thepackhub
INNOVATION ZONE

PACKAGING INNOVATION

BRIEFING REPORT

JUNE 2022

Welcome

Welcome to ThePackHub's Packaging Innovation Briefing Report for June 2022.

We hope you enjoy this comprehensive and unique monthly review of all things packaging innovation.

This briefing of the month's global packaging innovations and industry news ensures that you are kept up to speed and fully informed of the latest packaging innovations.

We have 132 pages of content and have collated 115 new packaging innovations for the month.

The Nine Trends →

The innovations featured track ThePackHub's trend areas:

- Naturally Done
- Everyday Engagement
- The Online Surge
- Making Life Easy
- Materially Changed
- Protect and Preserve
- Recycling Resurgence
- Refill Revolution

Naturally Done →

Back to Start

Naturally done

Next Page →

Back to Start

Naturally done

This trend area continues to be active with 19 new bio-based initiatives this month. Compostable and biodegradable packaging continues to be developed. We also continue to track several new bio-based material alternatives to plastic. There is a significant amount of compostable, biodegradable and bio-based examples both in development and coming to market.

Without established industrial composting systems in place in most markets, the compostable sector is at a turning point. Mass adoption will only really occur when the infrastructure to deal with the packaging is in place. Home composability is still relatively niche with most consumers not having the space or the will to participate. There are also concerns about compostable and biodegradable packaging contaminating existing recycling waste streams. Cost is also a significant barrier with the packaging sometimes costing brands and retailers three to four times the price of conventional plastic-based products. That is a substantial investment for a brand or retailer when compostable packaging's full benefits are still to be fully understood. We have yet to see many big brand examples introduced with the majority being small challenger brands looking for a sustainable point of difference. The bio-based packaging sector continues to expand at pace. Many of the initiatives listed are still in development and not yet on supermarket shelves.

Next Page →

Back to Start

Naturally Done

Compostable packaging for US tea range introduced
Bio-based coffee capsules made from renewable raw materials
High bio-renewable content for UV offset inks
Fully compostable deli meat pack is a market first
PLA and kraft paper combine to create compostable veg packs
Snap-fit coffee cup lids made from sugarcane for European market
Amorphous PHA polymer launch is a market first
German toy range to incorporate bio-based material
Pasta brand switches to industrially compostable zipper bag
Lingerie brand switches to biodegradable packs
Apple producer switches to compostable packs
Researchers develop biodegradable packaging made with agro-industrial waste
Edible inks for direct food and pharmaceutical applications introduced
Canadian bread brand switches to compostable bag clips
Active packaging development aims to reduce food waste
Sugarcane-based bioplastic creates carbon negative footprint
Edible film in development made from pineapple waste
Plant-based barrier coatings created for fibre coffee cup lids
Bamboo-based MAP meat tray makes Australia launch

Next Trend →

Compostable packaging for US tea range introduced

The Tea Spot is a leading producer of handcrafted whole leaf teas based in Louisville, Colorado. Thanks to a $10,000 grant from Boulder County, the business has now introduced a line of 100% compostable packaging in its effort to make a low-waste impact on the environment. The grant facilitated thorough research of the appropriate compostable materials to expand The Tea Spot's sustainability efforts to individually wrapped tea sachets in foodservice. The packaging and tea sachets are made from plant-based and sustainable materials—100% biodegradable and compostable in commercial environments. This new iteration of the brand's best-selling teas is now available across seven tea flavours and are available through Whole Foods, Central Markets and the company's website. The brand claims to continually look for innovative ways to positively impact the environment and serve the tea-loving community through ideas, products, and now with packaging.

Back to trend contents

Bio-based coffee capsules made from renewable raw materials

In a three-way collaboration, German coffee producer Tchibo is introducing a bio-based capsule for its Qbo brand made from 70% second-generation renewable raw materials. The feedstock for the capsules is supplied by Finland-based Neste and will be converted into capsules by Berry Superfos. These second-generation renewable raw materials are manufactured using organic waste and by-products, such as tall oils from forestry, waste fats from the fast-food industry and vegetable fats from cooking oil production. These materials go into producing PP polymers with the same quality as virgin PP, and it is claimed that the consumer won't see or taste any difference. Tchibo say that they chose Berry Superfos for the project as it has experience with their products and holds the required ISCC PLUS certification to produce the capsules from renewable materials.

Back to trend contents

High bio-renewable content for UV offset inks

German ink manufacturer Siegwerk has announced the launch of a range of UV offset inks with high bio-renewable content for non-food paper and board applications. The formulation of these new inks consists of more than 40% of renewable and vegetable-based components, showing four times higher share of bio-renewable content than the average standard UV ink. The product range contains four-colour process inks according to ISO, Pantone colours, base inks, special colours as well as flexo OPV (overprint varnishes). Siegwerk says the series shows excellent ink performance and high colour strength. Next to high dot gain sharpness and excellent flowability, the new UV offset range offers a very stable ink and water balance even during long runs and good film flexibility for post-processing. It is also free of TMPTA (Trimethylolpropane triacrylate), Benzophenone and CMR CAT. 1 and CMR Cat. 2 components.

Back to trend contents

Fully compostable deli meat pack is a market first

Pennsylvania-based C-P Flexible Packaging has formed a partnership with St Louis-based cured meats producer Volpi Foods to bring to market the US's first fully compostable package for packaged deli meats. C-P will be supplying Volpi Foods with their GreenStream compostable packaging, which is certified compostable by the Biodegradable Products Institute (BPI) and meets the standards established under ASTM D6400 test methods. Made from plant materials, GreenStream™ compostable packaging breaks down into non-toxic components. This residue will break down into natural compost – carbon dioxide, water and biomass. Volpi chose C-P to partner with as they found that this next-generation fully compostable packaging worked successfully without compromising durability, machinability or sealing properties. Since 2020, Volpi has been converting all products to less environmentally damaging packaging, beginning with packs that use less plastic than standard deli meat packaging.

Back to trend contents

PLA and kraft paper combine to create compostable veg packs

Agromediterránea, based in Murcia, Spain, are specialists in growing and producing organic vegetable products straight from the fields. As part of their commitment to sustainability and innovation, they are replacing their previous plastic packaging with bio-based, biodegradable, and compostable PLA and kraft paper bags. The new plant-based bag prolongs the product shelf life, which, in the case of radishes and broccoli florets, can be extended to 14 days. Agromediterránea says that the move to biodegradable packaging is in response to consumers' growing concern for the environment and their search for fresh food that is produced more sustainably. The company says that the move is also part of their ongoing quest to find sustainable alternatives for packaging that will help to reduce their ecological footprint while at the same time guaranteeing food safety and maximum product quality.

Back to trend contents

Snap-fit coffee cup lids made from sugarcane for European market

Zume is a California-based manufacturer of moulded fibre products, whose aim is to replace single-use plastic items with compostable plant fibre-based alternatives. They have developed a compostable coffee cup lid made from bagasse, a by-product of the sugar industry. These snap-fit coffee cup lids are now available in the European market. Zume says that many fibre-based products don't hold up to hot liquids and either lose their form or break down, obviously an issue for coffee drinkers. The lids are said to have the same premium feel and functionality that coffee drinkers expect. Zume also says that due to world-class engineering and product design they are able to manufacture the lids at a price that makes it a cost-effective alternative to plastic.

Back to trend contents

Amorphous PHA polymer launch is a market first

CJ Bio is a biotechnology company based in Kerteh, Malaysia. As part of its PHACT Marine Biodegradable Polymers line, they have developed a new “market-first” amorphous PHA polymer. PHAs or Polyhydroxyalkanoates, are polyesters produced in nature by numerous microorganisms, including through bacterial fermentation of sugars or lipids. Amorphous PHA is a softer, more rubbery version of PHA that is said to offer fundamentally different performance characteristics than the crystalline or semi-crystalline forms that currently dominate the PHA market. CJ Bio’s immediate focus for this polymer is on flexible and rigid packaging. One promising application is accelerating the rate of composting of the biopolymer polylactic acid (PLA), which has seen significant growth as a bio-based material in a broad range of finished product applications. Blending amorphous PHA in PLA is reported to lead to significant improvements in mechanical properties, such as toughness and ductility whilst maintaining clarity.

Back to trend contents

German toy range to incorporate bio-based material

German construction toy manufacturer Fischertechnik is incorporating a flexible bio-based material from Espoo, Finland based Paptic for its packaging. The company has replaced single-use plastic in pouches of its bio-based construction set with the wood fibre-based material. Fischertechnik, seen as one of the sustainability forerunners in the toy industry, were keen to offer their customers a sustainably complete package, from the product itself to the packaging. By using Paptic, the company says that it is now easy for the consumer to recycle the entire packaging in one stream as it can be recycled with cardboard and packaging paper. The functionality of the material was of great importance, especially the puncture resistance of the material. Paptic materials are available as FSC (Forestry Stewardship Council) certified products. The project was completed in just a few months. The bio-based construction set Animal Friends packed in Paptic is now available in stores.

Back to trend contents

Pasta brand switches to industrially compostable zipper bag

UK based packaging company KM Packaging are on the innovation trail once again, now announcing their collaboration with fresh pasta makers Nonna Tonda. The two entities have partnered to deliver a packaging project called the C-Bag, an industrially compostable zipper bag from KM Packaging's C-Range that has also been developed in partnership with UK packaging specialists Treetop Biopak, which will be used for Nonna Tonda's fresh pasta. The bags are resealable to allow for maximum freshness, and are bio-based and made from renewable resources. The C-Bag is not only designed for pasta, it can also be used for produce and baked goods.

Back to trend contents

Lingerie brand switches to biodegradable packs

Perfect4U is an inclusive British online lingerie company that caters to all sizes and shapes. As part of their drive to become more sustainable they have announced that all of their packaging will be 100% biodegradable. The new packaging will be made entirely from biodegradable cornstarch and polymers. Once customers have unpacked their lingerie they can put the mailer and other packaging in their food waste collection bin or home compost bin. Perfect4U states that in as little as 6-12 weeks the packaging will be broken down completely by enzymes. For those with compost collection bins, the local waste centre will take care of composting. Perfect4U claims that in addition to being plastic-free the new packaging is also tough, durable and most importantly, bearing in mind the UK climate, weatherproof.

Back to trend contents

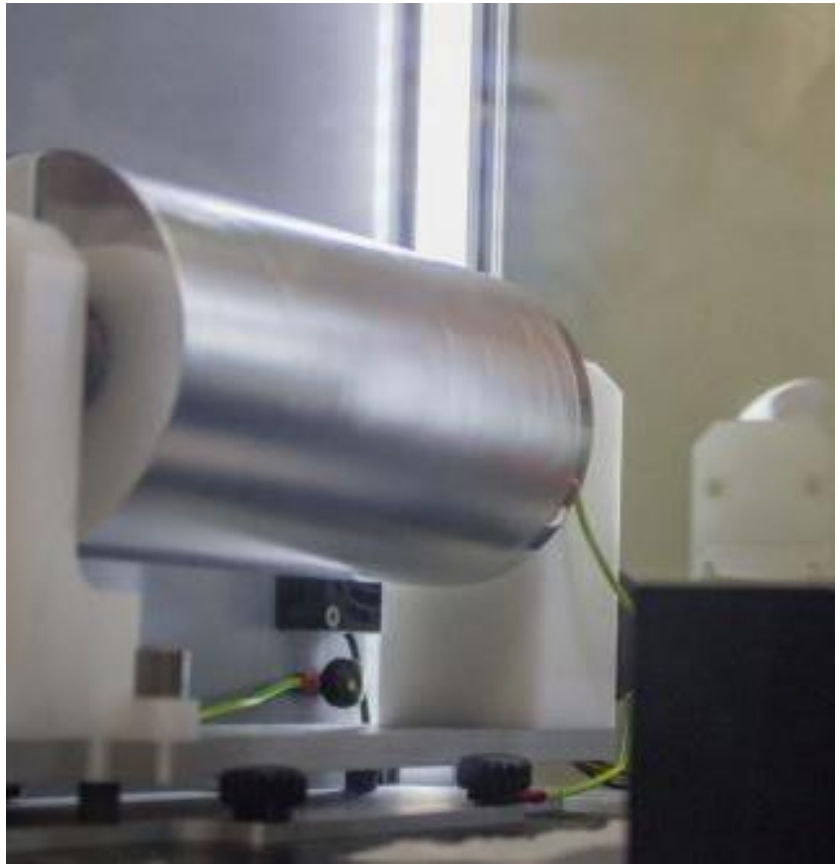
Apple producer switches to compostable packs

In what is said to be a first for the Australian market, organic apple producer R & R Smith is to move its 1.5kg apple packs to 100% home compostable packaging. They will be using Israel-based Tipa's biodegradable film, which disintegrates within six months in a home compost environment and in an industrially compostable setting within three months. Tipa films comply with standards for home and industrial composting, including ASTM D6400, ISO 17088, and EN 13432, and TUV OK Compost Home. Tipa films are designed to emulate the properties and functionality of conventional plastic materials such as polyethylene (PE) and polypropylene (PP), and have similar machine performance and sealing properties. R&R Smith say that the change was just another example of the company's active effort to reduce waste in its supply chain, and acknowledged that their customers wanted sustainable alternatives to single-use plastic.

Back to trend contents

Researchers develop biodegradable packaging made with agro-industrial waste

Peruvian scientists from CITEagroindustrial Chavimochic and the National University of Trujillo have developed biodegradable packaging made from agro-industrial waste. The researchers used different residues, such as asparagus peel, avocado seed, mango pepper and peel, and grape marc (skins, pulp, seeds, and stems), among other residues that are obtained from the agro-industrial companies that operate in the La Libertad region of Peru, to create the raw material for the packaging. The waste goes through a biotechnological process in the laboratories of the CITE and the UNT to obtain biopolymers: bacterial cellulose, polyhydroxyalkanoates, and starch. These compounds are an attractive alternative to common plastics, as they are of biological, renewable, and of biodegradable origin. The resulting packaging is expected to be used to cover and protect food, which would be used again by these companies and generate a circular economy process.



