

ANNUAL REPORT

2023/2024



Contents

Tetra Laval

Theme: Mitigating climate change in the food and beverage industry	3
Tetra Laval in brief	4
Comments by the Chairman of the Board	6
Tetra Laval Group Board	8
Tetra Pak facts	10
Sidel facts	12
DeLaval facts	14
Tetra Laval world trends	16
Theme: Interview with Dan Esty	18

Tetra Pak

Comments by the President & CEO	21
Executive Leadership Team	23
Theme: Mitigating climate change in the food and beverage industry	24
Highlights 2023/2024	26
Sustainability	28

Sidel

Comments by the President & CEO	31
Global Leadership Team	33
Theme: Mitigating climate change in the food and beverage industry	34
Highlights 2023/2024	36
Sustainability	38

DeLaval

Comments by the President & CEO	41
Global Leadership Team	43
Theme: Mitigating climate change in the food and beverage industry	44
Highlights 2023/2024	46
Sustainability	48

Tetra Laval

Tetra Laval International	50
Tetra Laval International Management	51
Tetra Laval Group Support Functions	51
Tetra Laval sustainable development	52
Addresses	55



Page 24 Tetra Pak strives towards net-zero climate impact in the value chain



Page 34 Sidel enables customers to reduce their climate impact



Page 44 DeLaval partners with John Deere to reduce climate impact in the dairy industry



Page 53 Partnering on school milk in Uganda

Mitigating climate change in the food and beverage industry

With more than one-third of global greenhouse gas emissions attributed to the way we produce, process and package food,¹ the food and beverage industry has an essential role in mitigating global climate change. Tetra Laval's three industry groups – Tetra Pak, Sidel and DeLaval – all focus on technologies for the efficient production, packaging and distribution of food.

Tetra Pak

As a globally recognised climate leader in the food and beverage industry, Tetra Pak has a long history of working to reduce climate impact – both in its own operations and for its customers. The company is striving towards net-zero climate impact in the value chain.

Read more on page 24.

Sidel

With most of Sidel's life cycle climate footprint created by downstream activities, the company focuses on enabling customers to reduce their climate impact. It does this through a holistic approach to sustainability that includes packaging and equipment efficiency.

Read more on page 34.

DeLaval

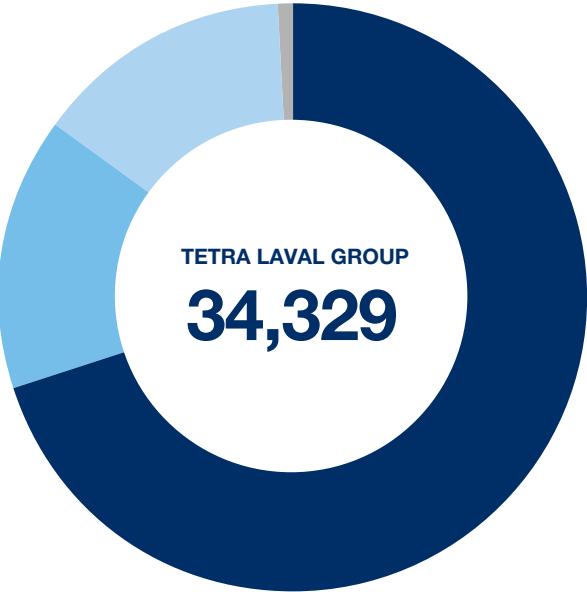
DeLaval's solutions help farmers to develop more sustainable and low-carbon dairy operations. In 2024, the company is partnering with John Deere to launch a digital ecosystem that has huge potential to reduce climate impact in the dairy industry.

Read more on page 44.

¹ UN News - <https://news.un.org/en/story/2021/03/1086822>



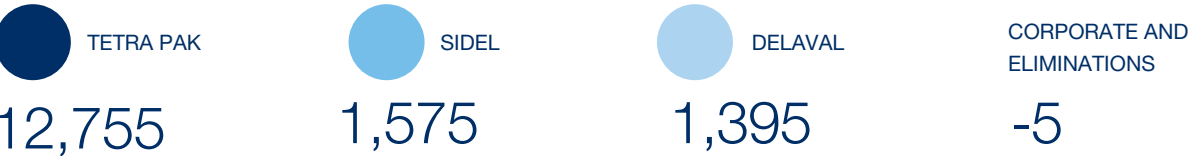
The Tetra Laval Group consists of three industry groups, Tetra Pak, Sidel and DeLaval, all focused on technologies and services for the efficient and sustainable production, processing, packaging and distribution of food. The head of each industry group has operational management responsibility for the respective industry group and reports directly to the Tetra Laval Group Board. The Group Board is responsible for the overall strategy of the Group and for controlling and supervising all of its business operations. The Chairman ensures the implementation of the Group Board decisions and the implementation of strategy and policy for the Group.



NET SALES 2023, MILLION EURO

TETRA LAVAL GROUP

15,720



NUMBER OF EMPLOYEES, DECEMBER 2023





 **Tetra Pak**

Protects What's Good

Tetra Pak is the world's leading food processing and packaging solutions company. Working closely with customers across the globe, we provide a broad range of innovative products, technologies and services, helping to make food safe and available, everywhere.




 **Sidel**

Performance through understanding

Sidel is a leading provider of equipment and services solutions for packaging beverages, food, home and personal care products in PET, can, glass and other materials.



 **DeLaval**

We live milk

DeLaval is a full-service supplier to dairy farmers. The company develops, manufactures and markets equipment and complete systems for milk production and animal husbandry.

