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Achieving a sustainable future
for **Food & Drink
Manufacturing**

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THE CHALLENGES HAVE BEEN SET, NOW WE MUST RISE TO THEM

A FOREWORD BY
JONATHAN HORRELL
GLOBAL DIRECTOR OF
SUSTAINABILITY
MONDELÉZ
INTERNATIONAL



In the food business, Mission Possible should really be 'Mission Necessary'. We'll have to feed nearly 10 billion people by 2050. And we'll have to do so without destroying the natural resources on which food production depends.

The key challenges of climate change, water risk, waste and land use are huge and diverse. They reach right across our supply chain from farm to fork, and beyond. We need to think in new ways to overcome them and achieve positive impact for people and planet.

Achieving radical cuts in CO2 emissions means understanding the real drivers. Cutting CO2

emissions from our own operations is clearly the right thing to do. So we'll continue to use energy more efficiently and use more renewables as we seek to decouple emissions from growth.

But that's only the start. The resources we use to make our products – food ingredients – have a much bigger impact than our operations. This impact is beyond our direct control, so achieving a sustainable future depends on adopting smart solutions and the right mindset in three key ways.

LOOK FORWARD, NOT BACK

Perhaps more than any topic, food stirs memories of the past. It's tempting to think the old ways were better, more natural, or more wholesome. But the old ways won't feed 10 billion people.

We need to look forward and embrace innovation at every level: new technologies, new ideas and new forms of collaboration.

Productivity is at the core of sustainability because it means making more efficient use of resources.

For example, deforestation makes up the largest part of our carbon footprint and is driving climate change globally. Côte d'Ivoire and Ghana supply about 60% of the world's cocoa but both have high deforestation rates, estimated at nearly 3%. Persistently low productivity in cocoa farming is at the heart of this challenge: to produce more, cocoa farmers increase their land area by expanding into the forest. This, in turn, disrupts local rainfall patterns and causes production to shift across the landscape.

We're helping farmers grow more cocoa on less land. That way, they will be better off and the forest better protected. We're investing £308 million through our sourcing programme, Cocoa Life, to help grow opportunities for farmers and communities, including investments in productivity training, access to inputs and good environmental practices. A productivity mindset also helps us to reduce waste in our own operations, where we're looking to adopt a zero-waste mindset. Since 2013, we've reduced total manufacturing waste by 15%, towards our goal of 20% by 2020. Since much of this is food waste, it reduces the environmental burden of food production as well as increasing productivity. ▶



COLLABORATE TO CHANGE THE SYSTEM

You can never become sustainable on your own. Sustainability needs to be mainstream and sector-wide. So, avoid difficulty, expense, or exclusivity and focus instead on affordable, scalable collaboration.

For example, sustainability programmes and standards have improved practices and raised awareness but they need support from jurisdiction and landscape approaches to embed sustainability across the board. We helped to instigate the Cocoa and Forest Initiative, a collaborative framework involving all the major chocolate and cocoa companies, along with the governments of Côte d'Ivoire and Ghana.

Together, we're creating a joint action plan to fight deforestation to complement our own Cocoa Life programme.

Likewise, we collaborate with industry peers to address the challenge of plastic waste. Plastic is a highly efficient and effective packaging material and a key element for food safety and quality. Without it, the shelf life of many products would be far shorter and add to the environmental impact of food waste. But the challenges of plastic waste are well documented and urgent action is required.

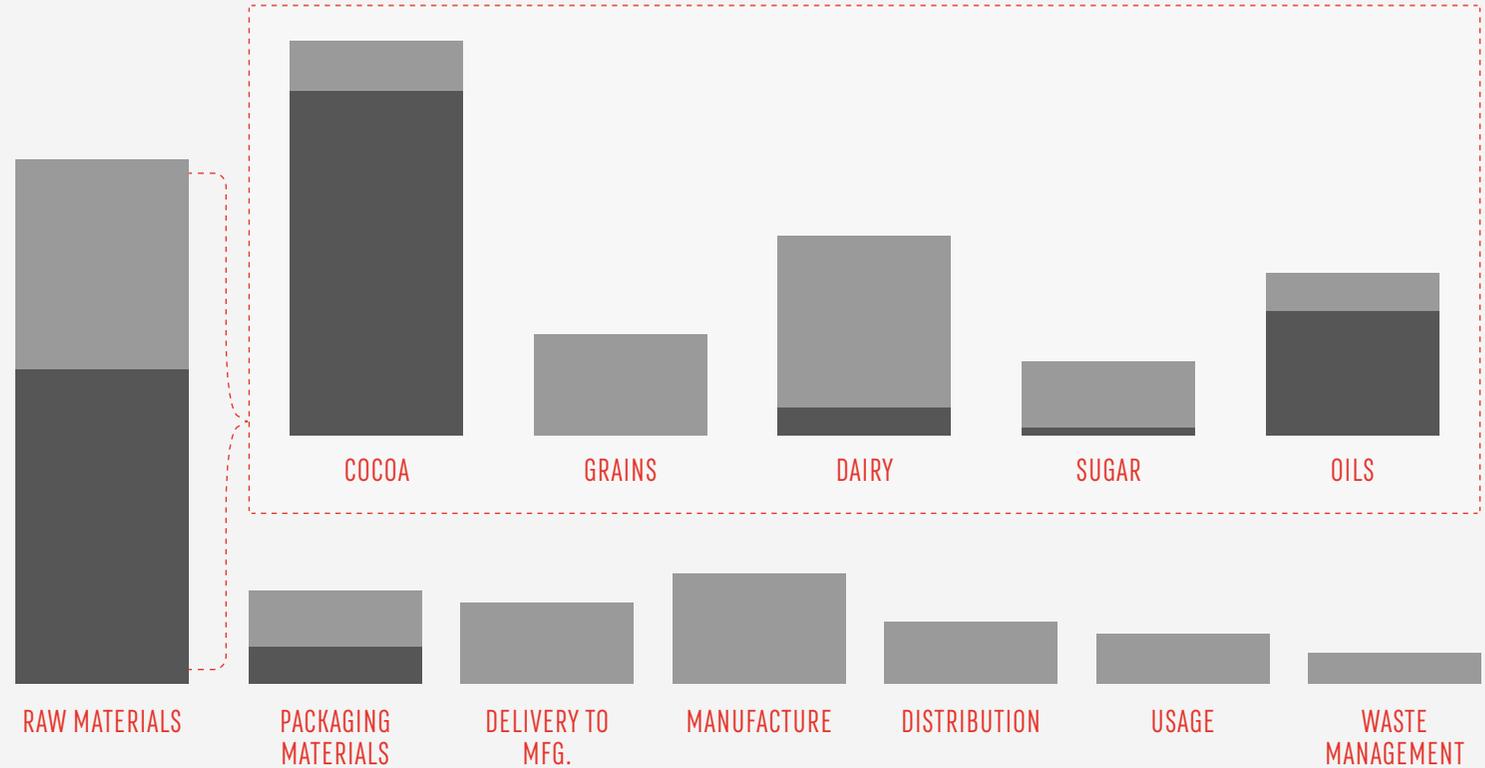
As well as our own goals to ensure all our packaging is recyclable by 2025, we're supporting industry coalitions and public-private partnerships to develop vital waste-management infrastructure to reduce waste

