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Partner Comment

As we step into year two of the covid-19 global pandemic, we are experiencing an incredibly unprecedented period of time in history for the foodservice and packaging sectors where consumer trends have pivoted. These significant changes, notably hygiene over sustainability, have had a huge impact in the way that we now operate and meet supply and demand. It is crucial that as an industry we continue to examine packaging and materials, ensuring sustainable and recyclable packaging solutions are available and backed by science.

Together with navigating a global pandemic our industry is encountering a "perfect storm" situation, with overnight price increases for raw materials across the globe, particularly in plastics, as well as transport and freight price hikes and availability issues, whilst not forgetting the daily struggle to meet HGV driver and labour demands.



At kp we are pleased to support this report which gives invaluable insight into our current situation in the foodservice and packaging sectors.

Roxy Walker, marketing communications director, food packaging, Klöckner Pentaplast

Introduction

In March 2020 the Office for National Statistics (ONS) added reusable bottles and cups to its 'inflation basket' of goods for the first time⁽¹⁾. The decision reflected "a growing number of people switching away from single-use products". More food brands were launching refill pilots and most had made public-facing commitments to tackle single-use plastic. Some were publishing their plastic packaging footprints for the first time and most were investing in ways to ensure all their disposable packaging was recyclable or compostable.

Politicians, meanwhile, were busy penning policies to make producers pay more for unrecyclable packaging. A plastics tax was prepared, as well as market restrictions on the most commonly littered items, like plastic straws. Campaigners continued to push for change, and so too consumers.

Then the covid-19 pandemic struck. Foodservice businesses raced to purchase personal protective equipment (PPE) – most of it single-use – and shift their models to 100% takeaway as lockdowns came into force. Supermarkets talked of customers switching from loose fruit and vegetables to pre-packed produce, which they perceived as safer (2).



Sodexo was among the caterers that re-introduced plastic-wrapped cutlery. Led by Starbucks, out of what the coffee chain described as an "abundance of caution", the majority of high street chains also stopped accepting reusable cups on hygiene grounds ⁽³⁾.

In an exclusive Vypr survey for this report of 500 people who have visited a food-to-go outlet in the past three months, 30% of respondents said they'd stopped using reusable cups. Similar anxieties crept into businesses served by contract caterers. "Almost overnight we saw customers who had switched to reusable solutions move back to disposables," explains Stephen Brennan, supply chain and procurement director for Aramark

Northern Europe. The fears, as detailed later in this report, persist.

So how has the covid-19 pandemic impacted foodservice packaging? Are companies still committed to reducing disposables, improving recyclability and using recycled rather than virgin polymers? Do consumers still care about plastic pollution? Have safety fears really derailed progress on reusable models? And is there still the political will to press for the ambitious reforms set out in the government's resources and waste strategy for England?

Through discussions with around 20 industry experts, think tanks, consultants, academics and campaigners, as well as an exclusive consumer survey, this report provides some of the answers.



Packaging, perceptions and the pandemic

"We were making really good progress, getting traction from clients on packaging, and then everything just stopped."

Mike Hanson, director of sustainable business, WSH

The true impact of the current pandemic on packaging (and consumer behaviour) is yet to emerge. Early reports of single-use plastic consumption jumping 250% to 300% in some countries were fanciful (4), as was talk of plastic having 'a good pandemic' – at least as far as food and drink packaging goes. The foodservice sector was hit hard and the effects will last for some years to come.

Research by Valpak, a compliance scheme, suggests the amount of packaging placed on the market by the hospitality sector fell across all materials (aluminium, glass, plastic, paper and board) in 2020 as businesses were forced to close. Grocery packaging tonnages likely increased on the other hand, as people drank beer at home from cans rather than in bars in pint glasses, for example. The amount of

plastic packaging used by hospitality businesses is estimated to have dropped 47% from 2019 to 2020, while in supermarkets it increased by around 6%⁽⁵⁾. The amount of packaging placed on the market by hospitality and hospitality wholesale businesses reached 1.2m tonnes in 2019, but that is estimated to have slumped to 687,000 tonnes in 2020, according to *Footprint*'s analysis of Valpak data. However, this year packaging levels could rise to almost 1.6m tonnes.

Politicians paused some of their policies, too. The plastic bag tax was temporarily scrapped, for example, while England's ban on plastic straws and stirrers was delayed. The European Commission came under pressure to reassess its Single-use Plastics Directive because it "did not take into account the hygienic consequences of banning or reducing single-use plastics", argued

The amount of plastic packaging used by hospitality fell 47% from 2019 to 2020, while in supermarkets it increased by around 6%.

You have previously used a reusable cup. Have you stopped doing so since the covid-19 pandemic started?



How well do you think the foodservice sector is performing in attempts to reduce plastic waste?



Very good Good

Acceptable

Poor

21%

36%

UK processing of plastics: rising fast but fast enough?

| | 2017 | 2019 | 2020 | 2021 | 2022 |
|--------------|-----------|-----------|---------|---------|-----------|
| Aluminium | 32,000 | 38,000 | 25,000 | 33,000 | 38,000 |
| Glass | 653,000 | 673,000 | 376,000 | 573,000 | 704,000 |
| Paper & Card | 117,000 | 259,000 | 139,000 | 189,000 | 259,000 |
| Plastic | 196,000 | 220,000 | 116,000 | 165,000 | 220,000 |
| Steel | 63,000 | 38,000 | 31,000 | 35,000 | 38,000 |
| Total | 1,061,000 | 1,228,000 | 687,000 | 995.000 | 1,259,000 |

Source: Valpak PackFlow covid-19 phase 2, 2020

European Plastics Converters, a trade association.

Similar noises were made in the UK, where the Foodservice Packaging Association (FPA) frequently reported that "sets of plastic cutlery that are wrapped and delivered in a totally hygienic and safe condition, are currently in huge demand, alongside single-use cups, plates, straws and bowls".

Many packaging suppliers were crucial in helping meet huge demand from the NHS, in particular. Some pivoted to produce and source more PPE, while plastic cutlery was diverted from airlines to hospitals. Business models also evolved quickly to take advantage of customer demand for drive-thru and delivery.