Great performance in a difficult year

The Group achieved good revenue growth, excellent profitability and an outstanding cash flow, despite the difficult business environment characterised by persistent inflation, lower consumption and geopolitical instability. Performance was positively impacted by price increases and lower material costs.

Revenue increased by 2.8 per cent in 2023 to €15.7 billion, despite the -1.5 per cent impact from the divestment of Tetra Pak Russia. Growth was reported by every industry group with overall revenue growth by 7.4 per cent at comparable rates and scope. Despite declining consumption due to lower consumer purchasing power, we delivered good growth particularly in the US and Canada, Brazil, Mexico and Iberia.

During 2023 our donation of €10 million of humanitarian aid continued to support Ukraine, while we did our utmost to help Ukrainian customers maintain their operations. We continue to condemn the Russian invasion of Ukraine, we stand with those affected by the violence, and we support calls for an immediate ceasefire and for Ukraine to remain a sovereign and democratic state.

On behalf of the Board, I would like to express our gratitude to our dedicated employees for the outstanding performance and their commitment during yet another challenging year.

Tetra Pak – excellent performance

Revenue rose to €12.8 billion at prevailing rates, and an increase of 7 per cent at comparable rates and scope. Packaging Solutions sales rose by 5 per cent, to deliver 179 billion packs globally, while Processing Solutions and Services grew by 10 per cent and 12 per cent respectively.

Automation and digitalisation are key drivers to further optimise our customers' operations – to help them to take faster and more precise decisions, especially in terms of equipment and performance, facility operation and integration. In China, we delivered equipment, automation and digital solutions to Mengniu's new state-of-the-art mega dairy plant. Here efficiency is taken to

a completely new level, meaning that just 100 employees can produce one million tonnes of dairy products annually. The plant was up and running within two years of the order being placed. We made good progress on our ambition to create the world's most sustainable food package, solely made from responsibly sourced renewable or recycled materials, fully recyclable and carbon neutral. An important milestone was the launch of our aseptic beverage carton featuring a paper-based barrier. This innovative solution expands the amount of paper and lowers the carbon footprint, while continuing to preserve the taste, appearance, and quality of the product inside across the supply chain from production to the consumer. This brings Tetra Pak one step closer to its ambition of a beverage carton made solely from responsibly sourced renewable or recycled materials, fully recyclable and carbon neutral.

To optimise customer operations, we launched the Tetra Pak® E3/Speed Hyper, which uses eBeam technology for packaging material sterilisation. The technology uses up to 30 per cent less energy, 45 per cent less water and 99 per cent less chemicals, while enabling a 10 per cent reduction in customer operation costs and providing the fastest filling machine in the aseptic carton industry.

In 2024, we expect Tetra Pak to increase sales but deliver slightly lower operating profit and cash flow following an outstanding 2023.

DeLaval – Fifth year of record sales

Total net sales increased by 2.8 per cent to €1.4 billion. At comparable rates and scope, revenue increased by 8.6 per cent. Most of the growth derived from price increases and the aftermarket.

Growth in capital equipment sales was driven by Automated Milking Systems. DeLaval's operating margin reached an all-time high thanks to good volume development, price increases and pruning of the product portfolio. For example, DeLaval Cleaning Solutions in the US was divested as there was no customer overlap with DeLaval's customer base.



New products launched during the year included the next-generation milking system DeLaval Rotary E500 that achieves 30 per cent more throughput and the OptiWagon autonomous feed distribution robot that promotes animal welfare by providing more frequent feeding. We also began offering the DeLaval Plus Behaviour Analysis, which is a digital farm management tool that uses sensors and Artificial Intelligence (AI) to help identify sick cows and cows in heat.

With most emissions from the dairy industry occurring at farm level, we can have a significant positive impact through our products and solutions. During 2023, we conducted a double materiality assessment and made a scope 3 downstream emission calculation with the aim to further optimise our customer offering. DeLaval also teamed up with Deere & Company (John Deere) to create a digital eco-system to help dairy farmers improve the efficiency and sustainability of their operations.

The expansion project at our demonstration farm, Hamra Farm in Sweden, progressed to create a state-of-the-art dairy farm with new barns, new automatic milking robots and more digital solutions with sustainability and animal welfare at its heart.

In 2024, we expect declining sales and operating profit due to lower demand caused by declining milk prices for dairy farmers. However, we expect a gradual recovery during the second half of the year.

Sidel – favoured by several trends

Revenue increased by 9.3 per cent to €1.6 billion, with an increase of 8.1 per cent at comparable rates and scope. Since the pandemic, there has been a huge demand among food and beverage producers to invest in packaging equipment and increase their pro-

duction capacity, but the global shortage of components has significantly hampered delivery. Service sales increased by 11 per cent at comparable rates, as our customers maintained and improved their existing production lines.

Sidel is favoured by several trends. Firstly, the macrotrend of sustainability works in Sidel's favour, with collection rates, recyclability and recycled content making PET and the aseptic solution an attractive packaging alternative. Secondly, the technology conversion from hot-fill to aseptic has gained momentum and is likely to continue. Finally, aseptic PET improved its competitiveness versus other packaging alternatives in 2023 thanks to the lower cost of resin and lightweighting. With world-class expertise in the design, blowing, filling and labelling of PET bottles, Sidel is well placed to benefit from these trends.

Indeed, we continue to be a recognised leader in optimised container design where we drive the sustainability performance of our customers' packaging through our expertise and state-of-the-art laboratory in France for recycled PET. The innovative solutions we have developed include a breakthrough PET blower that produces resource-efficient and uniquely designed bottles with patented laser technology.

