



# Bag-in-Box<sup>®</sup> a sustainable solution

Highlights 2021



## OUR PURPOSE

# We create, protect & care.



## WE ARE TAKING ACTION TODAY AND INVESTING IN TOMORROW.

At Smurfit Kappa, we are proud to be one of the world's leading providers of sustainable packaging.

We believe that paper-based packaging can be one of the answers to the challenges facing our planet. Our innovative, sustainably-produced, paper-based products are 100% renewable, recyclable and biodegradable.

For a sustainable packaging solution for liquid products, Bag-in-Box® (BIB), made of 75% corrugated board and 25% of light plastic film, substitutes heavy packaging with less materials, reducing waste and CO<sub>2</sub> emissions.

By considering the entire life cycle of our products, and bringing together our 48,000 employees, at over 350 production sites across 36 countries, we can have a bigger impact on a greater scale.

The result is packaging that is better for the planet.

**Our vision**  
To be a globally admired business, dynamically and sustainably delivering secure and superior returns for all stakeholders.

**Our commitment**  
To be an impactful business supporting a greener, bluer planet.

**Our long-term ambition**  
To have at least net zero emissions by 2050.

**Our priorities**  
Our ambition of sustainable growth is based on three pillars: Planet, People, and Impactful Business.

**Our culture**  
People are at the heart of everything we do. We have a strong and positive culture that is based on our values of Safety, Loyalty, Integrity and Respect.



“ Our leadership in sustainability extends through our products and manufacturing into our local communities. Sustainability has always been at our core and it is now embedded within our capital structure

Tony Smurfit, Group CEO

”

# Bag-in-Box®: a sustainable packaging solution

Bag-in-Box® is an ideal solution to protect liquid products with a very effective barrier bag inside, a strong and protective paper-based outside packaging and a perfect tap to dispense the liquid product, while preventing oxygen access to the product. BIB comes in different sizes and compositions to contain various liquid products – from juice and alcohol to paint, many types of oils to body or home care products.

BIB is efficient for storing and transporting food and non-food liquid products, it produces less carbon emissions than other materials, it is light and compact and contains less plastic than other types of packaging. The shelf life of the products is much longer, it reduces waste and provides greater convenience to consumers.

Bag-in-Box sites' data is included in reporting and it contributes to progress against the Group's Better Planet 2050 targets.

The benefits of Bag-in-Box® are:

## Less plastic

75% of our 3L BIB is corrugated board – biodegradable and fully recyclable. 25% is plastic.

BIB uses 54%-86% less plastic material weight than rigid plastic packaging.

In 2021 we launched E-Compact 55 and M-Compact 77. Both products are part of our less plastic initiative.

## Lower carbon emissions

The packaging manufacturing process has a big environmental impact. BIB produces less CO<sub>2</sub> emissions than other liquid packaging. Also water and energy consumption in our production process is relatively low.



1L empty PET bottles require 21 trucks for 1 million litres of product

**4x more**  
than using flat BIB



BIB keeps wine fresh for up to

**6-8 weeks**



Glass or PET bottles  
**2-4 days**



3L BIB EVOH Vitop

3L HDPE bottle  
**125g**

**35g**



75cl glass bottle  
**675g**  
CO<sub>2</sub> per litre



75cl PET bottle  
**245g**  
CO<sub>2</sub> per litre



3L BIB only  
**70g**  
CO<sub>2</sub> per litre



## Recyclable

Our BIB packaging is easily separated so components can go into the correct recycling streams.

Our standard PE and EVOH bags can be recycled in many European countries.

Launched in October 21, our new Vitop® Renew tap is made from bio-based PP resins. When combined with bags made from our E-Recycled EVOH, the new bags are composed of 53% recycled and renewable content.

## Logistics savings

BIB reduces the amount of packaging per litre of product.

Up to 35 trucks can be removed from the supply chain, and warehousing costs are also reduced – substantial logistics savings of up to 40%.

## Preventing food waste

BIB help prolong the shelf life of liquid products.

Our design ensures that air doesn't enter the product while dispensing prolonging the shelf life up to 14 times.



# Leading in sustainability

## Bag-in-Box®

### Delivering for our customers: Better Planet Packaging

Our 8L Bag-in-Box® helped Pascual Calidad reduce the plastic in their packaging by

**>60%**



Our Bag-in-Box® for paints helped PPG reduce plastic weight of up to

**81%**



## Don't take our word for it, take theirs

Some examples of our external recognition



## Science-approved

Our emission targets have been approved by the SBTi as being in line with the goals of the Paris Agreement.