Indeed, spending on fast food and takeaways climbed 62% last year, according to a review of transactions by Barclaycard. These models currently rely almost exclusively on single-use packaging. Some brands have been forced to make quick decisions on new formats and materials. Others are still taking what they can get their hands on as they battle ongoing supply chain challenges.

Demand and desperation has led to accusations of widespread greenwashing – some claims the result of ignorance, others intentional – by suppliers pitching 'environmentally-friendly' solutions. Buyers have been left baffled by the claims as they strive to offer what their clients and consumers want.

Corporate critiques

Public concern about plastic is undimmed. McKinsey research shows that only 4% to 11% of consumers globally are less concerned about packaging sustainability than they were precovid ⁽⁶⁾. In the UK, the top concerns are marine litter and excessive waste production.

The public is yet to be wholly convinced by the performance of foodservice businesses in reducing plastic waste. Although most of those surveyed by Vypr think efforts to-date have been "acceptable" (36%), more consider the performance of the sector to

HOT TOPIC

Carbon counting

Interest in the link between plastic and global warming, in particular, has gone from lukewarm to red-hot since the start of the pandemic - at least among campaigners. The word plastic appears in neither the Paris Agreement 2015 nor the Glasgow Climate Pact 2021, so expect NGOs to pile on the pressure, starting with the UN **Environment Assembly meeting** in Nairobi this February/March. "Plastics are the new coal," warned one group recently. However, plastic – and in particular recycled plastic can have a lower footprint than alternatives (see Chapter 4).



be "poor" (21%) rather than "good" (19%).

Mexican restaurant group
Wahaca found that many of
the influencers it approached
to help promote new delivery
dishes took an interest in the
packaging. "Deliveries being sent
in sustainable packaging were
something that was essential to
them," explains sustainability
manager Carolyn Lum.

Campaigners sense this too and have started to sharpen their knives. A January report by the Environmental Investigation Agency (EIA) warned that the world's "addiction to plastic and failure to prevent it contaminating the food web directly undermines human health, drives biodiversity loss [and] exacerbates climate change" (see Carbon counting).

The issues concerning plastic now spread far beyond those revealed in that seminal BBC Blue Planet programme. Use of fossil fuels in the production of plastics and chemical toxicity are hot topics (*see Chemical concerns and circularity*). Microplastic pollution is not just a crisis for seas, either. In the UK, the Environment Agency is keen to tighten the limits on the levels of plastic permitted in composts and digestates spread on farmland ⁽⁷⁾. Too little is known about the fate of the

нот торіс

2020

2021

2022

Chemical concerns and circularity

2019

Hospitality packaging highs and lows

1.2

0.9

0.6

0.3

0.0

2017

Last year, experts writing for the journal Environmental Health warned that chemical safety is "often ignored" in solutions to reuse or recycle plastic, or to switch to other materials. The chemicals building up in recycled plastic is one concern. However, campaign groups like Fidra have also flagged "really high" quantities of PFAS – so-called 'forever chemicals – in rigid compostable packaging. NGOs in the UK and Europe have also showed PFAS in bakery, fries and sandwich bags from McDonald's, Subway, Greggs and the Coop, as well as pizza boxes from Papa John's, Domino's and Pizza Hut. UN experts have called for more information to be made available on chemicals additives, while campaigners have called for better enforcement of regulations and have even begun using the phrase 'toxic recycling' on social media. There is concern that the attention could deter people from recycling. Michael Warhurst, executive director at the CHEM Trust, told Ends Report recently that the focus should be on creating a clean circular economy because "anything else will risk undermining public confidence in the whole circular economy concept".

12.5 million tonnes of plastic used to help grow and protect food, the Food and Agriculture Organization recently warned⁽⁸⁾.

Support for a global plastics treaty, akin to those already in place for climate change and biodiversity, is snowballing. The tone of campaigning on single-use plastic has evolved from "acute to chronic", notes Robert Blood, founder at tracking firm Sigwatch. His data on global NGO activity shows the issue peaking at the start of 2019, falling

throughout 2020 and picking up again last year. The focus now is on criticising corporate commitments, he adds.





Committed to change during challenging times

"Plastic is at the forefront of everyone's mind and we're seeing some great progress in elimination and alternatives to plastic being used."

Ashleigh Taylor, head of environment, Compass Group UK & Ireland

December 2021 marked four years since the BBC Blue Planet II episode that beamed the plastic crisis into millions of homes. As the public demanded action, politicians pushed new policies and businesses were left with little choice but to act. Industry-wide commitments emerged together with public pledges to tackle single-use plastic.

The Ellen MacArthur Foundation (EMF), a think tank, spearheaded a global commitment, while Wrap launched the UK Plastics Pact.

These programmes were designed to help brands strip out unnecessary plastic packaging and ensure what's left is 100% recyclable, compostable or reusable. Significantly more recycled materials would also be

used in everything from pots to pouches, dramatically reducing carbon emissions in the process.

Food brands insist they have lost none of their desire to live up to their promises, despite the pandemic. Burger King has just committed to 0% single-use plastic by 2025, while Compass has set a target within its net-zero commitment to reach 100% reusable or recyclable packaging by 2023 (two years earlier than the Plastics Pact target). "We know we can't have recycling rates for plastic at their current rates forever," explains one contract caterer.

Getting shot of SUP

The shift away from conventional plastic is already happening. In 2020, use of virgin plastic fell for the second year running, a trend that EMF suggests will accelerate rapidly from the 1.2% drop in 2020 to 19% in 2025. That would keep 40 million barrels of oil in the ground, it noted in its November 2021 update – which presented a mixed bag of results ⁽⁹⁾.

Removal of problematic singleuse plastics is happening. Singleuse cutlery, expanded polystyrene, straws and black plastic are all being stripped out. Nestlé alone removed two billion straws, which are now banned in England and Scotland (as well as the EU). Businesses have been busy preparing for further market restrictions on commonly littered single-use plastics as the UK seeks to match the EU Single-use Plastics Directive. "Our goal is to stay ahead of legislation," explains Aramark's Brennan.