Back to trend contents

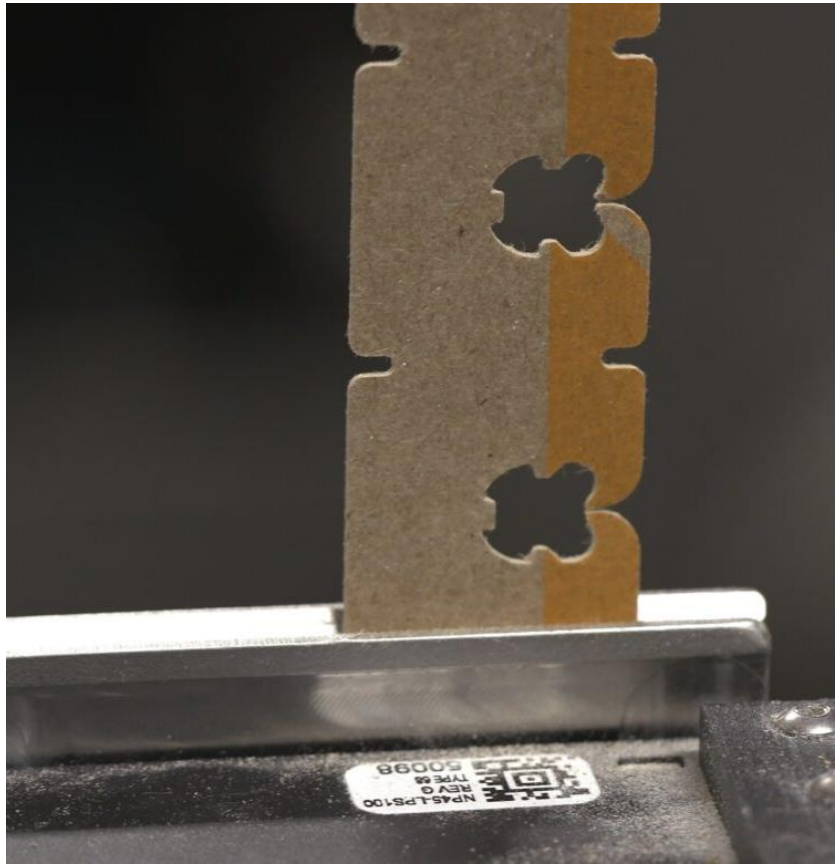
Edible inks for direct food and pharmaceutical applications introduced

The world’s largest producer of printing inks and pigments, New Jersey-based Sun Chemical, has announced the launch of edible inks for direct food and pharmaceutical applications. The technology is reportedly suitable for pharmaceutical and nutraceutical markets, such as printing on pills and capsules, as well as direct food printing, including onto baked goods. The company says its FSR ink range is based on synthetic colourants suitable for use in direct food printing applications using mid-viscosity range piezo printheads, such as the Ricoh GH2220 digital printhead. This completes a series of digital edible inks from Sun Chemical, adding to the existing low and high viscosity FSE and FSS lines, to enable food decoration with a full range of digital printhead technologies. The company says that the range combines an in-depth comprehension of food with deep knowledge of digital printing to deliver a high-quality and safe solution for customers.

Back to trend contents

Canadian bread brand switches to compostable bag clips

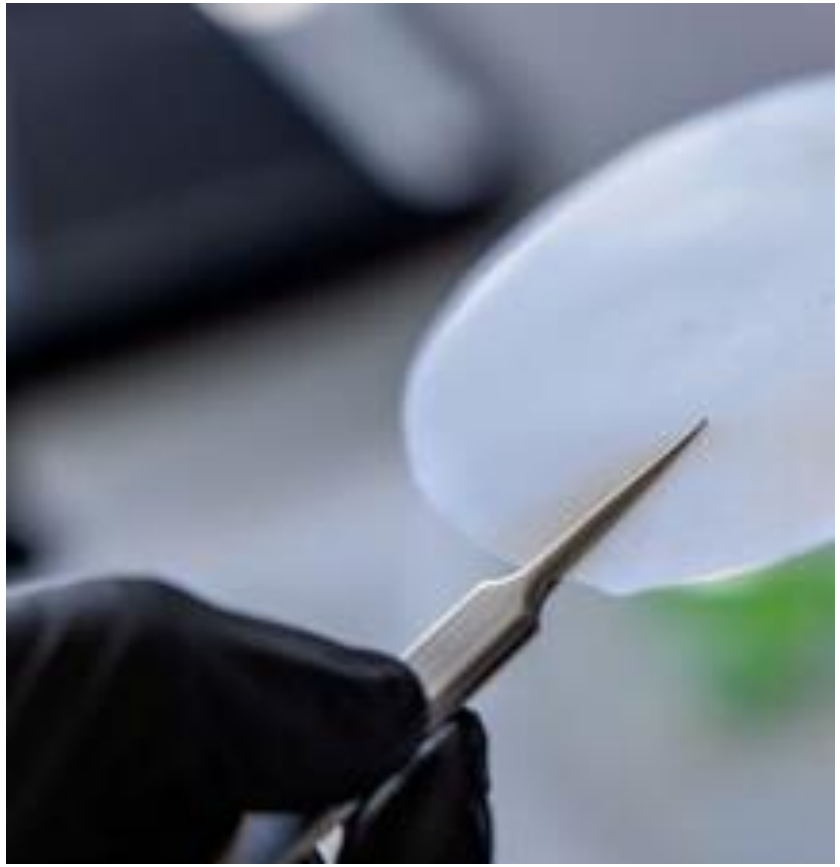
Bimbo Canada, a subsidiary of the Mexican bakery company, and one of Canada's largest bakery companies is changing its plastic bread bag clips to compostable cardboard clips. The change is to start immediately and will be complete within two months. It's expected to reduce the company's single-use plastic consumption by about 200 metric tonnes annually. The new cardboard tags are made from recycled board and can be composted in municipal kerbside waste pickup. Extensive testing has been carried out across various scenarios, including repeated cycles at room, fridge and freezer temperatures. They are said to biodegrade in the right conditions in 84 days. The new bread bag tags are the result of a partnership with Quebec-based KLR Systems, which won a provincial Food Innovation Award last year for developing the cardboard clips. Bimbo Canada has set a goal of having 100% of its packaging recyclable, biodegradable, or compostable by 2025.



Back to trend contents

Active packaging development aims to reduce food waste

New York's Cornell University is researching ways of creating active packaging to preserve food to help reduce food waste. Their latest findings, which will be published in the journal Food Packaging and Shelf Life, will feature a biologically derived polymer that helps products like salad dressings, marinades and beverages last longer when refrigerated. Scientists grafted the corn-derived polylactic acid polymer with the antioxidant nitrilotriacetic acid to use it in food packaging. In the lab, biologically derived polymer is grafted onto a plastic disc to demonstrate how it may be used in food packaging. It has been stated that as the antioxidant is bound to the polylactic acid, the preservative can interact with the food but not migrate into it. This means that a shelf-life benefit is gained from the preservative without consuming it. This allows for cleaner label foods, which consumers are reportedly looking for.



Back to trend contents

Sugarcane-based bioplastic creates carbon negative footprint

Australian bioplastic packaging manufacturer Grounded Packaging has formed a partnership with Plantable Health, who are providers of a plant-based lifestyle programme. Plantable will be changing their current plastic packaging to Grounded's Biovac bags, in a move that will help Plantable achieve a headline-grabbing carbon negative footprint for its packaging, while also replacing more than 2,114kg of virgin fossil fuel each year. They have also calculated that it will recover the equivalent of 106,000 bottles of ocean-bound plastic a year by using Grounded's sugarcane-based bioplastic Sugarflex. The partnership was announced on 2022's Earth Day (22 April), in the hope that it might inspire other food businesses, and encourage the acceleration to more 'earth positive solutions'. Plantable say that they have so far saved an estimated 3m^2 of forest area, 9 kg of CO2 and 1,100 gallons of water for every meal each day by encouraging the use of plant-based ingredients in place of animal agriculture.

Back to trend contents

Edible film in development made from pineapple waste

A team of researchers from the Department of Analytical Chemistry, Nutrition and Food Sciences at the University of Alicante in Spain have developed a new packaging material made from pineapple waste. Both the core and peel are used to make the plastic-like material. The new packaging format effectively thwarts potential pineapple food waste where as much as half of each fruit is wasted with the rind and core being the parts most commonly discarded. It is said to have properties which can increase the level of preservation of the food it holds, increasing shelf life. The end goal of the development is to have created an edible film that can be used to control the shelf-life of susceptible foods such as red meat.

Back to trend contents

Plant-based barrier coatings created for fibre coffee cup lids

HSMG, part of Singapore-based Greentech Global, has collaborated with Swedish moulded fibre packaging manufacturer PulPac to use HSMG's plant-based PROTĒAN technology. The first application which will utilise the technology will be Sweden's MAX burgers, which will be used on coffee cup lids. Traditionally paper-based packaging has a thin layer of plastic added to prevent water and grease from leaking through. Plastic layers can make paper-based packaging difficult to recycle. HSMG's PROTĒAN technology. However, it allows a thin, stretchable substrate to be applied during the forming process, helping to ensure the recyclability of moulded fibre packaging used for applications such as coffee cups and lids. The companies claim that PulPac's Dry Molded Fiber technology is a good fit with HSMG's barrier chemistry solutions. The PROTĒAN carrier sheet integrates readily into the manufacturing process and is an ideal way to target the barrier to the function required.

Back to trend contents

Bamboo-based MAP meat tray makes Australia launch

Australian sustainable food packaging manufacturer Caspak has formed a partnership with Melbourne-based organic butcher Hagen's, who will supply the butcher with an MAP (modified atmosphere packaging) tray made from bamboo. The trays, which are made from FSC (Forestry Stewardship Council) certified bamboo, can be recycled in kerbside recycling bins after removal of the lidding film, and a thin plastic film that can be peeled away from the bamboo tray so that the two materials are easily separated, the film can then be recycled through the RedCycle soft plastics system. The move to the fibre MAP Trays has resulted in an 80% total reduction in plastic, from 20g to just 4g per meat tray, and will increase the raw material recovery rate to 70%. The trays are designed to work with existing product lines, as there are no tooling changes required and are suitable for an array of meat, seafood and ready-meal applications.

Back to trend contents

Back to Start

Everyday Engagement

Next Page →

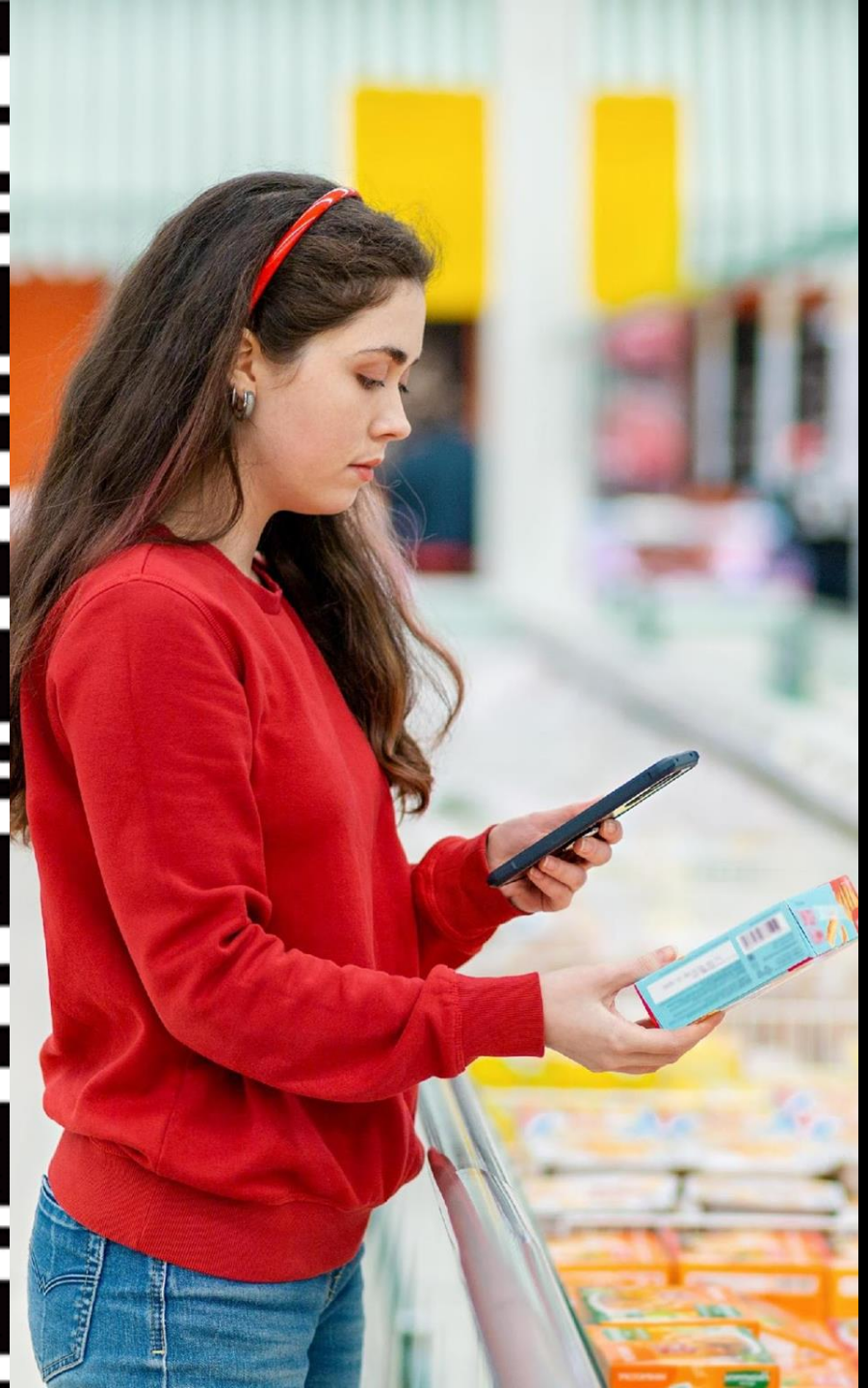
Back to Start

Everyday Engagement

Packaging that engages consumers and end users has an important role to play in the market and we continue to track some great examples. Many use smart and intelligent technology to reach their goals whilst others use pack shape and distinctive pack graphics to get the conversation going.

The ability to operate an ongoing dialogue with consumers is an important brand-building tool. Smart and intelligent technology such as RFID, NFC and QR codes are increasingly used for these purposes. The costs of the capability is coming down, opening up more opportunities for more everyday usage. Inevitably, the drive to deliver sustainable products influences the decision to use many of the technology-based examples as they often do not have an acceptable end of life plan. However, we are seeing more solutions that are easier to recycle and that is opening up the sector. The use of technology to engage with consumers also generates vital data insight opportunities for brands.

Next Page →



Back to Start

Everyday Engagement

NFC pack aids post-purchase engagement
“One a Day Banana” format presents fruit at different ripeness levels
Dual frequency inlays combine NFC and RFID technologies
Flavour-adjusting electric chopsticks make low-salt food taste salty
Digitally-enabled tracking tool for pharmaceutical manufacturers launched
QR code-enabled shipping solution allows for easier box returns
Digital packaging platform benefits manufacturers and consumers

Next Trend →

NFC pack aids post-purchase engagement

Clinique Laboratories, the US manufacturer of high-end skincare, cosmetics, toiletries and fragrances, have recently launched a limited edition version of their Moisture Surge 100H moisturiser. It features an NFC (near field communication) chip on the base of the jar. By tapping the chip, consumers can access a range of digital content and services. The limited edition ‘More Than You Think’ pack enables consumers to “find out what dehydrators may be affecting their skin; get advice from Clinique’s experts; then share the experience with others. NFC technology is a set of communication protocols that enables communication between two electronic devices over a distance of 4 cm or less and is now commonly used for payment at supermarket checkouts. The Limited Edition Moisture Surge 100H Auto-Replenishing Hydrator retails at £39 (£48) for a 50ml jar.

