

ELLEN MACARTHUR FOUNDATION

We cannot recycle our way out of the plastics waste and pollution problems we see today.

» p2

FAUNA AND FLORA INTERNATIONAL

Urgent action required to achieve a circular plastics economy.

» p4

WORLD ECONOMIC FORUM

The answer to solving plastic pollution isn't to eradicate plastic altogether.

» p6



Sustainable Packaging

BUSINESSANDINDUSTRY.CO.UK

“Planet or Plastic? National Geographic’s multi-year effort to raise awareness about the global plastic waste crisis. Learn what you can do to reduce your own single-use plastics, and take your pledge.”

p11 National Geographic



MEDIA PLANET

© IMAGE PROVIDED BY NATIONAL GEOGRAPHIC_PLANETORPLASTIC_CHIAS_JORDI

PROTECTS WHAT'S GOOD

Turn to p3 to learn from Tetra Pak why collaboration is key in today's circular economy



Follow us





Reuse, refill, return: how a circular plastic economy can help end plastic pollution



WRITTEN BY:
SARA WINGSTRAND
New Plastics Economy
Ellen MacArthur Foundation

It is time to stop plastic becoming waste. After all, plastic is a useful and durable material and, while it is harmful in the environment, it can be every bit as valuable in the economy.



WRITTEN BY:
ANNETTE LENDAL
New Plastics Economy
Ellen MacArthur Foundation

Today, most plastic packaging is made to be thrown away. An overwhelming 72% of it ends up in landfill or leaks into nature. This is not only environmentally damaging but amounts to \$80-120 billion (USD) being lost to the global economy every year.

By applying circular economy principles, we can replace this linear model of take-make-waste with a system that makes the most of resources. While the linear model relies on extracting materials from the ground and making products that will eventually be discarded, in a circular economy, waste is designed out, materials and products are kept in use, and natural systems are regenerated.

Embracing a circular economy

More than 40 years after the launch of the first universal recycling symbol, still only 14% of plastic packaging is collected for recycling; even less is recycled into new products. We cannot recycle our

way out of the plastics waste and pollution problems we see today.

Reuse is an innovative opportunity to change how we think about packaging, turning it from something seen as disposable into a valuable asset that is cleaned and refilled many times.

Reuse packaging models enable brands to build customer loyalty, optimise business operations, allow for product customisation, and cut costs. If we converted just 20% of single-use plastic packaging to reusable alternatives, it could unlock \$10 billion (USD) for businesses.

Reusable bottles and refill cups can offer a better customer experience

Reusable packaging can also be more convenient and economical for the customer. Refill options are now available in many areas of everyday life, from popular refillable bottles and reusable coffee cups, to containers for takeaways, ready meals, and home and personal care products.

“ Only 14% of plastic packaging is collected for recycling.”

The Ellen MacArthur Foundation recently published *Reuse - Rethinking Packaging*, a book highlighting 69 examples of businesses that are already shifting to such successful reuse models.

Incentivising brands to use recyclable products and packaging

Such examples are new to many customers. TerraCycle is piloting Loop, a new online and physical shopping platform that features products in reusable packaging from well-known brands. Participants include Nestlé, PepsiCo and Unilever. Loop will charge brands a membership fee determined by the durability, washability, and life cycle assessments of their packaging, meaning brands are incentivised to

design packaging to be kept in use for as long as possible.

By rethinking their products, brands can often rethink their packaging. For example, toothpaste tabs come in a reusable jar that replaces the standard, non-recyclable toothpaste tubes. These tabs are being offered by a number of personal care companies.

Brands are now developing sustainable alternatives

US startup, Blueland is similarly rethinking household cleaning products. It delivers detergent as tablets, which the user mixes with water in a reusable spray bottle to make the final product at home. This significantly reduces shipping and packaging costs.

If containers can't be refilled at home, customers are often incentivised to do so on the go. Cosmetics brand, CoZie, has created a bulk dispensing machine for its products, such as moisturisers and face creams, and offers discounts when

empty containers are returned.

In London, startup DabbaDrop has been inspired by a century-old lunch delivery and return system from Mumbai. It uses metal tiffin boxes that are easy to stack and easy to wash, and the company delivers food by bicycle for a flat fee. The empty tiffin box is picked up on the customer's doorstep when the next order is delivered.

The urgency to act on plastic pollution is now widely understood. Through the New Plastics Economy Global Commitment, over 400 organisations, including some of the world's largest corporations, have signed up to a clear vision of a circular economy for plastics. These organisations explicitly acknowledge that we need to rethink how we bring products to customers without relying on disposable packaging.

The time for reuse is now. ■

Read more at businessandindustry.co.uk

Let's make packaging for a sustainable world.

PAPER | PACKAGING | SOLUTIONS
LSE:SKG

 **Smurfit Kappa**
Open the future



Collaboration is key in today's circular economy

In a linear economy, 'take (raw materials), make, use and dispose' has been the production and consumption process for decades. This process has rightly come under recent scrutiny from all corners of government, industry - and from consumers too.

Consumers are demanding less single-use plastic, more information on how and where packaging material is sourced, and how that material can be recycled. Essentially, they want to know how their actions impact the environment in a more circular economy.

As a packaging company, our role must fit into a bigger picture where everyone - from the government, to retailers, to industry, to consumers - works together to protect what's good.

Action to support a circular economy

We're seeing the UK and Scottish Governments taking policy action to provide the right conditions to enable a circular economy.

Their move towards policies that improve our waste management and recycling infrastructures, such as Extended Producer Responsibility (EPR) and Deposit Return Schemes (DRS), preserves the 'producer pays' principle when it comes to the recycling of waste packaging.

In Scotland, the design of a DRS trial is a significant step towards the Government's zero waste ambition. This is welcome progress, especially for convenience and on-the-go drinks brands.

Making household recycling easier

The UK Government has consulted on a similar DRS system in England, Wales and Northern Ireland, and is developing plans for consistent household recycling. This has the potential to provide much needed clarity to consumers on what they can recycle at home.

But these initiatives will be ineffective if they are not accompanied by a change in consumer, retailer and manufacturer behaviour, underpinned by widespread public awareness campaigns.

A simple and straightforward approach

For consumers, the key is simplicity and clarity. That is why we believe that, once viability has been tested, all packaging formats, including cartons, should be included in a DRS across the UK.

This is alongside consistent household recycling collections and EPR. Without this consistency, we will continue to see recycling efforts hampered by consumer confusion.

Brands also have a role to play given their strong relationship with consumers. M&S has launched a plastic take-back scheme for customers to return non-recyclable

“It's what happens to a carton after it is used that truly contributes to a collaborative, circular economy for all.”

plastic packaging, and Estée Lauder has pledged to ensure a minimum of 75% of its packaging is recyclable, refillable and reusable by 2025. It's a good start, but the onus is also on us; the packaging suppliers.

The renewable carton

On average, over 70% of the material that makes up our cartons is paperboard, made from trees which, through collaboration with the Forest Stewardship Council¹ (FSC[®]), are harvested from responsibly managed forests and other controlled sources.

Yet, it's what happens to a carton after it is used that truly contributes to a collaborative, circular economy for all. In the recycling process, the different material streams that make up the package - paperboard, aluminium and polymers - are separated, and made into new products such as cardboard packaging, soap dis-

pensers, napkin holders and plant pots.

