

# Protect, Promote and Preserve

SUSTAINABILITY  
REPORT 2022

**TRIVIUM**  
PACKAGING



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# Transforming Tomorrow

## Mother Nature is sounding the alarm

From major floods to prolonged droughts, and even severe hailstorms, extreme weather events were once again part of our everyday reality in 2022. With our climate changing rapidly, the need for change is no longer up for debate. The question today is how we, as a society, can reduce our environmental impact, as far and fast as possible.

We believe Trivium's rigid metal packaging solutions are an important part of the answer. Indeed, sustainability is embedded into the heart of our business, not least because of metal's intrinsic strengths as an infinitely circular material that can protect, promote and preserve a wide range of everyday consumer products (for more details, [watch Michael's Davos 2023 interview](#)). More than that, we are focused on making sustainability a foundational pillar of our ongoing business transformation.

This collective drive is underpinned by our shared purpose: 'We shape the future of packaging to ensure a better planet for everyone – today and for generations to come. **We contain what matters.**' It is inspiring to see this purpose enacted every day through the passion, teamwork and excellence of our thousands of colleagues and the many impactful initiatives they bring to life.

In this report, we are pleased to present an overview of Trivium's progress in 2022. Among many other highlights, we made important strides towards our carbon emission reduction goals ([page 45](#)), submitted our targets for validation by the Science-Based Targets initiative ([page 33](#)), and recorded improvements in our workplace health and safety metrics ([page 48](#)). In particular, we are extremely proud to receive a Platinum rating from EcoVadis for a second consecutive year ([page 62](#)) – an achievement that we believe demonstrates our ambition to shape the packaging industry.

As we continue to implement our "Circularity Champion" strategy, we will continue to transparently share our progress in the years to come, including renewable energy initiatives, collaborations to reduce the energy consumption of metal packaging production and the development of even more environmentally friendly solutions for [environmentally conscious consumers](#).

Of course, we could not and cannot reach our goals without you, our stakeholders. We therefore want to extend our warmest thanks to all our customers, suppliers, industry and academic partners for their trust and support in 2022 and beyond, and to all

our colleagues at Trivium for their outstanding contributions to our continued success. At the same time, we continue to welcome opportunities to collaborate with like-minded parties in our wider value chain.

By standing strong together, we can achieve the industry transformation we need – and shape a circular, more sustainable future for packaging, our planet and its people.

Michael Mapes  
Chief Executive Officer  
(CEO)



Jenny Wassenaar  
Chief Sustainability Officer  
(CSO)

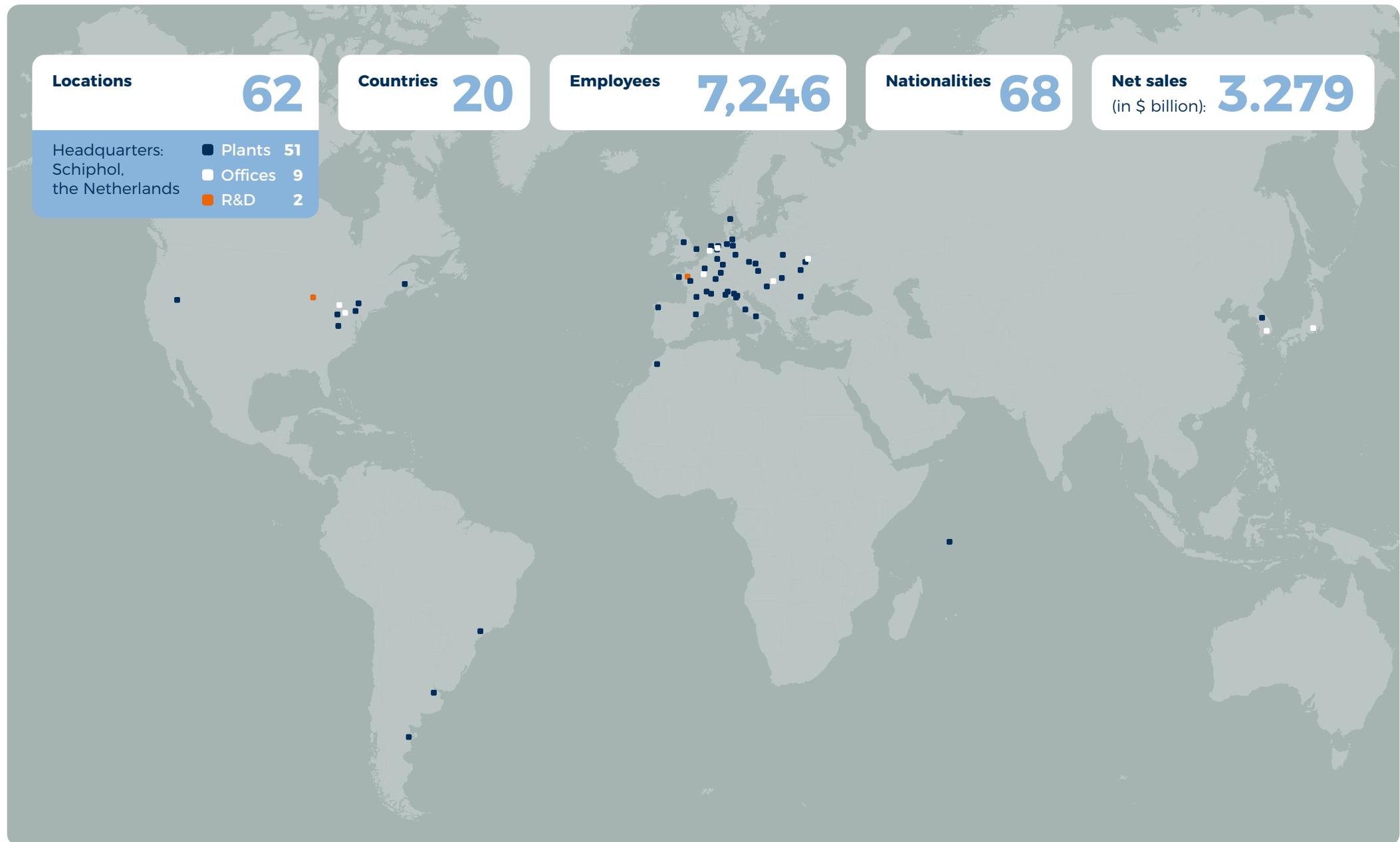


# T Who we are

Trivium Packaging B.V. and all its affiliates (altogether 'Trivium'), headquartered in Schiphol, the Netherlands, is a leading supplier of innovative, value-added, rigid metal packaging solutions, designed to benefit the products they contain, the people who use them and the planet we share. Trivium's products mainly include metal and aluminium containers primarily servicing end-use categories, including beauty and personal care, beverages, food, home care and industrial, nutrition, paints and coatings, pet food, pharmaceuticals, seafood, vitamins, supplements and over-the-counter packaging.

**TRIVIUM**  
PACKAGING

## Our locations



## Our product types



Aerosols



Beverage bottles



Threaded bottles



Two-piece cans



Three-piece cans



Draw wall ironing (DWI) cans



Draw redraw (DRD) cans



Slugs, ends and component

## Our segments



Food



Seafood



Pet



Beverages



Coffee



Health and nutrition



Beauty and personal care



Home care and industrial



Paints and coatings

## Our core values



### Passion

Every day we strive to positively impact Trivium and society. We aim high and we are committed, enthusiastic and accountable.



### Teamwork

With safety as our first priority, we harness the power of collaboration. We do this with humility, trust, integrity and openness.



### Excellence

We aspire to shape our industry through world-class performance and exceptional value creation for all our stakeholders.



# Our role in society

The world needs packaging. Products that we buy need protection, food we consume needs preserving, and brands we love need to find ways to stand out on crowded shelves. Yet, our desire for safety, convenience and differentiation should not come at the expense of future generations and their ability to sustain themselves. At Trivium, we help companies make the transition towards more recyclable packaging.

## How we see the world around us

The world consumes 100 billion tonnes of materials annually, but only 8.6% is cycled back into our economy.<sup>1</sup> Put differently, over 90% of the resources we extract from nature go to waste every year. In response, stakeholders from around the world are rightfully demanding an alternative to today's throwaway economy. In their calls for a more circular future, many have turned to packaging for a better way forward.

Among end consumers, for example, environmental awareness and the importance of recyclability is on the rise – with consumers showing both a greater willingness to pay more for sustainable packaging and a strong reluctance to purchase products that harm the environment.<sup>2</sup>

At the same time, tighter regulations on packaging are being imposed around the world. Within Europe, growing interest among policy-makers in circular solutions and packaging waste reduction has been made abundantly clear with the recent publication by the European Commission of a proposed regulation on packaging and packaging waste (2022/0396 (COD)), arguably the most environmentally ambitious packaging-focused legislation to date. Similarly, growing momentum for Extended Producer Responsibility legislation in other regions of the world reflects a growing interest among policymakers to incentivise the use of readily recyclable packaging.

<sup>1</sup> CGRI (2022). The Circularity Gap Report.

<sup>2</sup> Trivium Packaging (2022). Global Buying Green Report.

Driven by these developments, consumer packaged goods companies are also acknowledging the importance of dissociating their products from packaging waste. Many brand owners are actively seeking packaging with better recyclability, reusability and/or reduced material.

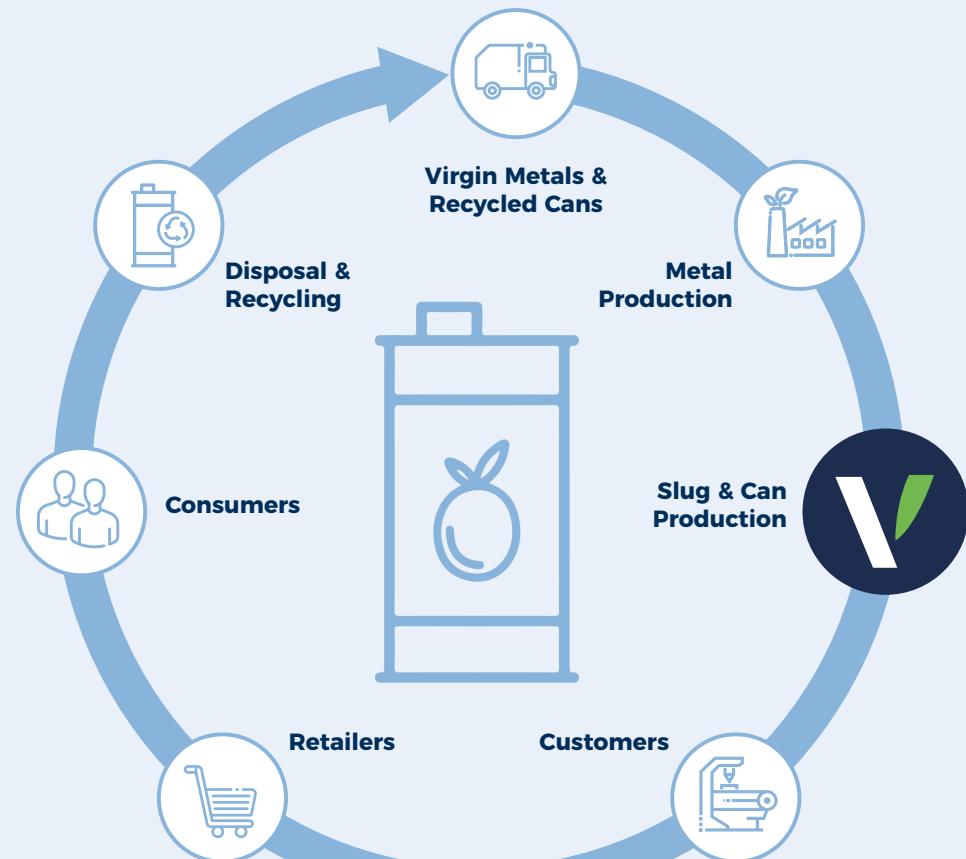
## How we create value

At Trivium, we specialise in producing and delivering safe, high-quality and innovative metal packaging that helps our customers grow their businesses and supports their progress towards their sustainability goals. Metal is our material of choice because it is infinitely recyclable, meaning that it has a lower waste footprint than most substrates on the market. It is also highly robust and versatile, offering superior protection and extended product shelf life.

We are on a journey to reduce our environmental footprint, in our production sites and throughout our value chain. With our value chain partners, we create roadmaps and projects with the objective to continuously improve and challenge the status quo. In this report, you can find plenty of examples from our journey. Our purpose is clear: to shape the future of packaging to ensure a better planet for everyone – today and for generations to come.

**We contain what matters.**

## Our value chain





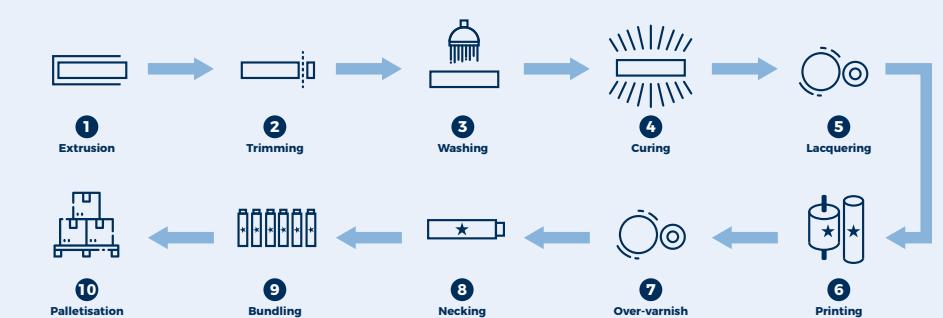
## What we do

Our metal packaging production processes are at the core of our business, and central to the impact we have on the world around us. Here is a glimpse into our production process for two of our main products.



### Three-piece steel cans

Steel is cut into large sheets (2). One side of the sheet is lacquered (3), to protect cans against corrosion and create a safe barrier between the cans' contents and their inner metal walls. After drying (4), sheets are cut (5) and rolled into a cylinder (6), and the edges are welded (7). Lacquering is then applied again to the inside surface of the weld (8), and it is cured (i.e., heated air is blown onto the outside of the cans). Afterwards, the welded body can be necked-in, flanged (9), seamed on one of two sides (10) and further reinforced and strengthened through a forming technique called 'beading' (11). Now the container is ready for filling. Finally, all cans are pressure tested (12) and then palletised (13).



### Aluminium aerosols

The production process for aerosol cans starts with applying a large force on an aluminum disc or "slug" to extrude the base shape (1). The parts are subsequently trimmed to specified lengths (2), washed in alkaline-based detergent washing chambers (3) and dried in an oven (4). To protect against corrosion – and to remove the possibility of interaction between the packaging and its contents – a protective lacquer is used to line the interior of the cans (5). Advanced lithography techniques are then applied to give cans a differentiated, premium look and feel (6). This includes the application of stain-resistant surface coating, decorative prints and over-varnish (7) protecting the print surface. Finally, a neckdown process forms the shoulder and neck of the can (8). After this, cans are ready to be bundled (9), palletised (10) and shipped to customers.

## Why metal?

### Protect

Metal is among the world's most durable packaging materials, offering resilient protection and keeping contents safe from external elements. It provides a strong barrier against UV and oxygen, enabling a long shelf life and reducing product waste- a crucial benefit considering that up to one-third of total global food production goes to waste each year.<sup>1</sup>

### Promote

Promote. Metal packaging provides greater opportunities for brands looking to differentiate their product. Research shows that consumers naturally associate metal packaging with a "premium" look and feel relative to other materials.<sup>2</sup>

### Preserve

Preserve. Metal is the material of choice for a circular economy. It can be recycled forever, meaning that it remains in the loop and reduces the need for virgin materials. Metal packaging also has one of the highest recycling rates in the world compared to other packaging materials.<sup>3</sup>



**100%<sup>3</sup>**

**infinitely recyclable**  
enabling true circularity

**80%<sup>3</sup>**

**of all metal ever produced is still in use**  
and will stay for generations to come

**60-70%<sup>4</sup>**

**of metal packaging is recycled globally**  
making it one of the most highly recycled materials around in the world

**70-95%<sup>3</sup>**

**energy savings**  
by recycling metal scrap instead of using virgin raw materials

<sup>1</sup> World Food Programme (2020). 5 facts about food waste and hunger. <sup>2</sup> Trivium Packaging (2022). Global Buying Green Report.

<sup>3</sup> Metal Packaging Europe. Metal recycles forever. <sup>4</sup> International Aluminium Institute (2022). Aluminium beverage can study. Global Recycling Magazine (2021). The global metal recycling market.

Our ambition is to help as many businesses as possible to make the transition to metal packaging, thereby contributing to more circular value chains across the segments we serve. We do so by collaborating closely with existing customers to incorporate more metal packaging in their product

portfolios (read about our collaboration with **California Olive Ranch** below). We also seek to identify growth areas for metal packaging in new markets – for instance by converting single-use plastic to infinitely recyclable metal (read about our collaboration with **Ocean52** on the next page).

Both processes typically involve a series of innovation sessions with the brand owner, in which we make the case for sustainability, share our passion for metal packaging and discuss a range of innovative ideas, specific to the customer's – or prospect's – portfolio.

## When trendy is also sustainable

**Smart packaging helps brands stand out on crowded shelves but not at the expense of the environment.**

Leading olive oil producer **California Olive Ranch** (COR) has a long track record of challenging convention to change its industry for the better. More than 20 years ago, it revolutionised olive growing practices and helped establish the California standard for olive oil (EVOO), one of the strictest standards in the world.

Building on this rich tradition, COR wanted to take its commercial offering to a new level by seeking out premium, sleek and differentiated packaging with a strong sustainability profile – and that is where Trivium came in. Trivium provided COR with aluminium bottles with a customised neck finish. The bottles use a clear base coat to reveal the beautiful underlying substrate of clear brushed aluminium, which serves as a reminder to consumers that they are opting for infinitely recyclable packaging and further demonstrates COR's commitment to sustainability. Due to its robustness, metal packaging is also less susceptible to breakage, leading to improved processability

and line uptime during the filling phase. Importantly, aluminium bottles are an excellent barrier to sunlight and moisture, the two primary drivers of premature quality degradation in food and edible oils. Such exceptional barrier qualities contrast with those of materials such as glass and plastic, which are generally more permeable to light and moisture, and that in turn can have an impact on the colour and quality of the oils.

"The aluminium bottle we developed together with Trivium came with any typical new bottle challenges, but with Trivium's top-notch Quality and R&D team in full support of troubleshooting we knew we would make things work. Trivium provided us with lots of information in advance, test bottles, and plenty of support to get a bottle that works flawlessly. We are very pleased with the improved functionality, recyclability and aesthetic appearance of our bottles and look forward to their commercial success as we start seeing them on shelves now"

**Mary Mori** Vice President of Quality and Product at California Olive Ranch



# The more you love, the more you protect

"Our new aluminium bottles are the perfect example of packaging that can be convenient, robust and fully in line with a truly circular, no-waste economy. Trivium has been a true partner in our fight against plastic waste. Not only have they provided us with high-quality, well-designed packaging, but they have also served as thought partners on sustainability, transparently sharing data and working with us on carefully assessing the environmental impact of our solutions."

Santi Mier CEO and founder of Ocean52



## Ocean52 - No Plastic Water

Every year, 12 million tonnes of plastic are dumped into the ocean. At current rates, we can expect plastic to outweigh fish in our waters by 2050. For a group of ocean-passionate individuals, this scenario is unthinkable. Armed with advanced marine knowledge and a determination to avoid business as usual, Ocean52 was born.

**Ocean52** is the world's first beverage company that devotes 52% of its profits to ocean protection. "We believe in a simple thesis", says Santi Mier, Ocean52's CEO-founder. "The more you know about the ocean, the more you love it. And the more you love the ocean, the more you want to protect it." That's why Ocean52 dedicates a significant amount of its time and resources on designing, creating, and raising awareness on solutions that serve to protect our oceans.

Ocean52's dedication to the ocean is synonymous with its dedication to fighting plastic waste. "Our approach is to trace the origins of plastic waste and find ways to eliminate it at the source", explains Santi. "On-the-go packaging is a key contributor to the waste that ends up in the ocean, and it was clear to us from the outset that one of the ways we can make the biggest and, importantly, most immediate impact to ocean conservation is by

"This collaboration helps to highlight the key elements of the aluminium bottle: its sustainability credentials, refillability and also convenience as it is re-closeable. My journey with Santi and Ocean52 started many years ago at a sustainability conference at Cambridge University and we are delighted to now have No Plastic Water in Trivium bottles, which reflects both companies' commitment to sustainability and to helping the bottled water market change step by step".

**Greg Mucha** Trivium Sales Director Beverage Europe

introducing more sustainable packaging alternatives for nomad consumption".

In 2019, Ocean52 introduced 'No Plastic Water', premium quality natural mineral water sourced from the Galea spring in Asturias and packaged in aluminium cans. With its rigid structure and excellent barrier qualities, aluminium packaging offers superior product protection while boasting the highest recycling rates among all beverage containers. Aluminium is eternally recyclable: it can be recycled over and over again without losing quality, and every recycled can requires 95% less energy to make than a new one.<sup>1</sup>

Encouraged by the great customer response to its cans, Ocean52 worked with Trivium to create a new premium line for their products. Just four months after floating the idea, the 'No Plastic Water' aluminium bottle was introduced. The bottle boasts the sustainability credentials of aluminium

packaging but also has a refreshing sleek look that immediately catches the eye. Importantly, the bottles are re-closeable meaning that they can be refilled and reused multiple times. When they are finally discarded, they can be recycled endlessly.

In addition to directly contributing to plastic waste reduction, 52% of the profits from the sale of No Plastic Water aluminium bottles – as with all Ocean52 products – will be used to fund ocean conservation activities such as beach clean-ups, youth educational programmes, and various circularity and recycling initiatives. With No Plastic Water, customers are therefore directly contributing to plastic waste reduction (Ocean52 products have replaced three million plastic bottles since 2018) and the preservation of marine biodiversity. At Trivium, we are proud to support Ocean52 on their quest to make such a positive impact.



