

Circularity in the Air

World Travel Catering®
& Onboard Services

EXPO

AVIATION
SUSTAINABILITY
FORUM



INTRODUCTION

The Aviation Sustainability Forum (ASF) is an independent, 'not for profit' organisation whose members are made up of stakeholders from across the inflight product and services supply chain. ASF's members are tasked with collaborating to identify the pathway and solutions our sector needs to make the case for International Cabin Waste (ICW) regulation change.

The ASF's mission is to solve aviation's throwaway problem, reduce the amount of waste sent to landfill, and the emissions from incineration by demonstrating that there is a better way to manage ICW by supporting The International Air Transport Association (IATA) to make the case for regulation change that allows our sector to move away from ICW incineration and landfill and embrace the circular economy.

The aviation sector plays an integral role in the global economy, yet as we undertake the irreversible shift to a greener, cleaner future, it remains one of the hardest sectors to abate and poses one of the toughest

decarbonisation and waste management challenges we face.

The journey to responsible aviation has taken off however, and our sector is showing that a collaborative approach to Sustainable Aviation Fuels (SAFs) development is the way forward for us all; yet one issue that continues to fly under the radar and runs the risk of holding us back from meeting our Net Zero targets, is International Cabin Waste.

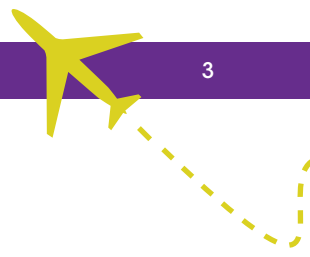
By developing new policy and regulatory frameworks, creating an evidence base and mobilising coalitions of support, we have the opportunity to unlock a suite of solutions that will make ICW a thing of the past.

That's why the ASF has partnered with World Travel Catering & Onboard Services Expo (WTCE) to encourage more airlines, suppliers and their partners to get involved, so we can widen the debate around how to think differently about cabin waste and devise innovative solutions that work for everyone.

The ASF has recently completed a strategic review of the ICW issue to develop a clear and detailed campaign plan, which addresses the problem step-by-step, and will identify the solutions the sector can adopt that make the case for regulatory change, and open up our sector to the commercial and environmental benefits of the circular economy.

The ASF is now taking its campaign plan to the aviation sector and philanthropy for both practical and financial support; financial support that will be used by ASF's membership to find and implement the solutions required and support IATA in making the case for the regulation change and harmonisation we all need.

Read on for a snapshot of how the industry is tackling sustainability and for stakeholder views into the challenges they face.



FLYING FULL CIRCLE

“Sustainability” is a buzzword in the airline industry. For onboard specifically - from food and beverages to amenity kits - the environment and sustainability are increasingly front and centre when it comes to the inflight offer. Lightweighting to save fuel, swapping plastic for cardboard and paper, and offering pre-ordering for inflight meals to save waste are just some of the measures on the sustainability menu.

