

INSIDE Entrepreneurs & start-ups
Sustainability
IFFA Preview
60 Second Interview

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APRIL 2022

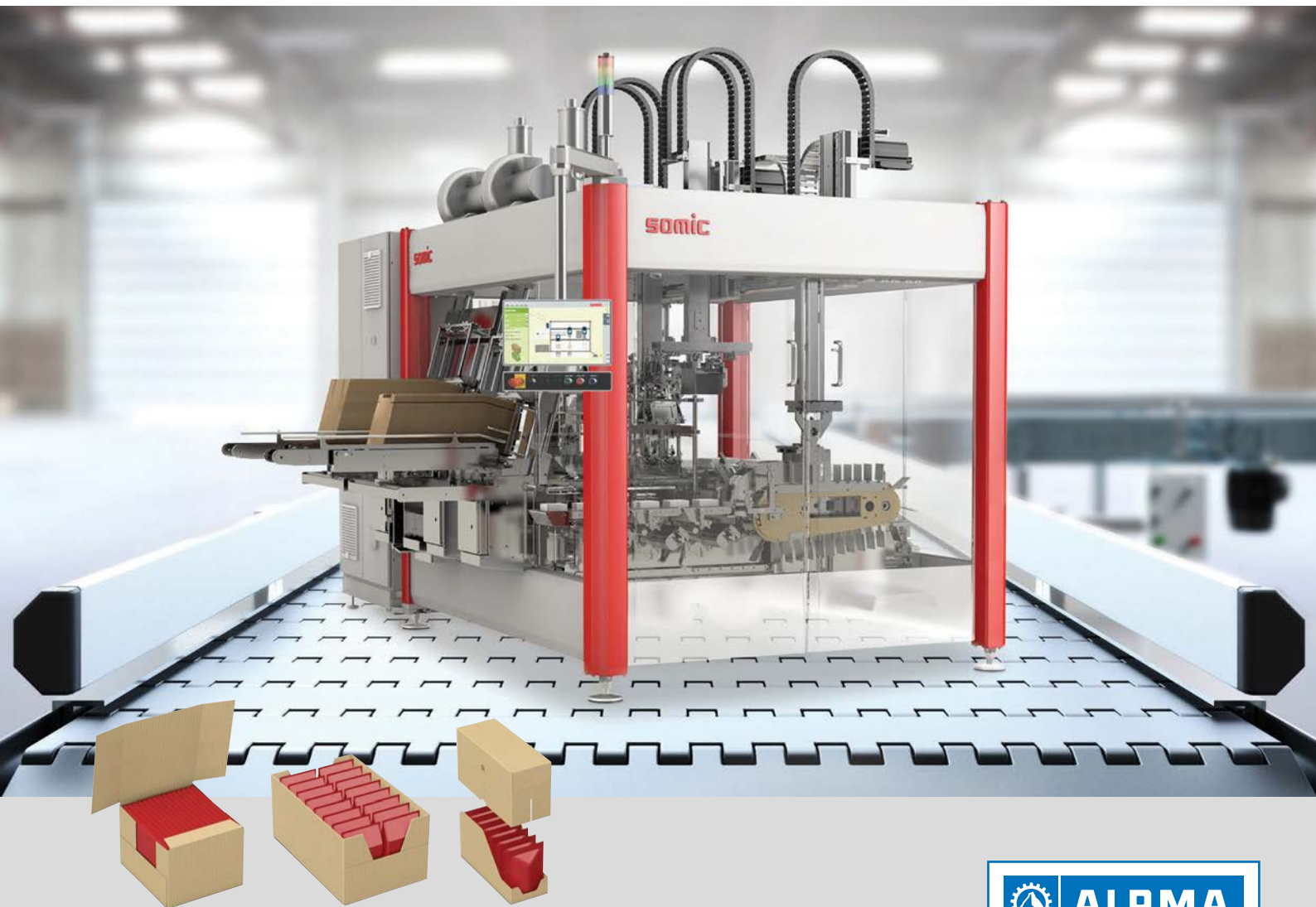


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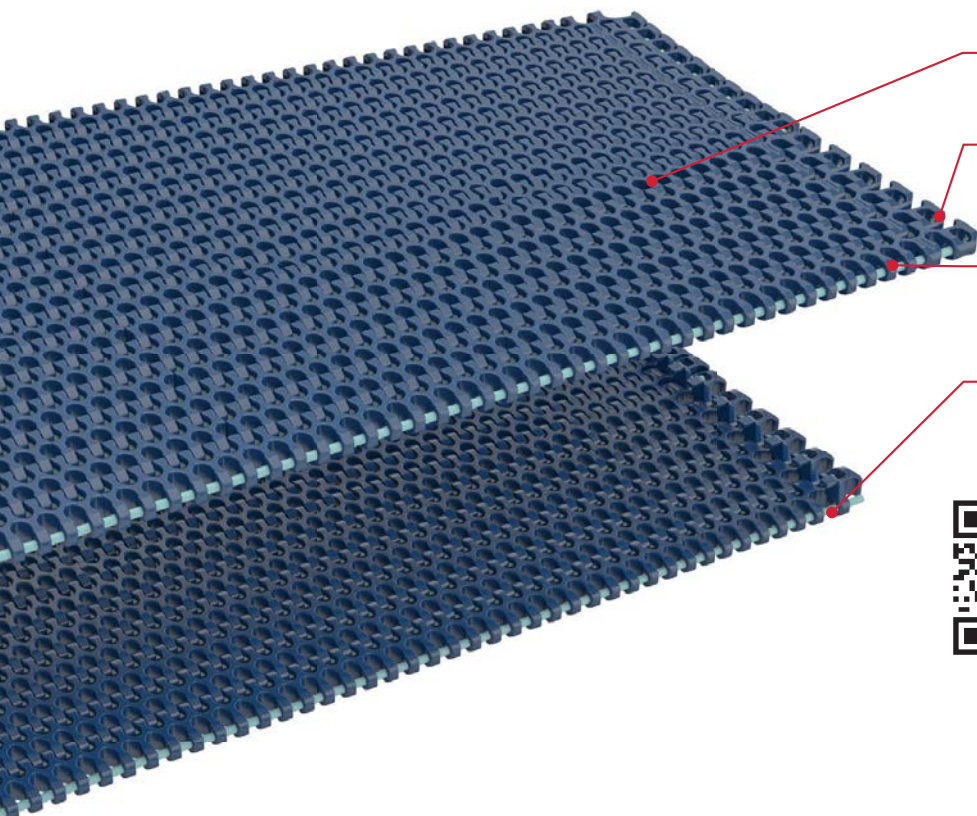


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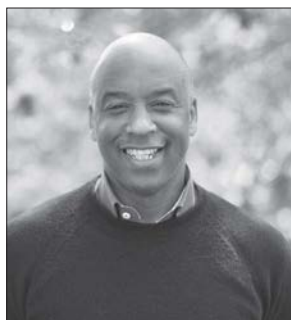
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Sustainability

is changing minds

It used to be the case that many thought this sustainability thing was all smoke and mirrors. At this time, scepticism reigned. If you had a way of working, and it worked, that was what you'd pursue without considering the consequences. You'd hear many argue against a green plan — and win. Then, after plenty of daily reckonings we became haunted by doubts. You could make a connection to an expanding climate crisis to your own lifestyle and conclude, "I'm going down the wrong road." Remaining sceptical meant losing many an argument.

Business sustainability has come a long way. Today, more than 90 per cent of CEOs state that sustainability is important to their company's success, and companies develop sustainability strategies, market sustainable products and services, create positions such as chief sustainability officer, and publish sustainability reports. Viewing sustainability as a common-sense issue instead of a matter of policy and legislation has made it much easier to see what needs to be done and how to do it.

From the FDF's progress report, published this month, many companies embrace sustainability. They have the people on board to remove the remaining barriers and embed the right incentives to make their business a model of sustainability. This is probably quite instructive as regulators continue to develop standards.

A lot of companies have made a commitment to becoming carbon neutral in all their operations. It is clear there is a need for companies to communicate the widening definitions of sustainability, and a changing, challenging landscape means agile engagement will be crucial — companies will need to continuously evolve.

Companies are moving from incremental improvements to bold approaches that create a net positive impact. Sustainability means more than better buildings and clean energy and recycling. It means changing minds. It is really becoming clear that sustainability simply isn't going away.

Sustainability remains a major challenge, one that matters beyond individual companies. But reassuringly a number of large companies are developing forward-thinking sustainability policies. The environment around us now exerts a such a strong impact on our behaviours.

Looking ahead, thinking sustainably means thinking differently with an eye towards innovation and growth. This means companies can be more creative and intentional about products, services, processes and organisations. There is a whole world of opportunities out there for businesses willing to comply with the realities of a changing world.

**Rodney Jack, Editor,
Food & Drink Technology**

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EFSA publishes scientific opinion regarding high-pressure processing of food



The European Food Safety Authority (EFSA) has concluded that high-pressure processing (HPP) is efficient at destroying harmful microorganisms and presents no additional microbial or chemical food safety concerns when compared to other treatments such as pasteurisation.

HPP – using high pressure for a certain amount of time to inactivate pathogens and microorganisms that can spoil food – has minimal effects on the taste, texture, appearance, or nutritional value of the food. It can be applied at various stages of the food chain, often on pre-packed products. The HPP treatment has been used on not only raw materials including milk, fruit juices, and smoothies but also on processed products, for example, sliced cooked meat and ready-to-eat meals. In the latter case, the method can help reduce the contamination originating from the manufacturing processes.

The scientific opinion is published as a request from the European Commission. EFSA experts who were asked to provide overall assessments on the safety and efficacy of reducing the levels of foodborne pathogens of the HPP method. In addition, EFSA's opinion also addresses the efficacy of HPP as an alternative for pasteurisation and ultra-high temperature treatment of raw milk and raw colostrum, as well as for controlling *Listeria monocytogenes* in ready-to-eat foods.

EFSA concludes that this processing treatment lowers levels of *Listeria monocytogenes* in ready-to-eat meat products when specific time-pressure combinations are applied. Also, it is proved to be effective at reducing the levels of other pathogens, including *Salmonella* and *E. coli*. In general, the efficacy of the HPP method is better with longer durations and higher levels of pressure.

New FAO report highlights possible benefits and risks associated with tomorrow's food

The future promises exciting opportunities for feeding the world whether through new foods like jellyfish, edible insects and cell-based meat, or new technologies like blockchain, artificial intelligence and nanotechnology, says a report by the Food and Agriculture Organization of the United Nations (FAO).

According to FAO chief scientist Ismahane Elouafi, "we are in an era where technological and scientific innovations are revolutionising the agri-food sector, including the food safety arena. It is important for countries to keep pace with these advances, particularly in a critical area like food safety, and for FAO to provide proactive advice on the application of science and innovation."

The report discusses some of the most important trends and issues in food and agriculture, focusing on food safety implications, which consumers around the

world are concerned about.

The team adopted a foresight approach, which is based on the idea that the outcomes of the future can be seen in the form of early signs from today.

The various drivers and trends covered in the report include climate change, changing consumer behaviour and preferences, new food sources and production systems, technological advances, microbiome, circular economy, and food fraud. The findings emphasise the increased risk of microbiological and chemical contamination regarding new food sources such as jellyfish, algae, and insects, laboratory meats, plant-based alternatives, and new technologies being used in growing and producing food.



Callebaut launches dairy-free range for artisans and chefs

Barry Callebaut has launched a new range of plant based chocolate



for chefs under the name "NXT", which it claims, not only tastes great, but is better for the environment.

Describing NXT dairy-free as "chocolate indulgence of the next generation", the dark and milk chocolates are made from 100% plant-based ingredients without any trace of milk or dairy. The development follows the release of another plant-based alternative to dairy chocolate, Plant Craft.

Consisting of dark and milk chocolates made with an extract from the chufa plant, the range is free from dairy, lactose, nuts and allergens. The brand describes its vegan range to taste "as close as it gets to Callebaut's renowned Finest Belgian chocolates."

Callebaut, the Belgian gourmet chocolate division by The Barry Callebaut Group, has launched its 100% plant-based dark and milky tasting chocolates range to support chefs and artisans re-inventing traditional chocolate recipes.

In addition to its new vegan chocolate range, Callebaut also launches its "NXT" online platform, which offers know-how and tested recipes for vegan chocolate creations. The platform is set to support ambitious chefs and artisans to create the next generation of vegan delights.

Xuan-Lai Huynh, global brand leader of Callebaut, said it took Callebaut experts and R&D teams three years to bring the innovation to life.

"What makes it even more special is that the whole concept is being fuelled not only by our R&D team, but even more by passionate chefs and artisans. Creating vegan, plant-based and dairy-free recipes stirs up all the know-how chefs have been applying for generations. For many, it's like starting over. NXT will help ambitious chefs to re-invent the traditional pastry and chocolate recipes and elevate dairy-free, vegan, plant-based chocolate delights from a 'niche' segment to a global movement."

Harmful chemicals found in bottled drinks prompts call for better recycling

Researchers from Brunel University London found 150 chemicals that had leached into drinks from their plastic bottles, with 18 of those chemicals found in levels exceeding regulations.

Food contact chemicals (FCC) are mostly considered perfectly safe in low concentrations. However, research shows that drinks bottled using recycled polyethylene terephthalate (PET) can contain higher concentrations of FCCs than drinks bottled using virgin PET, suggesting problems with the recycling process may be leading to some bottled drinks being contaminated.

"We found these chemicals can come from various sources, such as the catalysts and additives used during production and degradation during PET production, and degradation that can happen

across a bottle's lifecycle," said Dr Eleni Iacovidou, a lecturer from Brunel's Centre for Pollution Research and Policy, who led the study.

The researchers point to several factors that can result in FCCs being present in bottled drinks, including the production of the empty bottles, but also the conditions under which bottles are filled, stored, distributed, and shelved, for example, being exposed to high levels of sunlight or humidity.

To reduce the number of chemicals found in bottled drinks, the study suggests that a technology known as the 'super cleaning' process could be used, which uses a three-stage process to clean old plastics before recycling – a high-temperature wash, a gas wash, and a chemical wash.