Santi Mier (left) and Greg Mucha celebrate the launch of No Plastic Water aluminium bottles at the Radikal Ocean52 swim event in Calella de Palafrugell, Spain.

<sup>1</sup> International Aluminium Institute. Sustainability.

At the same time, we recognise our business touches hundreds of millions of people around the world, thanks to the more than 100 million metal packaging items we produce every day. Our actual and potential impact on society, therefore, reaches far beyond our customers, and our aspiration is to create exceptional value for all stakeholders connected to our business.

To highlight and assess our impact on stakeholders, in 2021 we developed and published our first value creation model. The model is based on the six capitals model developed by the Value Reporting Foundation (formerly the International Integrated Reporting Council (IIRC)). It illustrates how we are able to use our assets to create societal impact that is aligned with the United Nations Sustainable Development Goals (UN SDGs).

#### This value creation process is driven by three levers:

# 1

#### Our vision

To be the global leader in metal packaging

#### Our shared purpose

We shape the future of packaging to ensure a better planet for everyone today and for generations to come.

We contain what matters.

Our vision focuses on the commercial side of our business, while our shared purpose connects and aligns our commercial goals with our social responsibility. By shaping the future of packaging, we need to be a reliable partner that delivers, and we will grow as a result.

# 2

#### Our core values

Passion  
Teamwork  
Excellence

Our values represent what we stand for, guide the way we do business, and underpin our activities, decisions and organisational culture. They allow us to deliver on our commitments to our customers, partners, suppliers, and stakeholders, and help promote ethical corporate behaviour within our organisation and towards third parties.

# 3

#### Our standardised approach to doing business

Trivium Business System (TBS)

TBS enables us to consistently apply standardised best-in-class practices across all our plants and functions so that our customers get reliable and predictable quality and service from Trivium regardless of which entity they deal with.

# Value Creation Model

## Assets >

### Global platform

Well-invested asset base with over 60 locations in Europe, Africa, Asia and the Americas

### Innovation leadership

Over 90 R&D scientists underlying award-winning product and process innovations

### Materials



100% infinitely recyclable metal in all products

### Diversified portfolio

9 different product segments generating substantial cash flow on an annual basis

### Organisational culture

Start-up agility combined with a rich legacy of more than 100 years of packaging excellence

### Engaged workforce

One global team of over 7,000 employees representing more than 60 nationalities

## Business Model >

### Our vision

To be the global leader in metal packaging

### Our shared purpose

We shape the future of packaging to ensure a better planet for everyone - today and for generations to come

**WE CONTAIN WHAT MATTERS**

### Our core values



Passion



Teamwork



Excellence

### Trivium Business System



## Output >

### Customer

Partner of choice



→ Growing our business sustainably

### Planet

Care for climate



→ Environmentally conscious facilities  
→ Sustainable sourcing

### People

Force for good



→ Safe, engaged and responsible workforce  
→ Sustainability leadership through stakeholder engagement

## Stakeholder Value >

We help our customers grow their brands, stand out on shelves and realise their sustainability ambitions through our metal packaging solutions

We aim to create long-term shareholder value that does not undermine future generations' ability to sustain themselves

We aspire to enrich end consumers' lives by enclosing their products in safe, well-designed and protective packaging

We seek to empower the industry to elevate the profile and sustainability standards of metal packaging

We challenge our suppliers to continuously enhance the sustainability of metal

We aim to help our employees reach a sense of meaning, fulfillment and purpose

We work towards the prosperity of the communities we operate in through development and partnership opportunities

## Societal Impact >

### Partnerships for circularity



Engaging with stakeholders on collaborations that inspire transformational climate change and the transition to a circular economy

### Protection of products



Preserving product integrity and extending shelf life

### Preservation of the environment



Limiting the environmental and ecological footprint of our operations and value chain

### Promotion of responsible and inclusive growth



Fostering safe and empowering work environments that enable professional and organisational growth



"My role as plant controller is to assess plant initiatives and projects against several criteria, including risks, costs, and anticipated (environmental) benefits. Sometimes external developments can help reduce some of the trade-offs between these criteria and streamline the investment process. Last year's energy crisis, for example, brought challenges to our business, but it also accelerated our plant's commitment to invest in energy-saving initiatives such as increasing the efficiency of our printing lines and reducing the energy consumption of our air compression system. These initiatives will help us to reduce our operational costs and minimize our environmental impact, thereby supporting both our business and sustainability agendas."

**Abdel Aziz Derme** Trivium Plant Controller, La Fleche

## How we approach sustainability

'Circularity Champion' is our overarching strategy to transform Trivium into the partner of choice for quality and sustainable packaging. Launched in 2020, our strategy consists of three pillars that reflect our organisational priorities: customer, planet and people. Within each of our three pillars, we have identified priority areas based on a materiality assessment. These areas are aligned with the UN SDGs that we feel are most relevant to our business and are further associated with concrete key performance indicators (KPIs) and targets that we aim to achieve by or before 2030.

In 2022, we conducted a new materiality assessment to assess the extent to which our previously identified material topics in 2020 were still material in terms of impact. These are topics that (can) significantly influence our organisation and its performance, and/or topics which our organisation (can) significantly impact with its activities ([see page 81](#) for a more detailed description). As a result of this assessment, we refined our strategic and reporting focus for 2022 with a view to accelerate our societal impact in the future. Specifically, we introduced some changes to our strategy and added four new KPIs and their associated targets. These new KPIs are highlighted in the table below and our performance on them, along with the rest of our KPIs, are described more extensively later in this report.



## Strategy pillars

Pillar	Focus	SDGs	Sub-pillar	KPIs	2020	2021	2022	Target	Target year
<b>Customer-Partner of choice</b>	The sustainable growth of our business through the production and delivery of safe and innovative packaging that exceeds our partners' expectations. Our aspiration is to support more brand owners in swapping the less sustainable packaging in their product portfolios with our metal packaging solutions.	 	<b>Product safety</b>	# incidents of non-compliance with regulations concerning the health and safety impacts of our products <b>[NEW]</b>	N/A	N/A	0	0	N/A
				% significant product categories assessed for health and safety impacts <b>[NEW]</b>	N/A	N/A	100%	100%	N/A
			<b>Product quality</b>	% plants with a top-rated quality management system <b>[NEW]</b>	N/A	N/A	88%	100%	2030
			<b>Product eco-design</b>	% new product developments that meet eco-design criteria	N/A	61%	65%	80%	2030
			<b>Product information</b>	% sales revenue from eco-designed products	N/A	N/A	16%	50%	2030
				Fully automated and readily accessible product compliance information portal available	N/A	On track	On track	Full implementation	2024
<b>Planet-Care for climate</b>	A less wasteful, more sustainable future through continuous process optimisation, environmental management and responsible business practices. Our aim is to make our operations and supply chain as ethical, ecological and efficient as possible.	  	<b>Scope 1 and 2 emissions</b>	% reduction in Scope 1 and 2 CO <sub>2</sub> emissions vs 2020 baseline <sup>2</sup>	N/A	-3.2%	-10.2% (-7.3%)	-42%	2030
			<b>Renewable electricity</b>	% total electricity consumed from renewable sources	N/A	29%	29%	100%	2030
			<b>Water withdrawal<sup>1</sup></b>	% reduction in water withdrawals vs 2020 baseline <sup>2</sup>	N/A	-1.5%	-1.2% (+0.3%)	-10%	2030
			<b>Waste</b>	% total waste generated that is sent to landfill	23%	18%	14%	0%	2030
			<b>Supplier ESG</b>	% total purchase spend allocated to suppliers with average or above-average ESG performance	N/A	48%	61%	70%	2030
			<b>Scope 3 emissions</b>	% reduction in Scope 3 CO <sub>2</sub> emissions vs 2020 baseline <sup>2</sup>	N/A	-7.1%	-11.6% (-4.7%)	-25%	2030
<b>People-Force for good</b>	Being a force for good in all the areas in which we operate. Our aim is to nurture a work environment in which our employees feel safe, engaged, and responsible, and to work with local and global stakeholders on collaborative engagements that inspire and promote the greater good.	  	<b>Workplace health and safety</b>	Total Recordable Accident Rate (TRAR) per 100 FTE/year	1.14	1.51	1.30	0.85	2025
			<b>Employee engagement</b>	Organisational Health index (OHI) quartile score	3 <sup>rd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	2025
			<b>Leadership and functional capabilities development</b>	% workforce who receive regular performance and career development reviews <b>[NEW]</b>	N/A	14%	16%	75%	2030
			<b>Inclusion and diversity (I&amp;D)</b>	Company-wide I&D programme implemented	N/A	On track	On track	Full implementation	2025
			<b>Transparency</b>	# world-class scores on major external sustainability ratings per year	1	2	2	2	N/A
			<b>Community engagement</b>	% locations participating in at least one community engagement project per year	90%	100%	100%	100%	2025
			<b>Thought leadership</b>	# open access knowledge documents published per year	2	2	2	2	N/A

<sup>1</sup> Formerly reported as "water consumption"

<sup>2</sup> Cumulative progress vs baseline (year-on-year change in parenthesis)

# 2 Business review

Despite uncertain market conditions, we successfully delivered our performance impact goal in 2022. We closed the year with a stronger financial performance than 2021 owing to the continued dedication of our teams towards the factors we could control.

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**“Market challenges seem to be the new normal but despite this we believe our operational performance outlook continues to be positive on the back of continued demand and regulation favouring sustainability-friendly products as well realisation of continued benefits from our transformation programme.”**

**Stefan Siebert** Trivium Chief Financial Officer

Global economic headwinds caused by, among others, the Russia-Ukraine conflict (see boxout), high inflation levels, decline in the Euro/Dollar exchange rates and rising interest rates throughout the year were key challenge areas during 2022. In addition, some of our end-markets faced difficult conditions due to events like the historical drought<sup>1</sup> in Europe during the summer as well as global supply chain challenges and labour shortages. These challenges impacted year-on-year volumes and related efficiencies within some of our business units.

Nevertheless, 2022 saw a particularly strong performance by both our purchasing and commercial teams, which helped to protect our margins in the face of volatile supply market conditions in Europe and in the Americas.

Our products continued to shine on the world stage in 2022, receiving a total of 10 awards from industry associations covering pet food, beverage, and health and beauty. Products with a reduced environmental footprint are increasingly well positioned through our eco-design approach to offer metal packaging solutions that address this demand.

In 2022, we were also awarded Platinum status by EcoVadis for the second year in a row. The rating agency reviewed over 100,000 companies globally and the Platinum rating, whose threshold increased from last year, is only given to the top 1% of the rated companies. This achievement validates our strong sustainability strategy and performance.

Our over 7,200 employees continue to focus on what we can influence, through delivering on our transformation agenda. The transformation is driven through our Trivium Business System approach whereby we focus on continuous value creation, including standardizing tools, processes and capabilities.

#### Russia-Ukraine conflict

Trivium has been impacted by the ongoing Russia-Ukraine conflict as a result of having operations in both countries at the start of the conflict (two plants situated in Ukraine and one plant in Russia). Trivium has subsequently sold its sole operating plant in Russia during the second quarter of 2022, whilst the two plants in Ukraine continue to operate on a relatively normal level. In aggregate, the Ukraine operations contribute less than 1% of Trivium's performance.

<sup>1</sup> BBC (2022). Europe's drought the worst in 500 years- report.

	Year ended December 31, 2022	Year ended December 31, 2021
(in \$ millions, except percentages)		
<b>Income statement data</b>		
Revenue	3,279	2,757
Adjusted EBITDA <sup>1</sup>	604	451
Profit/(loss) for the year	18	(129)
<b>Performance ratios</b>		
Adjusted EBITDA margin	18.4%	16.4%
Leverage ratio <sup>2</sup>	4.4x	6.0x
<b>Balance sheet data</b>		
Cash, cash equivalents and other financial assets	179	215
Total assets	5,165	5,280
Total equity	689	679
Net debt <sup>3</sup>	2,652	2,718
Capital expenditure <sup>4</sup>	145	94

<sup>1</sup> Adjusted EBITDA consists of profit or loss for the year before income tax expense, depreciation and amortisation expense, exceptional operating expense items, finance expense, (loss)/gain on disposal of PPE and service costs of the long-term performance-based plan.

<sup>2</sup> Leverage ratio is calculated as Net debt divided by Adjusted EBITDA.

<sup>3</sup> Net debt is comprised of our total indebtedness, net of cash, cash equivalents and other financial assets and derivative financial instruments used to hedge foreign currency and interest rate risk.

<sup>4</sup> Capital expenditure is the sum of purchases of property, plant and equipment and intangible assets, net of proceeds from disposal of property, plant and equipment, as per the consolidated statement of cash flows within the Report to Bondholders as at December 31, 2022.





# Growing our business sustainably

Our customers expect us to provide them with safe, high-quality, innovative and sustainable packaging solutions that protect and contain what matters. Meeting and exceeding these expectations is key to the growth of our business and the prosperity of our customers, planet and people. In 2022, we reinforced our position as our customers' partner of choice by upholding rigorous product safety safeguards, setting a new benchmark for product quality, and introducing award-winning innovations to the market.

**TRIVIUM**  
PACKAGING



# Advancing product safety and compliance

By choosing our metal packaging solutions, brand owners are entrusting us with the superior protection of their products. It is imperative that we strive to bring packaging to the market that complies with the relevant product safety regulations. We therefore implement operational controls and adequately disclose product information to our customers to streamline regulatory compliance procedures.

## Product stewardship

Product stewardship sits at the heart of our management of product safety at Trivium. First, we take steps to verify that the raw materials we use to manufacture our packaging are safe for their intended (food or non-food) purposes. Our product stewardship is in place to avoid non-compliance of the raw materials with relevant and material regulations in the regions where we operate (such as the Food and Drug Administration in the United States and the European Food Safety Authority in the European Union). We require our suppliers to provide us with relevant compliance documentation, and to update this documentation as and when there are any changes to the formulations or compositions of the materials we procure.

Our second set of internal controls relates to quality safeguards across our own operations. All Trivium plants have a third-party certified quality management system in place with the purpose of safeguarding compliance ([see page 24](#)).

To further reinforce our efforts to prevent non-compliance with product safety regulations, we introduced two new KPIs and targets in 2022. The first measures the number of incidents of non-compliance with food contact material regulations and good manufacturing practice regulations concerning product-related health and safety impacts, resulting in fines or official warnings by authorities. In 2022, we successfully met our target of zero such incidents.



“Making comprehensive product information easily accessible is at the heart of our efforts to demonstrate transparency towards our customers and support them in compliance documentation. In 2022, we issued a total of 1,648 product safety and compliance documents for our customers.”

**Hélène Germon** Trivium Product Stewardship Manager

The second KPI measures the percentage of significant product and service categories for which product-related health and safety impacts are assessed. Suppliers provide us with a Declaration of Compliance for the relevant and material regulations concerning the raw materials they supply. Regarding direct food contact raw materials, the supplier Declaration of Compliance is based on a full evaluation done by a third-party accredited laboratory to validate the compositional and migration-testing compliance. Similarly, in line with their quality management system certification requirements, our plants conduct annual product quality and safety reviews. As such, we have successfully met our second product quality target of 2022: 100% of significant product categories assessed for health and safety impacts.

## Declaration of Compliance

Our approach to product safety extends to how we communicate about it with our customers. Our aim is to offer our customers transparency around our products and processes so that they can confidently verify our compliance with relevant product safety regulations.

We provide our customers with Declarations of Compliance for their products upon request. We are currently creating an online portal that will streamline the compliance process and enable customers to quickly collect the relevant regulatory information they need for their products. In 2022, we successfully completed a trial for the automated compliance tool that will underpin this portal, and we remain on track to launch the portal in 2024.

In parallel, we seek to provide our customers with guidance on product safety and associated regulatory and compliance issues. For example, in 2022, our Customer Technical Service (CTS) teams in North America launched new guidance on double-seaming integrity, thereby helping customers who receive our packaging maintain product safety during the filling phase. Within our Europe, Africa, Asia (EAA) division, we provided trainings to our CTS teams to equip them with the latest knowledge on legislative developments regarding product safety so that they can answer customers' compliance-related queries and, where relevant, provide customers with guidance on technical issues that they might face.

# Safeguarding product quality

Product quality is closely linked to product safety. In our operations, product quality means having the right culture, systems and procedures in place to enable us to consistently deliver products that meet customer and regulatory requirements. This year, following the emergence of product quality as a new material topic, we are aiming higher by setting a new quality-related target.

## Top rated quality management systems

Within Trivium, all plants have a third-party certified quality management system. For our plants that produce food packaging, 100% have a quality management system with a Global Food Safety Initiative-approved BRC certificate (an internationally recognised benchmark for best practice in food safety, quality and responsibility). All our other plants have an ISO 22000-, 22715- or 9001-certified quality management system.

The results of our recent materiality assessment (p. 83) indicated that stakeholders care deeply and hold high expectations of Trivium regarding the quality of our products. These findings motivated us to set a new, ambitious KPI and target in 2022 to measure our product quality improvement journey.

Our new KPI relates to the percentage of Trivium plants with a top-rated certified quality management system in place. We define a top

rating as AA or A+ for BRC certification and/or 'no major findings/non-conformities' for ISO certification. Our target is to achieve 100% by 2030. By setting this target, we aim to go beyond the presence of quality management systems and further strengthen the implementation of these systems. Since these quality systems additionally support our product safety objectives, we see them as an integral part of our overall operational strategy.

In 2022, 88% of all Trivium plants had a top-rated quality management system. Meanwhile, we continued to roll out our new web-based Statistical Process Control system in our European and North America Food business units, helping to improve and standardise process control. Our quality awareness campaign and newsletter, as well as our dedicated taskforces, continued to drive quality improvements throughout the year. In 2023 and beyond, we will continue these efforts to further enhance our quality-related performance and reach our target of 100% top-rated quality management systems.



# Innovating to lead

**Our role as a leader in shaping a positive future for metal packaging depends on our position at the forefront of technical and sustainable innovation. To realise our ambition of becoming the partner of choice in our industry, we provide our customers with new, tailored solutions, using the latest approaches and technologies.**

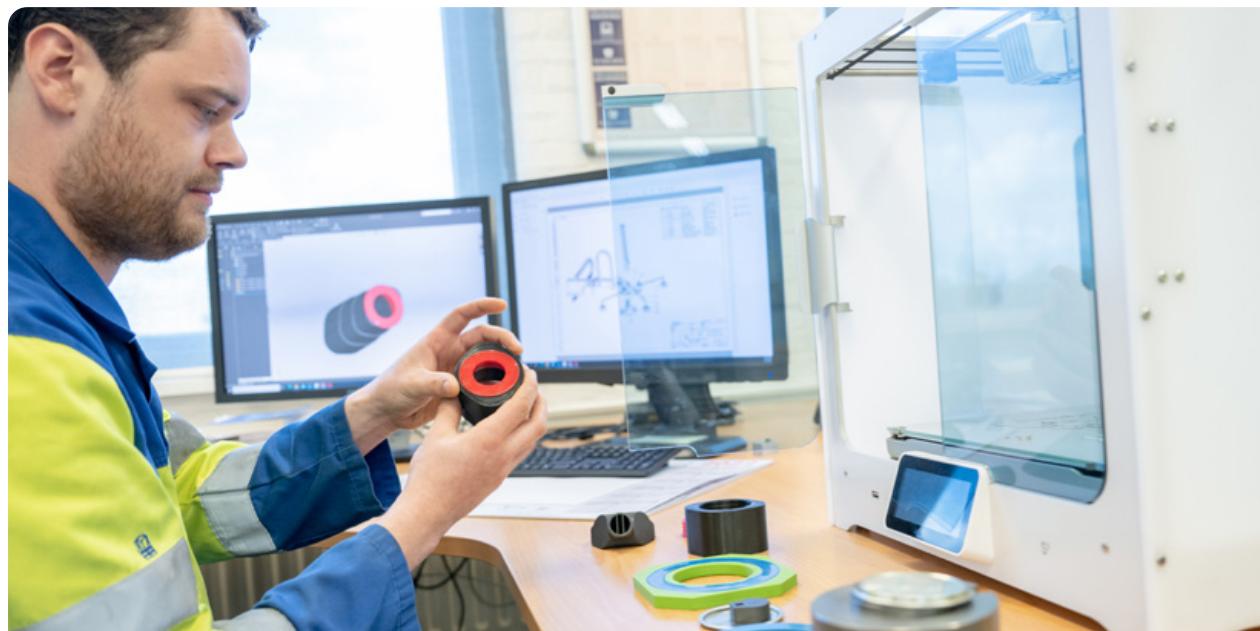
## Smart partnerships

We are committed to offering customers best-in-class metal packaging solutions that help consumers enjoy their products in a safe, comfortable, convenient and environmentally friendly way. This requires a continuous focus on innovation. We recognise, however, that we are just one link in our value chain and believe that the

different players in our ecosystem can and should take every opportunity to learn from one another. To support and enable this, more than 90 scientists across Trivium's two R&D centres, as well as cross-functional commercial and operational colleagues, proactively collaborate with customers, suppliers and research institutes to develop one-of-a-kind packaging solutions with technical and sustainable excellence at their core.

We work closely with our customers to come up with new ideas that address key market opportunities. This close collaboration takes the form of an open and ongoing dialogue with our customers throughout the year and is often supplemented with innovation and sustainability sessions. During these sessions, we listen to our customers' packaging challenges and wishes, share new ideas for new packaging options based on their existing product portfolio and help them to identify key growth opportunities in their market segments. According to customer needs, we can follow up on these collaborative sessions with customised, industry-leading innovations that advance their objectives. We accelerated our work on closure technology, including direct seals and more consumer-friendly easy-open ends.