In 2023, Sidel acquired Makro Labelling Srl, an innovator and leader in modular labelling machines, based in Italy. Makro has enabled us to offer a complete range of labelling technologies to customers, and broadened our reach within the Food, Home and Personal Care, and Wine and Spirits markets.

During the year, we embarked on the implementation phase of Leading Excellence, our three-year transformation programme. The programme will make us a more agile and high-performance

organisation. We also continued to optimise our industrial footprint by moving the manufacturing of two factories in France to existing Sidel factories and divesting the US Novemba cap factories.

In 2024, we expect Sidel to increase its sales, supported by a solid order backlog, and significantly improve its operating margin.

Growth, sustainability and innovation remain in focus for 2024

We forecast good revenue growth, but product volume growth will be more challenging given the decline in global consumer purchasing power. By introducing new innovative products, we will support our customers to give retailers and consumers an outstanding offer – and ultimately drive volume growth.

The theme of this year's report is 'Mitigating climate change in the food and beverage industry'. This is a key focus area for our sustainability agenda at Tetra Laval and all three industry groups play an important role in reducing CO₂ emissions throughout the value chain. The food and beverage carton is the best package to minimise CO₂ emissions. DeLaval enables dairy farmers to enhance their raw milk production and reduce their climate impact. Sidel's leading position providing equipment for the production of PET bottles from recycled material is another example of our commitment.

During 2024, we forecast revenue growth, slightly lower profitability due to inflation and good cash flow.

Lars Renström

“All three industry groups play an important role in reducing CO₂ emissions throughout the value chain. The food and beverage carton is the best package to minimise CO₂ emissions. DeLaval enables dairy farmers to enhance their raw milk production and reduce their climate impact. Sidel's leading position providing equipment for the production of PET bottles from recycled material is another example of our commitment.”

A supervisory board to all Tetra Laval units

The Tetra Laval Group has operations and representatives in more than 160 countries. It is a decentralised organisation but with clear rules and guidelines. The framework for Corporate Governance establishes the Board's requirements and expectations for the industry groups, and communicates governance guidelines throughout the organisation.

The Tetra Laval Group Board has five primary areas of responsibility:

- Development and definition of overall strategies and policies.
- The appointment and succession planning of senior management.
- Corporate governance.
- Financial and operational control. An Audit Committee and a Remuneration Committee support the Board in these functions.
- The Board defines financial targets for the Group's different operations and for total resource allocation within the industry groups.

The Tetra Laval Group Board schedules four regular meetings each year and when circumstances require, additional meetings are held.



Lars Renström



Niels Björn Christiansen



Paul Conway



Nigel Higgins



Ola Källenius



Dr. Mohsen M. Sohi



Finn Rausing



Jörn Rausing

Lars Renström

Chairman of the Board since 10 June 2016.

Lars Renström joined the Board as non-executive director in 2013. Lars Renström was President and CEO of the Alfa Laval Group 2004 – 2016. He has previously held positions as President and CEO of Seco Tools, President and head of Atlas Copco's Rock Drilling Tools division and head of Ericsson's Telecom Cables Division.

Niels Björn Christiansen

A non-executive director since June 2021.

Niels B. Christiansen is Chief Executive Officer of the LEGO Group. He joined the company in October 2017.

As CEO, Niels B. Christiansen manages the executive leadership team in the Group's mission to bring LEGO® play to children all over the world. During his tenure, the company has expanded retail stores across the world, launched the first sustainably sourced LEGO elements, created innovative play experiences combining the physical brick and digital experiences, and maintained its ranking as a highly reputable and loved brand globally.

Niels B. Christiansen is Chairman of the Board of Demant A/S.

He holds a Master of Science degree in Engineering from the Technical University of Denmark (DTU) and holds an MBA from INSEAD in France. His international experience from the management of major, global, industrial hi-tech corporations is comprehensive. He has extensive board experience from listed companies as well as comprehensive insight into industrial policy.

Paul Conway

A non-executive director since 2014.

Paul Conway OBE. Former Vice Chairman of Cargill Inc and Chairman of Carval Investors Ltd.

Vice Chairman of the US-China Business Council and board member of the US-India business council. In his 36 year Cargill career, Paul Conway worked mainly in Food & Agriculture supply chain businesses in East & West Europe, Asia and the USA. He had Executive supervision of Asia-Pacific as well as Strategy & Capital allocation and approval. Paul Conway has been a frequent external speaker on Food Security & Sustainability issues worldwide.

Nigel Higgins

A non-executive director since August 2016.

Nigel Higgins is Group Chairman of Barclays plc. Prior to Barclays Nigel had a 36-year career at Rothschild & Co, with a decade as Chief Executive. He worked at Rothschild upon graduating from Oxford University in 1982. He is Chairman of Sadler's Wells, the world's No. 1 venue dedicated to international dance and a Director of Garsington Opera. He is a member of, and former co-head of the UK group of, the Trilateral Commission.

Ola Källenius

A non-executive director since June 2016.

Ola Källenius is Chairman of the Board of Management of Mercedes-Benz Group AG and Mercedes-Benz AG. He has been a Member of the Board of Management of Daimler AG – now Mercedes-Benz Group AG – since 1 January 2015. Before he became Chairman of the Board of Management on 22 May 2019, he was leading Group Research & Mercedes-Benz Cars Development and until 1 January 2017 Marketing & Sales. Before his assignment in Marketing & Sales, he was the CEO of the performance and sports car division Mercedes-AMG GmbH for three years after having led Mercedes-Benz U.S. International, Inc. and the Mercedes-Benz production plant in Alabama in 2009. From 2005 – 2009, Ola Källenius was the Managing Director of Mercedes-Benz High Performance Engines Ltd. in Brixworth, UK - the company's Formula 1 powertrain operation. He assumed this position after his role as Executive Director of Operations for McLaren Automotive Ltd. and after holding several Management positions within the Procurement and Controlling organisation of Mercedes-Benz Cars.

