and letterheads and packaging such as envelopes and cartons. The paper comes in various sizes and shapes, with embossing, debossing, foiling, letterpress, digital printing, and screen printing options. The hemp paper has low ink absorption, no optical brighteners and a high tearing index. Hemp paper is considered an excellent alternative to conventional tree paper as it is non-toxic and biodegradable. OG Hemp procures sustainably grown hemp fibres to manufacture their products. Hemp paper is eight times more recyclable than tree paper and can produce as much paper as four to ten acres of trees over a 20-year cycle. Hemp stalks take only four months to mature compared to 20-80 years for trees. Hemp has 85% cellulose compared to wood (30%) and is highly stable due to its lignin content (5-24%) compared to trees (20-35%). In addition to its sustainability benefits, hemp also offers advantages such as durability and resistance to yellowing over time.



First fully compostable, plant-based water bottle introduced in Spain

Hijos de Rivera, a Spanish group known for its natural mineral water brand, has introduced a new sustainable bottle, made from renewable sources and free from waste or harmful substances during decomposition. Presented at the Food 4 Future fair in Bilbao, this plant-based water bottle, the first of its kind in Spain, is composed of PLA, a bio-based polymer derived from sugarcane. Notably, the bottle, along with its PLA labels, reportedly 100% decomposes in less than 90 days under industrial composting conditions and leaves no waste, reducing the environmental impact of plastic waste. Its production also requires less energy than traditional plastic bottles. This initiative aligns with the company's ambitious sustainability plan aiming for carbon neutrality by 2040. ITENE, the specialist technological centre, has confirmed the bottle's biodegradability and compostability, applying to the UNE-EN 13432:2001 standard.



Four-way collaboration results in unique travel kit

The Trific project is a unique 48-hour travel kit for people who travel responsibly. It contains three dry products: hand soap, body soap and toothpaste that simply dissolve after use. Trific is a collaboration between four companies, three Swedish and the other German. By developing a bio-based concept, the collaboration has explored circular design, materials, dry-forming technology and end-of-line barrier solutions. The concept and system design partner is FutureLab & Partners. The wood-based raw material is supplied by Holmen Iggesund, and uses residues from the wood grown in forests to make climate-smart pulp and paperboard, the basis for the Trific packaging. Yangi used their dry-forming technology to turn the material into Trific, and German Optima Packaging Group who are evaluating different barrier options to fulfil different requirements. The end result is this circular packaging solution. The prototype was apparently developed within six months.



Turning crop waste into eco-friendly packaging solutions

Founded in 2020 in Faridabad, India, Dharaksha Ecosolutions is tackling the environmental issue of crop residue burning by converting it into sustainable packaging materials. Co-founders Amit Kumar and Ashish Kumar have repurposed paddy stubble, a major crop residue, to produce biodegradable, compostable packaging materials that offer an alternative to conventional plastic. With features like thermal resistance, fire retardancy, water resistance, and anti-static properties, Dharaksha's products are suitable for secondary packaging and can be utilized by businesses in the food and beverage, e-commerce, and pharmaceutical sectors. Through a proprietary process, paddy stubble, sourced from local farmers, is converted into various shapes and sizes of packaging materials, and custom designs are offered.



Nanocoatings extend shelf life and reduce plastic waste

Canada-based Nfinite Nanotech is an advanced material company that makes smart nanocoatings for sustainable packaging. The business says that its superior barrier coatings can make biodegradable packaging more robust, and existing packaging more recyclable to extend the shelf life of products and reduce plastic waste. Nfinite Nanotech's Spatial Atomic Layer Deposition (SALD) technology lays down one atomic layer at a time, producing nanocoatings that are uniform, pinhole-free and ultrathin. These layers are applied in open air, at up to 100 times the speed of conventional ALD. It is said that the technology is a step ahead of the field as it does not require a vacuum chamber. The novel aspect of this technology offers new opportunities for integration. The nanocoating is one thousand times thinner than a human hair (<100nm) and can withstand manufacturing processes and handling. It is FDA-approved, food-safe, apparently cost-effective, and made of sustainable substances.



Project aims to create bioplastic from cocoa husk waste

The Institute of Subtropical and Mediterranean Horticulture (IHSM) La Mayora, in collaboration with Ayuda en Acción, is working on a scientific project to develop a bioplastic for food packaging using cocoa husk waste. The project aims to address the environmental impact of plastic production and explore sustainable alternatives. The IHSM La Mayora research team travelled to Esmeraldas, Ecuador, to share their scientific knowledge with the local cocoa producers and assist in bioplastic production. The project aims to add value to the local cocoa production, which women in the area primarily carry out. Currently, cocoa husks are considered low-value by-products of the agri-food industry, but their abundance has resulted in significant waste. The research team have successfully developed a bioplastic suitable for food packaging using cocoa husk residues, and the knowledge has been transferred to the Esmeraldas producer community to create their own packaging. The collaboration involves other researchers from IHSM La Mayora and the Institute of Materials Science of Seville.



Collaboration results in the development of compostable coffee capsule

A collaboration between two bioplastics companies has resulted in the development of a new compostable coffee capsule that meets the EU's proposed packaging regulations. The EU recently announced a proposal to make plastic packaging such as tea bags, coffee capsules, very light plastic bags and self-adhesive labels for fruit and vegetables compostable. The two companies, US-based Danimer Scientific, Inc, and Dutch TotalEnergies Corbion, came together to develop the capsule, with Danimer contributing with its signature bioplastic Nodax, which is a polyhydroxyalkanoate (PHA), and TotalEnergies Corbion's well-established PLA bioplastic Luminy High Heat. Both materials have passed tests for biodegradation and are certified for home composting. The close collaboration between the two companies began in 2021, and the new capsules are currently being tested on the market by several European companies.



Coffee capsules and lids are certified home compostable

Austrian packaging company Alpla is producing a new generation of biodegradable coffee capsules for the Blue Circle coffee brand. This new solution is made of an organic material, which stands out in particular in terms of odour and taste neutrality. The certified system consists of a capsule and film lid to minimise the effects on the contents and prevent the unwanted migration of coffee aroma to the environment. The capsules are injection-moulded using the company's own facilities and are produced in the Blue Circle design for the best results in terms of compatibility and handling. The entire pack, including sealing film and contents, has been awarded the 'OK compost HOME' and 'OK Compost INDUSTRIAL' certification marks by TÜV Austria. Therefore, the Blue Circle coffee capsules can simply be disposed of via home compost or in the organic waste bin.



Chocolate carton uses bio-renewable direct-contact inks

Leicester-based Qualvis Packaging, and global producer of printing inks and pigments, Sun Chemical, recently collaborated to develop a carton for Yorkshire chocolate manufacturer Whitakers. The cartons, for chocolate truffles, use Sun Chemical's SunPak DirectFood Plus bio-renewable direct-food contact inks. They also incorporate Sun Chemical's SunSpec SunStar direct-food contact aqueous varnish on the inside of the carton. It is claimed that compared to solutions from other suppliers, the inks stand out regarding on-press performance and quality. A spokesperson for Whitakers said that there were major benefits in eliminating plastic and increasing the sustainability credentials of their products.



Students develop edible packaging from eggshells

Five students from the University of Hohenheim in Stuttgart have developed edible packaging made from eggshells and other plant-based raw materials. Called Edggy, it was designed for ramen, and once empty the packaging can simply be dissolved in the hot water and can even be eaten as an additional protein boost. When it's dry, the 4 x 2 centimetre bag looks like normal plastic, but just a little hot water is enough, and within seconds, nothing is left of it. Edggy took the students nine months to develop following research to find the correct formula. For this innovative idea, the five students received the prize at the EIT Food Reuse2Repack Challenge and prize money of EUR 1,200. The team acknowledge that the film can and needs to be improved, and they are considering taking it further via a startup.



Mushroom producers move to tray containing 40% grass

The Swiss Mushroom Producers Association (VSP) has announced that they have moved two of their products from plastic into a grass and paper-based board tray. The tray, developed in cooperation with the Co-op, is made up of 40% pulp, obtained from grass. The remaining 60% pulp comes from FSC-certified forests. Paper is a highly sought-after raw material worldwide, but its production requires a lot of water and energy. Grass paper offers an innovative alternative. The material reportedly has up to 30% lower CO2 emissions in its production compared to normal paper and cardboard. The grass grows without using fertilizers in ecological compensation areas, often in the immediate vicinity of the respective paper mill. From now onward, the packaging trays of Swiss organic brown mushrooms 225g and Swiss organic white mushrooms 225g will be replaced by 100% grass and paper trays in Swiss Co-op stores.



Biodegradable additive for plastic packaging developed

A new additive has been refined that promises to make plastic packaging biodegradable. The additive, called d2w, is made by Symphony Environmental Technologies. It is a bio-based additive that can be added to conventional plastics to deliver biodegradability. d2w works by breaking down the plastic into small molecules that bacteria and fungi can absorb. The process of biodegradation takes about 12 months and reportedly produces no harmful byproducts. d2w can be used to make various plastic products, including bags, bottles, and food packaging. Several companies, including Coca-Cola, Unilever, and PepsiCo are currently utilising it. The development of d2w is being reported as a significant step forward in the fight against plastic pollution that could help reduce the amount of plastic that ends up in landfills and the environment.



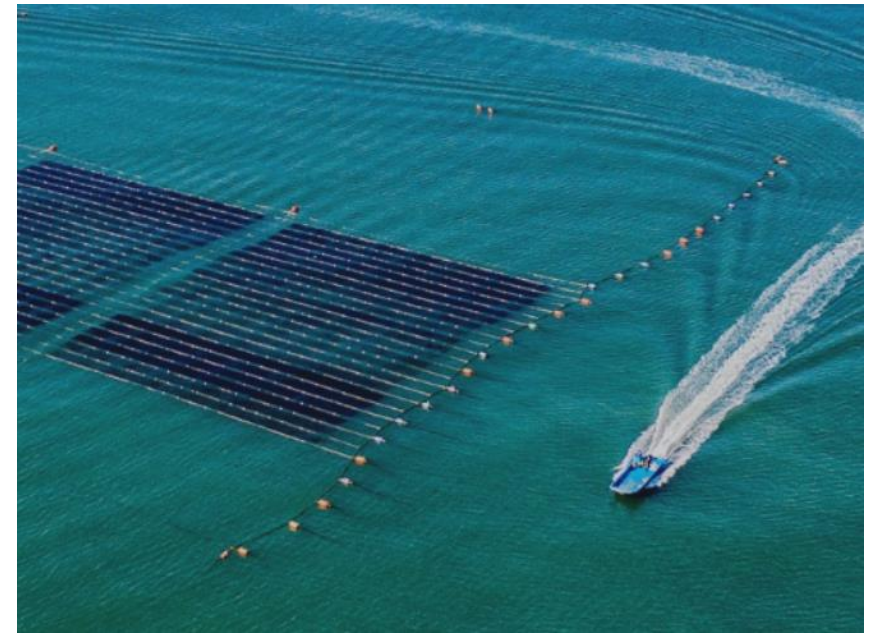
Barrier coating for paper-based packaging is home compostable

German chemical manufacturer BASF has announced adding a home-compostable grade to its Ecovio portfolio for cold and hot food packaging. Ecovio 70 PS14H6 is a blend of BASF's Ecoflex biodegradable aliphatic copolyester and 45% PLA (polylactic acid), designed for use on paper and board products. It has excellent barrier properties against liquids, fats, grease, and mineral oil and is temperature stable when filled with boiling water (up to 212°F/100°C). The company says that Ecovio 70 PS14H6 has excellent adhesion for many types of paper and board-based products, such as cups and pots. Expected uses include for chilled or frozen dairy products, wrappings for sandwiches and cereal bars, bowls and trays for sweets and snacks as well as to-go cups for hot/cold drinks and soup. After use, they can be composted in garden home or industrial composting facilities.