“AVOID DIFFICULTY, EXPENSE, OR EXCLUSIVITY AND FOCUS INSTEAD ON AFFORDABLE, SCALABLE COLLABORATION.”

MONDELÉZ'S LIFE CYCLE ASSESSMENT FINDINGS

Addressing and eliminating deforestation continues to offers the largest opportunity to reduce our carbon footprint.

● Carbon footprint, agricultural practices and operations ● Carbon footprint, deforestation



and improve real-world recycling rates. Bringing all this together are global platforms to drive common approaches to the major challenges.

The UN Sustainable Development Goals (SDGs) provide a common framework to address the key issues around the social and environmental impacts. They are just as relevant to business as other stakeholders and, like many other companies, we've started to align them to our

programmes. In the field of reporting, CDP has established common principles for companies to disclose climate change and water impacts and is helping build the movement for science-based targets to help companies set meaningful, long-term ambitions.

Collectively, we must rise to these challenges to deliver 'Mission Necessary' and secure a sustainable future. ●

Jonathan Horrell is director global sustainability for the snacking company Mondelez International, a world leader in biscuits, chocolate and other categories, featuring brands such as Oreo and belVita biscuits; Cadbury Dairy Milk and Milka chocolate; and Trident gum. He is responsible for sustainability strategy, managing key sustainability issues, and building relationships with policy makers and external stakeholders to support the company's strategic sustainability priorities.

EXPLORE THE FUTURE OF FOOD AND DRINK MANUFACTURING

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edie Insight is published by edie, the year-round resource providing energy, sustainability and resource efficiency professionals with the practical information, insight and intelligence they need to make their businesses more sustainable and profitable.

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November 2018



REPORT INTRODUCTION



GEORGE OGLEBY
INSIGHT EDITOR
edie

THE FUTURE OF FOOD AND DRINK MANUFACTURING STARTS HERE

In a world of rising populations, scarce resources and a changing global climate, there has never been a more pivotal time for food and drink manufacturers to deliver a sustainable future, today.

Food and drink manufacturing possesses a fundamental relationship with the environment, on which it depends for a reliable and abundant supply of safe, high-quality materials. Ensuring sustainable growth, therefore, not only helps protect the world's limited resources but also future-proofs the sector's long-term competitiveness and prosperity.

It is crucial, then, that the industry fundamentally addresses the way it operates, from the ingredients used and products made,

to how they are packaged and transported. Due to the direct interest of the sector to invest in resources that improve its social and environmental impacts, food and drink manufacturing organisations are well-positioned to positively contribute to their local communities and societies at large.

But to serve the needs and expectations of its customers, the industry will need to display a renewed commitment to be a force for good. Proactive actions by progressive food and drink firms to tackle some of the biggest issues of our time will be critical to push the sector on a pathway to a sustainable future. Only through bold collaboration and leadership will the sector thrive in a modern global economy, especially in the face of major obstacles to the price and availability of resources.

This sector insight report, produced in association with Centrica Business Solutions, demonstrates the steps that must be taken for food and drink organisations to scale-up action across all areas of sustainable development. Specifically, the report explores exactly how businesses within this industry should be working, innovating and collaborating to achieve a sustainable future.

The report has been inspired by **Mission Possible** - edie's new purpose-driven campaign

for 2018 which is empowering businesses to ramp up efforts across all areas of sustainable development. As such, the report will be structured around the five Mission Possible campaign pillars of Energy, Resources, Mobility, The Built Environment, and Business Leadership. These five sections of the report will follow a similar layout; beginning with an overview of current progress; looking to the future; and concluding with an exploration of how food and drink organisations can take new approaches to drive sustainability.

Facts and stats, best-practice case studies and exclusive findings from our own industry survey* are embedded throughout the report to provide an end-to-end overview of how food and drink manufacturers can achieve a sustainable future.