Our innovative collaborations also extend to our raw material and equipment suppliers. In 2022, we worked closely with our steel suppliers on higher quality steel grades for some of our ends; with our aluminium suppliers on ways to adapt our manufacturing processes to suit new aluminium alloys with higher recycled content; and with our coating suppliers on preparing for compliance to upcoming regulations on product safety and food contact, such as bisphenol A (BPA) and per- and polyfluorinated substances (PFAS). In addition, we collaborated with our equipment suppliers on new metal-forming opportunities for some of our products, such as bottles, and on energy consumption reduction opportunities for our processes. Through these partnerships, we aim to





**Jean-Luc Keravec**

Trivium VP Group R&D

**“Our ongoing focus on customer-driven innovation and excellence, and a commitment to smart partnerships across the value chain has made 2022 a strong year for innovation at Trivium. In 2022, we conducted more than 60 customer innovation sessions globally, with further sessions scheduled for 2023. We are also proud to have continued our strong tradition of award-winning technical and sustainable innovation, receiving 10 awards across a range of categories and geographies.”**

become the driving force behind the metal packaging industry's evolution towards technical excellence.

As we strive to advance our product innovation, we also look to develop academic partnerships and pursue knowledge-sharing collaborations with institutions in Europe and the USA. In 2022, for example, we successfully completed a project with the University of Twente (the Netherlands) on determining the fundamental causes of lacquer damage on tinplate. In France, we cooperated with national standardisation association AFNOR on filing a new standard related to the

microwaveability of metal and alloy articles in contact with food ('Evaluation d'aptitude au chauffage par micro-ondes des articles en métal et alliage au contact de denrées alimentaires NF-D21-314') that was published in January 2023. In the years to come, we aim to increase such collaborations to accelerate our product innovation and explore issues that represent both opportunities and challenges to our industry.



### Product Innovation Awards in 2022

1. WorldStar Packaging Awards for the Bubble Tree Refillable Bubble System bottle and the Peel Off End with a QR code.
2. PAC Global Best in Class Award for Technical Design for the Bubble Tree Refillable Bubble System bottle.
3. CanTech Award for the Titus seafood can
4. CanTech Award for the Sandara wine bottle.
5. The International Organisation of Aluminium Aerosol Container Manufacturers (AEROBAL) award for the Rexona aerosol bottle in the 'Can Already on the Market' category.
6. Grandes Cases de Embalagem Competition recognises Trivium for its aluminium bottle for BEG Boutique Distillery.
7. Canmaker Can of the Year for Low Ka Kombucha bottle (Gold)
8. Canmaker Can of the Year for Bravo Sierra sulphate free body-wash bottle (Silver),
9. Canmaker Can of the Year for Doothie can (Bronze).
10. Better World Award recognises Trivium for its refillable aluminium bottle for Boticario (Arbo brand) men's cologne.

## Product eco-design

Sustainability is at the heart of all we do, making us the natural partner for up- and downstream businesses aiming to achieve ambitious sustainability goals through our metal packaging solutions. However, we do not rely on metal alone – which has inherent environmental benefits as an infinitely recyclable material – to do the hard work for us. We are constantly working to improve its green credentials, thanks to initiatives such as the eco-design tool we introduced in 2021. See *Trivium Packaging Sustainability Report 2021*, page 35.

Our eco-design tool sets out nine sustainability criteria, determining a rating for each of our product designs and developments. This enables us to benchmark the environmental profiles of new packaging solutions against existing version on the market today.

### Eco-design: our nine key criteria

- Light-weighting
- Refill, reuse and reclosure functionality
- Recycled content
- Recyclability
- Chemical boundaries reduction
- Carbon footprint reduction
- Water consumption reduction
- Waste reduction
- Volatile organic compounds (VOCs) emission reduction

In 2022, we focused on three eco-design criteria in particular: light-weighting, recycled content, and carbon footprint reduction. We continued our product light-weighting journey, for example, by introducing the next-generation of downgauged easy open ends (read about our collaboration with **Conserve Italia** on the next page). Recycled content, meanwhile, was a particularly strong area of focus in our partnerships with customers in the beauty industry, thanks to growing consumer pressure in this market segment. During the year, we worked with our aluminium suppliers on developing aerosol cans with higher levels of recycled content. As exciting as such progress is, the shift will not happen overnight as the quality, durability and technical requirements of our products still have to be met. Nevertheless, we are starting to see important R&D projects such as this being translated into commercial products.

Finally, we continued collaborations with customers, suppliers, and logistics providers that aim to significantly reduce carbon emissions across the value chain (read about our collaboration with **ArcelorMittal** on [page 45](#)) with a view to passing on these reductions to our customers in the form of lower carbon packaging.

To reinforce our commitment to eco-design and innovation, we have two associated targets that we aim to achieve. First, we aim to have 80% of our new product developments meet our eco-design standard by 2030. Setting this target empowers our R&D teams to prioritise sustainability in their innovation efforts.



### Eco-Design

New product developments that meet eco-design criteria

**2022 65%**



**Target 2030 80%**

**2021 61%**



## The world's lightest Easy Open Ends

**As raw materials are responsible for a significant part of our environmental impact, light-weighting (or downgauging) is an important criterion within our eco-design framework.**

Through light-weighting, we aim to retain the durability and strength of a product or component while reducing the total amount of material used in its production. The environmental benefits are clear: owing to the associated reduction in raw material and transport-based carbon emissions, our customers receive highly protective and robust packaging with a lower carbon footprint.

Easy Open Ends (EOE), one of the main closures we use for our cans, are an important focus area for our light-weighting efforts. In 2008, we were the first company in Europe to introduce the downgauged 0.18 mm Ø73 mm EOE to the market, at a time when 0.21 mm was the standard. Since then, our R&D teams have worked tirelessly on finding ways to bring about further downgauging, with the aim of setting a new standard for eco-designed ends.

In September 2022, we introduced the next generation EOE to the market. The 0.16 mm Ø73 mm EOE is the world's lightest end of its kind and represents a significant step in can-making technology. Since its launch, we have produced a total of 300 million of these new generation ends, with sustainability-driven customers such as **Conserve Italia** being among the first set of customers to shift to this new lighter closure. As more brand owners look to us for innovative, sustainable packaging solutions, we plan to continue the roll-out of these new ends among our broader customer base.



A new product meets our eco-design standard if, in addition to being produced with infinitely recyclable materials, it meets one of the nine identified criteria and generates an overall score that is higher than the incumbent product. In 2022, 65% of all new product developments met this standard (up from 61% in 2021). Our eco-design standard is intended to be in line with the upcoming requirements of the Ecodesign for Sustainable Products Regulation (ESPR), which was published on 30 March 2022. The proposal builds on the existing Ecodesign Directive, which has a limited product scope and a focus on energy. The ESPR aims to cover the 'broadest possible range of products' with more diverse Ecodesign criteria. At Trivium, we are monitoring the impact of this regulation on our products and our eco-design tool.

Second, in line with our ambition to grow our business sustainably, we aim for 50% of our revenue to come from products that meet our eco-design criteria by 2030. In 2021, we calculated that 25% of our sales revenue came from eco-designed products, based on a preliminary review of our 100 best-selling products. In 2022, we expanded our review to include all of our products: 16% of our revenue came from products that met our eco-design standard. In the future, we will continue to work towards our target of 50% by, among other things, taking every opportunity to address the subject of sustainable packaging in our innovation sessions with customers.

## Ausnutria and Trivium celebrate lower-carbon packaging production

With carbon footprint reduction representing one of our nine eco-design standards, we aim to continuously improve the reduction of the carbon content of our products, including more efficient production, operations, logistics and procurement. Our collaboration with leading infant formula manufacturer, Ausnutria, in Heerenveen, the Netherlands, is a great example of a project that targets all the above.

In 2018, **Ausnutria** was looking for a supplier that could provide them with packaging that would meet the highest quality and hygiene standards and with a reduced environmental impact. A solution was devised in the form of constructing a new can-making plant together, that directly adjoins Ausnutria's production facility in Heerenveen. In 2022, this plant became operational.

The plant was designed with sustainability as a priority. This is the first Trivium plant running on zero emission energy sources, for example geothermal heating and green electricity. Excess warmth during the summer period is stored deep underground and can later be transferred to the plant in the winter. The result is a comfortable working environment all-year round with no gas consumption.

The proximity of the plant to the customer's facility has also improved logistics: up to 80% of our finished packaging is now transferred to the customer by means of a conveyor belt that runs

between both plants, eliminating the need for truck-based transportation and its associated emissions. In parallel, upstream-based emissions have been reduced through a nitrogen gas generator that produces and supplies nitrogen onsite, eliminating the need to transport nitrogen to the plant in liquid form by road.

Finally, the plant no longer uses light switches. Motion-based sensors mean that lights are only switched on when needed, further reducing electricity consumption.



4

# Environmentally conscious facilities

We recognise that caring for our climate is a business imperative and that our stakeholders increasingly expect us to make meaningful efforts towards positive climate action. A continuous improvement approach to the environmental profile of our global facilities is key. In 2022, we submitted our carbon emission reduction targets for validation by the Science-Based Targets initiative and continued the successful roll-out of global and local initiatives related to our main areas of ecological impact.

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# Adopting an integrated approach to environmental management

Our manufacturing processes convert aluminium and steel into packaging through a series of steps. These steps may require energy and water, while others can produce waste or release gases that contain volatile organic compounds (VOCs). As these activities can pose a threat to the environments and communities in the vicinity of our operations, we adopt a holistic approach to reducing our impact on the planet through a combination of environmental policies, management systems, and initiatives.

## Environmental Policy

Trivium's Environmental Policy dictates our overall approach to environmental performance management. Trivium's Environmental Policy is linked to our [Code of Conduct](#) and therefore governs the activities of all our employees, contractors and third parties working on our behalf around the world. Approved by Trivium's Management and Supervisory Boards, the Policy seeks to achieve several outcomes, including raising environmental awareness; reducing the occurrences of environmental incidents; establishing standardised company-wide environmental protection practices and achieving material compliance with environmental regulatory requirements.

Underpinning Trivium's Environmental Policy are Environmental Control Standards, a set of rigorous specifications in line with relevant legal and regulatory guidelines on environmental criteria. Our Environmental Control Standards are subject to regular internal audits, management reviews and compliance checks to help make sure that they are both properly applied and contribute to their intended goals. In 2022, 100% of our locations completed an online audit to review their implementation of current standards.<sup>1</sup> The feedback was used to identify each plant's environmental achievements, best practices and performance gaps, as well as to define concrete steps to further enhance environmental performance in the years to come.

<sup>1</sup> Excluding our two plants in Ukraine.

Based on our online plant audits, we have not identified any instances of non-compliance with material and relevant environmental laws and regulations in the countries where we operate. We also remain committed to open and unbiased dialogue with our stakeholders on environmental topics, and we periodically align our approach with external and internal stakeholders through, among others, materiality assessments and audits ([see page 81](#)).

## Environmental management system

We have environmental management systems in place at each of our production facilities. In 2022,

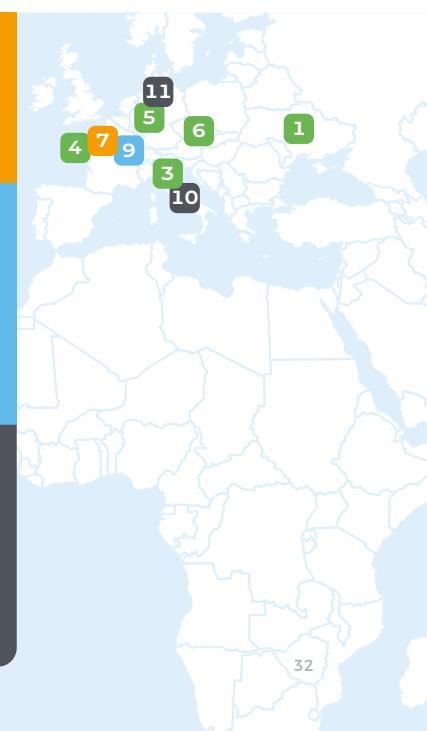
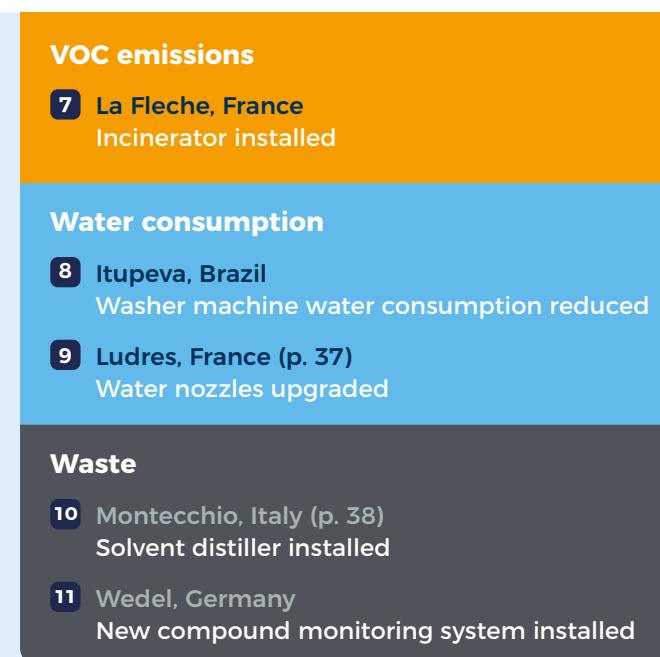
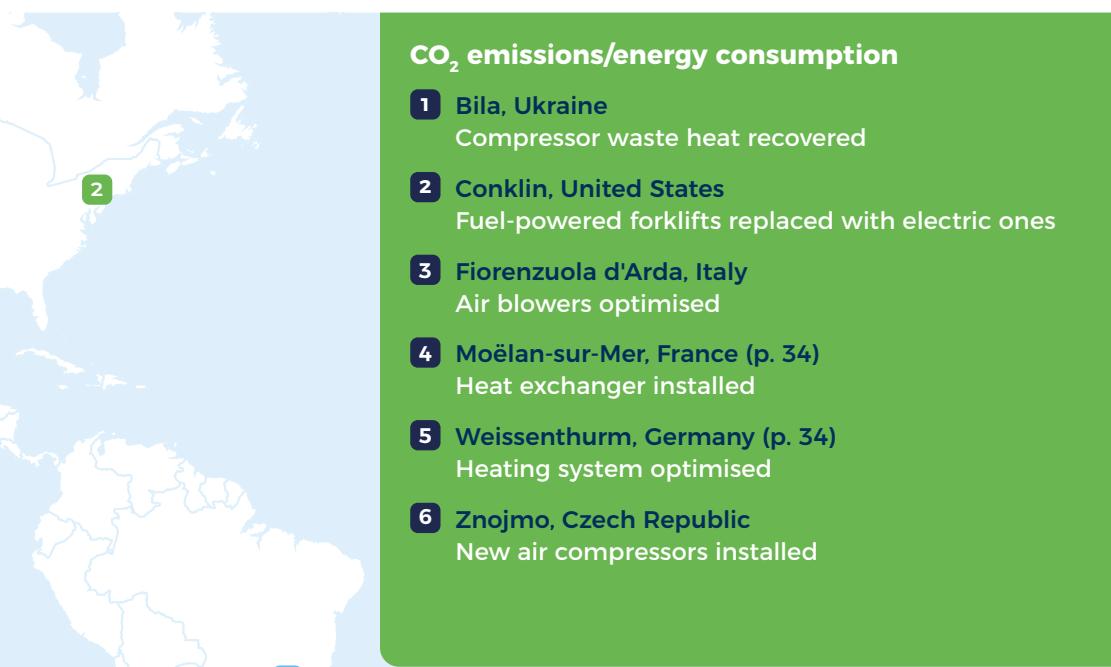
63% of our plants had an externally validated ISO 14001 certification for environmental management (2021: 64%) and 24% had an ISO 50001 for energy management. Acquiring these third-party certifications helps us keep our environmental management activities in line with international best practices.

In addition, all our plants are required to share monthly environmental data through the Trivium Risk Inventory Management System (TRIMS). Environmental incidents must also be reported to TRIMS in accordance with specific reporting procedures. Through TRIMS, we can closely track our environmental footprint and document environmental incidents, which in turn enables us to investigate and implement corrective action

wherever necessary to drive continual improvement.

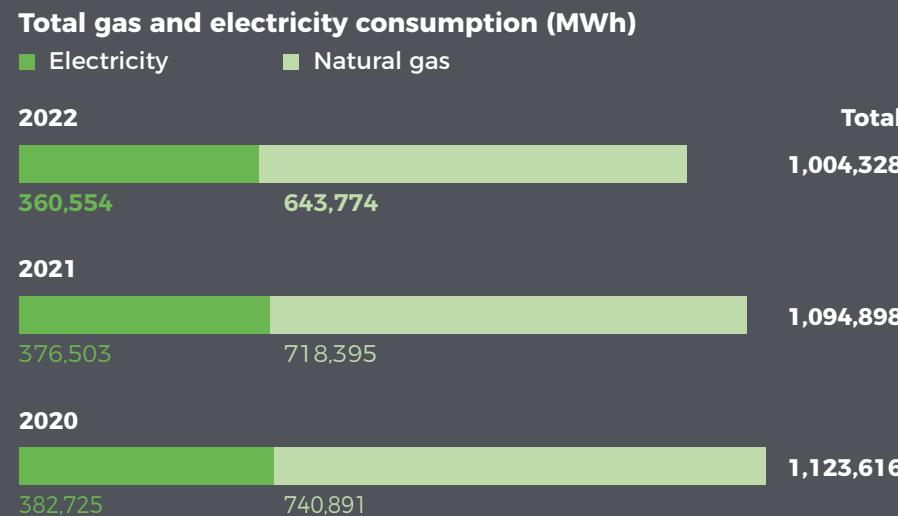
## Environmental initiatives

Finally, we carry out ongoing initiatives specifically designed to limit our environmental impact across our manufacturing locations (see some examples below). These initiatives encompass our four core environmental footprints (■ carbon emissions, ■ VOCs, ■ water and ■ waste) and are key to enabling us to achieve our ambitious Circularity Champion targets.



# Reducing carbon emissions from our operations

In 2021, our colleagues in Erfstadt experienced the physical risks of a changing climate when a major flood damaged one of our plants. In May 2022, we were once again reminded of the significant impact of extreme weather events in Weißenthurm, where a severe hailstorm impacted and damaged our plant. As evidence of the severity and urgency of the climate crisis continues to mount up, we recognise that the way we operate our organisation is intertwined with the future of our planet. We are therefore committed to reducing our own carbon emissions as much as possible.



## Science-based reduction targets

We adjusted our Scope 1 and 2 emissions reduction commitments in 2022 from 30% to 42% by 2030. We also introduced a new Scope 3 emissions reduction target of 25% by 2030. These targets are set according to science-based principles and are fully aligned with the 1.5°C climate scenario, meaning they are consistent with a reduction in greenhouse gas emissions to levels that the latest climate science deems necessary to limit global warming to 1.5°C. In 2022, we submitted these targets for validation by the Science-Based Targets initiative (SBTi). We expect to receive this validation in 2023, and in the meantime, we will continue our efforts to meet our targets.

In 2022, these efforts included the roll-out of various operational excellence programmes aimed at helping us reduce our emissions across our plants, such as initiatives targeting energy efficiency, reductions in energy and electricity usage, process optimisation and equipment upgrades. For example, some Trivium plants have invested in heat reclamation and recovery technology, which captures heat generated during the production process and uses it to heat buildings or reduce energy consumption, especially in our lacquering and print shops (see boxout on next page). We also continued the roll-out of our Plant Energy Reduction tool, a user-friendly system that uses data from TRIMS to provide a detailed breakdown of each plant's progress against our science-based targets.

## Reducing gas consumption in Weißenthurm

In Weißenthurm, Germany, our plant's central heating system is responsible for around 25% of the plant's energy consumption. Any improvement to our heating process therefore has a large potential impact on both gas consumption and associated carbon emissions.



With that in mind, our plant personnel looked for different ways to optimise our central heating unit and support systems. First, they saw an opportunity to reduce the flow temperature in the central heating system. "This gave us a higher efficiency in our incinerator heat exchanger", Bjorn Wagner, Project Engineer at Trivium, explains. Second, they constructed a new and better insulated roof in a subsection of the plant. Third, they surveyed our colleagues, asking them to identify any defects and malfunctioning heaters that could be fixed. This made everyone feel part of the initiative.

Thanks to these efforts, 1 GWh of gas savings were realised in the last quarter of 2022 alone –the equivalent of over 200 tonnes of CO<sub>2</sub> emissions – with more savings expected throughout the winter. "In addition to reducing our gas consumption in central heating, we are implementing best practices from the Trivium Blue Book and have found more potential energy savings in our processes and resources", says Bjorn. "What is really inspiring is that this will not just impact our plant, but it will demonstrably reduce the footprint of the products manufactured in the Trivium facilities we serve. It is a win-win situation for Trivium!"

Project engineer, Bjorn Wagner (left) and Continuous Improvement Manager, Thomas Ruff, stand in front of the Weißenthurm plant's central heating unit. Through process optimizations, 1 GWh of gas savings were realised in the last quarter of 2022 alone.

## Recovering heat in Moëlan-sur-Mer

A recently installed Regenerative Thermal Oxidiser (RTO) in our Moëlan-sur-Mer plant in France has a potential VOC removal efficiency rate of 97%. However, it requires significant electricity and gas consumption to operate. Convinced that there should be no trade-off between reducing energy and reducing VOC emissions, our OSG team set out to find a solution to achieve both goals simultaneously.

In 2022, the team installed a heat exchanger between the RTO and the Draw Wall Ironing (DWI) make-up lines. This connection captures clean, hot air from the RTO and reuses it to heat up the DWI lines to the ideal temperature for our lacquering processes.