Australian company offers injection-mouldable bioplastic made from seaweed

Kelpy is an Australian company that specialises in seaweed technology in both packaging and seaweed production and processing. They have launched what they claim is the world's first injection-mouldable seaweed bioplastic. Kelpy says they offer a B2B packaging solution for manufacturing customers who care about climate change and ocean health. They can offer both rigid and sachet film packaging solutions to market that are marine degradable and home compostable. The company says it aims to replace plastic on every continent, reducing climate impact with a regenerative and circular solution that "heals the planet from sea to soil". Kelpy also offers turnkey seaweed farming solutions together with the world's leading experts in innovative seaweed farming, equipment production and software-integrated solutions.





The Online Surge

The Online Surge

The e-commerce industry has experienced substantial growth in recent times, and this trend is influencing packaging development. The COVID-19 pandemic has accelerated this trend, as the need for online-specific packaging remains significant.

The e-commerce market has seen a significant spike due to the pandemic, as consumers worldwide shift from physical stores to online platforms. A significant number of these consumers are online shopping for the first time, and it is likely that many will continue to do so. The role of shopping and packaging has changed permanently as a result.

As the e-commerce market continues to expand, there are increasing opportunities for brands and retailers to offer packaging solutions that are tailored specifically for this channel, rather than simply replicating the packaging used in physical stores. Packaging designed for e-commerce does not require the same level of security measures, as the purchase decision is made on a screen and bright on-pack messaging is not necessary. Additionally, packaging does not need to be explicitly designed to be attractive on a physical store shelf.

[Back to Start](#)

The Online Surge

[EPS packaging solution designed for e-commerce transport of bottles](#)



[Next Trend →](#)

EPS packaging solution designed for e-commerce transport of bottles

Termotécnica, who claim to be the leader in EPS (expanded polystyrene) manufacturing in Brazil, has launched a new brand called GoPack, designed for the protection and safe transport of different formats and sizes of glass bottles. The company's investment in GoPack is designed to meet the excellent prospects for e-commerce. In the GoPack brand identity, the letter "G" design references an arrow, while the letter "O" is a graphic representation of the shape of the modular beverage pack seen from the top perspective, emphasizing the meaning of the word "Go". Since its presentation to the market at Wine South America in 2022, Termotécnica's modular beverage packaging has been adopted by dozens of customers, such as Peterlongo, Don Laurindo and Pizzato.





Making Life Easy

Making Life Easy

Packaging that is easy to use will always have a place in the packaging innovation schedule. With the focus very much on sustainable solutions, it is important that packaging still delivers the necessary functional requirements and packaging. Easier to use packaging will always create a point of difference in the market and often meets the needs of a growing senior consumer segment.

Packaging that has added functionality, that is easy to use and makes life easier for consumers continues to be popular. We will continue to see many new examples come through the innovation funnel. With most of the development focus on sustainability, it is essential that brands and retailers can still deliver pack formats and solutions that meet an unmet functional need to make the consumer experience easier and more pleasurable. Plastic reduction is a primary focus for the majority of brands and retailers and there are signs this is having an impact on pack functionality in the market. We have tracked a couple of recent examples in the cheese sector where the resealable functionality has been removed to achieve packaging reduction targets. These isolated examples might just be a sign of things to come. However, the worldwide ageing marketplace means an increasing need for packaging that is easy to open and close.

Making Life Easy

[New jar lid has been designed to be easier to open](#)

[Condiment brand launches a 'fork that sauces'](#)

[Collaboration produces lightweight, consumer-friendly can](#)

[Japanese innovation produces beer with perfect head](#)

[New sachet for liquids is easy to open and resealable](#)

[App for visually impaired customers being trialled on hygiene products](#)

[Shampoo bottle enables consumers to get to every last drop](#)

[Packaging innovation solves decades-old crisp problem](#)

[New tamper evident child-friendly bottle cap adopted by iced tea producer](#)



New jar lid has been designed to be easier to open

Ohio-based CCT (Consumer Convenience Technologies) has announced that the largest German supermarket chain EDEKA has become the first European grocer to adopt the CCT EEASY Lid. The EEASY Lid is the world's first aluminium lug lid (first [reported in the Innovation Zone](#) in November 2019) and reduces the amount of torque needed to open a jar by up to 50%, providing customers with a new level of accessibility. The EEASY Lid is also the world's first aluminium lug jar lid – a more sustainable and durable alternative to traditional steel lids. The EEASY Lid will be available on EDEKA Kempken's new tomato-basil flavour of its in-house private-label pasta sauce brand, providing its customers with a new level of accessibility. The EEASY Lid was created after a company co-founder was approached by a close friend who underwent surgery for breast cancer. Struggling to open a jar, she asked why someone couldn't make a jar lid that was easier to open.



Condiment brand launches a 'fork that sauces'

Swiss mayonnaise and mustard manufacturer THOMY has launched the 'Saurk', a portmanteau of the words sauce and fork. The innovation was the result of an approach by marketing services provider McCann Germany and is a fork that attaches to THOMY's aluminium mayonnaise or mustard tube, and which then allows the product to be squeezed from the tube and directly onto food. A spokesperson for McCann says that the Saurk is the most fun and unnecessarily efficient way to sauce a sausage and other stuff. THOMY is planning to give away 1000 Saurks just a few weeks away from BBQ season, and it's clear that for a few people, the THOMY Saurk is seen as an "entirely unnecessarily necessary" addition. THOMY says that it is planning more Saurk-based activities in the near future.



Collaboration produces lightweight, consumer-friendly can

A collaboration between steel giant Tata and Spanish canned fish producer Grupo Calvo has resulted in a new consumer-friendly can, which the companies say reduces food waste, enhances shelf impact, and takes lightweighting of steel for packaging “to new heights”. The key to the success of its collaboration is a new product called Protact which, it is claimed, offers a unique internal polypropylene (PP) layer which enables a groundbreaking direct seal concept. This concept eliminates the need for a traditional can ring and delivers a 24% steel weight reduction overall. Grupo Calvo could also use its innovative Vuelca Fácil or ‘Easy Flip’ aluminium film lid, which allows the can to be opened easily and safely. The PP coating reportedly contributes to reducing food waste by enabling the tuna to slide cleanly from the upturned can with no residue. Also, it allows for a 15% reduction in food oil.



Japanese innovation produces beer with perfect head

Tokyo-based design agency Nendo has designed what they call the 'foam-can'. In Japan, a head on beer is considered essential for making it taste better as it acts as a lid to prevent beer from coming into contact with the air, and keeps it from releasing aroma, flavour, and carbonation. The foam-can was designed with two pull tabs, where there is usually just one, of course. Slightly different distances between each pull tab and the lid change the degree of opening. When the can is opened by the first tab, the lid opens a little to create more foam. Once the glass is about half full of bubbles, stop pouring and wait for the bubbles to settle. Then open the second tab, which opens the lid to the fullest, and gently pour the rest under the foam. In this way, a glass with a liquid-foam ratio of 7:3, is produced, the so-called golden ratio.



New sachet for liquids is easy to open and resealable

American and Dutch companies have joined forces to develop a new sachet called Easypop that is easy to open and resealable. Easypop was developed by US-based PopPack and Dutch company Vivia Ventures, with help from film producer OPACKGROUP and technology specialists Watttron. The Innovation Zone has [previously reported in the development](#). An air bubble at the top of the sachet acts as a lever that breaks the seal of the sachet when pressed. Thus, the EasyPop design offers controlled, leak-free dispensing and a self-closing function. The EasyPop sachet is designed for liquid products and is suitable for food and non-food products from 30ml to 150ml. Expected uses are for sauces, spices, personal care products or dairy products, cleaning products, energy gels, ointments and more. The film is formed into a tube, seals the sachet at the top, and applies the air bubble. The sachet remains open at the bottom, so a producer can fill the packaging with the product.



App for visually impaired customers being trialled on hygiene products

P&G UK has announced that it is partnering with NaviLens to add its technology to four Always Discreet pads and pants products as part of a pilot initiative. The new packs will feature codes on the front of the packs to improve product accessibility for blind and partially sighted consumers. The codes contain all of the packaging information as well as usage and disposal instructions, and the brand said it is improving representation in advertising and marketing. Instead of physically picking up and reading key product information on each pack, shoppers can use NaviLens technology to make their shopping experience easier. The customer uses the NaviLens app on their mobile phone. It can access the code 12 times further away than a conventional QR code or barcode, is quick and does not require the phone to focus.



Shampoo bottle enables consumers to get to every last drop

P&G brand Head & Shoulders Bare anti-dandruff shampoo is being offered to US consumers in a new recyclable bottle that is claimed to enable consumers to get every last drop out of the bottle due to its 'roll and squeeze' structure. The bottle also apparently contains 45% less plastic per ml in comparison to the 370ml Head & Shoulders bottle, and the packaging is claimed to be fully recyclable. The Head & Shoulders Bare formulation contains an anti-dandruff formula that is free of silicones, sulphates, and dyes. BARE Pure Clean for an oily scalp and hair and BARE Soothing Hydration for a dry scalp and hair – offering coconut water and orchid and aloe scents, respectively – are currently available exclusively at Walmart. Another step towards sustainability saw P&G package its Head & Shoulders, Pantene, Herbal Essences, and Aussie-brand shampoo and conditioner bars in recyclable, FSC-certified paper boxes.



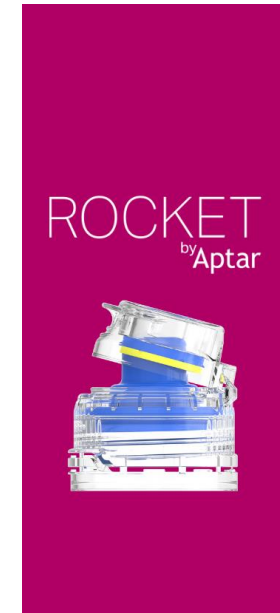
Packaging innovation solves decades-old crisp problem

Dutch crisp manufacturer Hoeksche Chips has introduced a packaging innovation to solve a problem that they say has 'haunted crisp eaters for decades' – how to get to the crumbs at the bottom of crisp packets. The company says these are impossible to get out without losing human dignity or, worse, making a mess on your clothes or the couch. Thanks to their new 'Flavor Saver' technology, the bottom left portion of the bag can be removed so that the customer can utilise the 'corner funnel technology' to get to the remaining tastiest morsels. Together with global advertising agency Wunderman Thompson and their offices in Atlanta and Amsterdam, the removable corner was devised so that nothing, not a single crumb, of those delicious crisps would go to waste. Hoeksche Chips 'Salt & Balsamic Vinegar' including 't Hoeksche corner is now available at all specialty stores in the Netherlands.



New tamper evident child-friendly bottle cap adopted by iced tea producer

Aptar Italy has announced that it will supply Ferrero with its Rocket Sport Cap for the brand owner's Estathé iced tea drink. Rocket offers a hygienic double-wall lid design that protects the drinking area from external contaminants. Rocket was designed to consider all consumers' safety and adhere to child safety standards (BSDA). The new Estathé design is delivered in a convenient, resealable cap that provides a tight and secure close for on-the-go use. Rocket offers a unique, highly visible and non-detachable tamper evidence system, ensuring no plastic parts are detached and thrown away. The Rocket closure's innovative design was born from consumer studies and insights to meet many uncovered market needs, which reportedly attracted Ferrero to partner with Aptar for their new Estathé packaging.



Materially Changed

The packaging industry is experiencing a substantial shift in materials, primarily driven by objectives centered around sustainability. The replacement of plastic remains a priority for many brands and retailers, as they seek alternatives that may provide a smaller environmental footprint or at least be more favourably received by consumers focused on anti-plastic initiatives. This month, we tracked 29 new initiatives in this direction.

ThePackHub continues to document numerous cases of brands and retailers transitioning primarily from plastic to other, often paper-based, alternatives. While some substantiate their moves with positive environmental impact data, not all changes can withstand rigorous environmental examination. The truth is that we're currently in a period of substantial transformation, where recyclable plastic is often replaced with different materials because consumers perceive it as the environmentally conscious choice. Most material changes typically follow significant investments in machinery and novel processes. These changes are made with a long-term view, and any backtracking seems far in the future.