Back to trend contents

“One a Day Banana” format presents fruit at different ripeness levels

SSG.Com Corp. is a South Korean e-commerce business that functions as an online department store with its head office in Seoul. Due to climate restrictions bananas have not been a common sight in South Korea until recently. The fruit has now become more common in South Korean supermarkets since a trade route was established with global fruit producer Dole, with bananas being supplied from a plantation in the Philippines. They have now introduced the “One a Day Banana” format. The pack consists of a pack of four bananas each of which is selected to be at different stages of ripeness, from green to yellow. Therefore the consumer can eat one a day without the bananas going bad all at once, before the consumer has a chance to consume them, thereby reducing the amount of food waste.

Back to trend contents

Dual frequency inlays combine NFC and RFID technologies

Avery Dennison has expanded its dual-frequency inlay range with two new additions that combine near-field communication (NFC) and RFID (radio frequency identification) technologies for item-level tagging in retail and pharmaceutical applications. Dual-frequency technology offers shared memory functionality, Avery Dennison says. The inlays combine NFC (HF) and RAIN RFID (RAdio frequency IdentificatioN) is an ultrahigh-frequency RFID (UHF), which apparently means each interface can be used to update product information in real-time. AD Medio Web DF EM4425 and AD Web DF EM4425 V12 inlays and tags are designed for brand protection, supply chain management, and customer engagement. The company explains that NFC technology allows consumers to verify the authenticity of a product and interact with the brand in-store or at home via smart devices. Additionally, this could allow consumers to access more detailed product information such as carbon footprint analysis. For pharmaceutical applications, enhanced information on dosage, origin, and ingredients can allegedly be provided.

Back to trend contents

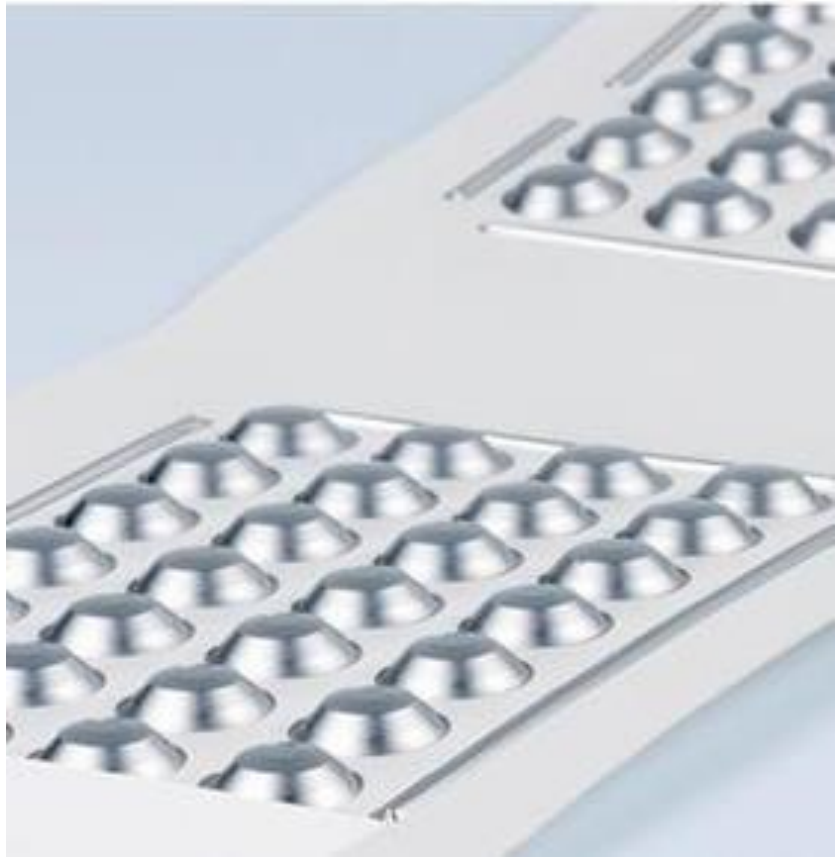
Flavour-adjusting electric chopsticks make low-salt food taste salty

Japanese manufacturer of beverages and pharmaceutical products, Kirin Holdings has partnered with Tokyo-based Meiji University researchers to demonstrate a set of electric chopsticks that can boost people's perception of saltiness. The researchers say that the "electric taste sensation" system pairs one regular chopstick with another that's connected to a wrist-worn power supply and control computer. Apparently, the system uses very weak electricity, not enough to affect the human body – to adjust the function of ions such as sodium chloride and sodium glutamate to change the perception of taste by making food seem to taste stronger or weaker. Gel "food" samples were given to participants, with precisely measured salt levels representing "normal" salted food and a reduced-salt version with some 30% less salt in it. When the device was turned on, subjects rated the reduced-salt food as slightly saltier than the "normal" food, on a "saltiness intensity evaluation point" scale.

Back to trend contents

Digitally-enabled tracking tool for pharmaceutical manufacturers launched

Munich-based Schreiner MediPharm has launched its upgraded Smart Blister Wallet – a digitally-enabled tool that allows pharmaceutical manufacturers to track compliance with clinical trial participants automatically and with greater flexibility. This new version has doubled the number of cavities available from 32 to 64. Featuring twice as many cavities, it can be implemented for all blister designs as well as for two or multiple-fold blisters. This prolongs the period of time during which the wallet can be used, and enables extended integration of several dosage strengths. Schreiner MediPharm supplies the cardboard box including the integrated conductive tracks and printed circuit board to the pharmaceutical manufacturer or contract manufacturing organization (CMO). Schreiner says that the solution is convenient, with an easy push-through removal of tablets, and simple NFC-based (near field communication) data reading at one point on the wallet, irrespective of the number of blister cards it contains.



Back to trend contents

QR code-enabled shipping solution allows for easier box returns

California-based Boox is a sustainable platform providing consumers and retailers with zero-waste, circular shipping solutions. The business has announced the expansion of its services to the UK. They are to share premises with Grimsby packaging company Tri-Pack. The returnable shipping solution features a QR code inside the pack that links to digital instructions that guide consumers through the returns process via one of 3,000+ InPost Lockers across the UK. Once returned to Boox, the boxes are carefully refurbished and re-distributed to partners to be reused over and over again. Boox boxes are manufactured from PP (polypropylene) and are made of 50% post-consumer plastic combined with 50% virgin plastic, a ratio the company says it aims to improve over time. By the time of a Boox's expected reuse of at least ten times, environmental impact is said to be reduced by 70%. There is also a reusable bag version, known as the Baag.

Back to trend contents

Digital packaging platform benefits manufacturers and consumers

US packaging company Sealed Air, known primarily for its range of leading cushioning packaging and Cryovac food packaging, is launching a new digital packaging brand called prismiq. This new brand will offer a portfolio of digital solutions. Sealed Air says that prismiq will create ‘game-changing value’ for their customers, enabling touchless automation in their own facilities as well as customers’ operations, making sustainability for packaging a reality. The prismiq brand offers three solution categories: smart packaging, design services, and digital printing. Using a smartphone, prismiq will allow customers to see effectively inside the package. Through the SEE™ Mark, multiple data signatures can be transmitted to a smartphone, including QR codes, bar codes, RFID, recycling codes and date and time stamps, to enhance the consumer experience. Sealed Air has reportedly invested approximately $100 million in digital transformation, including its most recent development: the prismiq5540, the world’s largest, fastest, flexible digital printing system.

Back to trend contents

Back to Start

The Online Surge

Next Page →

Back to Start

The Online Surge

The e-commerce market has demonstrated strong growth in recent years and its increasing prevalence is shaping packaging innovation. The COVID-19 pandemic has given the channel a significant boost with the demand for online specific packaging continuing to be important.

The growth of e-commerce is significant. The sector has grown more in the last 18 months than at any time in the last 20 years. It has received a significant shot in the arm due to the COVID-19 pandemic as swathes of consumers worldwide are compelled to switch from their local bricks and mortar stores to buying directly from their mobile, computer or tablet screens. It has been reported that a notable number of consumers were online shopping for the first time, and it's fair to say that many won't go back to the same physical shopping frequency again. Shopping and packaging's role has changed forever. As the market begins to scale, there are increasing opportunities for brands and retailers to offer packaging solutions tailored first and foremost for this channel rather than being replications of the packs bought physically instore. Packaging designed for the e-commerce channel does not need to have the same security measures. The purchase decision is on a screen so bright on pack messaging is not necessary, and packs do not need to be explicitly designed to be attractive for the supermarket shelf.

Next Page →

Back to Start

The Online Surge

Wrapping machine designed to create customisable e-commerce packaging
New functional paper aims to ‘revolutionise e-commerce’ sector
NFT coffee pouches are a market first

Next Trend →

Wrapping machine designed to create customisable e-commerce packaging

Italian packaging machinery manufacturer Sitma Group has announced the launch of E-Wrap. Aimed at the e-commerce sector, it is a paper wrapping machine that they say uses heat-sealable paper. This means that it does not require an extra adhesive system, meaning simplification of both the management of the production process and the maintenance of the machine. Sitma also says that the E-Wrap's display can reportedly 'read' the objects to create customised packaging. It is, therefore, able to create either envelopes or packs that fit the 3D form of the objects being packaged. Additionally, the machine can apparently insert documents into the package, such as invoices, delivery notes, return labels, coupons, and leaflets. Sitma also claims that the unit can be integrated into various production settings and hubs with different layouts, as well as combined with units for labelling and weighing.

Back to trend contents

New functional paper aims to ‘revolutionise e-commerce’ sector

Mondi, the global paper and packaging manufacturer, has collaborated with German machinery supplier Beck Packautomaten to bring a new e-commerce solution to market that it says could revolutionise the industry. Their FunctionalBarrier paper solution is said to replace plastic packaging and create right-sized packaging for a wide range of products when paired with Beck’s automated packing machine. Their machine ensures that products of different sizes are packed according to their requirements. The machine measures the packed goods and calculates the paper needed, reducing excess usage of the material and thereby minimising waste and costs. Mondi’s FunctionalBarrier Paper is 95% paper and features enhanced barrier properties to guarantee premium product protection against water vapour and moisture. The paper is made with a higher strength, enabling it to carry heavier items without breakage. It is responsibly sourced, made of renewable materials and recyclable in existing recycling streams throughout Europe.

Back to trend contents

NFT coffee pouches are a market first

A recently launched subscription coffee service, called the Bored Breakfast Club, has digitally printed coffee pouches that feature NFTs (non-fungible tokens) as part of their artwork. The Bored Breakfast Club is the brainchild of Kley, a digital design studio based in Los Angeles, who wanted to bring their passion for coffee to a wider audience. Their intention is to launch a new blend to customers every five to six weeks. An NFT is a blockchain-based digital identifier that certifies the authenticity and ownership of a digital file containing unique content, such as artwork. Bored Breakfast Club's clever strategy marries those virtual assets to physical packaging. Bored Breakfast Club NFTs reside on the Ethereum blockchain, and each NFT is sized for use as a banner in the owner's chosen social network. Each NFT depicts a unique breakfast scene. The brand's 5000 NFTs were minted in January 2022, and the number of owners is currently 2,600.

Back to trend contents

Back to Start

Making Life Easy

Next Page →

Back to Start

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.

Next Page →

Back to Start

Making Life Easy

Sustainable and easy-to-use pill box alternatives starts pilot
Digital expiry date simplifies supermarket mark-down process
Half-bottle sized wine bottles to attract younger drinkers
Squeezy peanut butter pack is a UK first

Next Trend →

Sustainable and easy-to-use pill box alternatives starts pilot

US-based Parcel Health is a women-founded medication packaging startup focused on creating sustainable and functional prescription packaging. They have now launched their first product, the Phill Box as a pilot scheme, which is being trialled at ten independently owned US pharmacies. The Phill Box is recyclable, compostable and water-resistant. It is being touted as an easy-to-use alternative to conventional plastic pill bottles. Made from high-quality mineral-coated paper, the Phill Box uses 100% sustainably sourced paper, certified by Programme for Forest Enforcement Certified (PFEC). The Phill Box's proprietary opening mechanism is designed to be child-resistant, and considerate of ease of use for the elderly. The pilot pharmacies are located in 10 different cities across the East Coast, West Coast, South, and Midwest. Many of the pharmacies offer quick prescription transfer and free delivery, making the switch easy and convenient for patients.

Back to trend contents

Digital expiry date simplifies supermarket mark-down process

Supermarket chain Asda, the UK's third largest, has collaborated with Gothenburg, Sweden consultancy Whywaste in a bid to reduce food waste. They have been working together on a new data solution to simplify the supermarket's mark-down process through an app that records expiry dates. The Whywaste digital date checking solution identifies products that are close to the expiry date on the packaging and sends this information to Asda employees via the app. This apparently means employees do not need to look at every product individually, enabling them to mark down products more efficiently. A pilot trial commenced in one store in 2020, and was rolled out across all stores early in 2022. The Whywaste solution means no product is overlooked and that upcoming expiry dates can be acted upon more quickly. Asda says that this will help with its goal of reducing food waste by at least 50% by 2030.

Back to trend contents

Half-bottle sized wine bottles to attract younger drinkers

Premium Australian winemaker Taylors Wakefield Wines has announced that they are releasing three of their award-winning Jaraman range in a 375ml half-bottle size. The move follows recent research from wine consumer research and insights business Wine Intelligence that stated that younger drinkers (Gen Z and Millennials) are more likely to consider purchasing alternative packaging types as they consider them a more convenient packaging format. Taylors say that more and more people want to enjoy premium quality wines at picnics, for example without carrying an entire bottle or worrying about any wine wastage. For its initial release of 375ml bottles, Taylors has selected its 2020 Jaraman Clare Valley & Coonawarra Cabernet Sauvignon (RRP $20), 2020 Jaraman Clare Valley & McLaren Vale Shiraz (RRP $20) and, for the white, the 2021 Jaraman Adelaide Hills and Clare Valley Chardonnay (RRP $15). The new 375ml half-bottles will be available from select independent retailers and via Taylors direct.

Back to trend contents

Squeezy peanut butter pack is a UK first

Whole Earth has announced the launch of what is reported to be the first squeezy peanut butter pack to launch into UK supermarkets. Called the Drizzler, it comes in a bottle made from recycled plastic, and can be recycled again. Thanks to a unique production process the Whole Food Drizzler delivers a delicious taste and runnier peanut butter texture that's said to be perfect for drizzling. It will be available in two varieties, Classic Roasted Super Smooth Peanut Butter and Golden Roasted Super Smooth Peanut Butter. A 320g bottle will retail at £3.30. The launch will be supported by a £1.5m marketing campaign spanning key consumer touchpoints including shopper, out of home, digital, PR and influencer support. Whole Earth holds the largest UK share within the peanut butter category at 26.7%. Drizzler will be available initially in Waitrose and Tesco before a wider rollout.