"By investing in new super-cleaning technologies, we can maximise the likelihood of decontaminating recycled PET to levels similar to virgin PET," said Dr Iacovidou.

The report, published in the *Journal of Hazardous Materials*, also suggests that bottle manufacturers should prioritise 'design for recycling' to improve the quality of recycled goods and recyclers need to improve how they collect, sort and reprocess PET bottles.

Technology gateway to help drive business growth

Businesses have been challenged to kickstart a new era of growth by taking advantage of a collaboration making it easier for food and drink companies to adopt cutting edge technology.

The Food and Drink Federation's (FDF) Food and Drink Innovation Gateway matches firms in the sector with the expertise to support them with their technical challenges. The FDF said the partnership will provide valuable insights into the technological needs of the industry, helping improve and better target the support available.

The federation also stressed that utilising existing and new technologies is vital for food and drink businesses to increase productivity, reduce waste and improve sustainability. It can also create new, high skilled green jobs across all nations and regions, and support the FDF's ambition for the sector to be Net Zero by 2040.

Steve Barton, strategic project director, ABF Grocery Group and chair of the FDF's Technology Forum emphasised the simplicity of the online tool, saying the Innovation Gateway makes it easy to quickly identify the best automation and technology solutions.

"This is increasingly important as we manage decarbonisation, rising energy costs and commodity price volatility," Barton said. "Completing one online form connects food businesses to an independent specialist to help find the right partner to step change their productivity and efficiency."

Experts in the world of research and higher education, from the Manufacturing Technology Centre (MTC) to the Advanced Manufacturing Research Centre (AMRC) to the University of Lincoln will be on hand to enable businesses of all sizes to better understand the opportunities that innovation can deliver, while helping to de-risk investments and implement the technology.

Karen Betts, chief executive, the FDF, said the Innovation Gateway will offer practical support for businesses to harness the opportunities that technology can offer.

"By investing in digital capability, food and drink businesses will be able to improve the productivity and sustainability of our companies and our supply chain – critical investments both in future growth and in the resilience of our industry," Betts added.

Lycored encourages messages of support for Ukraine



Lycored is encouraging people who work in the food and nutrition industries to send messages of support to the Ukraine.

The global wellness company, which has members of staff in Ukraine, has been organising donations of food and medical supplies Dnipro.

It is now encouraging partners across the health, nutrition and beauty industries to write anonymous messages of support which will be translated, printed and included in food parcels being delivered to people in Dnipro. For each one written, Lycored will make a financial donation to a charity providing humanitarian support.

Shirley Cohen, CEO of Lycored, said: "All our thoughts and prayers are with our colleagues, their families, their communities and all the people of Ukraine. You will always have our immense respect, appreciation and support, and our entire global family stands with you."

People can write notes of support at www.littleglowapp.com and at Lycored's Science of Positivity exhibit at the New York Museum of Science.

Making it our business: the food and drink sector is delivering on Net Zero ambitions

F&DT considers what has happened and looks at the work that remains for companies to meaningfully engage in a sustainable development policy

The future of food is one in which circularity and sustainability thrive, where waste is a valuable resource, collaboration is second nature and the environmental and social impacts are minimal.

According to the Food and Drink Federation's (FDF) latest Ambition 2025 progress report, since 1990 FDF members have lowered CO₂ emissions by 58%. Members have also cut water consumption by 39.4%, successfully contributing to an industry-wide target to reduce water use by 20%.

The Food and Drink Federation is equipping key industry stakeholders with the necessary tools to achieve their sustainability ambitions and drawing attention to the pioneering retailers, farmers and producers driving the change.

The members of the Food and Drink Federation have continued to significantly reduce carbon emissions and water consumption, as part of the sector's Ambition 2025 commitment to reduce its environmental impact.

The report – released during Food Waste Action Week – showcases the progress made by the food and drink industry in all target areas – from food waste to transport to natural capital – to create a more sustainable food supply chain.



Helping cultivate the future



Many food and drink companies now see themselves as partners in achieving sustainable development and they engage in

this pursuit in myriad ways. Some realise sustainable development is essential not just for the future of their business, but for the planet.

That noted, the FDF acknowledged while the work being done by its member companies is important, it believes it isn't enough.

To make a real difference, the sector needs to collaborate with government and other partners across the farm to fork food chain to create a truly sustainable food system that is fit for the future.

The FDF stepped up its engagement with government and key stakeholders over the last 12 months, particularly in driving this ambition for the sector to be Net Zero by 2040 and on packaging reform.

As part of this, the FDF is urging the UK Government to ensure legislation continues to allow chemically recycled plastic

to be used in food packaging and for it to be recognised in the plastic packaging tax mass balance calculations; the FDF also supports the need for all plastic films and other plastic flexibles to be included in Consistent Collections, as well as making Extended Producer Responsibility efficient and cost-effective for business.

Last year, the FDF reviewed its 'Ambition 2025 – Shaping Sustainable Value Chains' project to deliver a more sustainable food system. It includes a strengthened target for reducing CO₂ emissions as well as enhanced targets around water use, reduction of food waste, use of more sustainable packaging and the reduction of emissions from transport.

In all these areas, food and drink companies continue to deliver progress, working across supply chains through industry initiatives, including Courtauld 2030, UK Food Waste Reduction Roadmap and UK Plastics Pact.

Director of sustainability at the Food and Drink Federation Nicki Hunt (above) said food and drink manufacturers continue



to work hard to ensure that they are firmly on the road to Net Zero. This is in addition to reducing the environmental impact by improving water efficiency and in taking significant steps to improve the recyclability of our packaging.

"This is critical for the sustainability of our sector in the short, medium and longer term, and we know how important this action is for consumers, communities and our own employees," Hunt said.

The Ambition 2025 initiative forms part of the FDF's goal for the food and drink sector to achieve Net Zero carbon emissions by 2040 – a decade earlier than government targets. Launched at COP26, the Federation produced a handbook providing practical advice for food and drink manufacturers in implementing their own decarbonisation roadmaps.

Two business sustainability case studies – and how they worked

1 Quorn Foods

Founded in 1985, Quorn Foods operates five sites internationally and has a simple goal: to bring people delicious and exciting food that is good for them and good for the planet. Environmental sustainability is driven within the organisation via its Supply Chain Sustainability Strategy, which prioritises improvements relating to greenhouse gas emissions, water use, waste and responsible sourcing. Key to this is ensuring production processes are as efficient as possible.

Following a review of the Quorn Foods site in Billingham, County Durham, two incoming supplies were identified which would benefit from replacing the existing on-site distribution transformers.

Smart energy provider, Powerstar offered a solution to lower electricity consumption, reduce CO₂ emissions and minimise energy costs through its HV MAX amorphous core distribution transformer with integrated voltage regulation solution.

Replacing the existing, inefficient transformers with Powerstar HV MAX systems increases the efficiency of the high voltage infrastructure, and a reduction in voltage produces significant reductions in energy consumption.

Consumption on the site was reduced by 10.2% annually. As well as offering far better efficiency than the ageing transformer fleet, significantly cutting down carbon emissions and costs.

Takeaway: Quorn Foods is benefitting from a reduction in carbon emissions by 365 tonnes, and an annual saving in electricity costs of £71,843.



2 Suntory Beverage & Food GB&I

Suntory Beverage and Food GB&I (SBF GB&I), the UK's third largest soft drinks maker, is accelerating its fight against climate change by targeting a 50% reduction in greenhouse gas emissions from direct operations and a 30% decrease across its value chain by 2030.

SBF GB&I has already committed to science-based targets to achieve reductions in emissions by 2030 and since 2015 has reduced its carbon footprint by 25% (ISO 14064).

Progress has been made by investing in a new energy and water efficient production line at its Coleford factory, continued investment in warehousing and operations efficiencies and using increasing amounts of recycled plastic (rPET) in its primary packaging.

In 2020, Ribena became the largest UK soft drink brand to use 100% recycled and 100% recyclable plastic bottles. This shift from using virgin plastic made from fossil fuels to rPET reduces CO₂ emissions by approximately 79% and builds towards SBF GB&I's 2030 ambition to move to fully sustainable packaging by 2030.

SBF GB&I's 100% sustainable plastic packaging target will play a crucial role in reducing its greenhouse gas emissions by eliminating plastic derived from fossil-fuels.

To do this, SBF GB&I is undergoing a major transformation project to optimise all its bottles for recycling, with the aim of

boosting the domestic availability of recycled material. Doing this will mean more bottles can be made back into bottles and remove the need for virgin plastic.

Ribena was the first of its brands to be overhauled and Lucozade will follow in 2021/2 with a design fit for bottle-to-bottle recycling.

To help consumers play their part in keeping bottles in circulation, SBF GB&I became founding members of Circularity Scotland – the administrator delivering Scotland's Deposit Return Scheme – in the hope of increasing collection rates to 90% and replicating the model throughout other parts of the UK.

Takeaway: SBF GB&I continues to promote energy conservation through its supply chain, is exploring further renewable energy options and is transitioning its fleet over to hybrid vehicles while trialling electric vehicles for its city-centre sales teams in Ireland.



Food and drink counterfeit and pirated goods steal boost from pandemic



The latest Intellectual Property Crime Threat Assessment, produced jointly between Europol and the European Union Intellectual Property Office (EUIPO), reveals that the distribution of counterfeit goods has been thriving during the Covid-19 pandemic. The health crisis presented new opportunities for trade in counterfeit and pirated products, and criminals have adjusted their business models to meet global demand.

The report, based on EU-wide data and Europol's operational information, confirms that imports of counterfeit and pirated goods reached €119 billion (\$131 billion) in 2019, representing 5.8 per cent of all goods entering the EU, according to the latest data from OECD and EUIPO.

Although the majority of counterfeits in Europe are produced outside the region, mainly in China and other parts of Asia, experts said manufacturing within the EU is a rising trend.

F&B focus

The report found production of illicit food and drink has become more pro-

fessional and sophisticated, with some counterfeiters covering the whole supply and distribution chain. Violations of protected geographical indications also continue to be widely reported, the researchers wrote.

In 2020, foodstuffs such as cookies, pasta, crisps and sweets were the second most commonly confiscated category of products at the EU's external border.

China and Turkey were near the top of non-EU countries of origin for counterfeit food and drink blocked at the EU's external border in 2019 and 2020. Other common non-EU nations of origin were Albania and Ukraine in 2019, and Jordan, Moldova and Panama in 2020.

Criminals counterfeit or manipulate foods or mislead consumers by altering labels, manufacturing processes, geographical origins, or by replacing products. Counterfeit food and drinks are often produced in settings with inadequate hygiene, using substandard or harmful ingredients, according to the report.

IPR infringements on geographical indications target a range of products, such as oil, condiments, chocolate, spices, alcohol, meat products, cheese and dairy and vegetables and fruit.

Counterfeit alcohol can be adulterated with artificial colours to make it look genuine. Refilling empty bottles is another common finding. Packaging materials for juices were one of the most seized fake goods at the EU's external border in 2020.

Use of digital tools

Europol's executive director, Catherine De Bolle, said law enforcement seizures indicate that the Covid-19 pandemic entrenched the criminals' reliance on the digital domain to source and distribute their illegal goods. Such goods are offered on online marketplaces, via live-streaming, videos and advertising on social media platforms, and instant messaging services.

Christian Archambeau, EUIPO executive director, said: "This threat assessment report casts new light on the scope, magnitude and trends of counterfeiting and piracy in the EU, and the damage it can cause to consumers' health and to legitimate businesses, particularly during these challenging times of the Covid-19 pandemic."

Strategy

Businesses need to develop and implement an effective anti-counterfeiting strategy, experts at the law firm Pinsent Masons have said in light of the report's findings.

"The costs to brands associated with counterfeiting cannot be underestimated," said brand protection expert Gill Dennis. "Not only is there a direct impact on the bottom line from lost sales, but there can be genuine health and safety concerns for consumers and a real risk of lasting brand reputational damage. For these reasons, businesses cannot afford to simply ignore this issue."

Online brand protection specialist Tom Nener said businesses need to monitor the key global online marketplaces – 'takedowns' are a straightforward but effective method of cutting off the key route to market for these products.

Brand owners can take action against third parties who misuse their portfolio of intellectual property rights, including registered designs and registered trade marks.

"Businesses need to develop and implement an effective anti-counterfeiting strategy," Nener said. "There are a number of very effective anti-counterfeiting tactics available to businesses that can form part of a bespoke enforcement approach."

Pinsent Masons has developed a brand protection platform, Alteria, which allows businesses to monitor a brand online and enables takedown requests to be made to global online marketplaces and social media platforms at the click of a button. [FTI](#)

Russian food oligarchs sanctioned over Ukraine invasion

The European Union (EU) has sanctioned two leaders of the Russian food and drink industry, freezing any EU-held assets and imposing travel bans into and from member states, following the invasion of Ukraine by Russia's military, which the UN says has killed a minimum of 549 civilians. One target is Alexander Vinokurov, a director of Magnit, Russia's largest food retailer, who the EU has claimed is within the inner circle of President Vladimir Putin, being married to the daughter of Sergey Lavrov, Russia's foreign minister. The second top food executive sanctioned is Vadim Moshkovich, chairman of the Rusagro Group, a major producer of pork, fats and sugar, who has met with Putin since the invasion was launched to discuss coping with the battery of financial and trade sanctions imposed by the EU, the US, UK, Japan and others since the invasion began on February 24.



Dependency on agricultural products cut

Looking ahead, EU heads of government meeting in Versailles, France on March 11 said the EU would reduce its dependency on certain imported agricultural products and inputs, especially by boosting EU production of plant-based proteins. Government leaders told the European Commission to develop policies limiting rising food prices and the risk to global food security prompted by the invasion of Ukraine, a major grain exporter, and resulting sanctions on Russia, which sold \$30.7 billion worth of agricultural goods overseas in 2021.