Perhaps the most important part of this entire report is the final page - the Mission Possible Pledge Wall - which showcases an array of new bold, tangible actions that have been made by food and drink manufacturers that have thrown their weight behind the Mission Possible campaign. The list of pledges on that page will be added to and updated over the next 12 months, and I very much hope that - in light of the level of ambition shown throughout this report - you are encouraged to join the mission and make a new commitment on behalf of your business. ●



**The Mission Possible survey was conducted online via edie.net between 21 February and 13 April 2018. The survey, comprising 20 questions, was taken by UK-based sustainability, energy and environment managers from organisations of all industry types and sizes. The survey results displayed within this report are based solely on the 23 respondents that represented manufacturing organisations.*



ENERGY

**“A FUTURE THAT IS CLEAN,
SMART AND FLEXIBLE.”**

Energy management can be the catalyst for sustainable business transformation. Technology developments are now enabling food and drink manufacturers to reduce their carbon footprint, cut costs and provide new revenue streams.

CURRENT PROGRESS

As the largest manufacturing sector in the UK, it should come as no surprise that food and drink producers are also some of the nation's largest energy users. In some cases, energy accounts for more than 15% of operational expenditure. Across the UK, members of the Food and Drink Federation (FDF) - which represents the UK business of more than 300 companies - are bearing down on a target to slash emissions by 55% by 2025 against a 1990 baseline. As of January 2018, the likes of Britvic, PepsiCo and Warburtons had collectively managed to reduce emissions by 51% through a continued focused on energy efficiency and decarbonisation.

The FDF has warned that the sector's progress can be partially attributed to a fall in production in a number of sub-sectors which could be reversed in future years. Delivering further reductions will become more challenging, the trade body insists, and will require greater focus on new technology, process design and low-carbon energy sources.

Outside of the sector's own operations, the UK's food supply chain - from production to consumption - accounts for around a fifth of UK greenhouse gas (GHG) emissions.

To help combat this issue, WRAP has set up the Courtauld 2025 initiative which aims to reduce emissions associated with the production and consumption of food and drink by 20% in the UK.

FUTURE ENERGY

As with any major industrial sector, the adoption of science-based targets to reduce emissions can be a massive opportunity for food and drink firms to build investor confidence, enhance brand reputation and drive bottom-line savings.

Among the major firms to commit in this area include Carlsberg, which is one of only three major companies to have set and approved a science-based target to reach a 1.5C ambition in line with the Paris Agreement. Mars, meanwhile, has pledged approximately \$1bn into its Sustainable in a Generation plan, a new corporate strategy that sets a 67% reduction in emissions across its value chain by 2050.

Research from Barclays has found that, in comparison with other UK manufacturing sectors, the food and drink sector has the most to gain from further investments in automation, with the bank's study showing a more than 10% increase in output between 2016-2020 and close to a 25% rise between 2020-2025. ▶



CARLSBERG IS EXPLORING ENERGY STORAGE TO SUPPLEMENT ONSITE GENERATION

Carlsberg's director of environment and utilities Adam Pawelas recently revealed that the global brewer was in the "early stages" of exploring integration methods for energy storage to support onsite generation.

BRITVIC HAS SWITCHED TO 100% RENEWABLE ELECTRICITY

Drinks giant Britvic this year announced that every UK manufacturing site would be powered by 100% renewable electricity from October 2018.



Sensor technology combined with cloud-based analytics is giving food and drink manufacturers real-time insights into their energy usage, enabling predictive maintenance. Alongside energy management, there are opportunities for food and drink organisations to respond in real-time to the energy market, turning in from a cost into a source of competitive advantage.

At present, agriculture accounts for 17% of total global GHG emissions, mainly by producing methane from livestock digestion. Evidence shows that meat substitutes generally use less energy, land and emit less GHG emissions than the average for farmed beef.

One recent academic paper concluded that the US could achieve as much as 74% of the carbon reduction required for its 2020 GHG target just by switching the nation's beef consumption to beans.

DELIVERING A BETTER ENERGY FUTURE, TODAY

The likes of Nestlé and Britvic are turning to renewable energy to power their entire UK manufacturing operations. Indeed, Nestlé announced in July 2018 that it will now generate half of its UK and Ireland energy needs from a new wind farm in Scotland that it has funded. The promotion of energy-efficient technologies, such as **Combined Heat and Power (CHP)**, will help put the sector out on the right path towards a low-carbon future. Brewer Anheuser-Busch InBev (AB InBev) has delivered savings of almost £50m in the past four years through energy efficiency improvements.

Storing electricity when supply is scarce or expensive is another option that is becoming increasingly popular. Earlier in 2018, Carlsberg revealed that the global brewer is in the “early stages” of exploring

integration methods for energy storage to support onsite generation. Meanwhile, investment in automation is already delivering significant environmental gains for the industry. This has been illustrated by Coca-Cola European Partners' (CEP) recent £39m automation funding, which the bottling company claims will save 3,867 tonnes of CO₂ a year.

Meat-substitute food brands are meeting the needs of a growing demographic who are switching to alternative sources of protein for health or environmental reasons. All the while, these firms are realising the possibility of delivering sustainably sourced products that dramatically reduce energy consumption. For instance, US-based firm Impossible Foods has introduced a non-meat burger that produces 87% less emissions, it is also designed to “bleed” like normal red meats. ●





RESOURCES

“A FUTURE THAT IS CLOSED-LOOP AND PARTNERSHIP-BASED.”

