Welcome

Welcome to ThePackHub's Packaging Innovation Briefing Report for March 2023, your ultimate resource for staying informed on the trends and breakthroughs in the packaging industry.

This exclusive and extensive monthly report offers a treasure trove of insights on the most recent packaging innovations and industry updates. Spanning 131 information-rich pages, featuring 100 new packaging innovations for the month so that you can be sure that you'll stay informed and up-to-date on all the latest developments in the packaging industry.

So sit back and enjoy this journey through the world of packaging innovation.

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Summary

This report highlights the recent developments in packaging innovation, with a focus on bio-based packaging, technology-based solutions, e-commerce packaging, functional packaging, plastic reduction, and refillable and reusable packaging. Sustainability continues to be of primary focus with around 80% of new initiatives being environmentally focused.

The bio-based packaging sector is expanding rapidly particularly seaweed-based packs, and packaging that connects with consumers is still essential. Additionally, with the growth of e-commerce, there are increasing opportunities for brands and retailers to offer packaging solutions tailored specifically for this channel. The trend towards refillable and reusable packaging is gaining momentum, with many initiatives in the dry food, household, and personal care sectors. Recycling initiatives also continue to be one of the most active sustainability areas, driven by challenging Plastic Pacts commitments and packaging taxes.

The Nine Trends →

The innovations featured track ThePackHub's nine trend areas:

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

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Naturally done

This month saw a continued focus on bio-based packaging, with 25 new initiatives in the space. Biodegradable and compostable packaging continue to be developed, as well as new bio-based alternatives to plastic. However, the lack of established industrial composting systems in most markets is a significant barrier to mass adoption.

Additionally, there are concerns about compostable and biodegradable packaging contaminating existing recycling streams, and the cost of such packaging is typically much higher than conventional plastic-based products. Despite these challenges, the bio-based packaging sector is expanding rapidly, with many new initiatives in development and not yet available on store shelves. However, big brands are yet to widely adopt these new packaging options, and most usage is currently limited to small challenger brands looking for a sustainable point of difference.

Seaweed packaging is a particularly strong area of development in recent times.

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Naturally Done

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Fibre-based punnets for UK mushroom packs

Graphic Packaging International and Smithy Mushrooms have partnered to provide recyclable, cartonboard ProducePack Punnets for UK supermarkets. As more consumers prioritize sustainability and legislation aims to reduce the use of plastic packaging, brands are seeking solutions that reduce single-use plastic. Graphic Packaging's ProducePack Punnet features a water-based moisture and grease-resistant barrier, and the top film contains 30% post-consumer recycled material supplied by Leicester-based D&M Flexibles. The punnet's unique rigid flange eliminates the need for plastic flow wrap, streamlining the production process and making the product more visible to customers. The previous punnet required plastic flow wrap as it could not be top-sealed. The partnership is said to demonstrate a commitment to reducing the environmental impact of packaging while still delivering high-quality products.

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Researchers develop sustainable materials from cocoa production waste

Kajkao are an Italian-Ecuadorian team of designers who have embarked in social entrepreneurship to develop new biodegradable, compostable and sustainable materials using agricultural waste from cocoa crops. In the roughly simple manufacturing process still based on a linear production chain, around 50% of the harvested cocoa pod is used to make chocolate, while the rest goes to waste. These waste products, including cocoa bean shells, are substantially made of vegetal fibres and thus have interesting thermal and mechanical properties suitable for different applications. Kajkao has experimented with and is developing new methods to integrate such waste into new environmentally conscious materials, saving the raw material from damping or incineration. They have produced bioplastic sheets with interesting aesthetics and properties, such as a smooth or textured surface to the touch, light transparency, and a semi-matt or glossy appearance. These bioplastic sheets, produced in rolls, can be cut or thermoformed.

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Shellac used to improve the barrier properties of pulp-based packaging products

A shellac-based coating has been developed by researchers in order to improve the barrier properties of pulp-based packaging products. Shellac comes from a resin secreted by lac bugs and is used in a variety of products, and is also widely used in the pharmaceutical and food industries due to its non-toxic nature, thermoplastic behaviour, oil resistance and good moisture barrier properties. Researchers at the School of Science, Mae Fah Luang University, Thailand, and the School of Engineering and Materials Science, Queen Mary University of London, combined to develop a moulded pulp with a nanocomposite layer consisting of nanofibrous cellulose (NFC) and shellac, to further protect the products in a package from intrusions. The Shellac-based coating makes the cast pulp materials food-grade and sustainable, as no petroleum-based polymers or metals are required. A challenge to commercialisation lies in the cost, estimated to be three to ten times higher than the materials used today.

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New technology challenges traditional paper and pulp moulding

Norrköping, Sweden-based Celwise has developed an innovative new technology promising to revolutionize the packaging industry, rendering traditional legacy methods for producing paper and moulded pulp obsolete. Compared to existing alternatives, Celwise's technology offers significant reported benefits. It saves 50% of the energy per gram of moulded paper and is up to seven times faster than other options, thus increasing productivity. The technology creates paper with reported dramatically improved properties and superior quality. Additionally, it replaces formed plastics and is made of pure cellulose fibres without additives, ensuring that products made with the technology are 100% naturally compostable. The technology is reported to be cost-effective compared to plastic products. The patented process creates unique properties in materials that result in stronger, lighter, and more hydrophobic substrates. Celwise owns and licenses this advanced technology, including the processes, tooling, and machines required to produce the products.

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Seaweed-based food packaging extends shelf-life

Cambridge-based SoluBlue has developed an innovative seaweed-based food packaging material that extends shelf-life and eliminates food waste, while also being fully biodegradable and having biodigestible properties. SoluBlue is reported to look and feel like plastic, but is breathable and hydrophilic, absorbing excess moisture from food, preventing mould growth, extending shelf life and preventing premature spoilage. Being made from seaweed, SoluBlue is biodigestible, making it safe for marine life. It is fully compostable, reportedly biodegrading as quickly as the food it contains. This means that both food and its container can be placed in the same composting bin, which ensures its effective capture and return as fertiliser to grow food. Recommended applications are primarily fresh fruit and vegetable products, but SoluBlue packaging is also an effective solution for extending the shelf life of cheese.

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Luxury brand owner to accelerate the use of sustainable materials for cosmetic products

French multinational luxury brand owner LVMH, is collaborating with Dow Chemicals to accelerate the use of sustainable packaging across LVMH's perfume and cosmetic products. This partnership would enable both bio-based and circular plastics to be integrated into several of the beauty multinational's product applications without compromising the functionality or quality of the packaging. The collaboration will see the use of circular plastics, which are made from bio-based and plastic waste feedstock respectively, and will be used to produce sustainable SURLYN ionomers, polymers used to manufacture premium perfume caps and cosmetic cream jars. Bio-based feedstocks for the production of bio-based SURLYN can include raw materials such as used cooking oil. A spokesperson for LVMH said that as part of their Life 360 programme, they had made the decision that their packaging would contain zero plastic from virgin fossil resources in the "near future".

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Bottle made from potato is edible and dissolvable

GoneShells is a bio-based bottle made from potato that can be eaten, home-composted or dissolved under water when finished with. It was developed by Swedish design studio Tomorrow Machine, in a collaboration with juice company Eckes Granini. GoneShells was inspired by the way a fruit is protected by its peel. The core concept of GoneShells is that the lifespan of the packaging matches the lifespan of the contents inside, and so bypasses the conventional recycling system. Once the drink is finished, the bottle can be peeled in the same way as fruit, thanks to its spiral-like structure. The decomposition process can only begin once the bottle is peeled and the water-resistant barrier is broken. Then, it can be eaten, home composted or dissolved in a kitchen sink. Tomorrow Machine does not reveal much about the production and material compound, except that it is made from potatoes and uses existing manufacturing techniques.

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Turkish researchers looking to sea lettuce as cellulose alternative

Turkish researchers from the SÜGEP (Sustainable Development Youth Leaders Training Program) Academy are looking at ways to address the increasingly out-of-control spread of sea lettuce (Ulva lactuca) in İzmir Bay. The project developed by the SUGEP Academy aims to utilise the material, which causes environmental pollution and odour, as a raw material in the packaging industry. The researchers are hoping to work toward developing sustainable raw materials for packaging to counter the use of cellulose in the industry. Project coordinators, who will conduct fieldwork and initiate research and development studies with the samples they collect, say that sea lettuce could be an alternative to plastic materials. The researchers say that once they have obtained a prototype product, it will be offered to packaging suppliers that they are in contact with. Primarily the project will profit nature and will also hopefully serve commercial industries.

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Pioneering biotech company receives £3m funding

Kelpi is a pioneering biotech company based in Bath, England. The company has announced that it has received more than £3m ($3.62m) fundraising to advance its pioneering technology creating biomaterial coatings from seaweed. The company will use the funds to conduct manufacturing pilots for their proprietary coatings for paper and card. In the last 2.5 years the company has developed high-performance materials from seaweed, with a uniquely strong water barrier, as well as oxygen barrier, grease and acid resistance. The company is already working with global leaders in food & drink and cosmetics, tuning the exact properties of the coatings to meet the needs of specific clients. Seaweed provides a valuable source of carbohydrates for biomaterials. It grows prolifically without need for fertilisers, nor land nor fresh water, offering benefits over alternative plants from which bioplastics can be made. It soaks up carbon as it grows, de-acidifying and re-oxygenating the ocean.

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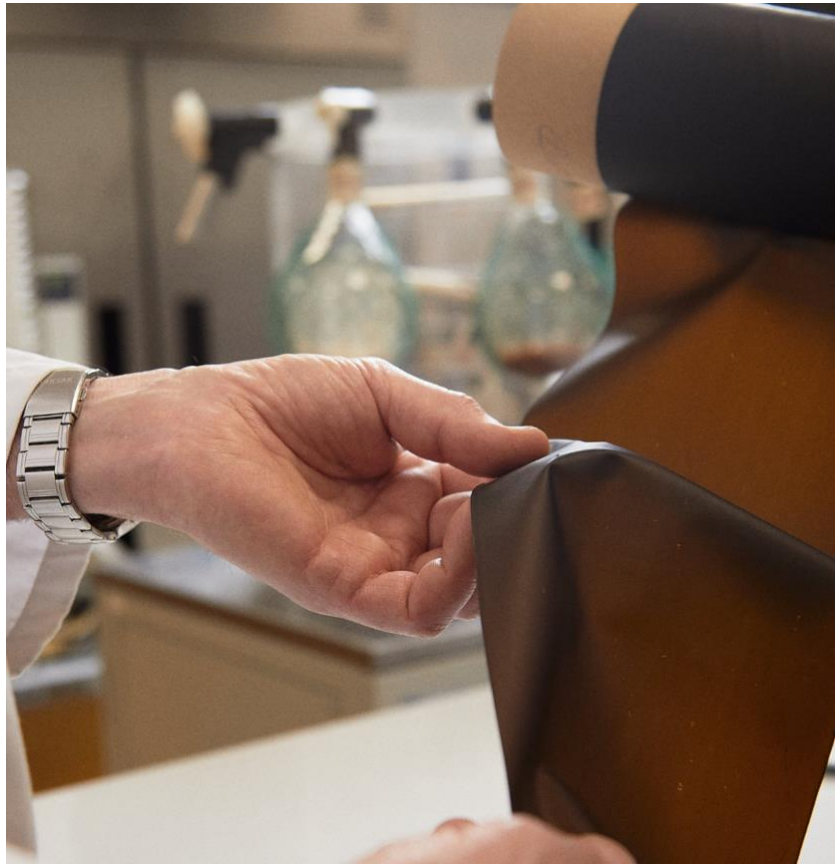
Biomaterials from seaweed in development stage

Oceanium is a Scottish company that develops innovative, all-natural products from sustainably-sourced seaweed. Their innovative refinery technology extracts maximum value from the whole plant. This enables them to produce high-demand products, including high purity bioactives for nutrition and cosmeceuticals, plant-based food ingredients, and innovative materials. Oceanium was formed to make a positive environmental, economic and social impact while helping to drive growth in the sustainable seaweed industry. The company's Ocean Actives products include bioactive nutraceuticals and cosmeceuticals, including Fucoidan, a fucose-rich sulfated polysaccharide found primarily in the cell walls of brown seaweeds. Oceanium is currently in the development phase of seaweed-based packaging materials but don't yet have materials ready for market. Seaweed is considered a low-resource crop as it doesn't require cleared land, fresh water, insecticide or fertiliser. Seaweed absorbs carbon and excess nitrogen which helps alleviate ocean eutrophication.



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Leather-like bioplastic derived from seaweed

Carbonwave, based in Boston, Massachusetts, claims to be the world's leading developer of ultra-regenerative, plant-based, advanced biomaterials from seaweed. The company uses sargassum, long considered waste, into materials that can restore soils and oceans, eliminate micro-plastic waste, and achieve carbon neutrality. Sargassum is a genus of brown macroalgae (seaweed), numerous species of which are distributed throughout the temperate and tropical oceans of the world, where they generally inhabit shallow water and coral reefs. Carbonwave says that their materials replace not only toxic, petroleum-based products but also create next-generation alternatives – from fertilisers to cosmetics, clothing to packaging – that improve on industry standards while reducing emissions. The company has created a plant-based fabric that relies on the extraction of structural polymers to form films stronger than the seaweed itself and competitive with the strength of other vegan textiles without relying on polyurethane (PU) plastic for structure and strength.