EU fights Egypt in courts over import criteria

The EU has launched World Trade Organisation (WTO) disputes proceedings against Egypt claiming that dairy products (not infant formula), other oils and fats in packs of 5kg or less, preserved or dried fruits, chocolate and other cocoa exports are impeded through overly tough import licensing requirements. Egypt requires foreign factories or trademark owners to submit legal entity certificates, lists of products produced and exported, trademark and quality control certificates submitted by a legal agent in Egypt in Arabic and English, approved by the exporting country's chamber of commerce and/or consulate.

Sanctions extend to Russian allies

The EU has also banned the import of all goods from the breakaway republics of Donetsk and Luhansk, in eastern Ukraine, whose independence was recognised by Russia ahead of the invasion. It has also banned exports from Russia's ally Belarus of steel and wood products, including packaging. And it has extended sanctions against the All-Russia national scientific research institute for wine growing and wine making (Magarach) and the Crimea-based joint-stock company 'Sparkling wine plant Novy Svet'.



Banana exporters wait on ruling

Major banana exporters to the EU, such as Del Monte, Chiquita, and Dole Foods, are concerned that their access to EU markets may be impeded if the European Commission tightens residue limits of the pesticide mancozeb, which is used on their Latin American plantations. Brussels is expected to make a ruling in April, says newswire Politico.

Ukraine introduces licensing

The Ukraine's government introduced export licensing of foodstuffs including wheat, corn, poultry meat products and sunflower oil on March 7.

Food security experts meet to discuss invasion

A new expert group on European food security crisis preparedness and response mechanisms (EFSCM), already established by the EU, met for the first time ahead of schedule – on March 9 – because of the Ukraine invasion and its potential impact of food supply chains.



New commercial team at Moy Park



Left: Kat Reid Right: Chloe Burgess

Moy Park has made two new appointments to its commercial brand team, which will support the growth and development of the Moy Park brand across Northern Ireland and the Republic of Ireland/Ireland.

The meat processor has appointed Kat Reid as commercial manager Ireland who will be responsible for managing Moy Park's key customer relation-

ships, driving growth, and pursuing new business opportunities for the Moy Park brand across its customer base in Northern Ireland and the Republic of Ireland/Ireland. Reid has worked in food manufacturing for the past 15 years, within the poultry and red meat sectors, and she has extensive experience of working with multiple retailers in customer supply chain management roles.

Chloe Burgess joins the team as customer marketing executive and will be responsible for the analysis of the poultry market across Northern Ireland and the Republic of Ireland/Ireland. Burgess will focus on identifying business growth opportunities and innovation in new product development, as well as studying consumer data and shopper trends in the current market landscape. She has worked in a number of local food companies including Dale Farm, PRM Ltd and Glashy Farm Ice Cream, where she developed her passion for Northern Ireland's agri-food industry.

New CEO heads Eurogerm

Eurogerm has announced the appointment of Jean-François Honoré as president of the group. After more than 25 years of an international career within several major groups, Honoré – a trained engineer – has a multidisciplinary background that combines a deep knowledge of ingredients and formulation, a commercial expertise and technological knowledge. He has led companies in Asia, Europe, and the United States on several nutrition verticals.



Anglia Maltings hires new boss

Former finance director of US-based Country Malt Group, Stuart Sands is the new chief executive at Anglia Maltings (Holdings), a group which comprises Crisp Malt, EDME and Micronized Food Products. As a chartered accountant with an MBA and extensive leadership skills, Sands is set to bring strategic skills, energy and experience to the position. The company was previously led and developed by David Thompson, who died last July. Sands said he is 'up for the challenge' of taking an already-strong customer support to new levels as well as drive forward sustainability goals and the innovation work the ingredients the business produces.



Higgidy appoints first sustainability manager

Higgidy has appointed its first sustainability manager in Megan Welch, formerly the environmental engagement



and behaviour change manager at Kent County Council. She will be in charge of devising and leading the brand's sustainability strategy. Welch has a background in sustainability having started her career as a sustainability specialist at Canon and sustainability executive at Virgin Atlantic.

Rachel Kelley, CEO at Higgidy said appointing Megan will allow the business to set ambitious targets when it comes to reducing its environmental impact. Higgidy's new strategy will be detailed in an impact report to be published later in the year.

Clasado appoints new head of B2B and corporate marketing

Clasado Biosciences has strengthened its commercial team with the appointment of Steven Riley to the position of head of B2B and corporate marketing. Bringing his extensive global experience in life sciences marketing to the business, Steven will spearhead the continued growth of Clasado and its proprietary prebiotic ingredient, Bimuno. The appointment marks the next significant step forward for Clasado as it continues to expand its global presence as a standalone bioscience brand, as well as that of Bimuno. The business puts a heavy



focus on learning and education surrounding the gut microbiome, with the goal of making better gut health simpler and more accessible.

Sustainability appointment at Macphie



As the company celebrates B Corp Month, Macphie welcomes its new sustainability manager Kirsty Allan to drive forward its environmental agenda. Allan has joined Macphie from energy, digital and industrial transformation specialists Bouygues Energies & Services where she's been working for the last four years. In this newly created position, she will oversee Macphie's growing environmental commitments and lead the company's efforts to achieve net zero carbon emissions ahead of government targets. Kirsty

Allan's arrival will help the business drive "sustainable, profitable growth" said chairman Alastair Macphie. "We have ambitious growth plans and it's vital that sustainability is built into everything we do. From new products to new processes, Kirsty will be responsible for making sure that any future transformations are sustainable."

Univar Solutions makes sustainable & natural products leadership appointment

Kelly Gilroy is the new vice president of sustainable & natural products at Univar Solutions, a global chemical and ingredient distributor. In her new role, Gilroy will be responsible for leading the further development and commercialisation of a full range of sustainable and natural ingredients across the entire Univar Solutions portfolio. This new approach will support customers seeking to infuse sustainable and natural ingredient practices and processes into their own product development. Additionally, she will work closely with Univar Solutions global supplier base in identifying markets and opportunities to launch new ingredients.



Eco Flexibles underpins growth plans

UK headquartered sustainable flexible packaging business, Eco Flexibles, has strengthened its senior team with the appointment of Lee Ralph as commercial & supply chain manager. The rapidly growing business, which is seeing significant commercial success in North America and Europe, said Ralph's appointment will galvanise the commercial team and enable the business to keep pace with surging demand for its lightweight recyclable packaging solutions.

Eco Flexibles is a sustainable packaging supplier comprising packaging industry members that believe sustainable flexible packaging has been made too complex and no longer in favour of the brand.



Dawn Allen appointed chief financial officer of Tate & Lyle

Tate & Lyle has announced the appointment of Dawn Allen to the position of chief financial officer, and to the board of Tate & Lyle, with effect from 16 May 2022. Dawn Allen joins Tate & Lyle from Mars, where she has been global CFO & VP, global transformation since 2020. Prior to that, she has held a number of senior financial roles in Europe and the US including Global Divisional CFO, Food, Drinks and Multisales and Regional CFO Wrigley Americas.



Innocent appoints European MD Nick Canney as new CEO



Nick Canney will be the new CEO of innocent drinks when current CEO, Douglas Lamont, steps away from the business to take on a new role in the Autumn. Canney joined innocent

as UK&I managing director in 2015 and has been innocent's European MD since 2019. Jennifer Mann, senior vice president and president of global ventures for The Coca-Cola Company, who owns innocent, said Canney has demonstrated not only his commercial and people leadership capabilities but also a commitment to the purpose, vision and values of the company over his time as MD. The move is seen as one that will provide "great continuity for the business as it enters its next phase of growth and looks to expand into new territories".

Griffco Foods appoints new general manager

Griffco, the strategic joint venture between Griffith foods, a global product development specialist and



IFFCO an international conglomerate based in the UAE with deep-rooted heritage and outstanding infrastructure in the region, is to be led by Richard Pattinson. Griffco is designed to build and protect customers' brands in the GCC (Gulf Cooperation Council), the Levant region, Egypt and Pakistan and to create innovative and sustainable food solutions in the B2B space. He brings over 20 years of experience in the food manufacturing industry and is a global senior sales expert in sweet and savoury food systems, speciality flour, culinary sauces, UHT and oils and fats. Pattinson – known for his practical solution-based sales approach – will spearhead the operational, innovation, and future growth of the recently launched Griffco foods.

Gavin Taylor joins ZERO2FIVE

Gavin Taylor has joined ZERO2FIVE Food Industry Centre. Based at Cardiff Metropolitan University, ZERO2FIVE offers help to eligible companies with waste reduction, process efficiency, new product development and compliance with food standards through the Welsh Government and EU-backed Project Helix. Taylor has nearly 30 years' experience in the industry, working across production operations. In his new role, he will lead process waste management services, including full process audits, waste minimisation interventions and identification and feasibility of by-product ingredients.



Poultry business recruits from within for MD's role

Soanes Poultry's board of directors has appointed former director of sales and marketing, Ben Lee (right) to succeed Nigel Upson on his retirement after a 10-year tenure. Lee, 32, joined the family business in 2008. He has worked in all areas of the business from production to sales and was appointed to the senior management team as head of sales and marketing in 2019 and to the main board as director of sales and marketing in 2021. Upson, who joined Soanes Poultry in 2012, was credited with returning the business to sustainable profit in 2014. He will remain with Soanes in a business support role until his official retirement in 2023. Lee assumes overall responsibility with immediate effect.



Silvery Tweed welcomes technician

Silvery Tweed has enhanced its NPD team with the appointment of Aaron Davidson. He joins as a product development technician to support the NPD manager in the preparation of new concepts, including simple blends of dry ingredients and seeds and new products for the company's cereal coating line. Davidson is also responsible for managing the shelf-life testing of new products and the packing up and dispatching of samples to clients. Davidson has experience working in professional kitchens as a chef and is well versed in crafting flavours, producing high-quality food and running an organised kitchen.

Elly Tomlins is chief people officer at Britvic

Elly Tomlins is chief people officer at Britvic after joining the company from Tate & Lyle. She has extensive experience across human resources in multiple industries, most recently as vice president of culture & people strategy and HR director of innovation & commercial development at Tate & Lyle. Prior to this, she held key human resources and people roles at Whitbread, and Thompson Reuters. In her role she will be responsible for driving Britvic's people and culture strategy globally.



Upcoming events

In-Person | Online | Hybrid

APRIL

ICC2022 – Future Challenges for Cereal Science and Technology

Date: 25-27 April

Location: Vienna, Austria

Web: lcc2022.meetinghand.com

Seafood Expo Global/Seafood Processing Global

Date: 26-28 April

Web: seafoodexpo.com/global

Location: Fira Barcelona Gran Via venue, Barcelona

Anuga FoodTec

Date: 26-29 April

Web: anugafoodtec.de

Location: Exhibition Centre Cologne

MAY

IPACK-IMA

Date: 03-06 May

Web: ipackima.com

Location: Fiera Milano RHO, Milan

Vitafoods Europe

Date: 10-12 May

Web: vitafoods.eu.com

Location: Palexpo, Geneva/Hybrid

IFFA 2022

Date: 14-19 May

Web: iffa.messefrankfurt.com

Location: Messe Frankfurt

JUNE

12th Annual European Food Sure Summit

Date: 14-15 June

Web: foodsureeurope.com

Location: Milan

Nutraceuticals Europe

Date: 15-16 June

Web: nutraceuticalseurope.com

Location: Barcelona International Convention Centre

JULY

Snackex

Date: 6-7 July

Web: snackex.com

Location: Hamburg Fair and Congress

Biofach 2022

Date: 26-29 July

Web: biofach.de

Location: Nürnberg, Germany

SEPTEMBER

Fish International

Date: 04-06 September

Web: fishinternational.de

Location: Messe Bremen

Anuga Horizon

Date: 06-08 September

Web: anuga-horizon.com

Location: Koelnmesse, Cologne/Hybrid

Drinktec

Date: 12-16 September

Web: drinktec.com

Location: Messe München

Future Food-Tech

Date: 22-23 September

Web: futurefoodtechlondon.com

Location: London, UK

Hip Pop Hooray



As snacks continue to be a big part of daily diets, people want nutritious foods with rich, complex flavours but made with wholesome, real food ingredients. Healthy snack maker and founder of nibnibs, Susan Everitt, talks to F&DT about the 'Not Too Naughty' disruptor brand of cookies that taste like regular cookies but has health benefits

Tell us a bit about your background and how you started out in your career – have you always worked in the food and drink industry?

Neither of us worked in food and drink before launching Hip Pop.

Kenny has always been an entrepreneur and I've had a few different roles across multiple industry sectors. Immediately prior to launching Hip Pop, I was UK director for Dolly Parton's Literacy charity. I got hooked on fermented foods when living in the US and then started to make them for my family before, eventually, setting up our own brewery. Now we have professionally trained brewers in the team.

Where did the idea for Hip Pop come from? Did you have a 'lightbulb moment'?

I love kombucha and introduced it to my co-founder, Kenny, to help manage his struggles with IBS. He also loved it too – particularly as

it made his stomach better – and from here it quickly turned into a passion which led us to explore the massive opportunity of functional gut health drinks that:

- Taste Good
- Do Good
- Look Good

Tell us about the brand's journey and how far it has come since it was launched in 2019?

We have had quite the journey since launching Hip Pop [then branded as Booch & Brine] in 2019. A pinnacle moment for us was in early 2020 when WeWork took a risk on us and agreed to stock our Kombucha on tap in all UK sites.

However, due to the pandemic we had three stalled rollouts in April 2020, October 2020 and July 2021 and it is only now that we are about to unveil our first Kombucha tap at multiple WeWork sites in London.

However, the fact that a big brand, like WeWork, believed in us has really helped us gain the traction we needed with other businesses, like Harrods, Amazon, Google, Booths, THG (The Hut Group), who now stock us or work with us on their wellness programs for their employees, customers, or members.

Last year, we also made the decision to rebrand from 'Booch and Brew' to Hip Pop after realising there was a big gap in the Gut Health focussed Functional Drinks category for a brand that produces a wide range of gut health drinks alongside kombucha that taste good, do good and look good. For this we needed a name that didn't pigeonhole us with just kombucha, like with Booch & Brew. As a result, Hip Pop was formed and Trademarked.