As surging consumer demand continues to put a squeeze on the world’s raw materials, food and drink manufacturers are turning to advances within areas of circular resource use, process waste reduction and packaging optimisation.

CURRENT PROGRESS

Food and drink production generates high volumes of waste, both from product and packaging.

WRAP figures suggest there are 1.7 million tonnes of food waste arising in manufacturing in the UK, before products even reach the supermarket shelves. However, progress is being made in this area: UK retailers and food and drink manufacturers generated an estimated £100m in food waste savings over a three-year period as part of WRAP’s Courtauld Commitment Phase 3 – the prelude to the Courtauld Commitment 2025.

In addition, some of the UK’s largest food and drink manufacturers recently committed to a pioneering initiative from WRAP to halve food waste by measuring and acting on wastage levels across a “farm-to-fork” approach.

Food and drink manufacturers account for around two-third of the EU’s total used



WALKERS IS LAUNCHING THE UK’S FIRST CRISP PACKET RECYCLING SCHEME

The UK’s biggest crisp brand recently unveiled plans to launch a nationwide crisp packet recycling scheme, following months of consumer protests against its hard-to-recycle packaging.

packaging by weight. The industry is faced with the challenge of reducing the volume and weight of packaging used while dealing with higher consumer demand. Figures reveal that, by 2021, the number of plastic drinks bottles produced globally will reach more than half a trillion, but only a tiny fraction of these bottles are recycled.

The world’s top-six soft drinks brands used a combined average of just 6.6% recycled plastic in their bottles in 2017, evidence has shown. ▶

“THE FOOD AND DRINK SECTOR MAKES A SIGNIFICANT CONTRIBUTION TO INDUSTRIAL SYMBIOSIS, WHICH IS WHEN A BY-PRODUCT FROM ONE INDUSTRY CAN BE USED AS A RAW MATERIAL FOR ANOTHER INDUSTRY.”

A host of high-profile industry figures have since signed up to WRAP's Plastic Pact, which will see members ensure that 100% of plastic packaging can be reusable, recyclable or compostable. One such firm is CCEP, which currently has on average 25% recycled content in its PET bottles and has set a 50% target by 2050.

FUTURE RESOURCES

Research and innovation must continue to overcome technical barriers in this area. Food and drink manufacturers will need to work with suppliers to develop innovative packaging materials that reduce environmental impact and maintain product protection and preservation. Innovations such as intelligent and smart packaging, which involves the ability to sense or measure an attribute of the product, can help extend shelf life, monitor freshness, display information on quality and improve safety.

Greater consumer demand for circular food and drink products will be needed – a point emphasised by 35% of Mission Possible

survey respondents when asked to highlight the biggest opportunity for manufacturers to accelerate the transition to a circular economy.

Meanwhile, the heightened public and media scrutiny of the plastic waste issue in 2018 has served to highlight just how rapidly resource efficiency issues are rising up the agenda for consumers, and food and drink manufacturers are duly recognising the need to respond.

ACHIEVING A RESOURCE-EFFICIENT FUTURE, TODAY

There is a sharpened focus among industry players to identify innovative packaging projects which improve reusability, recyclability or compostability. Soft drinks firm Britvic has made strides in its own bid to develop a viable bottle from sustainable wood fibres, while Lucozade Ribena Suntory is trialling edible drinks sachets made from seaweed, in an effort to gauge the consumer appetite for plastic-free alternatives to single-use bottles and pouches.

Food and drink firms across Britain are progressively implementing recycling and recovery processes at their operations and divert as much waste away from landfill as possible. Major companies such as Coca-Cola and Mars send little or no waste to landfill from their manufacturing sites in the UK.

The food and drink sector makes a significant contribution to industrial symbiosis, which is when a by-product from one industry can be used as a raw material for another industry.

The sector has shown leadership in its voluntary actions to improve water efficiency, saving both water and money.

PepsiCo recently revealed that its water stewardship efforts have led to a 26% reduction in operational water usage since 2006 – exceeding its initial 20% goal. Diageo, meanwhile, now replenishes 21% of water used in the final products in water-stressed areas. ●



QUORN IS ELIMINATING BLACK PLASTICS FROM ITS PACKAGING SUPPLY CHAIN

Vegetarian food brand Quorn Foods is switching almost 300 tonnes of hard-to-recycle black plastic packaging to clear, recyclable alternatives – at a financial cost to the company – to reduce the amount of plastic waste it produces.



MOBILITY

“A FUTURE THAT IS AUTONOMOUS, OPTIMISED AND FULLY ELECTRIC.”

Business mobility is one of the greatest environmental and social challenges the world faces today. But, from investments in electric vehicles (EVs) to the deployment of smarter business travel, the food & drink sector is accelerating the shift towards its own sustainable mobility future.

CURRENT PROGRESS

For the UK's food and drink manufacturers, transport plays a vital role in the supply and distribution chains. The sector is a big user of different modes of transport – Heavy Goods Vehicles (HGV) in particular. Indeed, in the UK, food transport is estimated to account for 25% of all HGV vehicle kilometres. edie's Sector Insight survey shows that green mobility has, until now, been a low priority for food and drink manufacturers, with only 13% of respondents identifying 'transport and logistics' as a significant investment area for their organisation in 2017/18.

However, many within the industry are now actively seeking to reduce environmental impact of transport through collaboration with transport and distribution providers; to improve efficiencies in product sourcing, model shifts, distribution networks, route planning and vehicle choice. Food and drink manufacturers have reportedly contributed to a 7% fall in emissions per vehicle in 2015, compared with 2010.