Dr. Mohsen M. Sohi

A non-executive director since June 2021.

Dr. Mohsen M. Sohi is the Chief Executive Officer of Freudenberg SE, Weinheim, Germany, since 2012. From July 2010 to June 2012, Dr. Sohi served as Managing Partner of Freudenberg & Co. From March 2003 through June 2010, he served as President and Chief Executive Officer of Freudenberg-NOK in Plymouth, USA. From January 2001 to March 2003, Dr. Sohi was with NCR Corporation, a leading global technology company and managed its global Store Automation business. Prior to NCR, Dr. Sohi was with Honeywell International Inc. and its pre-merger constituent, Allied Signal, Inc. for 14 years, serving in positions of increasing responsibility in the aerospace, automotive, commercial vehicle, and engineered materials segments. His last position with Honeywell was President of Honeywell Electronic Materials. Dr. Sohi previously served as a director of Aviat Networks, Inc. (formerly known as Harris Stratex Networks, Inc.) from 2007 until January 2015 and Hayes Lemmerz International from 2004 until 2009. He is Chairman of the Board of Directors of STERIS since 2018, member of the Supervisory Board of Baker Hughes and Chairman of Freudenberg Foundation.

Finn Rausing

A non-executive director of the Tetra Pak Group Board from 1985 to 1989 and of the Tetra Laval Group Board from 1995.

Finn Rausing, who is the chairman of the Audit Committee of the Tetra Laval Group Board, is also a board member of Alfa Laval AB, DeLaval Holding AB and Excillum AB. Mr. Rausing is also chairman of the Stockholm Institute of Transition Economics (SITE).

Jörn Rausing

A non-executive director of the Tetra Laval Group Board since 1991.

He was an alternate director of the Tetra Pak Group Board 1985 – 1991. Jörn Rausing is also a board member of Alfa Laval AB, DeLaval Holding AB, Ocado PLC and a trustee of the Institute of Advanced Studies, NJ. He is the Tetra Laval Group's head of Mergers and Acquisitions. He is also the chairman of the Remuneration Committee of the Tetra Laval Group Board.

Protects What's Good

Tetra Pak is a world leading food processing and packaging solutions company. Working with our customers and suppliers, we provide access to safe, nutritious food for millions of people in more than 160 countries every day.

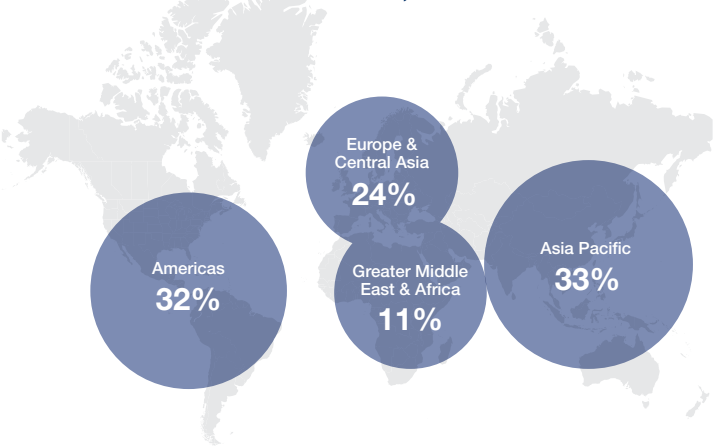
Our purpose

As a global company with over 24,000 employees working with local customers worldwide, our purpose is fundamental to driving our business decisions and is the reason we come to work every day. Our purpose is: We commit to making food safe and available, everywhere, and we promise to protect what's good: food, people and the planet.

Our strategy

Strategy 2030 is how we continue to fulfil our purpose, by creating value for customers, for employees and for others in society. Helping us face the immense, interconnected challenges of feeding a growing population while protecting our natural resources and combating climate change. Our strategy is to deliver food safety and the best quality, lead the sustainability transformation, integrate and optimise customer operations, and innovate for customer growth, while becoming a more dynamic, productive and capable Tetra Pak.

TETRA PAK NET SALES BY GEOGRAPHY, 2023



Our customers

We create value for customers with complete solutions for a wide variety of food and beverage categories, including cheese; dairy; ice cream; juices, nectars and still drinks; new food; plant-based products; powder; and other food and beverages.

Tetra Pak is uniquely equipped to provide solutions that meet our customers' entire needs. We provide solutions for processing, packaging and distributing a wide range of food and beverage products. We are experts in minimising raw material and energy consumption during manufacturing and distribution – to maximise operational and environmental performance.

Our solutions

Tetra Pak's portfolio is broad, and includes:

- Carton packaging
- Processing equipment
- Packaging equipment
- Distribution equipment
- Automation and digital solutions
- Services
- Complete integrated solutions

TETRA PAK PACKAGING MATERIAL NET SALES PER CATEGORY, 2023

Liquid Dairy Products 58.3%	Plant-based products 8.2%
Juice & Nectar 19.7%	Food 4.7%
Other beverages 5.4%	Others 3.7%

NET SALES 2023

€12.755

BILLION

SALES IN

>160

COUNTRIES

NUMBER OF EMPLOYEES DEC 2023

24,391

CUSTOMER INNOVATION CENTRES

7

TECHNICAL TRAINING CENTRES

8

R&D CENTRES

6

PRODUCTION PLANTS

51¹

¹ Production plants: 29 packaging material converting factories; four closures (caps) factories (standalone), three additional material strips and films facilities, two additional material straws factories (standalone), and 13 processing solutions and packaging equipment production facilities.