Materially Changed

[Back to Start](#)

[Alternative solution to EPS for salmon transportation](#)

[Paper-based insulating product is sustainable and recyclable](#)

[Sustainable mushroom packaging developed in Spain as a plastic alternative](#)

[Wood pellet manufacturer moves from plastic to paper packaging](#)

[Paper-based alternative to plastic bubble wrap](#)

[Spirit producer eliminates secondary cartons at its Indian operations](#)

[Indian brewer chooses sleeve format for flagship beer is lighter than label](#)

[Skinpack switch for French cheese brand](#)

[Swedish company offers sustainable alternative for toilet roll packaging](#)

[Plastic-free flowpack for fruit and veg is sustainable alternative](#)

[Coffee roaster moves to 100% paper packaging](#)

[Collaboration results in tube and closure made from 85% fibre](#)

[Paper-based packaging aims to replace plastic for fittings and electrical components](#)

[Spanish pickle producer launches new range in PP tubs](#)

[Sustainable board-based alternatives to conventional plastic blister packs](#)

[Sustainable alternative to plastic packaging for fresh produce](#)

[Sustainable packaging manufacturer moves to paper for pallet wrapping](#)

[Mattress manufacturer moves from plastic to paper packaging](#)

[Paper bottle is linerless, adhesive-free and 100% recyclable](#)

[Thermothormed skin pack is first for Brazilian beef](#)

[Sustainable paper labels launched](#)

[Board alternative for vacuum skin packs reduces plastic use by over 90%](#)

[French beauty brand opts for 100% recycled aluminium refill](#)

[New board for food products is flourochemical and plastic-free](#)

[British supermarket trials removal of neck sleeves from wine bottles](#)

[Product marking technology reduces carbon footprint](#)

[Party beer keg reduces CO2 emissions by 69%](#)

[Low temperature can cleaner reduces energy consumption and CO2 emissions](#)

[New pizza box is lighter with lower carbon footprint](#)

[Next Trend →](#)

Alternative solution to EPS for salmon transportation

The S-Bin, by Packaging Solutions Scotland Ltd, is being seen as an alternative to the industry standard EPS (expanded polystyrene) box for salmon transportation. It is thought that EPS boxes will be an obvious target for higher fees for Extended Producer Responsibility (EPR) in years to come, thanks to their single use and difficulty in recycling. The S-Bin is a complete storage system comprising three main components: pallet base, lid and side wall. The S-Bin is designed for reuse, with bases and lids lasting several years and side walls good for 20+ round trips, while also being easily washable. They are also space-saving, as the unique collapsible design means 13 empty bins can be stored in the space of one full bin. The company also says that savings of up to 78% CO2 have been reported by customers when using S-Bins in place of equivalent polystyrene boxes and wooden pallets.



Paper-based insulating product is sustainable and recyclable

Leeds-based ecoMLR are the developers of ecoINS, a product designed to thermally insulate and protect both warm and cool products in markets such as food and pharmaceuticals. It is a sustainable and recyclable packaging solution, designed as an alternative to plastic-based products. It can maintain a temperature of below 8 degrees for a period of up to 48 hours and keep a temperature of above 40 degrees for a period of up to 2 hours. Various stock sizes are available, and after use, they can be disposed of in household paper recycling. The company says that ecoINS is already being used by one of the leading global meal-kit delivery providers who rely on the ecoINS to keep its contents as fresh as when they sent it. ecoINS is made from recycled Kraft paper and not less than 70% recycled content.



Sustainable mushroom packaging developed in Spain as a plastic alternative

Hinojosa, a leader in sustainable packaging, has developed a novel product for mushroom packaging at its Vegabaja Packaging plant, a collaborative effort with Champiñones Emar, one of Spain's leading mushroom producers. The new packaging is distributed in Spain and Portugal and represents a cost-effective alternative to plastic. Composed of 100% recyclable, biodegradable cardboard, the packaging holds Forest Stewardship Council (FSC) certification, indicating the material sources from sustainably managed forests. The pack allows for maintaining the optimal quality of the product, supporting its required moisture properties. As a viable alternative to plastic packaging, this development benefits both the environment and businesses by marrying sustainability with cost-effectiveness.



Wood pellet manufacturer moves from plastic to paper packaging

Austrian sawmill Holz-Bauer has moved from plastic to paper for its wooden pellet product. Global packaging company Mondi, are supplying the new bags and their PelletBags are created from 2-ply Mondi kraft paper which is produced, printed and converted in-house before being sent to Holz-Bauer for filling and closing, using its secure sewing method with a static binder machine. Plastic bags are the industry standard for wooden pellets, and Holz-Bauer's move to paper packaging is indicative of the trend towards using more sustainable packaging solutions. Mondi's kraft paper is created from renewable, responsibly sourced fibres and the final paper bag can be disposed of in existing European recycling streams. The bags have high tear resistance and can be stored and transported easily. Holz-Bauer's 15kg PelletBags have an artisan design to reflect their own product and business identity.



Paper-based alternative to plastic bubble wrap

German protective packaging specialists Storopack has announced a new flexible and sustainable packaging solution, ideal for providing optimal protection for e-commerce products during transport. PAPERbubble from Storopack offers customers an innovative and sustainable alternative to traditional plastic air bubble film. This protective packaging is made from paper, a renewable raw material, and in combination with air, is 100% recyclable and reliably protects small to medium-sized goods during shipping. The ready-to-use, perforated paper sheets measuring 580 mm x 380 mm are available in a specially designed box and in user-friendly packaging units that offer maximum flexibility and allow the sheets to be removed easily and ergonomically directly at the packing station. This means that PAPERbubble does not require a machine system, making it a user-friendly and cost-effective packaging solution.



Spirit producer eliminates secondary cartons at its Indian operations

Pernod Ricard India has announced that it is to remove all cartons from its portfolio of wine and spirits brands. Starting with 500 million pieces annually under its Indian Made Foreign Liquor (IMFL) brands, the company will gradually extend this initiative to include its portfolio of imported brands. A report promoted by the brand owner has calculated that around 43% of mono-cartons end up in landfills. Since 2020, Pernod Ricard India has been working on pilot projects to test consumer acceptance of removing permanent mono-cartons. With this initiative, Pernod Ricard India intends to reduce its carbon footprint, eliminate its water footprint in secondary packaging, and help reduce deforestation. The company would then reportedly become the first to achieve a zero-waste-to-landfill contribution for permanent mono-cartons in India. This is part of an industry-first initiative, #OneForOurPlanet, aimed at reducing the impact secondary packaging has on the environment and ensuring a more sustainable future for everyone.



Indian brewer chooses sleeve format for flagship beer is lighter than label

American Brew Crafts Pvt Ltd is an independent brewer based in Hyderabad, India. For their flagship Block Buster lager, they have chosen a sleeve format. The new attractive packaging of the bottle in a sleeve comes in vibrant colours and designs. The new sleeve is made from a high-quality resin that enhances the look and feel, is easy to hold for customers and beer will have protection from sunlight and to reportedly help retain the flavour. The company says that using a sleeve is more sustainable, as the weight of the sleeve is less than that of a conventional full label and is less carbon-intensive to produce. Also, as they are made from either PET (polyethylene terephthalate) or PP (polypropylene), they can be recycled. Sleeved packaging can also help keep the contents of the bottle cooler for longer.



Skinpack switch for French cheese brand

Dischamp Dairies is launching a new packaging solution for their Cantal Jeune and Cantal Entre-Deux affiné 4 mois cheeses, available in stores across France this spring. The skinpack is designed to reduce plastic waste, reportedly utilizing 70% less plastic than traditional trays. Consisting of a single layer of paperboard and a thin plastic film, the skinpack offers recyclability in the paper recycling bin while occupying less space on supermarket shelves, thanks to its compact design. Dischamp Dairies' initiative reflects their commitment to minimising environmental impact. The skinpack's benefits include its reduced plastic usage, recyclability (of the paper element), and space efficiency. Dischamp Dairies' introduction of the skinpack presents a notable development in addressing environmental concerns related to cheese packaging. The sustainable, recyclable, and space-saving attributes of the skinpack offer potential advantages over traditional plastic trays, aligning with consumer preferences for more sustainable choices.



Swedish company offers sustainable alternative for toilet roll packaging

Swedish pulp and paper manufacturer Billerud AB is launching a machine-smoothed kraft paper specially developed for wrapping toilet and household paper rolls. The company says that it is renewable, recyclable and biodegradable. Billerud also claims that following drop testing of the product, the new paper, thanks to soft virgin fibres, has as much resistance as PE plastic. The machine-polished surface of the paper is extremely smooth, which enables a very strong sealing ability. In addition to a lower risk of damage to toilet and household rolls, the new packaging material is so strong that it can be made extra thin, which reduces packaging weight and saves resources at all stages. The paper's white, long, soft virgin fibres reportedly provide extremely good printing properties. Because of this, there are new opportunities to make the packaging stand out.



Plastic-free flowpack for fruit and veg is sustainable alternative

Argos Packaging & Protection, based in the Netherlands has partnered with Italian paper packaging specialists Inkarta to become the official distributor of the No Waste Technology (NoW) Flowpack packaging. The NoW Flowpack consists of paper and cellulose and is FSC certified. The packaging is equipped with a one layer transparent cellulose window produced from wood pulp, so the packaging can be fully recycled in the paper recycling process. NoW Flowpack paper packaging is considered especially suitable for packaging fresh, dried and frozen fruit and vegetables up to a weight of 2.5kgs. The porous properties of the packaging promote a microclimate in the bag, which in turn extends the freshness and shelf life of the products. It is also claimed that the density of the paper provides a natural barrier against the spread of bacteria, viruses and oxidation from UV rays.



Coffee roaster moves to 100% paper packaging

California-based Heirloom Coffee Roasters has announced that it has moved its food service coffee to compostable 100% paper packaging instead of the industry standard plastic packaging. As well as being made from plastic, this packaging has typically also had wasteful valves, metal ties and poly liners to maintain the freshness of its contents. Heirloom Coffee Roasters' new 100% paper packaging eliminates the need for these features and replaces them with a semi-permeable layer that allows coffee to release gas without losing its flavour. The new packaging is said to be ultra durable, and has been specifically designed to withstand the rigours of the food service industry. The new pack was designed for their 5 pound (2.27kg) bulk packaging with palletisation, stacking, and food safety in mind. Heirloom Coffee Roasters' new packaging is available for purchase now through food service distributors nationally.



Collaboration results in tube and closure made from 85% fibre

A collaboration between two Scandinavian companies has resulted in what is claimed to be the first-ever paperboard tube with fibre closure. Finnish manufacturer of paper and pulp products Stora Enso has joined forces with Swedish bio-based closure manufacturers Blue Ocean Closures to develop the new tube and closure. All components of the tube are designed for recycling. The fibre-based screw cap developed by Blue Ocean Closures is combined with a tube composed of Stora Enso's barrier-coated board material Natura Shape and assembled by Swiss equipment supplier AISA. The solution contains more than 85% fibre content, the highest proportion available in a tube design. Intended for use in cosmetics, personal or home care, it is expected to be commercially available in 2024. The new wood fibre-based concept is said to support brand owners to increase the share of renewable material in their packaging.



Paper-based packaging aims to replace plastic for fittings and electrical components

Koehler Paper has introduced an additional product to its NexPlus range of papers originally developed as barrier films for the food sector. NexPlus Seal Pure is a sustainable packaging option for products with no additional barriers for products such as screws, electronic components and parts, processors, and LEDs. The company carried out a pilot project for a few months with Schneider Electric, to put the new Koehler NexPlus Seal Pure through its paces for the non-food sector. It is said to be very strong yet still supple, and another standout feature is its excellent printability, for example, for product illustrations or application instructions. Koehler's aim is to replace plastic in packaging by using so-called barrier paper wherever possible. Koehler NexPlus Seal Pure is available in grammages of 35, 40, 45, 65 or 80 g/m².