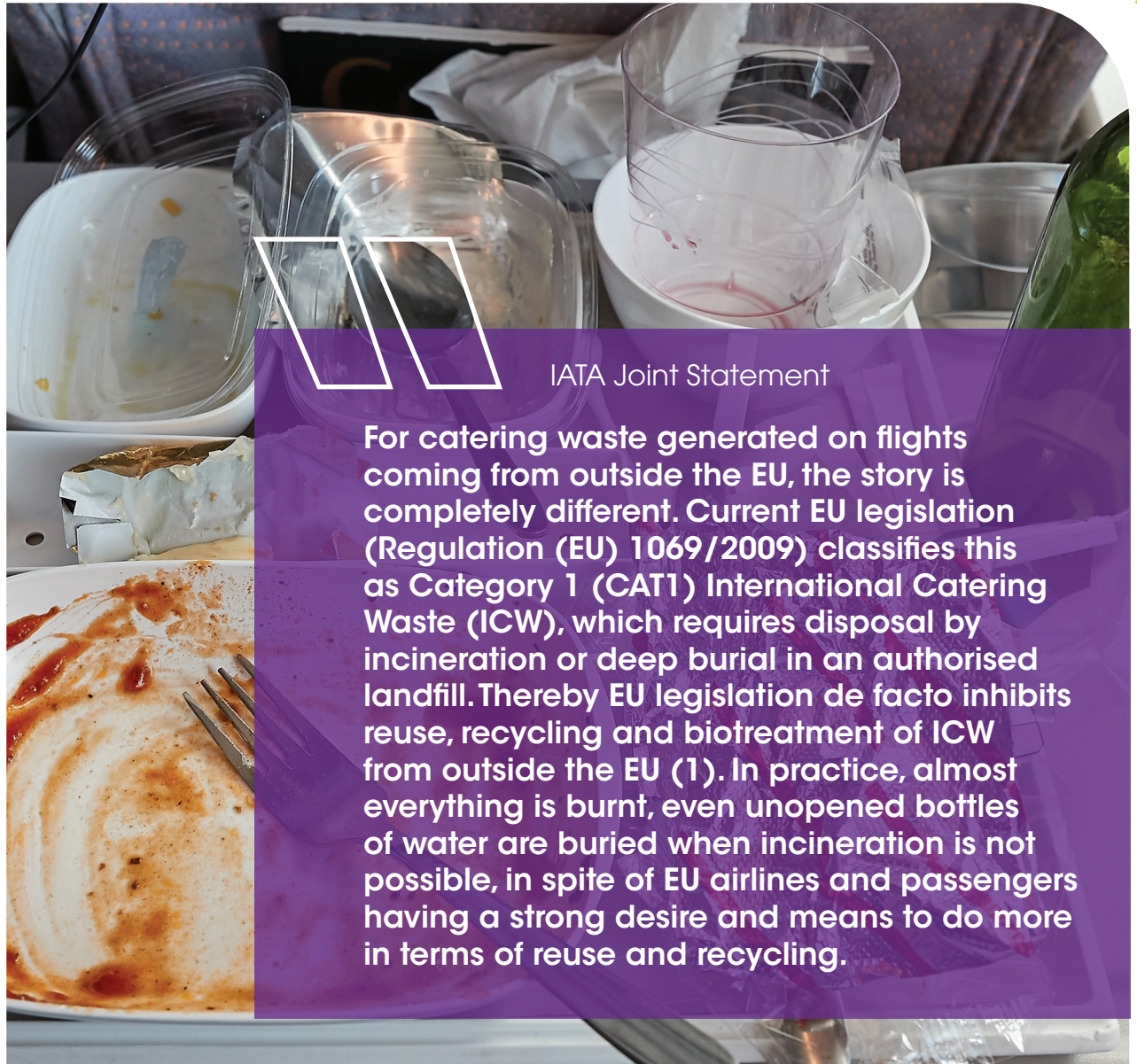
A key area of sustainability international carriers are looking to is circularity - that is reusing, recycling or regenerating products and packaging rather than sending them to landfill or the incinerator.

While circularity is potentially an achievable goal for carriers operating domestic flights, the plethora of regulations imposed by governments worldwide means many perfectly reusable or recyclable items that leave international trips end up in the incinerator.



This issue was highlighted last year when IATA issued a joint statement on behalf of European airlines and air travel organisations appealing for the EU to reconsider rules that say all catering waste from flights outside of the EU must be either incinerated or put into deep landfill. Similar rules apply in other regions too.

In underlining that catering waste does not pose a threat to animal or human health, IATA's joint statement said: "Catering waste from within the EU is efficiently processed, recycled and reused. Here, airlines demonstrate the opportunities that a circular economy can offer, minimising residual waste and, as a result, reducing impacts and costs to society and the environment."



IATA Joint Statement

For catering waste generated on flights coming from outside the EU, the story is completely different. Current EU legislation (Regulation (EU) 1069/2009) classifies this as Category 1 (CAT1) International Catering Waste (ICW), which requires disposal by incineration or deep burial in an authorised landfill. Thereby EU legislation de facto inhibits reuse, recycling and biotreatment of ICW from outside the EU (1). In practice, almost everything is burnt, even unopened bottles of water are buried when incineration is not possible, in spite of EU airlines and passengers having a strong desire and means to do more in terms of reuse and recycling.