Market

The food and beverage industry is continuously evolving to meet the ever-changing preferences and needs of consumers. Understanding consumer behaviour is essential for remaining competitive in a highly challenging market.



LIQUID DAIRY PRODUCTS

White milk is expected to annually grow by 2.2 per cent around the world until 2027, with Central and East Asia accounting for half of the global demand. Global demand for flavoured milk will grow by 1.7 per cent annually by 2027, even though volumes are small compared to white milk.



CULINARY CATEGORIES

The culinary categories landscape is rapidly diversifying with pressures on brand owners to innovate to meet the demand for convenient food options and address affordability. Annual growth is expected of 1.6 per cent until 2025.



PLANT-BASED PRODUCTS

The growing demand for plant-based and alternative protein sources, driven by the consumption of rice, nuts, grains and seed-based beverages, will continue with an annual growth forecast of 1.5 per cent until 2027.



JUICES AND NECTARS

Reducing sugar content remains the main priority in the category although there is also a shift towards functional juices and new consumption occasions. The category slightly contracted in 2023.



SPECIALIZED NUTRITION

High protein and active nutrition provide opportunities to drive category growth and make it more mainstream. Baby and toddler drinks are expected to grow annually by 2.6 per cent until 2027.



READY-TO-DRINK TEA AND COFFEE

Increasing on-the-go consumption and the innovation of trendy tea and coffee shops are driving the category, along with eco-friendly and indulgence product innovation. Coffee is driving the category with a 2.1 per cent annual growth forecast until 2027.



ICE CREAM

Ice cream consumption is estimated to annually grow by 1.7 per cent until 2027. Despite concerns over high-sugar intake, flavour remains the driving force for category development.

Technology

Unleashing the power of new food

Imagine if organisms and cells invisible to the naked eye could help solve some of humanity's biggest challenges. Tetra Pak is at the forefront of developing processing solutions and equipment to produce new food in a more sustainable and efficient manner.

Tetra Pak is already a pioneer in precision fermentation, a technology where microorganisms can be programmed to produce specific fats or proteins. The company is also innovating with biomass fermentation, which involves cultivating protein-rich microorganisms, such as fungi, to be used as the basis for food products. The next step is to scale up production to harvest larger volumes while reducing production costs to make food more affordable

for consumers. Collaboration with public, private and academic partners is essential to overcome challenges and bring complete, end-to-end solutions to market.

"New food is about producing essential ingredients, such as proteins and fats, in a more sustainable and efficient manner – to address the need for increased food supply while reducing environmental and climate impact," said Ida Svensson, Transformation Manager New Food at Tetra Pak. "In the future, we expect that alternative proteins will be produced at scale by cultivating meat in industrial plants and extracting protein from cultured insects. Welcome to the exciting world of new food!"



High-performing and innovative packaging solutions

Sidel provides end-to-end packaging solutions that meet the needs of customers and consumers around the world, by delivering products, services and designs that boost performance, sustainability and flexibility – now and into the future.

Sidel is a leading global provider of packaging solutions for beverage, food, home and personal care products in PET, can, glass and other materials. Leveraging over 170 years of proven experience, we help shape the future of the packaging industry through advanced systems and services, line engineering, eco-solutions and other innovations.

Sidel has over 40,000 machines installed in around 190 countries, and more than 5,000 employees worldwide who are passionate about providing equipment and service solutions that fulfil its customers’ needs. As a long-term partner, we apply strong technical knowledge, packaging expertise and smart data analytics and automation to optimise performance.

Our strategy

Our customer-driven strategy has a comprehensive and innovative portfolio and high-performance orientation. Our aim is to always deliver the value our customers need to achieve their goals by first understanding each challenge they face in their production. We are known in the industry as a knowledgeable partner – addressing market needs and individual customer goals with our innovation capabilities and longstanding expertise.

Sidel’s ‘Performance through Understanding’ mindset draws on this understanding. We offer complete and innovative customised packaging solutions that are easy to service, focus on digitalisation and sustainability, and optimise our

customers’ Total Cost of Ownership. Our packaging is designed to minimise environmental impact and our solutions help reduce water, energy and material use. Our approach to reducing costs and increasing competitiveness never compromises food safety and security to give our customers and consumers peace of mind.

Our solutions

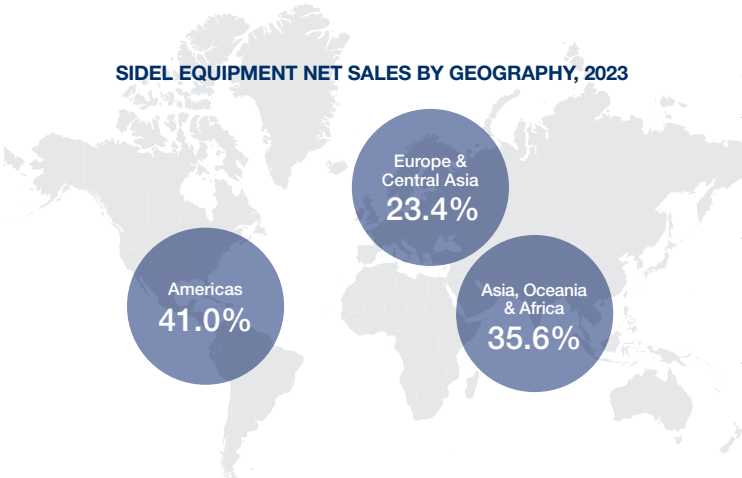
Sidel serves brand owners, manufacturers, co-packers, and other customers in the beverage, food, home and personal care industries. We are a leading provider of blowing, filling, labelling, material-handling, end-of-line, engineering and packaging design solutions for multiple applications.

