



PACKAGING INNOVATION

BRIEFING REPORT
AUGUST 2022



Welcome

Welcome to ThePackHub's Packaging Innovation Briefing Report for August 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 130 pages of content and have collated 100 new packaging innovations for the month.

The innovations featured track ThePackHub's nine trend areas:

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Naturally done

Naturally done

This trend area continues to be active with 12 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.

Naturally Done

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Swedish research team turns waste into plastic

Swedish researchers at Chalmers University of Technology in Gothenburg have shown that the carbon atoms found in mixed combustible waste – for example, plastic waste, food waste, paper and wood – can replace all fossil raw materials in the production of new plastic. It is reported that today's plastic recycling can at best replace 15-20% of the fossil raw material, which is needed to cover society's need for plastic. The methods, which the researchers are proposing, are based on thermochemical techniques and mean that the waste is heated up to between 600 and 800°C, and converted into a gas, which, after the addition of hydrogen gas can recreate the building blocks of the plastic. This makes it possible for the remaining 80-85% of the fossil raw material required to be replaced. The pioneering recycling method is inspired by nature's own carbon cycle and it can eliminate the climate impact of plastic materials, or even clean the air of carbon dioxide.



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Compostable bulk bags replace plastic in Chile

Ceroplast is a Chilean manufacturer of compostable bags. Although Chile brought in a ban on plastic bags in 2018, and was the first to do so in Latin America, it does not include products in bulk packaging. Ceroplast have now addressed this anomaly with a bag that can handle up to 5kg of food products, such as bread, fruits and vegetables. The bags can also handle temperatures of up to 50°C. The new bags are made from corn starch, and when added to a home or industrial compost bin, they biodegrade between 90 and 180 days, transforming into humus and fertiliser. The company believes that a reform to the law should be evaluated to eliminate plastic bags for bulk packaging. Ceroplast have a range of bulk bags, from 2 to 5kgs in capacity, depending on size.



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Bread brand switches to home-compostable bag

Earth & Wheat has been touted as the UK's first "wonky" bread brand. The business delivers fresh bread that would otherwise go to waste due to its appearance or because of overproduction. The brand is trying to improve its packaging environmental credentials through the introduction of a home-compostable bag. This replaces Earth & Wheat's plastic bags. The solution has been supplied by KM Packaging as part of the C-Range. The C-Bag has been developed in partnership with compostable packaging experts Treetop Biopak. The compostable packaging has similar properties and look and feel to conventional plastic. The new bags will disintegrate in a home compost heap and biodegrade into a combination of carbon dioxide (CO2), water and biomass. A QR code is printed on the pack that directs consumers to information about the packaging and how best to dispose of it including as use as bin liners for organic waste collection. The C-Bag meets the Soil Association Standard for packaging materials and has TUV certification.



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Multilayer packaging waste converted into compostable plastics

A Spanish research centre based in Valencia has developed delamination and depolymerization processes to improve the recovery of multilayer packaging waste. The Itene Technology Centre has managed to transform the waste from multilayer trays of PET/PE (polyethylene terephthalate/polyethylene) into a compostable plastic through the use of microorganisms. The objective of the project was to develop advanced chemical and biotechnological recycling processes for the recovery of non-recyclable packaging for its transformation into biodegradable and compostable materials. During the project, compostable and biodegradable plastic materials, PHAs (polyhydroxyalkanoates), have been obtained from monomers and oligomers from PET. PHAs have mechanical properties similar to polyolefins and a moisture barrier capacity similar to PET, which means that they are useful for different sectors, such as medicine, pharmacy or the agri-food industry. Also, a delamination process for multilayer rigid packaging was developed to separate the PET layers and facilitate their recycling and subsequent recovery.



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Compostable paper tray for ready meals uses bio-based barrier

A collaboration between two companies has led to the development of a compostable paper tray for ready meals. Confoil, an Australian manufacturer of food packaging developed the tray in conjunction with German multinational chemical company BASF. The tray, called the DualPakECO, is a formed paper tray that has the inside of the tray coated with BASF's ecovio PS 1606, a partially bio-based and certified compostable biopolymer that was specially developed for coating food packaging made of paper or cardboard. DualPakECO trays are certified to Australian standard AS4736-2006 and are food contact approved to international requirements. The trays are suitable for the microwave and conventional oven, as well as for the refrigerator and freezer, and are certified and industrially compostable. They are also reported to be grease-repellent, liquid-tight and odourless. Depending on the ecovio type and the type of paper, solutions for home composting or for industrial composting plants are possible.



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PET-like plastic created from non-edible parts of plants

Scientists at the Swiss Federal Institute of Technology Lausanne (EPFL) have created a PET-like (polyethylene terephthalate) plastic from the non-edible parts of plants. The bio-based plastic, which they say can be made easily, is said to be tough, heat resistant, and has a good barrier to gases such as oxygen. They believe the finished product could be suitable for food packaging. The researchers have already made packaging films and fibres that could be spun into textiles. The challenge to the scientists was to produce a bio-based plastic that could compete with fossil-based plastics in terms of low cost, heat stability, mechanical strength, processability, and compatibility. By using a one-step process that just 'cooks' wood or other non-edible plant material, such as agricultural wastes, in inexpensive chemicals, they have found a simpler, more cost-effective process. The new plastic can also be chemically recycled and degrade back to harmless sugars in the environment.

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Cardboard core manufacturer develops sustainable adhesive in-house

German cardboard tube manufacturer Brandt-Hülsen has announced that they have developed a sustainable adhesive in-house. The company had realised that a significant factor in their production costs was adhesive, they made the decision in 2015 to produce an adhesive themselves. A Brandt employee developed the recipe for the adhesive based on polyvinyl alcohol (PVOH). The family business invested a six-figure sum in the construction of a small hall with mixing tanks, steam generators, pumps and storage tanks. They have calculated that the use of their own adhesive reduces the costs of core production by 35 to 45%. The adhesive is harmless to health and environmentally friendly when recycling waste paper, since the components produced when the adhesive is washed out in the water bath biodegrade. The adhesive, called Branocoll, is offered as a separate product line on the company website, in container sizes ranging from 250 g to IBC (intermediate bulk container).



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Collaboration creates fibre-based packaging from sugar beet pulp

The Danish Technological Institute (DTI) and Scottish company CelluComp, who develop sustainable materials, have jointly developed a fibre-based packaging derived from sugar beet pulp. The material, called Curran, is made of micro-fibrillated cellulose from sugar beet pulp and an ultra-thin biodegradable coating that they say blocks oxygen, water, and fat. DTI says it has developed special moulds for the new packaging, which allows the mass to be moulded into cups and coated with an ultra-thin coating that is apparently biodegradable. CelluComp and DTI say that although the fibre-based packaging could potentially be sorted and recycled as paper in the future, it is not currently sortable in Danish sorting plants. DTI has estimated that this type of packaging could replace up to 10,000 tonnes of plastic food packaging with 8,000 tonnes of recyclable and biodegradable packaging in the Denmark market, a CO2 saving of more than 20,000 tons per year.



Fresh food company launches compostable plant-based salad bags

California-based Boskovich Fresh Food Group is launching a retail line of organic salad kits under the Fair Earth Farms brand. The new range will be packed into plant-based, 100% compostable bags. The company says that the compostable, plant-based bags are printed using water-based inks, and will break down into soil over time, contributing to farming's regenerative cycle and providing a solution to the current plastic crisis. The packaging includes a full description of the product, instructions on how to enjoy the salad, and how to compost the packaging after the product has been consumed. It also has a How2Compost label, a standardized on-package label that communicates composting instructions to the public, along with a QR code that educates customers on the product they are purchasing. The company says that it took two years of testing to get the film to work with their various products as they respire at different rates.



Insects degrade multilayer plastic containers

AIMPLAS is a technology centre based in Spain that focuses its research on the plastic industry. They are currently investigating the use of insect microbiomes for the recovery of plastic waste from multi-material packaging. Multilayer structures based on plastic are used for the unique properties they provide, such as sealing, structural and thermal stability, and impermeability. However, this makes them difficult to recycle, due to the different materials employed. AIMPLAS is researching the use of microbiomes from different insects as a tool for the recovery of plastic waste from multilayer packaging, as part of the ENTOMOPLAST project, funded by the Valencian Innovation Agency (AVI). They are investigating the use of the insects *Locusta migratoria*, *Pachnoda butana*, *Plodia interpunctella* and *Galleria mellonella* to accelerate the biodegradation of PE, PET and PU.



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Start-up looks to increase production of edible coffee cup

Cupffee is a Bulgarian start-up that produces edible, crispy wafer cups as an alternative to single-use plastic and plastic coated board coffee cups. With the help of Swiss food processing equipment manufacturer Bühler Group, they are looking to increase their output, which is currently at 3 million cups a month, to 10 million a month over the next two years, by installing two more lines at its factory in Plovdiv. The 110 ml and 220 ml Cupffee cups, which remain crunchy for up to 40 minutes, are made from natural oat bran and wheat flour, uncoated with chocolate or sugar, are just 56 or 105 kcal respectively and have a neutral taste, so as to not affect the contents of the cup. The edible cups have also been used to serve soups and antipasto, and the sleeves on the cups can be printed to promote any brand or message required.



Pilot scheme to produce bio-plastic alternative to PET

Finnish paper and pulp product manufacturer Stora Enso is to pilot production of a 100% bio-based alternative to petroleum-based PET at its Langerbrugge recycled paper mill near Ghent, Belgium. Currently, the pilot is in the final stages of commissioning. The plan is to produce the first material in the northern hemisphere's autumn season and be in full production mode towards the end of the year. Stora Enso has been developing a breakthrough technology called FuraCore to produce FDCA (furandicarboxylic acid), an organic chemical compound that occurs in nature and is the key building block for bio-based plastics such as PEF (polyethylene furanoate). PEF can be used to produce a wide variety of industrial applications, including bottles, food packaging, textiles, carpets, electronic materials, and automotive parts. PEF is said to perform better than PET with a six times higher oxygen barrier, three times higher carbon dioxide barrier and two times higher water barrier.





Everyday Engagement

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.

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Everyday Engagement

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New rectangular QR code works in narrow spaces

The inventor of the QR code, Japan-based Denso Wave, has announced the launch of the rMQR (rectangular Micro QR) Code. This thin rectangular code lets it print in long, narrow spaces. While the shape of the rMQR Code is new, it retains the same rapid scan speed and data capacity characteristics of a common QR Code, says Denso. The rMQR Code contributes to the efficient management and use of information and resources in a wide range of industries, including manufacturing, it claims. Additionally, the code is ISO certified and can be used freely and easily by all users worldwide. Expected uses are on the edges of slips and tickets, small industrial parts, and slender medical equipment, such as test tubes as well as for packaging applications. QR codes offer excellent scan speed and data capacity, and because it is in the public domain, it has become the global standard.



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Drinkers can customise their own beer cans

Multinational brewery and pub chain BrewDog, based in Scotland, have introduced a personalisation option for customers wanting to buy unique gifts. They will now be able to personalise cans of BrewDog's popular Punk IPA by including their own text and images. Three customisable templates are available, with an 11-character limit for the name, a 20-character limit for the personal message, and room for an image. The new service will be the first of its kind by a craft brewery, and the service is available through their website. Personalised products will be dispatched separately from any additional products ordered, and will arrive in discreet packaging. Brewdog aims to fulfil orders within seven days and the price is £26.95 for 6 cans. With the production of over 800,000hl (hectolitre), BrewDog claims to be the #1 Craft Brewer in Europe.