The joint statement asked the European Commission (EC) to undertake a quantitative risk assessment of ICW and its threat to animal health and in turn, consider a revision to the regulations so that the aviation industry can make a more positive contribution to the EU's circular economy, while meeting its own "ambitions and passengers' expectations" on sustainability. It also asked that in the interim, EU member states have access to harmonised guidance on the reuse and recycling of waste from international flights to avoid inconsistency from country to country.

While international laws may be slow to change, there are signs that at least the industry is being listened to. Last autumn a group of MEPs fielded a question to the European Commission asking if the regulations as they currently stand are fit for purpose, if the EC could publish the results of any assessments into risks posed by airline catering waste and if a risk assessment hasn't been completed, for one to be carried out.

The questions were firmly rebutted with the EC restating that airline catering



waste does pose a "significant risk for the introduction of animal diseases into the EU" despite no risk assessment taking place, and it has no plans to carry out a risk assessment. It did state, however, that it would be open to "receiving the results of any study, with regard to possible new, alternative methods for the treatment of international catering waste that may be suitable at a later stage for

an assessment by EFSA (The European Food Safety Authority)."

It's also worth noting that since the UK left the European Union, all waste generated on flights between the UK and EU countries is now classified as CAT1, rather the lower risk CAT3.

SUSTAINABLE PRIORITIES

So how are airlines and their stakeholders working circularity into the airline industry? We spoke to a selection of industry players to find out.

Simon Soni, an experienced leader in catering and guest experience teams for airlines such as Qatar Airways, Virgin Atlantic, and WestJet, emphasises that while circularity is a popular topic, most airlines “primarily focus on reducing onboard weight, recycling and using sustainable materials due to regulatory challenges”. Soni believes this focus is justified and that recycling has been “very successful where possible in a number of areas”. One important aspect is minimising the use of single-use plastics to meet legal requirements and satisfy passenger expectations.

Soni also highlights the substantial cost associated with implementing circular

practices. He explains that airlines operate on narrow profit margins in a highly competitive industry, so they prioritise issues with significant financial impacts. While he hopes that more attention will be given to circularity and overall environmental sustainability, he believes “it cannot be viewed in isolation”.

The main priorities will remain reducing onboard weight, recycling and ensuring waste streams are degradable. These measures are primarily driven by cost considerations, possibly supported by legislation such as can and bottle deposit schemes. However, there is also a desire to be perceived as keeping up with public sentiment.



Soni notes that “public sentiment” can sometimes contradict expectations. He points out that, based on his experience, “passenger uptake of airline carbon offset schemes is very low, while low-cost airlines are thriving”. For most passengers, at this time, the price of their ticket and the safety/quality of the airline’s service matters more than circularity. “Without a significant change in passenger behaviour, airlines are most likely to take action based on cost/revenue opportunities or regulation,” he says.

There are certainly challenges but suppliers are rising to them. Wayne Costigan, Partner at Global-C, which designs, manufactures and delivers inflight products, says one of the ways it is working circularity into its supply chain is by customising the recycling technology of its larger, raw materials and manufacturing partners: “This comes in the form of chemical recycling and closed loops that allow for complete end-of-life reuse of the rotatable products we supply to our customers,” he says, adding: “It’s early days so we’re at the blueprinting and piloting stages, but there is real potential for select applications.



“For example, in 2019 we piloted a closed-loop program for CPET containers for economy class hot meals with a large Middle Eastern carrier and our partner Faerch in 2019. Approximately one million pieces were used on board and collected at the Middle Eastern hub where there is no requirement to incinerate. The containers were collected and washed and sent to The Netherlands for recycling. The recycled material was then transported to Denmark where it was used to make new products that were then sent back to the hub.

“The pilot was technically and logistically successful, however the cost of washing the products at origin exceeded the financial returns of the program, so the project did not move forward.”