The evolution of our brand, together with our success with retailers and the launch of our own eCommerce site in early 2021, has enabled us to drive consistent growth where over the last 12 months we have more than doubled headcount to 12 and increased turnover by 100 per cent.

How has the pandemic affected your business over the last 18 months? If there were challenges, how did you overcome any hurdles?

When the pandemic started, we were completely wholesale with no direct to consumer and no eCommerce website. Like many businesses we had to start from scratch online.

It's now a huge part of our business so despite the initial challenge, it is now a blessing - having accelerated our online and D2C evolution, whilst enabling us to establish a growing and loyal customer base.

What do you believe makes Hip Pop unique?

We combine three important elements: all of our drinks have to taste good, do good and look good, which we believe is rare to find.

They taste good because we use professional brewers, and we taste test with BBC's Kate Goodman and her team of drinks experts. They do good because we add beneficial friendly bacteria to all our drinks and Hip Pop is one of the only drinks brands in the world to do this. And we may be biased but we think our bottles and cans look really cool!

What has been Hip Pop's biggest achievement to date?

Hip Pop is the first UK gut health drinks brand to penetrate the USA market. We have 100 and counting USA independent stockists and we only commenced our international growth strategy in January 2022, so watch this space.



Hip Pop has just released a CBD infused Kombucha range, what trends do you see shaping the future of CBD beverages, and what next for the CBD infused beverage market? CBD drinks and the CBD market in general is now subject to more regulation which is a good thing for consumers. What's next?


There are an increasing number of studies that are investigating CBD's benefits for gut health, therefore, we think there will be a shift towards drinks that contain a certain amount of CBD to actually make a positive difference, as opposed to a token amount for marketing purposes.

With Hip Pop CBD kombucha you get a double dose of goodness - CBD and kombucha in one. We add 20mg of CBD which is market leading and more than most other brands.

What can we expect from the Hip Pop brand moving forwards? Is there anything exciting in the pipeline?

We're about to launch on tap in WeWork, which is really exciting and will enable us to see draft kombucha start to grow and emulate the USA market.

In addition, we are expanding beyond kombucha and will be bringing out an Apple Cider Vinegar Soda range which is an exploding trend in the USA and is something our customers have also requested - but, unlike market competitors, we have taken it one step further by ensuring it passes our rigorous taste tests without adding sugar or sweeteners so it's all natural.

We are also including over 1 billion live cultures for the added gut health focus to add to the benefits of your daily dose of premium Apple Cider Vinegar. We plan to expand this range along with our kombucha into the US market and across Europe which we have already started. We also have another gut focussed drinks product in development and will be releasing details of this later in the year. 

Probiotic era

How do you balance risk and opportunity in microbiome-based innovation? Ankita Singal-Sareen, R&D strategy & innovation key account management, Sagentia Innovation explains



The global market for pre- and probiotic products continues to grow at pace, and the opportunity to personalise such products could unlock further growth for food and beverage companies – but what are the options, how are they best realised, and what risks are involved?

Personalised products that improve individual health and wellness show much promise. However, the gut microbiome is still an emerging field. There is no single definition of a 'healthy' gut microbiome or of an 'unbalanced' microbiome (dysbiosis). What's more, microbiome data is not an established biomarker. So, while the potential is great – and continues to grow – aligning microbiome-based food and beverage personalisation with robust scientific evidence is not straightforward.

Much of the scientific rigour stems from investigation of multiple microbiome-disease associations like coronary artery disease and inflammatory bowel disease. Another area of significant activity is the gut-brain axis. Some studies indicate a causal effect between gut microbiota, the brain and behaviour, giving rise to 'psychobiotics' which might offer mental health benefits. Postbiotics, para-probiotics and synbiotics are also attracting attention.

Evidencing causal links between diet, gut microbiome health, and wider health and well-being is complex, and it's just part of the equation. Developments must also walk a fine line between risk and reward in commercial, technical and regulatory matters.

Commercialising microbiome-based innovation

Commercial models for microbiome-based food and beverage personalisation require careful consideration. At present, a truly individualised approach is unlikely to be cost-effective at scale in most scenarios.

A potential starting point for commercialisation could involve consumer segmentation and stratification to underpin mass personalisation. This makes the benefits of personalisation accessible in an economically viable way. Propositions could be aimed at specific population cohorts or 'need states' based on factors like lifestyle, demographics and health conditions. For instance, mass-customised microbiome-based products and services geared towards pre-diabetics or the elderly could have great potential. Gut-brain axis as an innovation space is also fast evolving, as science joins the dots. Probiotic solutions which address depressive mood, anger and fatigue, and to improve sleep quality, are being commercialised (eg Bifivir – Probiotal, Italy).

Right now, global corporations are investing in propositions to drive better substantiation of evidence. Last year, Seres Therapeutics and Nestlé Health Science announced a co-commercialisation license agreement for SER-109, an oral investigational microbiome therapeutic for recurrent *C. difficile* infection.

In terms of business models, several companies provide microbiome analysis and advice based on the results. However, some go a step further to offer personalised supplements such as precision prebiotic and probiotic mixes. These include Viome, which acquired Habit from Campbell's Soup Company, and has a vision for a 'whole body' approach to human health.

Technical considerations

An important factor in microbiome-based personalisation is the manufacture and distribution of products.

Installed manufacturing footprints of most food and beverage companies are designed with scale and convenience in mind. However, mass production can conflict with a personalised approach. Difficulties vary between different environments and product types, so there is no single solution. Challenges associated with packaged foods (eg product stability) are quite different to those in the food service industry where products are prepared for immediate consumption. Further innovation is needed in the encapsulation of probiotics to increase viability and controlled release in the gut.

Another area bubbling under the surface is precision engineering of the microbiome (e.g. Eligo Biosciences). This technology is currently only relevant to the pharmaceutical industry, however it will be interesting to watch its evolution and impact on the increasingly blurring interface between functional foods and consumer healthcare.

Food and beverage companies aiming to lead microbiome-based innovation will need to devise innovative 'product plus service' models for health and wellbeing which offer diagnostics and longer-term assessment. The level of sophistication could vary greatly, ranging from simple online questionnaires and app-based regimes to provision of stool samples for detailed microbiota analysis. Either way, this will involve direct interfaces with consumers which need to be carefully constructed and managed, bringing additional technical complexity.

Regulatory challenges

When innovating microbiome-based products and services that may offer health and wellness benefits, upfront awareness of regulatory




challenges can de-risk investment. Questions should be raised about the survivability of microorganisms within final end-products, their physiological manifestations and their benefits. These affect the validity of health and marketing claims, which can be a powerful communication tool to appeal to consumers.

Currently within EU and UK markets there are no approved health claims in relation to use of probiotics. Approximately 90 submissions have been made to the European Food Safety Authority (EFSA). All were deemed non-authorised because the relationship between the substance and the health benefit is not substantially validated. Manufacturers ought to carefully consider this when submitting a dossier for pre-market approval.

On the other hand, marketing claims may be used with caution. These must be truthful, not ambiguous or misleading, and properly substantiated.

Lastly, with food and beverage manufacturers focused on creating microbiome-based products with a potentially therapeutic effect, it should be noted that products cannot carry claims such as 'cure', 'prevent' or 'treat'. Such products would be classified as medicines, and subject to medicine regulations.

As it stands, microbiome-based food and beverage innovation offers exciting possibilities for the future. However, it must contend with tight scientific and regulatory boundaries, as well as technical and commercial challenges. Alongside this, consumer demand presents risks as well as opportunities. Expectations are high, and may be out of kilter with the science. Nevertheless, companies tackling the difficult questions now will be well placed to deliver effective microbiome-based products that support individual health and wellness 

Shelf life and *kicking*



Tom Russell, managing director, The Food Incubator helps entrepreneurs and start-ups extend the shelf life of their products

After months of research, recipe trials and tweaking, you've successfully arrived at the ultimate recipe and packaging for your dream product. Congratulations.

But if the product has a poor shelf life and is unstable in terms of food safety criteria, no matter how great it tastes, your chances of commercial success are extremely low. Finding a solution to food safety which does not impact on taste, flavour and visual appeal is a major part of the jigsaw for any start-up.

Be aware of the time it takes to bring a product to market. Developing the product, the packaging, the brand identity, and marketing collateral is in itself a long and arduous journey, but don't underestimate the extensive period required to be able to demonstrate proof of a credible, validated preserving process backed up by accurate record keeping.

Focus on clean labels

Using artificial preservatives to extend shelf life is fast becoming a barrier to purchase for

consumers, foods with 'clean labels' are driving the market and there is no sign of any let up. Not only are consumers shunning synthetic additives, but the sustainability agenda is also becoming a significant factor influencing consumer buying habits. Thermal processing scores highly on both counts and accounts for a positive contribution to reducing the environmental impact of food production.

The taste experience process which leads to the creation of an innovative food or drink product is often the focus of attention for entrepreneurs but it's equally important to make decisions early in the proceedings regarding the anticipated distribution chain – will this be an ambient, chilled, or frozen product? It is also vital to recognise that any changes in the recipe, for example increasing the size of a vegetable chunk, has implications on the process used to enhance shelf life as this will impede the heat uptake during sterilisation or pasteurisation.

Additional benefits of thermal processing

Thermal processes not only extend the shelf life of finished products, they also offer a range of possibilities to shorten some of the internal procedures, for example they can be effectively applied to specific components of the end-product to aid the final result, such as softening meats or prior to inclusion in pies or sauces to reduce the overall cooking time. In addition, thermal processing has a strong role to play in 'work in progress (WIP)' shelf life extension for low to high care processes, for example in situations where a sauce or mayonnaise may move from a low care area to a high care area during the final assembly stage.

Choose the right processing partner

The application of heat to food which is intrinsic to thermal processing renders it incapable of delivering a raw product or one that is totally unchanged. However, the skill to this process lies in minimising the change and selecting the right process and partners to work with to optimise the organoleptic qualities of the product while delivering the optimum shelf life.

The rising numbers of food scares and recalls means that auditors are increasingly looking to home in on processing techniques so it is imperative to have robust systems in place and to be able to demonstrate that all relevant staff have undergone the requisite training, from operators who need to be simply au fait with the basics, right up to technical managers and NPD specialists who will need to be able to communicate the science behind the Fo values. The Fo value is the number of minutes required to kill a




Lyco cooler

known population of microorganisms in a given food under specified conditions and is therefore a benchmark for sterilisation time, so those with food safety responsibilities need to know how to maintain calibration and quality assurance, using validated processes even when recipes change and evolve.

Training and understanding the thermal process at the outset will ensure ongoing food safety, product integrity and nutritional content remains a priority, leading to an untarnished recipe for success.

Get this wrong and the consequences can be very expensive – both in terms of time, money, and reputation...

Get it right and you are well on your way to launching a great food business. 

Problem waste learning



Marina Billinger, founder of Leroma, works with specialists to build and expand a raw material database

How to prevent food waste at the beginning of the value chain

More than 1.6 billion tons of food are wasted every year. 40 per cent of the waste occurs at the beginning of the value chain. This causes economic losses of \$660 billion (€605bn) in the food industry. This is why Leroma came up with a solution in order to help and solve this problem.

What is Leroma?

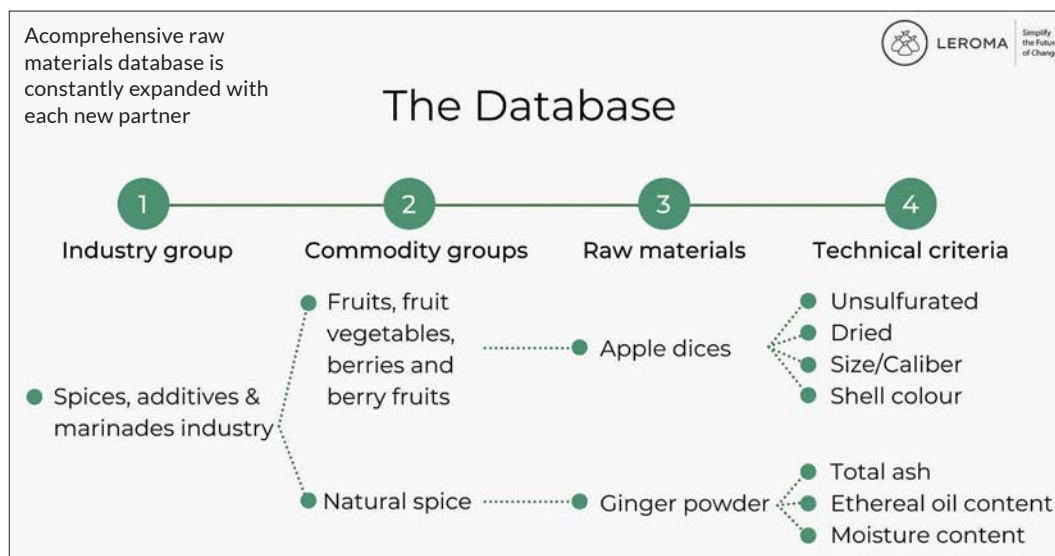
Leroma stands for food raw materials market. The company comes from the food technology domain and provides its customers with a digital B2B platform for food raw materials. Marina Billinger, the founder of the company, worked in the food industry for several years and came to the realisation that the procurement of raw materials usually takes several weeks. This is because food producers spend a long time looking for suitable raw materials, while suppliers are searching for buyers. Leroma connects both parties via the digital platform and makes the procurement process more efficient and transparent. The start-up was founded in 2019 and the platform has already gone online with its raw material search in 2020.

Currently, Leroma operates with two business models: the Commodity Search and the Surplus Exchange. Through the Commodity Search, producers can list their products and add certificates and documents. Food producers can search for the desired products. The search is facilitated by product-specific filters, which are Leroma's unique selling point. Additionally, Leroma offers the Surplus Exchange, which is intended to make a major contribution to combating the waste of resources. Through the Surplus Exchange, suppliers can sell their excess materials, residual items and surpluses on the market. Customers can list occasional surpluses that often result from miscalculations and sell them at a lower price. Thus, at this point the raw materials do not leave the value chain and are disposed of, but rather they are being reused in the same or neighbouring industries.