We offer processing equipment supplied by Tetra Pak. We also deliver value-added services for both Sidel and non-Sidel equipment, with the latter served by Competek, part of Sidel Group. Other parts of the Sidel Group, Gentlebrand and Makro Labelling, provide branding and design services, and modular labelling machines respectively.

Our customers

We support both non-alcoholic beverage producers (water, carbonated soft drinks, liquid dairy and non-dairy products, juices, nectars, isotonic, soft drinks and teas) and alcoholic beverage producers (beer, wine and spirits), as well as food (edible oils, sauces and dressings, coffee, pet food and more) and home and personal care producers across diverse categories around the globe.

SIDEL EQUIPMENT NET SALES BY GEOGRAPHY, 2023



SIDEL EQUIPMENT NET SALES BY MARKET SEGMENT, 2023

Water 23.1%	Juices, Nectars, Soft Drinks, Isotonics & Teas 25.3%	Wine & Spirits 2.1%
Carbonated Soft Drinks 15.1%	Liquid Dairy and Plant-Based Products 12.0%	Food 10.7%
Beer 8.5%	Home and Personal Care 2.4%	Others 0.8%

NET SALES 2023

€1.575

BILLION

SALES IN

>90

COUNTRIES

NUMBER OF EMPLOYEES DEC 2023

5,059

TECHNICAL TRAINING CENTRES

15

R&D CENTRES

12

PRODUCTION PLANTS

14

Market

In 2023, the beverages, food, home and personal care industries continued to innovate with a focus on sustainability, health and variety. Combined, these market segments sold 4,063 billion units of consumer-packaged goods during the year. Global data analysts forecast that approximately 388 billion additional units will be sold by 2027.



WATER

Water is expected to account for the greatest proportion of consumption growth in the coming years due to the shortage of potable tap water in several regions along with the continued consumer health consciousness. The market is expected to grow 3.7 per cent CAGR to amount to 475 billion units in 2027.



LIQUID DAIRY PRODUCTS (LDP)

The LDP and plant-based alternatives market is dynamic, driven by population and spending growth. Significant growth is expected in drinking yogurt in China, as well as milk in India. The market is expected to grow from 446 billion units in 2023 to 492 billion units in 2027.



BEER, WINE AND SPIRITS

The trends of health and eco-responsibility are driving innovation in the industry through premiumisation, with more low/no-alcohol products. 'Refillable' glass options are seeing increased demand due to their sustainability advantages. The market is expected to grow by 2.1 per cent CAGR until 2027.



CARBONATED SOFT DRINKS

Despite concerns over high sugar and caffeine content, the industry is expected to experience volume growth in Africa, Asia and Eastern Europe. In 2023, 301 billion units were sold with the market expected to amount to 329 billion units in 2027.



JUICE, NECTAR, SOFT DRINKS, ISOTONIC AND TEA

In response to heightened consumer health concerns, the consumption of juices is expected to grow, along with energy drinks particularly in Asia. The market is expected to grow from 391 billion units in 2023 to 452 billion units in 2027.



FOOD, HOME AND PERSONAL CARE

The increasing adoption of PET, including recycled PET, is driven by its transparency, branding opportunities, cost efficiency and 'green potential'. The market is expected to grow from 2,039 billion units in 2023 to 2,188 billion units in 2027.

Technology

Sidel expands labelling technology offering

Sidel acquired Makro Labelling in 2023 to expand its offering in state-of-the-art labelling technologies. Makro's modular labelling machines can label up to five items per bottle with high precision in cold glue, hot glue, self-adhesive and combination versions. The technologies enhance Sidel's offering of advanced labelling solutions and broaden the company's reach into dynamic markets such as wine, spirits, food, home and personal care.

"The low and medium-speed modular labelling machines made by Makro complement our leading higher-speed technologies

that are manufactured at our factory in Mantova, Italy and integrated into Sidel's packaging lines," said Monica Gimre, President & CEO at Sidel.

Makro maintains its full autonomy as a unit of the Sidel Group and continues to operate independently.

Makro Labelling has grown rapidly since it was founded in 2009, with more than 140 people currently working at its facility in Goito, northern Italy.



We live milk

DeLaval is a market leader and trusted partner for thousands of farmers around the globe – providing integrated milking solutions that are designed to improve dairy production, as well as animal welfare and overall quality of life.

Strategy

In 2023, we sharpened our focus to future-proof both DeLaval and our customers. Automation, digital services, animal welfare and sustainability are all key topics where we can have the greatest impact on farmers across the globe. We pride ourselves on our ability to provide dairy farmers around the world with innovative solutions to contribute to a successful dairy farming business.