Back to trend contents

Back to Start

Materially Changed

Next Page →

Back to Start

Materially Changed

The packaging continues to see a lot of change of materials driven largely by sustainability objectives. Plastic replacement is still top of the agenda for many brands and retailers as they look to switch out of the material to solutions that may offer a better environment footprint or at least be better received by anti-plastic focused consumers. We have 18 initiatives this month.

ThePackHub continues to report many instances of brands and retailers switching primarily from plastic to other often paper-based alternatives. Some, but not all, support the move with positive evidence of these changes' environmental impact. The reality is that we are experiencing a cycle of high change where, in some cases, recyclable plastic is being replaced with other materials because consumers believe this as the right thing to do from an environmental perspective. However, not all examples stand up to stringent environmental scrutiny. Most of the material changes have often come about following significant investment in machinery and new processes. These switches are for the longer term, and any reversals are a long way off.

Next Page →

Back to Start

Materially Changed

Air capsule packaging alternative to conventional corrugated shipping cases
Glassine-based release liners switched to certified base paper
Full market roll out for aluminium-free aseptic carton range
Durable and waterproof paper packaging designed to replace plastic
New technology for PET bottle reduces pack weight and CO2 by 30%
Linerless product range granted CarbonNeutral certification
Patent-pending alternative to beverage PE shrink wrap in development
Tube weight reduction achieved through head and cap fusion in one component
Contact lens brand gets rid of plastic pouches for delivery
Hybrid wood and corrugated board box offers weight advantages
Material-saving tube reduces carbon footprint
First vegan-certified packaging company announced
Alternative to plastic and paper for limestone-based initiative
Calcium carbonate-based plastic alternative launched
Wet-wipes in a bottle aims to cut waste
Loose fruit and veg to become the norm for UK’s biggest supermarket
Paper-based alternative to plastic padding and bubble wrap developed
Recyclable paper ketchup bottle prototype starts development

Next Trend →

Air capsule packaging alternative to conventional corrugated shipping cases

Procter & Gamble China has revealed a novel packaging solution called Air Capsule Express packaging. The development was recently shared by their R&D Technology General Manager, and is being touted as an alternative to conventional corrugated board shipping cases for protecting fragile items in the last mile of delivery, and reducing the quantity of packaging. The Air Capsule Express packaging is made from a single material that is inflated with air, is waterproof, recyclable, and weighs 40% less than a normal shipping case. Procter & Gamble China joined the GRPG (Green Recycled Plastics Supply Chain Joint Working Group) to investigate waste separation recycling and plastic recycling enterprises. The Air Capsule Express was developed jointly with the GRPG, who together carried out pilot trials for recycling of the Air Capsule Express as a way of promoting a greener circular economy.

Back to trend contents

Glassine-based release liners switched to certified base paper

Global leading multinational packaging group Mondi continue to extend their portfolio of packaging innovation solutions on a regular basis and have more initiatives listed than any other supplier. They have been on the innovation trail once more announcing that the business is switching all of their glassine-based release liners to certified base paper. This change, along with collaborations with certification schemes, will guarantee that the wood used for the paper is sourced sustainably and from responsibly managed forests. The new liners can be used in the exact same applications as the previously used iterations, and show no difference in quality or standard. All of the Mondi's pulp and paper mills are PEFC or FSC certified.

Back to trend contents

Full market roll out for aluminium-free aseptic carton range

Developments to improve aseptic carton recyclability continues to be tracked in the Innovation Zone. Norwegian liquid carton producers Elopak, have announced the rollout of a carton innovation which will be aluminium-free, called the Pure-Pak eSense. The aluminium in the carton will be replaced by a polyolefin blend barrier, resulting in a potential 50% lower carbon footprint than a standard Pure-Pak aseptic carton, as well as the carton being fully recyclable. The next brand that will be employing the Pure-Pak eSense is the Spanish drinks manufacturer García Carrión for their Don Simon brand.

Back to trend contents

Durable and waterproof paper packaging designed to replace plastic

Scientists at the Institute of Solid State Physics at the University of Tokyo have released an article that describes a method to make paper durable and waterproof, while at the same time being biodegradable. The paper describes a simple method for making a coating that the developers call Choetsu, which is designed to compensate for paper's lack of water resistance and strength so that it can become an alternative to plastic. Choetsu is a combination of safe and inexpensive liquid chemicals that, when applied to paper, form a durable and waterproof film upon contact with atmospheric moisture. Paper packaging, such as for food containers, is coated with this liquid mixture and then dried at room temperature. After the packaging is disposed of, over time, all the chemicals that make up this coating break down into harmless carbon, water and silicon.

Back to trend contents

New technology for PET bottle reduces pack weight and CO2 by 30%

The US division of Amcor Rigid Packaging has announced the unveiling of a new technology known as PowerPost. The business has been able to produce PET (polyethylene terephthalate) bottles that are 30% lighter, produce 30% less CO2, and can be made with 100% recycled material. PowerPost has two key technologies: an invertible, central post that actively displaces vacuum, and PowerStrap, the flexible ring surrounding the post. After filling, the post is inverted to actively displace the vacuum inside the container and, as the product cools down, the surrounding ring flexes to passively absorb any remaining vacuum. By eliminating the vacuum panels, PowerPost offers increased design freedom, a premium appearance with consumer appeal while addressing environmental sustainability goals. Eliminating the panels in the body also drives operational improvements at the fillers as labels can be applied more efficiently. The bottles also boast a superior user experience, avoiding overflow spills when consumers open their beverages.

Back to trend contents

Linerless product range granted CarbonNeutral certification

Finland head-quartered UPM Raflatac has announced that its entire Linerless product range has been granted CarbonNeutral product certification by Natural Capital Partners, who have issued the certification according to The CarbonNeutral Protocol, which provides what is said to be a robust and pragmatic blueprint for carbon neutrality. The Linerless products' GHG (greenhouse gas) emissions are compensated through offsetting projects. The Linerless products' cradle-to-customer greenhouse gas emissions are compensated in full through global projects verified to internationally recognized standards, such as the Gold Standard. This standard means that UPM Raflatac has compensated for the emissions that are unavoidable on behalf of their customers. Direct thermal (DT) linerless labelling products help customers reduce their packaging footprint, UPM Raflatac says that linerless labels give up to a 40% reduction in material usage compared to traditional labelling technologies. They claim that the DT linerless market has seen approximately 15% year-on-year growth in recent years.

Back to trend contents

Patent-pending alternative to beverage PE shrink wrap in development

Nordson India creates dispensing equipment for consumer and industrial adhesives, sealants and coatings. The business has announced the launch of an adhesive-based, patent-pending alternative to single-use PE (polyethylene) shrink wrap for product collating applications. Adhesive beads are applied to both sides of a board or textile carrier via an automated machine. The product is then placed onto the adhesive and assembled into a collated bundle. The patent defines numerous shapes and sizes of the carrier, along with the kinds of products that could be collated and numerous arrangements within the bundle. Expected uses are for beverages, personal care and even books, among other items. On removing products from the carrier, the adhesive remains on the carrier, as a residual adhesive on the product after its separation from the bundle would make it unsaleable. A similar technology also finds an opportunity for applications in pallet stabilisation, where pallets are currently stacked and wrapped with stretch film.

Back to trend contents

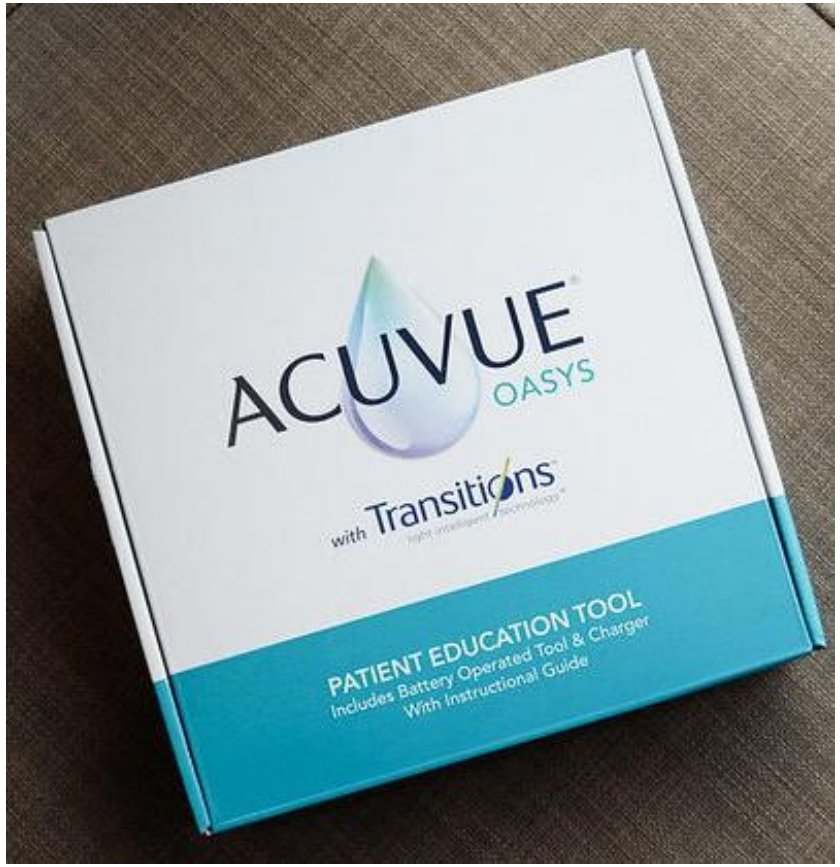
Tube weight reduction achieved through head and cap fusion in one component

French tube manufacturer Albéa has announced what it says is a market first product with the launch of EcoFusion Top. The solution is a fusion of the head and the cap in one component, yielding more than 80% weight reduction when compared to the classic flip-top + head. This results in an overall weight reduction of 55% for the whole tube versus standard tube formats. Being manufactured from HDPE (high density polyethylene) it is also a recyclable-ready solution in rigid packaging recycling streams certified by APR & Recyclass. Albéa say that by designing a single open-and-close system and reducing the tube's components to only two, makes EcoFusion Top a first on the beauty market and a new milestone in its product roadmap. This two-in-one system will be available with various sleeve options such as Greenleaf for laminate tubes and the Thin-Wall technology for extruded tubes.

Back to trend contents

Contact lens brand gets rid of plastic pouches for delivery

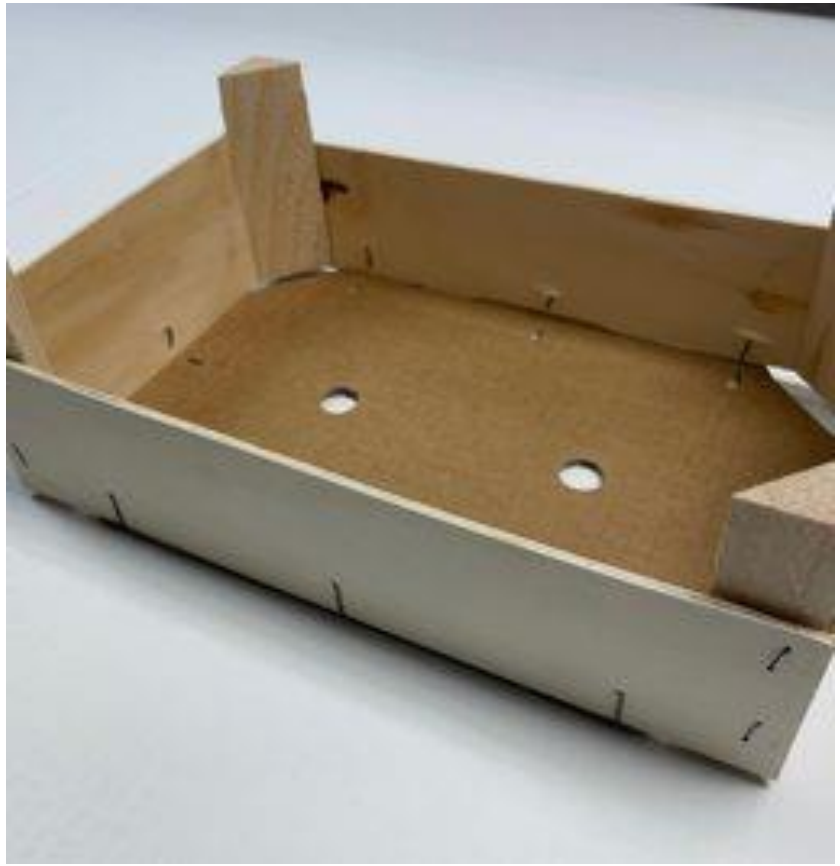
Johnson & Johnson Vision is to remove the plastic pouches currently placed on the outside of European Acuvue deliveries, with UK deliveries to follow in the next two months. Instead, essential customer information will be displayed on self-adhesive labels. They claim the move will save around 10 tonnes of plastic across the European market annually. Going forward the company intends to roll out the change across its wider operations. This latest move will support Johnson & Johnson's overall target towards its 2030 net zero target. The business recently published its plans to cut its carbon footprint, reduce waste and limit the use of natural resources. In 2022 Johnson & Johnson moved to 100% renewable electricity, three years ahead of target, and saved 42,000 tons of CO2 annually through renewable and energy efficiency programmes.



Back to trend contents

Hybrid wood and corrugated board box offers weight advantages

The Spanish division of International Paper (IP) has developed a hybrid box solution that combines wood with corrugated board to offer a more sustainable and lightweight product. Instead of being made completely from wood, the conventional bottom previously made of wood fibre is replaced with a corrugated board base. By doing this, the company has managed to considerably reduce the weight of its boxes, thus improving and optimising the logistics processes of its customers with a lighter solution for transporting its products, while using a material with greater availability in the market. IP says that in Iberian Peninsula stocks of wood fibre have been limited for 12 months due to an increase in demand and the global shortage crisis. This situation has worsened, even more, hence the development of the hybrid box. The new box is available in multiple sizes and is specially designed for the transport of different fruit and vegetable products.



Back to trend contents

Material-saving tube reduces carbon footprint

Swiss tube manufacturer Neopac has introduced a new lightweight tube to its EcoDesign series, known as the Eco-Stripped Tube. Neopac says that this new tube, which is an evolution of its lightweight tube, has reduced wall thickness from 0.5mm to 0.35mm, giving an overall weight saving of 30% virgin plastic content when combined with material savings in the shoulder and cap. Neopac says that they have achieved this reduction without compromising protection, haptics, or pack aesthetics. Neopac says that the Eco-Stripped Tubes can help to lower both shipping costs and Extended Producer Responsibility (EPR) fees due to the 30% overall reduction in materials. The tubes are available in diameters ranging from 30mm to 50mm, for volumes from 40 ml to 300ml. Neopac estimates that the new tubes will eliminate 7.7 tonnes of HDPE and PP per million tubes. This reportedly translates to a CO_2 reduction of over 29 tonnes of CO_2 per million tubes.