Food and drink firms have pledged to reduce the environmental impact of their own transport operations and third-party hauliers. Some have turned to a 'fewer and friendlier food miles' approach



HOVIS HAS INCORPORATED THE FIRST ALL-ELECTRIC TRUCKS INTO ITS DELIVERY FLEET

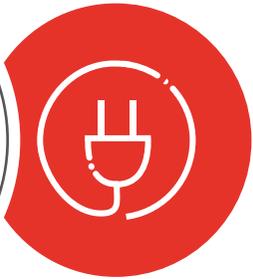
Bakery giant Hovis has introduced its first all-electric vehicles into its UK delivery fleet in a bid to reduce air pollution in urban areas.

within food transport policies. FDF's 10-Point Checklist for Greener Food Transport includes maximising vehicle loading, use of vehicle tracking technology, collaboration to reduce empty running, driver training, and encouraging innovation and best practice.

FUTURE MOBILITY

The current system of food supplies often involves large HGVs travelling long distances between suppliers and retailers via centralised distribution centres. This system enables an efficient loading of vehicles, which reduces the impact per tonne of food. However, fresh food supply chains are set to become shorter and faster as manufacturers attempt to retain product life. According to a 2015 report compiled by Coca-Cola and Cranfield University, industry will move away from centralised mass production, towards localised operations – improving the environment through reduced transport while connecting the consumer to food sources. ▶

30%
 PORTION OF BRITVIC'S FLEET
 ORDERS THAT ARE FOR HYBRID
 VEHICLES



25%
 AMOUNT OF ALL HGV VEHICLE
 KILOMETRES ACCOUNTED FOR BY
 FOOD TRANSPORT IN THE UK



THE WORLD'S LARGEST BREWER HAS ORDERED 800 HYDROGEN-ELECTRIC TRUCKS

AB InBev recently placed an order for 800 zero-emission, hydrogen-electric semi-trucks as part of its bid to run its entire fleet of long-haul trucks on clean energy by 2025.

The use of state-of-the-art technology could also play a key role in food and drink manufacturers' own transport fleets and in the choice of external transport logistics providers. Improved aerodynamic design trailers and retro-fitted aerodynamic modifications can significantly reduce fuel consumption by up to 10%, whilst training drivers in optimised safe and efficient driving techniques reduces fuel consumption by approximately 7%-10%.

Meanwhile, investment in the 'cold chain' – the process used to maintain optimal temperatures for the transport and storage of food and medicine – has the potential to deliver a measurable reduction in food waste.

DELIVERING SUSTAINABLE TRANSPORT SYSTEMS OF THE FUTURE, TODAY

The sector has made big strides in its action to cut its logistics carbon footprint. Manufacturers from Britvic to Hovis have boosted the number of electric and alternatively powered vehicles across their respective company fleets, with many using data and digital mapping to determine the most fuel-efficient routes for deliveries. Indeed, more than 30% of new Britvic fleet orders are now for hybrids. The firm's green mobility initiatives have included installing charging points across Britvic sites in UK and actively engaging with employees to demonstrate the total cost/benefit of hybrid vehicles, as well as the executive team championing the use of alternative fuels.

Some food and drink manufacturers are also now using natural gas and biogas instead of diesel in larger vehicles such as trucks, with CO2 savings of more 60%. Others, such as AB InBev, are turning to low-carbon fuels such as hydrogen as part of plans to run entire fleets of long-haul trucks on clean energy.

Capacity load optimisation is substantially contributing to reduced transport miles. Over the past four years, by using increasing capacity lorries, oven chip brand McCain has saved 770,000 road miles and reduced CO2 emissions by around 990 tonnes. The firm has recognised that increased collaboration within food supply chains can optimise loading rates and increase back-hauling. ●

“THE CURRENT SYSTEM OF FOOD SUPPLIES OFTEN INVOLVES LARGE HGVS TRAVELLING LONG DISTANCES BETWEEN SUPPLIERS AND RETAILERS VIA CENTRALISED DISTRIBUTION CENTRES.”



THE BUILT ENVIRONMENT

“A FUTURE THAT IS ULTRA-EFFICIENT, HEALTHY AND NET-ZERO.”

Some of the world’s most pressing and environmental and societal challenges can be found in the built environment. Thankfully, within the food and drink industry, encouraging progress is now being seen in the key areas of climate change, nature and biodiversity, and health and wellbeing.

CURRENT PROGRESS

As an energy and resource-intensive industry, food and drink manufacturing has a huge bearing on the state of the built environment. Food and drink manufacturing sites in the UK can be affected by flooding, storms and other extreme weather events that can have direct impacts on food processing.

In response to risks and opportunities, many firms are pursuing a range of adaptive practices that are designed to enable them to identify and respond to disruptions. Diageo conducts quarterly business unit risk assessments that inform crisis management plans, while Kraft Foods, Whole

Food and Walgreens have emergency response plans in place to minimise damage to owned locations and disruption to business.

The conversion of tropical forests to agricultural land, and the resulting impacts on biodiversity, local communities and GHG emissions, remains a big concern for the sustainability of food production. Under public pressure over the harm caused by its production, many food giants now claim to use ‘sustainable’ or ‘no-deforestation’ palm oil, printed on labels.

Natural capital is fast becoming a priority business issue for food and drink manufacturers in this regard, with many seeking to understand how they impact and depend on natural resources and the risks and opportunities associated with these relationships.



However, there is still some way to go. A recent study from Ceres revealed that almost half of the world’s 42 largest food companies are still not conducting regular assessments of their supply chains, and just six have set sustainable water-sourcing targets for the majority of their agricultural inputs.