Leroma's work with food technologists

While developing a platform such as Leroma, it is crucial to cooperate closely with food technologists. That is why the founder, Marina Billinger, has cooperated with these specialists since the beginning in order to build and expand the raw material database. This collaboration helps to cover various filters and criteria for each raw material, as well as the work being done to expand the expertise for raw material transfer.

Food waste occurs at the beginning of the value chain and leads to billions of lost Euros in the food industry



Simplification of raw material purchasing

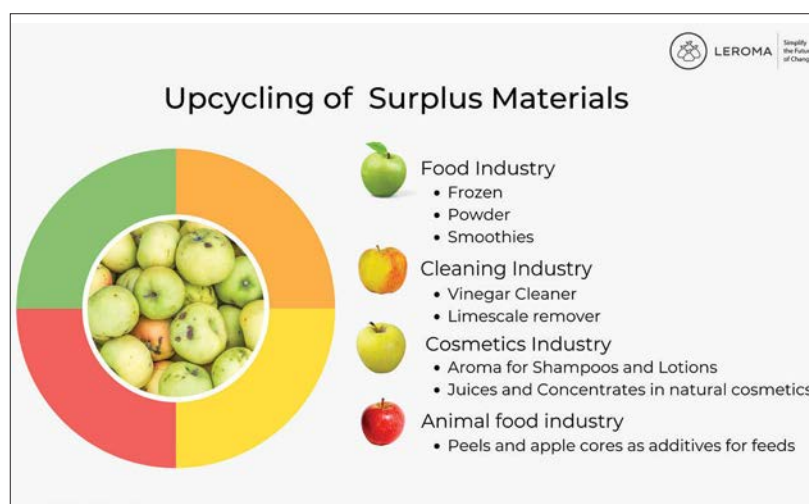
Food technologists are especially needed while developing the database structure. Leroma does have one database for both business models, however is more prominent in the Commodity Search and helps clients to find or sell their raw materials as fast and as efficiently as possible. Most of the platform's potential customers are currently looking for raw materials manually and offline. This is not only very time consuming but also inefficient. The offline system does not allow the buyers to specifically filter the product that they need, and therefore end up with numerous results that do not fit in for the criteria they need.

Leroma is currently operating in 15 industries that can be divided into 96 commodity groups. These commodity groups include for example oils, flavours, fours, as well as alcohol. The food commodities are further divided into raw materials. The technical criteria in the food industry specifically describe and categorise the raw materials based on their further specifications. These criteria are then used as filters that help the clients find exactly the product that the users are looking for. However, in the food industry it is very complicated to correctly class the technical terms. In this department, the food technologists play a significant role.

Use of raw materials in other industries

As mentioned, Leroma further operates with its Surplus Exchange model. Here, it is very important to focus on the upcycling of the existing surplus materials. In order to do so correctly and efficiently, the food technologists help the company

to come up with all of the possible opportunities in which the product can be upcycled in order to be used as effectively as possible.



An example of upcycling can be shown on apples. Apples do not have to only be resold to a buyer with the intention of them staying in the same form, but can be transformed and used in many other industries. Apart from keeping them in the food industry in many forms, such as powders, apples can be used also in the cleaning, cosmetics and animal food industry. In the cosmetics industry, for example, apples can be widely used in natural cosmetics, as well as an aroma for shampoos and lotions.

The collaboration of Leroma with the food experts enables the platform to be unique. This is due to the fact that both the knowledge and the technologies that support it are very highly and thoroughly developed in order to fit the needs of the buyers and sellers on the raw food materials market.

Surplus materials can be transformed and used for many industries

Reducing energy in food processing

Marek Lukaszczyk, European and Middle East marketing manager at WEG, explains why, to achieve energy efficiency in food processing, efficient equipment is key



Super premium energy efficiency motors offer users significant reductions in energy

Efforts to reduce consumption in food plants have obvious advantages, including a reduction in energy cost, leading to higher profit. However, there are also legal requirements for improving energy efficiency in industrial settings — and rules related to electric motor efficiency are prominent.

Motors for food processing applications

According to analysis by the International Energy Agency, electric motors account for around two thirds of total industrial power consumption and 45 per cent of the world's total power consumption. It is no surprise then, that improving efficiency of this equipment can reap significant productivity gains.

At WEG, our experience is that plant managers in food processing do not always prioritise energy efficiency when specifying a motor. Saving energy and saving costs should be a major part of a plant managers decision making process and with new legislation, it will be. As the world puts a greater onus on improving energy use in industry, new legislation means that energy efficient equipment is becoming a

regulatory and legal requirement — and motors for food processing are no exception.

Changes to motor legislation

From July 1, 2021, the rules tightened with the introduction of European regulation 2019/1781, a new regulation specific to energy efficiency of electric motors, and variable speed drives (VSDs).

The new regulations replace the regulation EC 640/2009 and have the potential to reap huge improvements in energy consumption for motor use. At the centre of the regulation is the EU MEPS (European Minimum Energy Performance Standard). This indicates how energy efficient a motor is, with ratings from IE1 through to IE4, with IE1 being the least efficient, and future ratings of IE5 and IE6 being discussed.


VSD and hazardous area motors

For food processors that use VSDs to manage the speed of equipment such as filling equipment and conveyors, awareness of this change is essential.

Similarly, ATEX hazardous area motors are also included in this regulation for the first time. These motors, designed specifically for use in potentially explosive atmospheres, such as flour mills, are now required to adhere to the same energy efficiency standards as safe area electric motors.

The regulation is valid for new motors and VSDs placed on the market from 1 July 2021. Replacement motors, as substitutes for identical motors integrated in products placed on the market until July 1, 2022 — and are specifically marketed for this purpose — do not have to meet the requirements of the new regulation now and have an extended time to keep being installed.

Under the new regulation, smaller induction motors between 120W-750W and larger motors between 375kW-1000kW will also be included. Three phase eight pole motors, single-phase motors and Ex eb motors will also fall under these requirements for the first time.

For food processors, the new eco-design rules will impact those responsible for sourcing motors for use in their facilities. Sustainability is a core objective for the food processing industry and while forming a circular economy for wasted ingredients — such as reusing broken KitKats — is beneficial, tackling the biggest culprits of energy consumption should be key. 

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Plant-based meat is receiving more attention as producers have developed techniques resulting in mimicking the taste, texture and appearance of meat



R&D teams can transform the food system by turning plants into meat



Lead from the front

The global demand for plant-based food & beverage products has increased significantly in recent years and, given the category's eco credentials, meeting the demands of sustainability-conscious consumers is critical. Here, Morten Aae Olander, market director at consultancy NIRAS, explains the importance of placing sustainability at the heart of plant-based food and drink manufacturing projects

While sustainability is often a box-ticking exercise in the boardrooms of food and drink manufacturers, for producers of plant-based products, which are commonly developed to solve an environmental challenge, that is simply not an option.

For these manufacturers, sustainability is typically the central purpose of their product rather than a marketing ploy designed to emphasise the CSR attributes of their brand. However, while all manufacturers are now required to place sustainability at the heart of their operations, for plant-based producers the stakes are even higher. If a product, designed to reduce our impact on the environment, is found to have unsustainable production methods, the knock-on impact to the brand's reputation could be severe.

Given the breakneck speed of developments in plant-based food and drink manufacturing, we have seen a huge amount of new and innovative products enter the market in recent years. Because of the impact of meat production on the environment, plant-based proteins have received a significant amount of attention, with

brands such as THIS leading the way in developing products which mimic the taste, texture and appearance of meat.

Scaling production

A huge range of exciting plant-based proteins are currently being developed around the world, such as a grass-based protein currently used as animal feed, replacing the need to transport soy proteins across the world, with the goal to develop a plant-based alternative for human consumption.

This sort of development highlights the huge technical challenges in creating plant-based proteins. As well as the fragment of the plant manufacturers are interested in, there is also a huge amount of other material which could be mixed with the target fragment. Any failures at this stage could disturb the organoleptic properties of the ingredient.

Beyond Meat and Impossible Foods are two brands which have overcome these challenges to become household names but, as more techniques and tech solutions are developed to create proteins from plants, many more innovators will be facing the similar challenge of scaling



The Impossible Burger handles, smells, cooks and tastes like ground beef from cows – but is made entirely from plants



Impossible Foods' production facility can make at least 1 million pounds of meat per month



Impossible Foods eyed meat eaters in its first national ad push in the USA

production to capture the potentially huge value of their new product.

Establishing a business case, which places sustainability at the heart of production is the critical first step to create a viable product. While experimental and small-batch manufacturing may have developed a credible plant-based protein, manufacturers need to consider the cost of sustainable and future-proofed production, and whether the potential value of the product is enough to build a business plan.

If the resulting product is only suitable for animal feed, the value will remain low. Developing a plant-based alternative fit for human consumption will increase its value dramatically.

With the potential for many new plant-based products to emerge, huge challenges remain with regards to scale. Using more traditional ingredients, a supply chain will be in place. If the base ingredients of the product are from crops, then this is already done on an industrial scale, but developing new products from less common base ingredients means that a supply chain has to be developed.

This is the scale-up challenge most sustainable plant-based products struggle with. It may be easy to achieve the testing and clever thinking and pilot scale can produce tonnes of products, but the key roadblock is often having to scale production to dozens or hundreds of tonnes of product. Without access to semi-industrial production, it is very difficult to deliver scale.

A further obstacle to sustainable plant-based food and drink manufacture is the new side stream of waste from new products. While a plant-based protein could have a significant positive impact on the environment by reducing the reliance on animal farming, its sustainability could be compromised if it is left with a huge amount of waste.

Licence to operate

Over the last few years, plant-based products have shifted from being a niche category in standalone sections in the supermarket, to increasingly mainstream alternatives to meat or dairy. With younger generations ever-more eco-conscious, plant-based manufacturers cannot rely on their inherent sustainability credentials to attract consumers. As plant-based continues to establish itself, purchasing decisions will become more focused on the sustainable production of products.

In the plant-based sector, sustainable factories cannot be seen as a USP or nice to have. Across all food and drink manufacturers, sustainability is increasingly becoming a licence to operate and, although plant-based brands have an inherent head start, they must continue to lead from the front to keep up with ever-changing consumer demands. [\[71\]](#)



Morten Aae Olander

Flavour of success



The Berry Company is preparing a market shake up. *Food & Drink Technology* finds out more about the recipe and ingredients of this successful blend

Khaled El-Yafi's ambition for The Berry Company is clear: to become the number one juice brand worldwide. The Berry Company's juices contain no added sugar or sweeteners. Suitable for those following a vegan diet, the blends are healthy, low in sugars and calories, and perfectly complement the world's finest spirits to deliver exotic and unique drinks and cocktails.

A fruitful future

To maintain a lead over new market entrants, The Berry Company constantly innovates to reinforce its USPs. Important among them is the ability to capture the zeitgeist of the time.

During the pandemic, for example, where certain aspects of the business slowed, it gave The Berry Company an opportunity to prioritise

actions to enhance its value and build strategic resilience.

"Part of this rewarding journey was speaking to our customers and partners across the globe and listening to their needs and wants," El-Yafi explains. "This helped us shape our new direction in terms of packaging, supply chain and, of course, NPD."

For The Berry Company developing profitable new products is its entire reason for being.

Innovation gives a business drive and without the next great idea to follow up on an initial success it can all too easily lose momentum, with an original product line drifting into obsolescence.

The belief in its ability to satisfy its aims is borne from the work it conducts with the supply chain, sourcing very exotic fruits, botanicals and ingredients from all over the world. This entirely

fruitful exercise makes the products distinctly unique by way of flavour and profile.

In efforts to embrace a discerning consumer, paying attention to health and well-being, The Berry Company's NPD includes new flavours such as: Apple, Orange, Pineapple, Green Tea & Juniper as well as its first limited edition product: Pink Lemonade and Rhubarb.

El-Yafi adds: "We are also bringing out a glass bottle range over the next few months. This has given us a perfect opportunity to ensure that our supply chain is more focused on traceability and will allow us to have full control and visibility of the entire production process. Together with our consultant we can really add value with regards to sustainability in every aspect of the chain where possible."

The secret to the brand's ongoing success is also its environmental awareness – from minimalist and iconic packaging and design to sustainability initiatives to monitor its impact.

The Berry Company has long-standing relationships with its plantation growers to produce the best possible ingredients for juice blends without the use of harmful chemicals.

"We source locally where possible and obtain our water from natural springs in Somerset, UK. Renewable energy and natural gases are used in production," El-Yafi reveals.

The Berry Company is currently partnering with One Tree Planted, an environmental non-profit charity that plants trees in countries around the world.

"We have also been interviewing sustainability consultants to help crystallise a more robust and international plan for the company," El-Yafi says of its net zero ambition. "Our aim is to become full carbon neutral within the next 12 months. Our brand being international gives us a great opportunity to spread the word about being fully sustainable and set an example of how a company should be run given the current climate."

As demand for fresh, minimally processed beverages grows, there is a huge, exciting opportunity for enhancing lives with great tasting products that are innovative, convenient, affordable, and deliver a healthy boost. Khaled El-Yafi's instincts have proved well founded: the ranges have done very well since launch. Full traceability and control over the supply chain as well as opening up new markets such as on trade and an increased International presence, are additional aims. Great taste and quality ingredients are key concerns for The Berry Company team. They take pride in not using any sweeteners or artificial ingredients to meet the call for exciting flavours within the ambient drinks category by offering consumers a choice of products that

suit their lifestyle. The love for exotic superberries remains at the heart of the brand and it will continue to bear fruit for the company and its founder. Watch this space. [\[31\]](#)



The Berry brief

Khaled El-Yafi founded The Berry Company in 2007, having been inspired by the publicity surrounding superfoods and their nutritious benefits. Khaled is passionate about health and fitness, so wanted to create a juice brand that would support him on his fitness journey.

The Berry Company's blueberry juice blend was their first product, which was rich in Vitamin C and K. This early success allowed Khaled to shape The Berry Company's long term strategy that eventually extended to over 40 products and sold to over 40 countries around the world.

Following the success of the wildly popular flavour, The Berry Company adventurously sourced more exotic juices and botanicals.