Products and solutions

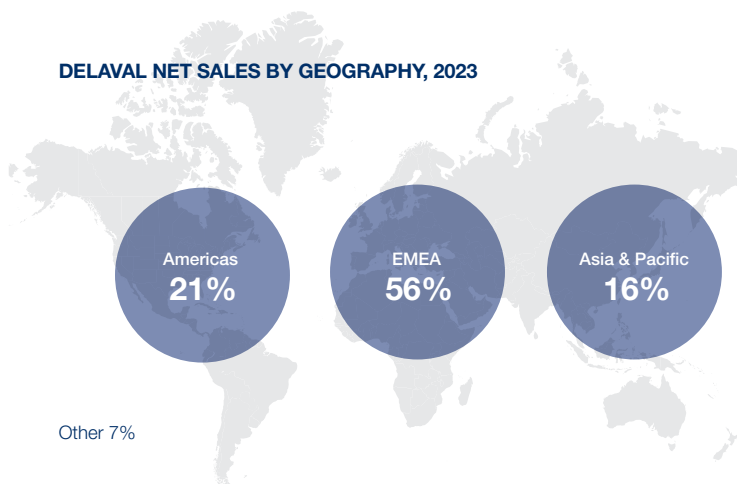
As a company built on innovation, we constantly work to find ways of helping our dairy farmer customers do more with less by providing world-leading milking equipment and solutions. DeLaval offers highly efficient system solutions for milking and other on-farm activities.

DeLaval customers can benefit from advisory and digital services to improve their performance. They can also choose from all-inclusive service plans and consumables including liners and tubes, farm supplies and original parts to ensure milk quality and animal health. By providing better conditions for animals, farmers can improve animal health and longevity while at the same time maintain or improve farm profitability. A healthy animal provides more milk, at a better quality and for longer.





Our customers

We are active across the globe in over 100 markets and modern dairy farmers are increasingly drawing on automated solutions to drive efficiency. Every time we help a farmer find a way to produce more milk from the same herd, we make food production more sustainable. This might involve increasing farm automation, promoting healthier cows to increase their milking lifetime, or introducing an updated working method, a new parlour, better hygiene or more data to make better decisions.

DELAVAL NET SALES BY GEOGRAPHY, 2023



DELAVAL NET SALES BY PRODUCT SECTOR, 2023

Service and original parts 21% 	Milking 41% 
Farm supplies 8% 	Hygiene 30% 

NET SALES 2023

€1.395

BILLION

SALES IN

>100

COUNTRIES

NUMBER OF EMPLOYEES DEC 2023

4,778

TECHNICAL TRAINING CENTRES

13

R&D CENTRES

7

PRODUCTION PLANTS

13

DISTRIBUTION CENTRES

6

Market

The dairy industry is shaped by global trends, which create both opportunities and challenges for DeLaval's market. The current major trends include:



MACRO ECONOMICS

Slowing economic growth, geopolitical instability, increased cost of living, rising inflation and interest rates are all challenges for DeLaval and the wider dairy industry. Dairy farmers are under pressure from higher farm production costs and lower milk prices.



FARM CONSOLIDATION

The continued global shift towards large-scale operations is mitigating escalating costs and increasing efficiency. There is a growing demand for solutions that promote automation, digitalisation and sustainability in the dairy industry.



DIGITALISATION

Digitalisation is changing the competitive landscape and creating new business opportunities. Digital solutions are enabling dairy farmers to improve nutritional security, animal health and increase productivity by providing valuable insights that enable informed decisions.



DEMAND FOR DAIRY WILL OUTSTRIP SUPPLY

The long-term demand for milk is expected to outpace supply with cheese consumption being the major growth driver of dairy demand. Future growth in milk production will come mainly from increased cow yield rather than herd growth.



SUSTAINABILITY

Consumer expectations on sustainability are increasingly reflected in agricultural policies, subsidies and incentives from dairy processing companies. Dairy farmers must embrace sustainability to maintain their licence to operate and future-proof their business.



LABOUR COSTS AND SHORTAGES

Rising labour costs and skilled labour shortages are driving investments in automation. Investments in automation are often a prerequisite for new generations on family-owned farms.

Technology

Enabling better dairy farm decision making

DeLaval Plus Behaviour Analysis, which provides actionable intelligence for better, faster and more accurate decisions, began its roll-out in 2023.

The farm management tool tracks cow location and uses artificial intelligence (AI) and sensors to analyse individual animal behaviour and help identify cows that are sick or in heat. Real-time information helps farmers to manage their to-do lists more efficiently and effectively.

"By responding to a cow quickly and with the right action, producers can drive the performance of their farm by increasing cow productivity and welfare," said Joaquín Azocar, Solution Manager, DeLaval Farm Management Systems. "DeLaval Plus Behaviour Analysis ensures total visibility and oversight of their cows."

The system uses DeLaval BioSensor ear tags, which automatically communicate with nodes installed throughout the barn. The data is shared with the DeLaval DeepBlue AI model, which analyses the information using sophisticated cow behaviour models. The system returns this information to farmers in the form of actionable intelligence so they can make better, faster and more accurate decisions.



World trends

TETRA PAK

The climate imperative

The effects of climate change are increasingly being felt by billions of people around the world through more regular and intense storms, heat waves, wildfires and floods. At the same time, international organisations are making even bleaker climate predictions with grave implications for the coming decades.

With 79 per cent of consumers believing that we must change our habits, they look to brands to provide more sustainable options and transparent information to base their purchasing decisions on. Climate concerns are clearly shaping consumer behaviour – from all-out 'climatarianism' to making incremental but meaningful changes to their dietary choices.