Aramark was among those businesses that removed straws and plastic stirrers long before they were banned. Expanded polystyrene - which will be banned in Scotland come June and is listed in a recent consultation among the items England wants to ban – is no longer available for Aramark's sites to purchase from its preferred suppliers. Once the current supply chain problems have settled down, cutlery and lids made from crystallised polylactic acid (CPLA), a compostable bioplastic, will be replaced with fibre-based alternatives.

"We know we can't have recycling rates for plastic at their current rates forever."

Contract caterer



Compostables, as well as some biodegradables, will also be subject to impending bans because they are defined as 'plastic'. This presents buyers with some tricky choices in the coming months. McDonald's has already had issues with the functionality of its paper straws, while Pret faced a backlash after it switched to wooden cutlery (10). Businesses have been trialling various options as they prepare for the bans, and some admit they are left choosing the "least worst" option (see *Chapter 3*).

Paper chase

Despite all this, UK brands have struggled to eliminate eight "problematic or unnecessary" plastic items, as defined by Wrap (cutlery, plates and bowls, straws and straws with cartons, cotton buds, drinks stirrers, polystyrene, oxo-degradables and PVC). Plastics Pact members have only managed a 42% reduction in tonnes of these since 2018: polystyrene is holding up progress with consumption falling just 3% from 2018 to 2020⁽¹¹⁾.

The weight of single-use plastic packaging that members placed on the market did fall 10% between 2018 and 2020. What isn't clear is what's driving this reduction: are brands getting shot of single-use plastic packaging or

simply switching to other singleuse materials?

EMF reports that 59% of its signatories have already increased the scope of their plastic elimination programmes beyond the usual suspects (those items subject to bans). However, only 20% of the reductions that signatories have made to date involve direct elimination of single-use packaging, and only 3% is from changes to reusable or refillable formats. More than three quarters (76%) were simply 'material changes', with paper the most popular option.

Paper and board have become incredibly popular alternatives to plastic; so much so that there are now concerns over supply of certified sustainable products. As more businesses switch to paper-based packaging this could drive illegal deforestation, Susan Evans from Green Alliance warned MPs recently as part of an inquiry into plastic waste (12). "There will be no compromise on standards," says Neil Whittall, head of sustainability at food packaging firm Huhtamaki.

Foodservice businesses are attracted to fibre-based products for a number of reasons: they are renewable (thereby decoupling packaging from fossil fuels), recyclable and a perennial favourite with consumers.

Which of the following types of packaging do you feel is most sustainable?

Recyclable card/ paper packaging 27%

Reusable 25%

Biodegradable 17%

Compostable 16%

Recyclable plastic 11%

None of these 4%



When asked which type of packaging is most sustainable, respondents to Vypr's survey picked recyclable card/paper (27%) over reusable (25%), and way ahead of recyclable plastic (11%).

The move to fibre-based options was in evidence at the recent Packaging Innovations show in London, says Paul Foulkes-Arellano, founder of Circuthon Consulting. The big packaging companies are clearly switching to fibre and scaling things up because no one can guarantee recycling for flexible plastics, he says.

Flexible foe

When it comes to plastics, the softer they get the harder they are to recycle. A fifth of consumer packaging is flexible plastic but only 6% is collected for recycling (13). Films dominate the 36% of plastic packaging produced by

pact members that is currently unrecyclable and the UK continues to rely on exports.

"The big packaging companies are clearly switching to fibre and scaling things up because no one can

guarantee recycling for flexible plastics."

Paul Foulkes-Arellano, Circuthon Consulting

Plastic packaging used in hospitality increased 20% from 164,000 tonnes in 2014 to 197,000 tonnes in 2017. Of that, 37,000 tonnes (19%) was film, according to the Valpak PlasticFlow 2025 report for Wrap (14). Just 2,000 tonnes was recycled.

The government wants to see flexible plastics collected from homes (fewer than one in five councils (16%) currently offer kerbside collections of these materials). How soon this should become mandatory is being hotly debated in consultations on harmonised household waste collections.

Models published in September by academics in Ireland showed the UK actually had "the greatest percentage of exported PE estimated to end [up] as ocean debris" in Europe (5%); plus the lowest share of PE being recycled (69%)⁽¹⁵⁾. Concerns have also been raised regarding the fate of the soft plastics now collected at 6,000 retail locations across the UK⁽¹⁶⁾.

The ban on exports of plastic to non-OECD countries promised in the 2019 Conservative manifesto has still failed to materialise (though provision for this has been included in the Environment Act). And with the Environment Agency struggling to regulate shipments another scandal or TV show involving branded packaging dumped overseas is increasingly likely.

Wrap has made flexible packaging – which is widely used but rarely recycled – its "number one priority". The UK Plastics Pact has groups working on producing

Plastic packaging from hospitality

RIGID: 159kt of which ...

48kt recycled **(30%)**

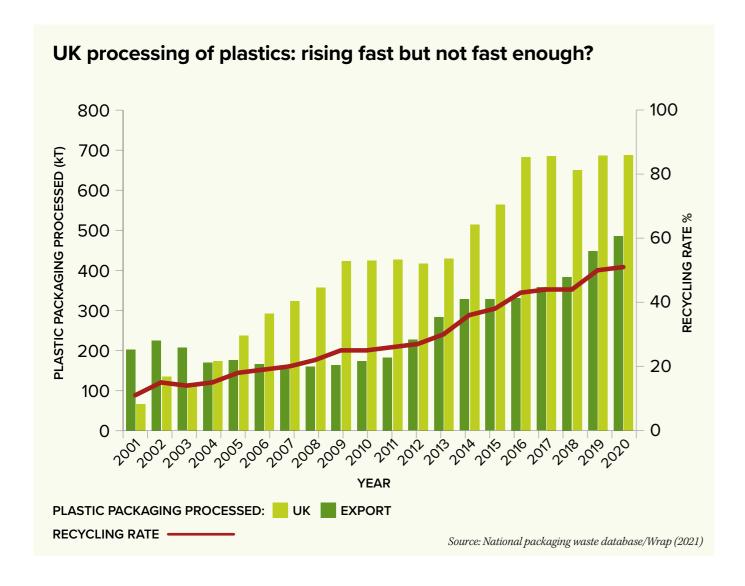
FILM: 37kt of which ...