Back to trend contents

First vegan-certified packaging company announced

Europe’s leading corrugated packaging company Smurfit Kappa has become the first packaging company certified by the Vegan Society for its range of vegan products. The company has a range of products that are produced using paper, glue, starch, and inks which are all sourced from ‘eco-conscious’ suppliers and free from animal products. This allows Smurfit to use the Vegan Trademark verification symbol on its packaging, a symbol that is now used on 60,000 products worldwide, including food, drink, clothes, household items, and more. The Vegan Society recently conducted research revealing that 97% of vegans and vegetarians will look for vegan verification on food and drink products before making a purchase. Aside from being the first packaging company to register a range of products with the Vegan Society, they are also the 60,000th product to hold the Vegan Trademark. Avery Dennison also recently announced a vegan-certified product.

Back to trend contents

Alternative to plastic and paper for limestone-based initiative

London-based LXD has announced that they are now the official supplier of Limex materials in the UK, a material that it says is a circular and sustainable alternative to plastic and paper. LIMEX is made predominantly from limestone (calcium carbonate), with a small amount of polymeric resin added as a binder. LXD says LIMEX contains 50-80% Limestone and the rest is polymeric resin or a plant-based resin (Bio-Limex), and due to the low levels of fossil-based plastic should not attract the Plastic Packaging Tax. LXD say that limestone extraction creates 1/50 of CO2 emission compared with plastic, while CO2 emissions are 58% of that of plastic when incinerated. LXD says that adding limestone to moulding reduces costs associated with petroleum-based resins and improves several physical and chemical properties of finished plastic products.

Back to trend contents

Calcium carbonate-based plastic alternative launched

Okeanos, based in Miami, is a sustainable innovation company focused on developing calcium carbonate-based solutions aimed at reducing plastic and drastically lowering the carbon footprint of single-use items. They are the developers of Made From Stone™, a new category of packaging technology developed to reduce the amount of plastic. They have used the study of biomimicry to develop their products, which is described as ‘innovation inspired by nature’, with the calcium carbonate shell of an egg being a major inspiration. Although Made From Stone™ does contain a small amount of plastic, they are honest about this but say that they are researching more sustainable solutions, including a fully natural binder. It is claimed that the product can do almost everything 100% virgin plastic can do, with two exceptions: it cannot be made clear, and cannot handle substances with high acidity without a liner.

Back to trend contents

Wet-wipes in a bottle aims to cut waste

Wype is a gel-based product that, when applied to toilet paper, works as a sustainable alternative to wet-wipes. After moving from Italy to the UK, and missing her bidet, inventor Giorgia turned to conventional wet-wipes, unaware of the problems that they could cause to pipes and waterways. So, with a partner, they wondered if they could come up with an alternative to the wet-wipe, something that provided the clean feeling of a bidet while being gentle to the body and good for the planet. Following two years of research, Wype is the result. It is an aluminium bottle which dispenses a cleansing gel onto toilet paper. It features an attached overcap which keeps the applicator head clean and prevents any leakages, a circular hole pattern which allows the gel to spread evenly, along with a one-touch design which allows the user to open and operate the applicator single-handed.

Back to trend contents

Loose fruit and veg to become the norm for UK’s biggest supermarket

Retail giant Tesco has announced that it is to accelerate its removal of plastic. The UK’s largest supermarket has set the target of removing plastic from a total of five billion products by 2025. They have informed suppliers that they need to move three times faster in the removal of plastic, and are bringing suppliers together to work on solutions because they state that they are determined to accelerate progress, with a focus on the areas of greatest impact. This will be on the sale of loose or unpackaged products such as fresh fruit and vegetables, as well as a big upscaling of the use of concentrates and reusable and refillable packaging. Tesco has warned suppliers it reserves the right to delist products that fail to comply with its move on plastic. They have produced a list of preferred materials and formats and a raft of “red” materials which will be phased out.

Back to trend contents

Paper-based alternative to plastic padding and bubble wrap developed

French sustainable flexible packaging manufacturer BBC Cellpack has introduced a paper-based alternative to conventional plastic padding and bubble wrap. Their cushion pads are made of 100% paper and are available in brown, white or printed recyclable cushion pads. As part of their commitment to more environmentally friendly packaging, the production of their cushion pads is CO2 neutral, which means that these products have a carbon-neutral footprint. Also, the paper used for their cushion pads is both FSC (Forestry Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification) approved. They are also approved for direct food contact. The cushion pads can be supplied in a number of formats, including pre-cut shapes to make discoverable compartments in chocolate or candy boxes to surprise consumers when they open the box. They can also be cut into other shapes, such as hearts, animals, stars, circles or squares to fit all box shapes and communication ideas.

Back to trend contents

Recyclable paper ketchup bottle prototype starts development

UK sustainable packaging creator Pulpex is developing an industry-first sustainable packaging solution with multinational food brand owner Kraft Heinz, for the latter's world-famous Heinz brand of ketchup. The team-up has resulted in the early exploration of a prototype paper-based and recyclable ketchup bottle made from renewable resources of sustainably sourced wood pulp. The initiative would launch in an opaque bottle, breaking the traditional ketchup bottle packaging rules of transparency. The prototype is just one development in a range that is helping Kraft Heinz work towards their company goals of making all of their packaging globally recyclable, reusable or compostable by 2025. The company has previously introduced recyclable caps for its plastic squeezy sauce bottles, which contains 30% recycled content.

Back to trend contents

Protect and Preserve

Next Page →

Back to Start

Protect and Preserve

Solutions that help to extend shelf life, reduce food waste and protect contents have environmental as well as cost-saving implications. We continue to track many new initiatives in this area. The COVID-19 pandemic has seen a rise in supply chain-based examples that aim to improve the safe distribution of vaccines.

The prevention of food waste continues to be a priority, and we are tracking many examples of packaging formats that have been designed to reduce the wasting of product. There are widely reported statements that between 33-50% of all food produced globally is never eaten, and the value of this wasted food is valued at over $1 trillion. Technology is playing its part with many recent developments using technological know-how to help detect and communicate changes in the state of food. Packaging has a key role to play in ensuring that produce and food waste is minimised. In this section, we focus on examples that improve the environment by increasing shelf life or reduce waste. The section also includes examples of packaging that protects the product through improved secondary packaging solutions that take on board environmental or cost concerns.

Next Page →

Back to Start

Protect and Preserve

Paper-based child-proof detergent box delivers 40% carbon reduction
High-barrier sterilisable vacuum pack developed
Shelf life extension pouch extends berries' life by seven days
"Often good after" label makes Sweden introduction
Inexpensive temperature logger label for food transportation launched
Cork diffusing plate technology helps deliver insulation packaging
Water-resistant paper opens up ecommerce opportunities
Light protection solution helps protect sensitive drugs
Bacteria that only stick to plastic could reduce deep-sea waste

Next Trend →

Paper-based child-proof detergent box delivers 40% carbon reduction

Global paper-based packaging specialists Smurfit Kappa has announced the launch of a patented paper-based and child-proof detergent box. Called the TopLock Box, it has been designed for detergent pods and capsules with child-proof features. Smurfit says that the TopLock Box is 100% plastic-free and made entirely from FSC-certified (Forestry Stewardship Council) paper-based packaging. This means that the TopLock Box is renewable, recyclable and biodegradable. The new paper-based laundry box solution is said to give a 40% carbon footprint reduction compared to traditional rigid plastic alternatives. Smurfit says that the TopLock Box's opening mechanism also makes it a safe and convenient solution for companies seeking a more sustainable alternative for child-proof packaging. The paper-based solution is apparently also leak-proof. The TopLock Box can be delivered as a flat, single item for inbound logistics and storage savings, while the dimensions of the pack can also be tailored to increase supply chain efficiency.

Back to trend contents

High-barrier sterilisable vacuum pack developed

Spanish flexible packaging manufacturer SP Group is extending its Eco branded range of materials by adding a recyclable and sterilisable high-barrier solution for lid and tray vacuum applications, in what SP claims is a first-to market solution. It is a mono material product that has been developed as a response to the need to comply with the guidelines set by the European Union in terms of sustainability, with the Horizon 2030/2050, by which all plastic containers must be recyclable, reusable or compostable. The ‘PP HB Ecotop’ lid combined with the new thermoformable bottom ‘RST B ECO’ is born as a recyclable solution since more than 90% is made up of PP (polypropylene) and the rest of the materials present in the formulation do not interfere in the recycling process. They are intended to replace more difficult to recycle structures such as PA/PP (nylon/polypropylene) or PA/PP EVOH (ethylene-vinyl alcohol) coextrusions.

Back to trend contents

Shelf life extension pouch extends berries' life by seven days

SAVRpak, based in California, has announced the launch of SAVRpak Drop-In. This shelf life extension solution is a pouch that is added to packs of delicate fruits such as berries, and vegetables such as leafy greens and mini cucumbers. The technology eradicates condensation, the main cause of premature moulding, wilting and spoilage of fresh produce. In fact, SAVRpak claims that within just one minute, SAVRpak's Atmospheric Control and Transmission (ACT) technology removes 50% of condensation. It then continues to keep condensation from forming by absorbing excess moisture and purifying the atmosphere within the pack to slow the aging process. The SAVRpak Drop-In is a thermodynamic, biodegradable, chemical-free pouch that is made from FDA approved food-grade materials that are 'primarily biodegradable' and 100% chemical-free. A trial conducted with RCG Fruits, whose berries typically stay fresh for 10 to 14 days, but using SAVRpak, found that its berries could last as much as seven days longer.

Back to trend contents

“Often good after” label makes Sweden introduction

Too Good To Go is a Danish mobile app that connects customers to restaurants and stores that have unsold food surplus. Due to confusion by consumers over the labelling of food products they have now launched a specially designed and well-visible ” Often good after ” label to complement the current ” best before ” date on food packaging. Consumers have long been confused by the end-of-life labelling on food packaging, with a recent survey of Swedish consumers discovering that half of Swedes did not understand the difference between the labels “best before” and “last day of consumption”. More than 10% of all food waste is due to this confusion regarding date marking. That is why the food waste player Too Good To Go, together with a number of brands, is launching the new label “Often good after”. The initiative has just been launched in Sweden and has so far been initiated in 11 countries.

Back to trend contents

Inexpensive temperature logger label for food transportation launched

Japanese printing company Toppan is launching a low-cost temperature logging label that enables the temperature of food in transit to be measured and recorded at regular intervals, and data to be sent to a database via wireless networks. Two frequency bands are available: UHF (ultra-high frequency), which facilitates communication over relatively long distances of about five metres, and NFC (near field communication), which is becoming increasingly incorporated into smartphones and operates at distances less than 4cm. A dedicated app and a cloud-based management system will be provided. The company says that its temperature logger label is equipped with a single-use battery and adopts a simple structure without a terminal for data downloading or a display, and Toppan says that the cost will be less than one-tenth of existing temperature logger devices. Pilot testing has been completed, and sales of the temperature logger labels are scheduled to start imminently.

Back to trend contents

Cork diffusing plate technology helps deliver insulation packaging

CorkConcept is a Belgian company that owns a European patent for multi-density cork diffusing plate technology for use in insulated packaging. It has been developed to meet the needs of the pharmaceutical and food markets in terms of improving the performance and sustainability of the insulated packaging needed to supply temperature sensitive goods. CorkConcept is said to be natural, reusable and recyclable. It can be used for transport duration of 24 to 96 hours, and it is also possible to do without the use of a refrigerated truck, meaning a reduction of transport costs and CO2 emissions. The process of the invention is as follows: a diffusing plate in cork is obtained with its outer skins of higher density than the inner part, which confers a diffusing property to the external surfaces and an insulating property to the inner part of the plate.

Back to trend contents

Water-resistant paper opens up ecommerce opportunities

Smurfit Kappa, one of Europe's leading corrugated packaging companies, has announced the launch of the latest innovation to join its TechniPaper portfolio. AquaStop paper is water-resistant thanks to a special coating which is added to it during the manufacturing process. It is said to be suitable for eCommerce packaging and packaging for products such as flowers, detergent, and fruit and vegetables where temporary protection against water is needed. It is claimed to be especially suitable for the transport and storage of refrigerated products where there is exposure to condensation. Smurfit also says that the water-resistant coating of AquaStop does not affect the recyclability of the product and can be recycled with other paper and board products. AquaStop is the latest innovation in Smurfit Kappa's Better Planet Packaging portfolio of products, which aims to offer sustainable alternatives to single-use plastics.

Back to trend contents

Light protection solution helps protect sensitive drugs

Germany-based Schreiner MediPharm develops and produces innovative pharmaceutical labels for the healthcare industry. Micafungin is an antimycotic agent, a medication that is used to treat and prevent invasive fungal infections. UV radiation may have a damaging impact on some active pharmaceutical ingredients (APIs) because they may lose their efficacy due to light irradiation. For this highly light-sensitive medication, Schreiner MediPharm developed a special light protection solution, with integrated UV protection and a clever inspection feature. Label design is customized to suit the particular container and to meet the product's specific light and light protection requirements. Examples of available options include a label using an opaque material that delivers full protection against light in the covered areas. The vial content can be checked through a resealable inspection window. Other design versions for visual inspection are label-integrated transparent or resealable, semi-transparent coloured windows that can also offer enhanced protection against UV rays and blue light.

Back to trend contents

Bacteria that only stick to plastic could reduce deep-sea waste

Scientists from Newcastle University's School of Natural and Environmental Sciences in the UK have discovered a new type of 'plastic-loving bacterium' that attaches itself to plastic present in the deep sea, probably allowing them to travel across the ocean. Using stone as a control item, the scientists were able to show that these bacteria only stick to plastic. The team used a deep-sea 'lander' in the North-East Atlantic to deliberately sink two types of plastic, polyurethane (PU), and polystyrene (PS), in the deep (1800m), and then recover the material to reveal a group of plastic loving bacteria. In their most recent work, they have also found a strain originally isolated from RMS Titanic named Halomonas titanicae. While the rust-eating microbe was originally found on the shipwreck, the researchers have now shown it also loves to stick to plastic and is capable of low crystallinity plastic degradation.

Back to trend contents

Recycling Resurgence

thepackhub INNOVATION ZONE

Next Page →

Back to Start

Recycling Resurgence

Recycling initiatives continue to be one of the most active sustainability areas driven by challenging Plastic Pacts around the world that are part of a three-pronged objective to deliver 100% recyclable packaging by 2025. The Plastic Packaging Tax in the UK penalising less than 30% recycled content is influencing change as well as the focus on stretching recycling targets. We are seeing more chemical recycling initiatives as well as recycled PS and PP developments coming to our attention.

This large section includes recycling initiatives as well as packaging that now incorporates (more) recycled content. We can report many examples of mono-material developments and other measures to improve recycling rates. The introduction of Packaging Taxes is also on the horizon, influencing the recycling of packaging. The UK's was implemented in April this year will see a levy on plastic packaging with less than 30% recycled content. This activity inevitably influences the demand for packaging reduction activities. There is still a long way to go in terms of consumer education and essential infrastructural and capability changes to improve recycling rates. We can report on an increase in the number of chemical recycling initiatives coming to our attention although still modest at this stage. Mechanical recycling processes is still the dominant way to deliver recycled packaging and this looks set to continue.