Currently, cartons are collected for recycling in over 94% of local authority areas, with around two thirds implementing kerbside collection from homes.

For many years now we have actively worked closely with ACE UK, the Alliance for Beverage Cartons and the Environment, alongside councils, to increase this coverage and continue to do so. Our support in facilitating the opening of a dedicated carton recycling plant in Halifax in 2013 is testament to this.

In addition, with up to 80% less plastic and three times less CO₂ impact than an equivalent plastic bottle,² Tetra Pak cartons outperform the majority of other packaging formats such as plastic, glass and aluminium, when it comes to carbon footprint.

We at Tetra Pak are also part of an exciting partnership with the Ellen MacArthur Foundation and its New Plastics Economy commitment, which calls for more action to eliminate problematic and unnecessary plastic packaging.

This is just the start, and as we continue to converse and innovate,

we're ready to continue our collaboration with the wider industry to tackle the circular economy challenge head on. ■

WRITTEN BY:
ERIK LINDROTH

Sustainability Director,
Tetra Pak Europe and Central Asia



How we've helped

We've pledged €80 million towards the development of paper straws, tethered caps and other solutions. In addition, we continue to expand the use of sugar cane based polymers for the caps and necks of cartons. Field testing recyclable FSC[®] certified paper straws has begun in Europe, a region where carton packaging companies have yet to develop these products.

Sponsored by



Read more at
tetrapak.co.uk/goodchoice

1: The FSC[®] license code for Tetra Pak is FSC[®] C014047 2: UK Comparative Life Cycle Assessment, IFEU 2018, Dairy category 3: www.ellenmacarthurfoundation.org/news/spring-2019-report 4: www.tetrapak.com/about/newsarchive/first-carton-packaging-company-to-launch-paper-straws



© ARYFAHMED

Companies must tackle the building blocks of the global plastic pollution crisis

WRITTEN BY:
DILYANA MIHAYLOVA

Marine Plastics Projects Manager,
Fauna & Flora International



Pictures of seabirds with brightly coloured plastic in their stomachs, or turtles wrapped in discarded fishing nets, have become all too common. These images have helped spur policy action on the most visible sources of plastic pollution such as single-use bags or straws.

There is a far less visible, but arguably more harmful, culprit stalking our oceans: plastic pellets.

A type of microplastic no more than five millimetres across in size, plastic pellets are the building blocks of nearly all plastic items. The raw material for the plastics industry, they are melted together to create finished plastic products.

These pellets get spilled throughout the plastic supply chain, escaping into waterways and polluting the ocean, where they get mistaken for food by wildlife. Pellets also adsorb toxic chemicals from the water and can transfer these toxins to marine life.

Pellet pollution crisis – particularly in the UK

Identified as the world's second largest direct source of microplastic pollution in the ocean, it's estimated that up to fifty-three billion pellets a year enter the ocean from the UK alone.

Pellets have been found on every European coastline that volunteers have checked, with pellet pollution hotspots emerging near industrial sites, suggesting chronic pollution throughout the plastic supply chain.

This is where big plastic-using brands have an important role to play. As the final link in the supply chain, they can request information from their suppliers regarding pellet spills and put pressure on them to handle and transport pellets in a way that minimises these spills.

Some are starting to recognise this – IKEA has said it audited some of its suppliers, but it is yet to publish its results.

Urgent action required to achieve a circular plastics economy

Fauna & Flora International, which has been working on the issue of plastic pellet loss, believes there is growing momentum among policymakers and investors to demand effective and transparent pellet loss prevention measures across the industry.

However, there is still an urgent need for more widespread recognition that pellets are the weak link in the ambition for a circular plastics economy – an outcome many multinational brands have committed to.

The focus to date has been on recycling, which means putting waste back into the system. But the system cannot be a truly closed loop until pellet spills are stopped. Tackling pellet pollution must be a priority if we're to achieve a circular plastics economy.

By prioritising pellet pollution and exerting their sizeable influence, brands, investors and policymakers can all help create a system that reduces plastic pellet pollution. And we can all demand that these key groups take responsibility for cleaning up plastic supply chains – and our oceans. ■

 Read more at businessandindustry.co.uk



© KOLDUNOV

Saving the world 40kgs of plastic at a time



WRITTEN BY:
SARAH HARPER

Consultant,
UNEP



WRITTEN BY:
RAN XIE

Associate Programme Officer,
UNEP

Images of plastic packaging strewn throughout the environment are commonplace in all types of media. Yet these plastic cups and bags are only symptoms of the bigger need to overhaul the 'take-make-waste' economy. The problem is visible and understood but what needs to be done and how can individuals help solve it?

Devastation from plastics and single-use disposables as they enter the human food chain is evident.

At sea, plastic masses form 'continents' larger than countries, wildlife is dying, and oceans and air are polluted. Indeed, plastic microparticles are found everywhere on Earth. In social media, plastic straws have become a symbolic call to action. Public outcry for suffering marine life (the iconic sea turtle) is pushing companies and legislators – often after being criticised on social media – to find solutions.

The EU has passed a directive on single use plastics, which foresees bans for specific product categories. Citizens around the world demand better recycling programmes, and companies like Starbucks are abandoning plastic in favour of paper straws... but keeping plastic cups.¹

Yet, these efforts do not comprehensively address the root problem – a society and economy based on waste. And some media coverage takes energy away from more effective actions. Innovation and new business models need to be upscaled.

Treating the problem has limited potential – only about 9% has been recycled.² But our culture of the 'take-make-waste' economy is recent – nearly half of all plastic ever

“ 40% of plastic produced globally, or 161 million tonnes, is packaging, used once and thrown away. That's almost 40kgs of plastic waste every year per person.”

manufactured has been produced in the last 18 years.

So, quick action from governments, companies AND individuals to change the plastics culture could work.

The big picture: change consumption and production systems

The impacts of daily decision making (from government, business and individuals) have a huge potential to make change.

Forty per cent of plastic produced globally, or 161 million tonnes, is packaging, used once and thrown away. That's almost 40kgs of plastic waste every year per person.

Decision makers – both public and private – are coming together to develop needed solutions – from regulations to innovation and cocreation for new business models (as exemplified at the UN Secretary General's Climate Action Summit last week in NYC).

Like global leaders, citizens, too,

can make a difference. Individuals can choose and demand more sustainable options to live their lives and they can ask action from governments and companies to set standards and offer products that do not harm the environment.

For example, the United Nations Environment Programme (UNEP) works with partners to achieve what's known as a circular economy for plastics, by eliminating unnecessary plastics, developing high value and needed plastics, and keeping them out of incinerators, landfills and the environment.