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NFC tags connected to NFTs for Swedish luxury brand

Byredo is a European luxury fragrance and makeup brand, started in Stockholm in 2006, with an ambition to translate memories and emotions into products and experiences. They have now partnered with RTFKT, the Nike-owned digital fashion startup, on a “beauty-meets-Web3” launch. The launch, in collaboration with Paris-based design agency M/M, will comprise wearable “auras”, which are customized “digital and physical scents”. These fragrances, a combination of 26 ingredients that represent different emotions, are packaged in bottles with near-field communication (NFC) tags that connect to NFTs (Non-fungible Tokens.) Each customised perfume will be launched soon as a digital collectable in limited quantities. Non-fungible tokens are cryptographic assets on a blockchain with unique identification codes and metadata that distinguish them from each other. NFTs can represent real-world items like artwork and real estate, or, in this case, perfume.



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The Online Surge

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 in-store. 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.

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New edge protection solution for the E-commerce market

Wisconsin-based Great Northern Laminations has launched a new edge protection product aimed at the e-commerce market. Called the EBoard, it is a paper-based solution said to be perfect for protecting heavy, bulky and expensive items in shipment and is easy to use – just “Peel, Place, and Protect”. The company says that one of the major customer benefits of EBoard is the reduction of product damage which in turn reduces return and reshipment costs. They say that EBoard is easy to apply and easy to remove. There is no need for tape, shrink wrap, strapping or additional corrugate to keep the product in place and protected during shipment. Once it has served its purpose, EBoard can be easily peeled off and disposed of since it’s recyclable. EBoard is ideal for products like large appliances and electronics – TVs, washer and dryers, indoor and outdoor furniture, heavy exercise equipment, and outdoor sporting goods.



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Plastic padding replaced with paper for Spanish e-commerce

Global tech and e-commerce conglomerate Amazon have over 15 individual initiatives documented on the Innovation Zone. They have since been on the innovation trail again, with the removal of inflatable plastic pads from their delivery packaging in Spain. The plastic pads have been replaced with recycled and recyclable paper padding in an effort to reduce single-use plastic. The paper, called dunnage, is designed specifically to prevent movement of products inside their packaging to stop damage. The packaging will apply to any goods sold through Amazon, including those who use Amazon's fulfillment services. While the removal of plastic is a step in the right direction for Amazon, the paper dunnage weighs more than its plastic predecessor and so could lead to a larger carbon footprint for Amazon's deliveries in Spain.



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Minimalist e-commerce packaging for stain remover

British multinational consumer goods company Reckitt has announced the launch of minimalist e-commerce packaging for its Vanish stain remover. A pilot trial will be carried out in the UK market on Vanish Multipower Tabs, which have been developed as a compressed powder version of the brand's main product. As the tabs are compressed, this allows for minimal packaging and makes them ideal for home delivery by post. The tabs are also packaged in SIOC (shipped in own container) format, which removes the need for an outer pack for online fulfilment and the use is encouraged by Amazon. The exterior of the pack showcases the distinctive Vanish pink, while the interior reveals full colour and a selection of messaging and illustrations, with the aim of engaging the user and clearly conveying how to use the tabs. The pack also features a QR code which Reckitt hopes will offer access to enhanced advice, relevant content and dialogue with the brand.



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Fibre-based tear tape solution for e-commerce packaging

American adhesives manufacturing company H.B. Fuller has announced the launch of 'Open Sesame', a sustainable fibre-based tear tape solution designed for e-commerce packaging. Because Open Sesame is fibre-based and contains no synthetic fibres, it can be recycled directly with board in a mono-material paper recycling process. It is made from sustainably-sourced, fresh, wood-based fibres which are FSC (Forestry Stewardship Council) certified. Unlike traditional plastic film tape, it adds high-quality usable fibre to the recycling stream. The company says that Open Sesame fibre-based tear tapes are designed for a thrilling consumer "unboxing experience" of everyday packages used to ship goods from e-retailer to consumer. H.B. Fuller says that Open Sesame is suitable for single-wall lightweight corrugated boxes, lightweight folding carton mailers, envelopes, and paper bags. The company says that their research shows that 35% of U.S. Millennials and Gen Z actively avoid buying brands online that ship in non-recyclable packaging.





Making Life Easy

Making Life Easy

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

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

Making Life Easy

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Single-dose packaging is printed on-demand

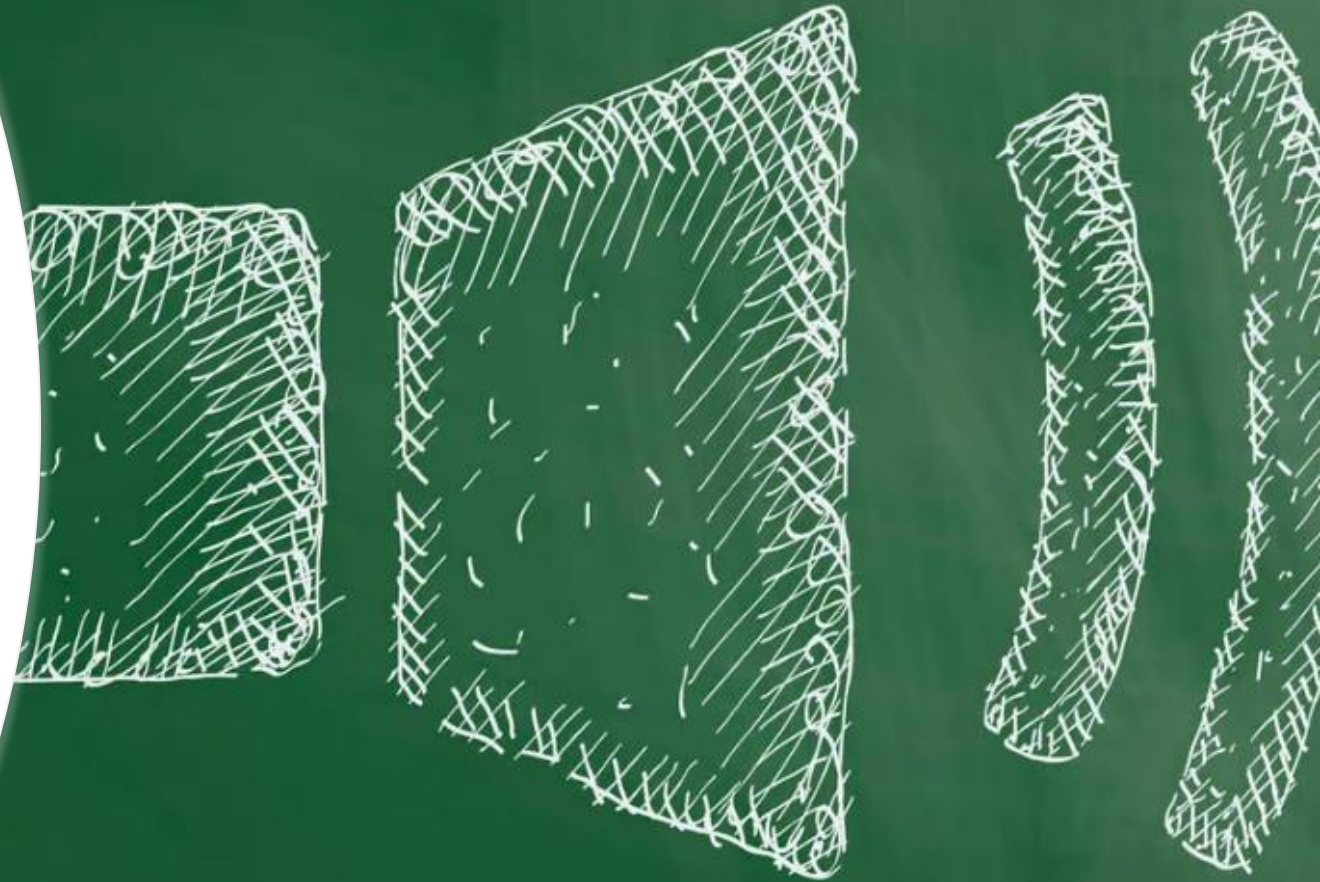
V-Shapes is an innovative supplier of unique single-dose sachets that can be opened with a single gesture using one hand, and are said to be convenient, hygienic and sustainable. The company says that they have now integrated in-line printing into their six-lane AlphaFlex machine, enabling packaging converters/fillers to accomplish the complete manufacturing process of their unique single-dose sachets under one roof with a compact footprint with full-colour branding available on both sides of the sachet, in line, on-demand and with the industry's highest quality. The AlphaFlex is powered by Memjet DuraFlex and ColorGATE Packaging Productionserver. Memjet DuraFlex was selected because of its compact footprint and 1600 dpi printing, as well as the ability of its inks to dry quickly on inkjet receptive substrates, and compliance with food safety regulations, combined with the advanced features and colour management capabilities of the ColorGATE Packaging Productionserver.



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3D printing development uses sound waves to create objects

A team of researchers at Canada's Concordia University based in Montreal have developed a new type of 3D printing that uses sound waves to build up objects. 3D printing typically involves depositing layers of molten plastic, laser-melting powdered metal, or using UV light to harden gelatinous resin. This new technique, known as DSP (direct sound printing) takes yet another approach by utilising sound waves. A transducer sends focused pulses of ultrasound through the sides of a chamber into liquid polydimethylsiloxane (PDMS) resin contained within. Doing so produces ultrasonic fields, which cause rapidly oscillating microscopic bubbles to temporarily form at specific points in the resin. As those bubbles oscillate, the temperature inside them rises. This increase in temperature and pressure causes the resin to solidify at the exact location of the bubble. Along with its ability to produce very small, detailed items, DSP also allows structures to be non-invasively printed inside other structures that have opaque surfaces.



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Small-dose twist-off solution made from mono-material

Swedish packaging manufacturer Emballator Tectubes has expanded its small-dose tube range with the launch of a twist-off recap solution. The small-dose solutions are made from mono-materials and are easily recyclable. Emballator says that the twist-off recap solution can be used in a range of sectors, including for pharmaceutical and cosmetic products. They can be produced in both medical and standard-grade resins, as well as aluminium, polyethylene and PCR (post-consumer recycled) aluminium. The company says that the tube is easy to fully empty, hygienic for multi-dose use, and both material and energy-saving as the business uses green power to manufacture all its products. It also features a tamper-proof, twist-off cap closure that reduces the tube's material content by 10%.



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New paperboard food box with integrated cutlery introduced

Global-C is a Dutch company that designs, manufactures and delivers sustainable inflight products for airlines around the world. They have now partnered with California-based EcoTensil to use their paperboard utensil in Global-C's NeverLeak food box. The companies say that one of the key advantages of this food box is the dramatic reduction in materials due to the fact that the utensil is made from the extra material around the die-cut box. Also, the EcoTensil does not need wrapping in any plastic or paper as it is sandwiched between the flap in the lid, meaning that it is separate from the food as well as the external environment. Global-C claims the product is a perfect solution for airlines and transit because it can go from freezer to oven to passenger with minimal fuss and material, including eliminating the need to provide wrapped utensils, saving both handling and product costs as well as being better for the environment.



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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 25 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.