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Research looks to advance deeper knowledge of fibre-based products

Multinational packaging and processing company Tetra Pak, is working with Swedish national laboratory MAX IV in a project which is designed to advance fibre-based food contact packaging in pursuit of a recyclable, high-barrier ‘package of the future’. It is hoped that the research will provide a greater understanding of the nanostructure of fibre materials. A spokesperson for Tetra Pak said that the pack of the future needed to be fully recyclable and have a low environmental impact, and that using renewable materials and increasing the use of fibre-based material within packages will be vital. The first experiment, which starts with paper straws, hopes to provide additional analysis capabilities into how paper straw material responds to changes in the environment in real-time and how the straw interacts with different types of liquids under stringent conditions.

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Los Angeles organic grocer first to stock fully biodegradable water bottles

Erewhon is a premium organic grocer based in Los Angeles. They recently entered into a partnership with Cove, the California-based innovation company that manufactures fully biodegradable water bottles. The partnership makes the supermarket the first retailer of Cove's water bottles, which we have been tracking the progress of in the Innovation Zone. The company says that Cove bottles are plastic-free, biodegradable, renewable, non-toxic, and compostable, as are the caps too. They are made with polyhydroxyalkanoate (PHA), a sustainably sourced, naturally occurring biopolymer. PHA is produced and consumed by microorganisms that occur all over the world, including soil-inhabiting and marine microorganisms. The bottle is screen printed with UV-cured ink. Cove partnered with Living Ink to create a UV-cured ink that uses black pigment derived from algae. This replaces the usual carbon black pigment derived from fossil fuels. Cove says that they expect them to take a maximum of five years to be fully broken down by microorganisms in a "reasonable natural environment".

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Sustainable ultra-pure solvent made from plastic waste

Luxembourg-based global cleantech company Clariter has partnered with TotalEnergies Fluids, a division of French petroleum company TotalEnergies, to produce the world's first sustainable ultra-pure solvent made from plastic waste. The result is the fruit of an 18-month collaboration between Clariter and TotalEnergies Fluids on joint research and development. Clariter leverages its proprietary innovative upcycling technology to transform plastic waste into sustainable, high-quality solvents, waxes, and oils. TotalEnergies Fluids then further converts the upcycled materials using its Hydro-De-Aromatization (HDA) technology into very high purity solvents that meet the quality levels required for the most stringent applications. Ultra-pure solvents are used in pharmaceutical, cosmetics and other highly demanding markets that require safe, colourless, odourless, and tasteless products that meet the highest standards of purity criteria. Producing these solvents from plastic waste significantly reduces their environmental footprint and addresses the challenge of end-of-life plastics.

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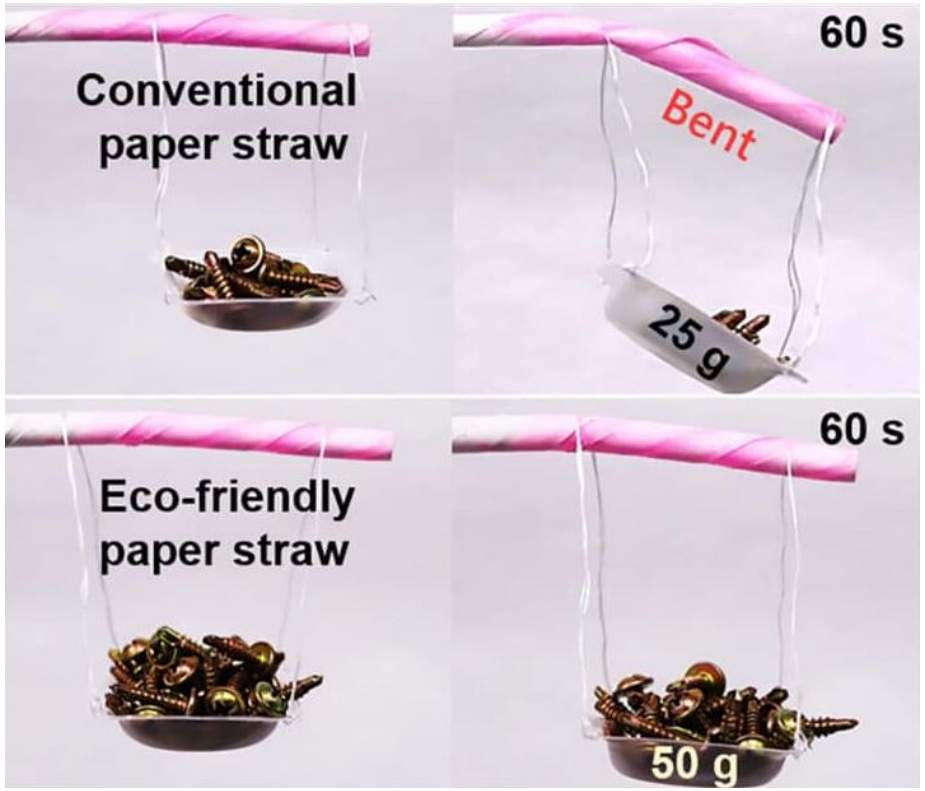
Biodegradable paper straws do not go soggy

Researchers at the Korean Research Institute of Chemical Technology (KRICT) claim to have solved the problem of paper straws that quickly become soggy in consumer's drinks. The team combined cellulose nanocrystals with a well-known biodegradable plastic, polybutylene succinate (PBS). The research team's method was used to develop a coating material. The biodegradable plastic can firmly adhere to the paper surface during the coating process because of the additional cellulose nanocrystals, which are made of the same substance as the major paper component. The research team discovered that these paper straws retain their physical integrity in hot and cold beverages. They performed a decomposition test in a marine environment by immersing the straw samples at a depth of up to 2m on the coast near Pohang, South Korea. They lost more than 50% of their weight after 60 days and decomposed entirely after 120 days.



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Tomato processor launches new product with lid made from bio-based PP

Alicante-based tomato processors Bonnysa and sustainable packaging manufacturer ITC Packaging have collaborated on the launch of a new lid for the packaging of its grated tomato range. The new solution for Bonnysa's grated tomato is made from bio-based polypropylene, a material from non-fossil fuel sources that helps reduce carbon emissions while guaranteeing the sustainability of raw materials. This second generation biopolymer is different from the fossil raw material because of its plant origin as it comes from organic waste that is processed until it turns into polymers. To guarantee the origin of the raw material, ITC has accepted the system of ISCC Plus certification, a protocol that has allowed the incorporation of new bio-circular materials that optimise the sustainability of packaging into the ITC portfolio. This certification has enabled ITC to launch its first circular-packaging projects, made from material from advanced recycling, and therefore suitable for food contact.

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Wine closure made from ocean-bound plastic is a world first

Vinventions began as a company in 2015 with the intention of supplying the wine sector with sustainable closures. Under their brand Nomacorc, they have now launched the Nomacorc Ocean, which is reported to be the first closure in the world made from Ocean-Bound Plastic (OBP). The OBP is collected by an organization certified to Zero Plastic Oceans standards. The certification ensures that OBP is collected under ethical and profitable conditions, which are audited, and that collection areas and waste collected are compliant with the OBP definition given by Zero Plastic Oceans. This guarantees that collection efforts have the highest impact on preventing marine pollution. For the launch, Vinventions has forged two partnerships. In Sicily, Donnafugata Estate has joined Vinventions in its actions to preserve the oceans by choosing Nomacorc Ocean for its Damarino cuvée. In France, Maison Bouey has chosen this closure for its fully eco-designed cuvée Oh La Vache!

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Supermarket chain moves to home-compostable tea bag packaging

British supermarket chain Waitrose has announced that its own label organic Duchy brand tea bags are moving to certified home-compostable packaging. The tea bags have been given TUV OK accreditation, which means that they have been approved to be disposed of after use in home compost bins or heaps. They are thought to be a source of nitrogen, encouraging plant growth by enriching the soil in consumers' gardens. It is hoped that the switch will save 4.5 million Waitrose Duchy tea bags from going to waste in its first year, the equivalent of 12.2 tonnes of material. The tags attached to the tea bags have also been redesigned to cut down on the amount of ink used and encourage a more effective decomposition process. The remaining stock of non-compostable tea bags will still be used to avoid further waste.

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Icelandic start up is using algae to produce bioplastic

An Icelandic start up is using waste from the production of astaxanthin to produce spray packaging and bioplastics. An antioxidant, astaxanthin is claimed to have many health benefits. It's been linked to healthier skin, endurance, heart health and reduced joint pain. Algalif is an Icelandic company that produces microalgae to convert into astaxanthin in a sustainable way, optimising processes and maximizing the yield of resources. The waste from this production was being used for the production of fertiliser, now, however sustainable startup Marea, wants to use this "waste" to produce "innovative and sustainable packaging solutions". Marea's idea is to use biomass to create a microalgae spray to apply on fruits and vegetables to extend their shelf life. Marea has also developed a thin bioplastic film starting from Icelandic algae, which are harvested or grown naturally.

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Enzyme technology removes need for chemicals and energy to produce wood-like materials

Researchers at the KTH Royal Institute of Technology, Stockholm, have developed an enzyme-based technology, which can be used as a general, sustainable and more environmentally friendly production process to produce plastic-like films of wood. Two of the most common processes for transforming wood's optical and mechanical properties and thereby giving the material new properties are to remove the component lignin (delignification), and to densify it (densification). These processes require some clever chemistry and energy, and the researchers have taken a closer look at how the refining process can be improved from an energy perspective. Using fungi, they have utilised different enzymes to change the cell walls of wood during decomposition. This was so successful that they developed a new wood film. This was without having to use either high temperatures, high pressure or pre-treatment with chemicals to modify the structure and composition of the cell walls.

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Scientists develop new plastic that is easily compostable and recyclable

A team of researchers at the University of Konstanz, Germany has announced the development of a new plastic that is highly stable, biodegradable, and readily recyclable. This new plastic, known as polyester-2.18, consists of two basic modules: a short diol unit with two carbon atoms and a dicarboxylic acid with 18 carbon atoms. The properties of polyester-2.18 resemble those of HDPE (high density polyethylene) due to its crystalline structure; it exhibits both mechanical stability and temperature resistance. Also, the first recyclability experiments showed that this material's basic modules could be recovered under comparatively mild conditions. The new plastic also has another quite unexpected property: despite its high crystallinity, it is biodegradable, as lab experiments with natural enzymes and tests at an industrial composting plant showed, because within a few days, in the experiment, the polyester was degraded by enzymes.

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Coffee capsules come in 100% compostable packaging

Madrid-based Grupo Horeca, owners of the Villa Victoria coffee brand, has announced that they have made their Nespresso-compatible capsules 100% plastic-free. The coffee capsules are now made from 100% biodegradable potato starch packaging, while the carton is made from kraft board, and has no plastic coating. This board comes from sustainable forests, under certification, which allows it to be disposed of correctly, so that the board can be recycled, contributing to environmental sustainability. The new packaging was designed by Cordoba-based packaging and branding specialists Al Margen. Villa Victoria says that the potato starch capsules will take between 90 and 120 days to degrade in the right conditions, leaving no residue. Prices start at €2.99 (£2.65) plus shipping for a carton of 10 capsules, and come in four varieties, Columbia, Ristretto, Mumbai, and Decaffeinated.

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Innovative cement sack solves disposal issues

Chilean pulp and paper company CMPC has launched the Zero Waste Sack. The Zero Waste Sack allows the packaging to be incorporated together with the cement into the mixer, which then disintegrates in just seven minutes thanks to the mechanical action of water. Thus, the container becomes one more element of the concrete. It has already won an award in Chile at the 2022 Packaging Innovation Awards in the category “Innovation in packaging: Sustainability and Climate Change”. According to CMPC, the sack does not need any type of special treatment, either for storage or transport. The company also says that the sack has a similar cost to traditional cement bags, making this innovation a sustainable alternative and an accessible one. The innovation is said to be especially suitable in areas of the country where there are difficulties for proper waste management, such as Easter Island or Punta Arenas.

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Researchers developing edible biofilm for frozen fish

Researchers from the Polytechnic University of Leiria in Portugal are aiming to create a substitute for single-use plastic film for conserving frozen fish. The project, called the SeaFilm food packaging project, will focus on bioactive seaweed extracts and edible algae. The SeaFilm project is looking to provide the industry with a new algae-based edible solution to replace plastic films whilst increasing product shelf life through the incorporation of bioactive seaweed extracts. After defrosting the frozen fish, the biodegradable film can either be disposed of or simply eaten along with the fish. In the latter case, the edible film could even include seasonings to create a meal that is tasty, convenient and easy to cook. The innovative solution was supported by the European Maritime and Fisheries Fund. The industry is very interested in the results of the project and has asked the team to produce biofilms for other species such as cod and hake.

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Egg packaging contains 30% bio-plastic

Spring Creek Quail Farms in Ontario, Canada, has started packing its eggs in specially designed bio-PET packs from the Vancouver-based sustainable packaging producer Good Natured Products Inc. The transparent packaging, which holds 18 quail eggs, consists of 30% plant-based bio-PET (bio-polyethylene terephthalate), making the packaging recyclable across North America while significantly reducing Spring Creek's reliance on fossil fuel packaging. Consumers often open conventional fibre or foam packaging to inspect eggs before purchasing. With the new transparent bio-PET packaging, customers can inspect the eggs without having to open the packaging. As well as being fully recyclable, the new packaging also meets Spring Creek's strict requirements for food safety, ventilation, durability during shipping and on the store shelf. The new egg packaging is being used for quail eggs, which are sold in major grocery stores in both the US and Canada.