Over 400 institutions, including 16 governments, 200 businesses of the plastic packaging value chain (jointly representing over 20% of all plastic packaging used globally), 26 financial institutions with around US \$4.2 trillion assets, and six investors committed to invest about US \$275 million, have signed the New Plastics Economy Global Commitment. This collaboration between UNEP and the Ellen MacArthur Foundation, a circular economy think tank, encourages businesses and governments to focus their attention on those actions that can lead to the most significant benefits in tackling plastics pollution. ■

 Read more at businessandindustry.co.uk

1: Additional statistic: We produce about 300 million tonnes of plastic waste every year – almost equivalent to the weight of the entire human population. 8 million tonnes of that enters the ocean every year. And what goes in the ocean, goes in you. **2:** Science Advances article: first global analysis of all plastics ever made—and their fate. Of the 8.3 billion metric tons that has been produced, 6.3 billion metric tons has become plastic waste. Of that, only nine percent has been recycled. The vast majority—79 percent—is accumulating in landfills or sloughing off in the natural environment as litter. Meaning: at some point, much of it ends up in the oceans, the final sink. If present trends continue, by 2050, there will be 12 billion metric tons of plastic in landfills. That amount is 35,000 times as heavy as the Empire State Building. (Learn about one possible future solution.) Roland Geyer, the study's lead author.



Why we need to think differently about packaging

Packaging is necessary if we are to avoid food waste, protect products and ensure medicines remain sterile. The trouble is that needless, single-use packaging is spiraling out of control.

Peter Oswald — CEO of Mondi Group, an international packaging and paper group — has worked in the packaging industry for 25 years.

For decades, this was a sector that didn't inspire much conversation among the general public. But that's changed. These days, environmentally conscious consumers are extremely aware of the packaging their products come wrapped or boxed in.

"It's been interesting to see increasing numbers of people recognising that useful packaging is enormously important," says Oswald.

"Packaging avoids food waste, protects products against damage and ensures the sterility of medical products. This means it's a major positive contributor to the reduction of carbon emissions, resource savings and healthier lives."

The problem — and it's a huge one — is too much needless, single-use, non-sustainable packaging generates alarming amounts of plastic waste and leads to unnecessary resource consumption.

"We consume 350 million tonnes of plastic per annum, which, by

2050, will increase to around one billion tonnes per annum," says Oswald. "Over 200 million tonnes of plastic stays in the environment every year, either as landfill or in the oceans, and it's estimated that it will remain there for around 400 years."

The Replace, Reduce, Recycle philosophy

At least part of the solution to this dire problem can be found in the philosophy of Replace, Reduce, Recycle. "The industry needs to replace plastic with paper where possible," says Oswald.

"It should also use flexible rather than rigid packaging when necessary, such as stand-up pouches, which typically reduces plastic consumption by 70%. And it should create packaging that has the same barrier properties as traditional plastic but is made from a single polymer, and is therefore more easily recyclable."

No-one is saying we should do away with plastic altogether, maintains Oswald. It would be too impractical for a start, particularly in the healthcare sector.

Yet, the fact is that a significant

“Over 200 million tonnes of plastic stays in the environment every year, either as landfill or in the oceans, and it's estimated that it will remain there for around 400 years.”



INTERVIEW WITH:
PETER OSWALD,
CEO,
Mondi Group

percentage of plastic packaging is used by manufacturers purely because it's cheaper, even though there are more environmentally friendly alternatives on offer.

"For instance, paper should be the material of choice for e-commerce,"

says Oswald. "It's not necessary to use bubble wrap. And there's no need to use plastic trays for groceries such as ham and cheese, because we've developed a perfectly suitable paper alternative."

Is a 'plastic tax' the answer?

On the plus side, growing numbers of firms are switching to sustainable packaging because increasing numbers of consumers are demanding it.

However, some companies still need to be persuaded to make the leap, preferring to stick with plastic bottles over a recyclable, stand-up, pouch for liquids, which has been well-received by customers and is better for the environment.

"Their argument is that they would need different filling equipment for pouches, which requires more outlay," says Oswald. "I'm a firm believer that we need a 'plastic tax', which would give companies an incentive to reduce their reliance on plastic. Because when plastic is used, costs are paid by society in terms of landfill and cleaning up the oceans."

Oswald is pleased about the public

outcry over plastic waste because it puts the need for sustainable packaging into focus. He points to Germany's planned ban on single-use plastic bags and Amazon India's promise to eliminate plastic packaging by 2020. "We've seen a lot of momentum in this area, so I'm optimistic," he says. But he also cautions against complacency.

"You can ban plastic straws, which is a very good step. But if you then think you've solved the environmental problem and can move onto a different topic, you haven't really understood the scale of the challenge we're facing." ■

WRITTEN BY:
TONY GREENWAY

Sponsored by



Read more at
mondigroup.com/en/home

It's our choice: buy and live better with less plastic

WRITTEN BY:
ELISA TONDA

Chief, Consumption and Production Unit,
United Nations Environment Programme (UNEP)



WRITTEN BY:
GARRETTE CLARK

Sustainable Lifestyles Programme Officer,
United Nations Environment Programme (UNEP)



Do consumers want the plastic box that dinner came in? Was it the cheapest way a company could sell a meal? Consumer habits are influenced by what they can afford, what is available, and what is desirable.

In many cities around the world, food delivery is common. Minutes after ordering by phone or online, food arrives with a staggering amount of waste - plastic cutlery, straws, napkins, containers and plastic bags.

One entrepreneur, Prativadee (Bonnie) Sananvatanont, is changing that by piloting a plastic waste reduction scheme in Foodpanda, a popular food delivery service.

As a winner of the Asia Pacific Sustainable Lifestyles Challenge in the Plastic Waste category, Sananvatanont received a UNEP grant to run the pilot and will receive business and marketing training and a chance to win more.

With over 200,000 orders per month in Thailand, almost all of the cutlery sent out is plastic. Sananvatanont built an opt-in system, where customers can decide if they need plastic cutlery. If only 10% of orders opt out, that would mean the service removes 276,000 sets of cutlery a year.

What YOU can do to live more sustainably

Everyone's daily decisions have impacts. Individuals can make more sustainable choices and can ask governments and companies for more information and options.

One initiative underway is the Anatomy of Action developed by UNEP and the UnSchool of Disruptive Design.

This contribution to the One Planet Network's Sustainable Lifestyles and Education Programme takes evidence and merges it into a tool kit, outlining everyday lifestyle swaps that individuals can make to live more sustainably.

Made up of videos, social media assets and facts, this how-to tool kit offers the means and messages to change in the living areas of: food, stuff, move (transport), money and fun.

It targets the two to three billion new urban consumers coming online in the next decades, most of whom will be young and will get their information from social media.