Materially Changed

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UK supermarket removes plastic wrapping from soft drinks multipacks

Britain's largest supermarket, Tesco, has announced that it is to remove the plastic wrap from 36 of its own brand soft drinks multipacks. Going forward the drinks will be sold loose, but customers will still gain the same discount as before. The price of multipacks will still be £1, with individual drinks costing 50p. The first packs to change will be cans of fizzy drinks, followed in the autumn by energy drinks, water, fruit juices and childrens' drinks. One advantage for customers is that they will now be able to mix and match different drinks, and still get the multipack price when purchasing four drinks. The company has estimated that the move will take 45 million pieces of plastic out of circulation annually by the time it is fully implemented. Tesco's plastics packaging strategy uses a framework based on the '4 Rs' – removal, reduction, reuse and recycling.



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French plant nursery moves to plastic-free packaging

French wholesale plant nursery Promesse de Fleurs is offering its customers the option of having their plants and shrubs delivered in plastic-free packaging. Depending on the size and complexity of the packaging, there is an additional cost of between 1 to 5 euros, which they say is approximately half of the real cost of the option. Since the start of this service in July 2021 they estimate that they have eliminated over a tonne of plastic, with an average saving of 500g of plastic per order. The cardboard and reinforced papers used are made of 100% recycled materials, FSC certified (Forestry Stewardship Council) and 100% recyclable. Where plastic is still used, i.e. for particularly delicate items, the search is ongoing for more plastic-free alternatives. Their ambition is to be plastic-free in all of their orders within three years, with no added cost to customers.



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“Most sustainable” aluminium aerosol can introduced so far

US aluminium packaging leaders Ball Corporation are launching what they claim is the most sustainable aluminium aerosol can they have ever made. The new cans contain 50% recycled content and low-carbon aluminium, smelted by renewable natural resources. Aluminium can be endlessly recycled without losing any quality. These sustainable factors have led to the cans yielding only half the carbon footprint as their predecessors. This is a positive step in the right direction for Ball, who have pledged to advance climate-based scientific research, achieve 100% renewable electricity globally by 2030, and achieve net zero carbon emissions by the year 2050.



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Plastic replaced with paper for Brazilian toilet paper brand

Suzano Consumer Goods, who are Brazil's third largest company in the toilet paper market, have announced that they are to replace plastic with paper on its Mimmo toilet paper brand. The project was brought to fruition with the help of flexible packaging supplier Inapel, also based in Brazil. Market research was carried out with consumers to understand the best way to communicate sustainability to the average Brazilian consumer. The result of this consultation resulted in the concept of "innovability", which the company says is innovation in favour of sustainability. They say that they want consumers to identify with their commitment to the environment and be aware that they are purchasing products from renewable sources, made from the planted tree. The new packaging contains the signature "Together, we plant the future", in addition to a QR Code that takes the consumer to the sustainability tab on the company's website.



Metalised flexible film development is titanium dioxide-free

Manchester-based vacuum research and development specialists Idvac have announced that they have developed a bright white, non-pigmented metalised film that does not contain titanium dioxide (TiO₂). The use of titanium dioxide is associated with a high environmental burden, some health and safety concerns, and a high carbon footprint. Titanium dioxide helps to scatter visible light to give the films their whiteness, brightness, and opacity. These white films are used in applications including packaging, pharmaceuticals, solar reflectors, and farming. To manufacture a white film without titanium dioxide, Idvac utilised a special low refractive index polymer that is transparent when applied as a thin coating onto flexible films. The company then noted that the polymer changes its colour and opacity to white following the vacuum metalising of aluminium. The company says that flexible films such as PET, BOPP, and polycarbonate (PC) can be successfully coated with this new white metalised finish.

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Swiss mineral water brand launches bottle without a label

Swiss mineral water brand Valser, owned by Coca Cola HBC (Hellenic Bottling Company), says it is the first mineral water producer in Switzerland to launch a bottle without a label. The first Valser drinks of the varieties “Tingling”, “Still” and “Still Calcium & Magnesium” without a label are now available and are being tested on the market. By removing labels, it is possible to reduce the amount of packaging material. That means less waste and less CO2 emissions. The product information and the logo are embossed directly into the bottle, while the barcode required for sale in stores is now printed on top of the lid. The bottles will be available in the standard size of 500ml, but a 750ml version is also being launched. Valser was also the first Swiss mineral company to move to PET bottles made from 100% recycled PET (rPET).



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Flax bottle for cognac is a world first

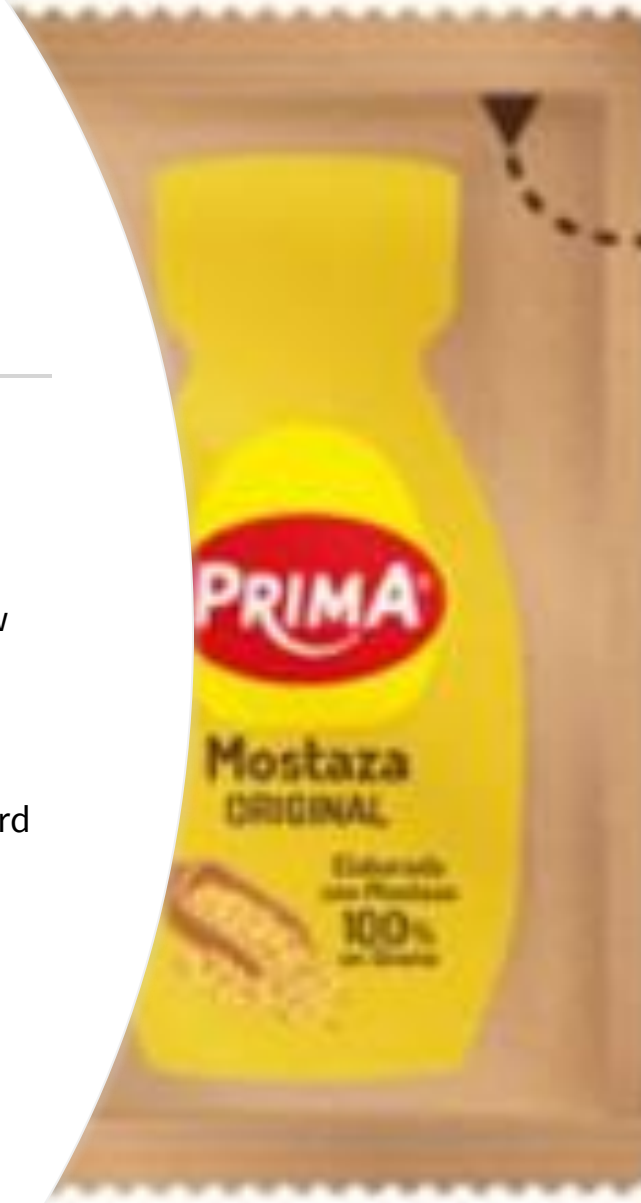
In what is claimed to be world first, French cognac producer A. De Fussigny has opted for a made-in-France, flax-based bottle for its new limited edition 2050 Organic Cognac. The bottle, called the Green Gen bottle, is supplied by Toulouse-based start-up Green Gen Technologies. The bottle combines locally sourced flax fibres and biosourced resin to create a solid, waterproof bottle shell. The cognac, however, is contained inside a food-grade rPET (recycled polyethylene terephthalate) liner. The bottle weighs 85g, compared to 700g to 1kg for a traditional spirits bottle. The bottle features a paper-free, natural polymer label made from a milk by-product. The natural polymer produced by Lactips is transformed into a film by Plastiques Venthenat and printed by Lorge. The easily removable label is water-soluble and biodegradable. The 2050 Organic Cognac has an initial production run of 5,000 bottles.



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Spanish sauce manufacturer launches paper-based sachet packaging

Spanish sauce and condiments manufacturer Prima has announced the launch of sustainable packaging for its single-serve ketchup, mayonnaise and mustard sachets. The new sachets are manufactured from 100% recyclable paper. The new sachets are made from a multi-layer paper-based material that reportedly guarantees the preservation and flavour of the contents. The new format offers easy opening and perfect content dosage. In addition, they include the Ecoembes logo 'Recicla al azul' (recycle to blue), a reference to Spain's cardboard and paper recycling bins, which are blue, to make the recycling process easier for the consumer. As well as the sachets being made from paper, the outer cases are also made from 100% recycled and recyclable board, in which the use of ink has also been reduced in the printing process.



First paper bottle added to wine merchants' range

British online wine merchants, Laithwaites, has announced that it has launched its first wine offering in a paper-based bottle. The bottle is made of 94% recycled board with a recyclable plastic pouch inside. The bottle weighs in at 83g, compared to the average weight of 500g for a glass bottle. It is reported that the manufacturing and recycling of glass bottles is by far the largest contributor to wine's carbon footprint, and by using a board bottle, the carbon footprint comes in six times lower. The wine, called Bacchus, is an English white wine made by East Anglian winery Redbrook Estates. Laithwaites has launched the wine in a paper bottle in order to offer more sustainable packaging options to customers, and they expect to expand the paper bottle range in the future. Redbrook Estate Bacchus, English Regional Wine 2021 is priced at £18.99 a bottle.



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Paper packaging switch for leading ice cream brand

Nestlé Hong Kong has announced that the packaging for its Kit Kat stick ice cream is moving from plastic to paper, which is a first for the Innovation Zone. The packaging is made of 100% pure pulp, which has been certified by the Forest Stewardship Council (FSC). It is designed to reduce plastic consumption and boost recyclability. The new paper packs for KitKat Stick ice cream support Nestlé's ambition to achieve 100% recyclable or reusable product packaging by 2025 and reduce the use of virgin plastic by one-third. Nestlé says that it is focusing on three core areas: eliminating non-recyclable plastics, encouraging the use of plastics that allow better recycling rates, and eliminating or changing complex combinations of packaging materials. Research by Nestlé in neighbouring China shows that consumers believe that paper packaging has good (44%) or excellent (30%) recyclability. However, a slightly larger majority believe plastic packaging has good (45%) or excellent (33%) recyclability.



The advertisement features a large, close-up image of a KitKat Stick ice cream bar. The bar is partially unwrapped, revealing the white vanilla ice cream filling and the chocolate coating with KitKat wafer pieces. Below the main image, there is a smaller image of the KitKat Stick ice cream bar in its new paper packaging. The packaging is dark brown with the KitKat logo and a small green recycling symbol. The background is a gradient of dark brown and red. Text in Chinese and English is present throughout the advertisement.

綿密威化味雪糕

I'm PAPER. PLEASE RECYCLE ME!

全新紙包裝
「脆」味不減 環保更加分

Have a break, have a KitKat

Carrots packed in paper bags with cellulose window

Co-op Switzerland has announced that it is moving its 1kg carrot packs from plastic bags to a 100% recyclable paper-based bag. The bag is made from FSC (Forestry Stewardship Council) certified paper and features a window made from cellulose to enable consumers to see the product. Co-op has estimated that it will save around 60 tonnes of plastic per annum. The move is another part of the retailer's ongoing sustainability programme, under their "Not words, but deeds" sustainability strategy. Coop has been committed to reducing plastic since 2012 and is gradually switching to sustainable alternatives. Co-op has already been able to reduce or optimize around 36,500 tonnes of packaging material. The supermarket claims that by 2026 around 20% of the plastic used in packaging and disposable items should be saved, while also expanding their unpackaged and reusable range for everyday needs.