Spanish pickle producer launches new range in PP tubs

Alicante-based ITC Packaging has partnered with Spanish olive and pickle producer Sarasa to create a new packaging format for its Market Sarasa range of pickles. The new format is a PP (polypropylene) tub with a IML (in mould label), which preserves the organoleptic properties of the olives and the pickles, by keeping 100% of the barrier on the entire container surface. Furthermore, with the IML label, the design of the brand can be incorporated onto a mono-material tub that is 100% recyclable, which improves the branding and the image of quality. There are three formats in the range with capacities of 420ml, 600ml and 850ml, all with the same lid. The new containers favour optimum industrialisation because they withstand the pasteurisation process that the product undergoes, due to the dimensional and functional stability of the tubs.



Sustainable board-based alternatives to conventional plastic blister packs

International board packaging manufacturer WestRock is offering a portfolio of board-based alternatives to conventional plastic blister pack applications. The company's proprietary tear-resistant technology provides a safe, easy-opening experience without sacrificing product visibility. A reliable, fibre-based solution, Natralock delivers retail security and strong printability without the addition of plastic clamshells, wrapping materials or locked cases—helping companies work toward their sustainability goals. The range comprises the following products: NatraLock Face Seal offers reliability and durability for the most demanding blister packaging applications. Natralock Protect offers strength and pilferage protection for various blister pack applications. Natralock Resist and Resist+ offer protection, functionality and visual appeal for fibre-based blister seal and clamshell applications. Natralock Ultra Seal offers sturdiness and flexibility for fibre-based blister seal and clamshell applications. All products are available in either SBS (solid bleached sulphate) or CNK (coated natural kraft) boards.



Sustainable alternative to plastic packaging for fresh produce

Mustangpack has developed Mustang Paper Trays, a packaging solution made entirely from 100% virgin paper for fresh produce, which makes it easier for companies to switch from plastic to paper packaging. The patented octagonal design of the tray features double-folded edges and one continuous top edge that simplifies the application of the film and defines a reinforcing perimeter belt, which stiffens the structure of the punnet. Mustangpack's trays are FSC-certified and offer printable external sides with colours suitable for foodstuff and internal sides that can be customized with a humidity-resistant coating. Mustangpack's goal is to face the increasing demand for paper-based packaging and offers a solid and user-friendly alternative to plastic packaging for the fresh produce market. The top-sealing system reduces the use of plastic by up to 90% compared to flow pack wrapping. Combining this with a home-compostable cellophane top film, it is possible to achieve a plastic-free packaging.



Sustainable packaging manufacturer moves to paper for pallet wrapping

Silbo is a Polish company that manufactures paper-based sustainable packaging. In order to make their production more environmentally sustainable they have announced that they have moved the palletisation of their finished products from PE stretch film to paper. The paper used for palletising comes from responsible sources, is certified in the FSC (Forestry Stewardship Council) system and is fully recyclable. The paper has a carbon footprint that is 62% lower than a comparable PE product. These calculations were made based on the GHG Protocol, assuming the consumption of 840 g of paper per Euro-pallet and 400 g of stretch film per Euro-pallet. The paper used by SILBO provides adequate protection for the product and has successfully passed transport safety tests (according to EUMOS standards). Mondi Group Poland supplies the paper, and the wrapper is supplied by Austrian mechanical Engineering company EW Technology.

We have rejected stretch films.
From today we palletize without plastic.

SILBO
Packaging
*good for
the planet*



[Back to Trend Contents](#)

Mattress manufacturer moves from plastic to paper packaging

The Italian arm of multinational packaging and paper group Mondi has partnered with German mattress manufacturer Megaflex Schaumstoff to replace the current plastic packaging with a flexible and recyclable alternative. Mondi's Protector Bag ExpandForm replaces the current plastic packaging with a flexible and recyclable alternative. The solution is also customisable and can expand to different sizes while holding the mattress securely. The packaging is made with Mondi's kraft paper, which is responsibly sourced and renewable, and can be recycled, contributing to a more circular economy. The paper bag is puncture resistant and suitable for printing, meaning brands can customise their deliveries with a high-quality finish. Megaflex collaborated closely with Mondi and machine producer FillMatic to ensure a smooth switch from its current plastic rollpacking equipment. A spokesperson for Megaflex Schaumstoff said that Protector Bag ExpandForm was a perfect fit for their mattresses, and the plastic saving estimate is significant – over 18 tonnes every year.



[Back to Trend Contents](#)

Paper bottle is linerless, adhesive-free and 100% recyclable

South Korean company Innerbottle has announced that they have applied their patented formulated polymer to a paper bottle, making it fully recyclable. This new paper-based bottle, known as True Pulp, requires no liners or adhesive, and reportedly contains 90% less plastic than conventional bottles. However, it has some plastic components, a screw-on top, and a pump mechanism. The pump is completely free of metal, making it recyclable. The company says the bottle can be made from virgin material, recycled newspaper or corrugated boxes. The Innerbottle system was originally developed for conventional cosmetics bottles and is a balloon-like insert designed to reduce residue waste in cosmetics products. The Innerbottle is made from TPE (thermoplastic elastomer), which ensures that the outer bottle stays clean and allows up to 99.5% of the product to be used.



Thermothormed skin pack is first for Brazilian beef

Best Beef has announced that it is the first Brazilian meat company to use the Cryovac Darfresh on Tray system, packaging with a tray that has a high barrier “skin” lid film and meets the refinement of the cuts in the Black Label category, such as Filet Mignon, Prime Rib, Picanha, T-Bone, among others. The protection technology was developed by SEE (until recently known as Sealed Air), owner of the Cryovac brand and pioneer in the vacuum system for protein packaging. The vacuum packaging protection system features high-barrier sealing that prevents oxidation and increases the product’s shelf life, reducing losses, especially in retail. In addition, the technology reinforces the natural maturation of the meat and guarantees its freshness and the maintenance of its flavours for a longer period of time. According to SEE, other benefits of meat packaged in this way are savings in packaging material, storage space and even labour optimisation.



Sustainable paper labels launched

UPM Raflatac has launched a new range of paper labels designed to be more sustainable and recyclable. The labels are made from FSC-certified paper and are compatible with a variety of recycling streams. The new labels are available in various finishes and weights, and can be used for several applications, including food, beverage, and consumer goods. The labels are also said to be easy to print and apply, making them a convenient option for brands looking to improve the sustainability of their packaging. Launching the new paper labels is part of UPM Raflatac's commitment to sustainability. The company has set a goal of making all its labels recyclable by 2025.



Board alternative for vacuum skin packs reduces plastic use by over 90%

Finnish manufacturer of paper and pulp products, Stora Enso, has announced the launch of Trayforma BarrPeel, a new easy-peeling board material for vacuum skin packs, to enable the use of fresh food packaging on recyclable paperboard trays. Trayforma BarrPeel is a sustainable barrier-coated paperboard material for pressed trays, which reportedly helps companies to reduce plastic to less than 10% of the tray. Suggested applications for Trayforma BarrPeel include cold cuts, single-portion meats, fish and cheese. The tray is made from 90% renewable wood fibres. Therefore, plastic usage is kept to a minimum, significantly reducing the packaging's carbon footprint. Trayforma BarrPeel's surface material allows the overlaying polymer skin film to be easily peeled, providing packagers with what Stora Enso says is an "affordable solution that satisfies the increasing consumer demand for sustainable packaging materials".



French beauty brand opts for 100% recycled aluminium refill

Austrian aluminium tube manufacturer Tubex has developed a refill for French sustainable beauty brand la bouche rouge's range of perfumes. The mono-material tube is made from 100% recycled aluminium, and 95% of that aluminium is made up of post-consumer recycled content. The MonoRefill is made from a unique alloy containing recycled aluminium packaging and is manufactured in a single step using one aluminium slug for the entire tube. As such, it is made from a single material and does not require a plastic cap – features that are expected to facilitate easy recycling, lower emissions, reduce waste, and preserve valuable packaging materials in a closed loop. To open the pack, consumers can snap off the aluminium closure and empty the product into the original container. The tube is designed to allow easy pouring, prevent spillages and mess and ensure all the product is used.



New board for food products is flourochemical and plastic-free

Finnish producer of paper and pulp products Stora Enso has announced the launch of a new product to join its 50 year old Tambrite range. Tambrite Aqua+ is said to be an easily recyclable board for food packaging. This new version is fluorochemical-free and can withstand external moisture or grease to keep the product inside safe and fresh. Tambrite Aqua+ is made using 'dispersion coating' technology, which makes it a water-based solution that can easily be integrated with the paperboard surface and provide the required protection. It has also been designed to minimise the requirement of fossil-based plastics. As well as being suitable for dry foods, Tambrite Aqua+ can also be used for frozen and chilled foods. Aqua+ comes with the 'PAP21 logo', signifying that it can easily be recycled using normal board and paper waste streams.



British supermarket trials removal of neck sleeves from wine bottles

British supermarket chain Waitrose is trialling the removal of foil and plastic sleeves from the necks of its own label wine bottles to cut down on unnecessary packaging. The trial is being conducted on its Loved & Found range, with all ten varieties set to be sleeve-free by the end of 2023. By then, the move is expected to save half a tonne of “unnecessary packaging” annually. A spokesperson for Waitrose said that bottleneck sleeves were introduced many years ago to prevent pests such as moths and weevils from ruining wines kept in dark, damp cellars. The caterpillars of this moth species would bore into the wine corks, causing the wine to leak or taste musty. Today few people have wine cellars and those who do tend to keep them in much better conditions, meaning that sleeves up and until now have been purely aesthetic.



Product marking technology reduces carbon footprint

Cajo Technologies has unveiled Cajo MakeBright, a sustainable and efficient product marking technology. The initiative delivers a notable reduction in the carbon footprint of industrial labelling, decreasing it by up to 90%. It eliminates the need for ink or packaging labels, producing precise and permanent markings on cardboard that adhere to ISO 29158 standards. Cajo MakeBright employs a patented laser marking technology that facilitates rapid marking without additives, lowering operational costs and generating minimal waste. This adaptable solution can be integrated into both new and existing production lines. Cajo MakeBright offers a cost-effective and sustainable solution for the packaging industry.



Party beer keg reduces CO2 emissions by 69%

German brewers, the Westerwald Brewery, has partnered with tinplate manufacturer thyssenkrupp Rasselstein and steel can manufacturer Julius Kleemann to launch the world's first 5-litre beer keg made of bluemint steel, with reduced CO2 emissions. In the joint project, thyssenkrupp Rasselstein supplies the CO2-reduced packaging steel, the Kleemann company produces and prints the kegs, which are then supplied to the brewery. By using biomethane and specially processed steel scrap, thyssenkrupp Rasselstein can save up to 69% of their CO2 emissions. This makes packaging steel even more sustainable. The material is also a leader in a European comparison regarding the recycling rate, as 85.5% of tinplate packaging is recycled, reportedly making tinplate the most recycled packaging material in Europe. The thyssenkrupp Group has very ambitious goals: the German steel manufacturer wants to be completely climate-neutral by 2045.



Low temperature cleaner reduces energy consumption and CO2 emissions

Düsseldorf-based chemical company Henkel has announced the development of a low-temperature cleaner for aluminium beverage cans. The Bonderite C-IC 72000 series cleans at lower temperatures, which can reduce natural gas consumption and the plant's carbon footprint. In a recent trial, one customer reduced its natural gas consumption, resulting in a 38% drop in carbon emissions. Compared to conventional cleaners, which usually use around 60°C, the Bonderite C-IC 72000 series requires a lower operating temperature of 43°C, significantly reducing energy consumption. The cleaner also offers water consumption and maintenance advantages: it is low-foaming and, according to Henkel laboratory tests, produces 75% less foam than standard cleaners. It also creates a less corrosive environment, which the company says will extend the life of the steel washer and parts. This reduces both wear and tear and water consumption and increases the service life of the cleaning system.