Next Page →

Recycling Resurgence

Back to Start

Cereal brand confirms 100% recyclable packaging commitment
Juice bottles switch to 100% PCR plastic
Shopping bags made from marine waste and recycled plastic hit Australian stores
First PCR plastic film approved for frozen food packaging hits Swedish shelves
Recycled wine boxes make Aussie introduction
Australian milk bottle made from 50% recycled plastic
New pouch introduced to meet plastic packaging tax legislation
UK rollout of attached caps for soft drinks leader
German machine converts waste corrugated board into packing material
Black plastic screw cap is near-infrared detectable
Partnership elevates Prevented Ocean Plastic programme
Mono-material PE pet food packs designed for online
Consumers give thumbs up to new tethered cap development
Recyclable paper-based absorbent pad is compostable
Partnership to deliver fully recycled polystyrene food packaging
Consortium gets additional funds for bio-based barrier coatings
90% PCR inkjet film developed for product labels
Recyclable 100% PCR PET packs developed
Formable and recyclable paper-based tray launched
Companies come together for chemical recycling of flexible packaging
Premium ice packaged in bags made from 51% recycled resin
Mono-material PET blister lidding solution meets industry requirements
PCR paperboard blister packs developed
Material switch improves recyclability of vending cups
Meal delivery service commits to plastic packaging neutrality
Fully recyclable MAP solution introduced
Recycle-ready material developed for pharmaceutical packaging applications
Recyclable dispenser has no metal parts
Board tray switch for minced meat brand is carbon neutral

Next Trend →

Cereal brand confirms 100% recyclable packaging commitment

Post Consumer Brands is a US breakfast cereal manufacturer headquartered in Lakeville, Minnesota. As part of their sustainability goals, they have set the task of moving to 100% recyclable packaging for its cereal products by 2025. The move follows their focus on packaging weight reduction in 2019 and 2020, which saw their Packaging Research & Development team successfully reduce plastic film usage in their cereal bags by more than one million pounds (454,000 kgs), and an overall figure of two million pounds (908,000 kgs) across all packaging materials. Currently 90% of PCB's current packaging materials by weight are made from recycled or renewable resources and are recyclable by consumers. Post Consumer Brands is the third-largest cereal company in the United States, and is home to many family-favorite cereal brands like PEBBLES cereal, Grape-Nuts cereal, Waffle Crisp cereal, among others.

Back to trend contents

Juice bottles switch to 100% PCR plastic

São Paulo, Brazil based fruit juice producer Natural One has announced the launch of their new fully PCR (post-consumer recycled) PET bottle. The packaging will initially launch in 1.5 litre-sized orange and grape juices, with the 5-year goal of using 100% recycled packaging for their entire portfolio. Not only does the bottle eradicate the use of virgin plastic, it also has UV-blocking properties, which will help preserve the liquid inside through delaying oxygen getting in to the bottle. Once the consumer has finished with the packaging, it can be further recycled with any kerbside recycling schemes.

Back to trend contents

Shopping bags made from marine waste and recycled plastic hit Australian stores

Australian supermarket chain Coles is offering shopping bags made from marine waste and recycled plastic. The bags are made with 80% recycled plastic, 20% of which is marine waste plastic. The bags will be available at Coles stores with the exception of Western Australian outlets, and will retail at A$0.25 (£0.14). The move is in line with the supermarket's 'Together to Zero' waste initiative and help towards Australia's 2025 National Packaging Targets, which primarily aim to increase the use of recycled content in packaging. The marine waste used for the retailer's Marine Reusable Shopping Bags is recovered from ocean-feeding waterways and inland areas across Malaysia. When the bags reach the end of their useful life, they can be recycled through soft plastic collections in any Coles store at the REDcycle drop off points.

Back to trend contents

First PCR plastic film approved for frozen food packaging hits Swedish shelves

Lidl Sweden has collaborated with Swedish packaging manufacturer Trioworld to bring to market what it says is the first Post Consumer Recycled (PCR) plastic film that is approved for packaging frozen food. The new packaging is an extruded five layer PE film with a thickness of 50-70 µm, specially designed for deep-freeze applications. In this multi-layer concept, different PE layers made of new and recycled plastic have been combined. The proportion of recycled material is estimated to be around 30%, and the film is also fully recyclable. The new packaging solution will be used on Lidl's cinnamon and cardamom buns and will immediately be available on shelves. The regranulates used for the film production complied with the REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation and other European regulations for materials that come into contact with food and would have passed special migration tests for food packaging.

Back to trend contents

Recycled wine boxes make Aussie introduction

Opal is an innovative Australian paper-based packaging company. They recently partnered with Dan Murphy's, a wine and liquor vendor also from Australia. Dan Murphy's had set an open challenge to the packaging community to design and create an Australian-made, 100% recycled and recyclable wine carrier box for its new 'Dan Picked' wine delivery subscription service. The criteria specified that the cardboard packaging needed to be robust enough for six bottles of wine to withstand bulk interstate distribution and delivery, and to provide an engaging and exciting unboxing experience for consumers when their delivery arrived. The Dan Picked wine box provides a sense of discovery upon opening each wine delivery and integrates a QR code to provide information, including tasting notes, the characteristics of each handpicked wine and food pairing suggestions. It is claimed that Opal's solution surpassed Dan Murphy's expectations and criteria for both performance and added value.

Back to trend contents

Australian milk bottle made from 50% recycled plastic

Visy is an American-Australian packaging company that claims to be a global leader in packaging and resource recovery. Following a $29 million (£16.45m) investment in a state-of-the-art recycling facility, it says it is able to produce a milk bottle manufactured from 50% recycled plastic. The investment is said to be diverting up to 1.9 billion plastic bottles from landfill and export each year, and keeping more plastics in the circular economy to be re-made locally into food grade products. Previously milk bottles manufactured at the Visy facility only contained a maximum of 20% recycled material. Visy currently recycles around 98,000 tonnes of plastic annually, most of which is derived from kerbside collections. The new process is said to have taken a great deal of development but has now been approved for food grade recycling.

Back to trend contents

New pouch introduced to meet plastic packaging tax legislation

Leeds-based flexible packaging manufacturer Roberts Mart & Co Ltd have collaborated with McBride, producer of private label products for the cleaning and hygiene markets, to launch a new stand-up pouch for supermarkets across Europe. It will be used for own-brand laundry capsules and dishwasher tablets. The pouch is made from 30% recycled plastic, which meets the requirements set by the recently introduced UK Plastic Packaging Tax, which requires a tax on plastic packaging with less than 30% recycled content threshold. Roberts & Mart aim to build on the progress made so far with an aim to increase further the level of inclusion of Post Consumer Recyclate (PCR) plastic beyond the 30% mark.

Back to trend contents

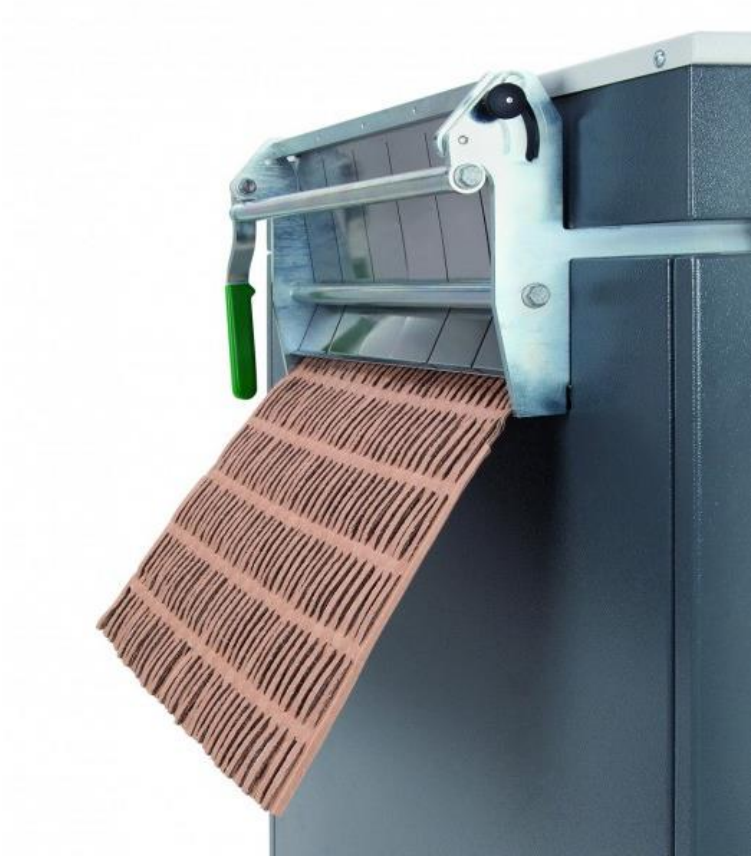
UK rollout of attached caps for soft drinks leader

Global beverage giant Coca-Cola has announced that it is moving to tethered caps for its PET (polyethylene terephthalate) bottles in the UK. The move by Coca-Cola Great Britain (CCGB) and Coca-Cola Europacific Partners (CCEP) has already begun at CCEP's site in East Kilbride for 1.5 litre bottles of Coca-Cola Zero Sugar, Diet Coke and Fanta. Coca-Cola says that the move to tethered caps will help to improve collection and recycling, while also helping to reduce littering and has been instigated to meet the EU's Single Use Plastics Directive coming into play in 2024. The move will be followed later this year by its site in Edmonton, North London and the rest of its sites in the UK over the next 18 months. Coca-Cola says that the move is just one of the steps as part of their 'This is Forward' sustainability action plan, which targets six key social and environmental areas where the business has a significant impact and forms a key element of their 2040 net zero target.

Back to trend contents

German machine converts waste corrugated board into packing material

HSM GmbH is a German machinery manufacturer specialising in shredding and baling machines. Their HSM ProfiPack C400 and HSM ProfiPack P425 machines are designed to use waste corrugated board packaging and convert it into protective packaging such as padding mats, padding wraps or packaging padding for filling voids. HSM says that these packaging machines are a brilliant solution for all shipping and storage areas. They perforate used cardboard or bolster it up and make universally usable packaging material which is ‘as good as new’. This, therefore, saves costs and, at the same time, is a sensible and practical contribution to environmental protection. The HSM C400 is a table-top size and can handle up to 50kg/hr, while the larger P425 is available in two capacities, up to 80 or 120kg/hr.



Back to trend contents

Black plastic screw cap is near-infrared detectable

Greif, Inc. is an American manufacturing company based in Delaware, Ohio that makes industrial packaging and containers. They have announced that it has developed a plastic screw cap for its containers using an alternative black colour that does not contain carbon, so it can be detected using near-infrared (NIR) technology. Conventional black plastics containing carbon black colourants are currently undetectable in recycling facilities that use NIR technology to sort waste, as carbon black is able to absorb NIR. This makes black plastic more difficult to recycle, despite the fact that it is a recyclable material, and often results in it ending up in landfill. The company first launched the closure in Scandinavia, where changes in legislation state that packaging and closures must not be dyed with carbon black. The screw cap is available through Greif's global closures business, Tri-Sure, based in the Netherlands.

Back to trend contents

Partnership elevates Prevented Ocean Plastic programme

London-based Bantam Materials are a distributor of recycled bottle materials from countries at risk for ocean bound plastic. They have now formed a partnership with PET UK, based in Dumfries Scotland, who are one of the UK's leading plastic processors. The partnership will bolster Prevented Ocean Plastic, a certified recycled plastic made from the material that has been collected from coastal areas in developing countries. PET UK's partnership with Prevented Ocean Plastic will help support a circular economy on plastic which both companies say is essential if we are to mitigate the climate crisis, protect marine life and support people working in materials collection in developing countries across the world. Collecting ocean-bound plastic reduces the amount of plastic entering oceans and harming the environment. This also reduces the use of virgin plastic which generates more carbon emissions than recycled plastic.

Back to trend contents

Mono-material PE pet food packs designed for online

Leading European packaging manufacturer Coveris has collaborated with Ultra Premium Direct, a French pet food producer that focuses on natural premium pet food. Coveris will supply pre-made pet food bags made from its MonoFlexE mono-material solution, a recyclable PE (polyethylene). The new mono-material solution is said to offer the same properties as standard PET/PE materials, including ensuring the preservation and freshness of the food and keeping all the organoleptic properties of the kibbles for better taste. The matte finish of the bag is said to allow the graphic visuals to stand out. For convenience, the bags have also been equipped with a top slider to allow them to be opened and closed easily and safely. The new bags will be used on Ultra Premium Direct's Protein Boost range, and will be available in two sizes, 3kgs and 8kgs, and is available for purchase online.

Back to trend contents

Consumers give thumbs up to new tethered cap development

From July 3, 2024, the EU's Single Use Plastics Directive requires that caps and lids on beverage containers up to 3 litres remain firmly attached to bottles after opening. It is anticipated that tethered caps will play an important role in preventing litter, as they will remain attached to containers after use. Bericap's ClipAside Tethered Caps are one of the available solutions, and they have now conducted consumer research to gauge whether these new caps will be favourably received. The survey involved consumers aged between 18 and 80 and their families. Survey respondents tested the new closures on 1.5 litre mineral water bottles in real-life scenarios for a period of a week. The users praised the easy and intuitive handling when opening, closing and drinking, and the perceived hygiene benefits of the closures. Consumers were also pleased that the closure is leak-proof and their ability to withstand being opened and closed multiple times.

Back to trend contents

Recyclable paper-based absorbent pad is compostable

Shropshire-based packaging developers Sirane Group are specialists in absorbency products and have announced the launch of Earthpad, a recyclable paper-based absorbent pad. Earthpads are composed of a cellulose absorbent layer, bonded to a paper-based top or bottom layer with a bio-polymer coating. The pad is compostable and can also be recycled through the paper stream. Earthpad was developed in conjunction with a UK retailer over a number of years and went into full-scale production at the start of 2022. Earthpads are available in any size, shape or configuration, including slit rolls. They are currently available in white and black, with a range of colours available soon. Absorbency grades are available of 800cc/M2, up to 10,000cc/M2. Potential areas of use are expected to include seafood, meat and fruit. Sirane says that they are easily identifiable as paper so should go in the paper bin, but if they do end up in landfill, will decompose.

Back to trend contents

Partnership to deliver fully recycled polystyrene food packaging

Greece-based innovative manufacturer of food packaging Pal Packaging have formed a partnership with leading German styrenics supplier INEOS Styrolution, who will supply Pal Packaging with their Styrolution PS ECO to integrate into its food packaging. This follows successful trials. The Styrolution PS ECO solution is made from fully recycled polystyrene (PS) and will initially be used for poultry and mushroom packaging. The packaging material is said to be easy to process and complies with food contact regulations. Pal Packaging says that the move to INEOS Styrolution PS Eco made it a seamless transition for them to offer their customers a sustainable packaging solution. Pal Packaging is a division of Greece-based company Palamidis, and claims to be an innovative and reliable supplier of packers, processors and supermarkets across Europe.