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Mono material PP solution for solid formulas

Global manufacturer and provider of cosmetics packaging solutions for beauty brands, Quadpack, is introducing a new packaging solution for solid formulas, for a more sustainable beauty collection. The Multi Stick has a large diameter that is suitable for formulas that need to be applied over a large area of the face or body, such as sunscreen, deodorants, solid skincare, cosmetics or fragrance. The company says that the Multi Stick solution provides for hygienic and simple application and is available in 30g and 50g sizes. It is also composed entirely of recyclable PP, and is suitable for brands searching for packaging made with recycled materials because it has a PCR content of up to 42%. The company also notes that many brands with makeup, skincare or fragrance formulas are switching to solid cosmetics, and by using sticks, brands are creating a different gesture and application method.



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Californian whiskey company introduces innovative 100ml can size

San Diego-based Skrewball Whisky, a peanut butter flavoured whiskey, has announced the launch of an innovative 100ml can to its range. The company says that this convenient and fun option offers two servings of the sweet and savoury flavoured whiskey with no mixers, perfect for sipping straight. The canned spirits category has seen a boom in the last year, with growth of 123% as consumers seek convenient and portable products to integrate into their lifestyles. In conjunction with this growth, the flavoured whiskey category continues to grow at four times the rate of unflavoured whiskey. Skrewball Whiskey's 100ml can is 70 proof (35% ABV). The canned spirit will be available in select markets across California, Colorado, New Mexico, Texas, Delaware, Illinois, Massachusetts, New York, Florida, Georgia, New Jersey, Wisconsin and Tennessee, with additional nationwide availability rolling out throughout the coming summer months.



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Paper manufacturer develops translucent barrier paper

Paper manufacturer Arjowiggins has launched a recyclable, compostable, marine-degradable translucent barrier paper made from renewable raw materials. Called Sylvicta, the company says that the paper has a very high oxygen barrier meaning it can prolong shelf life throughout all stages of the supply chain. Arjowiggins says that their R&D team has developed Sylvicta translucent paper with a natural bonding, without the need for any harmful chemicals, through a process called precision fibre refining. Potential uses for Sylvicta includes pouches for dry fruits, bags for salads, sachets for solid soap, sacks for pet food and flow-packs for chocolate bars, to metallised versions of the product for butter or margarine packaging. Sylvicta is FSC (Forestry Stewardship Council), and PEFC (Programme for the Endorsement of Forest Certification) certified, produced on a site that's ISO 14001-compliant, and is carbon-offset through the World Land Trust's Carbon Balanced programme.



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New food packaging solution contains up to 85% less plastic

Jospak is a Finnish start-up company that has developed a board-based tray combined with a separate multi-layer barrier film. The company says that this board-based alternative contains 85% less plastic than regular plastic trays. The tray is hermetically sealed with lidding film, which makes the tray suitable for MAP (modified atmosphere packaging) systems. It is compatible with existing automated packaging processes in the food industry. After use, the consumer can peel away the inner film liner and dispose of the materials in dedicated waste or recycling streams. The tray provides a large printable surface, enabling better means for brand and product messaging, standing out from the competition, and shelf visibility. It also helps avoid using the additional stickers and paperboard sleeves and therefore reduces packaging materials and related costs overall.



Cellulose film developed to replace plastic in food packaging

The VTT Technical Research Centre of Finland is piloting a new transparent cellulose film that has been developed as a replacement for conventional plastic films. VTT can produce transparent, flexible, biodegradable cellulose film and the consumer apparently cannot distinguish between the crystal-clear material and traditional oil-based plastic. Cellulose film can resist dampness, but in nature, it reportedly disappears as completely as a sheet of paper does. Their cellulose product is biobased and biodegradable, therefore recycling is easy, as it can be placed in cardboard recycling along with other paper and board items. Although the consumer can't distinguish between the crystal-clear material and traditional cellophane, their process for making cellulose film does not use the chemicals that conventional cellophane production requires. The production of this cellulose material is in the pilot phase, but VTT believe it could be in extensive industrial use in 5–7 years.



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New corrugated packaging with child resistant opening

The Spanish arm of Saica Group has launched the first corrugated cardboard packaging solution to obtain ISO 8317 certification, a regulation that guarantees the protection of children from packaging with dangerous household products. The pack, known as the CRC (Child Resistant Closure) is designed to replace traditional rigid plastic containers and is made of 100% recycled and recyclable corrugated cardboard. The development team based in Barcelona devised a format that, by pressing several springs at the same time, opens easily for an adult but makes it impossible for a child under five years of age. The product, which won one of the innovation awards of Saica Pack and Saica Flex, allows the box to be opened and closed as many times as necessary without weakening the closure. The solution provides easy industrialization by the customer since it is delivered as a folded case for filling on standard packaging lines.



Corrugated cardboard packaging for Spanish mineral water brand

Spanish mineral water producer Bezoya became the first brand on the market to sell water packaged in Bag-in-Box last year. The new sustainable format contains 60% less plastic for each litre of packaging. With the help of Smurfit Kappa, they have now given the format a new look by moving to an octagonal shape for its 8-litre Bag-in-Box water format. Also, in order to improve the visual appearance, the outer paper for the carton is pre-printed, which eliminates show through of the corrugations, while also giving improved print quality. The Bag-in-Box format is made up of a fully sustainable corrugated cardboard box, the content of which is protected by an inner bag that includes a special tap so that the water is kept in perfect condition. Both materials are easy to separate and recycle at home since it allows the consumer to put the box in the blue recycling container.



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More sustainable cold stamping formulation

German hot stamping and cold stamping specialists Leonhard Kurz have made a more sustainable version of their KPS SX+ cold transfer formulation which was introduced at the beginning of 2021. To match their wafer-thin metallization layers, they have now significantly slimmed down the transfer carrier for their cold transfer decoration. Their new patent pending version, KPS slim, is a more sustainable version, as they have reduced the gauge of the PET (polyethylene terephthalate) transfer carrier for their cold transfer decoration from 12µm to 6µm, meaning the PET carrier used is half as thin as its predecessor. This reduction in PET gauge means more running metres on one roll, fewer reel changes, and therefore less downtime and faster set-up times. KPS slim is already available as a limited edition in many European countries; further regions will follow as part of the global market launch.



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100% carbon neutral wine bottle launched

Chicago-based Berlin Packaging has launched a 100% carbon neutral wine bottle. The solution, called Aurelia, is expected to be popular with wineries engaged in sustainability. The “100% Carbon Neutral” production of Aurelia is achieved in a furnace powered by renewable resources, biomethane, and any additional CO2 generated in production is offset in partnership with Climate Partner. The Aurelia bottle is part of Berlin Packaging’s Itinera collection and was designed in-house. The company says that the Aurelia bottle is in-line with current market trends and it satisfies their clients’ needs in terms of design, product quality and sustainability. Aurelia is available in both ancient green and emerald green, in order to maximize recycled glass content. Berlin Packaging has been shortlisted in the ‘Climate’ category of Wine Industry Network’s 2022 Sustainability Awards for their Aurelia carbon-neutral bottle.



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Fibre-based barrier might replace aluminium for food cartons

Tetra Pak, the Swedish-Swiss multinational food packaging and processing company, has announced that it is to test a fibre-based barrier as a replacement for the aluminium layer in its ambient food cartons. The aluminium layer currently used in food cartons plays a critical role in ensuring the food safety of the contents but contributes to a third of the greenhouse gas emissions linked to base materials used by the company. The aluminium layer also means that Tetra Pak cartons are rejected from or not accepted in paper recycling streams in many locations, with the recycling rate for these types of cartons reportedly being around 20%. They plan to invest €100 million per year and will continue to do so over the next 5 to 10 years to further enhance the environmental profile of food cartons, including the research and development of packages that are made with a simplified material structure and increased renewable content.



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French start-up launches paper-based alternative to plastic

A new French start-up called Cilkoa is offering a paper-based alternative to plastic packaging. Using alumina (also known as aluminium oxide), paper is given a coating nanometres thick using technology very familiar to microelectronic companies called ALD (Atomic Layer Deposition). This is a thin-film deposition technique based on the sequential use of a gas-phase chemical process. This process wraps any single cellulose fibre on the surface of the treated material. This gives the paper a very low WVTR (Water Vapour Transmission Rate) meaning it is a very effective water barrier, and also a low OTR (oxygen transmission rate). Properties of the material are said to be similar to PE/EVOH/PE (polyethylene/ethyl vinyl alcohol/polyethylene) structures. Cilkoa say that their main target markets are food and cosmetics, though they are currently in talks with agri-food manufacturers and concrete producers.

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Move to board for own-brand ice cream range

British supermarket chain Iceland has announced that it is moving away from plastic to a predominantly board format for one of its own label ice cream ranges. The supermarket's 'Made in Italy' range will be launched in packaging supplied by Italian board packaging manufacturer Seda. The move to board packaging will see a reduction of plastic by 92% compared to the previous plastic-based format and will deliver a reduction of 84.5 tonnes annually. Iceland will monitor customer feedback for its new packaging across stores, continuing to gather insights into how consumers respond to plastic-free packaging alternatives. The move is part of Iceland's ongoing ambition to reduce the amount of plastic packaging used on its own label products. In January 2018, Iceland committed to becoming the first major retailer globally to eliminate plastic packaging from all of its own label products by the end of 2023.



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Launch of patented paper technology to replace plastic packaging

French paper maker Guyenne Papier has launched a range of barrier papers designed to replace traditional plastic-based packaging. Called SuniBarrier, the paper is the result of four years of research and development. It is biodegradable, compostable, suitable for direct food contact, and can be recycled with paper and cardboard-based packaging. Sunibarrier uses Lactips patented technology which is based on animal proteins called caseins, which have well-known plastic properties. The Lactips technology was developed in a polymer materials engineering laboratory at the University of Saint-Etienne. SuniBarrier paper is water, grease and water vapour resistant, but also heat-sealable and over 95% recyclable. It is also free of fluorinated resins, chlorine derivatives (PVdC), PVA and other plastics. SuniBarrier helps producers meet the requirements of the French AGECL law (anti-waste for a circular economy) with the ban on the use of items such as plastic packaging for fruit and vegetables and non-biodegradable plastic tea bags.



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Beauty packaging manufacturer introduces sustainable packaging face and lip range

Hong Kong-based Meiyume, packaging suppliers to the beauty industry, has announced the launch of a new collection of sustainable packaging for face and lips. The new range, called Canvas, integrates simple, sustainable materials such as paper, aluminium, and PCR (post consumer recycled) materials. The range includes mono-material PCR PET (polyethylene terephthalate) and aluminium lipstick tubes, paper and moulded pulp push-up sticks, dual-function refillable sticks, and slim-sized options. In addition to primary packaging, the range also includes secondary packaging for lipstick refills. The refill packs are made of two simple parts – a moulded pulp front and a cardboard backing. The flat cardboard on the back provides a place for product information to be printed. The Canvas range also offers vanity clutches to complete the consumer's beauty experience. Brands can opt for sustainable materials such as rPET or Piñatex, a low-impact material largely made up of pineapple plant leaves.



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Protect and Preserve

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.

Protect and Preserve



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Labelling solution prevents print rubbing off

Denny Bros is a UK provider of multi-page labelling and printing solutions. Following a request from a customer, they have developed Print and Protect, a label solution that has been designed to incorporate an extra layer of laminate that is applied over the top of the label to prevent print from rubbing off, something that the company says is a common issue in the world of variable data printing, especially in the areas of healthcare or in clinical trials. The company says that it is applied once the label has been printed with the variable information such as a batch number or expiry date. The label is also designed with a perf strip ensuring it can still be opened once it has been applied while the size of the label and number of pages can be bespoke to suit the customer.