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Everyday Engagement

Packaging that effectively connects with consumers plays a crucial role in the market. We continue to observe a variety of innovative examples, such as utilizing smart technology or unique packaging graphics to spark engagement. Maintaining a consistent dialogue with consumers can greatly enhance brand-building efforts.

Tech-based solutions like RFID, NFC, and QR codes are becoming increasingly popular and cost-effective for these purposes. Sustainability is also a key factor in the use of technology-based packaging, as many lack proper disposal methods. However, as recycling options improve, this sector is becoming more viable. Additionally, utilizing technology in packaging also provides valuable data insights for brands.

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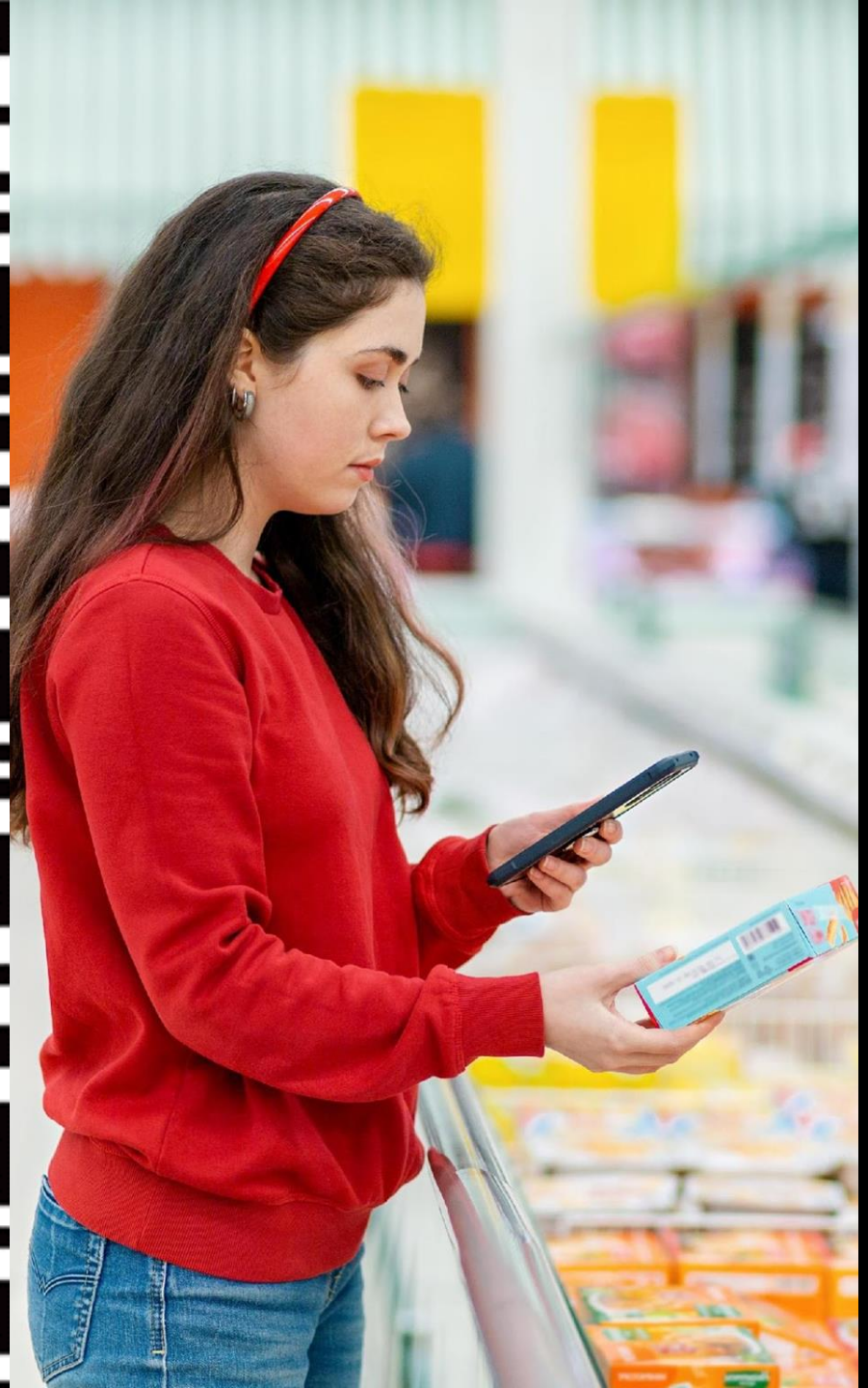

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Everyday Engagement

eLabel for spirits introduced in Brazil
Scented mailers increase customer engagement

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eLabel for spirits introduced in Brazil

French multinational Pernod Ricard has announced the introduction of the eLabel to Brazil. The multinational alcoholic beverage producer, which owns the Absolut, Ballantine's, Chivas and Beefeater brands now feature a QR Code on the back of the label. When the consumer's smart phone camera scans the QR code, it directs them to a platform that presents product details, such as ingredients and nutritional data, in addition to information regarding responsible consumption, health and moderation. The objective is to bring quality information to the consumer in an easier and more modern way and in several different languages. The initiative was initially launched in Europe in the middle of last year. A spokesperson for Pernod Ricard said that the activity brings practical solutions to make its commitment to its journey of sustainability and social responsibility.

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Scented mailers increase customer engagement

JohnsByrne Company is an Illinois-based company that specialises in producing custom solutions for premium packaging and high-impact direct mail. Its latest innovation is scented print technology. With the power of scent, they hope that marketers will be able to create interactive experiences and deeper connections with their brands. The company quotes statistics that prove the effectiveness and impact of scent marketing: consumers are 100x more likely to remember something they can smell than something that they can see, touch, or hear. Also, 75% of the emotions we generate daily are affected by smell. Smell is claimed to have a more significant impact on consumer purchase decisions than all of the other senses combined. When scented direct mailers are included with the current Tactile/Sensory/Interactive (TSI) promotions, it can provide net savings on direct mail programmes.

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The Online Surge

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

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

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

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The Online Surge

New e-commerce wine packaging accommodates various case counts and sizes

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New e-commerce wine packaging accommodates various case counts and sizes

Leading European corrugated packaging manufacturer Smurfit Kappa has launched an innovative and sustainable packaging solution specifically aimed at the e-commerce sale of wine. Smurfit's solution is claimed to be the world's first generic packaging solution that accommodates different case counts and wine bottle types. The new solution is Amazon Frustration-Free Packaging (FFP) certified, reduces excess packaging, improves the consumer experience and increases sustainability. This new multi-pack of wine from Smurfit Kappa has an elegant design, is made up of an outer box and stops, and is robust enough to reach the final consumer in perfect condition, no matter how complex the supply chain. The wine eCommerce sector has experienced a significant increase in sales since the start of the pandemic in 2020. According to Euromonitor, online wine purchases between 2019 and 2021 have increased by 52%.

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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.

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Making Life Easy

Ultra-thin smart label collaboration wins IoT award

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Ultra-thin smart label collaboration wins IoT award

A three-way collaboration has resulted in a 2023 IoT (Internet of Things) Global Award for an ultra-thin smart label. German companies Pod Group and Lufthansa Industry Solutions, with Dutch data collection specialists SODAQ developed the label, which is designed to ‘snip and ship’ to track goods—from pallets to individual shipments—with near real-time positioning. The lightweight Smart Label features a completely printed battery for minimal weight, expanding the possibilities for Track and Trace in logistics. The smart label was developed by SODAQ and connected to LTE-M by Pod SIM technology. The Smart Label transmits sensor data to the LEAP Platform from Lufthansa Industry Solutions. The user ‘snips’ the corner of the adhesive label to activate it, places it on the box/shipment manually, and, using a smartphone, scans a barcode that is then referenced in the Lufthansa platform to track their asset(s), whether they have one hundred devices or thousands.

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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 environmental 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.

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Materially Changed

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Luxury cosmetics packaging derived from aeronautics industry

French plastic injection moulders Sincoplas have developed an alternative material to combine luxury and sustainable design. Taking its cues from the aeronautics industry, Heavy Metal shares characteristics with metal, but is injectable like plastic. Fully and easily recyclable, it provides an alternative to Zamak (a zinc alloy that consists of aluminium, magnesium, and copper), and is difficult to recycle. Sincoplas were looking for materials that could be diverted from their primary use and they discovered a solution with a material used in aeronautics to produce complex technical parts. Heavy Metal combines the advantages of the plastic injection moulding process with the characteristics of metal regarding density, and therefore a certain total weight, cold touch, metallic sound and magnetizability, which makes recycling easier. The luxury cosmetics industry is already interested in Heavy Metal for cosmetics jars and caps, or perfume chases. It should be available on the French market first in March 2024.

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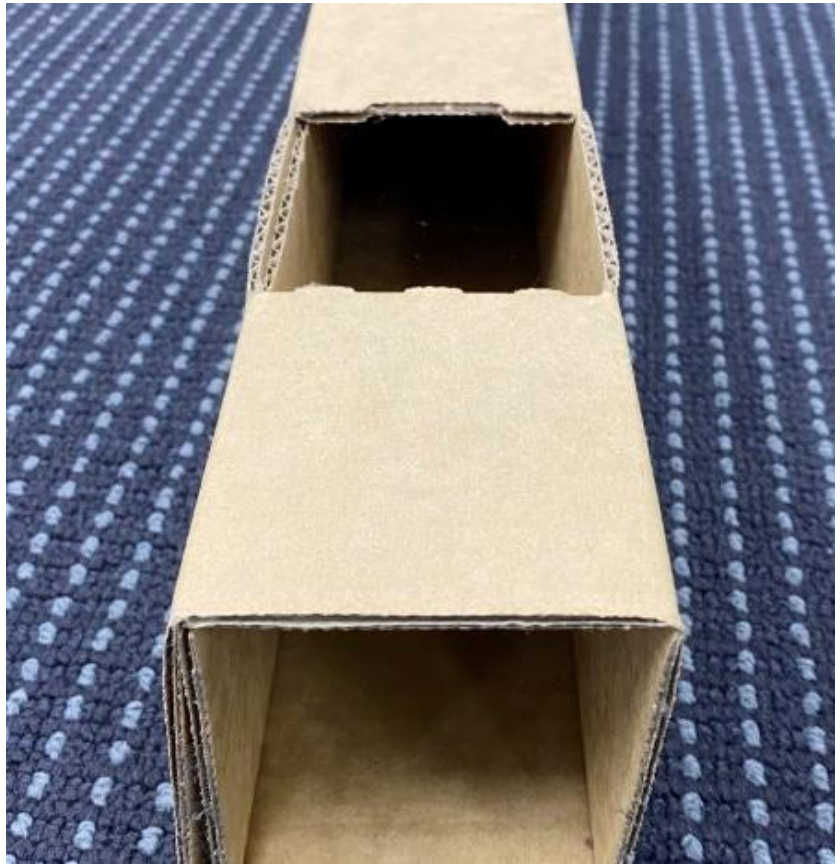
Recyclable dunnage solution minimises product movement

A collaboration between two Australian companies has earned them a 2023 WorldStar global packaging award. Renewable packaging supplier Opal and the country's largest meat processor, JBS Australia, devised an innovative corrugated cardboard dunnage solution, which minimises product movement during transportation that can be costly in damage and food waste. A spokesperson for Opal said that dunnage is usually made of expanded polystyrene (EPS), which can't be easily recycled and usually ends up in landfill. Its dunnage solution is a column-like corrugated structure. It offers a sustainable, 100% recyclable cardboard alternative to non-recyclable EPS, supporting the phase-out of problematic and unnecessary single-use plastic packaging under Australia's 2025 National Packaging Targets. A spokesperson for JBS said that the innovative product had resulted in tangible cost savings and operational efficiencies. Also, reducing their packaging footprint, it helps them to meet their sustainability objectives.



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Condensed milk launched in new pouch format

Nestlé Brazil has introduced versions of its popular Moça Integral Condensed Milk in a stand-up pouch format, which features a dosing spout and lid. The pouch with lid allows consumers to store any unfinished milk in the refrigerator after opening in the packaging itself. The pouch format is available in two sizes, a 65g pack called the Moça Mini, and a 300g pack called the Moça Topping. A spokesperson for Nestlé said that Moça Mini is a consumption option anytime, anywhere. Topping, on the other hand, is a more convenient alternative for family use. Moça has been present in Brazil since 1921 with a reported seven packs of Moça sold every second. In addition to condensed milk, Moça operates in other categories, including ironing; baking; professional; ice creams; chocolates; biscuits and breakfast cereals.

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Patented paper-based stick product for cosmetic products

Paris-based Cosmogen is a supplier of innovative application solutions for cosmetics. The business has now launched the Paper Stick, which functions similarly to lipstick packaging. The Paper Stick features an innovative and patented rotative system whereby the formula stick is unveiled when turning the bottom part, with no physical contact. The main difference between the Paper Stick and conventional lipstick packaging is that the tube goes down rather than the contents going up. Paper Stick is manufactured with 78% FSC (Forestry Stewardship Council) paper and is ideal for anhydrous (water-free) cosmetic formulas. Paper Stick is also entirely customisable to fit brand image and is 100% recyclable. This solution completes Cosmogen's range of sticks, particularly the ReUse mono-material (PP) stick, which is recyclable, waterproof and refillable.