With this solution, our plant has not only found a way to capture and reuse heat that would have otherwise gone to waste but also eliminated the burner system that had been used previously to heat the DWI lines. In total, the project has achieved an estimated energy reduction of 500MWh per year.

Importantly, in the fourth quarter of 2022, we launched a new project with the specific goal of pinpointing what we can do in the short and long term to reduce energy consumption in our European plants. During the first stage of the project, a workshop was organised where representatives from the major plants showed how they are tackling high energy consumption. This workshop resulted in the Trivium 'Blue Book', a collection of 16 initiatives that will serve as best practice for future projects. The Blue Book has been shared among all the plants in Europe, which have set up a total of 180 initiatives to reduce gas and electricity consumption, as well as procedures to facilitate energy reduction. In 2023, these initiated projects will continue to maximise our

energy efficiency with the ultimate goal of reaching a 15% reduction by 2025 (vs 2022 levels). Thanks to the dedication of our plant personnel, operational excellence (OpEx) teams and operational support group (OSG), these initiatives have enabled us to successfully meet and exceed our annual carbon emission reduction target for 2022. Specifically, we registered a 7.3% reduction in carbon emissions across our business, against a target of 4.2%. Our consistency in meeting – and exceeding – our carbon emission reduction goals for two consecutive years gives us the confidence that we are well on track to meet our science-based targets by 2030.

## Renewable electricity

In addition to increasing energy efficiency, transitioning towards greener energy in our operations is another integral pillar of our carbon emission reduction strategy. Our aim is to have all our manufacturing plants running on 100% renewable electricity by 2030.

Our plants in Spain and the United Kingdom have already met that target, running on 100% renewable electricity. In 2022, we took further steps by starting our new factory in the Netherlands on green electricity. We additionally approved the installation of solar panels at different sites. In total, 29% of our plants fully run on renewable electricity.

### GHG emissions (in metric tons CO<sub>2</sub>eq)

■

Scope 1 ■ Scope 2

**2022 Total emissions 255,657**    **Target 2030 -42%**

132,231

123,426

**Total change -10.3%****Intensity<sup>1</sup>**

78

**2021 Total emissions 275,847**

146,824

129,023

YoY change -7.3%

100

**2020 Total emissions 284,947**

151,945

133,002

YoY change -3.2%

107

### Renewable electricity

Electricity from renewable sources

**2022 29%****Target 2030 100%****2021 29%**

Plants fully operating on renewable electricity

**2022 12%****Target 2030 100%****2021 8%**

<sup>1</sup> Sum of Scope 1 and Scope 2 emissions for the year, expressed in tonnes of carbon dioxide equivalent (t CO<sub>2</sub> eq) per million US dollars of revenue for the same year.



# Limiting the ecological footprint of our operations

Our integrated approach to environmental management goes beyond reducing carbon emissions: we must be environmentally conscious across all our operations. This entails efforts to control and limit other environmental impacts, including VOCs, water and waste.

## VOCs

VOCs -or volatile organic compounds- are by-products of the metal manufacturing process that, if left unmanaged, can have a negative impact on air quality. We are therefore taking steps to monitor and reduce our VOC emissions by installing abatement technologies in our plants, working with our R&D teams to reduce the use of solvents in our processes, and more generally reviewing our compliance with existing and future regulations.

For example, in 2022, we continued setting up abatement technology in our Itupeva plant in Brazil and further improved the abatement capacity in our Moëlan-sur-Mer plant in France. Both solutions allow us to deal with increasing volume demands while maintaining high VOC oxidation efficiency levels.

In Europe, all industrial plants that produce high VOC emissions need to abide by the European Union Industrial Emissions Directive (2010/75/EU) and maintain compliance with the amendments

for Best Available Techniques (BAT). In a review conducted during the year by the European plants that operate under the scope of the Industrial Emissions Directive, we found no evidence of non-compliance based on the current emission guidelines as defined by the Directive.

## Water

We use water in our manufacturing operations for a variety of reasons, including cooling, preventing equipment scaling, corrosion and fouling, removing lubrication and chemical residues from cans and providing clean surfaces for treatment. In 2022, we operated 51 manufacturing facilities in 19 countries that are included in the Aqueduct Water Risk Atlas.<sup>2</sup> Of these, nine plants (namely, those in Argentina (2), Brazil, Italy (2), Morocco, Romania, Seychelles and Ukraine) are situated in locations classified as high or extremely high physical risk areas and consume water at a relatively high rate in their operating processes.



Of course, water is crucial not only to our business but also to the communities within which we operate. Our target is to reduce water withdrawal by 10% by 2030 (compared with 2020 levels). We want to be accountable to our local communities and encourage Trivium's plant management teams to prioritise responsible water management as an integral part of our sustainability strategy.

In 2022, we continued to implement water management measures across our locations. Closed-loop water systems are in place where feasible, helping us to reduce our water consumption and minimise pollution. In addition, we continued to implement process-optimisation

initiatives and equipment upgrades at several plants, including optimising our washing machines' water consumption, increasing efficiency and recycling for demi water creation, and setting up a rainwater harvesting system.

Despite these initiatives, our water withdrawal rate in 2022 was consistent with 2021 rates, largely due to an increase in production volumes in three plants, which collectively accounted for 37% of our total withdrawals. In 2023 and beyond, we plan to roll out more water-focused initiatives while continuing to closely monitor our water withdrawal rates through TRIMS.

## Reducing water consumption in Ludres

Some of the Easy Open Ends (EOE) produced at our Ludres plant in France are washed and cleaned with water following the coating process. Last year, our team found a way to significantly reduce water usage by installing a new nozzle that sprays water more uniformly and accurately across the ends. Thanks to this new technology, 320,000 ends can now be cleaned with just 1m<sup>3</sup> of water, a five-fold increase in efficiency compared with a conventional nozzle. Since its implementation in September 2022, the initiative has helped the plant achieve a 3% reduction in water consumption. Plans are currently underway to install new nozzles on the other EOE coaters in Ludres, which will save even more water in the coming years.



<sup>1</sup> Formerly reported as 'water consumption'. <sup>2</sup> Total water withdrawal for the year, expressed in cubic meters (m<sup>3</sup>), per million US dollars of revenue for the same year.

<sup>3</sup> The Aqueduct Water Risk Atlas is an online risk-mapping platform operated by the World Resources Institute. It provides global coverage of 13 different indicators of physical, regulatory and reputational risks related to water. We use it to derive key insights on water-related risks – such as water stress and flood occurrence – that are present in the locations where we operate.

## Waste

In our daily operations, we take care to limit waste in the form of metal scrap, pallets, corrugated board and plastic film packaging, for example. In line with the hierarchy of the EU's Waste Framework Directive (2008/98/EC), our aim is to send zero waste to landfill by 2030.

Our waste management approach centres on three pillars. First, we embrace lean methodologies, such

as Single-Minute Exchange of Die (SMED) and 5S, to optimise our production processes and increase overall equipment efficiency. Second, we apply lean manufacturing techniques to reduce the amount of material that is wasted during production. This can be achieved by conducting waste walks, reducing technical spoilage by optimising plate dimensions or using root-cause problem solving to sustainably remedy quality

### Reusing our solvents in Montecchio

We strive to reduce waste from our operations as much as possible across our facilities.

Finding ways to reuse resources was a key focus for one of our Italian plants last year.

Our Montecchio plant in Italy uses around 1,500 kg of solvent per month to clean its production lines; once used, this material is treated as hazardous waste. In late 2022, the plant installed a new solvent distiller. The new self-cleaning solvent reclaiming unit now allows up to 60-70% of the used solvent to be distilled and reused to clean the lines with no loss in performance.

The process works as follows: used solvent is fed into a small collection unit and taken to the distillation tanks via a closed system of pipes –

helping to protect air quality in the plant. The cleaned solvent is delivered back into the main solvent tank, where it is topped up with fresh solvent to replace the small amount lost during the procedure.

"In a short period of time, the unit has already had an extremely positive impact on our waste management", says Anette Schoenlaub, Trivium's Environment, Health & Safety Manager at the Montecchio plant. "Not only does it enable a much simpler and safer process, but it also allows us to cut down our hazardous waste and preserve a valuable resource so we can put it to good use many times over. In waste reduction, every little step helps – but it's rare to find a solution that makes such a big impact as this does. We can't wait to see the distiller's impact over a full year of operations."

### Waste generation (t)

■ Non-hazardous ■ Hazardous

**2022** Total weight of waste generated **31,851**

27,085 4,766

**2021** Total weight of waste generated 29,553

24,378 5,175

**2020** Total weight of waste generated 28,737

24,214 4,523

### Waste handling (t)

■ Reused/recycled ■ To landfill

**2022** Total weight of waste generated **31,851**

27,395 (86%) 4,456 (14%)

**2021** Total weight of waste generated 29,553

24,364 (82%) 5,189 (18%)

**2020** Total weight of waste generated 28,737

22,029 (77%) 6,708 (23%)



**"The world is changing, and the metal packaging industry is adapting. At Trivium, we are working with our value chain partners to understand how our businesses affect the habitats we live and work in, and on developing strategies that support us on our journey to produce products that improve our ways of life while reducing our impact on the ecosystems we depend on."**

**Sarah Sanzo** Trivium Senior Product Sustainability and Stewardship Manager

defects. Third, we implement plant-level initiatives to recycle and reuse materials as much as possible to conserve resources and reduce costs (see boxout). For example, discs created in the final production process can be reused for smaller ends, thus increasing circularity within our own operations.

Thanks to the effectiveness of our waste management efforts and plant initiatives over the past two years, the percentage of reused and recycled waste from our operations increased. This contributed to a reduction in the proportion of waste we sent to landfill, from 23% in 2020 to 14% in 2022, putting us on track of our target of zero landfill to waste by 2030. In 2022, 25% of our plants sent virtually zero waste to landfill.

## Biodiversity

According to the WWF Biodiversity Risk Filter, none of our 51 plants are situated in high or very high biodiversity-related physical risk areas.<sup>1</sup> Nonetheless, at Trivium, we are increasingly aware that biodiversity is a key part of any discussion on environmental awareness – and, moreover, that it is a subject close to our stakeholders' hearts. Though we have several biodiversity initiatives in place already, we took this a step further in 2022 by engaging in initial conversations with several of our stakeholders, including suppliers and customers, to better understand their perspectives on this topic and explore opportunities for joint action. This is just the beginning: in 2023, biodiversity will be a more prominent focus area for Trivium, and our aim is to create a roadmap setting out our approach to protecting the ecosystems around us and enabling biodiversity to thrive.

<sup>1</sup> The WWF Biodiversity Risk Filter is an online screening tool that enables companies to assess the extent to which their manufacturing locations are situated in areas of high biodiversity risk. A high physical score is driven by a high dependence on ecosystem services or high impact on pressures on biodiversity, as well as by compromised ecosystem services or high existing pressures on biodiversity at the site locations.

## Bee-ing the change in Hoogeveen

Biodiversity protection starts with awareness.

We help our employees develop a good first-hand understanding of the importance of biodiversity and its conservation by organizing nature walks, world clean up events and visits to conservation experts.

In Hoogeveen, our employees had the opportunity to visit a beekeeper to learn more about bees and contribute to their conservation by planting a field of wildflowers. Elsewhere, in Wedel, our employees prepared a bee pasture in the vicinity of the plant. Over the next few months, these bee-friendly flowers are expected to grow and thus help preserve biodiversity in the area.



5

# Sustainable sourcing

We are committed to working constructively with our global supply chain partners to meet the growing demand for sustainable packaging. At the same time, we hold our suppliers accountable for their actions and encourage them to contribute to a socially and environmentally conscious path for metal packaging.

**TRIVIUM**  
PACKAGING

# Promoting a responsible supply chain

Our products are made from raw materials that require extraction or waste sorting and refining by our suppliers. Ultimately, these processes help to create both infinitely recyclable metal packaging and of employment and economic development opportunities that benefit countless communities. Nonetheless, we must also be diligent in managing our sourcing activities to prevent negative environmental and social impacts.

## Supplier selection and onboarding

Our approach to responsible sourcing starts with supplier selection. At Trivium, we have a due diligence process in place to help us identify and work with partners that share our values and our commitment to acting responsibly. In our tender processes, we assess potential suppliers based on a series of questions about their sustainability and social responsibility actions and/or plans.

Since 2020, we have required all our suppliers to agree to our Supplier Code of Conduct. The Code includes a set of mandatory requirements for working with Trivium and clarifies our expectations for our supply chain partners around the world on a range of issues, including human rights, anti-bribery and fraud, modern slavery prevention, conflict minerals, health and safety and business

integrity. In 2022, we took the additional step of requiring our top 200 suppliers to sign off on our Supplier Code of Conduct to further confirm that they have read, understood and adhere to it. At the time of publication of this report, 78% of these suppliers had already either signed off on our Supplier Code of Conduct or presented us with their own Code of Conduct, which we judged to be of a similar level of stringency as ours.

In 2022, we confirmed that 100% of Trivium's tinplate manufacturers, traders and component suppliers are covered by a Conflict Minerals Reporting Template, conflict-free material statement or Securities and Exchange Commission report. We will continue to work closely with all our existing tinplate suppliers to raise awareness of this issue and inform any new suppliers of our policies at the outset so that they are aware of our conflict-free approach.

## Supplier ESG performance

Once our suppliers have been onboarded, we evaluate them regularly and encourage them to continue to think and act sustainably wherever possible. Our partners typically appreciate Trivium inquiring about their programmes in this space.

We pay particular attention to our top 200 suppliers, who represent around 84% of our purchase spend. Every year, we invite them to respond to an annual questionnaire on a broad range of environmental, social and governance (ESG) topics, including environmental





**"We track external developments so our supplier questionnaires reflect the latest thinking on sustainability and cover the most material ESG topics for our company and sector. This year we've included questions that aim to give us greater visibility on gender representation within our supply chain. We'll use the responses to set a baseline upon which we can plan future supply chain diversity and inclusion programmes."**

**Peipei Yang** Trivium Product Stewardship Analyst

management, CO<sub>2</sub> emissions and workplace controls. We use the results to create a sustainability scorecard for each of our suppliers, allowing us to monitor their environmental, social and governance performance over time and keep track of the initiatives they have in place. In 2022, 85% of our top 200 suppliers completed the questionnaire, representing around 83% of our total purchase spend for the year.

We remain committed to our KPI of having 70% of our purchase spend allocated to suppliers with an average or above-average ESG score by 2030. We view this as an essential part of our commitment to promoting safe and sustainable practices within our supply chain. Following the guidance of two industry-leading sustainability rating providers, EcoVadis and the Carbon Disclosure Project (CDP), we have defined 'average' as an EcoVadis rating of silver and/or a CDP rating of B. These baselines allow us to measure progress on our target and compare our suppliers' sustainability performance. In 2022, 61% of our total procurement spend was allocated to suppliers with an average or above-average ESG score, up from 48% in 2021.

In 2022, we took further steps towards our target by planning customised follow-ups with a subset of suppliers. The focus of these follow-ups is dependent on both the supplier's ESG performance and whether they participate in EcoVadis assessments. We seek to prioritise our outreach efforts towards suppliers that currently fall short of our ESG performance expectations, and to encourage more of our suppliers to participate in EcoVadis assessments to promote greater transparency in the supply chain.

In parallel, we continued to train our own procurement colleagues on the importance of sustainable sourcing and of supporting our suppliers on their sustainability journeys. A training module jointly conducted by Trivium's Sustainability Team and EcoVadis representatives on sustainable sourcing and supplier engagement saw a 100% participation rate among the global procurement team.

### Supplier ESG participation

Top 200 suppliers who completed our ESG survey

**2022 85%**

**2021 90%**

**2020 80%**

**2019 71%**

### Supplier ESG performance

Total purchase spend allocated to suppliers with average or above-average ESG scores

**2022 61%**

**Target 2030 70%**

**2021 48%**

# Promoting sustainability across the value chain



**"It's this relentless commitment to product quality, to doing things right, and to adding value to anyone connected to our business that make our relationship with Trivium so strong."**

Ryan Cene On Us President

At Trivium, our ambition is to elevate the sustainability credentials of metal packaging. For us, this entails leading by example as well as encouraging our value chain partners to embed sustainability in their operations and decision-making.

We are proud to work with partners who share our same values, but perhaps even prouder to see many of them take meaningful action on sustainability. Our Ohio-based bottling partner, On Us, is a case in point.

On Us and Trivium share many things in common. Both organisations believe in metal packaging as an effective solution to today's plastic waste crisis. They are also dedicated to technical excellence and share an unwavering dedication to customer satisfaction. "Supplying people with products that they will then consume comes with a great deal of responsibility", says Ryan Cene, On Us President. "Like Trivium, we approach every bottle we fill with a certain reverence. It's this relentless commitment to product quality, to doing things right, and to adding value to anyone connected to our business that make our relationship with Trivium so strong. We share the same values, and as a relatively young company, we're constantly learning from them about what we can do better."



**"The aim is not only to encourage transparency within the value chain, but also to provide companies at earlier stages of ESG maturity with a best-practice governance framework on which they can build their sustainability agenda."**

**Jenny Wassenaar** Trivium Chief Sustainability Officer

Recently, On Us turned to Trivium for inspiration on their approach to sustainability. "I like to believe that On Us is a place where people feel proud to work in; a place that sets them up for future success. However, to be authentic to who we claim to be, we realised we needed to take a closer look at our operations and processes and assess whether they were indeed aligned with relevant ESG benchmarks".

In an exchange with Ryan, Jenny Wassenaar, Trivium's Chief Sustainability Officer, suggested that On Us participates in an EcoVadis assessment. The aim is not only to encourage transparency within the value chain, but also to provide companies at earlier stages of ESG maturity with a best-practice governance framework on which they can build their sustainability agenda.

"We loved the idea of using EcoVadis as a gap analysis tool", Ryan says. "As first-time participants, our focus was not on final scoring, but rather on which areas require our attention in order to ensure we are living up to our word of being a responsible company."

Following their assessment, On Us identified some areas for improvement – including policies and reporting metrics. Their plan is to build on this assessment by creating a roadmap that will propel their sustainability journey and, with that, the sustainability performance of the metal packaging sector. We are proud to support On Us on this journey and look forward to inspiring more partners to continue to think and act sustainably wherever possible.



# Reducing Scope 3 emissions

Carbon emissions from our supply chain are significantly higher than those from our own operations. This makes supply chain decarbonisation a key enabler of our sustainability ambitions.

## Green material collaborations

Reducing our Scope 3 emissions goes hand in hand with a good understanding of the current carbon footprint of our suppliers and their decarbonisation plans. Discussions with stakeholders both inside and outside the industry have shown that measuring Scope 3 emissions remains a challenge for many businesses, either due to missing data from some suppliers or inconsistent methodologies. In 2022, we engaged with more of our suppliers to better understand their product carbon footprints emissions and the underlying assumptions and standards they adhere to. Over time, we aim to use more supplier-specific emission factors, rather than industry-averages, when calculating our own Scope 3 emissions.

In parallel, we continued to engage closely with suppliers on various initiatives aimed at cutting down carbon emissions along our value chain, including increasing recycled content in our aluminium alloys and developing new steel grades that support down-gauging. Thanks to these efforts, we registered a 4.7% decrease in Scope 3 emissions.

## Collaborating with suppliers on technical innovation

In 2022, Trivium teamed up with long-time steel supplier ArcelorMittal Europe to tackle an interesting challenge: how do you continue to improve the robustness and overall quality of easy-open ends (EOEs), which need to be strong enough to resist high sterilisation pressures, yet still make them easy enough to be opened by end consumers?



After months of collaboration and trialling with Trivium, **ArcelorMittal** successfully developed a new steel grade for use in EOEs. Testing shows that the force required to open the EOEs has been reduced by 10 newtons, making can-opening easier for consumers. What is more, the new steel grade also enables downgauging – a reduction in EOE thickness – thereby reducing the amount of material used and helping to make steel an even more sustainable packaging material in this everyday application.

Trivium is already using this steel in our can-making operations in Erftstadt (Germany), and we are now working to roll it out to other plants in 2023. Meanwhile, we will continue to work closely with ArcelorMittal on further downgauging, so we can achieve even higher materials savings and make an even more positive impact on our planet.



## Supply chain optimisation

Our inbound and outbound transport activities contribute to our Scope 3 emissions as well, which is why we look for ways to enhance the efficiency of our logistics across the full network of Trivium plants. In particular, we leverage technology to identify and act on opportunities to optimise our supply chain. The deployment of our cloud-based Transport Management System in Europe reached 95% in 2022, enabling the collection of data for the calculation of CO<sub>2</sub> emissions and the identification of efficiency improvement projects.

We also aim to reduce transport-related emissions by utilizing each truck to its maximum capacity and using high-cube trucks where possible to increase the capacity per transport. In 2022, we ran several pilots in the Netherlands to assess how we can better use truck space and measure the impact for our business and our environment. These initiatives showed that by considering the volume and weight of truck contents and using container space more efficiently, we can run fewer transportation journeys and lower both our CO<sub>2</sub> emissions and our fuel costs. We will use the results to inform changes to our loading practices and underpin discussions with customers about the topic of road freight sustainability.

### GHG emissions (in metric tons CO<sub>2</sub>eq)

Scope 3

**2022 Total emissions** 2,850,689

**Target 2030** -25%

**Total change**  
-11.5%

YoY change -4.7%

**2021 Total emissions** 2,991,690

YoY change -7.1%

**2020 Total emissions** 3,219,288

### GHG emissions (in metric tons CO<sub>2</sub>eq)

Scope 1   Scope 2   Scope 3

**2022 Total emissions** 3,106,346

**Total change** -11.4%

132,231

123,426

2,850,689

YoY change -4.9%

**2021 Total emissions** 3,267,537

146,824

129,023

2,991,690

YoY change -6.8%

**2020 Total emissions** 3,504,235

151,945

133,002

3,219,288

# 6 Safe, engaged and responsible workforce

Trivium's employees are fundamental to driving our business and sustainability agendas. In 2022, we continued to drive progress across five priority areas in our workplaces: health and safety, employee engagement, professional development, inclusion and diversity, and responsibility.