Back to trend contents

Consortium gets additional funds for bio-based barrier coatings

Bioinnovation, part of Vinnova, the Swedish government's innovation agency, has granted additional funds to a consortium so that it can continue developing 100% bio-based, plastic- and PFAS-free barriers for food packaging applications. The consortium is made up of Pulpac, the dry moulded fibre packaging manufacturer, Nordic Barrier Coating, and bio-based chemical company OrganoClick. The project focuses on integrating commercially scalable and sustainable water and/or grease-resistant barriers for PulPac's specialised Dry Moulded Fibre technology. Project responsibilities are as follows: OragnoClick has been tasked with developing the barrier coating material. Nordic Barrier Coating will then use this material in the production of nonwoven materials that are then used in PulPac's dry moulding processes. Extensive testing last year of the barrier coatings with new application methods and materials demonstrated the potential of these reportedly biodegradable and food-grade solutions.

Back to trend contents

90% PCR inkjet film developed for product labels

Germany-based Sihl GmbH is a manufacturer of coated papers, films and fabrics designed to serve the packaging and manufacturing industries. They have announced the launch of what it says is the first inkjet film based on 90% post-consumer recycled BoPET (biaxially oriented polyethylene terephthalate). 7054 PICOFILM CPr-50 gloss IHG1 is a transparent facestock film that has been designed for the production of product labels. The front side has a glossy coating for variable information printing with a water-based inkjet and is suitable for both dye and pigment inks. This film has the same mechanical properties as its non-PCR grades (7858/7852), so it is easy to process while offering identical benefits: fast drying, high colour brilliance, sharp-edged prints and good water resistance. The total weight of this film has also been reduced, which means more labels per roll and thus higher productivity.

Back to trend contents

Recyclable 100% PCR PET packs developed

Two leading converters have announced the launch of 100% PCR PET (post consumer recycled polyethylene terephthalate) products. Canada-based paper products and packaging giant Cascades is now offering a 100% RPET food tray. The design of the tray makes it compatible with packaging equipment already in use by food processors and retailers. The company says that the tray took three years to research and develop the design, which allows for minimal use of plastic but maintains rigidity. Amcor Rigid Packaging Argentina worked with bottled water producer Danone to develop a 100% RPET bottle without a label, making it easier to recycle. The bottle was developed for the Villavicencio mineral water brand, which is made exclusively for customers in Argentina. The bottle is the product of two years of collaboration between the companies. The new label-less bottle has a reduced carbon footprint of 21% compared to the previous bottle.

Back to trend contents

Formable and recyclable paper-based tray launched

Multinational packaging and paper group Mondi have launched a new packaging innovation as part of a continual conveyor of initiatives from one of the world's latest packaging companies. The 'PerFORMing Monoloop', a formable and recyclable paper-based innovation is designed to be used for sliced foods like cheese. It is comprised of a paper tray with a barrier layer, and a plastic top web solution, reducing the overall level of plastic and giving a strong level of product protection. The layers of the pack can be easily separated after use, allowing all parts of the pack to end up in the correct waste destination.

Back to trend contents

Companies come together for chemical recycling of flexible packaging

Three US businesses that control key points of the food supply chain have collaborated to create a flexible plastic packaging cycle through the use of resins with chemically recycled feedstock content attributed by certified mass balance. The three companies involved are ExxonMobil, which supply raw materials to Sealed Air, which then manufacture flexible packaging for products sold in Ahold Delhaize USA, the US branch of the Dutch group of the same name, a retail chain selling food products. The aim of the three companies is to avoid, as far as possible, the landfill of flexible packaging at the end of its life, waste that is difficult to recycle due to the multilayer and multi-material structure. This packaging will be collected, recovered and reused in new food packaging, ensuring the same performance and safety aspects as virgin plastic.

Back to trend contents

Premium ice packaged in bags made from 51% recycled resin

Philadelphia-based Arctic Glacier is a North American provider of premium ice products and services. It is claiming an industry first with the launch of premium ice packaged in bags made from 51% recycled resin. Arctic Glacier says that this move represents a 46% reduction in global warming potential impacts compared to the industry standard generic polyfilm widely used thus far. The recycled film is said to show no reduction in quality or performance. By using recycled PE (polyethylene) in place of the current virgin product, Arctic Glacier can avoid the equivalent of more than 2,500 metric tons of CO2 emissions per year – the equivalent of driving one car more than 10 million kilometres. The new packaging is supplied by Canadian packaging supplier Cascade Group's speciality products division, and was the culmination of three years of research and development.

Back to trend contents

Mono-material PET blister lidding solution meets industry requirements

Huhtamäki Oyj is a global packaging specialist based in Finland. They have announced a first-to-market, mono-material PET (polyethylene terephthalate) lidding material aimed at the global healthcare industry. Developed as a replacement to the industry standard of aluminium lidding, Huhtamaki's Push Tab blister lid is designed to meet the stringent safety requirements of highly regulated pharmaceutical and healthcare packaging, and provides the industry with a recyclable alternative to traditional push-through blister packaging. When combined with Klöckner Pentaplast Next™ R1 bottom rigid film, it is a plug and play solution, proven to run on existing blister packaging lines, without modifications or extra investment required, and without having to compromise on speed. Push Tab® blister lid has superior optical clarity, and Its PET-Heat Sealing structure is printable using all standard technologies. This new development is said to make PET based lid film pushable and enables easy access to the tablet for the consumer.

Back to trend contents

PCR paperboard blister packs developed

Ohio-based Rohrer has announced the launch of two new blister pack options with an eye very much on the environment. All-Paper Blister is a packaging solution, as the name implies, made entirely of paper. All-Paper Blister cards and inserts are made using paperboard derived from post-consumer waste (65% PCW) sources, or from Sustainable Forestry Initiative (SFI) certified paperboard. The other option, the ecoCombo, features thermoformed blisters that are created using post-consumer recycled PET (50% PCR). Both blister pack solutions are said to run on current production lines with existing heat-sealing equipment, and can be ordered in convenient quantities, ie. 5,000 to 100,000. Superior print and decoration is available on a variety of substrates, including Rohrer's Process+ seven-colour processing.

Back to trend contents

Material switch improves recyclability of vending cups

Berry Global owned company Berry Superfos have created a packaging innovation that seeks to improve the level of recyclability of vending cups. The initiative involves vending cups made solely of polypropylene (PP) instead of traditionally used polystyrene (PS), meaning they are now fully and easily recyclable. The lightweight PP vending cups are compatible with both hot and cold drinks, and harbour a small safety brim at the top of the cup, preventing accidental spilling, which is especially important for hot drinks. Recycling of the vending cups is now a possibility in areas where there is recycling infrastructure in place for PP.

Back to trend contents

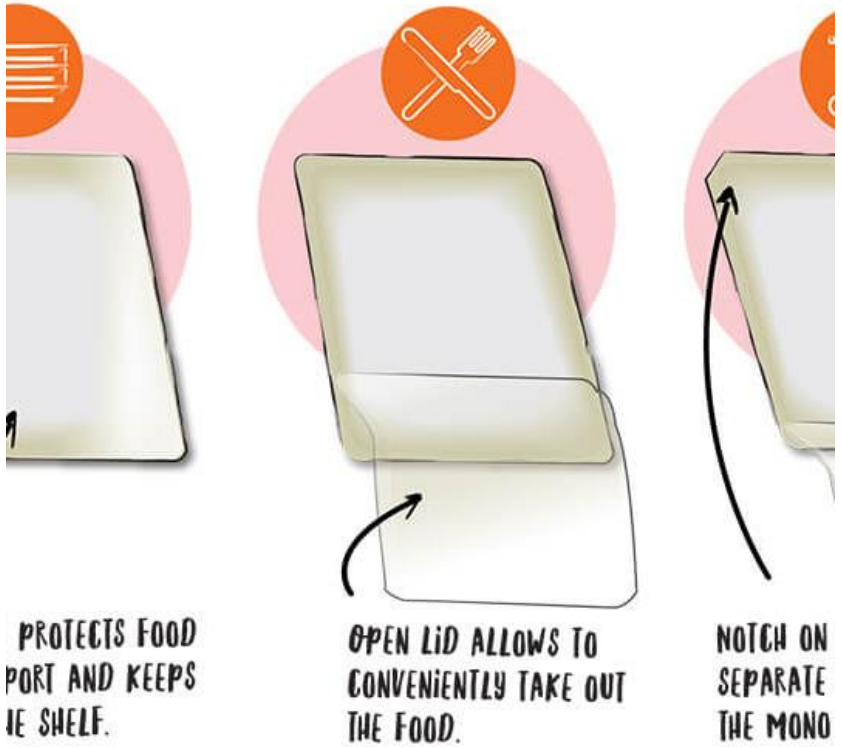
Meal delivery service commits to plastic packaging neutrality

Zomato is India's largest food delivery, dining and restaurant discovery service. They have announced that they will become fully plastic-neutral with every meal order delivery commencing straight away. To achieve this status, the company will voluntarily recycle more plastic than it uses in its food packaging. In order to fulfil this aim, they will be collaborating with a number of organisations that will be responsible for collecting and processing plastic waste by partnering with municipalities across India. These companies will be certified by the International Organisation for Standardisation (ISO). Zomato aims to deliver more than 100 million orders in sustainable packaging in the next three years by supporting its restaurant partners in transitioning to affordable and sustainable packaging alternatives. The company has already made 'no cutlery required' the default option on its platform, allowing 74% of its orders to be fulfilled without cutlery.

Back to trend contents

Fully recyclable MAP solution introduced

Multinational packaging and paper group Mondi continue to generate new sustainable packaging innovations at an impressive rate. The business have launched a new ‘Mono Formable PP’, a fully recyclable high barrier MAP solution, made from mono-material polypropylene (PP). The pack includes a printed top web combined with a thermoformable semi-rigid bottom web. The pack offers lightweighting opportunities as it weighs around 30% less than a similar polyester (PET) tray at the same thickness level, but offers the same high standard of product protection. It is said to be compatible with a number of features, including easy-peel for convenient and easy opening.



Back to trend contents

Recycle-ready material developed for pharmaceutical packaging applications

Global packaging manufacturer Amcor has announced the addition of High Shield Pharma laminates to its pharmaceutical packaging portfolio. The High Shield Pharma laminates are recycle-ready materials which meet the high barrier and performance requirements needed for the pharmaceutical industry while complying with the recyclability needs of pharmaceutical companies. The new low carbon High Shield innovations feature sustainable pharmaceutical sachets, stickpacks, and strippack packaging, and are available in both paper-based and polyolefin-based materials. Machinery investment is not a requirement, as this new material is compatible with existing filling machines, with no efficiency losses for manufacturers and packers. Initially, Amcor will launch the sustainable High Shield Pharma laminates options for pharmaceutical sachet, stickpack, and strippack packaging across Europe. The introduction of High Shield Pharma laminates is said to address the increasing demand and sustainability requirements established by the European Union and regional governments.

Back to trend contents

Recyclable dispenser has no metal parts

International manufacturer of plastic packaging products Berry Global has announced the launch of what it says is one of the first-to-market recyclable lock-up 2cc dispensers. Known as the Berry Wave2cc, it is made from 100% polyolefin, with no metal parts, which makes the dispenser recyclable when paired with a PET bottle where appropriate facilities exist. This has gained the Wave2cc a RecyClass A rating. The Wave2cc will be available with up to 70% post-consumer resin (PCR) that will be independently evaluated by the U.S. FDA with a no objection letter (NOL) to be issued. The dispenser is part of Berry's B Circular range, which meets market demands for a more sustainable version of the popular pump format that is widely used for a variety of personal care products including liquid soaps, body lotions, body milk, shampoos, conditioners and hair treatments.

Back to trend contents

Board tray switch for minced meat brand is carbon neutral

German wholesale butchers Okle GmbH has announced that they are replacing their previous plastic packaging with DS Smith's 'ECO Bowl' for their minced meat products. The ECO Bowl is said to be fully recyclable and is made up of a board tray with a thin plastic liner which is easily removable by the consumer to enable recycling, as is the top film. To ensure shelf life, the minced meat is packed in MAP (modified atmosphere packaging). Okle has calculated that the new board-based minced meat packaging will use at least 60% less plastic than the previous plastic packaging. Okle also ensures that the manufacture of the packaging is climate neutral by offsetting any CO_2 emissions by entering into a cooperation with ClimatePartner, an organization that promotes climate protection projects worldwide. Okle is supporting a wind energy project in Brazil and a hydroelectric project in Virunga, Democratic Republic of the Congo that will generate 13 megawatts of clean electricity.

Back to trend contents

Back to Start

Refill Revolution

Next Page →

Back to Start

Refill Revolution

Refillable and reusable packaging continues to come through the innovation funnel. The growth is in part driven by the Plastic Pact aim to deliver reusable packaging by 2025. Many of the initiatives are from start-up and challenger brands with multinational brand owners also getting in on the act with small scale trails and pilots. The dry food, household and health and beauty sectors are the most active.

Reusable and refillable packaging examples have increased in occurrence, notably over the last 18 months as brands, retailers and suppliers look at ways of tackling single-use and difficult to recycle packaging. A change in consumer attitude is emerging with resistance to single-use packaging. The innovations collated can be segmented into the Ellen MacArthur Foundation's four reuse models – Refill at home, Return from home, Refill on the go and return on the go. Dry food, household and personal care sectors are the ones that are making the most ground. Many of the in-store examples listed are small trials and pilots as major retail chains test the water with a small number of initiatives in outlets. Their next moves will be eagerly anticipated.

Next Page →

Back to Start

Refill Revolution

Next Page →

First UK fast food outlets to pilot reusable packs across 10 products

In collaboration with global reuse platform Loop, Burger King is to become the first UK fast food outlet to trial reusable packaging. To take part in the scheme, Burger King UK customers will have the option to pay a £1.00 deposit for a reusable cup or container, helping reduce single-use packaging consumption. Customers can choose from 10 Burger King products to be served in the reusable packaging, such as the popular Whopper and Crispy Chicken. The containers will have barcodes and via the Loop app customers who return their cups or containers will be refunded their deposit, with all returned cups or containers being professionally cleaned using Loop's state-of-the-art cleaning system. The trial will be conducted in five restaurants in Newmarket and Ipswich, and will be closely monitored by Burger King UK, with customer response used to inform future plans for a long-term reusable and returnable packaging scheme.

Back to trend contents

Refill pack developed for growing concentrated formulas market

The Dutch division of German plastic packaging systems manufacturer Weener Plastics has developed a refill pack concept for liquid concentrates. The small and handy refill pack contains 70ml of concentrate and is designed for use at home – the contents are simply diluted with water in a reusable bottle. The bottle is screwed onto standard bottles upside-down. After a click, the concentrate is released without mess and subsequently diluted in the water. The refill pack consists of three pieces: an injection-moulded bottle and a two-piece child resistant closure for enhanced safety. Weener says that using a concentrated refill can reduce material usage by up to 75%. Also, it enhances recyclability: the refill pack itself is a 100% recyclable mono-material solution. It will also be offered in recycled material. Weener also says that for limited investment costs other sizes of refill can be offered.