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Tinplate food cans made from low CO2 steel

German steelmaker Thyssenkrupp Rasselstein has announced the world's first food can made from CO2-reduced packaging steel. The cans are made from bluemint steel, where an alternative input material known as Hot Briquetted Iron (HBI) is used in the steel production process. The company says that this reduces the use of coal for the reduction process in the blast furnace. Up to 69% CO2 can currently be saved with tinplate made from bluemint steel. A YouGov survey shows that 50% of consumers would rather buy food cans made from CO2-reduced tinplate than cans made from conventional tinplate. The first products made from CO2-reduced tinplate can already be found on supermarket shelves: herbal candies from the Swiss company Ricola in a can and NaturRein fruit spreads by Zentis, the twist-off Caps of which are made from the innovative tinplate.

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Leakproof biohazard bags comply with transport regulations

Avantor is a leading global provider of mission-critical products and services to customers in the biopharma and healthcare sectors. Their Therapak 95 kPa transport pouches and bags are ideal to use as a secondary leakproof pack in accordance with the US Department of Transportation (DOT) and the International Air Transport Association (IATA) regulations for shipping Biological Substances. The space-saving ShuttlePouch offers a vast reduction in plastic usage. It is easy to use and has a pre-inserted absorbent. It is ideal for shipping specimens back to the lab in the original kit packaging or alternate shippers. When ready to use, simply insert the specimen tube, and follow the closing instructions. The pouch features an easy-to-open tear area to quickly access the specimen tube and facilitate processing when the samples arrive at the lab. Their 95 kPa transport bags also feature a patented leak-resistant seal.

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Fast food giant trials strawless lids for beverages

Fast food giant McDonald’s is testing strawless lids in the US. The company declined to say where the pilot stores were located, but trade publication Restaurant Business, said they had spotted the new lids in Minneapolis. According to Restaurant Business the lids come with a pullback tab that keeps the top closed for transport, and when that tab is pulled, it exposes a half-moon opening for easy drinking of the contents. McDonald’s said it has seen successful pilots of strawless lids in other countries, including China. The test is expected to reduce 400 metric tons of plastic waste per year and the wider opportunity is clearly significantly bigger. The move to strawless lids follows criticism from UK consumers who complained that the paper straws that were introduced to replace the plastic versions disintegrated in their drinks. In 2018, McDonald’s pledged to recycle food and beverage packaging in 100% of McDonald’s restaurants by the end of 2025.

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Manufacturer claims to produce the lightest PP packaging in Europe

Dutch packaging manufacturer Poorthuis Packaging are offering what they claim is the lightest PP (polypropylene) packaging in Europe. The new trays, jars and lids are aimed at the fresh fruit and vegetable market, and to highlight this they recently presented the lightweight packs at Fruit Logistica in Berlin in February 2023. They are available as a monomaterial and are 100% recyclable. As well as the lightweight PP products, Poorthuis presents a complete series of rPET (recycled polyethylene terephthalate) sealed jars and trays. Manufacturing is increasingly using recycled materials, so their new material called “Tray2Tray” is available in ever-increasing quantities so that it can be used more widely. In addition to the aforementioned plastic solutions, Poorthuis are also offering a series of cardboard packaging, including a jar and its lid that can be printed in four colours.

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Innovative pack eliminates the need for secondary packaging

Arranti is a flexible packaging company based in Toronto, Canada, that likes to present innovative packaging solutions. Their latest offering is the Cubi Pak, a multipack of up to 6 liquid pouches. According to Arranti, as the pouches are interconnected, there is no requirement for excessive secondary packaging, so no board sleeves, shrink film or labels are required, making the Cubi Pak more sustainable. The individual pouches can be separated easily thanks to a quick-tear perforation. The pouches can also be fitted with Arrantl's Beyond Spout, touted as the "the pouch without the spout". Because of this, it makes the pouches 100% recyclable. It is also available with either digital or gravure print.

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Lightweight alternative to weighty supplement bottles

Arranti is a flexible packaging company based in Toronto, Canada, that likes to present innovative packaging solutions. Their Mini-me product is a miniature size cube shaped pouch designed to replace heavy, weighty supplement and nutrient bottles, made from HDPE (high density polyethylene) or PET (polyethylene terephthalate). The Mini-me is lightweight and easy to carry making it more sustainable. It is reported that by using the Mini-me pouch, users can reduce their carbon footprint by up to 70%. The Mini-me pouch is seen as the perfect choice for those consumers looking to live a more sustainable lifestyle while still getting the nutrients they need, while no longer being required to lug around heavy plastic bottles and contributing to excess plastic waste. The sizes are customisable and can be flexo or gravure printed. Child resistant options are available too.

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Spanish producer moves to paper-based trays for plant-based meat products

Noel Alimentaria is a Spanish manufacturer of meat and meat substitute products. They have collaborated with Mondi to introduce a new paper-based food tray solution for a plant-based product range. The rebranded Verday range is now packaged in Mondi's paper-based PerFORMing tray. This Innovative paper-based tray is designed for recycling and has passed the recyclability tests by German institute Papiertechnische Stiftung. The trays consist of 80% paper compared to the industry standard, where they are made of 100% plastic, which means the plastic content of the tray has been greatly reduced. Being formable, the trays can be moulded and adapted to a range of different-sized food products, with high symmetrical stretch and are ideal for shallow food trays. A spokesperson for Noel said that they could run the new paper-based trays on existing machinery and will now be using this solution for their range of ham and other meat products.

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Florida-based distillery launches vodka in recycled paperboard bottle

Florida-based Distillery 98 has launched a new vodka product called Half Shell Vodka. The company claims that it is the first branded US spirit to be packaged in a recyclable paperboard bottle. The bottle is supplied by UK-based Frugalpac, and is made from 94% recycled paperboard with a food grade inner pouch. The bottle is reportedly five times lighter than glass and has a six times lower carbon footprint than a glass bottle. Frugalpac also offers 360-degree branding for differentiated shelf stand-out, unlike glass bottles with a label. It also uses 77% less plastic than a comparative plastic bottle. Half Shell is a distinctive spirits brand informed by the unique ecology of the Florida coastline. It is made from locally grown corn, and distilled through an 18-plate column and filtered through Gulf oyster shells. Half Shell Vodka is available for purchase at Distillery 98 and local liquor stores throughout Florida's Panhandle and the Tampa Bay area at an MSRP of $24.99 (£20.79).

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Paper-based security label range enlarged

Austrian security label and tamper evident product manufacturer Securikett has expanded its range of paper-based security labels. The new product has an opening tab and a tear-off strip. The company says that the new paper security seals not only offer innovative technical functions but also achieve a very effective security effect for consumers thanks to their appearance when peeled off. The tack-free opening tab allows consumers to easily and conveniently peel off the label without needing tools such as a knife or scissors. Arrow symbols and the word “OPEN” invite consumers to peel off the label on the opening flap. The so-called VOID effect, which only becomes visible when the label is removed, can be individually equipped with logos or texts. The multi-award-winning “It’s Paper” series is made from renewable raw materials and is produced with 100% green electricity from renewable energies.

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Solid board tray offered as alternative to plastic

German solid board and corrugated packaging manufacturer Schumacher Packaging Group has announced the launch of the Stackpack tray, a new solid board top-seal tray intended to replace conventional plastic trays. As well as being 100% recyclable, it can be sealed with standard sealing machines. Lidding made of thin plastic, a compostable cellulose mesh or even paper can be used to seal the Stackpack tray. Depending on the content, specially coated, plastic-free cardboard can be selected for the tray, such as for moisture-intensive products. The coatings are suitable for direct food contact and can be easily recycled with the tray. This makes Stackpack particularly suitable for sensitive products such as berries, mushrooms tomatoes or herbs and represents an ideal replacement for plastic trays in the fruit and vegetable sector. The outer surfaces of the tray can also be individualised with an offset print of up to six colours.

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Corrugated honeycomb material used for gift pack

3Motion is a successful print media company based in Zele, Belgium, that specialises in visual communication and point-of-sale advertising material. The company has recently designed a product under their “Reboard” product, which is a corrugated honeycomb-based creation. The new product made from Reboard was designed as a gift pack for Gimber, an alcohol-free organic drink made from premium ginger, cane sugar, lemon, herbs and spices, who are also based in Belgium. This very light honeycomb-style packaging is common in the corrugated sector and is mainly used in wedging and logistics due to its high resistance to horizontal compression. The Reboard honeycomb product was designed to contain a bottle of Gimber plus a branded Gimber glass. A previous similar product was designed for a wine bottle and glass, and the material has also been used as a laptop stand.

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Grease-resistant fibre-based technology is alternative to foil and plastic

Helsinki-based Ahlstrom has announced the launch of its new generation of FluoroFree technology that achieves grease resistance in the most challenging food packaging applications. Ahlstrom's FluoroFree technology has expanded to its PawPrint line of multi-wall, fibre-based pet food packaging papers, in addition to its Tempera Microwave Popcorn papers and Servera Quick Service Restaurant products. The company says that FluoroFree provides the solution utilising alternative materials to films and foils. Also, Ahlstrom's genuine vegetable parchment products are naturally greaseproof papers that are also certified as home-compostable. The new paper was developed by Ahlstrom's North American Food Packaging business, and its papers meet the compositional requirements for food contact papers under FDA and EU Regulations and BfR Recommendations. They also meet the legislative requirements on PFAS content set forth by The Danish Ministry of Environment and Food, as well as PFAS limits established by the Biodegradable Products Institute (BPI).

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German liqueur manufacturer moves its outer packaging to corrugated board

German herbal liqueur manufacturer Jägermeister has announced that it is moving its outer packaging from solid board to corrugated. The move will reduce the weight of the packaging by an average of 38.5%. The amount of recycled material also increases to over 90%. Based on 19.4 million cardboard boxes, the conversion saves a reported 249 tonnes of CO2 annually compared to the previous solid board box. The recycled corrugated outers are said to run efficiently on Jägermeister's highly efficient packing machines. The spirit manufacturer will be working with four family businesses from the Lower Saxony region to produce the more sustainable corrugated board boxes. Production in the corrugated outer cases began in early 2023, and the global change will take place throughout the year. The artwork design for the secondary packaging will remain the same.

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Sustainable paper-based alternative for packing toys

German paper manufacturer Mitsubishi HiTec Paper has launched a new paper product aimed at the sustainable packing of toys and other small items. More and more toy manufacturers are realising that, as well as making their products more environmentally friendly, sustainability should also apply to the packaging. This new product from Mitsubishi, called PACK, is available with both FSC (Forestry Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification) certified paper. The paper, which comes as a 75gsm weight, is made from virgin fibres, and is said to offer particularly good heat-sealability, which Mitsubishi says makes it especially suitable for pouch packaging. The company also says that PACK has been successfully tested on packaging machines from leading manufacturers. This, the company says, makes PACK the ideal alternative to previous plastic packaging made from films and film composites.

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Medical packaging manufacturer moves to more sustainable material

US-based Nelipak has announced that it is using Eastman's Eastar Renew 6763 material as part of its commitment to more sustainable healthcare packaging. The company has begun producing rigid thermoformed sterile barrier packaging solutions in Eastar Renew, which is said to deliver the same durability, safety and performance while improving sustainability by diverting plastic waste from landfills. Eastman currently aims to divert waste equivalent to 25% of the weight of the total packaging it produces. This will be increased by up to 50% later this year. The certified plastic waste diversion is accomplished by distributing recovered waste plastic to Eastman Renew materials via an ISCC-certified mass balancing procedure. Nelipak is able to produce sterile barrier packaging products with Eastar Renew 6763 at its facilities, as well as those of its supply chain partners. These facilities have received the International Sustainability and Carbon Certification's (ISCC) ISCC PLUS certification.

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Board-based alternative to conventional single-use plastic packaging

Chocal Packaging Solutions, based in Germany, is offering customers an alternative to conventional single-use plastic packaging. Their Chocal Paper Fibre (CPF) technology uses coated paper-based materials to produce formable, printable packaging. This technology is touted as revolutionary and enables the production of not only extremely stable, but also food-safe packaging that can be individually shaped. The company says that all CPF variants are also truly compostable or can be disposed of in the waste paper bin and thus reprocessed into paper fibre. Chocal barrier papers have a coating of easy-compostable biopolymers that make the paper impermeable to water vapour, oxygen, odours or fats. This makes them suitable for highly demanding food packaging applications. The company also says that their trays can be printed with colour and text and, thanks to the technology, can also be individually formed to a variety of depths.

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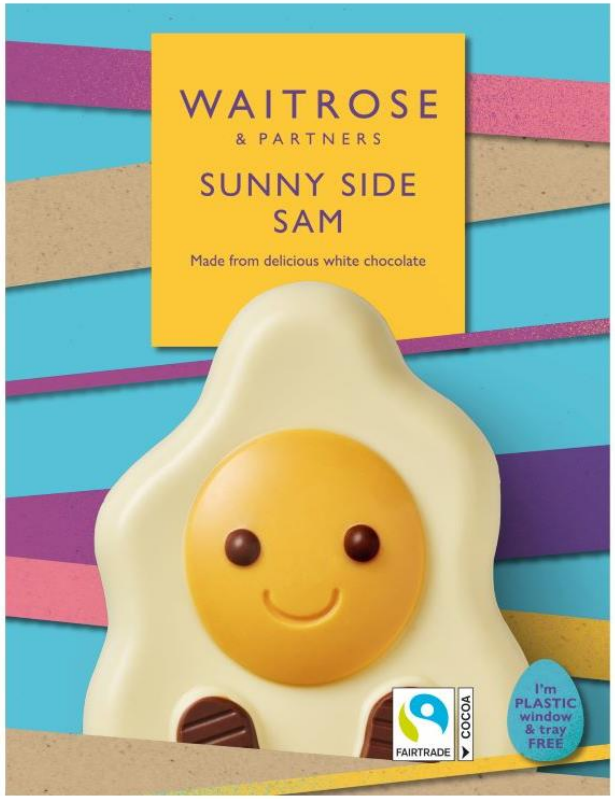
Supermarket removes plastic from Easter egg packaging

UK supermarket Waitrose has announced that it has reduced this year's Easter egg packaging by nearly 20%, saving around one metric tonne of plastic from going to landfill. Previously, their own-label chocolate eggs used to have plastic windows on the cartons, but these have now been removed. Easter eggs pose a great challenge due to their fragility. The main benefit of plastic was that it was shock absorbent and could prevent them from breaking. The company overcame this by using solid cardboard packaging and including a cardboard tray to help the egg stay upright. The company says that it has also removed nearly all plastic trays from its Easter confectionery range. The retailer also says that all its Easter 2023 own brand confectionery packaging is recyclable. Compared to last year, Waitrose has reduced its overall packaging weight by 3.25 metric tonnes (19.68%), of which 0.84 metric tonnes is plastic.