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# Building a zero-harm safety culture

Our manufacturing processes include extruding, trimming and shaping metal into containers. These processes, conducted at high speeds and involving heavy machinery and equipment, entail risks and hazards such as industrial accidents, fires and mechanical failure. Because of these operating hazards, we are committed to establishing a robust and standardised health and safety (H&S) programme that protects the safety and well-being of our people and reduces the likelihood of accidents in the workplace.

## H&S management systems

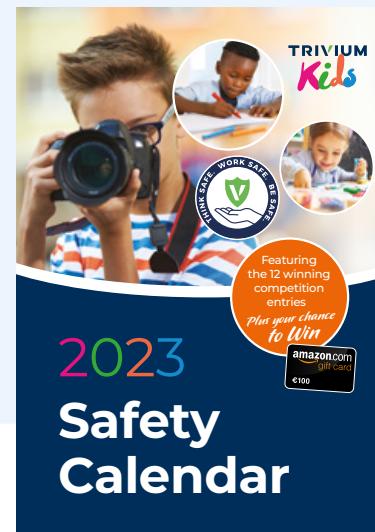
All Trivium workplaces are covered by an occupational Health & Safety (H&S) system that is internally audited by business unit H&S managers on an annual basis. Globally, 31% of our plants have an H&S management system that is ISO 45001 certified and have dedicated management-worker H&S committees in place (compared with 32% in 2021). Non-certified plants are also required to establish an H&S committee.

Hazard identification, risk assessment (including corrective action plans) and incident investigations are also embedded in the Group H&S management system. Procedures are in place at every plant to report accidents and near-misses through the Trivium Packaging Risk Inventory Management System (TRIMS). Accident reports are shared

throughout Trivium and lessons learned are applied. Emergency preparedness procedures are also in place across all our plants, enabling a fast response to any onsite health and safety incident or injury. Employees are entitled, and even expected, to stop work situations that they believe could cause injury or ill health to themselves or a co-worker.

## H&S standards

In line with the objectives of the Trivium Business System (TBS), we focused in 2022 on standardising how we address health and safety across the organisation. For example, we began standardising safety risk assessments and completed the roll-out of 18 H&S standards that cover fundamental safety topics of relevance to our company and industry.



## Co-creating a safety calendar

Involving loved ones in safety awareness can be an effective way to increase employee engagement. To drive broad involvement in our safety efforts, we reached out to our employees' families.

As part of an ambitious safety awareness campaign across our plants, we invited the (grand)children of our employees – and their families – to submit illustrations of workplace safety processes. Local competitions were organised across our plants, and 12 of the best drawings were then featured in a 2022 calendar that was distributed to our people around the world. The selected winners were rewarded with an iPad mini – thank you to all our aspiring artists who participated in the competition!

including machine safety, mobile operations, and personal protective equipment (PPE). These standards come on top of our existing 10 Life-Saving H&S rules, which all employees, suppliers, contractors and visitors must adhere to in order to reduce the likelihood of onsite accidents and occupational injuries. In 2022, over 90% of our plants were second-party audited and the remaining 10% undertook an internal audit based on these 18 standards through an assessment questionnaire. The outcome of this questionnaire will serve as a baseline for future safety targets.

In parallel, we encouraged plants to engage in their own H&S initiatives and share success stories with their peers as best practice. For example, at the Itupeva Plant in Brazil, vacuum slug box handlers

were introduced in order to provide employees with better ergonomic occupation conditions. 17 of our plants also voluntarily participated in the second phase of our Bradley curve assessment to understand plant-level safety culture maturity and, from there, undertake insight-driven interventions

### H&S awareness

We believe that a safe and healthy workplace is the joint responsibility of all Trivium employees. In 2022, we continued to provide seven e-learning modules to relevant employees on several H&S topics, such as working at height, mobile plant and PPE, to reinforce the importance of H&S processes and promote diligence within the workplace.

Overall, employees underwent a total of 20,509 H&S training hours in 2022 (compared with 6,805 hours in 2021).

We also launched awareness campaigns aimed at motivating everyone to play their part in promoting a zero-harm safety culture. For example, we carried out a three-month safety awareness campaign to highlight various safety issues. The campaign featured interviews with Trivium employees who had previously suffered life-changing workplace accidents. On another occasion, we invited employees and their families to express the importance of safety to them and how following the correct safety procedures helps our employees return safely to their loved ones every single day.

## H&S performance

We track our progress on H&S by closely monitoring our Total Recordable Accident Rate (TRAR) – a KPI for our business that records the number of incidents each year that require medical treatment (per 100 employees). By 2025, we aim to achieve a TRAR of 0.85 accidents per 100 full-time equivalents (FTEs) per year.

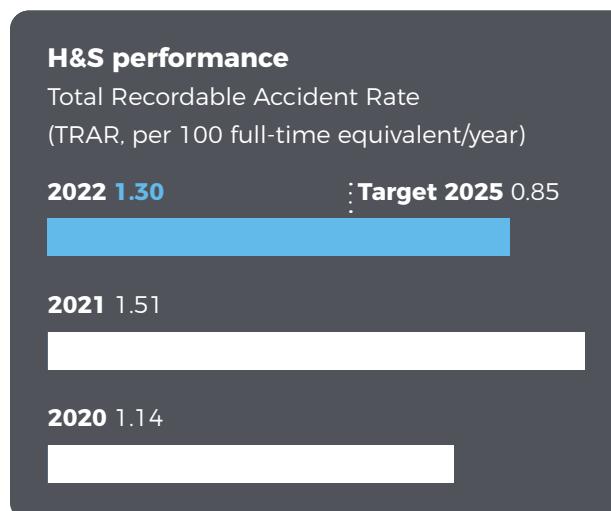
We recorded one life-changing incident last year; an employee in our Youngstown plant lost part of his middle finger. Next to immediate corrective actions on the machine where the accident happened we also launched a company-wide plan to ensure that such an incident will not re-occur in other plants. The completion of this plan is followed up as a KPI, and included in our internal

H&S dashboard, to ensure all plants complete the necessary actions before the set deadline.

In 2022, our overall TRAR decreased from 1.51 in 2021 to 1.30. In addition to our rigorous approach to H&S, several factors are likely to have played a leading role in 2022's TRAR reduction-- namely, the start of a shift towards managerial level responsibility on health and safety; an increase in the number of safety observation visits; an increase in the average number of safety training hours per employee; and strengthening our focus on leading safety indicators as opposed to lagging safety indicators.

Nevertheless, we recognise that there can be no room for complacency, and – in line with our five-year strategic plan for safety – we will continue

to apply our efforts to deliver a sustainable safety culture with world-class systems and processes. In particular, we plan to further democratise our H&S approach, including shifting more responsibility for upkeep of H&S standards to all Trivium employees, and to line managers in particular, who will lead the implementation of local standards. In addition, we aim to embed and leverage social psychology principles and insights to optimise our collective awareness and perception of safety, and, where possible, apply gamification to our trainings and procedures.



H&S indicators	2020	2021	2022
<b>Lost time accidents</b>	0.57	0.77	<b>0.73</b>
<b>Life-changing incidents</b>	3	2	<b>1</b>
<b>Medically treated incidents for contractors</b>	2	7	<b>9</b>
<b>Fatalities</b>	0	0	<b>0</b>



# Engaging our employees

We aim to provide a supportive and motivating environment that allows all our colleagues to give the very best of themselves to our organisation – and by extension to Trivium's stakeholders and society at large.

## Organisational health

We track the progress of our effectiveness, efficiency and employee engagement in an annual survey in which we ask our employees for their opinion on how we are performing as a company across various dimensions, including direction, performance transparency, people involvement, and learning and development. The results of this annual survey are aggregated into our Organisational Health Index (OHI), which we use to identify areas for improvement and take steps to address them. In 2022, we paid particular attention to four key focus areas that emerged from the 2021 OHI survey: communication, training and development, role clarity and contribution, and recognition and appreciation.

Regarding communication, our employees made it clear that they not only want to be informed about what is going on across our business, but they would also like to be able to ask questions and make their voice heard. In response, in addition to pulse-checks such as our monthly townhall meetings, we made sure to set up regular smaller-scale meetings across all our locations to provide a

forum where people can feel more comfortable in sharing ideas and posing questions. We also provided a communication template to all our locations to use as the basis for weekly updates on global and local news. Every Trivium location now has its own OHI committee or ambassador(s) to act as a conduit for sharing employee feedback with management. At the end of 2022, there were more than 100 ambassadors in place across Trivium's global operations.

It was also clear from the 2021 results that there was room for improvement with regard to training and development. We therefore launched several initiatives addressing this topic ([see page 54](#)), including adding new trainings to our online Trivium University, launching a dedicated leadership training, and taking steps to expand the scope of our performance management system to as many colleagues as possible.

To improve on our third focus area, role clarity and contribution, our Human Resources (HR) team has now made sure that there is a clear role description available for every Trivium employee. This is key to clarifying our people's responsibilities and decision





**“Organisational health is a vital part of a successful business. Our annual survey provides the company with valuable insights into what we need to focus on to continuously build a great Trivium organisation, shape our culture and improve our current ways of working where necessary. The survey results provide bottom-up feedback and help us to set priorities. I’m thrilled that across the company we can clearly see the positive impact of our focus on organisational health.”**

**José ter Mors - van Ostaden** Trivium Director of Global Organisational Health

rights, enabling them to make their best possible contribution to our business; and empowering them to take control of their future.

Closely related to this is the topic of recognition and appreciation, with the 2021 OHI responses showing that people were keen to receive more recognition for their contributions. As a result, throughout 2022, we worked to publicly share more teams' successes in meetings, family days and written communications, thereby increasing pride and motivation among our colleagues worldwide.

In addition to these four areas, we also took measures to improve overall employee engagement. For instance, we held bi-weekly round table meetings where leaders could share best practices with their peers, and organised a series of half-day workshops to boost awareness and performance regarding engagement, effectiveness and efficiency across Trivium. Moreover, we continued to encourage and incentivise our managers to maintain an open

dialogues with their direct reports by including clear KPIs for employee engagement in our reward framework.

After a busy year of addressing these areas for improvement, we launched our 2022 OHI survey in December. We achieved a global engagement rate of 74% (against a benchmark of 68%), and an overall score of 66 (2021: 64). This puts Trivium in the second quartile of organisational health and

brings us closer our 2025 ambition of being in the top (first) quartile. We are proud to see that 50% of our 36 manufacturing locations in Europe are already in the top quartile of health and that our American plants are improving their health scores. Throughout 2023, we will continue to standardise best practices and identify further areas of improvement that can help us achieve our OHI target by 2025.



### Employee engagement

OHI quartile score

**2022 2nd**

**Target 2025 1st**

**2021 3rd**

**2020 3rd**

**2019 3rd**

## Supporting our colleagues in Ukraine

**When war broke out in Ukraine in February 2022, people across Trivium watched in disbelief and horror. For our more than 240 colleagues based in the country, however, it was a case of finding a way to live through the conflict.**

"Our first reaction to the events as they unfolded was to see what we can do to support our people on the ground," says Charlotte van Meer, Trivium's Chief Legal Officer. "We quickly established that we could provide meaningful assistance in two ways: providing emergency support to help cover basic necessities that our Ukrainian colleagues might not be able to get from the government or other organisations in these extraordinary times, and helping to evacuate employees and their families who wanted to leave the country and seek safety elsewhere."

To that end, Trivium set up a Ukraine Support Fund to which colleagues around the world could donate, with the company matching all contributions. Our people rose to the occasion and donated over 150,000 euros to help their colleagues in Ukraine, with another 150,000 euros in matched donations by Trivium. Raised funds were used to provide emergency support in the

form of reimbursements to colleagues' damaged houses and the purchasing of winter clothing and scarce goods, such as power generators.

"I think for many of us at Trivium, these donations – but more generally a willingness to support colleagues during difficult times – were not considered going above and beyond, but rather the natural thing to do", says Charlotte, who also serves on the three-member Fund Committee.



**Charlotte van Meer**  
Trivium Chief Legal Officer

"When we say Trivium is committed to its people, or that the people of Trivium are supportive of their colleagues, we mean it. We support our people around the world in good times and bad times."



# Prioritising leadership and functional capabilities development

We understand the importance of building a strong training and development culture: one that stretches, supports and shapes our people's personal and professional development worldwide. We aim to further equip our people with skills that help them excel in their functional area and lead others, and to provide constructive feedback that helps them to develop further in their careers.

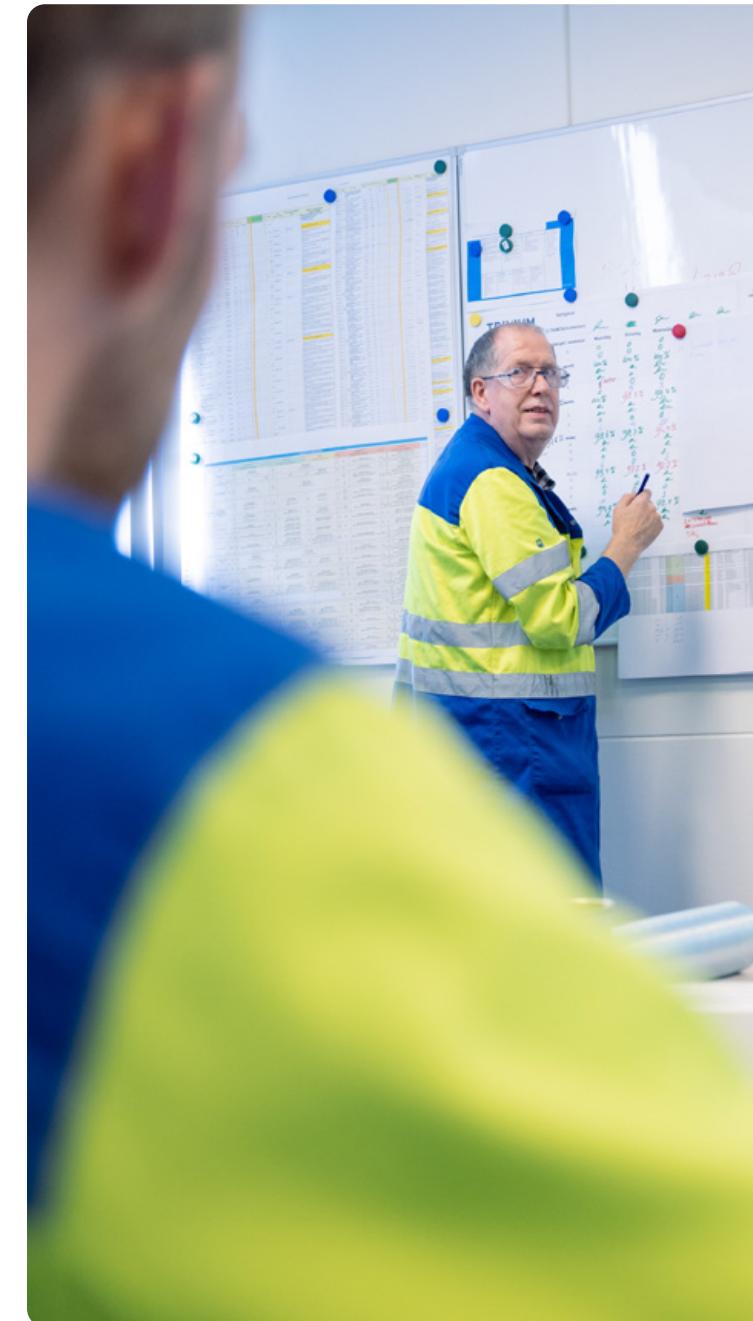
## Training and development

In 2022, we made significant progress in the rollout of our training and development programme across our organisation. The Trivium University online learning platform was officially launched in May, and now serves as the organisation's core training hub. By the end of 2022, more than 8,000 trainings in various formats were available via the platform to Trivium employees, providing myriad learning opportunities on both technical and non-technical subjects.

On the leadership front, we continued to focus on providing training that further develops a positive attitude for our employees to initiate, lead and facilitate change and growth in our business. To that end, we expanded last year's Ability to Execute (A2E) training to a further 100 participants and introduced a new Leadership Essentials training

dedicated to facilitate further growth in people management skills (see boxout on next page). We also launched a new mentoring programme, in which mentor-mentees are paired for at least six months as they work together on capability and potential development (as opposed to skills and performance). Participant feedback from the pilot scheme has been very positive (average rating of 8.6/10), and we look forward to rolling out the training more widely in 2023.

We also took steps to build our functional capabilities across the company. In 2022, each function created its own training programme. These capability-focused trainings, in conjunction with the wide range of function-independent trainings on Trivium University, help empower our colleagues to both build technical expertise and develop skills that allow them to deliver their best performance in any role and function.



## Leading in the Trivium way

In 2022, we developed and launched a training that covers the way we lead at Trivium.

'Leadership Essentials' is a three-day training for leaders of all levels within Trivium, meaning that every manager is eligible. The training is based on a six-part framework:

- Leading self
- Engaging people
- Building a high-performing team
- Coaching through feedback
- Getting results through others
- Leveraging daily management

Specially trained HR colleagues and plant managers deliver the Leadership Essentials training to small groups of employees in a range of local languages. By the end of 2022, 155 people (out of a target group of more than 500) had completed the training – and have provided very positive feedback on its interactivity, diversity and blend of theory and practice (average rating of 4.6/5). Our goal is to roll out Leadership Essentials to an additional 200 managers in 2023.

## Performance management

Effective performance management (PM) plays an essential part in clarifying role expectations and providing participants with a solid understanding of how they can further progress in their careers. As part of our PM initiatives for the year, we focused on improving our succession planning procedures, both to boost our employee engagement and protect business continuity. Importantly, 2022 was a year in which we reflected on the scope of our existing PM system. In previous years, PM in Trivium had been largely focused on managerial positions and above, meaning that a portion of our workforce across all locations received regular performance and career development reviews (16% in 2022 and 14% in 2021). These reviews bring a lot of value to participants by equipping them with the tools they need to develop their careers.

To realise our ambition of a strong company-wide development culture, we therefore decided in 2022 to commit to expanding participation in our PM system to more Trivium employees. Specifically, we aim to expand regular performance and career development reviews to 75% of our total workforce by 2030. We recognise that we have some way to go but we are committed to taking the necessary steps to make that ambition a reality. Looking ahead, we recognise that investing in our employees' skills and knowledge will be fundamental to achieving our long-term goals. To that end, our future focus will be on employee upskilling, providing opportunities for professional development and reskilling to meet the demands of a rapidly evolving business environment. We will implement a programme that includes training, mentorship, coaching and other learning opportunities. We believe that by investing in our employees, we will strengthen our workforce, improve employee engagement and position our company for long-term success.



### Performance management

Workforce who receive regular performance and career development reviews

**2022 16%**



**Target 2030 :**

75%

**2021 14%**





# Creating an inclusive and diverse Trivium

To become a global leader in metal packaging, we need to attract and retain a diverse workforce, with a range of backgrounds, experiences, and knowledge to share. We can only achieve this by developing an inclusive organisational culture and providing equal opportunities and fair procedures for everyone, regardless of gender, ethnicity, nationality, age, sexual identity, or background.

## I&D programme

Our Inclusion and Diversity (I&D) vision is to have an inclusive workplace that motivates and inspires each of our employees to contribute to Trivium's success every day – where each person feels safe, respected, and valued, and everyone can maximise their potential. To help us achieve this objective, we are developing an I&D programme that is underpinned by four pillars: working groups, policies, trainings and surveys. We aim to have initiatives related to each pillar fully implemented across our organisation by 2025.

With respect to the first pillar, our global I&D internal working group remained active last year and continued to serve as the primary forum within Trivium for initiating and leading key I&D initiatives across the organisation. For example, acting on suggestions by members of the I&D working group, we piloted new affiliation groups aimed at fostering connections within various

groups of employees, such as women or young professionals. We aim to have these groups serve as safe spaces for colleagues from all over the world to come together and share their experiences, suggestions and concerns, with a view to making Trivium an increasingly inclusive workplace for all.

For the third I&D pillar, we continued to train our people on I&D topics, paying particular attention to how everyone can recognise and combat unconscious biases within the organisation. To that end, we delivered a 'Building Inclusive Leaders' training to around 100 leaders within Trivium's Transformation team. The training's four sessions covered topics including reducing individual bias, giving effective feedback and navigating difficult situations. Through these sessions, our leaders learned and practised research-backed behaviours to increase inclusion at the team and organisational levels. We plan to adapt and roll out this training to more of Trivium's people leaders in 2023.



"At Trivium, we believe that diversity, equity, inclusion, and belonging are essential for not only a healthy workplace culture and employee's wellbeing but also for business success. We are committed to fostering an environment where everyone feels valued, respected, and supported regardless of their background or unique traits. By embracing this, we are better equipped to understand our customers, innovate, and achieve our goals. We recognize that this is an ongoing journey, and we are dedicated to continuously improving and striving for excellence."

**Floor van Criensven**, Trivium Chief People Officer

To the fourth pillar, we added quantitative I&D-related questions to our annual OHI survey to better track employee sentiment around our I&D performance. Furthermore, we began building a 'diversity dashboard' that will enable us to measure relevant metrics and report our progress internally more regularly.