2kt recycled (5%)

RIGID: 196kt of which ...

50kt recycled (26%)

Source: Valpak PackFlow 2025 (2017)



food grade (rPP), for example. Tesco, a founding member, last year launched what it claimed was the first food grade soft plastic packaging made with 30% post consumer recycled content⁽¹⁷⁾.

Plastic progress

Efforts to incorporate more recycled content generally are beginning to bear fruit: recycled content reached 18% across Wrap's signatories in 2020 (saving 140,000 tonnes CO2e). Those running the scheme were pleasantly surprised given the pressures of the pandemic and the temptation to revert to virgin polymers when the price of oil tanked.

The fact these targets can also

make a dent on those relating to carbon helped keep companies on track. Using recycled polyethylene terephthalate (rPET), high density polyethylene (rHDPE) or polypropylene (rPP) that can slash the packaging footprint by between 67% and 71%, according to industry-funded studies, is attractive to those aiming for netzero greenhouse gas emissions (18).

But business commitments to use more recycled content will be severely tested in the coming months. The cost of post-consumer rPET flakes in Europe has shot up 103% to €1,690 £1,416) a tonne since January 2021, according to ICIS data published in the Financial Times in January. This means rPET was pricier than virgin

PET. Demand is outpacing supply as the recyclers struggle to scale quickly enough and the UK plastics tax looms on the horizon.

Domestic processing capacity has increased. Figures from the national packaging waste database show 51% of the 1.2 million tonnes of plastic packaging was recycled in 2020 – 41% of it in the UK; in 2018 that figure was 35%. However, there is a 550,000 tonne shortfall in domestic capacity if a planned 70% recycling rate is to be met, says Wrap.

New policies, like EPR (extended producer responsibility), DRS (deposit return schemes) and consistent kerbside collections, promise to deliver higher quality



materials and release investment for infrastructure. So too the plastics tax. "There has been quite a lot of investment since the plastics tax was first proposed," Barry Turner, from the British Plastics Federation, told MPs recently (though industry would have liked to see tax funds ring-fenced by HMRC to help deliver more infrastructure).

The UK plastics tax, which comes into force in April, is a £200 per tonne charge on plastic packaging that doesn't contain at least 30% recycled content. Justin Turquet, head of sustainability at Bunzl Catering Supplies, says the tax is "broad in scope and will impact a number of products that we supply, although the cost impact is perhaps not as high as some people might have expected".

Perfect storm

But the tax is just one element of a perfect storm facing foodservice packaging. There is the rise in inflation, which has bumped up packaging prices by around 10%, and well-documented staffing and supply issues. The usually slick system behind container shipping has spun out of rhythm. "Trying to get hold of some of the materials you might want to use is taking longer and it's costing more," explains Pret global head of

packaging Simon Oxley.

Some businesses are defaulting to 16oz cups rather than 12oz because they can't get the stock. There is an argument that some of these issues highlight the benefits of circular economy thinking. Food companies increasingly have to report on their use of commodities, like soya, beef and palm oil, in order to reassure customers and investors that supply can be traced and is sustainable. Paula Chin, materials specialist at WWF-UK, sees similar transparency being required of businesses in relation to all the materials they use, including packaging (see Time for *Transparency*).

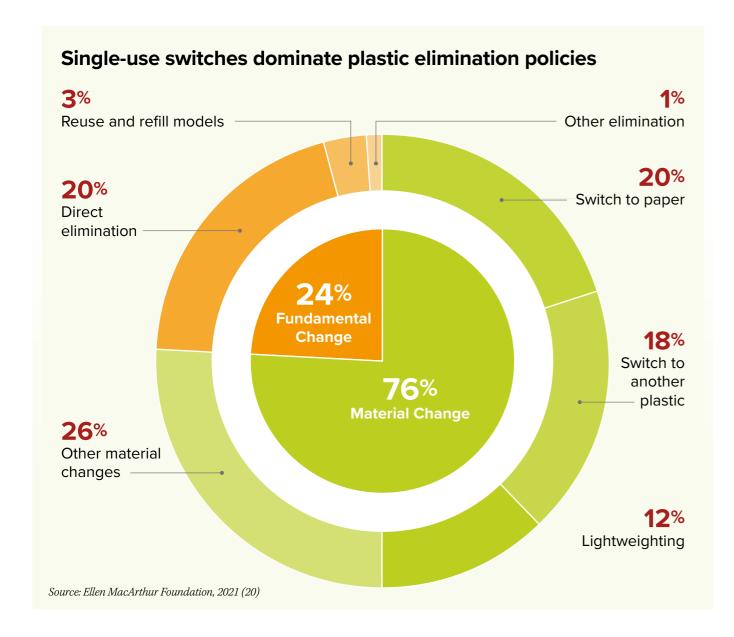
Chin has just published research trying to unravel the material flows of packaging used by hospitality and grocery companies, which found that the UK imports 9.7million tonnes of packaging and the origin of this is unknown ⁽¹⁹⁾. "We have no way of reporting on the data in relation to materials sourcing, processing, production and consumption," she explains. "And that's a big, big challenge."

Concern over consumption of materials is one of the driving forces in support for reusable packaging – a concept that took a knock during the pandemic. Just 1,700 tonnes of the 910,000 tonnes of primary plastic packaging used by UK

HOT TOPIC

Time for transparency

Footprint's 2019 packaging report highlighted how the high number of small businesses and far and wide dispersal of foodservice packaging made data on foodservice packaging hard to find. Individual companies were also "not habitually recording and reporting their packaging footprints". This hasn't changed. There is a "lack of published data on recycling in this sector", noted Valpak in its PackFlow 2025 report for Wrap. Some foodservice firms offered up their packaging data as background information for this report, while others said they don't have the figures. Starbucks and McDonald's have been publishing detailed plastic packaging footprints for the past two years as part of a programme with WWF⁽²¹⁾. Transparency will be critical if the sector is going to feed into government consultations and challenge what some see as the myths and misconceptions spread by some activists.