He also points to offering mechanical recycling of rotatable products in all active proposals. “We will begin piloting this in 2023 with one of our large customers. Of course, it’s early days and this is not a complete solution, but it will move things forward.”

IN IT FOR THE LONG-HAUL

The issue of cost is certainly a major barrier to greater circularity.

“In a lot of cases, the recycling and associated transport costs exceed the value that can be gleaned from recycled material. This is one reason why we are focused on rotatable products made from proprietary materials with virgin pricing in excess of the recycling cost. Another would be the short contract terms normally awarded to product suppliers like Global-C. Recycling programmes are long-term projects that will likely take years of cooperation to fully realise results,” says Costigan, adding: “Most purchasing contracts are no more than three years, which gives little incentive for companies like Global-C to invest time and capital into recycling programs that will make a difference. Third would be standardisation of materials and sharing of recycling infrastructure to create scale.”

He says for now, tackling modest projects that show short term results will provide the proof airlines need to tackle larger, more complex recycling programs. “One example could be reusing non-food contact items, like serving trays or drawers in the production of replacement products. This can be done with very little investment and consequence to operations, but still serves as the proof of concept needed for more ambitious programs.” He also stresses that there is “no one-size-fits all” and the aviation industry could consider a segmented approach to reuse and recycling depending on the territory regulations, pointing out that in the Middle East, Thailand, and many countries in Africa, for instance, do not have a requirement to incinerate items in contact with food.



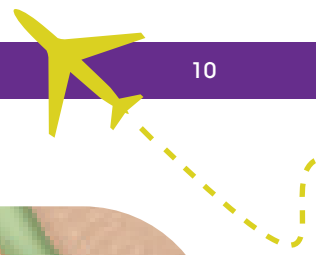


LSG Group's Environmental Programme Manager June Weirich adds that the business constantly works to optimise and expand its range of sustainable alternatives for products and services and keeps a close watch on the market to understand its changing customer requirements. Through its work with waste collection and recycling company, Athens Services in Los Angeles, the business is able to ensure that only a minimal portion of internationally regulated trash goes to a landfill.

After using an autoclave to boil incoming international aircraft waste, the recycling provider picks up the safe, no longer regulated, garbage. They use a special machine to squeeze the trash and extract organic juices emitted from the food waste. These juices are highly potent as an organic energy source and are used in a variety of applications. After the juicing, the trash is then separated for recyclables, with an absolute minimal amount being sent to landfill. A key focus for LSG Group is waste management and in the Americas region so far, it has successfully diverted approximately 30% of waste from

landfill. "Our target is to reach 50% through sustaining and adding new initiatives and technologies into the facilities," says Weirich, explaining: "We are experiencing requests on initiative data from the airlines. We are working with several customers with a goal to integrate our Zero to Landfill programme with airline sustainability programmes."