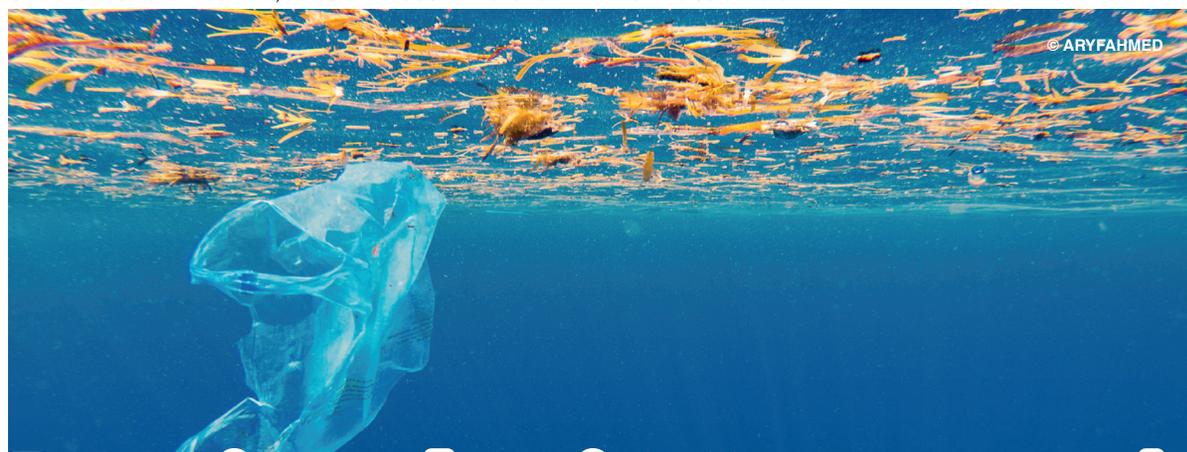
The easy swaps highlight carbon positive changes and what kinds of information and action can be asked of companies and governments. These efforts contribute to the UN System-wide #ActNOW social mobilisation campaign for climate action.

Individuals can and do make a difference

While the climate emergency has finally made its way into the mainstream and public consciousness, plastic cups and bags are indicative of more entrenched, systemic issues, and should not distract from the reality - the need to change the 'take-make-waste' economy to one that is circular and green. Individual actions are fundamental - individuals can and do make a difference. Earth is ready for a change. Are we? ■

Read more at
businessandindustry.co.uk

qvik.com/news/young-news-social-media-yle/
Example packaging related asks Food: when buying food avoid excessive packaging and take your own bags; Stuff: Recommend and buy from companies that provide spare parts for repair, take back services or use recycled materials in production; use your consumer power to buy better; ask brands how to take care of products; how they produce and source and their commitment to sustainability.



Banning plastic straws won't save the ocean; collective action will

WRITTEN BY:
KRISTIN HUGHES

Director,
Global Plastic Action Partnership,
World Economic Forum



Styrofoam takeaway container, permeated with grease and therefore non-recyclable. Travelling? The hotel's shampoo often comes in tiny, non-reusable bottles. Buying a loaf of bread? Even paper bags are fitted with a plastic window.

The statistics are well-known: at least eight million metric tons of plastic waste flow into the ocean every year. Much of it is plastic packaging, which has an astonishingly short life span: only 14% is collected for recycling, while the rest becomes waste.

Plastic pollution has become a global challenge — not just an environmental one, but also a humanitarian one: the build-up of plastic waste has triggered floods and public health crises across the world, putting vulnerable populations — particularly women and children — at heightened risk.

So, why is single-use plastic packaging so often our only choice? Why has the wasteful mantra of 'take, use, and discard' become our collective way of life? And how can we break free of this cycle and encourage more sustainable packaging?

The answer to solving the plastic pollution crisis isn't to eradicate plastic altogether. Rather, it's to rethink the way we make, use, and dispose of plastic packaging. It means transitioning the world to a circular economy for plastics — one in which plastic products like bottles and food containers can be recycled, regenerated, and reused, saving them from a landfill or the ocean.

Here's how businesses, governments, and consumers can drive this transition from concept to reality.

Businesses must transform their supply chains

To achieve the transition to greater sustainability and environmental responsibility, we need businesses onboard and, encouragingly, some are starting to engage meaningfully.

For example, industry giants like The Coca-Cola Company and PepsiCo

have signaled a clear willingness to pioneer a new approach to sustainable packaging. Coca-Cola has pledged to adopt 100% recyclable packaging by 2025, while PepsiCo has made similar commitments, vowing to shift to exclusively using recyclable, compostable, or biodegradable packaging for its products by 2025.

Both companies are also exploring refill stations that eliminate single-use packaging altogether.

They, along with Nestlé, Dow, and the governments of the UK and Canada, have been instrumental in working with the World Economic Forum to co-found the Global Plastic Action Partnership (GPAP), a public-private platform that helps leaders translate commitments into action in addressing the plastic waste pollution crisis.

Governments must incentivise sustainable packaging

Across the world, reducing plastic pollution is rising to the top of national agendas. Policymakers from both developing and developed nations are looking for solutions and taking steps to implement national action plans to tackle the issue.

To build the infrastructure needed to transition to a circular economy, governments must first create an enabling environment.

This includes crafting policy incentives for innovative business models, investing in research and development toward sustainable packaging, supporting a recycling-focused infrastructure and then sharing best practices with others.

Indonesia has announced ambitious targets to cut marine plastic debris by 70% by 2025. The lessons gleaned from this effort will inform similar plastic

waste reduction strategies across the ASEAN region.

Similarly, Ghana, where staggering levels of waste have become a significant impediment on economic growth, is set to launch a new GPAP partnership. The effective strategies drawn from this engagement could catalyse action throughout Africa.

Consumers must advocate for a new packaging economy

There is a surprisingly common phrase among consumers discussing plastic waste: They usually announce with pride that they've stopped using plastic straws.

Some might ask how saving a few straws could make a discernible impact in the grand scheme of things. Yes, the impact is nascent, but the statement is symbolic.

Increasingly, people are more aware of the scale of the plastic pollution problem. Many have adopted small lifestyle changes, like bringing shopping bags to the store. But we can — and must — do much more to effect change at a greater scale.

Now is the time to promote the importance of sustainable packaging and to press our governments and the brands we love to implement change. We need to push for commitments, targets, and concrete action to make our world a healthier, more equitable, more liveable one.

With collective action, we can produce positive change. ■

Read more at
businessandindustry.co.uk

Switching to more sustainable packaging solutions

Mindsets must change to reduce unsustainable packaging and stakeholders need to work together to find greener packaging solutions.

Why should companies use sustainable packaging (where possible)?

There are two questions we need to ask ourselves: first of all, what is the impact of producing unsustainable packaging on climate change? Secondly, what happens to unsustainable packaging after it has been used?

A fundamental problem is that the lifetime of unsustainable packaging is vastly different from the lifetime of the product inside it. Take a bottle of apple juice: the juice stays inside the bottle for maybe a couple of months — but the bottle stays on the planet for hundreds of years. Of course, we can recycle and reuse that bottle; but that puts a lot of pressure on an overloaded and complex recycling system. So, what's required is a change of mindset from everyone in the supply chain, from producers right through to consumers.

What makes you optimistic that mindsets will change?

What's different now — to say 20 or

30 years ago — is that power is in the hands of the consumer and, thanks to social media and platforms such as YouTube, public awareness of the problem is high. The consumer is annoyed by unsustainable packaging and demanding change. In fact, our research shows that 75% of consumers prefer paper-based packaging. That's forcing manufacturers to act.

What kind of changes do companies need to make?

We are a paper-based packaging company, but we're not against plastic. The beauty of plastic is that it resists moisture, is relatively low weight and has many benefits. But there are examples where paper-based alternatives could be used instead.

Take plastic trays to package mushrooms. That tray is simply there to help the consumer take the product home — there's no liquid inside it, so there's no functional reason to make it out of



INTERVIEW WITH:

ARCO BERKENBOSCH
Vice President Innovation and Development, Smurfit Kappa

plastic. Or what about those plastic rings holding six-packs of beer or soft drinks cans together? More and more drinks producers are switching to holders made from paper-based materials.