THE FUTURE BUILT ENVIRONMENT

edie’s Mission Possible survey offers some reassurance that food and drink manufacturers can help to deliver a sustainable built environment. ‘Net-zero carbon building design’ and ‘onsite renewable energy generation’ were seen as a ‘significant’ or ‘business-critical’ opportunity by a combined 61% and 57% of manufacturing respondents respectively. ▶

OLAM HAS UNVEILED A NEW ‘NET-POSITIVE SUPPLY CHAIN POLICY

Multinational agri-business Olam has launched a new sustainability strategy which supports a ‘net-positive’ approach to supply chain and landscape management.



NESTLÉ WILL POWER ITS ENERGY NEEDS THROUGH A NEW SCOTTISH WINDFARM

Food and drink giant Nestlé will generate half of its UK and Ireland energy needs from a new wind farm in Scotland that it has funded.

2050
 THE YEAR BY WHICH IT IS THOUGHT EVERY BUILDING ON THE PLANET MUST BE 'NET-ZERO' CARBON TO KEEP GLOBAL WARMING BELOW 2C



22%
 PORTION OF UK'S CARBON FOOTPRINT ACCOUNTED FOR BY THE BUILT ENVIRONMENT

Slightly further down the list, 39% of respondents cited 'green spaces and biodiversity' as a significant opportunity.

Across the board, the biggest opportunity for achieving sustainability in the built environment was 'energy efficiency upgrades to existing buildings', cited as a 'significant' or 'business-critical' opportunity by a combined 56% of respondents. Alongside these tried-and-tested formulas, sustainability professionals will need to exploit modern technological solutions to reduce their impact on the built environment. 'Smart-city technologies and data' was seen as either a 'significant' or business-critical' opportunity by 44% of respondents.

The Internet of Things (IoT) is likely be an important facilitator, helping food and drink manufacturers to capture, measure and report data, thus driving continuous improvement.

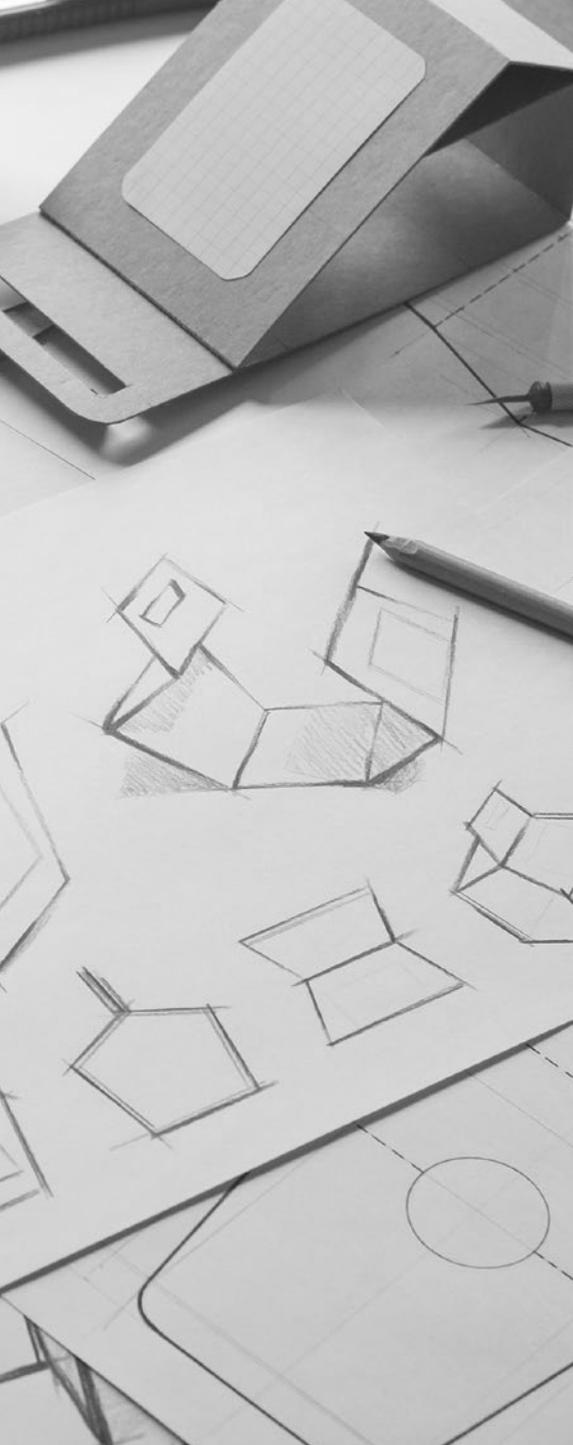
DELIVERING A SUSTAINABLE BUILT ENVIRONMENT FOR FOOD AND DRINK MANUFACTURING, TODAY

Many within the industry are taking action to encourage agricultural suppliers to undertake sustainable agricultural management practices to mitigate climate change and develop more resilient raw materials. The likes of AB InBev and ConAgra are advancing solutions to building climate resilience through collaboration with experts and stakeholders. The former is investing in research into more resilient, drought-tolerant, and productive seed varieties, and has also revealed savings of almost £50m in the past four years through energy efficiency improvements.

Some organisations are taking steps to help achieve zero-net deforestation by 2020, with support from NGOs, national governments and multi-stakeholder platforms such as the Consumer Goods

Forum. Moreover, engaging communities with the importance of natural capital is a key part of some food and drink company's sustainability strategies. For instance, Warburton's Farm Visit programme teaches primary school children about the importance of sustainable farming and the diverse natural environment around them.