Back to trend contents

Refillable body wash saves both plastic and water

Blueland is a New York-based company that creates ‘everyday eco-friendly’ cleaning products to save money whilst reducing plastic waste. The business has now launched a refillable body wash that saves plastic and water, as the bottle is made to be reused countless times. The Blueland Body Wash has a hypoallergenic formula that is gentle on skin. The bottle is filled halfway with water, then the ultra-hydrating body wash powder simply needs to be poured in the bottle, the bottle top replaced and shaken for ten seconds, then left to sit for an hour to activate. The body wash is available in three scents, Raspberry Hibiscus, Waterlily Dew and Sandalwood Sage. The Body Wash Starter Kit retails for $18 USD (£14.27) and includes the reusable Forever Bottle and a powder refill pouch that makes 18 oz (532 ml) of body wash gel. Additional refill pouches start at $9 USD (£7.13) and are packaged in compostable, paper-based packaging.

Back to trend contents

Reusable deodorant case cuts waste by 50%

Iskra Lawrence is a model, influencer and entrepreneur who launched a new body care brand, Saltair early in 2022. Initially the brand began with Serum Body Cleansers, which were then followed by Moisturizing Body Lotions. They have now launched a range of deodorants which are packaged in refillable containers. The new range is available in seven fragrances, matching most of the existing serum body washes and introducing seascape, and packaged in refillable pods, made from recycled plastic. Changing the refills is as follows: twist empty deodorant refill pod left to unlock then pull up to remove. Wipe reusable case if needed and recycle used refill. Insert a new deodorant pod. Twist right until it locks into place. Turn the bottom dial. Remove cap and use as directed. The reusable case is said to cut waste by at least 50% with every refill. The deodorants retail at $10 (£7.94) with refillable pods at $6.35.

Back to trend contents

Reusable bag rental system starts test phase

Two large retailers in New Jersey, USA are trialling the Goatote reusable bag system. The approach allows consumers to take clean reusable bags and return them when they are finished. The customer has two options, either a monthly subscription at $2.50, which allows the customer to take bags from any Goatote kiosk, or a $1 pay-per-use option, which gives customers access to a single kiosk. Both options allow the customer to take as many bags as they need. Customers will get charged $2 if they don't return the bags within 30 days and can receive a $1.50 refund if they return them after 30 days. After bags are returned, Goatote says it cleans them and does a "quality check" before making them available again. The bags are available at six locations in New Jersey, including CVS stores in Marlton and North Plainfield, and Target locations in Jersey City, Watchung, Howell and Marlton.

Back to trend contents

Refillable glass bottle switch in French hospitality sector

Coca-Cola Europacific Partners (CCEP) France plans to distribute all of its packaged beverages to hotels, restaurants and cafes in returnable glass bottles by the end of 2022. Coca-Cola says the new bottles can be refilled up to 25 times, saving more than 15 million single-use glass bottles and the associated energy use. The 250 ml returnable glass bottle will be used for the Fuze Tea, Tropico, Sprite, Fanta and Minute Maid brands. They join the Coca-Cola Original, Coca-Cola Zero and Coca-Cola Cherry brands in their iconic 330 ml glass bottles. Once empty, the bottles are stored in their own crates and collected for return to the factory to be cleaned and refilled. CCEP says a refillable glass bottle boasts a greenhouse gas impact three times lower than that of a single-use glass bottle. Coca-Cola says that packaging accounts for 43% of their total value chain emissions.

Back to trend contents

Partnership sees tracking of reuse scheme through innovative tech

Multinational food and drink brand owners Nestlé has collaborated with London-based startup Nozama which will see a partnership utilising the latter's innovative tracking technology to track Nestlé's Dolce Gusto coffee capsules. The trackers ensure proper participation in the reuse schemes offered by Nestlé, and prevent property loss. Consumers can take part in the scheme by downloading the Dolce Gusto recycling app, available on most smartphones. It allows consumers to digitally track the number of capsules they deposit at the recycling dropoff, and the app in turn shows them the environmental impact they are having by doing this. Through the consistent use of the app, users can earn rewards and discounts for Nestlé products.

Back to trend contents

Salon refill station delivers second generation iteration

Henkel Beauty Care has launched the second generation of its salon refill station. Under their professional brand Authentic Beauty Concept, the new refill bar is more compact than its predecessor, which was launched as a pilot scheme in 2020. After expert consultation, salon clients will receive their prescribed Authentic Beauty Concept product in a 250ml retail bottle made from 90% Post-Consumer Recycled (PCR) plastic. Once they've used it all up, it is brought back to the salon to be refilled and the cycle starts again. The bottles also come with UPM Raflatac's Forest Film labels, the first wood-based film label material in the market, certified by ISCC (International Sustainability & Carbon Certification). The Authentic Beauty Concept Refill Bar uses recyclable 5L bottles made from 50% PCR plastic with reusable pumps and recyclable Forest Film labels. Each 250ml retail bottle can also be reused at least five times, generating a saving of 83% less plastic.

Back to trend contents

Japanese haircare range switches to refill format

To improve its sustainability profile, US consumer goods corporation Procter & Gamble is moving to a refill system for its popular Pantene haircare range in Japan. Consumers will be able to purchase a lightweight, beautifully decorated aluminium bottle that's reusable after its contents have been emptied. For refilling a PE/PE (polyethylene) stand up pouch is supplied by Japanese flexible packaging supplier Zacros. Switching from a rigid plastic container to a pouch means savings of around 80% in both plastic use and CO2 emissions. Zacros claims that the pouch is Japan's first ever monomaterial refill pouch, and is a PE/PE adhesive lamination where the adhesive provides a barrier yet does not interfere with the PE recycle stream. Zacros was able to achieve an oxygen permeability of 4.6cc/m2/24 hours at 30°C, 70% RH condition with two PE layers. By comparison, a single PE film had over 1000cc/m2/24 hours under the same conditions.

Back to trend contents

Trial of smart drinks dispenser gains momentum

Coca-Cola Europe has announced extended trials of its ‘Freestyle’ brand and portfolio. The new Compact Freestyle machine is a smart dispenser that allows consumers to personalise their drinks while using their own reusable bottles or containers. This new machine is reportedly the smallest unit and the most digitally advanced range of Freestyle machines. The New Compact Freestyle enables digital consumer interaction, which includes options for consumers to personalise temperature and carbonisation levels to their taste, with around 40 beverage choices on offer. Trials of the New Compact Freestyle will begin this month at both on-the-go and at-work outlets in France and Belgium, with trials in the UK to follow shortly thereafter, with additional European countries to be added to the trials throughout 2022. Dispensed solutions like the New Compact Freestyle will form an important part of Coca-Cola’s recently-announced goal for 25% of its packaging to be reusable by 2030.

Back to trend contents

Reuse scheme get major investment push

The pursuit to develop viable reusable cup schemes in foodservice continues. In the UK, 2.5 billion disposable coffee cups are used every year and continues to be a significant waste challenge. US multinational coffeehouse chain Starbucks has joined forces with UK environmental organisation Hubbub for a £1 million fund to boost their reuse schemes, called the ‘Bring It Back Fund’. The fund will attempt to boost trials and pilots across the country by offering five sums of between £150,000-£300,000, totalling around £1 million. They will have a month of applications and are hoping to encourage strong innovation and really boost reusable cup usage and operational understanding. The activity comes just a few months after Starbucks trialled a **London and Geneva-based scheme** where customers could borrow returnable cups.

Back to trend contents

APET punnets combined with reclosable lidding film

UK based packaging company KM Packaging have launched a new packaging solution for New Zealand fresh produce supplier Best Berries. The fruit supplier needed a specific packaging solution, one with a fully printed reclosable lidding film with ventilation holes for their APET (Amorphous Polyethylene Terephthalate) 250g and 454g punnets of strawberries. Upon collaborating with KM, they proceeded with a solution called the ‘K-Reseal’. This packaging solution involves a lidding film range that can be repeatedly opened and resealed to the tray, and is compatible with the tray sealing machines in use by Best Berries. Beyond its use for fruit, the ‘K-Reseal’ can also be used for a number of markets, including meat, dairy, desserts etc.

Back to trend contents

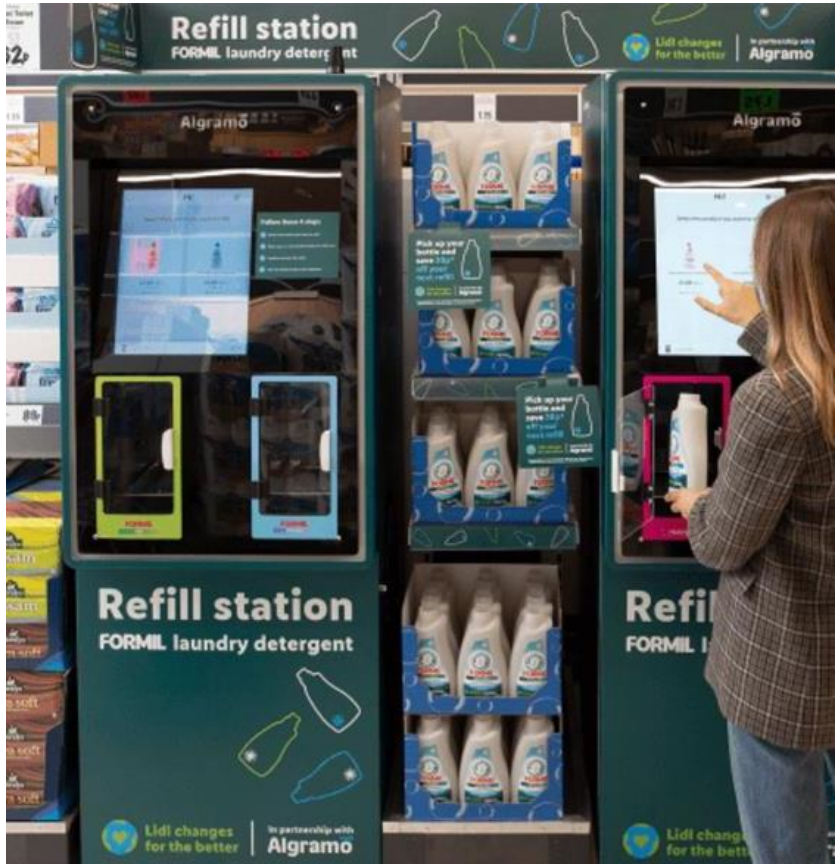
Returnable PET water bottle will remain in circulation for up to four years

Austria-based Alpla who specialises in blow-moulded bottles and caps have formed a collaboration with Vöslauer Mineral Water, also based in Austria. Together they have launched a returnable PET (polyethylene terephthalate) bottle. The one-litre bottle is fully recyclable and contains approximately 30% recycled PET. The bottle also features a paper label that is made of 100% recycled material. The bottles are expected to remain in circulation for three to four years and be reused at least 12 times. As well as being unbreakable, the reusable bottles weigh nearly 90% less than an equivalent glass bottle at around 55 grams. It has been estimated that the low weight helps to reduce the carbon footprint by approximately 30% by making production, shipment, and storage more efficient. The introduction of the bottle means Vöslauer will apparently make an annual saving of approximately 400 tonnes of material and 420 tonnes of CO2.

Back to trend contents

Collaboration sees UK launch of automated refill station

Discount retailer chain Lidl operates over 11,000 stores across Europe and the United States. The business has been working with Chilean refill pioneer Algramo to launch a detergent refill station in stores in Kingswinford in the UK. The kit employs smart chip technology to automate the refilling process and avoid spills. Four different types of detergent can be purchased using the machine, using bottles that are fully recyclable. The process works by charging customers the same amount as they'd pay for a non-refillable detergent bottle, but then on subsequent refills they save 20p per purchase. This scheme could save an estimated 3,000 single use bottles over the course of its six month trial.



Back to trend contents

Recyclable refill cartons for baby toiletries is a UK first

Johnson's Baby has announced what it says is a first for the UK market with the introduction of a recyclable refill carton for its range of baby toiletries. The refill cartons are made predominantly from paper, which is FSC (Forestry Stewardship Council) Mix certified material from well-managed sources. The cartons contain a small amount of plastic – around 8g per 1L pack, representing a significant reduction in plastic use – to protect the formula inside and maintain the pack structure. Rather specifically, every 11,202 packs of refills sold will save exactly one tonne of plastic waste. The new easy-pour cartons will be available across the brand's UK favourites, Baby Shampoo, Bedtime Bath, and Top-to-Toe Wash. Prices start at £4.25 in the UK, offering consumers better value on a price per ml basis compared to the current bottle format. The new packs will be sold by Sainsbury's and Amazon and will then be available from Boots, Tesco, Superdrug, and Ocado in due course.

Back to trend contents

Refill pouches now for insect repellent brand

Refill pouches are being launched across a variety of product categories. Ranger Ready Repellents, based in Norwalk, Connecticut, are manufacturers of premium insect repellents. Their repellents are now available as refill packs so that consumers can refill their existing reusable and recyclable bottles. The business states that studies indicate that the use of refills creates 70% less carbon dioxide, 60% less energy, and 45% less water than purchasing a new single-use bottle. The stand-up pouches also feature an easy-pour spout. The reusable bottles are made of recyclable PET (polyethylene terephthalate) which do not use any propellant. They also source triggers and pump sprays that work upside down so that customers can use all of the product inside and then recycle accordingly. By using 360-degree pump sprays, this eliminates the need for isobutane propellants in aluminum cans that end up in landfills. It is reported that each Ranger Ready Refills pouch prevents putting up to six cans in the bin.

Back to trend contents

Back to Start

About Us

ThePackHub is a leading UK based packaging innovation consultancy specialising in delivering packaging solutions to brand owners, retailers and packaging suppliers. ThePackHub manages a market-leading innovation database called The Innovation Zone. The easy to use resource has over 6,000 packaging innovations from around the world updated at 25 initiatives a week or 5 a day. This internal insight and knowledge feeds into much of the consultancy we undertake. ThePackHub also has an unrivalled network of packaging contacts and connections across the industry.

Our team delivers technical support for packaging projects, large and small. From quick and helpful tips and advice through to the project management of significant packaging initiatives, ThePackHub has established a strong reputation for helping companies from start-ups to multinational organisations. Our recent clients for technical support have included EAT, Greencore, Able & Cole, Loch Duart, Innocent, Aunt Bessies, Waitrose, Leathams, WRAP, KP Snacks, Iglo, Fortnum and Masons, Church and Dwight, Aubrey Allen, Glanbia, Pip & Nut and Happen!

We have published several packaging reports covering sustainability, packaging trends, supplier guides, seasonal packaging and more. ThePackHub also hosts packaging events. We have delivered a dozen face-to-face seminars that provide insight from expert speakers as well as 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, Meiyume, Walgreen Boots Alliance, Marks & Spencer, Lidl, Aldi and many more.

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