Plastics Pact members was reusable in 2020 - that's 0.2%. Schemes that involve shoppers bringing their own containers are not captured in this data but the finding raises big questions about the intention of the big brands to shake up their singleuse models. "We just need so many more trials and we need to just try and share the learnings and just keep going," says Wrap's strategic technical manager Helen Bird. "Because until we get the learnings and really understand how it is that we can scale it up, it's going be really difficult."

The early pandemic safety scares posed a considerable challenge. The

perception that reuse is somehow dirtier persists, according to some caterers. WSH director of sustainable business Mike Hanson says staff are nervous about coming back into work and employers are nervous about how their staff feel about reuse. "All that cultural change has gone backwards," he adds.

Lack of guidance from the government and its regulators hasn't helped. Scientists have joined forces with campaigners to challenge the 'single-use is safest' stories but there is a feeling that the Food Standards Agency should step in.

Our survey shows that 68% of those members of the public who

don't fancy adopting reusable containers for their takeaways say it's because of safety concerns; way ahead of cost (14%) or convenience (11%). However, those who wouldn't be happy with reuse models are in the minority (9%); 91% would like to give the systems a go with 44% having already done so for their grocery shopping. "Everyone wants to get back to where we were," says Hanson.





Finding (and funding) solutions

"Customers told us they want something that's quick, portable easy-to-eat and tasty [which is] 'grab and go'. But they also [...] don't want any single-use packaging'. We've yet to come up with a real solution to that."

Contract caterer, Responsible Business Recovery Forum

From the smallest cafés to the largest canteens, covid has created chaos and confusion. Approaches to packaging have varied wildly: from food being double-wrapped in plastic and high street chains refusing reusables, to hospitals that continued to offer washable plates and cutlery (22, 23, 24). Has a different view of packaging emerged? "It's a good question," says Whittall at Huhtamaki. "Single-use packaging has certainly shown its critical role in how businesses operate when dealing with consumers and ensuring food security."

Whether this means single-use packaging is now hero rather than horrid is moot – especially for the restaurants, cafés and catering companies that are now looking at building back their businesses as social restrictions ease.

World Coffee Portal data

published in January showed the UK branded coffee shop market grew 43% in the past 12 months, regaining 87% of pre-pandemic market value with outlet numbers exceeding 2019 levels. Spending on takeaways and fast food also rose 62% in 2021, as consumers splashed out more on in-home experiences and nights in, says Barclaycard.

Business is far from back to usual – VAT rises, new covid-19 variants, supply chain pressures and staff shortages present strong headwinds – but there is a feeling among experts consulted for this report that life is returning to normal. For one, campaigners have begun shouting about sustainability again. "Businesses had a period during the pandemic where they could essentially get away with a lack of action, but I think it's clear that demand from consumers is

very much still there and they are starting to run out of excuses," says Jo Morley, head of marketing and campaigns at City to Sea.

So, what challenges are foodservice companies facing and what solutions are emerging to deal with them?

Over-packed and overwhelmed

Faced with the paradox of competing demands for portability, convenience and speed, as well as sustainability and safety, brands have by-and-large stuck with single-use materials. The industry has not really moved up the waste hierarchy, say some experts. This is perhaps understandable given current uncertainties: "Disposables

"Businesses had a period during the pandemic where they could essentially get away with a lack of action, but I think [...] they are starting to run out of excuses."

Jo Morley, City to Sea

A mandatory

takeback obligation for cups, which is part of new EPR proposals, could

boost recycling rates

from 6% to 39%.



continue to offer flexibility and value for money and fit into existing business models," says Turquet at Bunzl.

Consumers are concerned by the levels of packaging, though. Vypr's research shows 58% are worried about the amount of on-the-go packaging, while 53% feel too much is arriving in food and drink delivered to their door. Ask them about grocery packaging, as many previous polls have, and concerns rise. People may have a lot of touch points with foodservice packaging but are rarely "overwhelmed" in the same way they are by the volumes that confront them during a weekly shop, says WWF-UK's Chin.

Most campaigners have traditionally focused their attention on supermarket and FMCG brands rather than foodservice or catering companies. Valpak data shows grocery businesses placed more than four times the amount of plastic packaging on the market as their hospitality counterparts in 2019 (987kt versus 220kt) – and the hospitality figures included primary, secondary as well as tertiary packaging.

No legislative let up

With this in mind, foodservice companies would be justified in feeling unfairly targeted by new regulations. Campaigners point to "woefully low" recycling rates for high profile items like disposable cups, while limited recycling data for foodservice packaging generally does little to help the sector's cause when challenging campaigners or responding to government consultations.

Academics, NGOs and policymakers are left to fill in the gaps. A study last year classifying 12 million items of litter showed that 50% to 88% were 'take-out consumer items', like wrappers, cutlery, bottles and cans (25). There are arguments over the source of that litter, how much there is, what it is composed of and who is to blame but the UK government is targeting items that are commonly littered, rarely recycled, or both.

Cups are firmly on its radar. "We are primed for government intervention," says WWF-UK's Chin. Despite an industry-led campaign, just 6% of disposable cups are recycled. A mandatory takeback obligation for cups, which is part of new EPR proposals, could boost recycling rates to 39% (a figure based on the 'Leeds by example' work run by environmental NGO Hubbub, and involving the likes of Starbucks, Ecosurety, Costa and Bunzl).

But the government – which

Are you worried about the amount of packaging ...



... on the go?

Yes 58% No 27%

... delivered to your door?

Yes 53% No 34%

Do you support a ban on disposables when dining or drinking in?



under the Environment Act now has powers to levy charges on all single-use items and not just plastic ones – sees a charge as a way to drive reuse (there is increasing evidence to show it is also more effective than the discounts most chains use). Just over half (54%) of those surveyed by Vypr supported such a 'latte levy'.

There was also support for a ban on single-use packaging when sitting in (65%). The government is mulling this over as part of a recent call for evidence (26). Juliane Caillouette Noble, managing director at the Sustainable Restaurant Association (SRA), says it is "pretty unacceptable" that reusables are not offered in quick service formats for diners staying on site, but there are "massive" impacts for businesses to consider (for more on reuse see Chapter 4). There is the space and cost of dishwashing facilities, especially for the smallest outlets. Many big brands - McDonald's, Burger King, KFC – have also built their models on single-use. There are also labour considerations: switching to reusables means additional staff but they are in short supply and increasingly costly to employ.