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Tasmanian fruit producer reduces counterfeit packs with smart fingerprint

A Tasmanian grower of premium cherries has seen a dramatic decline in product counterfeiting in the Asian market over the past three export seasons by moving to a smart fingerprinting solution. The Laava Smart Fingerprint solution was developed by brand authentication technologist Laava, in collaboration with Auckland-based label systems provider Peacock Bros. The smart fingerprints use images that are uniquely generated for each individual product, and use proprietary optical scanning technology, making them much more secure than a QR code. When a counterfeit box is scanned by the consumer, a 'Suspected Counterfeit' message will be displayed on the consumer's Smartphone screen, alerting them to the product not being authentic, along with support information from Reid Fruits. Their premium cherries go from trees to fridge in three days and command a premium of \$200 (£114) for two kilos, and people are paying for a brand that signifies not only quality and freshness, but, importantly, authenticity.



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Plant-based coating for avocados extends shelf-life

Spanish post-harvest company Sanifruit has launched a plant-based coating that reportedly extends the shelf-life of avocados. They say that the coating, called SANI-AG, can extend the shelf-life of the fruit by at least three days at the point of sale, while also helping suppliers and retailers reduce food waste and improve their profits. The coating is said to be easy to apply via a low-volume spraying system incorporated into the packing line through spraying which can be supplied along with the product. The company says that SANI-AG reduces weight losses during conservation and transport, thus increasing profitability, without modifying any of the organoleptic characteristics. Sanifruit says that extensive customer trials show a 15% reduction in internal damage after three days of ripening, while the severity of damage after maturation is 50% lower.



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Security labels can be fully recycled

Checkpoint Systems is a US provider of security systems for the retail industry. As one of the largest suppliers of RF-based Electronic Article Surveillance (EAS) labels globally, Checkpoint's labels are applied to millions of products, which are packaged in different materials. To ensure that its retail customers are not negatively affecting the recyclability of product packaging by attaching security labels, Checkpoint partnered with PTS. PTS are a Germany-based research consultancy with over 70 years of experience researching the use of fibre-based solutions. PTS conducted a series of technical tests on its range of labels and achieved an excellent overall recyclability rate of over 94%. The technical report concluded that consumers can safely dispose of a Checkpoint security label in a household recycling bin, without having to separate the label from the packaging, knowing that the entire pack will be recycled.



Edible security tag in drug capsules helps fight counterfeiting

Indiana-based Purdue University is developing an edible ‘security tag’ that can be embedded in medical drugs, using an authentication technique called “physical unclonable functions” – or PUF – which was originally developed for information and hardware security. PUFs can generate a different response each time they are stimulated, rendering them unpredictable and extremely difficult to duplicate. Since the tag is easily digestible and made entirely of proteins, it can be consumed as part of a pill or tablet. Shining LED light sources on the tag excites the fluorescent silk microparticles, causing them to generate a random pattern each time. Digital bits can then be extracted from an image of those patterns to produce a security key, which a pharmacy or patient would use to confirm that a drug is authentic. The researchers are currently converting this process to a smartphone app for the use of pharmacies and end consumers.



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Company launches one-piece tamper evident clamshell with innovative recycled material

InlinePlastics, based in Connecticut, USA have launched a one-piece tamper evident and tamper resistant clamshell. The clamshells include 10% reborn rDPET™ and are 100% recyclable. It is easy for consumers to use by filling and closing the lid, making it securely tamper resistant. Once closed, the clamshells are leak resistant. To open the pack, the consumer removes the tamper-evident tear strip. The clamshells are available in square, rectangular and round formats, and in a wide range of sizes. As the clamshells are made from DPET, which is the purest form of APET (amorphous polyester) on the market, it is ported to give them a superior gloss, high visual clarity, scratch resistance and unmatched uniformity. InlinePlastics have calculated that their use of reborn rDPET™ diverts close to 1 billion water bottles from the ocean and landfills annually, generating over 50% energy savings compared to conventional PET.



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Recycling Resurgence



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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. Packaging taxes that require 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 influencing the recycling of packaging. The UK's was introduced 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.



Recycling Resurgence

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[50% PCR PP jar and cap for beauty products](#)

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Biotech company raises funds to accelerate biorecycle plastic waste solutions

London-based Epoch Biodesign has raised an \$11 million (£9.06m) seed round led by Lowercarbon Capital to accelerate enzymatic solutions to 'biorecycle' plastic waste. The company says that it wants to 'develop natural solutions to unnatural problems'. The funds will be used to expand its protein design platform, construct new R&D facilities, and further scaling of bio-recycling. Epoch says that they are developing the first enzymes capable of transforming the hardest-to-recycle plastics into low carbon, circular chemicals. They say that this natural, low-energy solution is also highly scalable. Around 460 million metric tons of plastic are produced every year but due to the complexities of plastic waste, recycling rates remain low. Presently, most plastic produced is either sent to landfill or burned. Thus, valuable carbon is wasted and the chemical industry continues to use high-energy, fossil-based processes to meet growing demand.

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Laminate film solution is a world high for PCR content

Sydney, Australia-based packaging specialists Grounded Packaging have launched a new innovation which pushes boundaries for recycled content. The RE:MONO innovation is a recyclable laminate film solution, which is made from 83% recycled content. It is made from low-density polypropylene sourced from disposed plastic from standard recycling agencies. Grounded have said that the solution contains the highest amount of recycled content currently available in the world for food contact pouches, due to the difficulty that traditionally comes with converting a high percentage of PCR into packaging and it meeting food safety regulations. In order to achieve this, they worked hard to control all factors towards this innovation's success, including the acquisition of the right resources and the proper sortation process.



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Recyclable tomato packaging launched by UK supermarket

UK supermarket chain Marks & Spencers has launched a recyclable board pack for its British Collection vine tomatoes. The new solution is said to be inspired by traditional sandwich cartons and was developed in conjunction with the Reflex Packaging Group. The board-based solution uses 95% less plastic than the previous pack, and M&S says it will replace eight million plastic trays by the end of 2022. The recyclable board tray has a plastic window that helps preserve the freshness of the tomatoes and lets shoppers view the contents, but this does not prevent the board from being recycled. The move is part of M&S's pledge for all of its food packaging to be widely recyclable by 2025; it has also promised to remove one billion units of plastic food packaging by 2027. They have also rolled out recycling take-back units in over 500 UK stores, with customers able to drop off items not typically collected by local authorities.



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Recyclable lightweight stand-up pouch uses less plastic

Multinational packaging and paper group Mondi have nearly 70 innovations listed in the Innovation Zone. They have since added to their large portfolio of developments following a collaboration with Japanese consumer goods company Kao for their salon hair cosmetic brand Goldwell. The partnership led to the creation of a recyclable, lightweight stand-up pouch packaging solution for Goldwell's hair lightening products, to be used in salons. The pouch uses around 80% less plastic than the previous iteration (rigid plastic containers) but does not compromise durability or quality. Also, the pouches can be stacked, using space more efficiently than the rigid containers, thus contributing to a reduction in overall carbon footprint.



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Mono-material removable aerosol spray cap makes container 100% recyclable

Netherlands-based manufacturer of injection-moulded plastic products, Weener Plastics has announced the launch of what it says is the most sustainable aerosol spray solution on the market today. The Ultimate Spray System (USS) is a fully recyclable mono-material: an aerosol spray cap and insert made of PP or recycled PP/PCR. The patented two-piece cap can be separated from the aerosol container before disposal. To achieve refined spray patterns for specific application requirements, aerosols often use a spray cap with an insert. Traditionally, these inserts are made of polymethyl methacrylate (POM), which cannot be recycled and therefore disrupts waste streams. To overcome this issue, Weener Plastics has developed the unique USS with a polypropylene (PP) insert therefore making it a 100% mono-material product. Depending on the application, customers can vary the required spray characteristics by choosing different orifices and spray patterns.



Clear BOPP shrinkfilm can be easily removed to aid recycling

The UK division of Innovia Films, based in Cumbria, has announced the launch of a new clear BOPP (biaxially oriented polypropylene) product called RayoWrap CMS30, designed for shrink wraparound label applications. Innovia says that CMS30 solution provides high shrinkage, but only in the machine direction, making it ideal for labelling contoured drinkable dairy and beverage containers. This highly printable film is designed for use on small PP or PE bottles, as it can be easily removed to aid recycling of the bottle, or the whole labelled container can be recycled in a polyolefin stream. According to Innovia, this helps the final pack be fully recyclable, and therefore meets the Plastic Recyclers Europe packaging design recommendations. Being only 30 microns thick, the film also has a high yield, which Innovia says is a cost-effective way to get all round decoration of the container.



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Full-scale production trial of rPP resins concludes

NEXTLOOP, the multi-participant project aimed at closing the loop on recycled food-grade polypropylene (rPP), and Irish injection moulders Mannok Pack have announced the successful completion of the first full-scale packaging production trial incorporating NEXTLOOP's food-grade recycled PP resin, PPristine, into the packs. Mannok Pack ran the trials at its County Cavan facility, producing its 500g dairy spread tubs and lids through injection moulding with an in-mould label, conventional sheet extrusion, and thermoforming. The companies say that the finished packs showed excellent visual and processing characteristics, with what the companies say are minor but acceptable product variations between the 30% rPP pack and the virgin PP pack. Mannok Pack says that the packs are said to have very similar aesthetics and performance to their current virgin-based products, with little disruption to the manufacturing line.



Sortability trials for PP mono-material bags is a success

Multinational packaging manufacturer Mondi has been conducting sortability trials on its mono-material PP (polypropylene) bags. The tests were carried out at the National Test Center Circular Plastics (NTCP), an independent testing facility in the Netherlands. Using state-of-the-art engineering facilities, tests were conducted on pre-made retort and standard pouches, piping bags, topsheets and thermoformed semi-rigid shell materials. Tests on the polypropylene bags and roll material were carried out under realistic conditions and confirmed that they can be sorted into the appropriate waste stream. The bags were accurately recognized and set the standard for sorting streams that have yet to be developed across Europe. The tests are part of Mondi's MAP2030 sustainability commitments to provide circular solutions with innovative packaging and paper solutions, keeping materials in the loop and eliminating waste.



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Papermaker converts old clothing into paper packaging

James Cropper is a specialist papermaker based in the Lake District area of the UK. They have introduced Rydal Apparel as part of their Rydal range of recycled papers. Thanks to a relatively new technology, they can use post-consumer denim fibre for making paper. The process allows the cotton to be dissolved and turned into pulp. This process offers the potential to create fibre of equal or higher quality with the properties demanded for premium paper for packaging. Rydal Apparel is composed of 20% post-consumer denim fibre and 80% recycled fibre from sources such as used coffee cups. Rydal Apparel is launching with a 350gsm and 220gsm paper in Denim White deemed perfect for small boxes, garment tags, gift cards and retail carrier bags. The colour is an 'icy white' with a very subtle blue tinge created by the visible denim fibre in the sheet which adds a unique finish.



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Mono material development targets pharma sector

Vienna-based Constantia Flexibles has launched a new mono-material that is said to be ready-to-be-recycled and has high chemical resistance against aggressive liquid or gel formulations. The new product, Perpetua Alta is a PP (polypropylene) laminate, and although aimed at highly aggressive pharmaceutical products, Constantia says that Perpetua Alta may also find applications in other market segments requiring high chemical resistance, such as food applications. Perpetua Alta's performance is similar to aluminium-containing multi-material laminates compliant with HCR (high chemical resistance) requirements, such as hydro-alcoholic gel under accelerated ageing conditions. Constantia says that compared to a conventional laminate solution, this innovative laminate offers optimal product protection from oxygen, water vapour, and light at a reduced weight and increased yield. It is a drop-in solution for existing packaging formats based on laminates like stick packs, sachets, and strip packs. Also, packaging machines do not have to be replaced as existing equipment can be used.