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Mountain bike tyres move from plastic to corrugated packaging

German board packaging specialist STI Group has designed a recycled corrugated board box that will be used to replace the previous plastic packaging for Continental's high-tech mountain bike tyres. The box is hexagonal in shape in line with Continental's branding and features cut-out windows, allowing consumers to both see and touch the product inside without having to open the pack. It is folded and glued in place with the aim of utilising as little material as possible, and although this is said to be complicated to assemble by hand, STI Group states that it is possible to automate the process. The pack is said to be cost-efficient, easy to assemble and fill, and can be stacked on top of other packs. Its integrated handle also allows for the pack to be displayed on a Euro hook as well as a shelf and also makes it easier for consumers to carry the product home.

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Champagne house launches head turning gift box

French champagne house Maison Perrier-Jouët has announced the launch of a sustainable, eco-friendly gift box made from just two natural products, moulded paper pulp and vine shoots. The gift box came about through collaboration with COLOURFORM™, one of materials and paper products company James Cropper's brands. James Cropper see themselves as a forward-thinking paper mill that uses various materials, from cotton and wood, to carbon fibre in packaging to create visually different materials. The gift box, called the Belle Epoque Cocoon, perfectly envelops the bottles while also showcasing vibrant colours, giving the box both a luxurious and natural feel. The gift box is lightweight, coming in at only 49 grams, which is 93% lighter than the previous gift box. The box also doesn't include any varnish or glue. COLOURFORM™ uses 100% renewable energy, with most of the power being generated on-site by the company's own solar and hydro plants.

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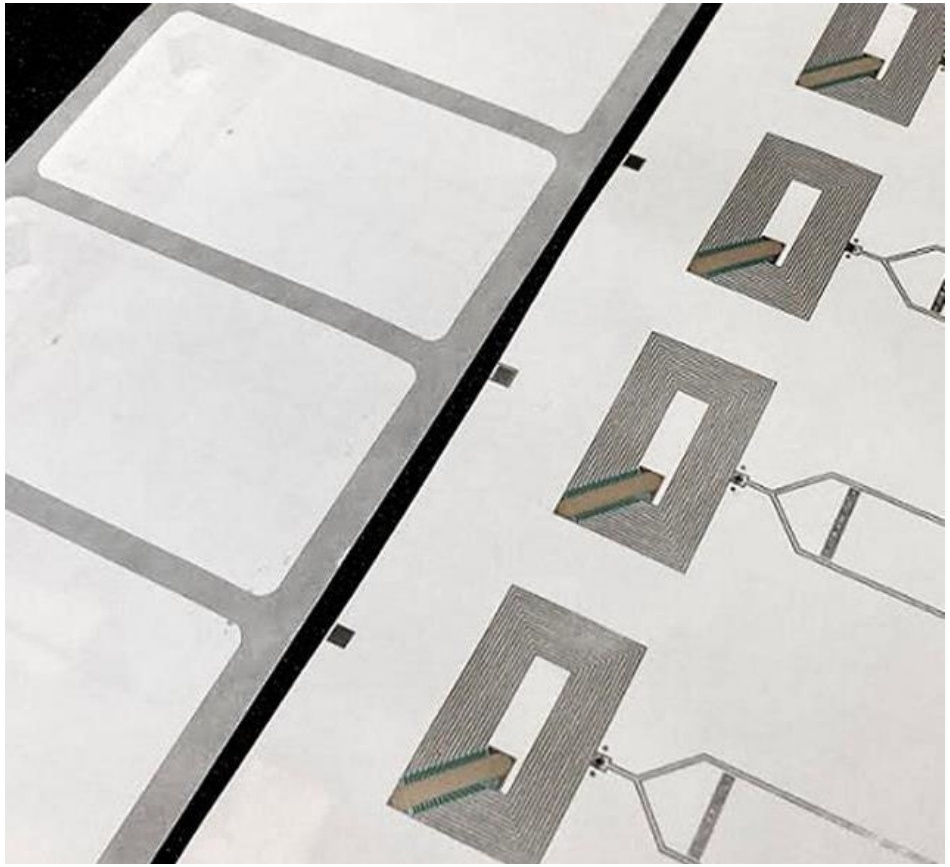
NFC tag label replaces plastic with paper

Japanese provider of advanced printing and communications technology company Toppan has announced the development of an NFC (near-field communication) tag label that uses paper material as the substrate for the antenna instead of conventional PET film. NFC tag labels are predominantly produced using metal foil to form an antenna on a plastic substrate, such as PET film. As governments and businesses advance activities to move away from the use of plastic, the market for NFC tags is seeing growing demand for replacing plastic with other materials with a lower environmental impact. Taking advantage of the properties of paper as a substrate, the NFC tag label is designed to break when it is removed, making communication impossible and preventing fraudulent use through the reattachment of labels. As the paper substrate doubles as the surface layer material, the new, more eco-friendly NFC tag label is 30% thinner than Toppan's products with PET film substrates.



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Vegan chocolate-maker moves to primary packaging made from paper

German vegan chocolate maker nucao is claiming to be the first chocolate manufacturer in the sector to embrace primary packaging made from paper and has been using it for its chocolate products ‘nucao fruits’ and ‘nucao nuts’ since the end of 2022. The packaging supplied to nucao is Oberkirch-based Koehler Paper’s NexPlus Advanced. NexPlus Advanced has excellent oxygen, mineral oil, and grease barrier properties, making it ideal for direct contact with food. It also has good gravure, flexographic, and digital printing properties. Compared to traditional plastic packaging, flexible paper packaging reduces the CO2 footprint significantly and provides a positive image transfer to the product and company brand. As it is 100% made from paper it can be placed in the paper recycling after use. Research from the brand shows that the majority of consumers in Europe prefer food in packaging that contains little to no plastic, and are willing to pay a higher price.

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Protect and Preserve

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

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

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Protect and Preserve

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Electricity-free cool box contains no plastic
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Pyramid-shaped salad trays save space and costs
Smart label extends shelf life of fat-based food products
Antimicrobial technology can be added to packaging
Film impregnated with copper microparticles extends shelf life of fresh foods
Holographic technology changes in brightness and colour depending on the degree of humidity

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Patented pizza box avoids soggy pizza

VENTiT is a corrugated solution that helps to avoid soggy takeaway pizzas. It was invented by a Mumbai businessman, who, being displeased with the state of his pizza order, simply used a Swiss army knife to gouge out, in strips, the upper and bottom layers of the cardboard box. By doing so, he allowed the box to breathe while preventing contamination. The lid of the corrugated board pizza box is made of three layers. Steam flows out from the top and bottom, but the ridges keep the box uncontaminated, insulated and heated. Although pizza boxes are just one of the items with a steamy or soggy problem, VENTiT's packaging can be used for many food items, and it has clients for items like parathas, French fries and grilled sandwiches. VENTiT has patents in over 70 countries.

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Supermarket moves to smaller vacuum-packed meat packaging

UK supermarket Sainsbury's has announced it is removing traditional plastic tray packaging across its entire beef mince range and replacing it with a vacuum-packed alternative. The supermarket says that the move will result in a reduction of over 55% of plastic per pack, which equates to a saving of 450 tonnes of plastic per annum. The minced beef products will be vacuum-packed for freshness by removing all oxygen which typically causes a product to eventually spoil. The new packaging will contain the same amount of beef mince, but is smaller in size, helping customers to use their freezer and fridge space more efficiently by taking up less space. The change will be across all Sainsbury's beef mince products, currently retailing for £1.99 for 500g. The new beef mince in the revamped packaging is now available both in-store and online.

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Electricity-free cool box contains no plastic

Streiff und Helmold is a German manufacturer of high-quality and sustainable board-based packaging. In 2022 they won two WorldStar packaging awards for their IceCoat refrigerated cool box. The IceCoat cool box requires no electricity and the packaging contains no plastic. The packaging is simply filled with water and then frozen. The ice that forms inside protects the contents through long-lasting cooling. The two international awards are for packaging products in the main category, “Beverages” and the Special Award Silver in the category “Packaging that saves food”. Two special properties make the product unique: the construction and the special printing process with impregnated varnish. Conventional packaging materials (mono-material cardboard) are used, which are processed using a special construction without adhesion and are impregnated with a plastic-free barrier. The contents have no direct contact with the ice to prevent them from freezing together and can therefore be easily removed individually.

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High barrier lidding film developed for extended shelf life

California-based Preferred Packaging has joined forces with Northwest Frozen to launch a line of extended shelf-life refrigerated, prepared meals. Together the companies have developed a high barrier lidding film that delivers hermetically sealed meals with a specific, low-oxygen atmosphere inside the package to help keep the food fresh. The new meals include a frozen croissant-shaped gnocchi pasta product, called Crocchi. The pasta is cryo-frozen and packaged in high-barrier, modified atmosphere containers. The companies jointly developed the new lidding film so that trays could be sealed on high-speed machines efficiently to CPET (crystalised polyester) trays and through contaminants such as sauces. Preferred Packaging said that customers can peel back the lidding material off the tray, removing the need for a knife or scissors. The lidding films can also be used for fresh, all-natural foods that are packaged and then processed with high-pressure pasteurisation.

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New corrugated format allows bathroom furniture manufacturer increased pallet capacity

Pelipal is a German bathroom furniture manufacturer that supplies its products in a flat-pack format. Smurfit Kappa designed the first endless processing packaging machine for Pelipal around 15 years ago. The company started with a storage area of 900m^2 for more than 500 different cardboard boxes and blanks, today, with Smurfit Kappa's input there is only a 300m^2 storage area required for the packaging machine. Smurfit Kappa developed a solution based on two components. The existing carton cutting machine has the requirements to process the fan-folded continuous corrugated cardboard recommended by Smurfit Kappa and delivered on pallets. The solution developed that is processed on the existing endless packaging machine now saves every fourth truck with packaging material. The previously used BE profile has been replaced by a significantly lower SE wave profile, significantly reducing the height of the palletised continuous corrugated cardboard and thus increasing the quantity per pallet.

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Pyramid-shaped salad trays save space and costs

Q-Bic is a new packaging design from Norway incorporating a space-saving and sustainable pack shape. The unique cup form is adaptable to various types of produce and can significantly reduce costs and emissions associated with transport, logistics, storage, and cooling. Q-Bic has recently delivered salad trays to a North American company, enabling them to double the amount of lettuce transported on a pallet, significantly reducing packaging and costs. The pyramid-shaped square cups with 6 cups form cubes with only 8% air, so, therefore, utilize volume as efficiently as possible. Q-Bic has also been in dialogue with major players in the grocery industry in Norway, including Bama, who initially purchased 200,000 cups for packaging blueberries. In a consumer test carried out with DOLE, Q-Bic outperformed existing packaging solutions. When stacked as cubes, the pyramid-shaped cups distribute forces evenly in all directions, allowing the packaging to withstand more impact and pressure than traditional packaging. Q-Bic is an innovative solution that is set to reduce costs and emissions and improve the efficiency of packaging and transportation.

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Smart label extends shelf life of fat-based food products

Portuguese research centre CeNTI (Centre of Nanotechnology and Smart Materials), in collaboration with injection moulding company MOLDIT and CENTIMFE (Technological Center for the Mouldmaking, Special Tooling and Plastic Industries) have joined forces to develop intelligent packaging for fat-based products that maximises shelf life and maintains the quality of the food contained therein. The solution is a smart label which, when activated by the user through a button, releases antioxidants in a lasting and controlled way, capable of delaying the oxidation and deterioration of the product, without compromising its quality and taste. A spokesperson for the project said that current packaging does not ensure the oxidative stability of fat-based products, which can be affected by transport and/or storage conditions even within the shelf life. The project intends to create a technological solution that maximises the useful life of the product during the shelf life.

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Antimicrobial technology can be added to packaging

California-based Copptech are producers of patented, antimicrobial technology. They say that their product can be added to polymers, textiles and building materials, amongst various other materials to make them ≥99.9% antimicrobial, helping to prevent bacteria, viruses and even termites. It is available as a polymeric application by using the company's Copptech masterbatch, which allows customers to include the technology in plastic products during the production process. It can be applied to products made of Polyester (PET), Polypropylene (PP), Polyethylene (PE), Acrylonitrile butadiene styrene (ABS), Polyvinyl chloride (PVC), Polyurethane (PU), and Polycarbonate (PC), among other plastics. Copptech has been certified by global laboratories with international standards. It provides a long-lasting protection. Copptech technology prevents the growth of bacteria and other pathogenic microorganisms through the biocidal power of copper and zinc. Copptech's active ingredients are released upon contact with moisture, generating a rupture in the membrane of the pathogenic microorganism cells.