WE'VE HAD OUR SCIENCE-BASED TARGET APPROVED



## Strong governance

**15 years**

of sustainability reporting – independently assured for over 10 years – giving our stakeholders a detailed insight into our actions and impact.

Our governance structure, sustainability-linked incentives and funding structure all support our commitment.

## Circular by nature

**7.4**

million tonnes of (primarily) post-consumer recovered paper handled each year.

## Delivering for the UN SDGs

First FTSE 100 company to be awarded five stars from Support the Goals, in recognition of supporting the UN SDGs.



# Continued delivery for a better tomorrow

The Group's Better Planet 2050 targets quantify our commitment to protect what we care about – our planet, our people, and our business. Our ambitious goals and sustainability targets will help to build a sustainable future for our communities, support good business practices and create a better planet.

## Key to our Strategic Priorities



Category	Targets	Achievements	Link to Strategy	Link to SDGs
Climate Change	<b>Net zero</b> Our ambition is to have at least net zero emissions by 2050 with a 55% reduction in relative CO <sub>2</sub> emissions by 2030	<b>41.3%</b> reduction in CO <sub>2</sub> emissions since 2005		
Forest	<b>&gt;95%</b> packaging solutions sold as Chain of Custody certified to customers by 2025	<b>93.45%</b> packaging solutions sold as Chain of Custody certified in 2021		
Water	<b>60%</b> reduction in relative Chemical Oxygen Demand discharge by 2025	<b>38.5%</b> reduction in Chemical Oxygen Demand since 2005		
Water	<b>1%</b> reduction of our water usage annually, which reflects our position as a processor, not consumer, of water	<b>6.2%</b> reduction of our water usage annually		
Waste	<b>30%</b> reduction in relative waste sent to landfill by 2025	<b>29.2%</b> reduction in waste to landfill since 2013		
Health and Safety	<b>5%</b> reduction in Total Recordable Injury Rate annually	<b>1.7%</b> reduction in Total Recordable Injury Rate in 2021		
People	<b>25%</b> of management positions held by women by 2024	<b>22%</b> of management positions held by women at the end of 2021		
Communities	<b>€24m</b> will be donated between 2020-2025 to support social, environmental and community initiatives	<b>€12.6m</b> donated since 2020		

Unless stated, numbers or statements represent the Group

# We achieved a lot in 2021

**41.3%**

CO<sub>2</sub> emission reduction since 2005

This is equivalent to the annual CO<sub>2</sub> footprint of

**1,173,434**

passenger cars or

**242,238**

EU citizens



**2**  
**BIB plants**

Vitop Italy and Smurfit Kappa Ibi Spain, were certified by the **International Sustainability and Carbon Certification PLUS** scheme (ISCC PLUS)

**€12 million**

invested in a new, **lower CO<sub>2</sub> emission** flexible material production facility in Smurfit Kappa Bag-in-Box Ibi



**159**

community projects across **24 countries**



**1st**

Bag-in-Box® certified as **frustration-free packaging (FFP)** by Amazon

**38.5%**

Chemical Oxygen Demand reduction since 2005

**3,819**

people directly benefited from **family projects** through Our Open Community initiatives

**29.2%**

reduction of **waste to landfill** from our paper mills since 2013



As a processor, not a consumer of water, we focus on the quality of the water we return to nature



This is equivalent to the annual waste to landfill of

**1.1 million**

EU citizens



**69 awards**

from across the globe, in areas such as packaging innovation, sustainability, design, and print

# Investing in a better tomorrow

One of the ways we deliver on our Better Planet 2050 targets is by investing in innovative solutions that have a tangible impact. Whether installing cutting-edge technology, reimagining our operations, or making simple changes that lead to big results, we are committed to making a difference.



## Redesigning energy generation in Germany

In 2021, we invested €11.5 million in our Zülpich paper mill. A major redesign of the multi-fuel boiler provides a more sustainable fuel source for generating steam and electricity.

The investment is set to deliver a 25% reduction in CO<sub>2</sub> emissions at the mill.

**25%**  
CO<sub>2</sub> emission reduction



## State of the art BIB film production in Spain

We invested €12 million in our film facility in Ibi, Spain, to achieve a fully integrated Bag-in-Box® manufacturing process that enabled us to reduce the CO<sub>2</sub> emissions of our flexible material production by up to 21%.

## Cutting carbon in Austria

The €134 million investment in Smurfit Kappa Nettingsdorf mill, Austria, has delivered an increase in profitability and sustainability. By using CO<sub>2</sub> neutral bioenergy, the new boiler has cut CO<sub>2</sub> emissions by 27% at Nettingsdorf.