New pizza box is lighter with lower carbon footprint

A three-way collaboration of Finnish companies has resulted in a new food-safe pizza box featuring reduced material and ink usage. The box was designed by Futupack and the packaging was manufactured by Adara Pakkaus, while Metsä Board provided the lightweight paperboard substrate to provide a better, safer, and more sustainable solution for food-grade applications. It is a fully bleached, uncoated white kraftliner suitable for flexo, offset, and digital inkjet printing and is available in a basic weight range of 70-160 g/m². Despite the reduced weight, the E-flute corrugated board box's structure provides the necessary rigidity. Compared to traditional solutions made of recycled fibre, the weight of the pizza box made of MetsäBoard Natural WKL Bright was up to 38% lighter, and its carbon footprint was reported as up to 50% lower, according to Metsä Board's Sustainability Service.





Protect and Preserve

Protect and Preserve

Solutions that prolong shelf life, decrease food waste, and safeguard contents have both environmental and economic benefits. We continue to observe new developments in this area. The COVID-19 pandemic has led to an increase in supply chain-based initiatives that aim to safely distribute vaccines.

Preventing food waste remains a crucial goal, and we are monitoring various packaging formats that have been engineered to reduce food waste. It is widely reported that between 33-50% of all food produced globally goes to waste, with a value of over \$1 trillion. Advancements in technology are playing a role in addressing this issue, with many recent developments using technology to detect and communicate changes in the state of food. Packaging plays a vital role in minimizing food waste. In this section, we will focus on examples that enhance the environment by extending shelf life or reducing waste, as well as packaging that protects the product through improved secondary packaging solutions that take into account environmental or cost considerations.

Protect and Preserve

[Substance produced by bees increases shelf-life of dairy products](#)

[Smart labels monitor quality of short shelf-life food products](#)

[Anti-counterfeiting system uses surface texture to verify authenticity](#)



Substance produced by bees increases shelf-life of dairy products

In a report published on the open-source scientific publishing organisation MDPI, it has been reported that propolis has great potential to be used as an active agent in food protective films, due to the number of polyphenols with multiple biological actions. Propolis is produced by worker bees, and is a mixture of resins collected from trees and salivary secretions. As a beehive defender propolis ensures that the hive is sealed and protected from external bacteria. The study aimed to develop and characterise a sodium alginate film with ethanolic propolis extract (EEP) for its potential use as a protective active packaging against nematode fungi in mature cheese. The test on cheese showed that the active mixture applied to the food matrix (cheese) as a film (by dipping or painting with a brush) was able to prevent the growth of nematode fungi during a storage period of 30 days at room temperature.



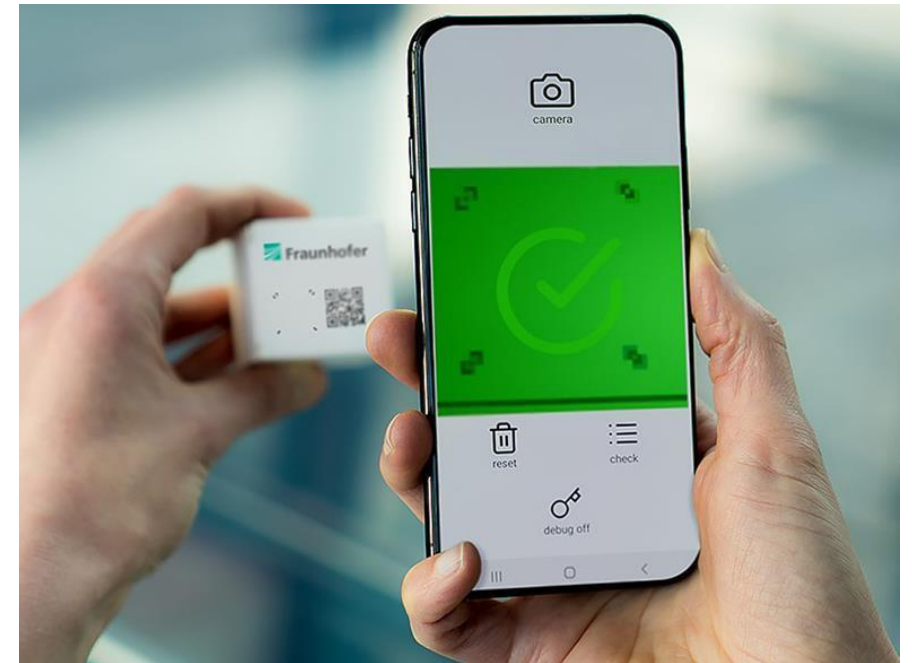
Smart labels monitor quality of short shelf-life food products

German technology company PolyTaksys has announced the development of its U4FOOD Smart Labels, to address the issues of food loss and waste in the refrigeration sector. The U4Food label reminds consumers to eat limited shelf-life products and in doing so reduces food waste, as well as giving information about the product/brand and ultimately leads to sales growth, it claims. The label is activated either automatically when the product is opened via product moisture, or by manual activation. Information and recommendations for action are released in a daily sequence, over a defined time period, for example, one, two or three days – each day revealing a different, more urgent message. Depending on the rate of cooling, the release of information can be accelerated or slowed down. Interested parties are being offered the opportunity to implement their own test market in supermarkets with U4FOOD opening time control labels from the middle of this year.



Anti-counterfeiting system uses surface texture to verify authenticity

German research organisation, the Fraunhofer Society, is developing a novel labelling system to uniquely verify and authenticate products via smartphones. Counterfeits of high-quality products such as medicines, cosmetics, watches, or even food and beverages circulate in large numbers, especially in online retail. Consumers usually have little chance to verify the authenticity of a product in this marketplace. The solution takes advantage of the fact that every pack possesses a unique, characteristic surface texture. The texture is comparable to a human fingerprint and can be detected by standard smartphone cameras, which scan the printed barcode and, at the same time, the texture of the surface. A specially developed app compares whether the information stored in the barcode matches the data from the scanned surface, so a tamper-proof barcode is created. The team presented the solution at Interpack 2023 in Düsseldorf.





Recycling Resurgence



[Next Page →](#)

Recycling Resurgence

This comprehensive segment encompasses both recycling initiatives and packaging that now integrates more recycled content. Numerous instances of mono-material developments and other measures aimed at boosting recycling rates are reported. The advent of Packaging Taxes, influencing packaging recycling, is also on the horizon. The UK has already set this in motion in April 2022, implementing a tax on plastic packaging with less than 30% recycled content. These activities inevitably drive the demand for packaging reduction efforts.

However, there's still a significant journey ahead in terms of consumer education and the crucial transformations needed in infrastructure and capabilities to enhance recycling rates. We're seeing an increase in the number of chemical recycling initiatives, albeit modest at this stage. Mechanical recycling processes continue to be the prevailing method for delivering recycled packaging, and this trend looks set to continue.



Recycling Resurgence

[Back to Start](#)

[Belgian crisps move to recyclable tube](#)
[Sustainable solution for cosmetics is easy to recycle](#)
[New flat bottomed pouch is 100% recyclable](#)
[Leak-proof lid for food-to-go is made from 100% rPET](#)
[Carry handle for fruit drinks is recycled and recyclable](#)
[Frozen food manufacturer moves out of black PET packaging](#)
[Innovative hotmelt adhesive introduced to ease plastic packaging recycling](#)
[Beverage giant trials technology for recycling 'hard-to-recycle' plastics](#)
[Beauty brands form partnerships to drive circularity](#)
[Sustainable pump dispenser is made from 100% PP](#)
[New sustainable mono-material pouch is 95% PP](#)
[PET aerosol is metal-free and 100% recyclable](#)
[Beverage giant moves to 100% rPET bottles in Thailand](#)
[UK supermarket launches fully recyclable handwash pack](#)
[Norwegian prawn packaging contains 60% ocean bound plastic](#)
[Flexible packaging company launches three new mono-materials](#)
[Beauty brand opts for recyclable tube and cap](#)
[Dutch recycler has unique technology for separating different plastics](#)
[Celebratory sausage roll pack is fully recyclable](#)
[Paper with ultra-thin metalised layer is recyclable](#)
[Recyclable PE film contains over 50% plastic waste](#)
[Three-way collaboration produces thin-wall cups made from rPET](#)
[New protective air cushions are made from 100% recycled plastic](#)
[Dairy and film manufacturers join forces to recycle cheese packaging](#)
[Researchers develop process to remove odours from plastic packaging for recycling](#)
[Cannabis packaging uses ocean-bound plastic](#)
[Recyclable packaging for rice, grains, and pulses launched](#)
[New varial geometry flow wrapper can run any material](#)

[Next Trend →](#)

Belgian crisps move to recyclable tube

Kellogg's, owners of the Pringles crisp brand, has announced that they are moving to a new recyclable tube in more markets. Following an investment of over €100 million (£86.9m), the revamped tube is now made of 90% paper, and the previous steel bottom of the can has been replaced. The research costs for the project were subsidised by VLAIO, the Flemish government's Innovation & Entrepreneurship Agency. It is claimed that the superior quality of the paper packaging is completely airtight and keeps the product good for at least a year, which is the main innovation. The new tube was developed with Fost Plus, the company that monitors the recycling of household packaging in Belgium. The production process of the new tube will be adopted in other Pringles factories worldwide after Belgium. According to the company, the paper used will come mainly from recycled materials. The paper tubes roll out in Belgium has now started.



Sustainable solution for cosmetics is easy to recycle

Florida-based Jabil Packaging Solutions has launched what it says is a more sustainable end-of-life solution for cosmetics, lotion, hair care and more. Their EcoJar is a hybrid paper packaging format that leverages recycled fibre for the outer shell and a recyclable inner liner that contains and protects the product. This two-piece format seamlessly connects the outer paper shell and interior liner to create a single-piece shell design. The outer shell and inner liner can be easily separated for recycling by removing the decal and applying pressure to the push tab on the pack's base. This lightweight packaging format leverages post consumer recycled paper and reduces plastic consumption per unit by as much as 60%. EcoJar does not rely on adhesives to bond the paper and plastic, ensuring that recyclability is maintained.



New flat bottomed pouch is 100% recyclable

Istanbul-based Korozyo Flexibles has announced the launch of its new 100% recyclable flat bottom pouch. Called KORORCY, (pronounced Kororecycle), it is a PE (polyethylene) monomaterial that can be used for a variety of products, from pet food to confectionery and instant beverages in the food industry, from agricultural products to cleaning and personal care products in non-food applications. It is side gusseted with five main panels and offers good product stability and shelf appeal. Additional options include multiple web, re-closure systems and easy carry handle. It can also have various finishes, including matt, high gloss, or a combination of the two, and a paper-look finish is also available. It can also be perforated or have laser scribing. These new recyclable flat-bottom pouches are suitable for products weighing 150 g to 10 kg.



Leak-proof lid for food-to-go is made from 100% rPET

Belgian packaging company Sabert Corporation has announced the launch of Snap2Go, a fully recyclable solution for chilled meals and food-to-go outlets. The secure snug-fitting anti-fog rPET clip-lid protects food, while offering easy one-hand closing. It securely fastens to internal tabs, locking into place with one simple push and click. Easy to hold, Snap2Go is said to be leak, moisture and grease resistant as it features a webbed-corner design. Refrigerator friendly, the multifunctional Snap2Go tray, with snug clip-lid is a good choice for all food-to-go applications from salads to chilled meals. For operators, it is easy to use, as the sleek, space-saving design and rigid construction means that it is both stackable and nestable. The base is a recyclable board which is made from Forest Stewardship Council (FSC®) certified paper, while the recyclable 100% rPET clip-lid is made from high-grade, post-consumer PET bottle flakes.



Carry handle for fruit drinks is recycled and recyclable

Britvic Soft Drinks, owners of the Robinsons squash brand, has announced that it has implemented a recyclable carry handle which will be applied to twin packs of its concentrated fruit drinks. Bedfordshire-based Item Products are supplying the handle, and the company worked closely with the packaging development and procurement teams at Britvic. Item Products set out timetables for the design, models, tooling, testing and approval of samples through to full UK manufacturing. The handle is made from 100% recycled material and can be disposed of through the domestic waste recycling system. It is designed to enable consumers to securely carry the pack by the collar when transporting it between the shelf and their homes. The handle will be applied to 1.75L twin bottle packs sold at wholesaler Costco.