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Beauty packaging range launched with molecular recycled resins

New Jersey-based WWP Beauty, a full-service supplier to the global beauty industry, has announced their collaboration with Tennessee-based Eastman Chemicals as part of the former's commitment to providing customers with sustainable technologies and materials. The collaboration between the companies began in 2021. WWP Beauty is now launching two new packaging collections in Eastman's Cristal One Renew and Cristal Renew. The Cristal One Renew Collection features a heavy wall jar, lip-gloss, and a compact with a luxurious bluish tint and a premium look and feel and contains 50% molecular recycled content. Cristal Renew is a collection of a jar, lip-gloss, and a compact featuring crystal-clear resin with a glass-like look designed with 50% molecular recycled content (RPETG 50%). Cristal Renew is indistinguishable from virgin resin, with a zero drop-off in performance or aesthetics due to the advanced molecular recycling process. It is reported that both collections will help advance the recycling of more materials.



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High-barrier recyclable paper alternative to plastic for dry food products

A joint venture by three companies has resulted in the development of a 100% recyclable, paper-based, high barrier alternative to conventional multi material plastic laminates. The FibreCycle project brought together three different stakeholders, firstly, UPM, a world-class paper manufacturer, the second is the varnish producer Michelman and the third, the specialist in paper and board converting machines, Bobst. The oneBARRIER FibreCycle solution utilises the synergies between wet dispersion coating and dry vacuum coating to achieve a high-performance packaging solution. On FibreCycle, the barrier is made possible by the presence of a thin metallic layer, applied under vacuum using a Bobst Expert K5 machine, on the Michelsen primer which covers the paper. A second varnish is deposited on top. It plays both a protective and sealing role. Designed for use on form-fill-seal (FFS) packaging machines, FibreCycle is said to be particularly suitable for packaging dry products such as coffee and freeze-dried soups.



PCR bottle development incorporates deinkable shrink sleeve

The Design4Circularity initiative is aiming to develop circular packaging solutions by accounting for each step of the development process. The initiative says it is looking to create solutions that support plastic waste reduction, as well as less use of virgin plastic material and lower climate impact. Participants in the enterprise include Clariant, Siegwerk, Borealis, and brand owner Beiersdorf. The team has now developed a concept for a colourless personal care bottle with 100% post-consumer recyclate (PCR) (post consumer recycled) content, which was developed by Borealis, with Clariant contributing an additive solution to protect against polymer chain breakdown with each recycling step. Siegwerk, in collaboration with Beiersdorf and a sleeve manufacturer, provided ink systems that reportedly allow full-body colour printing of the whole sleeve, while also allowing deinking of the sleeve within a recycling process. The companies claim that first sorting trials in existing recycling infrastructure prove the sortability of the full-body sleeved HDPE bottle.



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UK motorway service stations to introduce coffee cup recycling stations

As part of a collaboration with coffeehouse and fast food chain McDonald's, UK motorway service station operator Roadchef, is set to add coffee cup recycling points to all 30 of its UK sites. Across the service stations, there will be 65 recycling points, where customers will be able to separate cups, lids and leftover drinks. The cups will then be sent back through Costa Coffee's stores, to specialist recycling facilities. Roadchef records more than 50 million visitors to its UK service stations every year, making the opportunity for coffee cup collection significant. McDonald's UK already hosts recycling bins with cup sections in all large stores, with more than 1,100 recycling units for coffee cups installed. Costa has also been rolling out in-store collection points at stores outside of service stations in the past.



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Global spice company moves to 100% recycled PCR bottle

US-based McCormick & Company, a global manufacturer of spices, seasoning mixes and condiments, has announced that it is to move to a 100% recycled PCR bottle supplied by Berry Global for its bottled dyes. The new McCormick Assorted and Neon Food Color bottles are made from 100% PCR (post-consumer recycled) PET (polyethylene terephthalate) and will begin appearing on shelves across North America this month. By moving to a bottle made from 100% PCR PET, McCormick is increasing the circularity of its packaging while reducing associated carbon dioxide (CO₂) emissions. A life cycle assessment estimates McCormick will realise a reduction of 86.8 metric tons of CO₂ emissions with the new PCR bottle in comparison to the same bottle made from virgin material. This amounts to a 59% reduction in CO₂ emissions, which is stated by the brand as equivalent to the greenhouse gas emissions from 18.7 petrol-fuelled passenger vehicles driven in a year.



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Norwegian ice cream manufacturer introduces a deposit scheme for packaging

A Norwegian ice cream manufacturer is introducing a deposit scheme for returned packaging. Although Norway is already a leader in these kinds of schemes until now they have been limited to items such as cans and bottles, which have an established recycling value. Now, ice cream manufacturer Hennig-Olsen is introducing a scheme whereby ice cream wrappers can be recycled, with consumers earning 40 øre (approx. 4p) per wrapper. To get the money consumers will first need to download an app called Bower and then scan the barcode, along with taking a picture showing where it was disposed of, the packs are also equipped with geocoding. The consumer can then choose to either keep the money or donate it to a good cause. The system is to be implemented in cooperation with the Joker and Nærbutikken supermarkets. Last year Hennig-Olsen switched all of its individual ice cream packaging to a mono material, so it can all be recycled.



Bread manufacturer moves to 100% recyclable paper packaging

Warburtons, the UK's largest bakery brand is moving its 800g White Baker's Bloomer into 100% paper recyclable packaging. The change follows the successful launch of the bread maker's Seeds and Grains range, which was launched in April 2022. The company says that the new paper bag is fully recyclable at home with paper and board collection, and supports consumer desire for more sustainable packaging. They add that the paper-based packaging does not impact the freshness of the loaf. The new sustainable packaging forms part of Warburton's five-prong environmental strategy focusing on carbon management, ethical sourcing, packaging, food waste, and people and communities. Warburtons is a signatory to the Courtauld Commitment 2030 agreement, which was set up to help UK food and drink operators achieve global environmental goals. Warburtons Baker's Bloomer is currently listed in Tesco, Co-op, Sainsburys and Asda, with a RRP of £1.75.



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Plastic-free sack enables recycling in regular paper streams

Swedish paper and pulp manufacturer BillerudKorsnäs has announced the launch of Performance White Barrier, a paper-based alternative to plastic lined sacks. Due to a barrier coating, sacks made from Performance White Barrier are said to be easy to open, withstand moisture and even survive light rain for a limited time. The barrier coating can be applied to either the inside or out. The company says that if the coating is applied to the outside, it provides a good surface for printing. BillerudKorsnäs says that it is easy to move to Performance White Barrier as no changes are needed in sack production equipment, while other performance factors such as sack strength, handling and filling rates remain the same, and after use can be recycled with other paper items. The paper is suitable for various applications, from animal feed and dry food to building materials, chemical substances and mineral products.



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Japanese cosmetics company introducing chemically recycled PET for foundation makeup

Japanese cosmetics company Kao is integrating chemically recycled PET by PET Refine Technology, a subsidiary of Jeplan, into the inner plate of the company's compact powder foundations. The recycling process includes chemically breaking down discarded PET materials to eliminate impurities before recycling them and using them as the raw material for PET resin. The companies claim that this technique is advantageous since the material can be recreated with the same physical properties and quality as those derived from fossil-based material. The inner plate, which is currently constructed of virgin PET material, will be progressively replaced with chemically recycled PET of comparable quality. Kao aims to reduce the virgin plastic used in its makeup category through this effort. Kao's initiative to reduce virgin plastic use includes encouraging the use of replacement and refill packs. The company had 380 refill and replacement items as of December 2021, with an 83% conversion rate.



Toilet roll packaging made from 30% recycled plastic

Kimberly-Clark UK, owners of Andrex toilet roll, has announced that its most popular product, Andrex Classic Clean, is moving to an outer wrap that is manufactured from 30% recycled PE (polyethylene) made from post-consumer resin (PCR). This makes it a sustainable packaging alternative made from plastic materials collected from consumers. The plastic is taken to a facility where it is washed, reground and pelletised into a new usable material. The change is reported to remove 481 tonnes of virgin plastic over the next 12 months from this variant alone, which is the equivalent of over 48 million 500ml PET virgin plastic bottles, and packs have started to appear on all major retailers' shelves. The announcement marks yet another step towards a wider ambition to reduce the brand's usage of virgin plastic. By 2023, Andrex is targeting to have at least 50% recycled plastic across all its packaging.



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Manufacturer adds spouted pouches to recyclable plastic range

UK packaging manufacturer Sirane has announced that spouted pouches have been added to their RePEat mono-material recyclable plastics range. The RePEat range includes stand-up pouches and films, and all are made from pure PE, which means they can be recycled in the LDPE recycling stream. The company says that it can supply a range of different sizes and different spout types, and the pouches can be either filled through the spout or top-filled – with the spouts placed in either the corners or the centre of the pouch. Customers can also take advantage of Sirane's eco-friendly printing capabilities as they use only water-based inks and adhesives. For more 'aggressive' products, a protective layer can be added. The company says that their spouted pouches are suitable for a range of products, including baby foods, automotive products, health & beauty products and more.



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Beverage carton recycling solution being investigated

Finnish paper and pulp products manufacturer Stora Enso is joining forces with Swedish beverage carton manufacturer Tetra Pak to assess the feasibility of recycling beverage cartons at Stora's Langerbrugge site. The Belgian site is hoping to recycle some of the country's estimated 75,000 tonnes of beverage cartons that are sold annually. Currently there is no beverage carton recycling infrastructure in the region. The intention would be that Stora would recover the board fibres, while a third partner would recycle the polymer and aluminium barrier materials. The recycling project is linked to Stora Enso's feasibility study examining a potential conversion of one of the Langerbrugge site's paper lines into a high-volume recycled containerboard line, which is expected to conclude in the first half of 2023. If the company decides to invest, the recycling containerboard line is expected to enter production in 2025.



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Company launches UK's first fully recyclable baby food pouch

Baby food company Little Freddie has announced the launch of the UK's first baby food pouch that can be recycled through normal household recycling. The company spent several years of trialling to decide upon a PP (polypropylene) mono material structure for their pouches. The pouches have been assessed by the On-Pack Recycling Label (OPRL) scheme to meet the requirements of their 'Recycle' designation. The pouches will carry a recycle label, meaning they can be accepted by kerbside recycling. The first two products to move to the new format will be 'Super Strawberries & Bananas' and 'Mighty Mango & Passionfruit'. They are suitable for babies 6m+ and are available in a multipack, using FSC-certified cardboard and are printed using vegetable-based inks. Over the next 12 months, the company hopes to save over 350,000 pouches from landfill, equivalent to 2.5 tonnes of plastic.



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Companies bring sustainable PP coffee capsules to market

German coffee retailer Tchibo has collaborated with Berry Global to bring sustainable PP (polypropylene) capsules to market for its Qbo coffee brand. The new polymer capsule is made from 70% bio-based raw materials, such as waste and residue oils and fats like cooking oils. The companies say that the renewable resources used to create the PP polymers are the same grade as virgin PP, ensuring that customers will not notice or taste any difference. According to a life cycle evaluation conducted by the Technical University of Berlin, Germany, converting the Qbo capsule material results in approximately 35% fewer CO₂ emissions. The companies also claim that the renewable feedstock used can be simply integrated into current production lines with minimal modifications required. The International Sustainability & Carbon (ISCC PLUS) system certifies the renewable materials supplied by a mass balance approach.