**27%**  
CO<sub>2</sub> emission reduction, with more expected in the coming years



## Optimising our Bag-in-Box® supply chain in the USA

Acquisition of the injection plant Smurfit Kappa Vitop San Antonio, Texas, plus further capacity investments, allowed us to avoid shipping taps and glands from Vitop Italy to our Bag-in-Box® production sites in Canada and Mexico.

In 2021, the transportation of these components was reduced by 1.2 million km, which is equivalent to 936 tonnes of CO<sub>2</sub> emissions.

**57%**  
CO<sub>2</sub> emission reduction per year



up to  
**21%**  
estimated CO<sub>2</sub> emission reduction

# Bag-in-Box®: innovating for our customers

We are not only a sustainable company, we also create innovative, renewable, recyclable, biodegradable and sustainable packaging solutions for our customers.

The demand for sustainable packaging continues to grow, with consumers increasingly the driving force. Packaging provides a clear opportunity for brands and retailers to demonstrate their commitment to sustainability, and as a result, build trust and strengthen the brand-consumer relationship.

## Water in Bag-in-Box®

When Calidad Pascual were looking for a sustainable and disruptive packaging for their leading water brand Bezoya, our 8L Bag-in-Box® was the solution. Not only did it reduce plastic packaging by over 314,000kg per year, it was well received by their consumers, and it helped to optimise their supply chain.



over  
**314,000kg**  
of plastic packaging per  
year eliminated

*"While other paint producers are looking for the sustainable plastic bucket, together with Smurfit Kappa we delivered a packaging solution that excels in all the measurable parameters. BIB meets the increasing sustainability demand from our customers, and it is convenient to use."*

Christian Ulrich,  
Project Manager at PPG



## Bag-in-Box® for paint

PPG, a global supplier of paints, was inspired by the benefits of Bag-in-Box® in the food industry and ran a trial in 2021, offering their customers a unique packaging solution that allowed them to reduce plastic waste by 3.4 tonnes or 8 tonnes of CO<sub>2</sub>. Compared to jerricans and buckets, BIB reduced plastic weight by up to 81% and up to 60% more efficient for transporting.

## Bag-in-Box® in refill systems

Jean Bouteille, a pioneer of bulk liquids products, reduced packaging waste by up to 500g per litre of product by using Bag-in-Box® in the refill systems in 1,600 partner outlets in more than 35 countries. The company develops product branded refill equipment by using various Bag-in-Box® formats fitted with suitable taps.

*"Smurfit Kappa Bag-in-Box is our partner in our big ambition to make bulk the new standard of consumption and bring zero waste into every room in the house."*

G rard Bellet,  
founder of Jean Bouteille



## Bag-in-Box®: a refreshing package

For the launch of UK cider maker Healeys Cyder's new flat cider, we developed an 'envelope' style Bag-in-Box®. With no glue or tape, the solution can withstand vigorous supply chain conditions, provide protection for the cider and is fully recyclable. The unique vacuum functionality gives an increased shelf life after opening.

# Delivering for our people and communities

We are committed to managing our business ethically, recognising that good social citizenship – how we interact with our employees, business partners and local communities – is an integral ingredient in creating a sustainable future.

## Supporting our people

By providing a safe place to work and an inclusive and value-driven culture, we can attract, engage, and empower the best talent. We believe that a diverse work culture makes us stronger and more innovative, and our employees feel more engaged.

**12**

percentage points improvement in Bag-in-Box employee engagement levels

## Supplier sustainability

We identify opportunities to increase circularity and benefit our entire value chain. Wherever possible, we procure products and services from local suppliers, keeping finances flowing through local economies whilst mitigating risks related to environmental, social and quality issues.

**93.45%**

of packaging solutions sold as Chain of Custody certified in 2021

## The Smurfit Kappa Foundation

The Smurfit Kappa Foundation supports sustainable projects in the countries where we operate. Its primary focus is on projects involving disadvantaged children in the areas of health and nutrition, basic care, and early education.



## Communities

We have always believed in playing a positive part in the communities in which we are privileged to operate. Through our local operations, we actively support projects that help build a sustainable future for our communities. Aligned to the principles of our Foundation, we are focused on breaking cycles of poverty and dependence when and where they exist, beginning with the younger generations.



**1,000**  
new employees on-boarded through acquisitions

Global roll-out of our Employee Assistance Programme

**2,249**

people with disabilities were supported through Our Open Community

**7,622**

people were directly supported by our Group medical fundraising with medical supplies and services



**€12.6 million**  
in social investments since 2020

Confirmation of rights to use the trademarks:



The mark of  
responsible forestry



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