Alternative motive

The bans on commonly-littered industry essentials like cutlery, plates and polystyrene will also come at a cost. Alternatives to plastic cutlery are double the price, according to figures in the Westminster government's recent consultation, while paper boxes are more than three times the cost of those made from polystyrene (4p versus 14p). This will also have an impact on the public purse, with procurement costs rising for hospitals, schools and prisons (though the government sees this not as new costs but moving costs from one part of the economy to another).

The likes of the Green Alliance and WWF-UK told the Environment, Food and Rural Affairs committee recently that the bans would result in switches to less polluting but not less problematic alternatives, doing little to create a circular economy. The Scottish government acknowledged in its final impact assessment of its bans, set to come into force in June, that alternatives to single-use plastic plates, cutlery, straws, beverage stirrers and EPS food containers are "assumed not to be recycled, since these items are contaminated after use, and often poorly separated even if recycling is viable" (27).

Determining the most sustainable single-use packaging option is also laborious. Recent research showed 60% of expert buyers are confused by the sustainability claims of alternatives to plastic ⁽²⁸⁾. There are myriad options all touting their green credentials – and government funding for new solutions is plentiful.

Start-ups promising plastic that 'disappears' if it escapes into the environment continue to attract eye-watering levels of public and private investment. Recipe box supplier Gousto has been trialling edible packaging made from peas rather than plastic. US firm Novolex recently purchased Vegware,



"The quality of the fibre is good but is it good

separate it from the plastic? That's the sort of

enough to justify the effort of having to

Andrew Barnetson, Confederation of Paper Industries

question [the mills] are having to answer."



a specialist in compostable foodservice packaging based in Scotland, in what was reported to be a multi-million pound deal. And the UK government's proposal to ban plastic ketchup sachets has already sparked renewed interest in seaweed as an alternative to plastic.

Red card for green claims

Speak to the big packaging firms and they take all these green claims with a pinch of salt. All materials need to be sold honestly, adds Martin Kersh, executive director at the FPA. New guidance on green claims produced by the Competition and Markets Authority should help suppliers and buyers alike (29). The Advertising Standards Authority also appears to be scrutinising environmental claims more closely (30).

However, the battle between different materials rages on. Aluminium, paper, glass and compostables have all been boosted by the narrative that plastic is bad, making anything else good by comparison. It is an easy and seductive message but many brands see it is more nuanced than that (even if their customers don't).

In Wrap's opinion, every business should have a "robust defence for the choice of its packaging". Wahaca has spent the past 12 months

or so designing bespoke home compostable packaging made from bagasse, a by-product of sugarcane processing, as they counterbalance the dip in their dine-in revenue with higher demand for home delivery. Lum says it takes time, money and perseverance to find "the right material for your business". Suppliers should be quizzed and advice sought, she adds.

'Home compostable' packaging is gaining favour with some brands apparently frustrated by the poor capture and composting rates of industrially compostable materials. But critics argue that few households have a compost heap (and fewer still one managed to the exacting standards of the certification tests). "The big volumes [six million tonnes] are in industrial composting," says David Newman from the Bio-based and Biodegradable Industries Association (BBIA).

The ability to move away from fossil fuels, reduce carbon emissions and create positive marketing messages are all still driving interest in compostable options - but so too is end of life. Compostables may not be collected and composted in the short-term but Newman feels brands have more confidence in getting the collection and treatment systems in place than they do in flexibles made from conventional plastic.

charge on singleuse cups?



How often do vou recycle disposable cups bought on-the-go?

> **Always** 24%

24%

31%

Never

12%

I use a reusable cup 8%

Do you support a

Often

Sometimes

Segregate to accumulate

Whether it is conventional or compostable, plastic or paper, there are signs of a more collaborative approach to packaging being taken across the supply chain. Jean Dussaix, global sustainable sourcing lead at Sodexo, talks of "symbiosis" and his responsibility as a buyer to find the right products, from the right suppliers and the right waste management systems to deal with it. That is very different to five years ago, he admits, when manufacturers were "proposing products without any consideration of end of life".

Compass has introduced ready meal trays made from CPET that it says are "easier to recycle". What's more, the caterer will ensure all the plastic trays are returned to a dedicated recycling plant. "This circular programme ensures that the products are cleaned and broken down into flakes, to make into new trays again and again," says Taylor. Across five million meals this will save 244 tonnes of conventional plastic a year.

In Cambridge, a group of 12 restaurants and cafés are involved in a six-month trial with Cambridge BID, Envar Composting and Countrystyle Recycling aimed at recapturing compostable packaging. 'Mission compostable' is using four new city centre bins to collect the

packaging and food waste on-the-go, turning it into compost that is sold to farmers locally.

Mission critical in the coming months for the foodservice sector generally will be to recycle more paper cups. Of those who buy hot drinks out of home in our survey, almost one in two (49%) say they recycle their cups often or always; 31% do so sometimes. What gives? "People want the fibres and the problem has never been the demand for the actual cups - the problem has been getting them all in one place," says the FPA's Kersh.

Some paper mills are set up to process the cups separately, while others are thought to be readying their sites to take cups as part of the general paper and board stream. The tonnages involved (30,000 to 50,000 tonnes per year) are not a problem the issue is removing the plastic liner and whether that's commercially viable. "The quality of the fibre is good but is it good enough to justify the effort of having to separate it from the plastic? That's the sort of question [the mills] are having to answer," says Andrew Barnetson, director of packaging affairs at CPI, the Confederation of Paper Industries (see Stuck on paper).

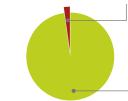
HOT TOPIC

Stuck on paper

Paper is a popular plastic alternative but for food and drink the problem comes when laminate liners are used - annually, 120,000 tonnes of this packaging currently presents challenges for mills. Discussions with brands and retailers have resulted in new recyclability guidelines for paper packaging as well as an aspirational target – that the pack weight should consist of no more than 5% plastic and in the interim no more than 10%. "We're prepared to go so far but we just don't think we should have 15% or 25% thrown at us," says Andrew Barnetson from the CPI.