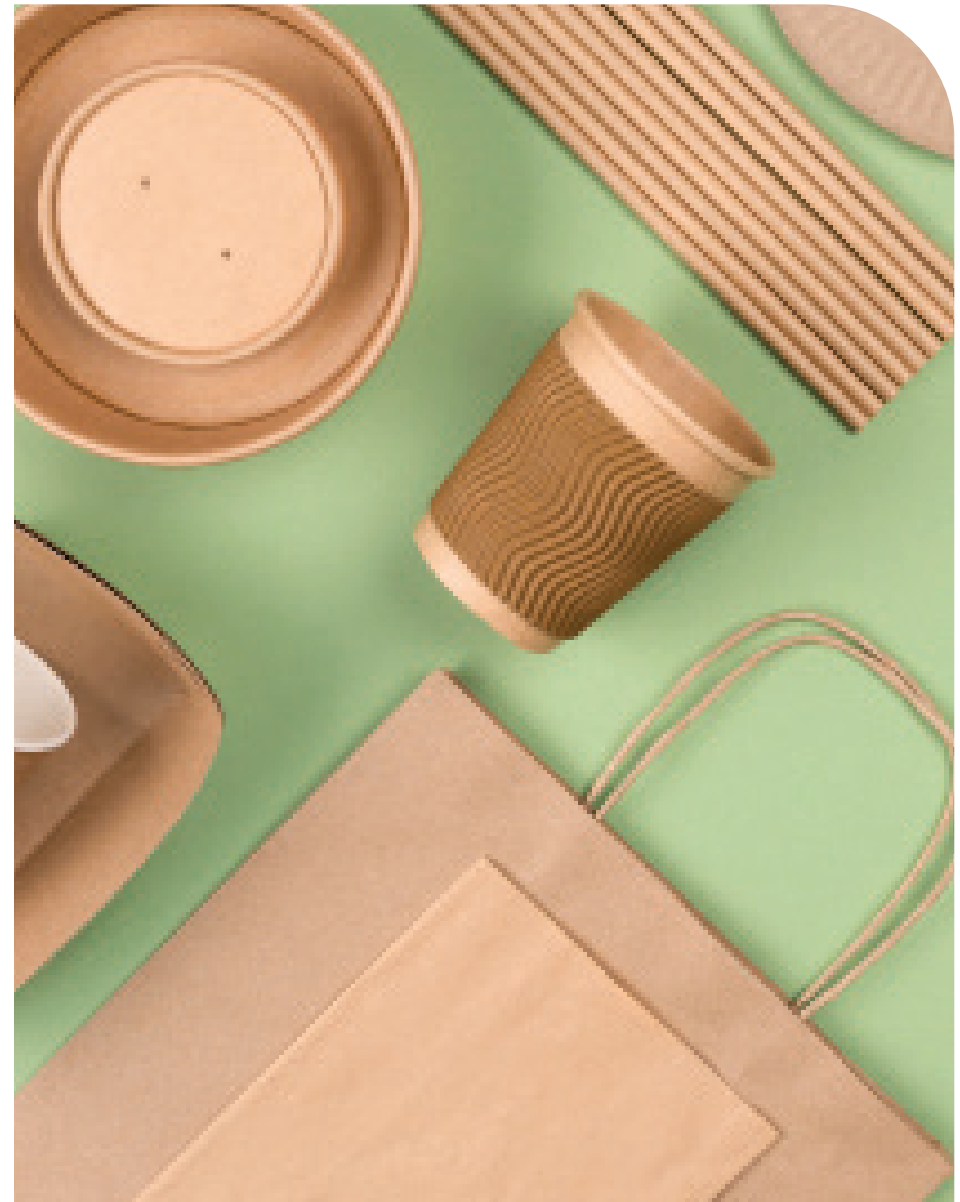
Global food service and supply chain partner En-Route is focused on ensuring packaging is recyclable or compostable, while also working to remove plastic and/or laminated materials where possible. Gayle Twigg, Head of Service Delivery and Projects says the business is also looking to minimally mix packaging materials. For instance, En-Route will look to design packaging that does not use two different materials – such as sandwich packs with windows – to simplify recycling for CAT3 waste.

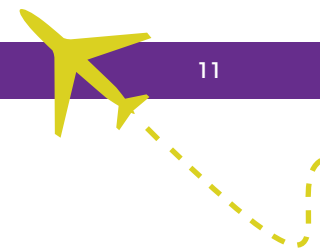


While for CAT1 ICW that simply can't be recycled, En-Route endeavors to work with materials that generate less carbon emissions when they are incinerated.

Twigg also underlines that cost is a factor when it comes to embracing sustainable initiatives. "Understandably, cost is a focus," she says, "but we need to move to sustainable materials being the preferred option, which in turn will drive costs down. Presently, sustainable materials are the exception rather than the rule. Unfortunately, to make large scale changes in business it must be legislative and global, and many businesses still view sustainability as a competitive advantage rather than a necessity."

When it comes to where airlines might find it most difficult to introduce circularity, Twigg points to Economy class complimentary products, such as the second meal service and buy-on-board, both of which use more single use than rotatable items. Despite the notable headwinds hindering a more rapid move toward circularity, airlines are striving to work it into their business models and sustainability strategies where they can.