Overall, therefore, 2022 was a year of positive progress in the implementation of our I&D programme, though we do acknowledge that there is room for further advancing and accelerating our efforts on that front. As such, in 2023, we remain committed to accelerating our efforts by transitioning from an inclusion and diversity (I&D) approach to a more comprehensive diversity, equity, inclusion and belonging (DEIB) strategy. Our focus will be on increasing awareness of intersectional DEIB culture throughout the organisation, creating a DEIB roadmap and strategic agenda and setting DEIB targets. These initiatives will help us create a more inclusive, equitable and supportive workplace culture, one where all employees can thrive and contribute to the success of the organisation.

## Your Hour, Her Power

Dress for Success is a global not-for-profit organisation that aims to empower women to achieve economic independence. It focuses on providing a network of support, professional attire and development tools to help women thrive in work and in life.

Dress for Success kicked off its second annual Your Hour, Her Power® campaign on 1 March 2022, in celebration of Women's History Month. The campaign brings back '31 Days of Women in Power' to inspire hope and resilience among women by honouring trailblazing women in leadership positions across various industries. Jenny Wassenaar, our CSO, was one of the women honoured by the campaign and used her platform to issue a call to action.  
"I believe that by empowering women, we empower everybody, men, women, young and old, different nationalities and different

backgrounds. Everybody wins", says Jenny. "Now it's time to open the doors for others to make a change. It's time to build a home for the new leaders of this world. When you give, you get. Let's shape an empowered future for everybody for generations to come."

She says, "Supporting change makers that align with our purpose, such as Dress for Success, is important because it uplifts our communities, enabling women across all industries and backgrounds to have equal access to professional development, career opportunities and networking. Support is critical in building our workforce of today and for tomorrow. Drawing from my own experience in the workplace, I recognise that as a white woman and an executive, my role comes with privilege. I feel an enormous responsibility to help advance inclusion for other women by using that privilege and that power."

# Celebrating diversity during Women's History Month

We have made it a priority to feature a diverse range of employee profiles on our communication platforms.

In March, we celebrated Women's History Month and International Women's Day with a dedicated LinkedIn campaign. Throughout the month, 23 women from across Trivium shared their perspectives on how our society can increase the proportion of women in leadership positions. Other colleagues were able to take part in the discussion by liking, sharing and commenting on the posts.

**SANDRINE RENOUARD**  
R&D INNOVATION MANAGER  
FOR IP AND FOILS

My mother is and remains a career and human role model for me. Throughout her life, she showed self-sacrifice, empathy, going after what she wanted.

I can't even begin to count the times I have seen her fall asleep at night on top of a stack of homework she was correcting as a teacher, exhausted after having juggled her professional work, housework, and educating her daughters.

Her values of honesty, kindness, and selflessness are something I try to live up to every day. These are also values that would not go amiss in any board room.

#WeContainWhatMatters  
#WomenChangeMakers  
#BreakTheBias

TRIVIUM

**NADINA RADU**  
PLANT AND SALES MANAGER

What matters to me in my career? Education, hard work, passion, and a healthy dose of intense intuition and empathy. These are all part of building a career. But most importantly, a successful career needs to provide satisfaction and meaning. Otherwise it's "just a job".

When your profession provides you with personal growth opportunities, it is more effective and efficient in what you do. In order to continue growing in your career, being engaged and feeling a sense of community in the workplace are musts.

That's when you know you bring value in both your professional and personal lives.

#WeContainWhatMatters  
#WomenChangeMakers  
#BreakTheBias

TRIVIUM

**YOLANDA JONHSON**  
MANAGER OPERATIONS FINANCE

As the slogan says, we need to "JUST DO IT." Many companies say equality and inclusion, but you don't see the results of the initiatives in their leadership profile.

People tend to hire and mentor people that look like them. If you look at your group of friends, I am sure 90% of the people you spend time with are people that look like you.

The workplace is no different. Upper management is no different. If companies do not have women or people of color in leadership positions, there will be no real change.

#WeContainWhatMatters  
#WomenChangeMakers  
#BreakTheBias

TRIVIUM

EMPLOYEE NUMBERS	TOTAL	EUROPE	AMERICAS
<b>Total</b>	<b>7,246</b>	<b>5,884</b>	<b>1,362</b>
of which are female	1,256	1,123	133
<b>Permanent</b>	<b>6,935</b>	<b>5,583</b>	<b>1,352</b>
of which are female	1,181	1,050	131
<b>Temporary</b>	<b>263</b>	<b>260</b>	<b>3</b>
of which are female	62	62	0
<b>Full-time</b>	<b>6,801</b>	<b>5,480</b>	<b>1,321</b>
of which are female	1,106	977	129
<b>Part-time</b>	<b>445</b>	<b>404</b>	<b>41</b>
of which are female	150	146	4

GENDER REPRESENTATION	2020		2021		2022	
	Female	Male	Female	Male	Female	Male
Total workforce	15%	85%	16%	84%	17%	83%
Manager level and above	23%	77%	24%	76%	18%	82%
Executive committee	22%	78%	22%	78%	33%	66%
Supervisory board	22%	78%	22%	78%	25%	75%

MINORITY GROUP REPRESENTATION (U.S.) <sup>1</sup>	2020	2021	2022
Total workforce	8%	14%	9%
Manager level and above	10%	10%	3%

<sup>1</sup> Data from Europe is not reported and not available.



# Reinforcing our responsibility

To be a force for good in our industry, it is important that Trivium employees conduct their business ethically and responsibly. We remain highly committed to embedding and encouraging a culture of responsibility and integrity at every level of the organisation.

## Ethics and compliance

At Trivium, we believe in doing business in a fair and honest way, in protecting people and the environment, in treating each other with respect, and in safeguarding company information and assets. To enforce these values, we have a *Code of Conduct* in place that applies to everyone who works for Trivium, from employees to contractors, but also third parties conducting business on our behalf or in our name (e.g. agents, consultants), wherever in the world. The Code empowers us to 'do the right thing, in the right way, at the right time and for the right reason'. It also helps us maintain strict compliance to all applicable regulations in the jurisdictions in which we operate. We expect the same level of commitment from our customers, suppliers and other third parties with whom we conduct business.

Our *Code of Conduct* defines ethical conduct in line with the key principles of leading governance bodies, including but not limited to the United Nations Global Compact, the Universal Declaration of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work and the ILO's Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy. In complying with these governing principles, we support (among other things) freedom of association and the recognition of the right to collective bargaining, the elimination of all forms of forced or compulsory labour, the abolition of child labour and the elimination of employment discrimination. For example, over 80% of our employees are covered by a collective bargaining agreement; across our production facilities, we aim to fully comply with all relevant local employment, environmental and health and safety laws; and we regularly review our human resources policies on issues such as parental leave, pension and minimum wage requirements.



“Encouraging people to be more environmentally aware at work, by minimising waste, participating in Clean-up days or conserving energy for example, often results in them repeating this behaviour when they go back home. As an HR professional, I therefore recognise the role I can play in inspiring my colleagues to be the best versions of themselves – not only in their workplace but also their private lives.”

**Florencia Castells** Trivium HR Analyst Argentina

We also take steps to promote awareness and a good understanding of our Code of Conduct within Trivium. By the end of 2022, 94% of all Trivium employees had certified their compliance with the Code, and 96% had completed an online training module that helps them understand how the principles of the Code apply in their daily work. More broadly, we regularly conduct function-specific trainings aimed at raising awareness about ethics and compliance issues. Some of the topics covered in 2022 are personal data protection, competition law and anti-bribery and corruption.

## Whistleblower-programme

Trivium has an independent reporting whistleblower hotline available 24/7 in local languages, through which employees can report incidents they perceive to be in violation of our Code of Conduct, also anonymously. There is also a whistleblower procedure for Trivium's suppliers who wish to raise a concern regarding a (suspicion of a) violation by Trivium or its employees of any laws or regulations or Trivium's Code of Conduct. The various reporting channels and their procedural details are communicated proactively to stakeholders both online (e.g. via the Code of Conduct and Supplier Code of Conduct) and offline (e.g. via posters in our manufacturing plants).

Within Trivium, a Compliance Committee composed of senior management from Trivium business units and functions is charged with monitoring compliance with the Code of Conduct and its associated policies, as well as processing and reviewing compliance violations that are reported directly or anonymously via the various reporting channels, including the whistleblower hotline. In 2022, we registered 37 reports of alleged Code of Conduct violations. All reported incidents were promptly investigated and the Compliance Committee took remedial actions where necessary.



# Stakeholder engagement

We strive to be a sustainability leader – giving us the credibility, and responsibility, to both transform the entire metal packaging industry and inspire others to raise the bar for responsible business. In 2022, we continued to promote our mission by encouraging transparency within our operations, connecting with our communities and sharing our thought leadership among stakeholders around the world.

# Promoting transparency

Since our founding, we have been strongly committed to reporting transparently on our sustainability performance. Not only does such an emphasis help us to remain publicly accountable to our stakeholders, but it also challenges us to aim for and achieve industry-leading sustainability performance.

In line with our targets for this pillar, we underwent reviews by two major external rating agencies this year: the Carbon Disclosure Project (CDP) and EcoVadis. Both ratings agencies perform independent assessments of companies' sustainability and/or ESG performance to encourage urgent action in support of a sustainable economy.

In our third annual CDP assessment, we maintained our A- Leadership rating in the category of Water Security and scored a B on Climate Action, with both ratings putting us above the sector average. Meanwhile, EcoVadis awarded us a Platinum rating for the second year in a row, despite having raised the threshold in 2022.



## Transparency

World-class scores on major external sustainability ratings

**2022** 2

Target 2:



**2021** 2



**2020** 1



Trivium was among the top 1% of 100,000 companies assessed during the year, an achievement of which we are extremely proud. In 2023, the bar for Platinum will once again be raised, making us more determined to improve our performance and demonstrate our commitment to excellence in sustainability.

We have also tried to promote sustainability transparency through other channels. In June 2022, we published our [second Sustainability Report](#), highlighting our activities during the 2021 calendar year, outlining our impact and introducing our value creation model. In March 2023, we received an ESG Risk Rating of 10.7 from Morningstar Sustainalytics and were assessed to be at low risk of experiencing material financial impacts from ESG factors.<sup>1</sup> Importantly, we collaborated closely with customers to provide them with greater visibility on ESG performance across their broader supply chain (read about our collaboration with [Hempel](#) on next page).



<sup>1</sup> In no event shall the Risk Rating be construed as investment advice or expert opinion as defined by the applicable legislations



# Promoting transparency in the supply chain

**"A focus on ongoing dialogue is a conscious choice we made in order to drive impact"**

**Dagny Nome** Procurement Sustainability Manager Hempel

Beyond participating in external ratings, our commitment to transparency means informing and updating our customers about our environmental, social and governance (ESG) performance. Through such transparent reporting, we aim to help our customers gain a good understanding of how Trivium can help them achieve their own sustainability targets and commitments, so they can make well-informed purchasing decisions.

Our collaboration with one of our customers, **Hempel**, on their supplier sustainability screening exercise is a case in point. In formulating their approach to sustainable sourcing, Hempel has opted for an approach that both assesses their supply chain holistically (across product categories) and actively involves their suppliers as partners on a joint sustainability journey. Specifically, Hempel relies on best-practice governance frameworks such as EcoVadis for supply chain risk assessments, but further complements them with tailored, one-on-one touchpoints with their suppliers throughout the year. "A focus on ongoing dialogue is a conscious choice we made in order to drive impact", says Dagny Nome, Hempel's Procurement Sustainability Manager. "By taking the time to understand where each of our suppliers stand on sustainability, but also provide feedback to these suppliers, we aim to develop good visibility on, as well as reward, sustainability performance across our full supply chain."



"We're proud to see our dedication to sustainability at Trivium clearly reflected in our scorecard, but we're especially delighted to have the opportunity to engage with a like-minded organisation on what we can do even better to the benefit of our customers, planet and people. Working with Hempel means engaging in meaningful conversations on how we can bring about real impact across the value chain."

**Omar El Nayal** Trivium Senior Sustainability Affairs Manager

Trivium's sustainability and commercial teams participated in Hempel's latest screening, working closely with Hempel's procurement team on the sharing of current and historic environmental data at both group and plant level. Hempel compiled information from all its key suppliers and rated them, by category, on the basis of transparency and completeness of information. Within Trivium's category (steel packaging), Trivium was ranked as number 1 of 35 suppliers, with a score of 89% relative to a category average of 41%.

"Our screening exercise brings us into contact with a wide group of people within our supplier companies and helps us create expert networks through which we can exchange best practices", says Dagny. "It's important for us that our suppliers view these dialogues as an opportunity to align on a common sustainable vision for the future for our industry. It's clear that Trivium understands this and shares our passion for driving real impact. We look forward to continuing our collaboration with Trivium on promoting transparency and advancing sustainability within our supply chain."



# Caring for our communities

We see community engagement as a valuable part of our work at Trivium, helping us to better understand public perspectives on metal packaging and providing us with opportunities to raise its profile through meaningful dialogues. Moreover, our community engagement projects are popular with employees as a means of connecting with our purpose, making them a positive factor in attracting and retaining talented colleagues.

To encourage our plants to prioritise community engagement with impact, our target is for every Trivium location to implement at least one community project per year. We met this target again in 2022 with a 100% community engagement participation rate across Trivium. In total, Trivium locations around the world led 64 community engagement initiatives tackling issues of relevance to the communities in which we operate, including Clean-up Days, Family Days, education and awareness-raising, recycling and waste management promotion, biodiversity protection, and local employment support.

For example, 15 of our plants organised Clean-up Days in their local areas. In Leeuwarden, the Netherlands, our team focused on cleaning up the city's canals, while in Madryn, Argentina, a beach clean-up was organised. Four of our plants invited students from nearby schools to various workshops and activities designed to embed sustainability in the mindset of the younger generations.

In Pontevedra, Spain and Roanoke, United States, our plants collaborated on various initiatives targeting local employment, including supporting Red Cross trainings and working with the local government on aligning educational curriculums with hiring needs, respectively. Several plants also implemented recycling promotion programmes designed to raise employee awareness on how simple waste management practices can be integrated into everyone's daily routines. In Itupeva, Brazil, for example, plant personnel compiled and published an ISO14001-inspired comic book to help colleagues learn more about environmental management systems and good recycling practices in an enjoyable and engaging way.



"I'm pleased to be part of an organisation and group of employees who have been receptive in helping various charities within our local community. In addition to the Easter and Thanksgiving food drives, our employees raised money for Breast Cancer Awareness and our annual Salvation Army 'gift tree' donations, bringing smiles to underprivileged children within our community."

**David Floor** Trivium Quality Assurance Manager, Weirton

## Care

Locations participating in at least one community engagement project per year

**2022 100%**

**Target 2025 100%:**

**2021 100%**

**2020 90%**

# Inspiring our peers through thought leadership

To inspire and empower others within and beyond our industry, we strive to position ourselves at the forefront of global conversations around sustainability. By participating in industry associations, joining high-level conferences and coalitions and publishing Trivium's research and insights, we aim to promote climate action and accelerate the transition to a circular economy.

## Industry activity

We are active participants in various groups bringing together leading players in the metal packaging industry. At the regional level, we are members of Metal Packaging Europe and AEROBAL in Europe, and the Can Manufacturers Institute in the United States. Participating in these associations helps us to remain up to date on the latest relevant regulatory developments so we can better support and guide our customers' product development and compliance. It also provides us with a forum to make our voice heard and use our influence for the benefit of our wider society.

In 2022, we committed to funding, until end of 2024, the UK Aerosol Recycling Initiative launched by aluminium packaging recycling organisation Alupro. This programme aims to increase awareness and uptake of aerosol recycling across the United Kingdom in line with the progress needed to meet 2030 targets. Similarly, we partnered with the Can Manufacturers Institute and the Household and Commercial Products Association on launching an Aerosol Recycling Initiative in the United States, with a view to increasing aerosol recycling rates nationally and facilitating on-packaging messaging to help end users properly recycle their aerosol cans.



Metal  
Packaging  
Europe



“We’re proud to have committed to supporting the UK Aerosol Recycling Initiative. The programme is crucial in driving further improvements in recycling and addressing consumer knowledge and the role of government and industry bodies.”

**Andrew Davies** Trivium R&D Prototyping Specialist

## Cross-sector collaborations

A challenge as big as climate change can only be tackled through innovation, teamwork and cross-sector mobilisation. As well as engaging with industry groups, Trivium therefore actively participates in partnerships beyond our own industry, meaning we can better leverage our combined power for the benefit of our planet and its people. This connects us with like-minded organisations and even provides some healthy competition to drive us to continuously improve our business practices. Importantly, these partnerships also enable the exchange of new packaging ideas and the sharing of best practices through open and honest dialogue.

In 2021, we joined the United Nations (UN) Global Compact, which promotes 10 fundamental corporate responsibilities in the areas of human rights, labour, the environment and anti-corruption. This reinforced our commitment to its principles; namely to engage in collaborative projects that advance the broader development goals of the UN

(especially the SDGs) and to support and pursue transparency and public accountability. These principles have long been embedded in our strategy, culture and day-to-day operations at Trivium. In 2022, our Chief Sustainability Officer joined the Board of the Global Compact Network in the Netherlands.

We are also a member of the World Business Council for Sustainable Development, whose Circular Sustainability Assessment for Packaging Workstream – co-chaired by Trivium’s Chief Sustainability Officer – launched a packaging sustainability framework known as *SPHERE* in 2022. This new and comprehensive framework aims to help customers and consumers to analyse packaging’s full impact on the environment, enabling them to make more informed decisions.

We also aspire to support organisations that are intent on making a positive impact on the world. In 2022, on behalf of our customers who completed Trivium’s annual satisfaction survey, we made a donation to the Bonneville Environmental Foundation (BEF), a US-based non-profit organisation that works on restoring freshwater ecosystems, increasing access to clean energy, and improving water and air quality for communities across the globe. Our \$11,000 donation will be used by BEF to offset 880 metric tonnes of carbon emissions via various GHG abatement projects around the world.



## Knowledge-sharing

With our years of experience in metal packaging and circularity, we see it as our duty to share our knowledge and research with stakeholders. In this way, we can raise awareness and encourage well-informed decision-making, correct

misconceptions that lead consumers to under- or overestimate the sustainability credentials of different packaging substrates and initiate research collaborations with other industry and non-industry parties on broader sustainability topics, including climate action.

Our target is to publish a minimum of two open-access knowledge documents each year. We met this goal in 2022 with the publication of the SPHERE framework in February and our “[2022 Global Buying Green Report](#)” – a survey of consumer perceptions of sustainable packaging – in April. As well as sharing our insights through written reports, our experts took advantage of 15 speaking opportunities at events and conferences during the year, including Sustainability LIVE, Plastic Waste Free World and the Greener Manufacturing Show. Our CEO also took part in Peace One Day’s Climate Action Live event in June, The Canmaker Summit in October and COP27 in Egypt in November, raising awareness of the environmental benefits of infinitely recyclable packaging solutions and taking part in broader sustainability dialogues.



### Thought leadership

Open access knowledge documents published per year

2022 2

Target 2

2021 2

2020 2

# 8 Corporate governance

**TRIVIUM**  
PACKAGING

# Legal structure and leadership

Trivium Packaging B.V. ('Trivium') was incorporated in the Netherlands on 8 July 2019. Ontario Teachers' Pension Plan Board (OTPP), through one of its controlled entities, holds a stake of approximately 58% while Ardagh Group S.A ('Ardagh') holds a stake of approximately 42% in Trivium. Trivium is jointly controlled by OTPP and Ardagh. Trivium has a dual-tier board structure consisting of a Supervisory Board and a Management Board.



## Supervisory Board

The Supervisory Board supervises the general affairs and operations of Trivium, including the policies and guidelines of the company's Management Board. The Supervisory Board has established an Audit Committee and a Compensation Committee.

The Audit Committee undertakes the following duties:

- (i) Reviewing the reliability and integrity of Trivium's accounting policies, financial statement reporting practices and financial statements;
- (ii) Overseeing and reviewing Trivium's independent auditor and internal audit functions;
- (iii) Reviewing Trivium's compliance with applicable laws and regulations insofar as they relate to Trivium's financial statements and accounting and auditing practices; and
- (iv) Reviewing certain related-party transactions within Trivium.

The Compensation Committee undertakes the following duties:

- (i) Determining the compensation of the CEO and the Supervisory Board members of Trivium;
- (ii) Evaluating the performance of the CEO, the Management Board members, the Senior Management team and the Senior Directors and Officers of other Trivium companies and reviewing and approving their compensation; and
- (iii) Overseeing and administering the management incentive plans of Trivium.

The members of the Supervisory Board are selected by the shareholders with due consideration to the relevant business experience each of them brings to the areas in which Trivium operates. Members of the supervisory board as of March 7, 2023 are presented below. For more information about the composition of our board, directors' profiles and the rules for the Supervisory Board and the committees, see our 2022 Report to Bondholders.

## SUPERVISORY BOARD

Name	Position	Date of appointment	Committee	Independent director
Mr. Paul Coulson	Chairman and Supervisory Director	03/01/2023		No
Mr. Rick Frier	Vice-Chairman and Supervisory Director	31/10/2019	Audit (Chair)	Yes
Mr. Mark Fleming	Supervisory Director	23/02/2023		No
Ms. Debra Kelly-Ennis	Supervisory Director	29/10/2020	Audit	Yes
Mr. Ashfaq Qadri	Supervisory Director	31/10/2019	Audit, Compensation	No
Mr. John Sheehan	Supervisory Director	26/5/2021	Audit, Compensation (Chair)	No
Ms. Amanda Sourry	Supervisory Director	30/10/2020	Compensation	Yes
Mr. Blake Sumler	Supervisory Director	19/11/2020	Compensation	No

## Management Board

Trivium's three-member Management Board comprises the Chief Executive Officer, the Chief Financial Officer and the Chief Legal Officer.

The Management Board is responsible for the day-to-day management of Trivium. This is done consistent with the policies and guidelines provided for such management by the Supervisory Board.