Packaging more challenging to recycle in mills

- 120,000 tonnes (2%)



Packaging readily recyclable in mills - 4.809.000 tonnes (98%)

19

Source: Confederation of Paper Industries CPI (37)



Packaging for the (near) future

"As an operator experiencing soaring inflation on packaging products, we are even more determined that our policy remains focused on reduction of single-use plastic and to favour reusables where possible."

Stephen Brennan, Aramark Northern Europe

So what next for the foodservice sector? Can businesses build back better and reduce their reliance on single-use packaging, recycle more of what's left in closed loop systems and keep customers happy?

Get wise on street bins

Consumers want to know what to do with their packaging but are still often left confused. Vypr's survey shows that people find it easier to deal with the packaging arriving at their door (55%) rather than for



products bought on-the-go (44%). Research across 20 leading high street foodservice chains in 2020 by City to Sea found that only two out of the 18 that didn't provide table service offered consistent front-of-house recycling across all outlets (31).

"There is so much goodwill to make sustainable decisions, but equally there is so much confusion around site-specific bin colours or waste management systems," says Aramark's Brennan, who continues to look at packaging options that "take the guess work out of which waste stream they need to be disposed into".

Councils should also focus on consistency and simplicity. The messages have to be right. The bins have to be emptied. General waste bins need to be available too. "We need a universal approach," says Steve Morgan from recycling charity Recoup. He feels efforts should be targeted at drinks containers first, capturing clean streams of readily recyclable materials. "Sometimes

"The customer takes more clues about your sustainability initiatives from your packaging

than they do about anything else."

Juliane Caillouette Noble, Sustainable Restaurant Association



we are trying to do too much, too quickly," notes WSH's Hanson.

Hubbub is also focusing on a limited range of packaging – bottles, cans and sometimes cups in its pilots to encourage on-thego recycling. Recoup and Valpak have estimated that 317,000 tonnes of PET drinks bottles were sold in 2018, of which around a third (111,000 tonnes) were disposed of out of home. Just 9%, or 10,000 tonnes, were collected for recycling, leaving over 100,000 tonnes of potentially high-quality, recyclable PET bottles not going into the recycling stream.

'Conscious decisions'

Deposit return schemes should help drive higher bottle and can recycling rates. So too clearer labelling. The government wants a binary label – 'recycle/don't recycle' – and some brands have already started using this approach under OPRL. The scheme's chair Jane Beavis says OPRL members like McDonald's were "thinking about their increasing move into home deliveries when they joined. That's an increasingly important part of our membership."

The criteria for OPRL are based on home collections, the capabilities of treatment facilities and reprocessing activity and markets. For example, to retain the 'recycle' label, fibre-based producers have to achieve a 10% laminate limit by January 2023. A specialist label for coffee cups is also available under OPRL.

EPR for packaging will drive a lot of activity in this space. Under EPR producers will become responsible for the full net costs of the collection and treatment of their packaging. It will cost an estimated £2.7bn in the first year, which could push the price of the average shopping basket up by $0.6\%^{(32)}$.

Ask people whether they'd pay more for sustainable foodservice packaging and more than half would pay 'a bit' or 'a lot' more, according to research in 2020 by McKinsey. Will they be prepared to pay more for packaging that isn't recyclable? It certainly won't be a good look for brands (especially if the cost of living crisis continues). "A clearly communicated sustainability benefit is a strong value proposition for packaging suppliers," the consultants say.

Indeed, 83% of consumers who used Just Eat's seaweed-lined containers said a restaurant's use of this packaging would affect their choice of where to eat. Those collecting the materials and processing them, from paper mills to plastic reprocessors, remain

How easy is it to recycle the packaging on items you buy on-the-go?



44%
Hard/very hard
26%

How easy is it to recycle the packaging on items delivered to your door?



55%
Hard/very hard
18%

uneasy about novel solutions that might contaminate recycling streams. Food brands are asking more questions and this should be encouraged.

Restaurants realise that packaging is here to stay and are now making "more conscious" decisions following the early pandemic panic, says the SRA's Caillouette Noble. "The customer takes more clues about your sustainability initiatives from your packaging than they do about anything else," she adds.

Carbon conundrums

Plastic dominated the sustainability agenda pre-covid but climate change is now arguably the main focus for business sustainability ambitions. Businesses that calculate their emissions and set science-based targets will have a much clearer picture of where to concentrate their efforts and how packaging fits into their ambitions. "Should we just be worrying about whether we're using plastic bottles or not, when the world is on fire?" wonders WSH's Hanson. "It's not going to get us where we need to be. We need huge decisions."

Will climate change take precedence over choking turtles? There is a "fine balance" between tackling plastic pollution and achieving net-zero, notes WWF-UK's Chin, and there will be trade-offs. Transparency is key – and something the public, politicians and private investors will increasingly demand.

Huera, the plant-based meat brand, switched from plastic in 2019 to a cardboard format in 2020, which then evolved into an 87% recycled cardboard tray and unrecyclable plastic layer. But a life cycle assessment (LCA) showed a plastic tray made of 92% rPET, an FSC-certified sleeve and unrecyclable plastic film saved carbon and water. "It's not the perfect solution but it's the best one yet," according to the company.

The notion of switching back to plastic is a hard one for marketing teams to swallow (especially if it is currently unrecyclable); many more companies could find themselves doing so as they look at their packaging through a net-zero lens. Customers often don't have the time or the expertise to unpick the nuance, leaving brands to do the hard work for them.

This isn't easy. Different views and studies detailing the pros and cons of different materials are piling up. Some, like Sodexo, are finding the best approach is to do all the homework so their clients don't have to. Guides on

You have stopped using reusable cups since the pandemic started – why?



Safety concerns 32%

Shop doesn't accept them 24%

Convenience

19%

Cost

16%

CHAPTER FOUR

"We haven't really

reuse."

Paula Chin, WWF-UK

started to understand consumer appetite on



disposable and reusable options are in place, says Dussaix, taking account of more than a dozen criteria across three broad themes: food safety, operations and the environment. These are continually monitored and updated to keep track of everything from impending legislation and novel materials to new science and research.