MAKING PROGRESS

Melanie Berry, Director of Customer Experience at Iberia told us that circularity is a key point in its sustainability strategy, with initiatives including waste management, elimination of plastic packaging, and the use of reusable and digitalisation processes to reduce the weight carried onboard.

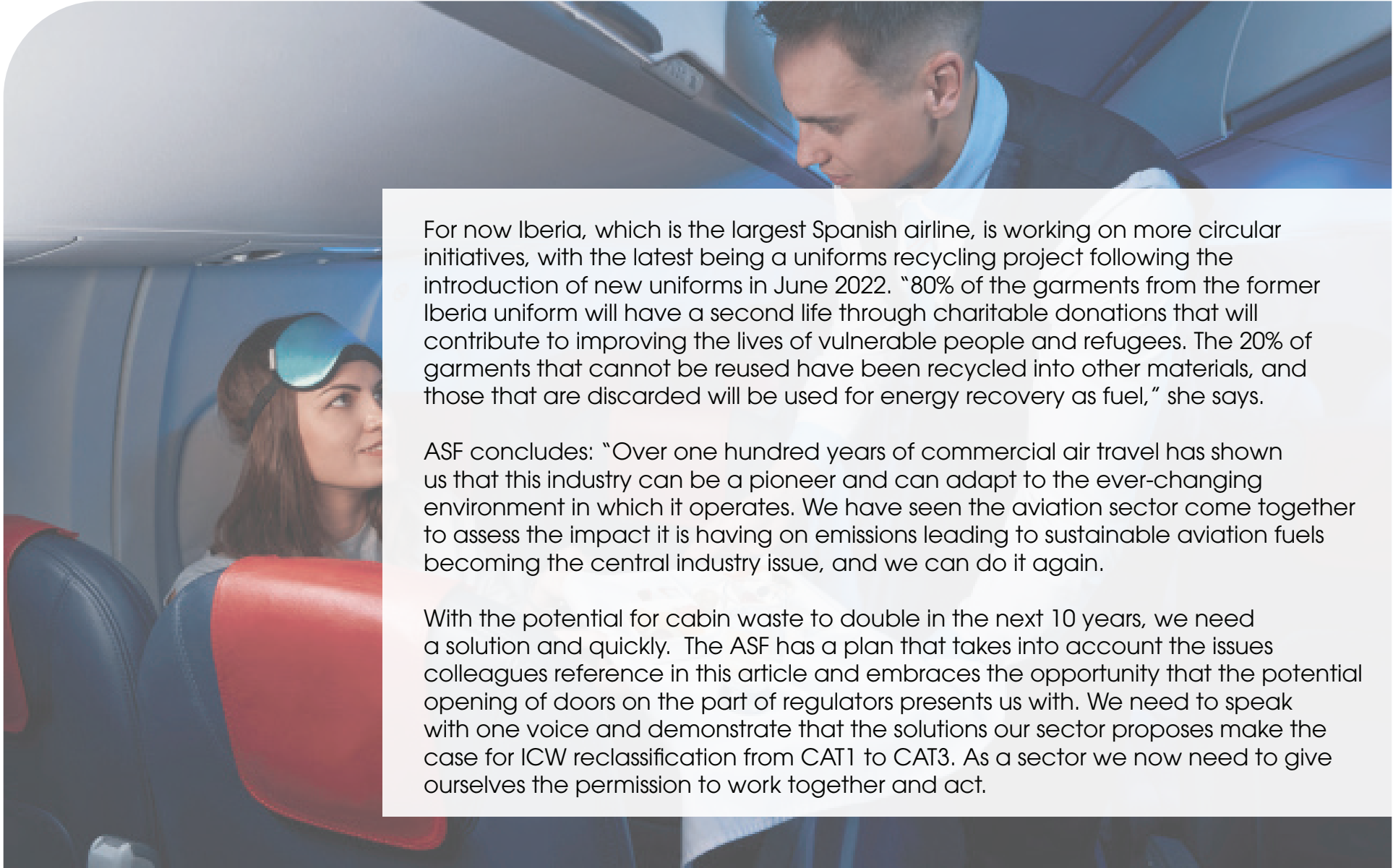
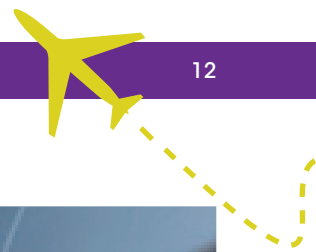
“In 2019, the LIFE Zero Cabin Waste project was implemented to start the process of recycling onboard, helping us to be more sustainable and move closer towards circularity. This project introduced the separation of the different types of waste, such as plastic, metal, paper and cardboard during the flights so they could be recycled at airports. With this programme, we aim to recover up to 80% of all in-flight catering non-food waste.