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Fruit tray made from 100% recycled cardboard

Dutch board packaging manufacturer Fonkels has launched a patented new soft fruit pack with an accompanying lid. The patented section of the tray is part of the base tray – called the Flex Bottom, it flexes with the product, ensuring that soft fruit is not crushed and that any juice is collected. The tray was also designed to match the same size as a standard plastic punnet, making it easy to transition from plastic to board. The soft fruit tray is made from recycled cardboard and is produced in a BRC (British Retail Consortium) certified factory. It is 100% food safe and can be recycled after use with other paper and board products. The soft fruit/berry tray is available in 150 grams and 300 grams sizes and is delivered ready-to-use and stacked. The trays can also be individually branded.



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Coca-Cola rolls out reverse vending machines across entertainment venues

Coca-Cola is rolling out a deposit return scheme for its 500ml plastic bottles at nine sites across the Merlin Entertainments Group. The venues will include Alton Towers Resort, Legoland Windsor Resort, Thorpe Park Resort, Chessington World of Adventures Resort, Warwick Castle Resort, SEA LIFE aquariums in Blackpool, Brighton and London, and Legoland Discovery Centre Birmingham. The reverse vending machines accept empty 500ml PET (polyethylene terephthalate) bottles and give consumers the chance to win VIP experiences to its sites in exchange for empty plastic bottles – including a family VIP behind the scenes tour of the SEA LIFE TRUST Cornish Seal Sanctuary in Cornwall, a shark dive at the Bear Grylls Adventure in connection with the Shark Trust, a VIP White Rhino Encounter at Chessington World of Adventures Resort in connection with the Chessington Conservation Fund and a Green Sea Turtle feed plus VIP Tour of SEA LIFE Manchester.



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Toilet cleaner bottles produced using 50% PCR

Austria-based Greiner Packaging and German multinational chemical and consumer goods company Henkel have collaborated to bring to market a bottle that contains 50% PCR (post-consumer recycled) PE (polyethylene). The bottles were developed for Henkel's Bref toilet cleaner brand and will replace the previous black bottles which caused issues for recycling due to the black masterbatch used to make them. The new bottles have a new masterbatch, supplied by Ampacet, who helped develop a black plastic packaging solution that is fully recyclable. The companies say that the black bottles can now be correctly identified and sorted by optical sensors at waste sorting plants. Henkel says that their new Pro Nature bottle containing 50% recycled material is a "shining example" of their activities to reach their goal to reduce 50% fossil-based virgin plastics by 2025.



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Laundry pods move to board packaging

Global consumer goods manufacturer Procter & Gamble is moving its Ariel and Lenor all-in-1 pods into recyclable board packaging. The new packs will be made from at least 70% recycled fibres, is FSC-certified (Forestry Stewardship Council), and fully recyclable. The new packs contain a maximum of 5% plastic to protect the pods. The move will save up to 900 tonnes of plastic annually across Germany, Austria and Switzerland. After use, the packs can be recycled with paper and board. The company says that adults can open the Ecoclic box intuitively while remaining securely closed for children. When closed, the box makes an audible 'click' once it is fully closed. To aid the visually impaired, the new packaging has tactile markers on the top in the shape of a washing machine. Also, NaviLens technology on the packaging ensures that the most important product information is also accessible to people with impaired vision.



World's first sustainable net wrap for silage

Unipak is an Australian-owned company specializing in the crop packaging sector. They have announced the launch of a sustainable net wrap specially designed for use with round silage bales. The new product, called Eco-Net Bale Net, is made from 100% recycled HDPE (high density polyethylene) resins. Unipak says that until now, due to how these specialist PE materials are required to behave, it has required virgin polymer materials to manufacture these types of products, but after extensive research, they have developed what they claim to be the world's first environmentally responsible net wrap. The company says that all product standards are guaranteed with Econet – length, high tensile strength, and are suitable for all-around balers. In addition, the entire packaging of Eco-Net – the material itself and the core – is made of recycled material. The company says that Eco-Net Bale Net is competitively priced too.



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Makeup powder launched in rPET compact redefines sustainable luxury

French luxury fashion house Chanel is launching Les Beiges Maxi Poudre Belle Mine Ensoleillée, its make-up powder in a food grade rPET (recycled PET) compact. The compact was developed in conjunction with French packaging company Texen, who says the 10cm x 10cm compact conforms to the House of Chanel's requirements. Texen explains that it is important to be attentive to the aesthetics and eco-design of this thin-walled compact, especially taking the technical constraints of the raw material into account. The compact features a hinge that was particularly difficult to assemble. For this product, Chanel insisted on using food-grade rPET, as it guaranteed consumer safety and the stability of cosmetic formulas. Texen says that BESST (Beauty Experience Sensation Surface by Texen) technology allows for the refinement of the material, optimizes the manufacturing of ultra-thin parts and gives them a glossy finish for a "premium aesthetic".

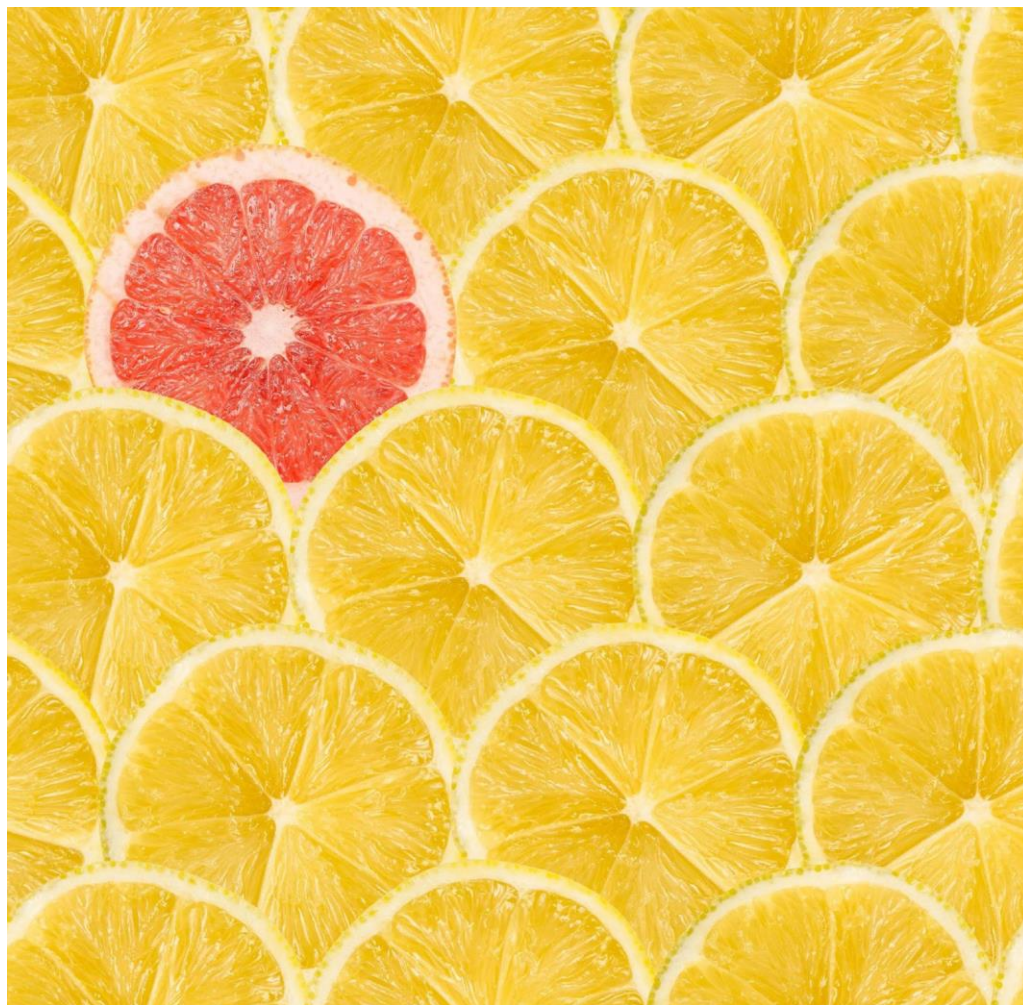


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50% PCR PP jar and cap for beauty products

Florida-based APC Packaging is a company that provides packaging for global cosmetics and skincare brands. They have recently announced the launch of an elegant, heavy-walled jar and lid manufactured using recycled materials. The PP (polypropylene) mono-material is made from 50% virgin PP, and 50% Post Consumer Resin (PCR) PP. As the cap and lid are both made from PP, this makes it easy for the consumer to recycle after use. The new PCR jar is available in 30ml and 50ml capacities. The jar is only available in white and the cap is available in either white or matte silver, although the silver cap is not recyclable due to the decoration. The company says that stock is available and ready to be shipped immediately by the case.





Getting Noticed

Getting Noticed

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

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



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Beer labels change colour through light activation

Heineken, owners of the Sol beer brand, has collaborated with Welsh custom label printer MCC (Multi Color Corporation) Cwmbran to produce a bottle label printed with photochromic inks, which change colour when exposed to sunlight. The limited edition bottles have been produced to celebrate the fact that Heineken have installed 9,212 solar panels on the roof of their Zoeterwoude brewery in the Netherlands, indicating that solar power plays an important role in the production process of Sol. This is a significant milestone in the brand's journey to reducing carbon emissions and becoming more sustainable. When exposed to sunlight, the Sol label reveals a hidden message to the consumer, enhancing their experience with the brand and reinforcing their connection with the sun and solar energy. The new bottle is now available throughout Brazil, in a 330ml size, but only as a limited edition.



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Whisky giant uses ink made from air pollution

Johnnie Walker, owned by Diageo, has launched a limited edition series of Black Label bottles that are printed using an ink made from air pollution. The whisky, called The Keep Walking City collection, has been printed in collaboration with MIT (Massachusetts Institute of Technology) spin-off Air-Ink, a start-up that creates ink by condensing carbon-based gaseous effluents generated by air pollution. The limited-edition bottles will feature artists' impressions of six cities, Mexico City, New Delhi, Warsaw, Bangkok, Istanbul and Madrid, and will be available between July and September 2022, with only 2,500 bottles being produced for each city. Johnnie Walker says that they asked artists to shine a light on what makes their city special and inspire people to come together to 'keep walking'. The Black Label Blended Scotch Whisky includes flavours of toffee, fruit and spicy vanilla, and is bottled at 40% ABV.



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Collaboration of six companies launch colourful monomaterial tubes

A collaboration of six companies has resulted in the launch of colourful lightweight mono-material tubes that they say possess perfect recycling performance. The objective of the project was to design tubes using less material but maintaining the same level of tube robustness. As a result of the use of mono-material, the tubes are said to be easy to recycle. The project was a partnership between six businesses. Merck provides Colorstream effect pigments, Iriotec laser-sensitive pigments for durable laser marking and Ronastar pigments that veil items in liquid shimmer. Gabriel-Chemie developed the masterbatch while Tupack produced the cosmetic plastic tubes. Additionally, KM Packaging provides the flip-top closure. Finally, Emil Kiessling fills each tube with shower gel and beLaser marks the flip-top closures and/or tubes with suitable laser marking technology. Known as the 'Spectacle of Nature' series, the companies are keen to show that sustainability and engaging colour effects can be flawlessly combined.