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Film impregnated with copper microparticles extends shelf life of fresh foods

Copperprotek, based in Santiago, Chile, has developed smart packaging based on copper microparticles that can extend the shelf life of different perishable foods. The Chilean company's innovation was awarded the World Star Award in the Food category, and are organised by the World Packaging Organization (WPO). The winning material, Life Span Copper Based Film, was developed in collaboration with global food packaging company Amcor. The technology used to create this smart packaging is based on the potential of copper for industrial applications, which after an intense research process managed to develop copper microparticles, which was patented in the United States in 2018. The company says that Life Span film can extend the shelf life of products such as fresh meat, sausages and cheese by up to 30 days, and reduce food waste by 30%.

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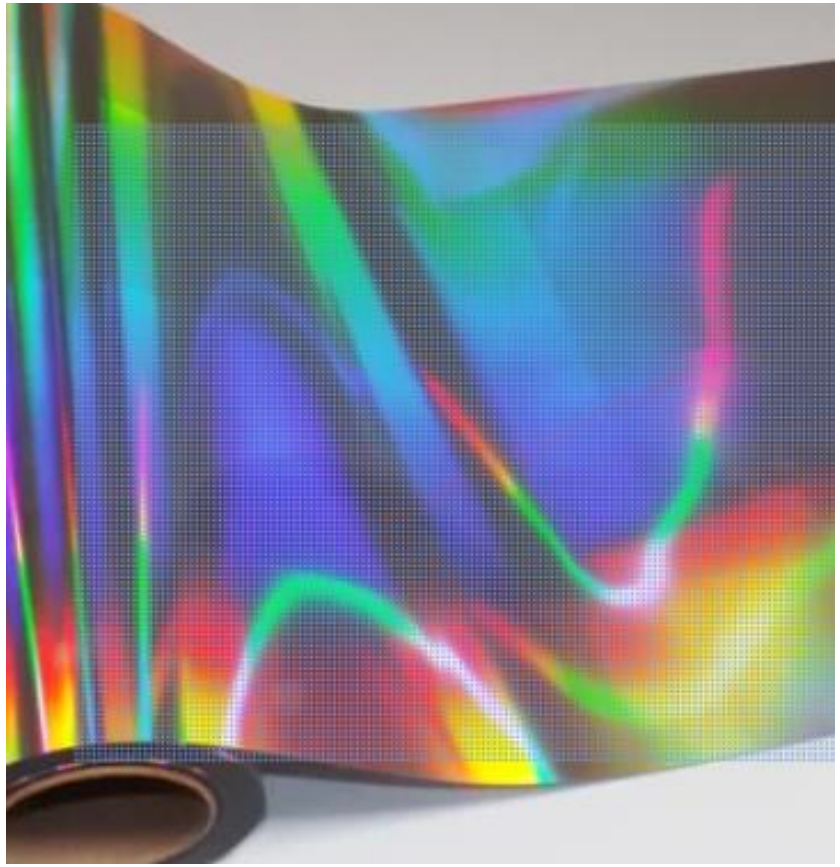
Holographic technology changes in brightness and colour depending on the degree of humidity

Researchers at the Pohang University of Science and Technology, South Korea, have developed a technology that changes in brightness and colour depending on the degree of humidity, and could potentially be used in holographic images to protect against counterfeit currency and packaging applications for consumer goods. The researchers printed the images using a single-step nanoimprinting technique. The method uses highly secure multiplexed optical encryption metasurfaces to display, hide, or destroy encrypted information based on the relative humidity – both irreversibly and reversibly, it is said. The holographic system also includes a display on which structural colours can be tuned by humidity. For example, researchers said a blue image at low humidity turns red as humidity increases. The researchers say that images could have “a significant impact” on optically variable devices and secure optical-information sharing applications for goods such as whisky, official documents such as passports, and paper bills used in currency.



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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. The packaging tax in the UK, now a year old, that requires 30% recycled content is influencing change as well as the focus on stretching recycling targets. We are seeing more chemical recycling initiatives as well as recycled PS and PP developments coming to our attention.

This large section includes recycling initiatives as well as packaging that now incorporates (more) recycled content. We can report many examples of mono-material developments and other measures to improve recycling rates. The introduction of Packaging Taxes is also on the horizon, influencing the recycling of packaging. The UK's has already been implemented in April this year, which sees 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.

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Recycling Resurgence

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New label material contains recycled label backing

Italian label manufacturer Fedrigoni Self Adhesives has announced the launch of Re-Play, which aims to upcycle the discarded glassine backing of other self-adhesive products into a new premium labelling solution. Until this development, the siliconised backing of previous self-adhesive solutions was typically discarded and has only ever been partially recycled. In collaboration with Les Papeteries de Clairefontaine, the recovered glassine is now being combined with white waste paper to form a new self-adhesive material – said to constitute 100% recycled material, correspond with FSC certification, and negate the need for an invasive de-inking process. The resulting products contain around 10% to 20% recycled glassine. Customers can also choose between papers in various forms and textures, including an uncoated Natural White design; a Neck Label of similar texture for bottlenecks and reduced diameters; and textures ranging from ‘Pearlescent’ to the embossed ‘Martelé’ and ‘Retrò’ papers.

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Canadian petrochemical company launches range of rPE products

Canadian petrochemical company NOVA Chemicals has announced the launch of a range of circular solutions to meet growing demand for recycled plastic. The range is made up of three recycled PE (polyethylene) products under the SYNDIGO brand. The three products in the range are: 1) EX-PCR-WR3 resin, mechanically recycled, sourced from polyethylene (PE) agricultural film, and reported to be ideal for e-commerce mailers, can liners, carry-out bags, protective packaging, and shrink. 2) EX-PCR-NC4 resin, mechanically recycled, sourced from back-of-store distribution centre PE stretch film and front-of-store consumer drop off, and ideal for heavy-duty sacks, e-commerce mailers, stretch wrap, collation shrink, protective packaging, and industrial films. 3) EX-PCR-HD5 resin, mechanically recycled, sourced from HDPE milk jugs, and ideal for flexible packaging, heavy-duty sacks and small-part blow moulding. NOVA Chemicals says that it aspires to be the leading sustainable polyethylene producer in North America.

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Anti-corrosion film now contains at least 30% PCR material

Cortec is a Minnesota-based company that specialises in corrosion prevention products. They have now announced the launch of VpCI-126 PCR, its proprietary vapour-phase corrosion-inhibiting film, which now contains at least 30% post-consumer recycled (PCR) content. The company says that this demonstrates that this important sustainability feature is compatible with high performance and reliability, especially in films. The company also says that VpCI-126 PCR protects metal parts for up to five years from all types of corrosion, including rust, stains, tarnishing, white rust and oxidation. The film offers sustained protection from salt, excessive moisture, condensation, aggressive industrial atmospheres and dissimilar-metal corrosion. According to Cortec, films in the range provide multi-metal protection to ferrous and non-ferrous metals. They are heat-sealable and available in a range of bag and film formats. Film gauges range from 50 to 250 microns. Cortec produces all of its films for Europe at the EcoCortec plant in the Baranja region of Croatia.

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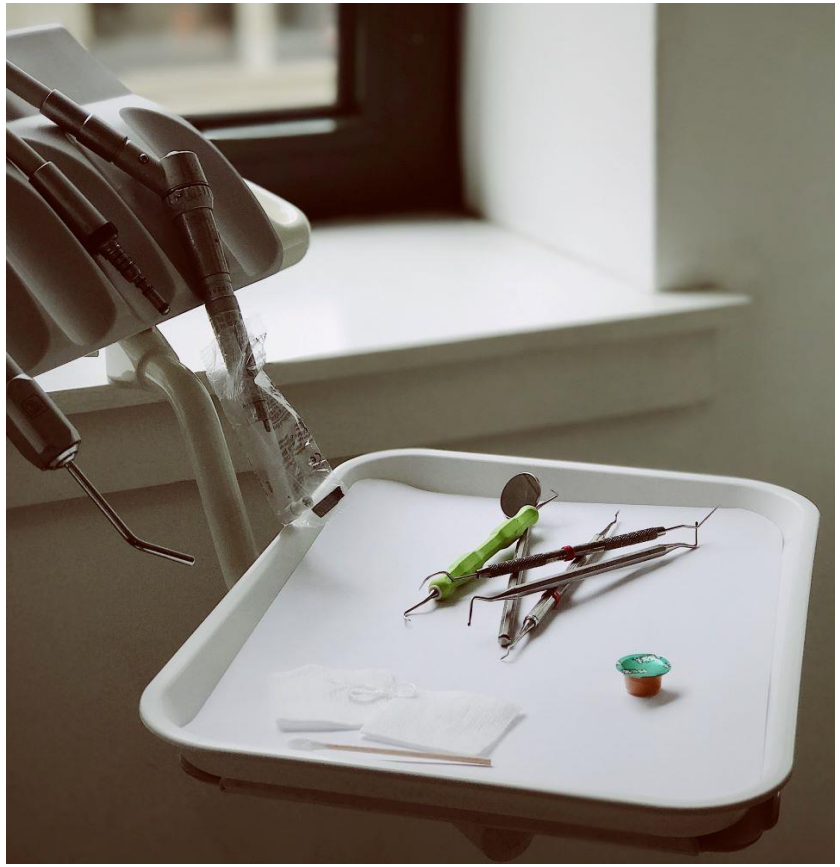
Collaboration results in overwrap film made from recycled PE

Texas-based Chevron Phillips Chemical (CPChem) and Charter Next Generation (CNG), based in New England, are collaborating to produce overwrap film made with CPChem's Marlex Anew Circular Polyethylene. CPChem leverages its established advanced recycling programme to produce Marlex Anew Circular Polyethylene, certified through International Sustainability and Carbon Certification (ISCC). According to the companies, the recycling process uses pyrolysis oil, made from difficult-to-recycle waste plastics, as a feedstock to produce circular PE with characteristics identical to CPChem's original Marlex PE. CNG is using recycled content as a component in several of its food and consumer packaging films. The overwrap films they have created help preserve food, keep medical instruments secure and sterile and provide lightweight and durable product packaging. CPChem continues to explore applications for its PE and enhance its advanced recycling programme.



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PE-based range of patented monomaterial packaging is easily recyclable

Cincinnati-based ProAmpac has announced the launch of its latest patent-pending, PE-based flexible packaging series, called ProActive Recyclable R-2050. This new product is aimed at the European market, and can be used for a range of products, including frozen food, fresh produce, dry foods, and pet treats. According to a spokesperson for ProAmpac, R-2050 is manufactured in the UK, and is available across Europe. It is said to be a sustainable alternative to conventional multi-material laminated structures without sacrificing performance. R-2050 has been engineered to have high clarity and drop resistance, excellent stiffness and dimpling resistance for a premium shelf appearance, and R-2050 also provides superior puncture resistance and excellent directional tear without the need for laser scoring. The R-2050 series is widely recyclable in existing streams, as well as OPRL compliant in the United Kingdom, allowing store drop-off convenience to consumers.

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Range of recyclable mono-material films suitable for dairy products

Packaging manufacturer Coveris has launched what it says is an industry first with its MonoFlex range of recyclable films, which are designed to replace unrecyclable APET (amorphous polyethylene terephthalate) and PA-based (nylon) base webs for dairy products. MonoFlex BP bottom web is a PP-based (polypropylene), thermoformable film said to be suitable for a range of cheeses, which can be tailored depending on the product. The portfolio includes film thicknesses from 200µm to 350µm and is available in transparent or white. For grated cheese, the company has developed a recyclable PE (polyethylene) barrier film as part of its multi-award-winning MonoFlex BE brand. A fully recyclable solution was created thanks to a barrier specially adapted to the product and a sealing layer that can seal through product contamination. Also, for yogurt products, Coveris has made another breakthrough with the launch of its polypropylene die-cut blank, as a replacement for foil lids.

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Monomaterial spout and cap closure 20% lighter

Spanish machinery supplier Mespack, and US plastic packaging manufacturer Hoffer, have jointly announced the launch of a spout and cap closure made from a mono-material. The new P-15 is said to be lightweight and contain 20% less plastic than previous designs. In its utilisation of monolayers, the closure is not thought to require separation in the recycling stream; this is hoped to produce higher quality recyclate and save energy during the recycling process. Hoffer says that the P-15 is compatible with PP (polypropylene) and PE (polyethylene) recycle-ready pouches. Hoffer anticipates that the P-15 will contribute towards the recyclable spouted stand-up pouches it has developed in collaboration with Mespack. Such projects aim to bring the European and global packaging markets closer to circularity in line with the EU's ambitions to ensure the complete recyclability of all plastic packaging by 2030.

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High performance label range features 100% recycled fibres

Italian label manufacturer Fedrigoni Self-Adhesives has launched a range of labels that feature 100% recycled fibres. These high-performance labels are aimed at applications where wet strength technology is required and where products see changes in temperature and humidity, such as wine and beer bottle labels. As well as the labels themselves being made from 100% recycled fibres, the liners for the labels are also made from 30% rPET (recycled polyethylene terephthalate), which reduces the amount of virgin PET used. This offers a reported significant carbon footprint reduction to those utilising these materials. Fedrigoni Self-Adhesives is a leader in the industry in offering sustainable material options. By 2030 the group aims to double the volume of items with advanced sustainable features in its product portfolio. The 100% Recycled Premium Papers, all FSC-certified, are a tangible example of the group's effort to reach this goal.