Frozen food manufacturer moves out of black PET packaging

Norfolk-based frozen baked food manufacturer Finedale Foods, and owners of the Frank Dale wholesale brand, has moved all its products from black PET (polyethylene terephthalate) to clear recyclable PET and corrugated board. The new trays, which are supplied by Huntingdon-based Charpak, are made from rPET, and contain 70% recycled plastic, with a minimum of 30% PCR (Post Consumer Recycled) material. It has been calculated that the move to clear rPET packaging will result in 10 tonnes of black plastic per annum being saved from landfill. The corrugated board packaging is being supplied by CBS Packaging, based in West Bromwich. A spokesperson for Finedale said that removing black plastic entirely from their manufacturing process was a significant step towards Frank Dale becoming “a more sustainable, planet-conscious” brand. The move is being implemented across the company’s entire range, from their individual quiche portions, to tarts, pies, cakes and crostini.



Innovative hotmelt adhesive introduced to ease plastic packaging recycling

Avery Dennison, a US-based global materials science and manufacturing company, has partnered with leading materials science business Dow to introduce a new hotmelt adhesive for labels called PureWash. This breakthrough solution is designed to facilitate the recycling process of polyethylene (PE) and polypropylene (PP) plastic packaging, addressing the issue of adhesive residues that often hinder recycling. The PureWash adhesive technology can be removed easily during the recycling process, improving the quality of recycled plastics and increasing the overall recycling rate. This collaboration between Avery Dennison and Dow demonstrates their commitment to creating sustainable solutions and supporting the circular economy. With the adoption of PureWash, brand owners, packaging manufacturers, and waste management companies can significantly enhance the recycling efficiency of plastic packaging, thereby reducing waste and promoting environmental sustainability.



Beverage giant trials technology for recycling 'hard-to-recycle' plastics

Coca-Cola Europacific Partners (CCEP) is trialling technology that could turn hard-to-recycle plastic into beverage bottles. CCEP is funding CuRe, a Netherlands startup that specialises in producing food-grade recycled plastic from plastics typically destined for landfills or incineration. These hard-to-recycle materials include films, trays and coloured packaging and even clothing. CuRe Technology's polyester rejuvenation offers a low-energy recycling process for used polyester and PET. Their recycling process creates high-quality rPET with a carbon footprint that is approximately 65% lower than virgin PET, which can be used for food and drink packaging. The process, known as partial depolymerisation, removes colour from polyester, transforming it into clear polyethylene terephthalate (PET) pellets. CuRe has been sending samples of its recycled plastic to Coca-Cola's headquarters in Atlanta for testing. If the recycled plastic consistently meets quality standards, there is a possibility that it may be introduced into other markets.



Beauty brands form partnerships to drive circularity

Two beauty brands have revealed partnerships, which will drive circularity in the sector. French skincare brand Garnier is collaborating with Loop Industries in a pilot scheme to transform low-value waste into high-quality 100% recycled PET (polyethylene terephthalate). Canada-based technology company Loop Industries has supplied Garnier with 20,000 recycled bottles featuring the Loop Industries logo on the front of the packaging to support its environmental sustainability goals. Also, another French beauty brand, Sephora, is working with Australian nonprofit Pact Collective. To help reduce the amount of packaging ending up in landfills and oceans, Beauty (Re)Purposed will allow consumers to drop off their empty beauty packaging at any Sephora retail store, no matter the brand, and give their beauty products a second life. Pact Collective will sell the collected materials to a partner to convert the empties into something new such as carpet, pallets, asphalt, new packaging or energy.



Sustainable pump dispenser is made from 100% PP

Michigan-based TriMas Packaging has launched a range of single-polymer dispensing pumps. The 100% recyclable pumps, called Singolo, are made solely of PP (polypropylene). Singolo's range can contain various products and formulas with different viscosities. It can also be used as a sustainable alternative to replace conventional pump packs for beauty, personal care, and in-home care applications like hair products, hand and body soaps, dish soaps and body lotions. The dispensers can also be used for other applications, such as automotive cleaning, as well as in food and beverage and pet and agricultural applications. The pump can also be customised as per its user's needs. The pump has already received a 'Class A' rating from RecyClass, a cross-industry initiative focusing on advancing the recyclability and traceability of plastic packaging across Europe.



New sustainable mono-material pouch is 95% PP

Austrian chemical company Borealis has introduced a new high-barrier polypropylene (PP) monomaterial pouch for dry food packaging. The new pouches will be made of 95% PP or more, increasing the pouches' sealing and hermetic attributes. The new sustainable high-barrier packaging is mainly used for preserving and protecting food products that are sensitive to light, aroma, oxygen, and moisture. Expected uses include coffee and snack foods, as well as dry ingredients and powders. Using high-barrier solutions ensures a longer shelf life, which eventually contributes to minimising food waste. The new pouches have been designed to meet the broader recycling and waste reduction targets under the European Commission's Packaging and Packaging Waste Regulation (PPWR). The new pouches were developed in collaboration with value chain partners, including Mitsui Chemical Group, Jindal Films, Profol and Finnish company Huhtamaki Flexible Packaging.



PET aerosol is metal-free and 100% recyclable

Michigan-based Plastipak has announced the launch of SprayPET Revolution, a fully recyclable 100% polymer aerosol. Until now, PET aerosol containers used standard metal valves with rubber gaskets. Whilst many PET recycling plants are equipped to remove metal components in the recycling process, not all recyclers have this capability. Other components, like rubber gaskets, still cause quality concerns in the recycling stream. The valve utilizes new polymers other than PET for sealing with a molecular density of less than 1g / cm³. This means the valve can be easily processed with the PET container during the recycling process. As well as being 100% recyclable, recycled PET (rPET) can be included in the SprayPET Revolution container body. It has been assessed and approved by both the European PET Bottle Platform (EPBP) and the USA-based Association of Plastic Recyclers (APR).



Beverage giant moves to 100% rPET bottles in Thailand

Following certification from the Food and Drug Administration of Thailand (FDA), Bangkok-based Suntory PepsiCo Beverage (Thailand) Co. Ltd. has started to use bottles made from 100% rPET (recycled polyethylene terephthalate) as part of a campaign it calls “Fizzy Consciousness to Change the World.” Suntory PepsiCo partnered with the Property Management Chulalongkorn University (PMCU) in Thailand and Thailand-based plastic resins producer Envicco Ltd. in the effort, which it says is the first of its kind in that nation. The manufacturing and production processes at Envicco fall under the European operational standard practice to produce 100% PCR (post consumer resin) PET resin under the brand ‘InnoEco,’ which is certified by the United States Food and Drug Administration (USFDA) and also now by the FDA in Thailand. The first bottles to move to 100% rPET will be the company’s 550ml Pepsi and Pepsi No Sugar, followed by their ready-to-drink TEA+ Oolong tea.



UK supermarket launches fully recyclable handwash pack

In what is claimed to be a UK first, major supermarket chain Aldi has become the first retailer to offer fully recyclable own-label handwash packaging to reduce plastic waste. Removing any metal or glass components from the bottles means they are now fully recyclable at home. The company says the move will allow more than 200 tonnes of packaging material a year to be recycled more easily. The fully recyclable product will be available in all of Aldi's 990 UK stores. It is the latest move in Aldi's efforts to reduce its environmental impact and develop more sustainable product packaging alternatives. A spokesperson for Aldi said that reducing waste was incredibly important, and they would not stop looking for ways to improve their packaging to ensure shoppers know they are making more environmentally friendly choices when buying their everyday products.



Norwegian prawn packaging contains 60% ocean bound plastic

Saudi chemical company Sabic has partnered with Estonia-based Estiko Packaging Solutions and Coldwater Prawns of Norway to develop and implement a highly sustainable new packaging pouch for frozen prawns. The pouch is made from a multi-layer film produced by Estiko Packaging Solutions using a circular certified random polymer grade of SABIC PP QRYSTAL with an ocean bound plastic (OBP) content of around 60%. OBP is abandoned or inadequately managed post-consumer plastic waste found on riverbanks and in rivers up to 50 km inland from seashores. The certified circular solution is mass balance certified under the International Sustainability & Carbon Certification (ISCC) PLUS chain of custody. This means the material flow is controlled and tracked from the OBP to each pouch following predefined and transparent rules. Therefore, Coldwater Prawns of Norway can document the enhanced sustainability towards consumers by indicating the responsibly sourced packaging content on the pouches.



Flexible packaging company launches three new mono-materials

German flexible packaging company Huhtamaki has announced the launch of three new flexible, mono-material packaging solutions made from paper, polyethylene, and polypropylene. PE Retort material is reported to contain up to 95% mono-PE (polyethylene), while PAPER Retort and PP Retort (polypropylene) apparently offer a mono-material share of 90%. Each solution is apparently designed for recycling and aims to minimise the amount of material used to increase resource efficiency, thus utilising fewer materials than conventional multi-layered and complex materials. Huhtamaki says that these new materials offer the highest percentage of mono-material currently available on the market without impacting cost or protective qualities, and this is thought to increase the technical and economic possibility of recycling. It is anticipated that this development will contribute towards the company's own goal of reaching 100% recyclable, compostable, or reusable packaging by 2030.



Beauty brand opts for recyclable tube and cap

Swedish beauty brand Oriflame has chosen Albéa's (Re)flex 2 technology for two products of its new hair care brand Duologi. The Duologi Rich Creme Conditioner and Duologi Light Creme Conditioner both feature a (Re)flex 2 tube, an aluminium-free, plastic barrier laminate (PBL), combined with a low-profile cap. Albéa's (Re)flex 2 technology is RecyClass approved and fully compatible with the European rigid high-density polyethylene (HDPE) recycling stream. For the cap, the brand opted for a PP Slight Cap, one of the lightest on the market. A spokesperson for Oriflame said that the Duologi range had been designed in alignment with their sustainability goals. The combination of a (Re)flex 2 tube with a low-profile cap provided a reduced carbon footprint while contributing to the circularity of plastics as both components can be recycled.



Dutch recycler has unique technology for separating different plastics

Netherlands-based Umincorp is a recycler of plastic waste, which it receives from waste processors and municipalities. After shredding it, removing contaminants and washing it, they cut this waste into flakes, each consisting of one type of plastic. Magnetic Density Separation technology separates the flakes into different plastic types. This process recovers 90% of the plastic and is 75% more cost-effective than current recycling methods. The result is PP (polypropylene), HDPE (high density polyethylene), PS (polystyrene) and PET (polyethylene terephthalate), and is of such high quality and purity, it can be used directly in new end products as an alternative to virgin plastic. Their Rotterdam plant produces PET granules according to customer requirements. The first food tray packaging-to-packaging based on Umincorp PET has been available in Albert Heijn supermarkets in cooperation with plastic packaging manufacturer Royal Hordijk.



Celebratory sausage roll pack is fully recyclable

Yorkshire-based Parkside Flexibles has produced a limited edition recyclable sausage roll pack for Sainsbury's, to celebrate the UK coronation of King Charles III. The PE (polyethylene) lid utilises Parkside's ParkScribe technology to produce a peel and reseal opening feature. The lid is then sealed to a PE tray, which makes the whole pack recyclable under OPRL guidelines. The pack was developed in line with Parkside's Sustainable 7, or seven pillars of sustainability by which it designs and develops its packaging – these include reducing unnecessary virgin material use and weight, aiming for recyclability through the use of monopolymers, and designing packaging to reduce CO2 emissions throughout a product's supply chain. The project was a collaboration between Parkside and Compleat Food Group for Sainsbury's, and a spokesperson for Parkside said that a very quick turnaround was required to hit the launch.