## MANAGEMENT BOARD

Name	Position	Date of appointment
Mr. Michael Mapes	Chief Executive Officer and Director	31/10/2019
Mr. Stefan Siebert	Chief Financial Officer and Director	31/10/2019
Ms. Charlotte van Meer	Chief Legal Officer and Director	16/03/2020



# Risk management

At Trivium, risk management is an integral part of doing business and decision-making, not only for safeguarding the business and assets of the Group but also for securing long-term performance and value creation. Risk Management is supported by a clear governance framework and is an essential element when business opportunities are assessed, and strategies are developed. A proactive approach ensures risk management is part of our executive conversations and is embedded in our decision-making processes, addressing potential threats and opportunities securing our ability to grow and be sustainable.

The Management Board maintains a risk management framework and system of internal controls. This ensures an integrated approach to risk management and implementation of risk-mitigating measures for the key risks, as identified by the Management Board, monitored by the Supervisory Board and the Audit Committee during the year through risk updates and reviews.

The Group's appetite for risks varies per objective and type of risk:

- **Strategic Risks:** Trivium Management is prepared to take reasonable risks to achieve its performance goals and objectives.
- **Operational Risks:** Trivium management, with a commitment to environmental health and safety measures regarding its operating practices, strives to minimise any downside risk from any operational failures within its businesses.

- **Financial Risks:** Trivium Management takes appropriate measures to ensure sufficient liquidity to effectively run its operating activities, fulfil its financing obligations, such as interest payments and debt repayments, and maintain its credit ratings.
- **Compliance Risks:** Trivium Management does not allow any of its employees to take compliance risks and takes appropriate measures in the event of breaches of its *Code of Conduct*. Trivium Management encourages and is committed to engaging in fair and vigorous competition while complying with all antitrust and competition laws worldwide.

Trivium Management has assessed and monitor the following major risks:

Risk category, description and implications of risk	Mitigation measures	Likelihood	Impact	Reference to relevant section on management approach and policies in this report
<b>Economic impact of change in end-consumer demand and loss of customer relationships</b> Our customers sell to consumers of end-use categories which include beauty and personal care, beverage, food, home care and industrial, nutrition, paints and coatings, petfood, pharmaceutical, seafood, vitamins, supplements and over the counter packaging. If economic conditions, consumer preferences or other factors affect consumer demand in above categories, our customers may be affected, thus reducing the demand for our products.	We are mitigating these risks by actively maintaining strong relationships with a large portion of our customers through strategic multi-year supply arrangements of varying terms between two and ten years.	Low	High	<ul style="list-style-type: none"> <li>■ Our role in society (<a href="#">page 7</a>)</li> <li>■ Advancing product safety and compliance (<a href="#">page 22</a>)</li> <li>■ Safeguarding product quality (<a href="#">page 24</a>)</li> <li>■ Innovating to lead (<a href="#">page 25</a>)</li> </ul>
Furthermore, the metal packaging sectors in which we operate are continually exposed to competition from other metal packaging producers based on factors such as price, innovation, design, quality and service. To the extent that any one or more of our competitors become more successful with respect to any key competitive factor, our ability to attract and retain customers could be materially and adversely affected, which could have a material adverse effect on our business. In addition, we are also subject to substantial competition from producers of packaging made from plastic, carton and composite materials.		High	High	
<b>Climate change</b> The presence of emissions like carbon dioxide and other greenhouse gases ('GHG') in the atmosphere is having an adverse impact on global temperatures, weather and precipitation patterns, and the frequency and severity of extreme weather and natural disasters.	Environmental management is one of the priorities of Trivium's sustainability strategy. Trivium Management is mitigating these risks by continuously monitoring any potential impact of climate change and or legal and regulatory changes and is focused on reducing energy usage and emissions reduction, minimisation of water usage, and reducing waste. Current and future environmental regulations are being assessed, and cross-functional teams are assigned to implement needed actions.	High	High	<ul style="list-style-type: none"> <li>■ Innovating to lead (<a href="#">page 25</a>)</li> <li>■ Adopting a holistic approach to environmental management (<a href="#">page 31</a>)</li> <li>■ Reducing carbon emissions from our operations (<a href="#">page 33</a>)</li> <li>■ Reducing Scope 3 emissions (<a href="#">page 45</a>)</li> </ul>
The impact of climate change, like weather changes, could result in damages to plant assets from climate events, reduced availability of inputs such as water or increased costs of such inputs, reduced product demand and/or transitional risks such as technological development, policy and regulatory change, and market and economic responses. Measures to address climate change through laws and regulations, for example, by requiring reductions in emissions of GHGs could additionally create economic risks and uncertainties for our businesses by increasing the cost of purchasing allowances or credits to meet emissions caps, the cost of abatement equipment to reduce emissions to comply with reduced GHG limits or required technological standards.		High	High	

Risk category, description and implications of risk	Mitigation measures	Likelihood	Impact	Reference to relevant section on management approach and policies in this report
<b>Compliance and regulations</b>	<p>We operate in the metal packaging industry, where strict laws and regulations are applicable, and failure to comply with them could lead to penalties, claims, and reputational damage.</p> <p>Frequent changes in the legal and regulatory environment tend to increase the risk of non-compliance with local and global laws and regulations. Furthermore, due to recent regulatory developments, law enforcement has increased over the past years, particularly regarding anti-bribery and corruption, fraud risks, competition and data privacy laws, and human rights. This leads to an increased risk of allegations of violations of laws and regulations by law enforcers and private parties.</p>	Low	Very high	<ul style="list-style-type: none"> <li>■ Advancing product safety and compliance (<a href="#">page 22</a>)</li> <li>■ Adopting a holistic approach to environmental management (<a href="#">page 31</a>)</li> <li>■ Promoting a responsible supply chain (<a href="#">page 41</a>)</li> <li>■ Reinforcing our responsibility (<a href="#">page 59</a>)</li> <li>■ Risk management (<a href="#">page 72</a>)</li> </ul>
<b>Geopolitical contestation</b>	<p>Global, regional or local economic and political uncertainties could impact Trivium's business and our customers.</p> <p>In particular, the risk of an economic recession, financial crisis, inflation, rising interest rates, foreign exchange devaluations, trade restrictions, devaluation, nationalisation, or social unrest could adversely impact consumer confidence, resulting in reduced spending on our customers' products and, thereby, reduced or postponed demand for our products. Moreover, constant changes in global economic conditions may reduce our ability to forecast developments in our industry and plan our operations and costs, resulting in operational inefficiencies.</p>	Low	High	<ul style="list-style-type: none"> <li>■ Risk management (<a href="#">page 72</a>)</li> </ul>
<b>Health and safety</b>	<p>Trivium aims to provide a safe workplace for all employees and other related personnel at its various operational sites and offices.</p> <p>Despite the several controls in place, Trivium workforce and other related personnel may be impacted by uncontrolled events in the office, plants, supply chain, or while delivering to our customers, which could lead to severe injuries, illness, or fatalities.</p> <p>Moreover, an ongoing volatile and uncertain global geopolitical environment as well as the recent pandemic experience has shown the importance of prioritising the mental health and well-being of employees as such events and circumstances can cause stressed working environments that negatively impact employees' well-being, social cohesion, and productivity.</p>	Low	Very high	<ul style="list-style-type: none"> <li>■ Building a zero-harm safety culture (<a href="#">page 48</a>)</li> </ul>

Risk category, description and implications of risk	Mitigation measures	Likelihood	Impact	Reference to relevant section on management approach and policies in this report
<p><b>Information technology</b> Trivium's business places heavy reliance on technology within its manufacturing sites, R&amp;D centres as well as its offices.</p> <p>Failure of our IT systems due to various events, some of which are beyond our control, including natural disasters, power failures, terrorist attacks, equipment or software failures, computer viruses, or cyber security attacks, could lead to business disruption, loss of confidential information, unauthorised access to our data, increased costs, legal claims or proceedings and a breach of data privacy regulations. All of this might lead to financial or reputational damage.</p>	<p>IT availability and cybersecurity remain the top priority for Trivium. Our IT availability and cybersecurity programme are regularly evaluated as part of our long-term IT strategy to ensure they remain fit for purpose. Integrated and standardised IT infrastructure, applications, up-to-date, stable IT systems, and backup processes are implemented and tested rigorously to minimise the IT unavailability and cybersecurity threats at all our operating sites and offices.</p>	High	Very high	<ul style="list-style-type: none"> <li>■ Risk management (<a href="#">page 72</a>)</li> </ul>
<p><b>Developing Leadership, Talent, and Capabilities</b> Trivium is committed to shaping the metal packaging industry and doing what matters. To meet this ambition, we attract and retain a diverse workforce bringing a range of backgrounds, experience, and knowledge to share.</p> <p>However, Trivium operates in a very competitive market, and not being able to attract, develop and retain diverse and talented people and leaders with the required capabilities may jeopardize our ability to execute our strategy and achieve the targeted returns.</p>	<p>Trivium constantly fosters a talent mindset and skill set in our leaders to build a full and diverse leadership pipeline. We ensure that our policies and procedures match our people strategy and robust talent attraction, selection, and development programmes and processes are in place. As part of the HR transformation, expected behaviours are deployed and reinforced through all key people processes and tools, including performance management, development plans, assessment, and recruitment. Moreover, Trivium has taken an intentional and scaled approach to capability building by identifying and developing critical strategic capabilities and harmonising our capability framework across the organisation. Our Inclusion &amp; Diversion strategy includes transparent ambitions on gender balance, cultural diversity, and development for people managers.</p>	High	High	<ul style="list-style-type: none"> <li>■ Engaging our employees (<a href="#">page 51</a>)</li> <li>■ Prioritising leadership and functional capabilities development (<a href="#">page 54</a>)</li> <li>■ Creating an inclusive and diverse Trivium (<a href="#">page 56</a>)</li> </ul>

Risk category, description and implications of risk	Mitigation measures	Likelihood	Impact	Reference to relevant section on management approach and policies in this report
<p><b>Supply chain</b>  Disruptions to the supply chain could lead to the inability to deliver products to key customers, loss of revenue, increased costs, brand damage, and loss of market share.</p> <p>Significant changes in the availability or price of raw materials, commodities, transport, energy, and water may result in a shortage of those resources or increased costs, which Trivium may not be able to pass through to its customer resulting in lower margins.</p>	<p>The Enterprise Risk Management programme implements a proactive monitoring approach to monitor market conditions and respond appropriately. Business continuity and backup plans have been revisited to ensure they are fit for purpose and effective in mitigating any unexpected event. Business resilience is further strengthened by prioritising several strategic initiatives, long-term procurement contracts, water management plans, and central management of global insurance policies. Moreover, as Trivium operates in Europe countries that are exposed to the energy crisis, all our forward-looking sustainable initiatives, like moving away from natural gas, are prioritised. Where practical, we enter energy forward purchase contracts to cover most of the company's upcoming 12-month forecast energy consumption and evaluate the viability of longer-term agreements for subsequent years.</p>	High	Very high	<ul style="list-style-type: none"> <li>■ Promoting a responsible supply chain (<a href="#">page 41</a>)</li> <li>■ Risk management (<a href="#">page 72</a>)</li> </ul>



## Internal controls

The internal control framework is an integral part of Trivium's overall assurance model. The objective of the internal controls framework is to protect Trivium assets and provide reasonable assurance over financial information, non-financial disclosures, compliance with applicable laws and internal policies, the effectiveness of internal processes by providing complete visibility on critical financial controls, and proactively managing risks in high-risk economic areas.

Internal controls are defined at the entity, process, and management level for critical processes, including financial reporting, Sales, Procurement, IT,

and HR. Adherence to defined standards, policies, and internal control framework is periodically assessed to test the design and operating effectiveness of Internal Controls Over Financial Reporting (ICOFR). Deviations from the defined standards, policies, and internal controls are included in the global monitoring and follow-up processes, supporting management in addressing these deviations. The Trivium Management (Group and Local) is responsible for defining and timely implementing action plans to remediate any deficiencies identified in these assessments and assures by quarterly controls certification. The results are reported to the Executive Board and other stakeholders. The Trivium standard, policies, procedures, and controls are periodically updated

to reflect the key risks and the extent to which Trivium can mitigate them.

Moreover, the internal control framework provides coordinated assurance with the internal audit framework supported by outsourced arrangements. The internal audit framework performs a risk assessment covering the internal operations, control environment of the Group and its external environment/trading conditions, and ongoing corporate strategy. Findings, recommendations, and observations are included in the annual Internal Audit Plan presented to the Audit Committee for approval.

# Sustainability governance

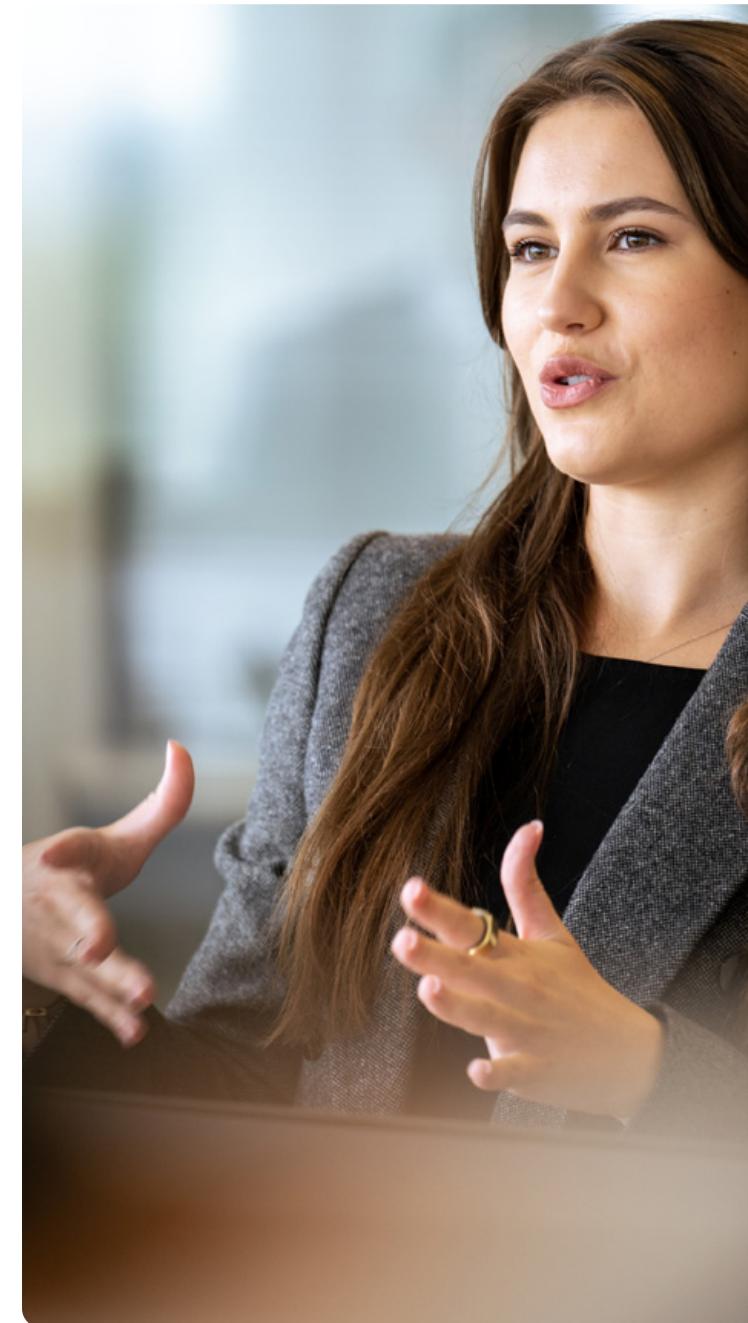
Within Trivium, our CEO and CSO hold accountability and responsibility, respectively, for our company-wide sustainability strategy and its implementation, with oversight from the Supervisory Board and support from the Global Circulate Team (GCT).

Trivium's CEO, CSO and Executive Committee help ensure that Trivium remains an economically sustainable and socially responsible business, committed to reducing our environmental impact. Their work in this regard includes, but is not limited to, setting long-term sustainability targets and supporting the necessary investments in capital, systems and personnel; assessing and responding to sustainability-related operational risks and regulatory developments; conducting regular reviews of our sustainability performance; and engaging with stakeholders – including customers and suppliers – on sustainability risks and opportunities. In light of the increasing interconnectivity between product innovation and sustainability, the role of Global Senior Vice President Global Research and Development was added to the responsibilities of our CSO, further bolstering our focus on future-proof innovations.

Our Supervisory Board provides leadership and strategic counsel to help propagate the principles of good corporate governance across the entire organisation. It also oversees the integrity,

responsibility and transparency of Trivium's decisions and actions, including those related to our sustainability strategy. In 2022, the Supervisory Board approved our Science-Based Target initiative (SBTi) plans and targets, which we have now submitted for validation.

The GCT, a sustainability standing group composed of environmental representatives from all our manufacturing plants, continues to support our CSO. The GCT defines, refines and drives the implementation of Trivium's sustainability strategy across the business, which primarily involves ensuring that our Environmental Policy, Environmental Control Standards and standard operating procedures are upheld consistently across all our locations. The GCT also tracks plant-level environmental performance and responds accordingly.



# 9 About this report

**TRIVIUM**  
PACKAGING

## Reporting approach and criteria

The 2022 Trivium Sustainability Report is Trivium's third sustainability report and was published on 26 May 2023. The report covers our sustainability performance during the 2022 calendar year and outlines the sustainability challenges and opportunities we faced. We also describe our sustainability management approach, policies, and overall strategy, which aims to transform us into the partner of choice for quality, innovative and sustainable metal packaging.

This report has been prepared with reference to the standards of the Global Reporting Initiative (GRI), and its GRI context index can be viewed [here](#). We have also included additional information that we feel provides further insight into our sustainability activities, initiatives, and performance. Our value creation model (VCM) is based on the principles of the Value Reporting Foundation (VRF) and the International Integrated Reporting Council (IIRC). The VCM helps us communicate how we link our core business activities with our corporate responsibilities and highlights our impacts and long-term value creation.

## Scope and boundaries

Our Sustainability Report incorporates environmental, economic and social data relating to the worldwide operational activities of Trivium for the period 1 January 2022 through to 31 December 2022. Data coverage encompasses a total of 51 production facilities across 19 countries, which Trivium operated during the full reporting period. During 2022, Trivium concluded that its presence in Russia was no longer viable given the current conflict environment. Consequently, in June 2022, Trivium sold its sole operational plant in Vyazma. Data for Vyazma for January and February 2022 is included in the report (i.e. from the start of the year to the outbreak of the conflict).

Environmental data from our nine standalone office facilities, such as Trivium's headquarters in Schiphol, the Netherlands, are not included in this report. None of these facilities are involved in the production of our products and their resource and energy consumption is therefore considered negligible. For employee demographics, safety performance and other non-environmental sustainability indicators, data from office facilities has been included unless otherwise specified.

Quantitative data concerning environmental performance included in this report is collected using our Trivium Risk Inventory Management System (TRIMS). After submission to TRIMS, all plant-level data is consolidated and reviewed centrally to validate its accuracy. Remaining data, such as new product developments, employee diversity and composition, Organisational Health Index, supplier ESG ratings and local community engagements, were extracted from information management systems by the responsible business units or taken from standardised reporting questionnaires. All reported figures have been validated by their respective data owners.

## Assurance

All information provided within this Sustainability Report is subject to internal review. Our environmental data has been additionally verified by a third party, Research Institutes of Sweden AB (RISE), for the purpose of providing reasonable assurance. Assurance has been conducted in accordance with RISE's own methodology, which itself is based on ISAE 3000, an internationally recognised and widely applied international assurance and audit standard for non-financial information disclosures. An assurance statement provided by RISE, including a comprehensive list of the sustainability indicators verified, is available [here](#).

## Materiality

In the second and third quarters of 2022, we carried out a preliminary materiality assessment to identify our company's most material issues, in anticipation of being subject to the EU Corporate Sustainability Reporting Directive (CSRD), which was adopted in October 2022. The process for this consisted of three steps that are detailed below.

### Step 1: Determining relevant topics

We applied the preliminary definition of materiality to align with GRI requirements, while incorporating insights from other reporting initiatives and the provisional principle on double materiality announced by the CSRD at the time. For this report, the definition applied for a material topic is any topic that significantly influences the organisation or on which the organisation has a significant impact with its activities. This includes positive and negative and direct and indirect influences (risk/opportunity) and impact. Through a standards, peers, societal (industry associations, community, inter- non-governmental bodies and organisations and national and local authorities), trend and media analysis, we compiled a list of 16 relevant topics. All 15 topics of the previous materiality assessment in 2020 are covered in this list (see table on the next page), although some topics have been combined and some topics were added based on the relevance analysis.

### Step 2: Stakeholder consultation and prioritisation

The stakeholder consultation consisted of the consultation of internal representatives of our most important stakeholder groups (customers, employees, investors, suppliers) and internal stakeholders on management, director and executive level. The topics were prioritized following conversations with internal representatives of different stakeholder groups, based on the perceived significance of economic, environmental and social impact and the significance for the stakeholders. This resulted in a ranking of the topics based on their impact relevance (see table on the next page).

### Step 3: Materiality and urgency validation

The outcomes of the stakeholder consultations were validated by the project team. During this session the materiality of the six highest prioritised topics was analysed based on:

1. Level of embeddedness in the planning and control cycle (maturity), given stakeholders expectations of Trivium's role and responsibility regarding the topics.
2. Risk/opportunity assessment of the topics in relation to Trivium's financial performance and possible impact.

The project group ranked and mapped the topics and urgency to address the topics in the management and control cycle, defining the reporting focus (material topics and level of disclosure), and the strategic focus (implications of urgency analysis for strategic agenda).