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New screw cap combines child-resistant, desiccant and tamper-evident features in single piece

French pharmaceutical packaging company Airnov have introduced the Integrated Desiccant Closure (IDC®), which reduces the number of components needed to have a complete desiccant system for pharmaceutical bottles. Airnov's squeeze-and turn (S&T) screw cap combines child-resistant, desiccant and tamper-evident features in one single piece. To ensure the protection of medicines inside a bottle, CRC (child resistant caps) desiccant systems are most often composed of a bottle, a two-piece CRC closure, an added desiccant and an induction seal. Airnov's IDC® is a solution with only two parts. With the desiccant integrated into the closure, this not only significantly reduces the amount of plastic used, but also eliminates the need for a separate desiccant. In addition, the integrated desiccant chamber can be filled with different absorbents, including silica gel, molecular sieve or EQius (Equilibrium RH Stabilizers).

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Trial to de-ink plastic packaging waste considered a success

A successful trial has been conducted to de-ink plastic packaging waste before it enters the recycling extrusion process. The collaboration between ink manufacturer Siegwerk, plastic recycler Wildplastic, and the Hamburg University of Technology (TU Hamburg) aims to demonstrate the importance of cross-industry collaboration in the journey towards sustainability. Wildplastic collects “wild” plastic from beaches, landfills, and illegal dumpsites; this is then transported to a recycling partner to wash, melt, and process the plastic into granules for a production partner to use as a substitute for virgin plastics. By de-inking it prior to regranulation it is hoped to prevent the inks used in printing from contaminating the recyclate and keep the plastic in the recycling stream for longer. Its current focus is to create a demand for LDPE – used in bubble wrap and certain types of food packaging, for example – and facilitate higher collection rates.

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Label manufacturer launches label range with unique textures

Multinational label manufacturer Avery Dennison has launched four new facestocks to the company's Sensorial Collection. Designed for the wine and spirits sector, all four are 70-lb. (31.7kg) wet-strength facestocks that employ 30% Post-Consumer Waste (PCW) paper. The labels are supplied with Avery Dennison's Z2010 adhesive, which has been engineered to support heavier facestocks, and will not float or show lift for up to eight hours while submerged in ice or a cold box. Each stock has a unique texture designed to go beyond the usual and deliver a distinctive sense of touch. The new surfaces include Houndstooth, which shows a subtle textured pattern reminiscent of the cloth with abstract shapes on a warm white material. Willow is an off-white material textured to bring to mind the look found in the bark of a tree. Veil evokes the patterns in a bridal veil, and finally, brushstrokes offers a canvas look and feel.

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UV tag reading technology developed for data capture at recycling centres

Technology start-up Polytag, based in North Wales, has announced the development of a new UV tag reading solution. The two-part technology consists of UV 2D printing capabilities and a UV tag reader, a fully ruggedised unit to be installed in recycling centres. Both parts are low-cost and easily retrofitted onto existing label printing systems and recycling detection systems respectively. The technology was developed in partnership with researchers at the Advanced Manufacturing Research Centre, and will provide key stakeholders in the packaging supply chain with access to never-before-seen packaging lifecycle data, including where and when it was produced, and the percentage of recycled materials it contains. Retailers Co-op and Ocado have already partnered with Polytag. Later this year, UV tags will be printed on to the labels of Co-op's two-litre own-brand spring water bottles and detected by Polytag's UV tag reader at the Abergele Recycling Centre in North Wales.

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New technology allows recycling of carbon fibre compounds

Japanese chemical company, the Asahi Kasei Group, has developed new technology to recycle high-quality carbon fibre plastic compounds. Carbon fibre-reinforced plastics (CFRP) are a sought-after material in many industries due to their unique rigidity, mechanical strength and light weight. CFRP is commonly used in the aerospace, automobile, construction and energy industries due to these properties. Going forward European directive 2000/53/EC requires 95% of automotive vehicle components to be recovered and reused, and at least 85% to be recycled. It is however difficult and expensive to recycle: extracting carbon fibres from resin after usage is notoriously challenging. Asahi Kasei's new recycling method uses an 'electrolysed sulphuric acid solution method' to decompose the resin that the carbon fibre is embedded within to extract continuous strands of carbon fibre that are identical to the original substance. The acid solution with the dissolved polymer matrix can then be reused again, resulting in almost no waste.

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World’s first ovenable packaging printed with water-based inks

UK-based innovative packaging specialist Sirane has launched what it says is the world’s first ovenable packaging printed with water-based inks. It is compliant with EU and FDA packaging regulations. The range features ovenable films and pouches that have been printed and laminated with water-based inks and adhesives, and which have reportedly been tested by Smithers for ovenable food safety performance at up to 220°C (430°F). The packaging is decorated using Sirane’s Amethyst print technology, which, according to the company, results in high print definition, enhanced image clarity, and greater densities with no plate costs. The water-based adhesives are apparently free of substances that can cause the release of aromatic amines in solvent-based alternatives, reducing exposure to carcinogens. The materials are available in the form of reels, flat bags, and flat or stand-up pouches.

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Collaboration brings recycled PE to cleaning product containers

French multinational petroleum company TotalEnergies, and Ecolab Europe, based near Zurich, have formed a partnership to bring post-consumer recycled (PCR) plastic into primary packaging for highly concentrated cleaning products. The containers will contain TotalEnergies RE:use rPE6314 grade, which is within the RE:clic portfolio of circular polymers. The companies say that they are part of a larger effort to drive solutions that prevent waste and protect people, the planet, and businesses. The rHDPE (recycled high density polyethylene) containers combine PCR with high-performing booster resin to enable circularity while maintaining the same performances, thus providing sustainable solutions for bottles and medium-size containers, for both solids and liquids. A spokesperson for TotalEnergies said that the collaboration with Ecolab is an excellent example of a value chain partnership aimed at enabling circularity for highly technical applications and it fully contributes to TotalEnergies' ambition of producing 30% circular polymers by 2030.

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Sustainable punnets for soft fruits are made from rPET

Italian thermoformed packaging manufacturer ILIP has launched two new, more sustainable punnets for soft fruits, such as strawberries. Both are made from rPET (recycled polyethylene terephthalate). The B40 basket is characterized by the replacement of the bubblewrap pad placed at the bottom of the container by an absorbent pad of paper. This change makes it possible to reduce the amount of plastic used in packaging. After use, the basket and pad can be easily separated and recycled as paper and plastic, respectively. The other product is the B40 r-PET.45 Air Wave protection basket is made from 100% rPET. This tray features a domed base, which the company says protects against possible impacts during transport and at the point of sale, eliminating the need for either bubblewrap or a cellulose absorbent pad. These trays will be presented by ILIP at Fruit Logistica in Berlin.

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New recyclable nasal spray pump contains no metal

Illinois-based Aptar Pharma has announced the launch of a recyclable nasal spray pump. Called the Aptar APF Futurity, the company says it is classed as ‘highly recyclable’ because it is comprised of easily recycled HDPE/PE (high density polyethylene/polyethylene) only, and contains no metal parts. It is reported that an emptied unit can be directly recycled into existing recycling streams with no dismantling required. The APF Futurity nasal spray can be clearly differentiated by its external plastic bellow spring designed to provide soft but concise actuation for the user. The spray also features a new oval-shaped finger flange that offers not just ease of use but also enhances sorting of the spray pump by infrared scanner and air pressure separation technology during established recycling stream processing because the otherwise round nasal spray bottle would simply roll away under sorting table air jets and not be sorted appropriately.

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Multilayer high barrier film is highly recyclable

German film manufacturer allvac specialises in producing thermoformable barrier films. Their new film, allflex SR, is a multilayer PA/PE (nylon/polyethylene) film that has a recyclability of 100% in the plastic film and LDPE flows, according to the CHI (Institut Cyclos – HTP) standard. The films can also be reused with a recyclability of 75% via the mixed plastics flow and the mixed polyolefin flow. Packaged goods that are frozen or pasteurised are suitably protected by the film, which is especially relevant for goods like meat or sausage. The films are manufactured by coextrusion, a technique which makes it possible to combine different films or use additives. The film is suitable for packaging produced on thermoforming machines and tolerates a temperature of up to 100°C for up to four hours. The composite film allows a large window through which to see the product while ensuring a longer shelf life.

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Turkish PP manufacturer includes 15% biopolymer in new film

Süper Film Ambalaj Sanayi ve Ticaret AŞ is a Turkish company specialising in PP (polypropylene) film manufacture. Their new offering, SUPEX 2011 ALG BOPP (biaxially oriented polypropylene), contains 15% land-grown seaweed in its formulation, meaning that dependency on fossil-based resources is reduced. The company says that an important feature of the biopolymer used in the film structure is that it is obtained from seaweed grown in terrestrial environments. By producing seaweed by this method, it is possible to produce biopolymer without using any agricultural resources, and without any negative effects on the food chain. In addition, the relevant film can be recycled with standard PP packaging materials and reused in a circular economy. The company is opening a new factory in 2023, and they plan to increase their capacity by 50% in total. The World Packaging Organization awarded the company a WorldStar packaging award for the development of the film.

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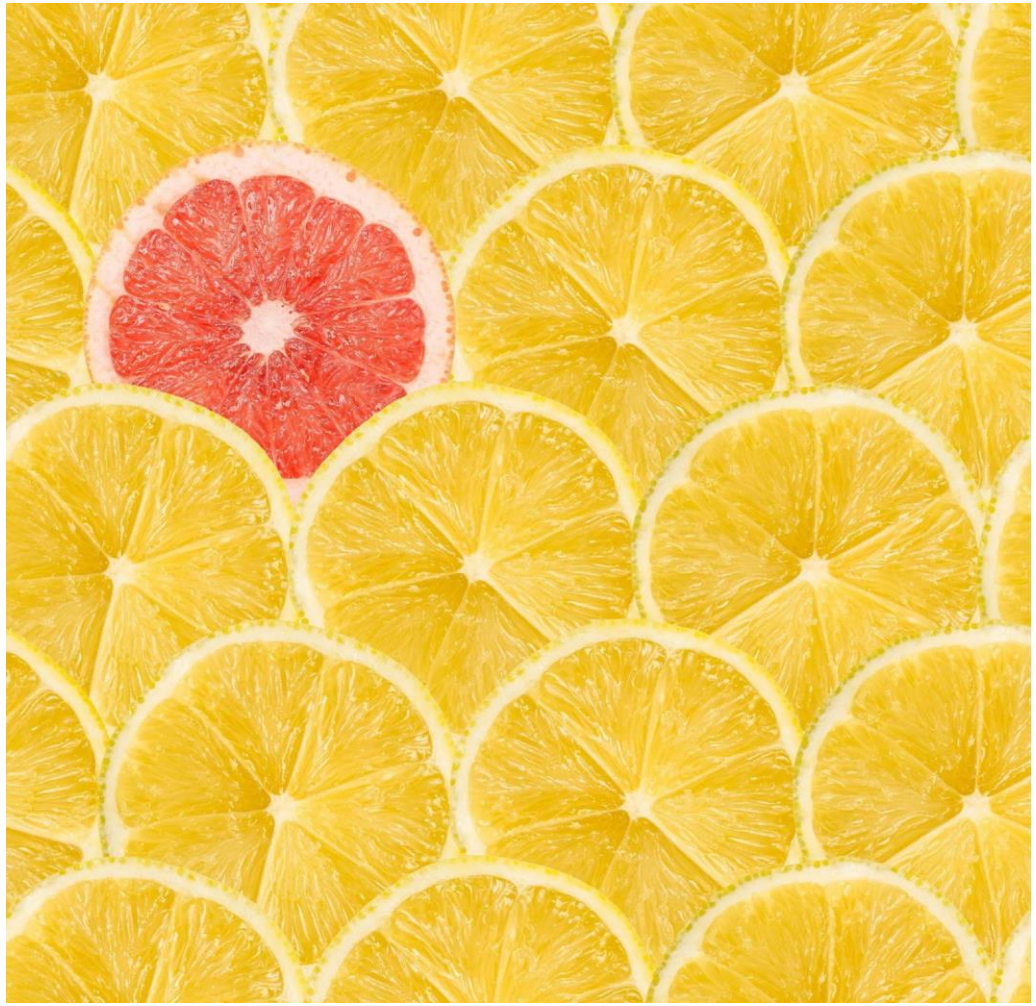

Getting Noticed

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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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Technically challenging pack wins prestigious award

Metal packaging manufacturer launches new portfolio aimed at the luxury packaging sector

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Mexican tequila brand releases limited edition bottle decorated with beads

Mexican tequila brand Kah has released a limited edition design for its Kah Extra Añejo Tequila bottles. The 600 limited edition bottles are only available in the US, and are each hand-decorated with 22,000 beads. According to the company, each bottle takes the craftspeople approximately 35 hours to complete. The design is based on symbols that reflect the cultural traditions of the Huichol tribe, who live in the Sierra Madre Occidental mountain range, in the north of Jalisco, near the distillery where Kah is made. The bottle designs include a beaded sun, denoting power; a bird, meaning freedom or a messenger of the gods; a lizard, foreteller of the future; the mezcal bloom, deemed to be the plant of life; and the deer, a life guide for humans. The limited edition bottles are priced at US $516.99 (£423).