“In 2022, thanks to this programme, more than 1,647 tonnes of used food and drink containers were recycled across long, medium and short-haul flights to Madrid, representing 43% of the total generated waste. This year

for the first time, glass waste was also segregated and recycled, resulting in more than 62 tonnes of glass being recycled.

“The Zero Cabin Waste project also aimed to reduce the total amount of waste generated on flights, including the elimination of the print media formerly offered to passengers (now available online) and the removal of the plastic packaging for the amenities offered onboard. All these measures brought about a 15% weight reduction and a decrease in waste by 5,000 tonnes in 2019 alone.”

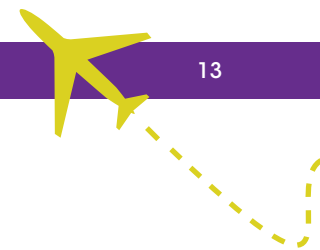
However, she points out: “The main barrier to improving the recycling procedures is that international legislation does not allow recycling, as many countries mandate the incineration of anything that potentially contains any food waste. We hope that regulators will revise the current legislation in order to be able to go further with recycling and close the loop.”



For now Iberia, which is the largest Spanish airline, is working on more circular initiatives, with the latest being a uniforms recycling project following the introduction of new uniforms in June 2022. “80% of the garments from the former Iberia uniform will have a second life through charitable donations that will contribute to improving the lives of vulnerable people and refugees. The 20% of garments that cannot be reused have been recycled into other materials, and those that are discarded will be used for energy recovery as fuel,” she says.

ASF concludes: “Over one hundred years of commercial air travel has shown us that this industry can be a pioneer and can adapt to the ever-changing environment in which it operates. We have seen the aviation sector come together to assess the impact it is having on emissions leading to sustainable aviation fuels becoming the central industry issue, and we can do it again.

With the potential for cabin waste to double in the next 10 years, we need a solution and quickly. The ASF has a plan that takes into account the issues colleagues reference in this article and embraces the opportunity that the potential opening of doors on the part of regulators presents us with. We need to speak with one voice and demonstrate that the solutions our sector proposes make the case for ICW reclassification from CAT1 to CAT3. As a sector we now need to give ourselves the permission to work together and act.



At WTCE, the ASF will continue to lay down the challenge – asking the difficult questions – and share its vision for a sustainable, responsible future for cabin waste . Central to the ASF’s plan is the recognition that we are better when we work together across the ICW supply chain and take collective responsibility to identify the solutions the entire sector needs, and that the regulator is asking us for. Working individually or in small groups on initiatives runs the risk of clouding the issue and holding us back.

To find out more or join the ASF, please WhatsApp us on +44 (0)7917893955 to book a meeting with us at WTCE or contact the ASF via info@aviationsustainabilityforum.com

Matt Crane, the Founder of the Aviation Sustainability, will be joined by James George of Pyxera and The Ellen Macarthur Foundation to discuss the challenges of 'Innovating Supply Chains - How To Overcome Barriers to Embrace Circularity' at this year's Taste Of Travel Theatre on Tuesday, 6 June @ 1500 at World Travel Catering & Onboard Services Expo which takes place from 6-8 June 2023 at the Hamburg Messe, Hamburg, Germany.

To find out more about the event or to register to attend, please visit www.worldtravelcateringexpo.com



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