Acai Berry and Goji Berry blends followed. The Berry Company experimented with these blends by combining the Amazonian Acai with pressed Raspberry and the Tibetan Goji berry with Passionfruit juice. These hybrid blends became internationally popular and both shaped and accelerated the company's vision and mission to further develop and combine exotic flavours with botanicals from around the globe.

Over time, The Berry Company has added 25 SKUs to its portfolio, which now includes sparkling and naturally light products. It works with the very best flavour houses and plantation growers to develop blends with unique flavour notes, combining sweet, sour, and savoury.



What the **future** holds

British Bakels looks back at the business' landmark movements across its 75 year history as well as what might lie ahead for the next seven decades

Over the next decade, sustainability will be at the forefront of everything we do. Responsible sourcing, reducing food waste, health and plant-based solutions form integral parts of strategies for the future, aligning with increasing customer expectation. This dynamic analysis comes from Paul Morrow, chairman of British Bakels, which is celebrating its 75th anniversary with a report to mark this achievement. The company collaborated with food futurist, Lyndon Gee, on the report – Baking Past, Present and Future – looking back at the business' landmark movements in the food industry's history as well as looking at what might lie ahead for the next seven decades.



Key trends

Forward thinking is a key philosophy for British Bakels and the report identifies key trends that can impact the future of the baking industry. For example, novel ingredients, sustainability, technology, consumer behaviours and ethics are all forecast to influence the baking landscape.

It's hard to say exactly what a plant bakery may look like, but Paul Morrow believes we can certainly predict, with the knowledge we have and the trends we are seeing, that technology will play a huge part.

"Tech impacts every area of our lives and will continue to lead change across the baking landscape," he explains. "From bakery deliveries, to



Paul Morrow, chairman of British Bakels

production and development automation, digital solutions will drive innovation in our industry.”

How we source our energy will also change. Self-sufficient green energy with solar and wind powered production units will be rolled out in the next decade, and new power sources, such as hydrogen, will come online in the 2030s.

Novel ingredients will become everyday foods with huge growth forecast in algae and seaweed, owing to their versatility and health qualities. A ‘shroom boom’ is also expected, from psychoactive mushrooms being adopted in mental health, to their ability to be used to create edible frameworks for flavour and as edible packaging.

Gene editing will be accepted and help prolong growing seasons resulting in higher crop yields that could be susceptible to drought, flooding, or predators and infestation. This means fewer pesticides and less water and will help to stabilise costs and supply. Gene editing will also allow for unique varieties to suit specific specifications or gluten-free coeliac friendly grains.

To help combat climate change and enhance sustainability, staples such as grains will be genetically edited to survive on very little water and hybrid genetically edited plants will enable people to grow their own food. Sharing apps such as Olio or Too Good to Go will expand and regulation may make food waste illegal in the food production and retail sectors.

‘Change is inevitable’

Technological developments will continue to lead change in the baking sector. Basic and traditional skills will always be required, but bakers and Bakels will need to keep up with advances in technology, as they’ve and we’ve always done. “Bakers are already using equipment today that wasn’t around 20/30 years ago,” Morrow adds.

Bakels develop products to meet consumer and customer needs, manufacture them safely and efficiently, and offer technical application support to bakers who want to remain ahead of the curve, as well as those looking to produce traditional favourites.

“Change is inevitable,” notes Morrow, “but that’s not a negative. We’re always striving to be

efficient and deliver the best possible service for our customers, to meet the ever-changing habits of the final consumer. In order to do this, there needs to be an element of change.”

AI will play an integral role in industrial baking, using robots with 5,000 potential flavours, ingredients and aromas to create innovative combinations, Morrow stresses. It will also provide real time access to sales data, analysis of flavour combinations and buying habits for NPd.

Morrow adds: “Something that we’re already starting to see is the combination of food TV/tech, which will continue to grow. Food will become a multi-sensory experience from point of sale to home entertainment and online shopping – think “lickable” TV and smell-o-vision.”

Where consumer behaviour is concerned, ethics will become even more important. Seventy-seven per cent of consumers are already focused on the environmental impact of the products they buy, and this statistic will increase, particularly among Generation Z[i].

A celebration

Paul Morrow, chairman of British Bakels, comments: “We are thrilled to be celebrating 75 years of success. It’s hard to believe that food rationing and the ‘National Loaf’ were in place when we first set up British Bakels in 1947. Since then, there’s been a revolution in both technology and ingredients and today’s consumers enjoy a vast array of different breads and baked goods.”

Future end-products will be, of course, recognisable to consumers of today. From the last 75 years, there have been many products that remain the same, says Morrow. For example, Millionaires Caramel, which has several extensions to suit changing consumer preference from low sugar, to vegan. >>

Founded in 1947, British Bakels – part of the Bakels Group Worldwide – has enjoyed many successes over the past 75 years





Millionaires Caramel PF is ready to use for the production of caramel shortbread, thanks to its clean-cutting qualities, and other indulgent sweet lines

"Consumers are used to seeing traditional bakes on-shelf and in bakeries. Take the pandemic, for instance. The nation fell back in love with bread and sales boomed. There will always be a place for bakery staples, but there's room for innovation and that's what makes this industry so brilliant.


"We're already seeing the likes of cronuts growing in popularity, and adopting international bakery products, as well as new flavour combinations, but the way people consume food is changing too, forcing bakers to reconsider formats. Bakels continues to innovate, not just with ingredients but also packaging and bespoke solutions, such as ingredient kitting, which reduces waste and promotes consistency."

Future proofing

When British Bakels first launched in 1947, we had rationing and the 'national loaf'! There's been a revolution in both technology and ingredients, and today's consumers enjoy an array of different breads and baked goods. Looking ahead to the next 75 years, developments in technology will continue, alongside the combination of trends, ingredients and flavours. While these will be different to years gone by, it is the same principle.

"We work with our customers, so they can stay ahead of the curve, sharing our innovative knowledge on the latest developments in the baking industry. Our company ethos is built on providing solutions for our customers and this will always remain," Morrow says of the business's modus operandi.

"While trends and ingredients will certainly evolve in the future, the core business model will not change. Bakels develops products to meet consumer and customer needs, manufacture them safely and efficiently, and offer technical application support to foster long term sustainable relationships. That's what British Bakels has done for the past 75 years and will continue to do for the next."

The ethos is very entrepreneurial in that British Bakels is constantly finding new ways to support its customers. 

British Bakels

Founded on 25 February 1947, British Bakels is part of the Bakels Group Worldwide, which produces 2000 bakery products and employs 2750 people across the globe.

British Bakels has enjoyed many successes over the past 75 years. It supplies a variety of ingredients for both retail and food service, which includes enough to produce 2.36 billion burger buns each year, as well as 129 million Danish pastries and 115 million doughnuts.

Innovation and NPD are at the heart of British Bakels. Multiseed Bread Concentrate is a great example of this, which launched in 2004, and is the company's most successful product to date. Ingredients for bread loaves collectively contribute to the production of 276 million loaves of bread each year.

Country oven multiseed bread concentrate is a versatile 50/50 concentrate, providing both great taste and nutritional benefits

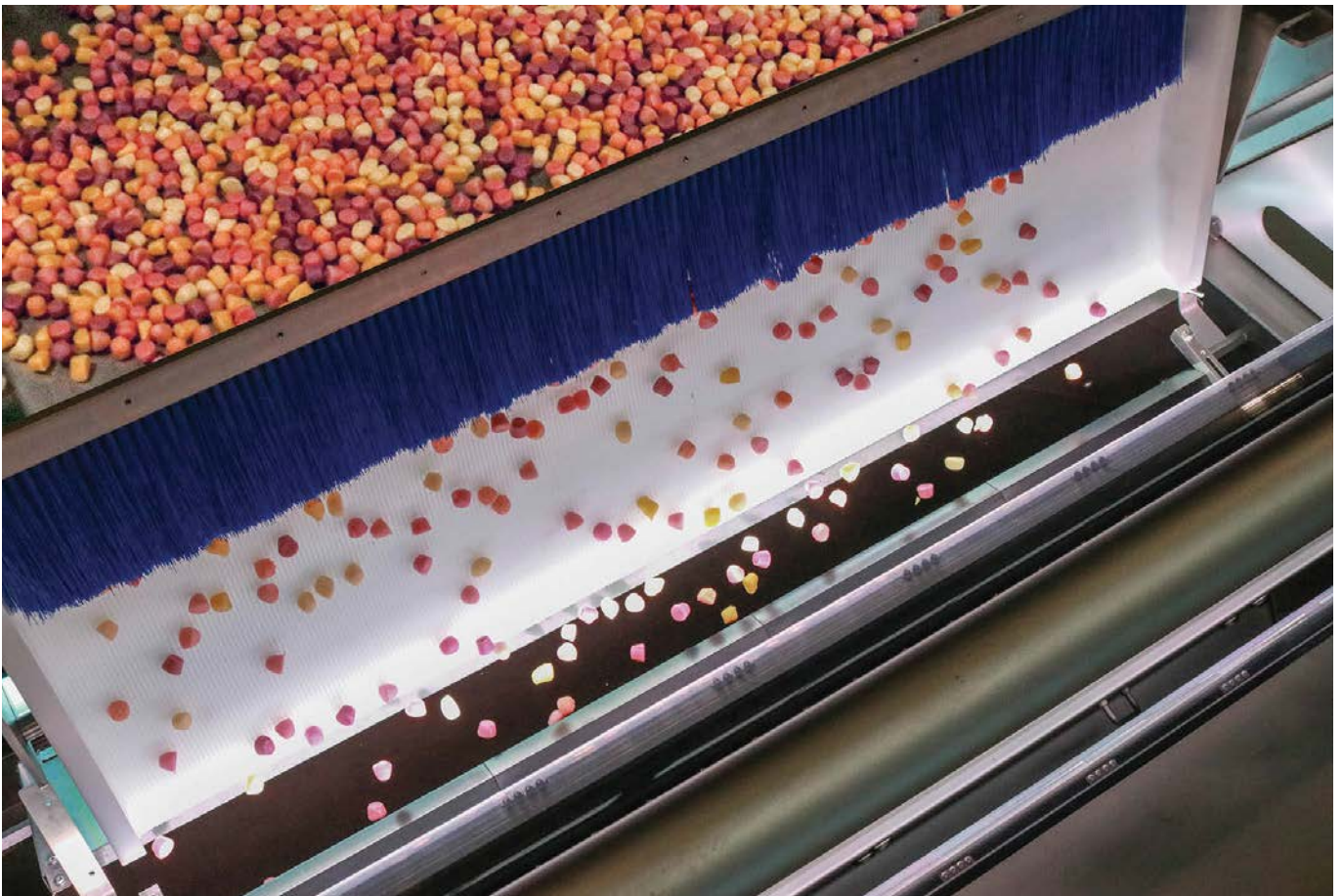


Sorting VIEW

New technology helps confectioners optimise product quality and ensure food safety while maximising yield, Marco Azzaretti, director of marketing at Key Technology tells *Food & Drink Technology*

To adapt to market demands for more diverse and quality sweets, the confectionery industry needs to adopt innovative technologies that help it meet the increasing expectations of consumers. Key Technology knows this well.

“The high-performance Veryx family of digital sorters are ideal for a wide variety of free flowing confectionery products. By detecting and removing more foreign material (FM) and targeted product defects with virtually no false rejects, Veryx helps confectioners optimise product >>



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quality and ensure food safety while maximising yield,” Marco Azzaretti, director of marketing at Key Technology tells *Food & Drink Technology* of the optical sorting technologies it offers the confectionery sector to achieve accuracy.

Superior sort accuracy is achieved with Veryx’s sensor configuration, which enables all-sided surface inspection, and a proprietary Pixel Fusion technology, which combines signals from multiple sensor types at the image pixel level to clearly identify even the most difficult-to-detect FM and defects.

“The effectiveness of the sorter infeed system contributes to sort accuracy by properly separating product for presentation to the inspection sensors,” Azzaretti notes. “Detection accuracy is complemented by Veryx’s high-res ejection system that targets objects identified for removal without inadvertently rejecting good product.”

Each Veryx sorter is tailored with the optimal sensor technology, lighting, ejection system, product handling and intelligent software to meet each customer’s specific requirements. Sorters can be designed to detect objects’ colour, size, shape and structural properties to find and remove all types of FM and product defects of interest, as defined by each processor. Chute-fed sorters inspect free flowing products such as hard candies, gummies and other candies that can be handled in bulk. Belt-fed sorters are available for handling stickier confectionary products and products of larger dimensions. The chute- and belt-fed Veryx sorters come in different widths to handle a wide range of production throughputs.

Digital to the fore

The uptake of digitalisation technologies across society is largely a result of continuing advances in miniaturisation, increased processing power and falling costs. Confectionery production is no exception, and it is also benefiting from improving digital technologies. At every stage, companies need help to increase efficiency, reduce the labour and be more sustainable. Sorters support sustainability by reducing false rejects to increase process yield and minimise food waste on the line. In addition, modern sorters can help improve sustainability by operating as an IIoT-connected ‘information center’ that collects and interprets big data to further benefit production efficiencies.

Azzaretti adds: “Equipping Veryx with Key Discovery information analytics software enables food manufacturers to identify actionable opportunities to enhance their operations from receiving to packaging, improving product quality and sustainability while reducing downtime.”

Leveraging Key Discovery software, Veryx sorters can also collect, analyse and share data about the sort process and every object flowing


“ The effectiveness of the sorter infeed system contributes to sort accuracy by properly separating product for presentation to the inspection sensors, Marco Azzaretti, Key Technology, marketing director ”

through the sorter to reveal patterns and trends that improve sorting performance and help control upstream and downstream processes. Key Discovery leverages data from the sorter beyond what is required to perform the sort function, and it turns that data into knowledge that can be harnessed to track and report on the quality of incoming product by shipment and/or supplier, maximise raw product utilisation and fine-tune line sorting to achieve higher operational efficiencies.

Enhance operations

There are almost as many examples of how data from a sorter can be used to improve operations as there are food processors, says Azzaretti. When a sorter is installed at the front of the line, it can be used to analyse the quality of incoming product by lot or by supplier to enable a payment scheme that rewards higher quality.