In the UK, FDF has pledged to play an active role to increase awareness of natural capital among members, many of whom have signed up to the Natural Capital Coalition, which has developed the world's first Natural Capital Coalition to identify and measure impacts and dependencies on natural capital. Nestlé has begun to roll out a programme of natural capital assessments across all their sites in the UK, working with the environmental charity and think tank Green Alliance on a new policy framework to preserve and enhance natural capital in the UK. ●



BUSINESS LEADERSHIP

“A FUTURE THAT IS COLLABORATIVE, INNOVATIVE AND PURPOSE-DRIVEN.”

The time is now for CSR and resource efficiency professionals to adopt a leadership stance on sustainability and convince the rest of the food and drink industry that they too must play their part to deliver a sustainable future, today.

CURRENT PROGRESS

As the global food system comes under increasing pressure from the impacts of climate change, population increase, a growing demand for limited resources, and changing diets, there is a growing understanding among the food and drink manufacturing community of the importance of building and maintaining high levels of business leadership on an array of environmental and social issues.

In particular, food and drink companies are starting to recognise a sustainable supply chain is no longer just desirable, but a cornerstone of business success. This is reflected in increased support for smallholder farmers to build more resilient and sustainable livelihoods. The likes of Cargill



INNOCENT DRINKS IS EMPOWERING ITS STAFF TO DRIVE SUSTAINABILITY

Innocent Drinks is on a mission to build a workforce of sustainability superheroes. In a recent article, edie explored the innovative approaches the smoothie and fruit juice manufacturer is taking to put people at the heart of its new CSR strategy.

and Mondelez, for instance, have taken action to strengthen the socio-economic resilience of cocoa farmers, many of which have already seen significant increases in their income and cocoa yield.

Food and drink firms are increasingly aware that taking a strong stance on wide-ranging areas, from modern slavery to environmental pollution, can add to the bottom line and drive consumer loyalty at a time when brand trust and resilience is needed the most. ▶

“FOOD AND DRINK COMPANIES ARE STARTING TO RECOGNISE A SUSTAINABLE SUPPLY CHAIN IS NO LONGER JUST DESIRABLE, BUT A CORNERSTONE OF BUSINESS SUCCESS.”

MONDELEZ IS CALLING FOR 'BRAVE' COLLABORATION TO BRING THE COCOA SUPPLY CHAIN OUT OF POVERTY

The head of Mondelez's Cocoa Life sourcing programme has called on the cocoa industry to "be brave" when exploring new ways to enhance supply chain practices that ensure cocoa is sourced sustainably while bringing smallholder farmers out of poverty.



FUTURE BUSINESS LEADERSHIP

When exploring which business characteristics are most important in order to achieve a sustainable future, edie's sector survey respondents from the food and drink manufacturing sector were keen to stress the importance of developing partnerships. Just under two-thirds (62%) described collaboration within supply chains or across networks as a 'business-critical' opportunity, with an additional 38% citing this as a 'significant' opportunity.

Collaborative action within the food and drink sector has the potential to increase productivity, mitigate risk and create opportunities for the development of new products and services. An opportunity also exists for the sector to share intellectual property and co-create products that protect the environment.

The previously mentioned report from Coca Cola and Cranfield University suggested that knowledge-sharing will become key in the upcoming years, with attitudes towards the development, generation and protection of Intellectual Property (IP) set

to change. CCEP has taken this notion on by crowdsourcing ideas from innovation platform OpenIDEO to encourage better domestic recycling habits.

ADVANCING BUSINESS LEADERSHIP IN FOOD AND DRINK MANUFACTURING

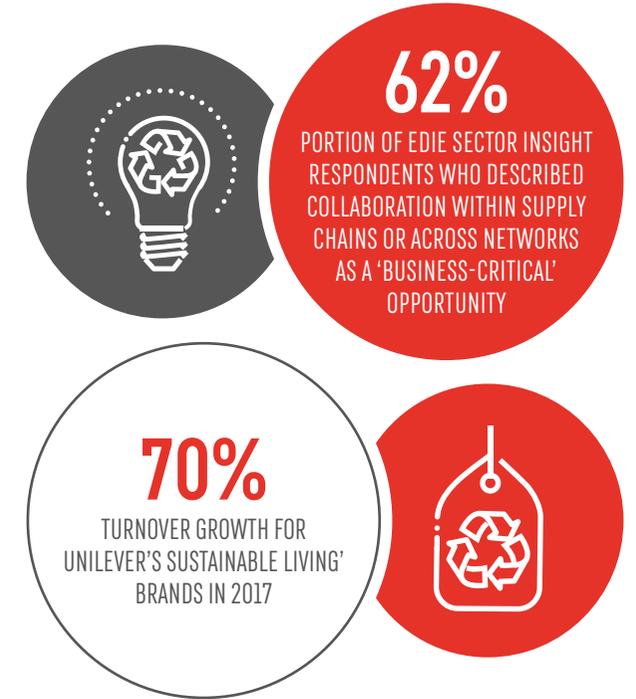
When asked which organisation provides the most inspiration to drive forward corporate sustainability, British-Dutch firm Unilever was cited by several of the Mission Possible survey's respondents, as were Innocent Drinks and Danone. Against a backdrop of constrained resources, growing populations and planetary boundaries, these sustainability leaders are more resilient against external shocks and are working more in harmony with the planet and its resources.