That isn't easy. Studies are pitched as black and white leaving brands mired in the grey. The European Paper Packaging Alliance (EPPA) has commissioned studies to demonstrate that the single-use products made by its members have a lower environmental footprint than reusable alternatives in quick service restaurants (33). Huhtamaki's Whittall says this kind of science challenges "in-built misconceptions" about reusable packaging.

The work has been criticised for its scope and failure to publish full life cycle assessments (LCAs). A number of peer-reviewed studies show reuse is better ⁽³⁴⁾, while a review of LCAs on the subject by Upstream, a non-profit working on solutions to plastic pollution, concluded that reuse beats singleuse "through every environmental measure" in foodservice settings ⁽³⁵⁾.

Purveyors of single-use packaging have not only been pitching their linear systems as more sustainable, but safer too. The hygiene factor gained traction early on in the pandemic and some outlets are still taking a cautious approach to cups: almost one in four (24%) of our survey respondents who have stopped using reusable cups since the pandemic started say it's because the shop doesn't accept them.

A return to reusables

And yet many brands are returning to reusables and launching new trials. Burger bars like Five Guys have brought back dispensers for condiments after switching to disposable sachets for a time. Heinz - which faced shortages of tomato ketchup sachets in the US last year due to "accelerated delivery and take-out trends" - has developed a 'no-touch' dispenser for dine-in. The 'ditching disposables' trials, designed to encourage adoption of reuse when single-use bans come into force and involving a number of small businesses, have been revived by Zero Waste Scotland.

McDonald's and Wagamama have also launched schemes for reusable packaging. So too has Just Eat. Readers of *Footprint*'s first packaging report, in 2019, will recall the delivery platform ruling out such systems: they were too costly and there were too many

HOT TOPIC

Cutting contamination

On-the-go recycling infrastructure remains patchy, with only about half of local authorities providing it and those that do often having to deal with heavily contaminated material. In a Hubbub pilot to improve on-the-go recycling in Leeds, the contamination rate in cup-only bins was 54% (there was more 'other stuff' in the bin than cups). Steve Morgan, head of policy and infrastructure at recycling charity Recoup, has been involved in a number of studies looking at on-the-go recycling. In one, they found 13 different types of recycling bin at one service station. Food and drink contamination is a huge issue too. "People are trying to do the right thing but with excessive amounts of food and liquid waste [the contents of the bin] can quickly become a sludge," he

question marks around hygiene and liability ⁽³⁶⁾. However, reusable trials are now underway in Berlin and London. Brands are reacting to public pressure, says Safia Qureshi, founder of Clubzero which provides returnable packaging for takeaway and is working with Just Eat: "Consumers are becoming more and more aware that recycling hasn't really worked effectively and are questioning if brands are doing enough."

Clubzero now has a permanent cluster of drop points for reusable packaging and is working with Just Eat on home deliveries. Its system for takeaway food and drinks, in which the containers are used, dropped off, cleaned and reused, is similar to that run by Loop. This third party ownership removes all the headaches for the brands but consumers still prefer bringing their own receptacle to a deposit and return scheme (58% versus 36%), according to Vypr. This could be down to familiarity. "We haven't really started to understand consumer appetite on reuse," says WWF-UK's Chin.

Clubzero's return rate is 95%. There is no deposit for the packaging but the threat of a charge if it's not returned. This makes it more inclusive and provides considerably more data on who



takes what, where and for how long, which can be used to make the system as convenient as possible. The functionality of the technology, for example the app consumers use, as well as the packaging are critical. One of the barriers to reuse is the "friction" at the point of sale.

Softer benefits of reuse include brand loyalty and green points.

More case studies, ideally at scale, are also needed to support evidence that the systems have impact both environmentally and financially, says Sorcha Kavanagh from the Conscious Cup campaign. Upstream reckons \$5bn (£3.7bn) could be saved by US foodservice businesses from no longer procuring

disposables for on-site dining. Clubzero's costs are comparable to single-use compostables, says Qureshi – so 17p per cup and 30p for food containers. "We are not the cheapest option," but companies are also being squeezed by regulation, which though not driving reuse is making single-use an increasingly expensive option, she adds.

Funding new reuse schemes in the current climate is a challenge but companies are unpicking the pros and cons of developing aligned schemes. A system that takes cups from Starbucks and Greggs, Costa and Caffè Nero isn't beyond the realms of possibility. Reuse has got to become a habit, explains Oxley

"Reuse isn't always the answer and our job is to find out when it is."

Sarah Greenwood, University of Sheffield

from Pret, "and the best way for it to become a habit is for it to be widespread".

Experts at the University of Sheffield are looking at all of this as part of their 'many happy returns' programme of work. They are running simulations of the staining and scratching that reusable containers are subjected to during their 'life' and how people feel about different levels of wear and tear.

They are also conducting LCAs to show how different reusable materials stack up against single-use –recyclability at end-of-life is an important factor for those adopting reusables. "Reuse isn't always the answer," says the university's Sarah Greenwood, "and our job is to find out when it is."

Time for change

There is much work to be done as foodservice businesses build back from the covid-19 pandemic but make no mistake: the pressure for them to play their part in solving some of the complex problems relating to packaging won't subside. If anything it will intensify as costs rise, legislation kicks in, NGO campaigns get underway and investors seek answers on sustainable approaches.

"The priority is to find solutions that work for us and our clients,



whilst doing the right thing for the planet in line with our net-zero commitment," says Compass's Taylor. This will take time and there will be trade-offs but across foodservice there is an appetite for progress on packaging.

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About this research

Footprint Intelligence

Footprint Intelligence was commissioned by Klöckner Pentaplast (kp) to write this report. The research comprised in depth, semi-structured interviews with foodservice experts, desk-based research, involvement in industry events and forums, and comments and insights gathered from other opinion leaders linked to the industry. Footprint Intelligence is hugely indebted to the industry experts who generously gave their time and insights as part of the research process.



We are also grateful to consumer research expert Vypr for providing access to its consumer research panel.

Vypr is a leading predictive consumer intelligence platform that combines research into behavioural science with a well-segmented consumer panel. Vypr works with retailers including The Co-op Food and Starbucks, brands like Weetabix and Müller, and large manufacturing groups such as Cranswick PLC and 2 Sisters Food Group.

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