How is collaboration important in this area?

As a company, our role is to develop more sustainable packaging, but this isn't something that only we can do. That's why we launched

an initiative called Better Planet Packaging — based on education, inspiration and innovation and partnership — where stakeholders, including commercial partners, universities and consumers, work together to develop more sustainable packaging.

Taking a '360 approach' we can work out how packaging solutions can better match consumer preferences while fitting with a brand, working effectively in the supply chain and being economically viable for producers.

How can fully recyclable and sustainable materials be used throughout the supply chain?

For instance, we have developed a solution for farmers to replace plastic used for mulching with a fully compostable paper product. Their produce can then be shipped to retailers in recyclable corrugated containers and transferred to paper-based packaging punnets to reach

consumers. In this way, produce can travel from farm to fork using only sustainable materials. ■

WRITTEN BY:
TONY GREENWAY

Smurfit Kappa have developed a revolutionary new paper to replace Polythene. Made from long pine fibres from sustainably managed forests in Northern Spain, AgroPaper™ enables efficient and eco-friendly mulching. It prevents weed growth and does not need to be removed after harvest as it is fully compostable and can be laid with existing machinery.

Sponsored by



Read more at businessandindustry.co.uk



Let's make packaging for a sustainable world.

Consumers are choosing companies that are helping to make packaging waste extinct. We are already helping thousands of companies open the future by adapting their packaging. We've also worked with over 60,000 supply chains, allowing us to gain a huge amount of knowledge, so we understand the complexities involved. In fact, sometimes the biggest challenge is just getting started. Join the evolution, talk to us today.

PAPER | PACKAGING | SOLUTIONS
LSE:SKG

Join us to create **Better Planet Packaging.**
Visit smurfitkappa.com

Smurfit Kappa
Open the future

New circular solution to address the problem of plastic pollution

A new recycling process is able to convert valueless plastic waste into recycled oil, which can then be used to make high-quality plastic products and packaging. This is the circular economy in action, directly preventing plastic pollution.

Is plastic a hero — or a villain? For Carlos Monreal, Founder and CEO of Plastic Energy, a global company developing a new technology to help prevent plastic pollution, it has the potential to be both.

“Plastic has many applications and can solve many problems,” he says. “It can keep medicines sterile in healthcare settings and keep produce fresher for longer in the food industry; and it is a lightweight and versatile material. So, plastic can be a hero. But plastic waste is often considered a villain. However, if we can find a solution to redesign, reuse, or recycle plastic, it will truly become a hero again. Because, getting rid of plastic altogether is just not possible — or desirable, either, given all the benefits it has.”

Making hard-to-recycle plastics part of the circular economy

Traditionally, there has been a big issue concerning the recyclability of some plastics. For a variety of reasons, companies often design complex plastics from multiple compounds that cannot be mechanically recycled. But, now, a ‘disruptive’ solution, called chemical recycling, has been developed to complement mechanical recycling and overcome some of its limitations, and to divert these plastics away from incineration, landfills, or our environment.

“We take plastic waste, melt it at high temperature and, ultimately, obtain recycled oil, which is purified and sold to the petrochemical industry,” explains Monreal. “It effectively replaces the virgin oil used to make plastic products. This Plastic2Plastic process will increase recycling rates and the recycled content in high-quality products to ‘close the loop’ and create a circular economy. And the process is endless: when plastic with recycled content is turned back into waste, we can recycle it again.”

The solution is already proven with two operational and commercial plants in Spain, the ISCC+ certification of the Plastic2Plastic process, and long-term agreements with global partners to build more large-scale plants.

Only possible with value-chain collaboration and policies in line with innovations

“The petrochemical industry is looking for innovations to fulfil the demand from brand owners to have recycled content especially in high-quality food-grade packaging,”

INTERVIEW WITH:



CARLOS MONREAL
Founder and CEO,
Plastic Energy

says Monreal. “So there’s a whole value chain needed to drive this change and build a new industry. We are already seeing ambitious commitments from brand owners and regulations from governments or the EU going in the good direction. But we need much more to deploy innovative solutions to make plastic circular and prevent plastic pollution. And chemical recycling is one.” ■

WRITTEN BY
TONY GREENWAY

Plastic Energy uses thermal anaerobic technology (TAC) to convert valueless plastic waste into TACOIL that is then be used as a new feedstock to make virgin-quality plastic, which is suitable for food-grade packaging.

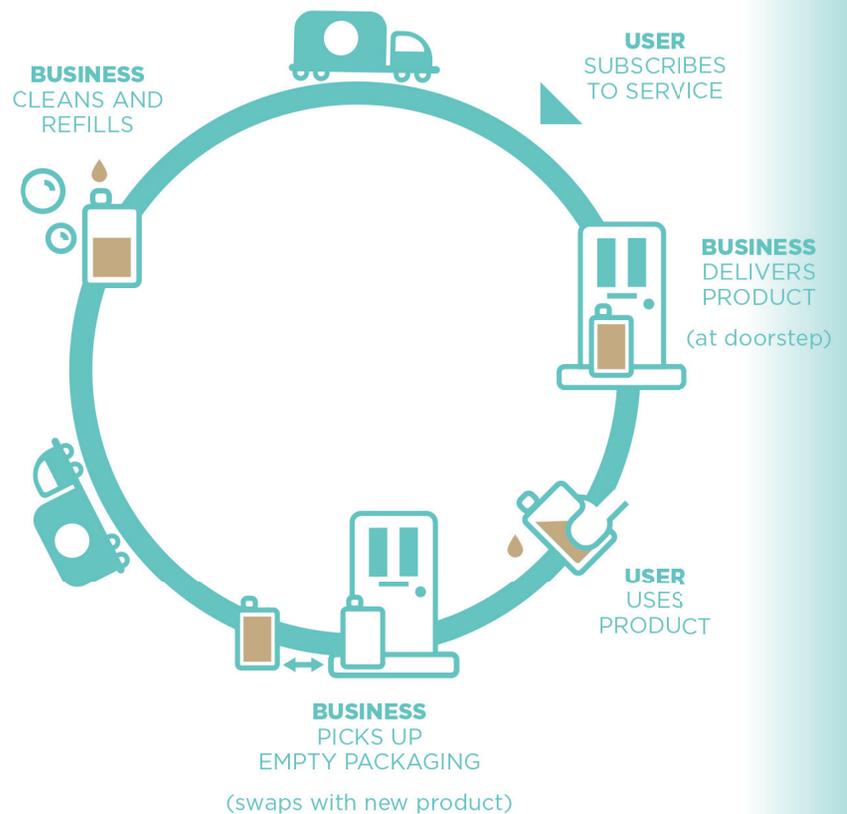


Sponsored by



Read more at
plasticenergy.com

Return from home



WHERE IT WORKS

Return from home is suitable for e-commerce as the pickup of empty packaging can be combined with the delivery of new products. It is particularly well suited for urban areas with reduced travel distances between deliveries.

Current examples of **Return from home** include:

- E-commerce for products such as groceries, meal delivery, personal care, home care, and beauty.

TYPICAL BENEFITS



Users can get a better experience through improved functionality and/or aesthetics of the packaging.



Businesses can improve brand loyalty by incentivising the return of the packaging through deposit and reward schemes.