### Step 4: Determine strategic focus

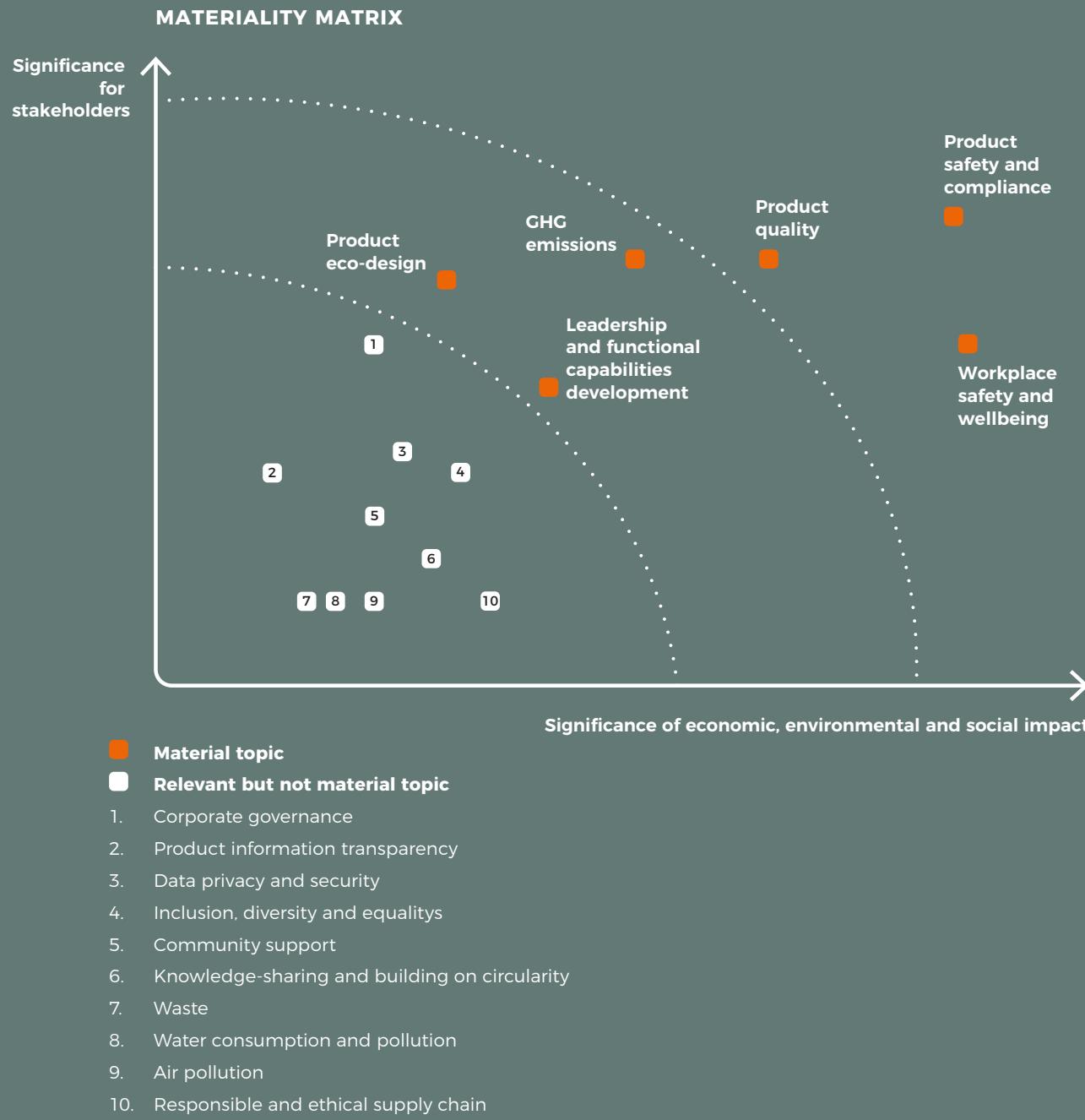
The final step was the validation and determination of materiality by the Management Board and members of the Supervisory Board. The six highly prioritised topics were validated as material with an urgency for strategic and reporting focus. These six topics (see table on the next page) are the topics reflected in this report.



Overview of relevant and material topics in 2022 and 2020

Topics 2022	Topic 2020	Definition
(Ranked based on stakeholder consultations)		
<b>Product safety and compliance</b>	Product safety	Making sure our products are safe for intended use by maintaining compliance to product safety regulations
<b>Workplace safety and wellbeing</b>	Workplace safety	Implementing workplace health and safety measures to safeguard and improve employee physical health and mental wellbeing
<b>Product quality</b>	--	Enhancing the technical performance of our products so that they (continue to) satisfy customer/end consumer needs, serve their purpose, and meet or exceed industry standards
<b>GHG emissions</b>	Carbon footprint/green energy	Reducing the Global Greenhouse Gas (carbon) emissions from our own operations (manufacturing and transportation)
<b>Product eco-design</b>	Sustainable innovation/recycled content	Reducing the environmental footprint of our products (e.g. through higher recycled content uptake, light-weighting, and designing for (higher) reusability and recyclability)
<b>Leadership and functional capabilities development</b>	Training	Helping employees to grow professionally and further develop their capabilities and on-the-job skills
Corporate governance	Reporting	Being transparent in and accountable for the way we do business (e.g., committing to anti-bribery and anti-corruption, compliance transparency, fair tax payments, etc.)
Inclusion, diversity and equality	Inclusion and diversity	Establishing a diverse and inclusive work environment that offers equal opportunities and remuneration
<i>Data privacy and security</i>	--	Protecting the intellectual property/data of our company and our stakeholders (including customers, suppliers and employees)
Community support	Global and local charities	Making positive environmental or societal impact on local communities through philanthropy, employee volunteering, awareness raising and/or capacity building initiatives
Knowledge-sharing and building on circularity	Circular economy	Engaging with intra and inter-industry stakeholders on advancing, promoting, and raising awareness about the circular economy and the role of metal packaging within it
Responsible and ethical supply chain	Sustainable supply chain	Applying human rights standards across the supply chain, and collaborating with suppliers, to improve industry standards and working conditions
<i>Product information and transparency</i>	--	Providing stakeholders with honest and clear product information and transparent marketing and communication (e.g. origin of materials, sustainability attributes of products etc.)
Air pollution	VOC management	Reducing air pollutants (VOC emissions) from our manufacturing operations
Water consumption and pollution	Water management	Reducing water consumption and water pollution within our operations
Waste	Waste management	Reducing and recycling waste produced by our operations

**Note** Topics in **bold** were identified as material in their respective year; all other topics were identified as relevant but not material. Topics in *italics* are topics that appear in 2022 but not 2020.



The calculation methodology for the KPIs related to our six material topics is presented below.

### Product safety and compliance

Based on the results of our 2022 materiality assessment, we introduced two new KPIs for 'product safety and compliance':

- Number of incidents of non-compliance with regulations concerning the health and safety impacts of our products and services
- Percentage of significant product categories assessed for health and safety impacts

For the first KPI, we only consider incidents that have resulted in fines or official warnings by authorities during the year. For the second KPI, we base our assessment on the presence of internal quality controls and safeguards (e.g. covering raw materials procured), combined with plant-level annual quality reviews with customers.

### Workplace safety and well-being

We assess our progress on 'workplace health and safety' through the following KPI:

- Total recordable accident rate (TRAR)

We define TRAR as the number of accidents that require medical treatment per 200,000 man-hours (around 100 full-time employees) per year. TRAR includes fatalities, lost time accidents, restricted work accidents, and medical treatment accidents. It covers all employees, including temporary workers and leased employees – but excludes contractors.

## Product quality

Based on the results of our 2022 materiality assessment, we introduced a new KPI for 'product quality':

- Percentage of Trivium plants with a top-rated quality management system

Within Trivium, all plants have a third-party certified quality management system—namely: BRC/ISO 22000/ISO 22715/ISO 9001. We define a top rating as AA or A+ for plants with BRC certification and 'no major findings/non-conformities' for plants with ISO certification, based on the plant's most recently conducted audit.

## Greenhouse Gas (GHG) emissions

We assess our progress on 'GHG emissions' using two KPIs:

- Percentage reduction in Scope 1 and 2 CO<sub>2</sub> emissions vs 2020 baseline
- Percentage reduction in Scope 3 CO<sub>2</sub> emissions vs 2020 baseline

We measure our Scopes 1, 2 and 3 emissions by following the guidelines of the Greenhouse Gas Protocol. Scope 1 refers to direct emissions from company-owned and company-controlled sources; Scope 2 refers to indirect emissions generated by the consumption of purchased electricity, steam, heating and cooling; Scope 3 refers to all other indirect emissions not included in Scope 2 that occur in a company's value chain.

## Product eco-design

We assess our progress on 'product eco-design' using two KPIs:

- Percentage of all new product developments that meet our eco-design standard
- Percentage of sales revenue from eco-designed products

To assess whether new and/or existing products have been eco-designed, we use a proprietary eco-design tool that we launched in 2021. The tool uses the European Commission's Product Environmental Footprint guidelines as a benchmark and assesses the sustainability performance of a product across nine pre-defined criteria ([page 27](#)). A product receives an eco-design designation if it fulfils at least one of these nine criteria, while also generating a higher overall score. We provide our R&D teams with guidance and support on eco-design ratings through 'decision checklists' and year-round training.

For the second KPI, we adjusted our calculation in 2022. In 2021, we limited our review to our 100 best-selling products as a first step of our eco-design programme roll-out. In 2022 we expanded our review to include all our products.

## Leadership and functional capabilities development

Based on the results of our 2022 materiality assessment, we introduced a new KPI for 'Leadership and functional capabilities development':

- Percentage of workforce who receive regular performance and career development reviews

Our KPI encompasses the entire Trivium workforce and we define "regular" as occurring at least once annually. Reviews can be conducted in person or online, take place between the employee and their manager(s), and have the goal of providing feedback on the employee's performance during the past period as well as guidance on what to improve and/or focus on – in terms of the 'what' and the 'how' – in the period ahead.

## Stakeholder engagement

We engage in active interactions and discussions with our stakeholders during the year. These engagements provide us with opportunities to better understand our stakeholders' needs; align our sustainability strategy with their preferences to enhance our environmental and societal impact; and establish lasting partnerships with parties that can affect (and be affected by) our business.

The table below provides examples of engagements that took place during the year with a subset of stakeholders whose interests we consider to be material (as determined by, among other things, their alignment with our values, objectives and expertise; their proximity to our operations; and their capacity and willingness to collaborate with us on sustainability issues). We aim to maintain an ongoing and constructive dialogue with these groups, at all levels of our company.



Stakeholder group	How we engaged	Main topics of discussion
<b>Customers</b>	Meetings, innovation sessions, surveys, conferences and tradeshows, sustainability report, website and social media, knowledge documents	<ul style="list-style-type: none"> <li>■ Product stewardship and compliance (<a href="#">page 23</a>)</li> <li>■ Product eco-design (<a href="#">page 27</a>)</li> <li>■ Knowledge-sharing (<a href="#">page 68</a>)</li> </ul>
<b>Employees</b>	Organisational Health Index survey, personal development reviews, trainings and seminars, community engagement projects, company intranet, sustainability report	<ul style="list-style-type: none"> <li>■ H&amp;S awareness (<a href="#">page 49</a>)</li> <li>■ Organisational Health (<a href="#">page 51</a>)</li> <li>■ Training and development (<a href="#">page 54</a>)</li> <li>■ Performance management (<a href="#">page 55</a>)</li> <li>■ I&amp;D programme (<a href="#">page 56</a>)</li> <li>■ Ethics and compliance (<a href="#">page 59</a>)</li> </ul>
<b>Shareholders</b>	Report to bondholders, sustainability report	<ul style="list-style-type: none"> <li>■ Business review (<a href="#">page 18</a>)</li> <li>■ Our role in society (<a href="#">page 7</a>)</li> </ul>
<b>Community</b>	Community engagement projects, volunteering, sustainability report	<ul style="list-style-type: none"> <li>■ Caring for our communities (<a href="#">page 65</a>)</li> <li>■ Limiting the ecological footprint of our operations (<a href="#">page 36</a>)</li> <li>■ Supplier ESG performance (<a href="#">page 41</a>)</li> <li>■ Ethics and compliance (<a href="#">page 59</a>)</li> </ul>
<b>Suppliers</b>	Annual questionnaire, audits and assessments, meetings, sustainability report	<ul style="list-style-type: none"> <li>■ Supplier ESG performance (<a href="#">page 41</a>)</li> <li>■ Green material collaborations (<a href="#">page 45</a>)</li> <li>■ Supply chain optimisation (<a href="#">page 46</a>)</li> </ul>
<b>Industry associations and non-governmental organisations</b>	Conferences, memberships, meetings, research collaborations, philanthropy, sponsorship	<ul style="list-style-type: none"> <li>■ Promoting transparency (<a href="#">page 62</a>)</li> <li>■ Inspiring our peers through thought leadership (<a href="#">page 66</a>)</li> </ul>

## Glossary

### A

**Ability to Execute (A2E training programme):** An internal capacity-building training programme, comprising several interactive e-learning sessions on a range of practical business skills.

**AEROBAL:** An international organisation representing manufacturers of aluminium aerosol cans.

**Aerosol Recycling Initiative (UK):** Trivium has committed to funding, until end of 2024, the UK Aerosol Recycling Initiative launched by aluminium packaging recycling organisation Alupro. This programme aims to increase awareness and uptake of aerosol recycling across the United Kingdom in line with the progress needed to meet 2030 targets.

**Alloy:** A metal made by combining two or more metallic elements, especially to enhance strength or resilience.

**Aluminium slug:** An aluminium blank punched out of aluminium sheet coils in different shapes, used as extrusion blanks for tubes, cans and containers.

**Aqueduct Water Risk Atlas:** An online risk-mapping platform operated by the World Resources Institute, which provides global coverage of 13 different indicators of physical, regulatory and reputational risks related to water. Trivium uses this resource to derive key insights on water-related risks – such as water stress and flood occurrence – in the locations where it operates.

### B

**Bisphenol A (BPA):** A chemical compound mainly used in the manufacture of various plastics, as well as epoxy resins found in the protective coatings and linings of various food and beverage metal cans and vats.

**Blue Book:** The Trivium Blue Book is a collection of 16 initiatives that will serve as best practice for energy consumption reduction in Trivium's European plants.

**Brand Reputation Compliance Global Standards (BRCGS):** An organisation that provides a framework to manage product safety, integrity, legality, quality and operational controls in the food, food ingredient, manufacturing, processing and packaging industries.

### C

**Can Manufacturer's Institute (CMI):** The national trade association of the metal can manufacturing industry and its suppliers in the US.

**CDP (formerly the Carbon Disclosure Project):** An international, non-profit organisation that helps companies and cities to disclose their environmental impact.

**Circularity:** A model of production and consumption that involves reusing, repairing and recycling existing materials and products for as long as possible.

**Circularity Champion:** Trivium's overarching sustainability strategy to transform Trivium into the partner of choice for quality, sustainable packaging, underpinned by the three pillars of customer, planet and people.

**Coil shearing:** The act of cutting sheet metal to size out of a larger roll or flat stock.

**Conflict Minerals Reporting Template (CMRT):** A standardised reporting template (developed by the Responsible Minerals Initiative), that facilitates the transfer of material origin information through the supply chain.

**COP27:** The 2022 UN Climate Change Conference. Held in Sharm El Sheikh, Egypt, this summit brought together parties to accelerate action towards the goals of the Paris Agreement and UN Framework Convention on Climate Change.

**Corporate Sustainability Reporting Directive (CSRD):** EU rules require large companies and listed companies to publish regular reports on the social and environmental risks they face, and on how their activities impact people and the environment.

## E

**Easy Open Ends (EOEs):** One of the main closures Trivium uses for its cans. In 2022, Trivium introduced the world's lightest EOE of its kind to the market.

**Ecodesign for Sustainable Products Regulation (ESPR):** The cornerstone of the European Commission's approach to more environmentally sustainable and circular products. The proposal was published on 30 March 2022.

**EcoVadis:** An international platform that assesses the material corporate social responsibility (CSR) impacts of different companies.

**Environmental Control Standards:** A set of stringent specifications – in line with relevant legal and regulatory guidelines on environmental criteria – that define Trivium's minimum requirements on a range of environmental topics.

**Environmental, social and governance (ESG):** The three central factors in measuring the sustainability and societal impact of a business.

## F

**Full-time equivalent (FTE):** The equivalent of the number of employees with a full-time contract.

## G

**Global Buying Green Report:** An annual open-access report published by Trivium featuring up-to-date research and data on consumer attitudes to sustainable packaging. The 2022 Buying Green Report is based on a survey of more than 15,000 end consumers across Europe, North America and South America.

**Global Circulate Team (GCT):** Trivium's standing group on sustainability, composed of environmental representatives from various manufacturing plants. The GCT works on defining, refining and driving the implementation of Trivium's sustainability strategy across the business.

**Global Reporting Initiative (GRI):** An organisation that publishes international standards for CSR reporting.

**Greenhouse Gas Protocol (GHG Protocol):** A multi-stakeholder partnership of businesses, non-governmental organisations, governments and others that develop internationally recognised GHG accounting and reporting standards.

## I

**International Organisation for Standardisation (ISO):** An organisation that is responsible for international management standards such as ISO 14001, 50001, 45001 and 9001.

**ISAE 3000:** An internationally recognised and widely applied international assurance and audit standard for non-financial information disclosures.

## K

**Key Performance Indicator (KPI):** A quantifiable measure of performance over time for a specified objective.

## L

**Life-Saving Rules:** 10 crucial rules that Trivium has introduced to help ensure that everyone working in or visiting its locations remains safe and free from injury.

**M**

**Metal Packaging Europe (MPE)**: An industry association that gives Europe's metal packaging industry a unified voice, and helps to promote the industry as a valuable contributor to sustainability throughout the supply chain.

**O**

**Organisational Health Index (OHI)**: Trivium tracks its effectiveness, efficiency and employee engagement in an annual survey among employees. The results of this annual survey are aggregated into an OHI.

**P**

**Proposal for a Regulation on Packaging and Packaging Waste (PPWR)**: A set of proposed European Union regulations covering design and waste management of packaging, aimed at increasing the circularity of packaging and reducing packaging waste.

**Paris Agreement**: An international treaty on climate change, with the long-term goal of limiting global warming below 1.5 degrees Celsius, compared to pre-industrial levels.

**Peace One Day**: A non-profit organisation that successfully campaigned for the adoption of the UN International Day of Peace on 21 September. Through its initiatives and collaborations, it encourages businesses and individuals across the world to reduce violence in the workplace, our communities and our environment.

**Plant Energy Reduction tool**: A user-friendly system rolled out in 2022 that uses data from TRIMS to provide a detailed breakdown of each plant's progress against our science-based targets.

**Product Environmental Footprint (PEF) guidelines**: A multi-criteria measure of the environmental performance of a good or service through its life cycle, created by the European Commission.

**R**

**Regenerative thermal oxidizer (RTO)**: A unit for air pollution control that decompresses hazardous gases at a high temperature and releases them into the atmosphere.

**Research Institutes of Sweden AB (RISE)**: A Swedish research institute, collaborating with universities, industry and the public sector to drive sustainable change.

**S**

**Science-Based Target initiative (SBTi)**: An organisation that helps to drive positive climate action in the private sector by enabling businesses to set science-based emission reduction targets.

**Scope 1 emissions**: Direct GHG emissions occurring from sources that are owned or controlled by an organisation.

**Scope 2 emissions**: Indirect GHG emissions associated with the purchase of electricity, steam, heat or cooling.

**Scope 3 emissions**: Other direct GHG emissions that are a consequence of the company's activities, but which do not come from sources owned or controlled by the organisation.

**Substrate**: A material or surface on which processing is conducted.

**Sustainability in Packaging Holistic Evaluation for Decision-Making (SPHERE) framework**: A comprehensive tool that helps to analyse the full impact of packaging on the environment.

**T**

**Tinplate:** Sheet steel or iron coated with tin.

**Trimming:** The process of cutting excess material from an object.

**Trivium Business System (TBS):** A system that underpins Trivium's approach to the standardisation of excellence across its administrative, commercial, operational, procurement and supply chain activities.

**Trivium Risk Inventory Management System (TRIMS):** An internal reporting system that allows Trivium to track its environmental footprint and document its environmental incidents. Trivium's plants submit their environmental data to TRIMS every month.

**Trivium University:** Built under Trivium's Learning Management System, Trivium University is planned to be a central, on-demand repository of training programmes and teaching materials.

**U**

**United Nations Global Compact:** A United Nations initiative that promotes 10 fundamental corporate responsibilities in the areas of human rights, labour, the environment and anti-corruption.

**United Nations Sustainable Development Goals (UN SDGs):** A collection of 17 interlinked goals to end poverty, protect the planet and ensure prosperity for all, as part of a sustainable development agenda.

**V**

**Value Creation Model (VCM):** Trivium's VCM defines all the ways in which the company transforms its assets to create value for its stakeholders, and how the business intends to act as a force for good in the world.

**Volatile Organic Compounds (VOCs):** Compounds that have high vapour pressure and low water solubility. Some VOCs are harmful to human health or react with gases in the air to form pollutants.

**W**

**World Business Council for Sustainable Development (WBCSD):** An organisation of over 200 international companies aiming to accelerate global system transformation towards a net-zero future.

**World Resources Institute (WRI):** A global research non-profit organisation that works with governments, businesses, multilateral institutions and civil society groups to develop practical solutions that improve people's lives.

**World Wide Fund for Nature (WWF) Biodiversity Risk Filter:** An online screening tool that enables companies to assess the extent to which their manufacturing locations are situated in areas of high biodiversity risk. A high physical score is driven by a high dependence on ecosystem services or high impact on pressures on biodiversity, as well as by compromised ecosystem services or high existing pressures on biodiversity at the site locations.

## Colophon

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