Unilever has continually proved the business case for sustainability, with the firm's 'Sustainable Living' brands accounting for a record 70% of its turnover growth last year, and growing 46% faster than the rest of the business. Innocent Drinks, meanwhile, has received many plaudits for creating an

enabling environment for its staff to champion sustainability. Every worker is provided with recycled notepads and reusable cutlery, and is encouraged to cycle to work. FSC-certified desks and a vegetable patch on the office roof terrace both enhance staff involvement with sustainability, while the building has ditched photocopiers to save paper. Thanks to these measures, staff pride in working for Innocent is currently tracking at 98%, according to the latest 'Company Pride' measurement.

What is clear from edie's in-depth Mission Possible survey is that the gap between these sustainability leaders and the rest of the food and drink manufacturing business community is closing, as a growing number of organisations begin to display a willingness to embed sustainability into the heart of their business strategy.

This was further evidenced by the final question of the Mission Possible survey: when asked if they would be willing to join a new movement that encourages and helps businesses to achieve a sustainable future, a huge 87% of food and drink manufacturers said YES. ●



MISSION: POSSIBLE PLEDGE WALL

WHAT DOES YOUR MISSION POSSIBLE LOOK LIKE?

edie's Mission Possible campaign is about making change happen. This page is dedicated to the food and drink manufacturing businesses that have stated their support for the campaign's aims by making new commitments to achieve a sustainable future.

Mission Possible Pledges began at the edie Live 2018 exhibition, where we saw more than 100 different organisations write their pledge on a post-it note and stick onto a dedicated Mission Possible Pledge Wall.

Now, the Mission Possible Pledge Wall has gone virtual, allowing businesses from all industry sectors to submit new sustainability on behalf of their organisation. No Mission Possible Pledge is too small, or too ambitious – so long as it is a new, tangible action

that the pledger believes will help their organisation on its mission to achieve a sustainable future. The Mission Possible Pledges fall under at least one of the five key campaign pillars (Energy, Resources, Mobility, The Built Environment and Business Leadership).

The pledges listed below are those that have been made by an array of food & drink businesses that have actively expressed their support for the Mission Possible campaign and its aims. ●



WE PLEDGE TO...

“ACHIEVE 100% RECYCLABLE, REUSABLE OR COMPOSTABLE PACKAGING BY 2025.”



WE PLEDGE TO...

“MAKE SURE AT LEAST 50% OF THE MATERIAL WE USE FOR OUR PET BOTTLES IN GREAT BRITAIN COMES FROM RECYCLED PLASTIC BY 2020.”



WE PLEDGE TO...

“EMPOWER 200,000 COCOA FARMERS AND IMPROVE THE LIVES OF MORE THAN ONE MILLION PEOPLE IN COCOA GROWING REGIONS AND COMMUNITIES BY 2022.”

INDUSTRY VIEWPOINT: TACKLING THE TRIPLE ENERGY CHALLENGE



THE VIEW OF
CENTRICA BUSINESS SOLUTIONS'
DIRECTOR
IAN HOPKINS

Energy can account for 15% of total overheads in food & drink manufacturing businesses. Here, Ian Hopkins, Director of Centrica Business Solutions, explains how to reduce energy and operational costs as part of a more resilient and sustainable energy strategy.

The triple challenge of volatile, upward trending energy prices, tougher carbon reduction targets, and the growing risk of energy supply disruption, is piling on the pressure for food and drink producers.

By implementing an integrated distributed energy strategy, food & drink producers can control all aspects of lower carbon, lower cost energy management. If 50% of manufacturers across all sectors adopted a suite of decentralised energy solutions, our research shows they could reduce annual carbon emissions by 7.2 million tonnes. This

could also result in collective energy cost savings of £540m a year across the industrial sector.

INFORMING ENERGY EFFICIENCY

Energy efficiency should be stage one of any distributed energy strategy, but where should you focus for greatest gain? Innovative AI and IoT enabled monitoring and reporting technologies, such as our PowerRadar solution, use wireless sensors to monitor exactly how energy is being used across your site, including machinery and processes, and then display this information in dashboard format. This informs both energy saving opportunities and operational improvement and preventative maintenance strategies.

We used PowerRadar to identify £116k of annual energy cost savings at a food & beverage producer's distribution centre. We spotted a hidden opportunity to reconfigure a fault on a cooling compressor that is saving more than £50k per year.

ONSITE GENERATION

Distributed energy technologies, such as solar or combined heat and power (CHP), are highly effective in reducing

energy costs, bolstering energy security and improving sustainability. The return on investment for food & drink businesses is typically rapid, but many businesses use our finance packages to deliver immediate savings CAPEX-free, without taking on operational and maintenance responsibilities.

There's the added opportunity to monetise onsite generators via demand-side response (DSR) participation, or to add battery storage to enhance cost, resilience and sustainability performance.

See how Centrica Business Solutions can provide a complete, end-to-end service to food and drink manufacturers. ●

“BY IMPLEMENTING AN INTEGRATED DISTRIBUTED ENERGY STRATEGY, FOOD & DRINK PRODUCERS CAN CONTROL ALL ASPECTS OF LOWER CARBON, LOWER COST ENERGY MANAGEMENT.”

RESULTS IN ACTION

Coca-Cola HBC Italia is using our CHP technology to generate most of its power, hot water, cooling and steam requirements. This is reducing energy costs, while cutting CO² emissions by 1,343 tonnes each year.

As Europe's number one DSR provider, we're managing a DSR programme for sugar producer Tereos, which is reducing energy costs and helping the company to reduce CO² emissions in its European sugar factories by 20%.