A sorter located after a transformational process can collect data to control the upstream process. All sorters regardless of their place on the line can offer predictive analysis, issuing a smart alarm if certain conditions begin trending in a problematic direction. Key Discovery can also perform quality control measurements and reporting in-line, eliminating the need for time-consuming tests to be conducted on small samples of the product population off of the production line.

By leveraging Pixel Fusion inspection to recognise a one-of-a-kind ‘signature’ for each type of substance, a sorter can identify specific objects-of-interest such as glass and alert operators to critical FM events using Key’s FMAAlert software. For processors that operate multiple sorters on different lines or production facilities, data can be compared to help managers optimise their complete process. 



Spotlight

on sorting efficiency

Modern sorting technologies achieve accuracy levels that outweigh manual sorters' capabilities

How sorting technologies make confectionery production safer and more efficient

Brand reputation is so important, yet in the confectionery business all it takes is one momentary slip in standards for this to be damaged and devalued. If just one batch of defective products should reach the end of the production line – or worse still, a foreign material potentially harmful to health – the commercial repercussions can be catastrophic. Which means that installing optical sorting machines on confectionery lines is crucial not only for product quality, but also to assure food safety.

Today's sorting technologies achieve an accuracy that manual sorting simply cannot. The optical sorting machines offered by industry-leader

Tomra Food can be relied upon to detect and eject foreign materials, cross-contamination, product clumping, and malformed products. And at the same time as looking over the production line like guardian angels, automated sorters also enhance product hygiene, solve labour-related challenges, increase throughput, maximise yield, and gather data that can unlock further improvements in line efficiency.

All of this matters more now than ever before because consumers' demands are changing. More people around the world are earning middle-class incomes and acquiring middle-class tastes. More are raising their expectations of food product quality. And fewer are prepared to tolerate product imperfections without complaining about them on social media platforms, where comments and photos can quickly reach and influence large audiences.

Today's confectionery market is also being changed by the need for sustainability. More people are now aware that it is crucial to reduce energy use and greenhouse gas emissions and

take better care of our planet's limited resources. Retailers and consumers want to see food manufacturers addressing these concerns by implementing sustainable business practices and taking active measures to minimise food waste.

For all of these reasons – and because confectionery ingredients can be costly – sorters must remove unwanted materials and imperfect products without also throwing away good product. That's why Tomra's sorters are designed, developed, and fine-tuned on-site to eject unwanted materials with minimal product loss. To minimise food waste and maximise yield, Tomra's machines achieve an exceptionally low good-in-bad reject ratio – and any good product ejected from the line can be recuperated when rejected materials are double-checked by running them through a sorter for a second time.

Sorting capabilities

Tomra's sorting technologies can inspect materials flowing down a confectionery production line according to their color, shape, and product characteristics. Four sorters are particularly well-suited to confectionery applications: the Genius and its successor, the Tomra 5B, both belt machines, and the Blizzard and Nimbus free-fall machines. Belt machines are generally most suitable for distinguishing the shapes of objects on the line and for hard candies that might be too fragile to land from a free-fall. Free-fall machines, which scan and separate objects in flight, are better suited to looking for discolorations. Both types of machines can be located on the line before or after the product is oiled, depending on the factory layout. Even though oiling can make the product sticky and sorting trickier, Tomra's machines nevertheless perform with unrivaled effectiveness.

The machine best suited to smaller confectionery production facilities, because of its entry-level price and small footprint, is the Blizzard. This free-fall sorter does its detection work with pulsed LEDs and a combination of cameras, with a lighting system that needs very little calibration or maintenance. The LED's different wavelengths detect foreign material, misshapen product, and discoloured product.

The Genius belt sorter also employs high-resolution cameras but combines these with advanced laser technologies. The Genius' successor, the Tomra 5B, employs on-belt 360-degree-surround cameras, a laser, and off-belt cameras. Capable of distinguishing the colour, structure, and shape of objects on the line, these belt machines detect cross-contamination, starch, and foreign materials, as well as identifying clumping and misshapen products. These machines are particularly well-suited to the North American market, where



Sorters must remove unwanted materials and imperfections



Sorters can inspect products according to colour, surface or structure

confectionery factories tend to focus on a single product and require foreign object detection to be supplemented by challenging shape analysis.

The Nimbus free-fall machine stands out for its capability to sort different products – such as sugar-free, with-sugar, and multivitamin sweets – with a variety of programs and applications on the same platform. This machine inspects product with specific laser technologies and combinations, and sorts according to colour, surface structure, and outline, with the ability to detect starch, foreign materials, and cross contamination. The Nimbus is in demand in European markets, where factories produce a variety of confectioneries and need to guarantee their customers a product free of cross-contamination. >>



The power to enhance business decisions

All of Tomra's sorting platforms are connectable to Tomra Insight, a web-based data platform that gathers sorting data in near real-time and stores this securely in the cloud. Live data can be reacted to immediately (and remotely) to optimise machine settings; historical data can be processed into actionable information to unlock improvements in machine performance.

The extent of these improvements varies according to the type of food product being processed, but the potential is huge. Downtime can be reduced by monitoring machine health, supporting the management of predictive and condition-based maintenance, and preventing unscheduled machine shutdowns. Throughput can be maximised by evaluating throughput variations to optimise sorting equipment. Operating costs can be reduced by identifying gaps in production and analysing root causes. And sorting to target quality can be enhanced by having accurate material-composition data. Such data analysis will become increasingly valuable as we



Sorters employ high resolution cameras and laser technology


move into a digitised future, with the power to transform sorting from an operational process into a strategic management tool.

Solving labour-related challenges

In addition to taking care of food safety and product quality, sorting machines also help solve the challenges traditionally associated with employing manual sorters – an effective pill for headaches caused by labour scarcity, cost, variable effectiveness, and absenteeism. And whereas manual sorting is unavoidably subjective, imperfect, and more vulnerable to error when labourers are tired or bored, automated sorters can work for hour after hour with superior accuracy, consistent standards, and unflagging efficiency.

What's more, the Covid-19 pandemic has heightened awareness of how greater automation reduces the health risks inherent when people have to work closely together. The more production steps the automated system takes care of, and the less manual intervention there is, the smaller the contamination risk. Extensive and reliable process automation ensures that the end-product is hygienic.

The pandemic's logistical complications – travel limitations and social distancing – have also highlighted the value of Tomra's ability to complement on-the-ground support with remote assistance. With the recently launched smartphone app Tomra Visual Assist, Tomra field service engineers and customers can work closely together even when they are thousands of miles apart. The engineer can provide detailed advice just as if standing right in front of the customer's machine, and both the engineer and the customer can share documents or annotate images to clarify and explain directions.

Another initiative proving helpful during these unusual times is Tomra's Online Demonstration Room. This makes it possible for confectionery producers to test-run Tomra's sorting machines, using their own infeed materials, even when they are unable to visit a Tomra Test and Demonstration Center in person. Tests are shown via a live video link, with the customer encouraged to ask questions, make requests, and direct one of the cameras showing the proceedings. After the test's conclusion, observers are provided with a report which quantifies results precisely and in detail. This means that, despite travel restrictions, confectionery businesses can be certain of a machine's capabilities before deciding whether to invest in the technology. An investment that pays back in many ways, not least in protecting that most valuable business asset, brand reputation. 



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Corbion
Keep creating

Beefing up the alt meat market



It plans to continue its focus on developing animal meat successors that are better for the planet, people, and animals.

"We will develop up to 10 new innovations in 2022. Our proprietary 100 per cent olive oil fat analog will be at the core of all of our new products while maintaining our commitment to clean labels and high nutritional profiles," Mark Coloma, CEO of Heura Foods tells *Food & Drink Technology*.

Alt meat isn't going to stay alt for long. *Food & Drink Technology* spoke to alt meat innovator Heura to see what Europe's vegan leader is serving up to get a taste of the market

Consumers are increasingly aware of alternative meat. What makes it of particular interest is its potential to go mainstream by catering to everyone, not just vegetarians, as diets become more flexitarian.

One company researching and developing improvements in nutrition and taste while keeping prices competitive is Spanish brand Heura, the fastest-growing vegan meat company in Europe. Heura is committed to breaking new ground in tech innovation to unlock the potential of the plant-based movement and 'flip the food industry on its head'.

Marc Coloma and
Bernat Añaños
BBQing at
Heura House



Meat successors

Heura doesn't see itself as just creating animal meat alternatives, but animal meat successors. According to Coloma, the industry is only at the beginning of the plant-based protein transition, and is only limited to its creativity and thinking when it comes to combine the functionality of ingredients to offer the most nutrition.

"There are over 20,000 species of edible plants in the world yet fewer than 20 species now provide 90 per cent of our food (PFAF.org). It's our goal to go far beyond offering the nutritional value of traditional meat products," he explains.

"We pride ourselves on our clean label, which contains 40 per cent fewer ingredients than the market average. A great example is our Heura's Burger 2.0, the world's healthiest burger. It has 85 per cent less saturated fat than beef thanks to an innovative fat analog that transforms 100%

extra virgin olive oil into solid fat. Additionally, it has 11.3 per cent more protein per calorie than animal meat. Our products are created for people who love meat, but not its consequences.”

Mediterranean advantage

Heura’s goal is to ‘accelerate the protein transition’ by ‘providing healthy, clean, and accessible’ alternatives. As a company rooted in the Mediterranean culinary heritage, it looks to renew traditions and provide sustainable and healthy solutions.



Heura chicken nuggets

“We have created a community of Good Rebels that help us strive for better food successors. With their constant feedback, we are continuously investing in our R&D team to roll out new innovations and thus plant-based solutions,” Coloma notes.

“We did so with the launching of our pork line. In a blind tasting prior to its launch, inhabitants of a small town in the region of Castilla-La Mancha, Spain – most of them ranchers, chorizo producers, and slaughter regulars – fell in love with our plant-based chorizo’s texture and flavour. As we continue to launch new products and verticals, we will continue to ask for consumers’ feedback and find ways to solidify ourselves as the meat successors and not just the alternative.”

Heura’s point of difference has always been its focus on nutritional values and taste.

“With a Mediterranean heritage, we understand the importance of our beloved food traditions,” Coloma explains. “Thus, we create solutions that empower people to keep celebrating their gastronomic culture in a more sustainable and healthier way. We started with chicken, followed by beef and now with our pork line, with which we are giving consumers options to keep eating the meals they have always liked with plant-based meat.”

It is also a member of FoodValley – a non-profit agrifood cluster – which helps Heura develop ways to solidify a sustainable protein system.

By learning how to shorten the time to market for competitive, locally produced, and con-

sumed plant-based proteins, Heura can improve its supply chain processes and establish itself as meat successors.

“This network is full of pioneers who, like us, are committed to transforming the food industry,” Coloma points out. “The organisation’s expertise and global reach make it even more interesting for a rapidly growing company like ours. We are gaining extremely valuable insights on how to develop a circular agrifood chain and ultimately how to improve our business practices.”

Where next?

Statistics show that category expansion is already happening. The plant-based sector is expected to reach €480.43bn globally by 2024, according to a recent report from BIS research (*Source: Global Consultancy AT Kearney).

Heura’s growth shows how the sector is evolving. It closed 2021 with €17.7m in turnover, up from €8m in 2020. With its most successful year in its nearly five-year history, Heura has expanded its reach to 20 countries, up from 13 just last year. Consumers are shifting towards more sus-




Heura Mediterranean meat successor

tainable eating habits that are boosting plant-based meat sales and pushing for innovation.

Heura has chosen the UK, France, and Italy for expansion. It sees leading consumption trends and market maturity that align with its mission and projections. The goal is to expand internationally even further this year and continue to be leading market players around Europe. Heura’s commitment to creating an international presence reaching new markets goes hand in hand with its continuous prioritisation of achieving price parity, to help make plant-based foods more accessible to all.

The company’s expansion shows it is on the right track. Also, it had a year on year point of sale increase from 3,000 to 13,000.

Mark Coloma concludes: “The possibilities are endless. With our goal to continue to renew traditions, we have ambitious R&D developments that will continue to create products that will not make people sacrifice their everyday dishes.” 

IFFA

Frankfurt am Main
14. – 19.5.2022

In the halls of meating

IFFA 2022 is set to be the world's leading trade fair not only for the processing, packaging and sale of meat but also for alternative protein products

IFFA will, for the first time, place a special focus on ingredients and manufacturing processes for vegetable proteins



A new subtitle, 'Technology for Meat and Alternative Proteins', an optimised layout, the organisers in receipt of more registrations for the coming fair than at an equivalent point in time of the previous IFFA, and an increase in demand for exhibition space of around 10 per cent. Such is the positive news prior to the start of [IFFA 2022 – Technology for Meat and Alternative Proteins – in Frankfurt am Main from 14 to 19 May 2022](#).

Visitors can see an expansion of the range of processing technology for meat, meat products and alternative proteins, as well as in the ingredients field. This covers not only the production and processing of plant-based products but also products made from cell cultured meat.

Around 900 companies at IFFA will show the latest solutions in the fields of automation, digitalisation and sustainability. For the first time in its history of over 70 years, IFFA includes technologies and solutions for vegetable-based meat substitutes and alternative proteins. At least 200 IFFA exhibitors will offer products for the production of meat alternatives. They are spread across the whole fair and can be found via the IFFA Contactor, the fair's exhibitor and product search engine. Additionally, the complementary programme of events will provide further information about this future-oriented subject. New IFFA partners, such as the German Association for Alternative Sources of Protein (BALPro), the Good Food Institute Europe and the ProVeg nutritional organisation, will also be contributing their expertise and their networks.

Highlighting the alternative

IFFA is giving a number of manufacturers who offer the raw material – protein flours or protein texturates – for further processing into meat alternatives the opportunity to present themselves at the exhibition. Among the ingredients and casings manufacturers for plant-based



Vacuum cook/cutter; source: Jochen Günter



Form, fill, seal packing equipment;
source: Jochen Günter

products are ADM, Biospringer, Euroduna Food Ingredients, Givaudan, Hydrosol/Planteneers, Loryma, Soy Austria or Viscofan.