Paper with ultra-thin metalised layer is recyclable

Two German companies have come together to develop a new premium metalised product paper-based film product called METIVO Advanced. Based on Koehler's NexPlus group of innovative flexible packaging paper products, it is said to have excellent oxygen, grease, and mineral oil barrier properties. Expected product categories include foods such as crisps, energy bars, energy powders, and coffee, but also non-food products such as cosmetics in powder or solid form. The extremely thin metalised vacuum coating by Nissha ensures recyclability and contributes to a sustainable circular economy. The Paper is made 100% with virgin fibre pulp from certified sustainable forestry and controlled sources and is designed to be recyclable in conformity with the latest testing methods. As with all other Koehler NexPlus paper products, this can also be heat-sealed. Compared to conventional plastic packaging, the flexible packaging paper reportedly reduces carbon footprints significantly and contributes to a sustainable circular economy.



Recyclable PE film contains over 50% plastic waste

British multinational chemicals company Ineos has announced the launch of a new recyclable PE (polyethylene) packaging film that contains over 50% plastic waste. The Ineos Recycl-IN range was developed with German machinery manufacturer Hosokawa Alpine's Machine-Direction Orientation (MDO) technology and with Ineos' specialism in polymers. It is claimed that Recycl-IN results in a reduction in carbon emissions of between 25% and 50% compared with virgin feedstocks. INEOS claims that this is the first time such a high amount of recycled plastic waste has been applied to this type of packaging. Ineos and Hosokawa Alpine hope these new solutions can replace multi-material alternatives and increase the recycled content in flexible packaging applications. A spokesperson for Ineos said they shared people's concerns about plastic waste, and producing more recyclable end products using large quantities of recycled materials shows their commitment to "creating a more sustainable future".



Three-way collaboration produces thin-wall cups made from rPET

Austrian plastic container producer Greiner Packaging has collaborated with the injection moulding machine manufacturer Engel and Dutch mould maker Brink nv to develop a new generation of thin-wall injection-moulded rPET (recycled polyethylene terephthalate) cups. Using 100% rPET results in up to a four-fold reduction in CO2e emissions compared to virgin PP material. The thin injection-moulded cups have an even wall thickness distribution and are designed to be both filling-line compatible and sealable. The development underlines the potential of cross-industry cooperation for a circular economy. Until now, however, PET has mostly only been used for thermoforming applications and for injection-moulded bottles and cans. Injection-moulded cups with thin walls have been realised mainly with polypropylene (PP), which to date has not received a positive EFSA (European Food Safety Authority) opinion. The use of rPET as a material of choice is due to its strong availability, food-grade status and high quality.



New protective air cushions are made from 100% recycled plastic

In what the company claims to be a first-of-its-kind innovation, the Cincinnati arm of German protective packaging company Storopack has announced the launch of AIRplus 100% Recycled air cushions. These air cushions are made of 100% post-industry and post-consumer plastic waste. AIRplus 100% Recycled cushions are made from recycled HDPE (high density polyethylene) and offer the same properties as virgin raw material air cushions, and shows that recycling is possible without degrading quality. The company says that producing this product saves 16% of greenhouse gases and conserves fossil resources throughout the entire production process. Also, after use, AIRplus 100% Recycled air cushions are recyclable and can be added to the recycling loop again. Storopack aims to increase sustainability year by year. In 2021, 33% of in-house products were manufactured from recycled or renewable materials, and their goal is to increase that figure to 50% by 2025.



Dairy and film manufacturers join forces to recycle cheese packaging

Arla Foods is collaborating with German film manufacturer and recycler SÜDPACK to explore new ways of recycling plastic waste. Arla produces mozzarella cheese at its Rødkærsbro dairy in Denmark. It needs to mature in specially designed bags for about two weeks. The plastic films need to be multi-layered for food safety reasons, but this also means they cannot be recycled through mechanical recycling, which is the industry standard across Europe. Utilising the processing capabilities at Carbolig, SÜDPACK's chemical recycling plant in Germany, they can ensure that the films produced for Arla's cheese maturing purposes do not exit the loop but instead are recycled into new packaging. One tonne of mixed plastic does not equal one tonne of new packaging, but it does reduce the need for fossil feedstock. The companies are testing the process with 80 tonnes of plastic film from Rødkærsbro dairy. After concluding the test, they will evaluate and plan the next steps.



Researchers develop process to remove odours from plastic packaging for recycling

Researchers at the Fraunhofer Institute for Structural Durability and System Reliability LBF in Germany have developed a new environmentally friendly process on a laboratory scale to remove odours from HDPE (high density polyethylene) packaging. Odour has until now significantly reduced the recyclability of plastic items. The new process developed by the scientists is based on pressurised water extraction. It removes the tracer fragrance limonene from commercial HDPE packaging and does not require organic solvents. In this way, the material quality of processed plastic waste can be increased within one hour. To develop the process, detailed insights into the chemical kinetics of the extraction process were necessary, which were made possible with the help of an innovative approach to in-process analytics. At the current stage of development, an application scenario for improved processing of plastic waste is emerging for the new process.



Cannabis packaging uses ocean-bound plastic

AE Global Packaging (AEG), based in Florida, are suppliers of packaging for the cannabis industry. In order to meet growing industry demand for sustainable cannabis packaging they have partnered with Ocean Recovery Group (ORG) to develop the EZ-Lock X ORG, which has been certified “plastic negative” by rePurpose Global. AEG has heavily invested in ORG, AEG’s recycling facility in the Dominican Republic, to establish a robust, closed-loop infrastructure to combat plastic pollution at scale. Ocean-bound plastic (OBP) is gathered at the ORG’s collection and processing site in the Dominican Republic, where the facility sorts, washes and produces flake. The flake is used in the injection moulding process to form child-resistant cannabis packaging. With every purchase of an EZ-Lock x ORG tray, nearly 35 grams of plastic are recovered. AEG has funded the recovery of 80,000 pounds of ocean-bound plastic through this initiative, while ORG has recovered 2,148 tons.



Recyclable packaging for rice, grains, and pulses launched

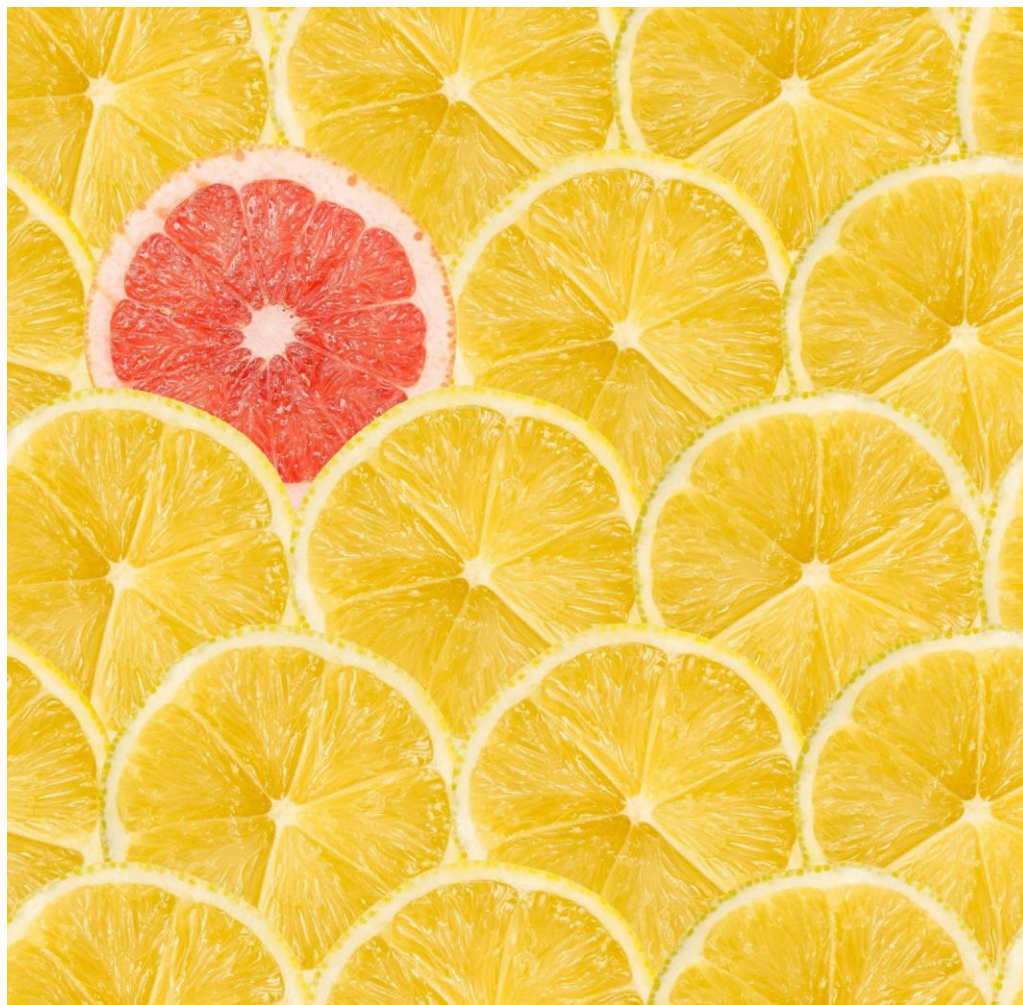
Marks & Spencer has introduced recyclable packaging for its rice, grains, and pulses range, in a move it says will save 5.5 million pieces of plastic a year. The new packaging is made from paper and cardboard and can be recycled in kerbside bins. The retailer has responded to their shoppers being increasingly concerned about the impact of plastic on the environment. M&S is not the only retailer to move towards more sustainable packaging. In recent months, several other supermarkets have also announced plans to reduce their use of plastic. As consumers become more aware of the environmental impact of plastic, it is likely that we will see more and more retailers making the switch to sustainable packaging. The retailer has committed to removing one billion pieces of plastic from its food packaging by 2027.



New varial geometry flow wrapper can run any material

IMA Ilapak has launched a new HFFS (horizontal form, fill and seal) flow wrapper that it says is the world's first variable geometry machine. It can run any packaging material, from paper-based to complex laminates and recyclable mono-polymer films. The Delta OF-360 X allows manufacturers and packers to switch easily between different substrates when more sustainable packaging decisions are fluid and uncertain. One of the first innovations to run on the Delta OF-360 X is Amcor's AmPrima film; a recycle-ready packaging solution for dairy products. AmPrima mono-material PE or PP films are lightweight, flexible, and ideal for dairy products, with elevated barrier properties designed to increase freshness and quality. Compared to standard, non-recyclable dairy packaging, AmPrima can reduce non-renewable energy use, lower packaging's carbon footprint, and reduce water consumption.





Getting Noticed

Getting Noticed

Despite the growth of online, the importance of creating impactful and noticeable packaging continues to create a point of difference. The packs have a role to get noticed on shelf as well as engage and delight in the consumer's hand and again this month we have some great examples. Despite the shift to online purchases, packaging that can get noticed continues to come to our attention. The importance of standing out on supermarket shelves or even in kitchen cupboards cannot be understated.

A pack's first impression can be the difference between success and failure in an ever-increasing competitive marketplace. We have tracked several examples that do just this. Also creating an impact in the hands of consumers is also important. A challenge for brands and retailers is to deliver pack finishes and decorations that meet the need to be sustainable.



[Back to Start](#)

Getting Noticed

[Champagne is available in limited edition personalised packaging](#)

[Music magazine to be embedded in 12-ounce beer can packaging](#)

[Next Trend →](#)

Champagne is available in limited edition personalised packaging

Australian customers of Moët & Chandon are being offered the chance to purchase champagne in limited edition metal boxes that allows them to add a personalised message to their gift of champagne. The customised “Specially Yours” gift boxes are available for the house’s signature 75cl Moët Impérial and also for its Rosé Impérial and have been launched for Australia’s Mother’s Day. The metal tins were designed and produced by the Moët & Chandon team in France and are then shipped to Australia. Once online orders are received, the personalised messages are printed onto the tin by a third-party fulfilment team locally. The company says that it hopes the tins are created as a lasting keepsake to mark a memorable milestone, the “Specially Yours” metal gift box is designed to be cherished as a personal memento long after the champagne has been enjoyed.