Businesses can optimise operations through the standardisation of packaging or shared logistics and cleaning facilities across brands, sectors or wider networks, e.g. in combination with a third-party packaging/service provider.



Businesses can improve brand loyalty and obtain user insights through subscription to auto-replenishment services. Users don't need to worry about keeping track of stock and reordering in a subscription service.

POTENTIAL CHALLENGES

- Establishing a local reverse logistics, cleaning, and refilling infrastructure to ensure economic and environmental feasibility.
- Developing the right deposit and reward scheme. The scheme needs to incentivise the return of packaging without scaring customers away with a very high initial deposit.
- Developing a system to keep track of deposits and handle payouts.
- Reducing the risk of theft of high-value packaging when sitting on the doorstep upon delivery or return.
- Scaling quickly to maintain affordable prices for customers.

Advancing sustainable packaging to drive the circular economy

When it comes to packaging, a majority of consumers place the greatest importance on strength¹ – a package must not break or leak. Their next priority: the packaging is good for the environment.² Fibre based packaging can deliver on both.

WRITTEN BY:
PATRICK LINDNER
President,
Consumer Packaging,
WestRock



Helping customers achieve their sustainability goals, while also meeting consumer expectations of performance is an undertaking that requires deep partnership and innovative thinking, but if we work together, we can connect people to products in a more sustainable way.

The challenge before us is to move toward packaging that is right-sized, renewable, recyclable and/or compostable. We are partnering with our customers to do just that, with a focus on:

Renewable materials

Wood fibre is inherently well suited to the circular economy due to its renewable nature and ease of recyclability. Responsible fibre sourcing is key to renewability so, by working

closely with landowners and certifying organisations like the Programme for the Endorsement of Forest Certification™ we can ensure that the virgin fibre used in our products is responsibly sourced.

- Using both virgin (new) fibre and recycled content. While recycled materials are important to the circular economy, many people don't realise that paper fibres are not infinitely recyclable. Without the addition of virgin fibre into the paper manufacturing system, recycled fibres would eventually become too small to be reused.
- Operating recycling centers in many areas of North America, bringing fibre-based packaging

back into the manufacturing cycle to be used again.

- Collaborating with partners like The Recycling Partnership to encourage consumer education and the development of recycling infrastructure.

Advancing sustainable packaging

- Partnering with customers and working to ensure that packaging is sustainable, through recycling and composting, as well as waste reduction.
- Continuing to work to develop fibre-based solutions that help customers remove plastics from their packaging. Additionally, scien-

tists are discovering new methods for enhancing recyclability and compostability of paperboard while maintaining strength and quality.

- And, working in partnership with our customers to create packaging that is the right size for use.

From our fibre sourcing team to our paper scientists, packaging engineers and designers and recycling professionals, we are committed to making packaging as strong and sustainable as possible. They are why I joined this company. Together, we believe we can use our collective knowledge and resolve to help solve our customers' challenges and make an impact on one of the most important issues of our time. ■

WestRock was one of the winners of the NextGen Cup Challenge with our prototype of a recyclable fiber-based cup for hot and cold beverages. The prototype has also passed compostability testing with the Compost Manufacturing Alliance.

Sponsored by



Read more at westrock.com

1: According to our most recent Packaging Matters™ study 2: WestRock Packaging Matters E-Commerce and Sustainability, 2019

ANATOMY OF ACTION



www.AnatomyOfAction.org

#AnatomyOfAction



© WITTHAYA PRASONGSIN

Making ethical supply chains the new normal

Commodity production and trade are at the centre of Earth's most pressing sustainability challenges including climate change, biodiversity loss, and extreme poverty.



WRITTEN BY:
JEFF MILDER
Director of Global Programs,
Rainforest Alliance

The Rainforest Alliance is on a mission to make responsible business the new normal. For most companies involved in food, agriculture, and forest products – supply chains present the greatest environmental and social risks.

The clock is ticking: the time for ethical supply chains is now

These supply chains are at the centre of Earth's most pressing sustainability challenges, including climate change, biodiversity loss, and extreme poverty. The expansion of farms and plantations for beef, soy, palm oil, timber, and other commodities is the leading cause of tropical forest loss in the Amazon, Congo Basin, Southeast Asia, and elsewhere.

Today's commodity business also carries a high human cost – expelling indigenous peoples from their land, contributing to forced labour, and perpetuating low wages and inequality.

In recent years, hundreds of companies have committed to cleaning up their supply chains by eliminating deforestation and human rights abuses associated with the products that we all consume.

But progress toward these commitments remains slow. And, as highlighted in a recent report from the Economist Intelligence Unit, many companies are failing to address fundamental issues such as climate change or child labour, and are even reducing their investment in supply chain responsibility.

Words are not enough. Consumers want results.

Today's consumers are savvy and don't want empty promises; they

want meaningful action and real results. For some companies, certification is the full solution to meeting this consumer demand. But to drive towards 100% responsible commodities worldwide, we need a broader arsenal of tools and tactics. And we need a common framework for companies to set sustainability commitments, take action, demonstrate results, and be held accountable across vast global supply chains.

Introducing the Accountability Framework: a guide for the ethical supply chain journey

The recently launched Accountability Framework fills this need, responding to company requests for a clear roadmap to achieve ethical supply chains that protect ecosystems and respect human rights. Underlying the Framework is the consensus of 15 leading NGOs – representing a unique convergence of environmental and social perspectives – as well as the contributions of hundreds of other organisations, experts, and companies.

The Framework helps to align existing tools (including certification and many others) and guide action in contexts where such tools are now lacking. That way, companies can follow a single, harmonised approach to manage and report their progress.

It's time to make ethical supply chains the new normal. Consumers are asking for it. And now, with the Accountability Framework as a guide, companies can achieve it. ■

Read more at businessandindustry.co.uk

1: growthcrossings.economist.com/report/no-more-excuses



© WITTHAYA PRASONGSIN

Recycling: the start of a better life

As plastic waste continues littering our environment, the time to act is now. We at Plastic Bank have designed a global recycling system that makes plastic too valuable to throw away.



WRITTEN BY:
SHAUN FRANKSON
Co-founder and CTO,
Plastic Bank

The world is filled to the brim with plastic. We use it in countless different ways, and while it's versatile and highly useful, it's devastating to see it polluting our ecosystem. Though events like beach clean-ups do help in counteracting the damage, this will continue being a band-aid solution until the problem is stopped at the source.

Plastic Bank believes the key to ending plastic litter is revealing the value it holds - make it too valuable to throw away. Our goal is to create a root cause solution that turns off the tap on ocean plastic at the source.

Eighty per cent of the plastic flowing into our oceans comes from developing countries, where the infrastructure to properly deal with waste doesn't exist. Imagine the impact if all that plastic, which is currently thrown away, clogging up waterways and finding its way into the ocean is instead collected, recycled and reinvested back into the supply chain as new products.

Recycling plastic, improving economies

We at Plastic Bank have taken on this

“Our mission is simple – fight ocean plastic and global poverty. So how do we do it? We make plastic waste into currency.”

challenge. Our mission is simple – fight ocean plastic and global poverty. So how do we do it? We make plastic waste into currency.