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Technically challenging pack wins prestigious award

New York-based Knoll Packaging has won the award for Best Limited Edition Pack at the 2023 PCD Innovation Awards. The award was for an advent calendar designed for M.A.C Cosmetics. The box faced many technical challenges, including the ability to spin with no plastic components, and complex printing and wrapping methods. The structure is made from FSC (Forestry Stewardship Council) approved paper and board to ensure material traceability, and is manually wrapped with plastic-free metalized paper. The rigid box contains 24 individual folding doors to secure the product safely and to bring the interactive design to life. The most complex part was the visual and spinning mechanics of the box. The ability to spin engages the customer and creates a “wow” factor. The box’s interior can also be lifted out by the ribbon handle, making it a reusable keepsake for the future.

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Metal packaging manufacturer launches new portfolio aimed at the luxury packaging sector

Global metal packaging manufacturer Eviosys has launched a new portfolio of metal containers for luxury packaging. The company presented a new hot-stamping technique, packaging for the visually impaired and a trend-led collection of ready-to-launch containers at Paris Packaging Week, at the end of January 2023. The hot-stamping technique can create an impression of relief and imitate textures including leather and marble. The company has also invested in a new micro-embossing machine which can be used to write on packs in braille. ‘Scan me’ could be micro-embossed in braille and a square surrounding a QR code. When scanned, the QR code could deliver audio content. The company has also teamed up with trends agency Caramel to create a collection showcasing ready-to-launch secondary packaging with different forms and decoration techniques in line with three consumer trends, labelled as ‘Regeneration’, ‘Réindustrie’, and ‘Simple Pleasures’.

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Refill Revolution

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Refill Revolution

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

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

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Refill Revolution

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Reusable packaging start-up partners with milk delivery brand

Organic teas displayed in plastic-free instore displays

Clickable cosmetic refill system is intuitive

Brazilian luxury products move to aluminium for refill packs

Stainless steel reusable packaging being trialled with major food producer

German deposit system for reusable cups and lids awarded Blue Angel eco label

Estonian supermarket to pilot reusable packaging at self-service counters

Start up provides technology to track reusable takeaway packaging

German start up champions reusable packaging

Concentrated refill option available for weed and grass killer

Cosmetics company launches lipstick in exclusive refillable packaging

Italian packaging group launches new sustainable cosmetic packaging

Sustainable alternative to paper towels

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French start-up wants to put an end to single-use plastic food packaging

Bibak is a French company that wants to put an end to single-use plastic food packaging and replace them with reusable food containers. Since January 1st, 2023, French restaurants have had to use reusable food containers for people who eat there, meaning that start-ups that have been around for some time like Bibak (since 2018) have an advantage. While many restaurants are buying professional dishwashers, Bibak believes that most food containers won't be cleaned in restaurants. Instead, a third-party company will come and exchange the dirty dishes, plastic boxes and cutlery with clean ones. Bibak, however, focuses on the tech and platform part of this flourishing industry, where it believes it can bring more value. They achieve this by providing usage and return data. They also incentivise return, via 'gamified' systems with rewards or straightforward deposit systems. The company can also manage the cashback and reward system for customers.

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Reusable packaging start-up partners with milk delivery brand

London-based reusable packaging operation, Again has announced that they have entered into a partnership with Müller-owned Milk & More to reuse up to three million items of packaging. The scheme, which is first being trialled across the Tom Parker Creamery brand and to The Village Press range of products later this month, allows shoppers to rinse packaging and leave these on their doorstep to be collected. The packaging will then be washed by Again and sold back to the brands to be refilled and reused. A spokesperson for Milk and More said that as a leading retailer in refillables and zero waste packaging, they were aware that their customers wanted to be more sustainable, but they are busy people and need convenient solutions – which is exactly what the partnership with Again offers them.

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Organic teas displayed in plastic-free instore displays

Les Jardins de Gaïa, based in Alsace, France, has been championing 100% organic and fair trade teas since 1994. They have now introduced a refill cabinet that allows retailers of their teas to display their product in store refill displays which are ‘zero plastic’. These are made from solid pine and glass to meet consumers’ expectations who want to limit their environmental impact. The company is offering its resellers the use of Forest Stewardship Council (FSC) certified solid pine furniture to display and sell its teas and rooibos at their points of sale. The cabinet is available in two versions, one which features six glass containers and another which has twelve containers. The glass containers are airtight to preserve the aromas of the tea leaves.

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Clickable cosmetic refill system is intuitive

German medical and drug packaging manufacturer Gerresheimer has joined forces with Medicos Beauty Group, based in Lyon, France, to introduce a sustainable and simple refill system for cosmetics. The new clickable refill system consists of Re-CliCK, Medicos' plastic insert and closure solution, and Gx-CyClic, the matching reusable glass jar from Gerresheimer, and its use is said to be simple and intuitive. All materials used are recyclable and partly recycled. The glass jar consists of 40% post-consumer recycling (PCR) glass, the insert is made of bio-based PP (polypropylene) and the closure is made of R-PET, PET (polyethylene terephthalate) or PP. All materials are recyclable after use. The companies say that all elements of the system can be individually designed in terms of finish and colour. The insert's click system allows the consumer to effortlessly insert and remove the refill while it remains securely sealed within the glass jar.

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Brazilian luxury products move to aluminium for refill packs

Trivium Packaging Brazil has announced the development of two aluminium refill bottles, one for a luxury perfume brand, the other for a gin distillery. A clever dispensing applicator on the aluminium bottle refills for O.U.i.’s eaux de parfum ensures the product is transferred to the reusable glass package cleanly and easily, without product waste. The refill reduces the weight of the package by 91%, lessening the greenhouse gasses involved in transport, and costs 44% less than the glass bottle. BEG Distilaria is another premium brand that has opted for a refillable/reusable system, this one for artisanal gin. It chose a 500-ml stock aluminium bottle, which is produced using an advanced alloy, allowing for a lightweight, 48g container. According to BEG, the refill bottle is nine times lighter than glass. The cost of the refill is also 33% less than that of the glass bottle.

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Stainless steel reusable packaging being trialled with major food producer

Frankfurt start-up company circolution has developed and produced a reusable solution which can be used across all food segments and makes it easy for consumers to save on packaging. They can buy their favourite product and return the packaging to the normal deposit machine after enjoying it. Their stainless steel containers are compatible with existing deposit machines in German supermarkets. “Anita in Steel” is the name of the first packaging solution and is ideal for foods with a long shelf life. circolution is currently testing with Nesquik from Nestlé, and coffee roasters Hoppenworth & Ploch and BE.AN. After around five life cycles, the ecological impact corresponds to that of single-use glass packaging. However, the stainless steel cup can be used up to 75 times. “Anita in Steel” can therefore save around 36 kilograms of glass. For plastic, this value is estimated at five kilograms. Rewe is currently testing the packs in four of its stores.

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German deposit system for reusable cups and lids awarded Blue Angel eco label

FairCup is a Germany-wide deposit system for reusable cups and lids and have become the only deposit system to be awarded the Blue Angel eco label. The difference between FairCup and other reusable formats is that they claim to be the only system in Germany where the reusable lid is part of the system. The deposit system works via the FairCup app, whereby the customer pays a small deposit, which is refunded on return of the cup. Their reusable lids fit all cup sizes and are easy to clean. FairCups are made from PP (polypropylene), and therefore the cups are considered to be easy to recycle. FairCups are lightweight, dishwasher safe and can be washed and reused up to 1000 times. They deliberately avoided printing on the cups, which means that at end-of-life the cups can then be returned in granulate and completely recycled.

Estonian supermarket to pilot reusable packaging at self-service counters

Estonian reusable packaging service provider Ringo has announced a partnership with major retailer Rimi to pilot reusable packaging in its ready-made food self-service counters at its Põhja, Telliskivi, and Tornimäe stores. The new trial system will offer consumers the choice between a 30-cent single-use pack or a 50-cent Ringo pack with a fully returnable deposit. The trial hopes to encourage the use of and increase access to reusable packaging among consumers. Consumers can then take the reusable pack back to a return box, where the on-pack QR code can be scanned to save the package to their phone number rather than an app. Once the package has arrived at the Ringo washing centre, the deposit will be returned to the consumer's bank or charity account. Rimi says that the pilot will last 6 months, and they chose stores that they thought more environmentally conscious people already visited.

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Start up provides technology to track reusable takeaway packaging

Topanga is a Los Angeles-based company that provides technology and services to help brands offer successful reusable packaging programmes. Topanga's track and trace technology makes it easy for a company to manage its reusable packaging operation. Topanga says that their technology helps drive higher return rates and monitor a customers' reusable container inventory. It can also Increase container returns through incentives and automated reminders, while helping recoup costs on unreturned reusable containers. The technology tracks where the customers' containers are, for example, who currently has the container, whether they need to or have returned it, whether it is being cleaned, and finally letting you know when it has been returned ready for re-use. Their technology can also measure things such as environmental impact and the number of containers saved from landfill. They have recently partnered with online food delivery business GrubHub for to-go dining hall orders for The Ohio State University and Colorado State University students.

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German start up champions reusable packaging

Hey Circle is a German start up that began in early 2022. It allows customers to receive their purchases in reusable packaging. However, For reusable packs to be a sustainable alternative to disposable, it needs to be in circulation several times. For Hey Circle, this means that the shipping packaging has to hold its own against a normal box. With a reusable shipping box from the company, 40% of the CO2 emissions of a disposable box can be avoided with 40 circulations, despite the return of the empty boxes and bags. The packaging is patented and certified as climate-neutral by ClimatePartner. Their boxes and mailing bags are made of over 95% PP (polypropylene) and the rest is PE (polyethylene). As these are two commonly recycled materials this means that the shipping packaging can be recycled via two established material flows at the end of its first life cycle.

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Concentrated refill option available for weed and grass killer

Ohio-based ScottsMiracle-Gro has launched a refill pouch for its Ortho GroundClear Super Concentrate weed and grass killer. The pouch, which contains 5oz of concentrate, converts into 0.5 gallons of weed killer. The pouch is a construction of PET/PA/PE (polyethylene terephthalate/nylon/polyethylene) film and is topped with a 20-mm child-resistant cap. According to Scotts, the new packaging reduces waste by up to 90% when compared to a 1-gal refill bottle and provides a smaller on-shelf footprint for retailers. It also requires less storage space in the consumer's home versus a standard-size bottle. The company intends to look for more sustainable options for the refill pouches. The Ortho GroundClear Super Concentrate flexible pouch refill is available in more than 850 stores around the USA, as well as online on sites that include Amazon and ScottsMiracle-Gro. A two-pack of the concentrate is priced at $18.49 (£15.02).

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Cosmetics company launches lipstick in exclusive refillable packaging

French cosmetics company Clarins has launched a new lipstick in exclusive refillable packaging. The new Joli Rouge refillable lipstick was developed by Aptar Beauty and is based on their ‘Private Refill’ technology, which features a unique security key that ensures that the refill only works with the branded shape on the bottom. The lipsticks are available in three colours, red, white or gold. The red and white versions are brightly lacquered, while the gold case is anodised. The Joli Rouge refillable lipsticks feature an elegant design and premium feel, with all the technical parts of the mechanism cleverly hidden. The case is made from recycled plastic, and the mechanism is styrene and silicone free. The carbon footprint is reported to decrease by 45% from the second refill, giving it a lower carbon footprint than a standard lipstick. Refilling is intuitive with a one-click gesture, which consumers have declared to have found quick and easy.

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Italian packaging group launches new sustainable cosmetic packaging

mPackting is the branch of Italy's Minelli packaging group that offers full packaging solutions for the beauty cosmetic industry. The group launched its new mPackting range recently during Paris Packaging Week. In collaboration with renowned designer, Thierry de Baschmakoff, mPackting has developed a standard yet luxurious range called Silva, comprised of skin care jars, lipsticks, compacts, and caps for skincare or perfumes. In line with the latest trends, the range is fully refillable and recyclable. mPackting has also collaborated with Italian luxury glassmaker Bormioli Luigi to create Tango, a premium lipstick focusing on sustainability and circularity. The packaging is made with a cap in glass, base in wood, and ring in a 100% biobased and biodegradable biomaterial. Also, for the release of the new Moon lightweight bottle by Verescence, mPackting has provided its caps based on the LegnaPin concept (wood and cork).

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Sustainable alternative to paper towels

Papaya Reusables is a Canadian company that sells reusable paper towels. One towel is said to replace 17 rolls of regular paper towels. They're claimed to be 20 times more absorbent, too, making cleanups more efficient. They're made of all-natural cellulose and cotton and are 100% compostable when they reach the end of their useful life. Also, unlike paper towels and sponges, the towels are naturally antibacterial. Papaya towels have received more than 2,700 five-star reviews; consumers are apparently hooked, saying they "won't use anything else" to clean now. The customer rinses the towel out after using it, then hangs it on the included hook to dry. If a deeper clean is required, they can stick Papaya towels on the top rack of the dishwasher or in the washing machine, then let them air dry. The towels come in packs of two, four, and six, starting at $18 (£15) for a twin-pack.

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About Us

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

ThePackHub manages a comprehensive innovation database called The Innovation Zone, featuring over 7,000 packaging innovations worldwide, with 25 new initiatives added weekly. They have a vast network of packaging contacts across the industry that helps inform much of their consultancy work. Additionally, they have published several packaging reports, covering sustainability, packaging trends, supplier guides, seasonal packaging, and more. ThePackHub hosts face-to-face seminars that provide insight from expert speakers and bring the industry together to network and collaborate.

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

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