Music magazine to be embedded in 12-ounce beer can packaging

American beer giant Budweiser is set to launch “Budweiser Music,” a novel music magazine embedded in 12-ounce (355ml) cans, beginning in May in select markets across the United States, Canada, and Europe. This quarterly publication will offer music-related content, including musician interviews, behind-the-scenes glimpses of music videos, and unique music content accessible via a QR code on the can. The initiative is part of Budweiser’s strategy to reverse recent sales declines by appealing to younger demographics. It is noted that this is not an entirely novel concept with Coors Light debuting a similar “Coors Light Music” can-magazine in 2017, but the effort was short-lived. Reactions to Budweiser’s foray into canned print have been mixed, with some viewing it as a great way to connect with younger consumers, while others see it as a mere gimmick. The magazine will be published quarterly and each can will contain a different music-related article.





Refill Revolution

Refill Revolution

The trend towards refillable and reusable packaging is gaining momentum as more companies explore ways to reduce their use of single-use, hard-to-recycle packaging. This growth is partly driven by the goal of the Plastic Pact to deliver reusable packaging by 2025. Many of these initiatives are coming from start-up and smaller brands, but multinational companies are also beginning to test the waters with small-scale trials and pilots. The dry food, household, and health and beauty sectors are currently the most active in this area.

Consumer attitudes towards single-use packaging are shifting, with a growing resistance to disposable packaging. The innovations in refillable and reusable packaging can be categorized into the four models outlined by the Ellen MacArthur Foundation: Refill at home, Return from home, Refill on the go, and Return on the go. The dry food, household, and personal care sectors are leading the way in this area. Many of the in-store examples of refillable and reusable packaging are currently small trials and pilots, as major retail chains test the waters with a limited number of initiatives in select outlets. The next steps of these major retailers will be watched with interest.



Refill Revolution

[Back to Start](#)

[Dutch supermarket introduces packaging-free range with deposit system](#)

[Refillable baby formula pack is Australian first](#)

[French glassmakers to produce mass-market reusable glass bottles and jars](#)

[Spanish dairy introduces returnable glass jars for yogurt](#)

[Reusable system for cups and food containers is a first for Denmark](#)

[New jar for beauty products is sustainable and refillable](#)

[Fragrance brand introduces refillable aluminium bottle](#)

[Online food delivery conducts its first reusable pilot scheme in the US](#)

[UK city launches reusable takeaway packaging scheme](#)

[Refillable cleaning system uses beverage can format](#)

[Beauty brands' refill containers made from 90% renewable polymers](#)

[Next Page →](#)

Dutch supermarket introduces packaging-free range with deposit system

Udea, the renowned organic Dutch supermarket chain, is making strides in its commitment to sustainability by implementing a new deposit system. Customers now have the opportunity to purchase a variety of products, including pasta, rice, and coffee beans, in bulk without single-use packaging. What sets this initiative apart is the convenience of returning empty containers to any Udea store for a refund, helping to create a circular economy model. In partnership with Loop, Udea estimates that this deposit system will reduce approximately 100,000 kilograms of plastic waste annually. By charging a deposit fee of €0.25 per container, Udea aims to incentivize customers to actively reduce their reliance on disposable packaging. This move reinforces Udea's position as a pioneer in sustainable practices. As of today, customers can enjoy the expanded packaging-free range at all Udea stores.



Refillable baby formula pack is Australian first

In what is said to be an Australian first, Nestlé Australia has announced the launch of a new refillable system for its Nan Supremepro toddler milk formula. The refill system comprises a reusable stainless-steel can, lightweight pouches inside the tin, a specially-designed lid to keep pouches snugly in the can, and a scoop made from 95% renewable plant-based plastic. Parents can re-order refill pouches as required online, or sign-up for a subscription service. The new Nan Supremepro toddler ReFill system will result in 40% less primary packaging weight over a year, compared to Nan Supremepro 3 toddler 800g tins. The Nan Supremepro toddler refill system starter kit is priced at \$41.98 (£22.40) and two ReFill pouches are available at \$37.78 (£20.16) and can be purchased direct from the Nestle Baby Store online.



French glassmakers to produce mass-market reusable glass bottles and jars

Citeo is a company with a mission to reduce the environmental impact of their packaging and paper, by offering companies a combination of reduction, reuse, sorting and recycling solutions. The two main glassmakers established in France, the French Verallia and the American O-I, which hold some 80% of the national market, have now signed up with Citeo to produce the first reusable glass packaging formats for mass consumption, based on models created by French designer Fabrice Peltier. Two models of bottles and four jars have been developed. Citeo launched the ReUse project in January 2023, supported with €350 million until 2029. The French Anti-waste law for a circular economy (Agec) has set a target of 10% reused packaging by 2027.



Spanish dairy introduces returnable glass jars for yogurt

Spanish dairy Casa Mateu de Surp has introduced returnable and reusable glass jars for the yoghurts it makes. After use, the customer can return the jar to their usual supplier or directly to the factory and will receive an amount of between €0.10 and €0.40 for each glass jar. The price varies depending on the size of the container. The company says that this initiative entails a little more work, but compensates for the savings in packaging. The dairy is in charge of collecting, cleaning and disinfecting the containers to be able to use them. To make it easier, the yoghurt label is made of cardboard and is hung from the neck. The company says that it is still too early to assess the response from customers since the factory started the new system a month ago, but so far the reception from retailers has been good.



Reusable system for cups and food containers is a first for Denmark

Kleen Hub is Denmark's first digital return system for reusable coffee cups and food containers. To be part of the scheme, customers download the app and register themselves. They can then see which restaurants and cafes are participating with Kleen Hub. At any chosen partner, they simply open the app, scan the restaurant's or cafe's provided NFC card, select the number of items they wish to rent, and confirm. No deposit is required. After use, the customer returns the used item to any participating stores, where they're washed for the next use. As long as the customer returns the Kleen Hub packaging to any restaurant or cafe within ten days of being issued, there is no fee. Kleen Cups are double-insulated stainless steel walls that allow the liquid content to keep the temperature for much longer than single-use. The food containers are made from PP (polypropylene) and TPE (thermoplastic elastomers).



New jar for beauty products is sustainable and refillable

French personal care and beauty packaging company Albéa Group has announced the launch of a new sustainable jar called 'Twirl'. The new jar has been designed to address consumers' increasing demand for refillable cosmetic packaging solutions that can further help them minimise their carbon footprint. The jar comes in a 50ml capacity, with a 'soft and intuitive' mechanism, that will help consumers easily take products out of the inner jar to refill the product quickly. The Twirl jar also has a locking system, which is meant to maintain the stability of the inner cup, both vertically and horizontally. The packaging solution is made from recyclable materials, including PP (polypropylene) and PET (polyethylene terephthalate). Twirl was designed by Albéa's innovation and marketing team members, whose main focus was to deliver packaging that features innovative motions, without impacting the overall design of the jar.



Fragrance brand introduces refillable aluminium bottle

British fragrance brand Molton Brown has introduced what it calls the 'Infinite Bottle'. The new Infinite Bottle claims to be infinitely recyclable and, excluding its pump, is made from 100% recycled aluminium. As such, it is said to provide a 95% reduction in energy use and lessen CO2 emissions by 83% in comparison with virgin aluminium. The refillable aluminium bottle is 'made-to-last', and Molton Brown hopes to enable consumers to shrink their plastic footprints by 63%. Also, the outer carton and tag are both made of paper said to contain 40% recycled materials and 15% agro-industrial waste – specifically, upcycled by-products from the food and drinks industry. Its minimalist aesthetic is designed for ergonomic shaping and compatibility with any bathroom interior for an improved customer experience. The Infinite Bottle will be available for their Re-charge Black Pepper, Fiery Pink Pepper, and Coastal Cypress & Sea Fennel bath and shower gel products.



Online food delivery conducts its first reusable pilot scheme in the US

Uber Eats is conducting its first pilot in the US with reusable takeaway packaging. The pilot is being conducted in partnership with DeliverZero and the pilot will be conducted in New York with customers having a choice of over 80 restaurants. When customers order their food via the Uber Eats app they will be given the option to select reusable packaging at a cost of \$1. DeliverZero will then send them a text message with instructions for returning the reusable containers to a participating store or scheduling a DeliverZero pickup at no extra charge. Uber Eats will monitor the volume of first-time versus repeat users and will work with DeliverZero to track return rates. Previous data has revealed that about 70% of existing DeliverZero customers return the packaging at a participating restaurant instead of scheduling a pickup. The containers are BPA-free PP (polypropylene), and designed to be reused up to 1,000 times (although the reality is that no pack will ever be reused that much).



UK city launches reusable takeaway packaging scheme

A new reusable packaging scheme was recently launched in Bradford. The scheme called 'Borrow', sees participating local businesses in Bradford, Yorkshire, UK lending customers reusable takeaway food and beverage packaging for a returnable deposit of between £0.50p to £1. There are several incentives Borrow customers can receive, including discounts on food straight away when they place their order, and discounts on their next order when they return the takeaway packaging. Customers with a smartphone can also scan a QR code to enter monthly prize draws every time they borrow. Maybe* is an innovative technology company that devised the digital rewards scheme. When customers return Borrow packaging, they can collect points exchanged for free food and drink items. On their return, the cups and boxes are commercially cleaned and ready to be reused. Borrow was trialled for the first time at an open Iftar held at Bradford Cathedral in March.



Refillable cleaning system uses beverage can format

Puracy is a plant-based household cleaning and personal care brand based in Texas. They have announced the launch of the Clean Can and Clean Can Starter Kit, the brand's new sustainably-focused product that is aimed at eliminating single-use plastic. The kit uses a standard beverage can format, which, as it is made from aluminium, makes it infinitely recyclable. Puracy specifically designed the ready-to-use Clean Cans to be a frictionless solution that allows the user to get back to cleaning in 10 seconds or less. The user simply cracks open the can, snaps it into the system, and it's ready to go. It was designed to be mess-free unlike other options where the user has to decant product from one container to another, which can be messy. Clean Can is priced at \$9.99 for a starter kit, including one can cartridge of Surface Cleaner, and \$3.99 for additional can cartridges.



Beauty brands' refill containers made from 90% renewable polymers

Refill containers for Stella McCartney Beauty have been made with up to 90% certified renewable polymers from SABIC's TRUCIRCLE portfolio. The containers were developed with three French plastic converters. Texen, produced the container heads which are moulded in an impact resistant SABIC HDPE polyethylene (PE). For the container bodies, Leygatech, a leading manufacturer of barrier and multi-layer films, supplies a film made from SABIC LLDPE (linear low-density polyethylene), which is then processed and printed for finishing the containers by STTP Emballage. The containers are completed by flip-top closures injection moulded by Texen in SABIC PP polymer. The new refill containers have been designed for use with STELLA Alter-Care Serum and Restore Cream. They feature three SABIC polyolefin resins with a combined mass-balanced certified renewable feedstock content of up to 90% and meet with the vegan branding of the cosmetics manufacturer.



About Us

ThePackHub is a UK-based packaging innovation consultancy that provides packaging solutions to brand owners, retailers, and packaging suppliers. They offer technical support for packaging projects of all sizes, with a strong reputation for assisting start-ups to multinational organizations.

ThePackHub manages a comprehensive innovation database called The Innovation Zone, featuring over 7,200 packaging innovations worldwide, with 25 new initiatives added weekly. They have a vast network of packaging contacts across the industry that helps inform much of their consultancy work. Additionally, they have published several packaging reports, covering sustainability, packaging trends, supplier guides, seasonal packaging, and more. ThePackHub hosts face-to-face seminars that provide insight from expert speakers and bring the industry together to network and collaborate.

ThePackHub has a wealth of experience helping many major companies with their packaging innovation. Clients include Arla Foods, Waitrose, Barilla, Coca Cola, PepsiCo, Mondi, Premier Foods, AB InBev, Kraft Heinz, Mondelez, Mars Wrigley, Church & Dwight, PZ Cussons, Starbucks, Walgreen Boots Alliance, Marks & Spencer, Lidl, Muller and many more.



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