We have collected 10.9 million pounds of ocean-bound plastic altogether. To frame this differently, that is equal to 237 million water bottles prevented from entering our water systems. In addition to a cleaner environment, collectors are able to enjoy a better quality of life.

We add a bonus on top of the market rate of plastic to provide a social impact wage. Our blockchain platform provides our members with a digital identity, a savings account, and access to a credit score. Our ecosystems allow the payment of school tuition, health coverage, sustainable cooking fuel, WiFi, cell phone minutes and more.

Recycling is a starting point for a better life – our members receive

access to financial inclusion, education and career training for a life beyond recycling.

We have partnerships with some of the largest corporations in the world, such as SC Johnson, IBM, Henkel, and Aldi. You can find our logo on product partner lines carried at Marks & Spencer, Aldi and DM.

Our world is interconnected - what happens in places we can't see still affects us. We know our oceans are integral to all forms of life. It's our responsibility to ensure our businesses respect the environment on a fundamental level. We at Plastic Bank invite you to join the revolution. ■

Find out more

For more information about our work, visit:

plasticbank.com

Read more at businessandindustry.co.uk

Answering consumer demand for sustainable packaging

Manufacturers must embrace circular economy values and companies need to work together to develop sustainable packaging innovations.

Why should manufacturers be moving to sustainable packaging solutions?

For the future of our planet we need to find new ways of consuming — and that has a direct impact on packaging. Consumers want sustainable packaging. They don't simply want to hear companies talking about their 'mission' in this area. They want to see concrete results. That's one reason why brand owners are taking action to find new ways of operating.



INTERVIEW WITH:

TIMO KEKKI,
Vice President,
Films Business Unit,
UPM Raflatac

The Ellen MacArthur Foundation's New Plastics Economy Global Commitment is committed to developing alternative, circular and renewable labelling solutions. Why is this important?

There's an easy logic to the circular economy: the more we re-use material that is already in the system, the more efficient it will be from an environmental standpoint — and from an economic standpoint. The New Plastic Economy is gaining traction among many players. This is a commitment we would recommend others to sign up to.

How can labelling companies make a difference?

Labels are enablers. With labels we can address the 3R's: Reduce, Recycle, Renew. Labels address sustainability from two ends: closing the loop and having sustainable origin. It means that labels enable efficient recycling of the total packaging and are made from recycled content or bio-based materials without risking the performance compared to current solutions. For instance, our new polypropylene film material is a 100% wood-based solution originating from sustainably managed forests. Companies shouldn't have to choose sides, however. You know: are we on the circular economy side, or the bio-based materials side? We should be able to integrate both systems. In fact, doing so is the only way to create truly sustainable, commercially efficient packaging.

How important is it for companies to work with partners to develop sustainable solutions?

Companies can't hope to come up with great solutions in this area on their own anymore to protect their Intellectual Property. They need to create the right partnerships in the value chain to make it possible.

How can we all play our part in the future of sustainable packaging?

I don't have any better answer than there are choices we all have to make to ensure we 'walk the talk'. As consumers, we have to demand change and then follow through with actions — which gives companies more commercial incentive to use recycled materials or bio-based materials.

Are you optimistic that demand for sustainable packaging will continue to grow?

I am. We certainly see new innovations coming to the market — and we're happy about that. Change is coming and solutions will be developed. There is a question mark over how quickly it will happen, however. But this is something we can all influence as consumers. ■

Sponsored by

UPMRAFLATAC

WRITTEN BY:
TONY GREENWAY

Read more at
upmraflatac.com



Ocean trash is building up; this artist reveals what's out there

WRITTEN BY:
DANIEL STONE
Senior Writer, Science,
Technology and Food System



Barry Rosenthal started collecting plastic garbage on a New York shoreline. His photographs reveal the variety of water-borne trash.

Beaches across the planet share many characteristics: sand, water, ocean breezes—and plastic. At Floyd Bennett Field in Brooklyn, New York, the coastal area where artist Barry Rosenthal goes collecting, trash piles up fast and in layers, as if at an archaeological site.

Plastics will indeed be the artifacts of our era, particularly in oceans, where the material invades ecosystems and floats around the world. More than five trillion pieces of plastic already fill the seas, with some nine million tonnes added each year.

Artist Barry Rosenthal builds these assemblages to illustrate the extent of marine pollution. He keeps trash in his studio for months — sometimes years — until a critical mass of colour emerges.

These objects have little in common beyond their shades of white — and their slow degradation by ocean waves, harsh sunlight, sand, and salt.

Photographing plastic sculptures to highlight pollution

Rosenthal observed how bottles, toys, and food wrappers fade, wear out, yet never disappear. He started building and photographing sculptures of ocean trash to illustrate the problem of marine pollution.

Eventually he began to gather the detritus to use as his art materials, cleaning a small section of the coast over and over again. "I started to just collect as much as I could and go back to my studio to sort it out," he says. Each sculpture has a theme, by colour, shape, or intended use.

Scientists believe some plastic trash lasts forever

Manufacturers design products, such as plastic utensils and to-go cups, to be used only once. But these items don't go away: scientists believe some plastic trash lasts forever.

Even pharmaceutical waste, including pill containers, syringes, and inhalers, finds its way to the beach.

Rosenthal collected motor oil containers along the shore at Floyd Bennett Field in Brooklyn, New York. Among the trash that lines the shore are wrappers for candy, chips, and other snack foods.

A project begun for aesthetics has acquired a second purpose: raising social and environmental awareness. Now Rosenthal travels to speak about ocean pollution and what might help clean it up. The most meaningful advance, he says, would be to rethink our method of consuming.

"We need a paradigm shift in all packaging design," he says. "Not just plastic bags and straw bans to make people feel good." ■

This story is part of Planet or Plastic?—our multiyear effort to raise awareness about the global plastic waste crisis. Learn what you can do to reduce your own single-use plastics, and take your pledge.

Read more at
businessandindustry.co.uk

Full circle recycling — why businesses must 'go compostable'

If there were a solution to plastic waste at festivals, in coffee chains and the fast food industry available now, we'd all like to hear it wouldn't we? Well, there is. Compostable packaging is set to provide business with an alternative to shipping our plastic off to sit in landfill.

Plastic recycling is one of the most important environmental issues facing our planet, representing a complex problem with very few simple solutions. In the UK, we 'recover' a significant percentage of our plastic waste. This, unfortunately however, is very different to 'recycling' that plastic.

We can't simply get rid of it from our supermarkets, where its use in protecting perishable food is vital in terms of minimising food waste. But, what about replacing plastics with natural, compostable food and drink packaging? Compostable alternatives to plastic-lined coffee cups, for example, do exist — affording events and businesses the chance to cut down their plastic waste and consolidate their waste streams into one.

Sam Walker from Biopac UK believes moving to fully compostable packaging could make life easier for these industries.

Products made from materials such as corn starch and bagasse (a bi-product of refining sugar) are already available and can be composted with food and drink waste. Currently, food and drink waste contaminate the plastic recycling process.

"It's a big benefit for event managers, having one waste bin for all products. To contrast that with current high street recycling schemes, where consumers have to pour waste coffee into one bag, put the cups into another bag and lids into yet another bag. "If the cup and lid are compostable, all of it goes in with any other kind of compostable packaging along with food waste — which only helps compost the products."