“A delicious taste is the main criterion for consumers when purchasing plant-based products. It is important to take a holistic approach when developing new products; ingredients, technology, market trends, and culinary influences are all important factors to consider,” notes Lucas Huber, marketing manager Plant Attitude Europe, Taste & Wellbeing at Givaudan. “Our expertise in taste, texture, colours, proteins, and ingredients enables us to co-create outstanding products with our customers as well as accelerate NPD.”

For Norbert Klein, head of research and development at Loryma, texture is the key word to make plant-based alternatives catch on. “Special attention is paid to a short ingredient list and attractive nutritional values – functional ingredients made from wheat can score here and offer technological advantages at the same time.”

In order to reduce time and costs in product innovations, digital configurators, which allow manufacturers to put together their desired product within a very short time, play an important role.

Processing technologies

Extrusion processes are often used to obtain a meat-like texture. Depending on the process, dry granulates can be produced that are further processed into minced-meat-like products or, through wet extrusion, fibrous protein structures for vegetarian escalopes, for example. Important suppliers at IFFA 2022 include Bühler and Coperion. The importance of extrusion for the production of meat alternatives is summarised by Stefan Gebhardt, general manager sales and strategy, business unit Food & Pharma at Coperion: “The flexibility of the twin-screw extruder enables the production of TVP (dry texturisation) and HMMA (wet texturisation) as well as numerous other extrudates on one machine. In addition, our technologies also



Vacuum supercutter; source: Jochen Günter



Full automation; source: Petra Welzel

enable the use of new protein alternatives such as hemp protein and microalgae.”

Numerous technology suppliers at IFFA will offer their production lines for meat processing and meat alternatives. These include, for example, Albert Handtmann Maschinenfabrik, Gea Food Solutions, Marel, Marlen International, Maschinenfabrik Seydelmann, Metalquimia, Middleby, Provisur and Vemag Maschinenbau.

IFFA digital extension

For the first time, IFFA will be held with a digital extension. For example, visitors can make contact with potential business partners and arrange mutually convenient appointments in advance via the matchmaking system. Further information about the IFFA Digital Extension can be found at www.iffa.com/digital-extension. 

Vitafoods Europe

2022

Blending the best of live and virtual



**Vitafoods™
Europe**



**10-12 May 2022 Geneva
2-13 May 2022 Online**

Presented by



The nutraceuticals community is set to reunite once more with personal health front of mind since the Covid-19 pandemic began, positioning the nutraceuticals industry for further expansion and success.

For over 20 years, Vitafoods Europe has been at the heart of the nutraceutical entity as the leading event to share ideas, source ingredients, discover new product developments, and hear from technical experts or industry thought-leaders.

As per last year, Vitafoods Europe will adopt a hybrid format to provide industry professionals with access to exclusive experiences, insights and networking opportunities.

Vitafoods Europe will give visitors the option to register to attend virtually, in-person or both!

Attendees can access the online platform a week before the live event (2-13 May) to see insight-lead content and use a data-driven matchmaking tool to conduct virtual meetings. The platform also enables attendees to plan their visit and set up in-person meetings in advance of the in person event held 10-12 May.

One advantage of online events is the incorporation of world-class speakers as part of an exciting agenda, tied to a SMART event designed to increase connectivity and enhance the in-person experience. By allowing the industry to connect ahead of the event, industry professionals can set up virtual meetings as well as plan face-to-face meetings in Geneva.

With an agenda exploring market trends, regulatory complexities, packaging and labelling challenges and more – including women in nutraceuticals and sustainability – the SMART event will provide opportunities to network and explore the latest industry trends and innovations both online or in-person. Highlights of this year's event include:

Exploring market trends, regulatory complexities, packaging and labelling challenges and more – including women in nutraceuticals and sustainability - highlights of this year's event include:

- Extensive expert presentations across four theatres – featuring the Main Stage, powered by Vitafoods Insights, Life Stages, New Ingredients and Probiotics theatres, with over 90 hours of content available across the whole event.
- Tailored networking opportunities – enabled by an intelligent data-driven matchmaking service, the Smart event allows visitors to find and connect with potential partners both in-person and online.
- Innovation tours – available in video and audio format to enable visitors to discover the cutting-edge ingredients, formulations, products and services on offer at the show.

- Themed Resource Centres – including the New Ingredients & Products Zones and, as well as the Omega-3 and Probiotics Resource Centres.

Registration for Vitafoods Europe 2022 is now open. Discover more about the show features and registration options at: www.vitafoods.eu.com

Who to expect at Vitafoods Europe 2022...

Visitors can meet over 1,000+ leading exhibitors from across the industry's four sectors - Ingredients & Raw Materials, Branded & Finished Products, Contract Manufacturing & Private Label, and Services & Equipment - including KSM-66 Ashwagandha, Lonza, Sabinsa, Sirio, Probiotal, and more. Plus, they can plan ahead by exploring the full list of exhibitors.

Event highlights

This year's exhibition will see the return of both popular and new features, designed to inspire, educate, and connect the nutraceutical industry. Highlights include:

Global connectivity via a new hybrid format

A seamless blend of Vitafoods Europe's cutting-edge online platform and the traditional physical event will integrate presentations, knowledge-sharing and networking across both platforms.

Next level networking through data-driven matchmaking

Whether attending in-person or online Vitafoods Europe 2021's networking service has intelligently designed to drive business opportunities by matching attendees with shared goals, the right backgrounds and in-demand expertise.

The latest insights on ingredients, innovations, and trends

Discover the very latest ingredients and products at the New Product and Ingredient Zones, explore new research and innovations in themed resource centres, and hear Innova Market Insights present the latest market trends live in Geneva.

Sustainability success stories

Visit the Sustainability Corner and attend expert-led sessions to explore some of our industry's greatest challenges and the success stories making the industry more sustainable.

With an agenda exploring market trends, regulatory complexities, packaging and labelling challenges and more, the event will provide plenty of opportunities to explore and learn about the industry, keep up to date with the latest developments, and discover key insights that will allow you to plot a competitive course for your business.

Agenda highlights

Bird's eye view of EU food labelling rules: how to effectively position your nutritional innovation within the applicable framework

Monday 2nd May

15:00 - 15:25 (25 minutes)

Main Stage

Speaker: Karin Verzijden, Axon Lawyers

New Flavour Worlds: Unlocking tomorrow's taste

Mandy Saven will explore wellness and immunity, evolving notions of comfort food and the democratisation of taste and flavour. Expect actionable insights and inspiration.

Wednesday 4th May

11:00 - 11:30

Main Stage

Speaker: Mandy Saven, content director, Stylus

Blockchain in the natural products industry: Why now?

This session will cover an overview of blockchain and how it works, key problems facing the natural products and organic foods industries, and the return on investment of transparency.

Friday 6th May

11:00 - 11:30

Main Stage

Speaker: Derek Lurth, CEO, HealthLog

From food tech to food success

What can you learn from the methodology that helped Oatly find its way to global success?

Friday 6th May

15:00 - 15:25 (25 minutes)

Main Stage


Speaker: Mrs. Aurore de Monclin, the HMT

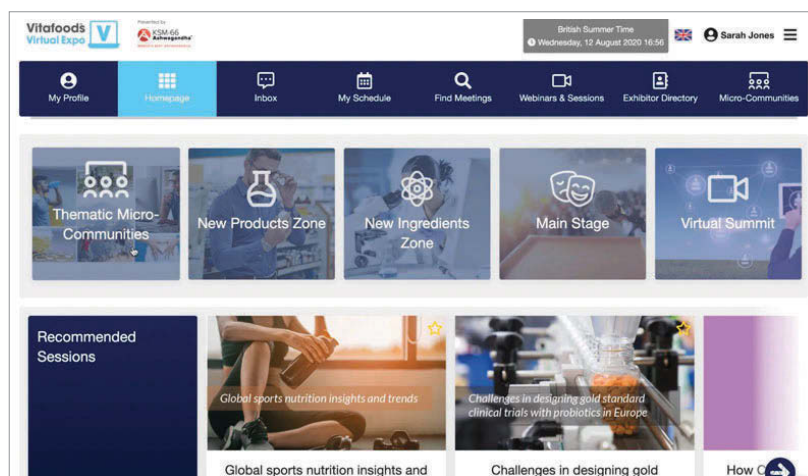
Formulating nutraceuticals to support healthy ageing

Cambridge Nutraceuticals talks scientifically and clinically validated ingredients

Tuesday 10th May

12:30 - 13:00

Life Stages Theatre, head of new product development, Cambridge Nutraceuticals. 



The one-day event will feature expertly curated content exploring mental wellbeing.

Summit offers an exploration of ingredient science, and its practical applications

Deep dive on mental wellbeing

One day summit to develop effective nutraceutical products

Vitafoods Europe is set to turn the spotlight on the important role of nutrition in mental wellbeing in an in-person summit on 9 May 2022, at the Fairmont Grand Hotel in Geneva. With 51 per cent of consumers looking to improve their mental and cognitive health, the Vitafoods Europe Summit offers an in-depth exploration of ingredient science, and its practical applications. Plus, attendees can network with like-minded professionals to discuss ways to address this sector.

Solve global issues together

Mental health is a top global health concern in 2022. Individuals are finding themselves working longer, sleeping less, and becoming more stressed than previous generations, according to Heather Granato, vice president of content, Informa.

“Understanding the market opportunities, trending ingredients that have scientific substantiation, product development and compliance considerations, as well as consumer needs are all key to developing effective nutraceuticals products in this sector,” she says.

The Vitafoods Europe Summit brings together the industry’s leading researchers, providing a dedicated forum to discover how nutraceuticals can support all-round wellbeing and open up conversations around building mental resilience through nutrition.

“By honing in on this one pressing subject at the Summit, we’re offering a deeper dive into it – it’s the practical application of nutritional science for mental health,” Granato says.

Expand market understanding

With 15 speakers across 11 live sessions, plus two panel discussions and five thematic lunch

roundtables, Vitafoods Europe Summit’s agenda has been designed to encourage learning and networking, and inspire NPD. Sessions include:


- Dr Joseph Firth, UKRI Future Leaders Fellow at the University of Manchester, presenting the latest evidence of nutrition’s impact on mental health.
- Dr Kaitlin Roke, director of scientific outreach & communication, GOED, providing insights into the current knowledge and future research gaps in the field of omega-3 supplementation and mental health.
- Nicholas Carbonelle, counsel, Bird & Bird, discussing the key regulatory challenges in the mental health space, from product classification to the developments in labelling and advertising regulations.
- Dr Holly E. Johnson, chief science officer at the American Herbal Products Association (AHPA), on evaluating and choosing traditional herbal adaptogens and ingredients for mental health product formulations.
- Dr Manfred Eggersdorfer, professor for healthy ageing at the University of Groningen, on the latest ingredient science and solutions leveraging vitamins and trace minerals for cognitive performance.
- Dr David Foreman, founder at Herbal Pharmacist, chairing a panel session exploring whitespace opportunities for product development and go-to-market strategies.

Ticket prices are available at an early bird rate of €349 until 8 April, with tickets providing visitors access to Vitafoods Europe 2022, starting on the 10 May. For further information, or to secure a place at the Summit, visit <https://www.vitafoods.eu.com/en/summit.html>

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Sixty seconds with ...

...Greg Bateman, founder of People's Captain,

which began as a hobby for Greg while playing for Leicester Tigers, bringing craft beers to rugby crowds. He worked with a handful of local and regional breweries, creating recipes that kept people asking for more. With a passion for great craft beer, Greg assembled a team to form People's Captain as its own entity bringing the beers direct to people's door. Greg via the People's Captain is on a mission to use the social power of craft beer to bring communities together. Through the sales of the range of beer it raises money for mental health initiatives across the UK.

peoplescaptain.co.uk



Describe yourself in three words.
LEARNING MORE EVERYDAY

What was your earliest ambition?

To be a professional rugby player
When did you know you wanted to work within the drink industry?

After having a pint with my best mate saved my life, I went on a mission to start a brand to stand for 'that moment' when you're with your mates with a vision to make that moment count.

Who has inspired you in your career?

I tend to take inspiration from all sorts of areas. There've been plenty of rugby players or athletes who've been inspirational in the way they've played the game, but I like the 'deeper' stuff, how they balance life, the way they approach their preparation. Other sources of inspiration include: Rob Bell, Gary Vaynerchuk, Simon Sinek, Owen Eastwood, and Johan Hari.

What's your biggest professional achievement?

Rugby has been a huge part of my life and naturally I'm proud of some of those big games (and tries scored!) but I'm immensely proud that our message has translated into people taking up their own mantle and starting conversations with their mates and having their own positive social impact.

What drives you on?

I guess it comes from my personal experience. I know I was incredibly lucky my mate was there for me in my hour of need. I just believe there's so much we can do on a social level to look after ourselves and one another.

What does a typical day look like?

A training day usually starts around 8am, kick-off with a meeting, some weight



lifting, a rugby session, break for lunch then another big rugby session early afternoon. Home around 3:30pm – get the dogs out for a walk in the Welsh countryside, work on People's Captain until teatime.

What is your pet hate?

Over cooked meat!

If you weren't in your current position, what else might you be doing?

I'm passionate about encouraging a positive social impact.

Give us a positive prediction for the beer industry over the next 12 months.

What's encouraging to me is how the public missed their locals during the pandemic; how we see, believe in and want to support 'our locals'. My sense is that pubs are looking for new, interesting and impactful brands to step in and help them make a difference in their communities.

Have you got any hidden talents?

I'm waiting for my hidden golf talent to kick in...

What is your ultimate comfort food?

Mac 'n' cheese!!

What's your tippie of choice?

Obviously, anything in the People's Captain range! It depends on the time of year/company but in the height of summer a dry crisp tippie like 'Tis the Saison is just 🍷!

How do you relax?

Being 100% honest, it's not something I've found easy to do and remains something I must be incredibly conscious of. Connecting with nature and connecting with other people are my two main ways of relaxing. Where I live, I'm very lucky with the rivers and mountains so it's important to be able to make the most of that. 🏡

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