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Refill Revolution

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 trials 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 couple of years 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.



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Reusable box for eggs at German supermarket

German supermarket chain Kaufland has become the first retailer in the country to introduce reusable plastic boxes for organic loose eggs. The boxes are priced at €1.99, and the eggs are priced individually. Once back at home, if required the box can be cleaned in the dishwasher and brought back with the customer next time they go shopping. Kaufland says that the responsible and resource-saving design of their range is their top priority. With the new reusable egg box, customers can once again easily help to avoid packaging materials when shopping and thus avoid waste. As part of the Schwarz Group, they are part of the group-wide plastic strategy REset Plastic, whose goals include: 100% of their private label packaging is to be recyclable, 20% less plastic in their private label packaging and transport aids, and on average a 25% use of recyclate in their private label packaging out of plastic.



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Refillable CBD range is a UK first

Scotland-based CBD producers Voyager Life have achieved a UK first in the packaging industry. They have begun selling their CBD products in refillable packaging, including two shampoos, two conditioners and four hand and body washes. The CBD products, sold in 250ml or 500ml sizes, can be purchased and subsequently refilled at three stores in Scotland – Dundee, St Andrews and Edinburgh. The pricing of the products is under £10 per item and there will be discounts given when customers use their refill scheme. Voyager now stocks over 40 products under their portfolio, and are planning to make their entire list as sustainable as possible.



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Refillable packaging range for makeup and skincare brands launched

Fasten is a Dutch manufacturer of packaging for the beauty industry, and is part of the Innovative Beauty Group. They have now introduced the Recharge Luxury Refill System, a range of refillable cosmetic packaging for makeup and skincare products aimed at supporting the circular economy. They are available in 30 ml and 100 ml containers that are fully constructed of PP and PET. The design of the pump features a clear outside frame with a bottomless design rather than a full outer container, which results in a significant reduction in weight, reduced material waste, and full visibility of the refill. The lightweight inner refill container has a simple click-in system and a pre-assembled PP dip tube that guards against cross-contamination during refilling. The absence of glue, the opportunity to add a debossed logo rather than inked decoration, and a little mushroom blister on the shell are seen as more environmentally-friendly characteristics.



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Seller of insulated containers partners with reusable packaging company

Hipli is a reusable packaging company based on the Normandy coast. They have formed a partnership with French company Qwetch, who sell insulated containers for drinks, thermos flasks, and also lunch boxes that can also be reused. Hipli has been offering reusable packages for e-merchants since 2020 as detailed in the Innovation Zone with the stated objective of reducing transport packaging, and in particular the cardboard and plastics that are used in this sales network. Hipli reusable packaging has a range of three envelopes, and a rigid parcel to protect fragile products. They feature a secured zipper to protect the shipment. They are designed to be reused 100 times. When the customer has unpacked their product it can be folded and inserted into its integrated pocket, then dropped off in a mailbox. The postage-paid package is then sent to the Hipli sorting center in Le Havre, where it will be inspected, repaired if necessary, cleaned and returned to the circuit.



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French companies launch refillable cosmetic jar

Two French companies have come together to develop a refillable cosmetic jar that is fully recyclable. Stoelzle and Technicaps got together at the beginning of the project and it took them just one year to develop a new refillable solution. It consists of a glass jar, a PP (polypropylene) cup and a PET (polyethylene terephthalate) cap. All three elements can be decorated. Once separated, each element is recyclable. To remove the empty refill, the user simply grabs the collar, unlocks it, and inserts the new one by locking it. The neck has three indexation zones, where refillable jars on the market usually only have two. These zones prevent accidental withdrawal of the cup when required, but easy removal for replacing the refill. Stoelzle and Technicaps say that as quickly as the second refill, the consumer has offset the CO2 emissions emitted for the production of the jar and its cup.



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French supermarket adds alcohol to the Loop reuse system

Following the successful move of water, fruit juices and carbonated soft drinks to the Loop refillable deposit system, French supermarket chain Carrefour is now including wines, spirits and beers in several of its stores. Marie Brizard Wine & Spirits has been offering its William Peel whiskey in a 70 cl format, Kronenbourg 1664 beer in a 25 cl bottle, and Famille Ravoire the Côtes-de-Provence rosé Manon as well as Côtes-du-Rhône White and red. Oé, a start-up specializing in organic wine and committed for several years to reuse, completes the offer with three references, a red Côtes-du-Rhône and Bordeaux and a white Languedoc. The Loop system, launched in May 2019 by TerraCycle and Carrefour in the form of an e-commerce platform, has been gradually implemented by the brand in around twenty stores in Île-de-France since the end of 2020. Currently, 21 brands of consumer products are available as part of the scheme.

The advertisement features a yellow background with the "WILLIAM PEEL" logo at the top. Below it, a banner reads "E DANS L'ÉCONOMIE CIRCULAIRE AVEC". The "Loop" logo is crossed with the Carrefour logo. A bottle of William Peel Blended Scotch Whisky is shown on the right. The bottle has a yellow label with the "Loop" logo and "Blended Scotch Whisky" text. Below the bottle, there are two numbered steps: 2. "Rapportez l'emballage vide" (Return the empty packaging) and 4. "Pour être réutilisé !" (To be reused!). A small text "avant qu'il nouveau !" is visible on the left.

WILLIAM PEEL

E DANS L'ÉCONOMIE CIRCULAIRE AVEC

Loop × Carrefour

2 Rapportez l'emballage vide

4 Pour être réutilisé !

avant qu'il nouveau !

WILLIAM PEEL
BLENDED SCOTCH WHISKY

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Australian wine producer sells draught wine in kegs

Australian wine producer Riot Wine has formed a partnership with Konvoy Kegs to create an unusual format for the wine category. Riot Wine Co, which began selling wine in 2016, became the first brand to make wines specifically for draught consumption. Being a small business, they did not have the capital to invest in their own fleet of kegs, so approached Konvoy Kegs. Konvoy is Australia's only dedicated keg servicing and repair centre. Riot says that kegs are an obvious choice for wine as they will retain their quality and taste as there is no temperature, light or oxygen variation that deteriorates the contents. The company noticed that sparkling wine has the highest level of wastage, so they decided to tailor their keggings processes with Konvoy for sparkling wine and have since launched draught sparkling wine. They say that they have become the first and only company to have sparkling wine on tap that stays sparkling.



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Belgian Post Group to trial reusable packaging

Bpost, also known as the Belgian Post Group, is the company responsible for the delivery of national and international mail in Belgium. They are currently running a sustainable pilot project in a collaboration with French reusable packaging company Hipli. The trial will be used for the delivery of orders from Torfs, ASAdventure and Juttu customers. After the recipient has removed their order from the package, the empty packaging can be returned via a red letterbox from bpost. It will then be cleaned and returned to the e-commerce network. These packs are expected to be reused up to 100 times, and Hipli has calculated that a package could travel as far as 144,500 km during its lifetime. The packaging is waterproof and tear-resistant. By sending reusable packaging, the CO2 footprint is reduced by 83% compared to cardboard packaging, according to Bpost.



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Cosmetics company debuts reusable packaging

French cosmetics company L'Oréal is to become the first company in Spain to use packaging created by Koiki that is intended to be reused up to 20 times. KoPack will come into use this month from two models, a foldable recycled polypropylene box and a raffia bag that provides greater flexibility and capacity. To recover the packaging, the consumer can return the packaging directly to the delivery person when they receive their order or deposit it at one of the collection points of the Spanish last-mile firm. The packaging is then sent to central collection points in Madrid and Barcelona, is sanitized and put back into circulation. Koiki is a delivery service that has two goals: One, to cut CO2 emissions in cities by delivering mainly on foot or by bicycle; and two, to provide employment for people with mental or physical disabilities.



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Pilot scheme promotes use of reusable/refillable containers

Algramo is a Chilean company that promotes the reuse and refilling of plastic packaging and has been featured several times already in the Innovation Zone. Following a contribution of \$650,000, they are launching a pilot scheme known as the 'Refill Revolution' in Mexico City. The project aims to reduce plastic pollution through the reuse and filling of specialized platforms located in supermarkets. The startup is working with global consumer goods companies such as Unilever, Nestlé and Purina, to promote what they call the recharge revolution. Algramo's innovative system makes smart packaging available, which tracks the life cycle of plastic, and a platform in the supermarket to fill household products, such as detergents, shampoos, dry food or pet food. The containers and dispensers are linked to a smartphone app where users can access their refill and environmental impact records. The funding came via P4G Partnership, a Mexican institution that supports the development of social, public, private partnerships to drive sustainable economic growth through innovation.



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Bespoke, reusable packaging solution for manufacturer of custom-made truck lamps

Antalis Packaging UK has created a bespoke, reusable packaging solution for a manufacturer of custom-made truck lamps. Antalis Packaging's client manufactures two kinds of truck lamps which are shipped to an external finisher before being returned and placed into storage. Prior to contacting Antalis, the lamps were packed into polythene bags and placed loose into a box, resulting in damages at a rate of 30-40%, partly because the lamps can only be touched at designated points. Antalis arrived at a solution comprised of laser-cut foam and a corrugated board outer carton. Antalis created a packaging solution that would provide optimum protection with minimum contact to avoid damaging the lights. The bonus is that the packaging is reusable, helping the manufacturer improve their environmental footprint. Antalis says that the client was delighted with the final solution.



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Resealable and refillable mono-material container for wet wipes

Hitam France is a family-owned company that produces maintenance, industrial, cleaning and professional products. In collaboration with Berry Superfos, they have launched a mono-material polypropylene (PP) container for their wet wipes range that is said to be both resealable to retain freshness and refillable, while also being easy to recycle. Berry Superfos developed the 5.3-litre container, which is a special refinement of its Paintainer pail, is durable and reusable, with an easy refill option once the reel of 1,000 wipes is finished. Hitam says that this new container also provides space for more wipes than the former pack, meaning the ratio between the plastic packaging and the wipes has changed to allow for extra wipes while reducing the plastic content of the container. When the cap in the lid is sealed, the wet wipes are in an airtight container, preventing evaporation.



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About Us

ThePackHub is a leading UK-based packaging innovation consultancy delivering packaging solutions and insight to brand owners, retailers and packaging suppliers.

Innovation Zone

ThePackHub manages a market-leading packaging innovation platform. The easy to use resource has over 6,300 packaging innovations from around the world updated at 25 new initiatives every week. The service includes regular updates, a monthly report summary, members only webinars and discounts off ThePackHub's range of services.

Technical Support

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.

Packaging Reports

ThePackHub has published several packaging reports covering important subjects such as sustainability, packaging trends, supplier guides, reusable and refillable packaging, seasonal and more.

Packaging Events

ThePackHub has delivered a dozen in-person packaging seminars that provide insight from expert speakers as well as helping to bring the industry together to network and collaborate. The team also host regular packaging webinars covering a range of packaging topics. We often attract around 300 registrations from participants around the world.

ThePackHub clients include Arla Foods, AB InBev, Amcor, Coca Cola, PepsiCo, Mondi, Premier Foods, Kraft Heinz, Mondelez, Mars Wrigley, Nestle, Church & Dwight, PZ Cussons, Walgreen Boots Alliance, Marks & Spencers, Lidl, Aldi, Waitrose and many more.

If you'd like to know more about how ThePackHub can help you, please let us know by contacting us at enquiries@thepackhub.com.



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