Current schemes invariably cater for products made from one material. Sandwich packs, for instance, face the same issues for recycling as cups do, because they are often a combination of plastic, card, paper and film. Are we going to come up with a scheme for every type of packaging? Why not just switch to compostables that won't necessarily cost more than current solutions and are far eco-friendlier than not acting at all.

They help form a circular economy. Crops are grown and the bi-products are used to make compostable packaging. When broken down with food waste, the compost produced is then re-used to grow more crops.

Walker, who speaks with real passion about the issue, feels that the time for excuses has passed. "The argument against compostables is that the infrastructure to compost them isn't there. But this is rapidly increasing each year and we can ensure that 100% of collected waste gets composted. The same cannot be said for recycling where we ship waste abroad for processing. We have a choice between two products, why do we continue to use the one that's more harmful to the environment?" ■

WRITTEN BY:
JAMES ALDER



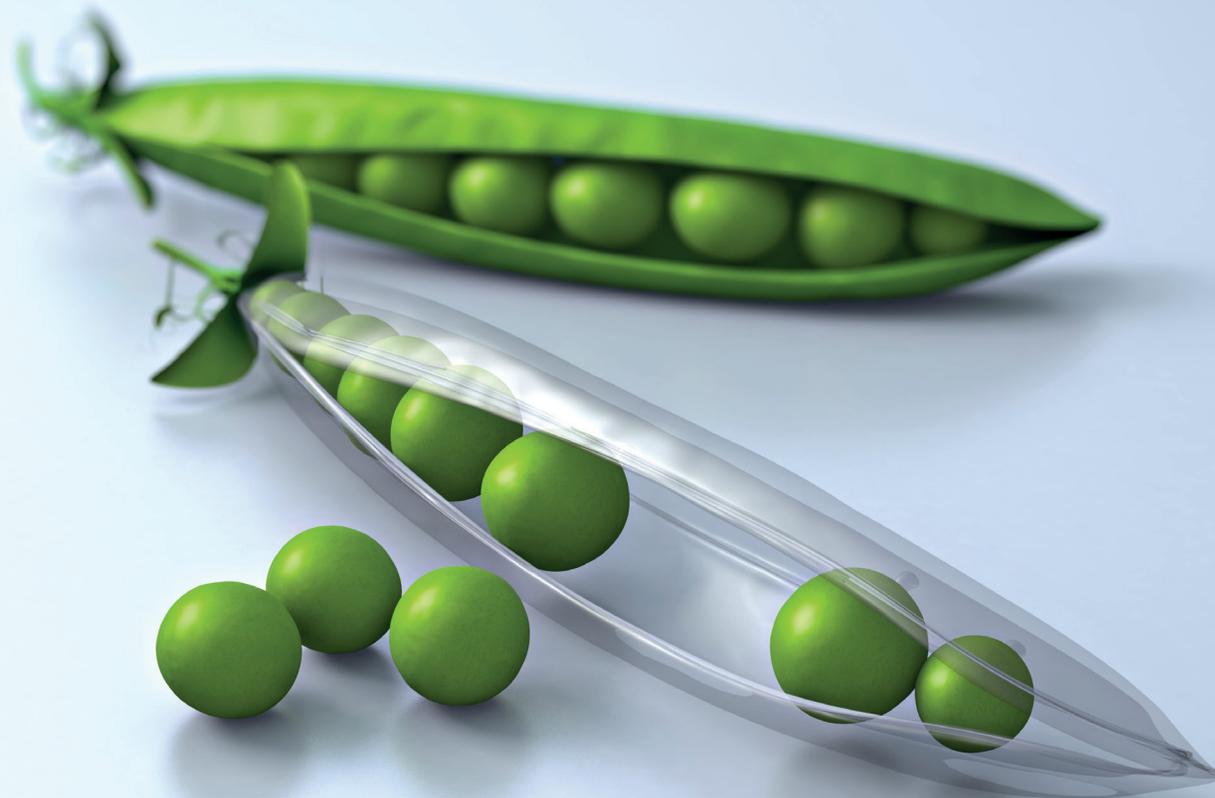
INTERVIEW WITH:

SAM WALKER
Business Development Manager,
Biopac

Sponsored by

biopac
packaging with principles

Read more at
biopac.co.uk



Material innovation: solving the plastic packaging waste crisis

12 billion tons of flexible packaging end up in the trash each year, and recycling is not cutting it. Daphna Nissenbaum of TIPA tells us about technology helping brands make a change.

Since the 1960s, brands and consumers have accustomed themselves to the convenience of single-use plastic, which serves as a barrier to protect food freshness and provides durability and shelf life. Recently, science has directed our attention to what becomes of our plastic packaging, and, as it turns out, most of our world's produced plastic still exists, and recycling isn't limiting our plastic production as we hoped. Currently only 9%¹ of all produced plastic has ever been recycled.

Plastic waste is rarely recycled

Flexible packaging (for crisps, granola bars, bread bags) makes up a substantial

sector of the plastic packaging industry, and is almost impossible to recycle. The packaging often combines several materials to enhance mechanical or chemical properties and, because of this, very little of flexible packaging's plastic is eligible for recycling.

Raw food substances can further contaminate packaging,² prohibiting recycling due to health standards. Recycling these materials is a costly³ process with a limited market for the end-product. Brands who want to keep packing their products will have to look to new materials and new solutions.

Circular packaging solution

Imagine if all of the items from

INTERVIEW WITH:



DAPHNA NISSENBAUM
CEO and Co-Founder,
TIPA

“This generation is setting new market standards, and those who refuse to adapt will lose their markets.”

your next trip to the grocery store could be sent together to compost bins instead of landfills to be made into healthy soil over the next few months. This innovation isn't science fiction, it already exists, and now leading brands in the UK and overseas are rolling it out one product line at a time.

Daphna Nissenbaum is the CEO and Co-Founder of TIPA, an Israeli

company working with brands across Europe, the United States, and Australia, and producing compostable flexible packaging alternatives for the food and fashion industries.

“When we first started with this idea, back in 2012, people looked at me like I was dreaming,” Daphna remarks. “But, over the last year, demand has exploded as the conversation around our waste, and issues such as climate change, are becoming more widely discussed. It took us a long time to find the right unique solution, and now, we are able to scale up fast.”

Leading brands on board

With compostable packaging easily replicated over typical plastic production lines, TIPA's product opens new markets for traditional retailers.

“We've seen clients dramatically increase their market share by switching to compostable packaging,” says Daphna

Leading brands like Bimbo, Waitrose, Mara Hoffman, and Stella McCartney have adopted TIPA's new material innovation because it gives them the ability to retain all the quality features they received from their former conventional packaging while breaking down fully in a sustainable end-of-life process. As more consumers demand brands with a

sustainable ethos, more companies will prioritise sustainability as a path to market growth.

“The kids are out on the streets demanding change. The price for not adopting alternatives is more expensive, and not just in dollars - it is costing the health of our planet's ecosystems. This generation is setting new market standards, and those who refuse to adapt will lose their markets. I hope that governments everywhere push companies to innovate more in this area. Our planet needs change.”

WRITTEN BY:
GINA CLARKE

Sponsored by



Read more at
businessandindustry.co.uk