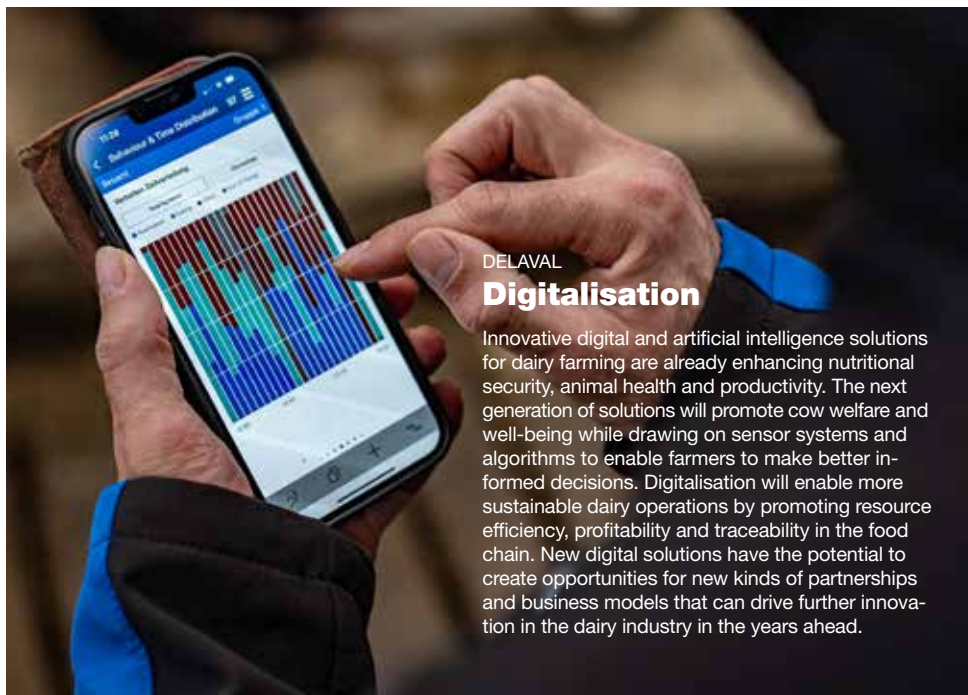


TETRA PAK

Our blended lives

Consumer eating and shopping habits have transformed since the pandemic as more people work from home. The fact that 65 per cent of consumers say they now shop more online because of working from home places new demands on products that are home delivered. At the same time, technological development offers new opportunities to create convenient hybrid physical-digital spaces with more joyful, sensory experiences – which are much appreciated in uncertain times. With many consumers already expecting restaurants to incorporate new technologies, and social media platforms shaping what food discovery looks like, brands will come under increasing pressure to innovate and adapt to our blended lives.





DELAVAL **Digitalisation**

Innovative digital and artificial intelligence solutions for dairy farming are already enhancing nutritional security, animal health and productivity. The next generation of solutions will promote cow welfare and well-being while drawing on sensor systems and algorithms to enable farmers to make better informed decisions. Digitalisation will enable more sustainable dairy operations by promoting resource efficiency, profitability and traceability in the food chain. New digital solutions have the potential to create opportunities for new kinds of partnerships and business models that can drive further innovation in the dairy industry in the years ahead.

DELAVAL

Farm automation

The automation of farm processes is an ongoing trend around the world. Greater automation is being driven by shortages in skilled labour and rising labour costs, such as through increasing minimum wages. At the same time, many family-owned farms experience difficulties with generational shifts. In response to these challenges, dairy farmers are increasingly investing in automated milking, feeding and other farm processes, such as manure handling. The investment in automation or semi-automation is also often a prerequisite for new generations taking over family-owned farms.



SIDEL

Smart sustainable packaging

With raw materials accounting for between 70 and 80 per cent of a bottle's cost, optimising the amount of materials used can realise significant savings, promote resource efficiency and reduce climate impact. Optimising packaging involves using less materials and reducing weight while ensuring the final bottle is still strong and reflects the customers' brand values. For bottles made from recycled PET, it is increasingly important to ensure best-in-class weight and quality, and that returnable PET bottles have a high level of resistance to withstand numerous washing cycles. At the same time, local regulations on tethered caps are being enforced in Europe, which means that sustainability must be designed in early to stay ahead of the latest requirements.

SIDEL

Next-generation digital technologies to unlock packaging line potential

Advanced digital solutions are increasingly important in a world where agility is essential to overcome challenges by making faster and smarter decisions. Such solutions are essential to help customers achieve the highest possible levels of production performance without compromising operational costs, product quality or environmental impact. Cutting-edge technology is being driven by innovations in Internet of Things (IOT) and generative artificial intelligence. In terms of line performance, advanced digital solutions can drive efficiency by aggregating and analysing equipment data 24/7 and offering real-time information and alerts – to help customers achieve the best possible production and performance.



Theme: Mitigating climate change in the food and beverage industry



Dan Esty gives an independent view on how the food industry impacts climate change and how it can contribute to a low-carbon future.

Dan Esty is an American environmental lawyer and policymaker who is currently the Hillhouse professor at Yale University. He has worked with climate change as a government official, policymaker, academic, and corporate advisor since the 1980s. Esty is the chair of Tetra Pak's sustainability advisory panel, which includes five independent external advisors with a range of perspectives and areas of expertise.

Why does the food and beverage industry need to act on climate change?

As a major source of global greenhouse gas emissions, there is significant interest in ramping up climate change action in the food and beverage industry. The focus on new technologies, strategies, and policies that will help move the industry toward net-zero emissions by 2050 was a key theme of the COP28 UN Climate Change Conference in Dubai last year. Tetra Pak launched an integrated approach to drive the transition to more secure, sustainable, and resilient food systems at the conference.

How will a changing climate affect the industry?

The systems that provide us all with the food and beverages we need are both a cause of climate change and have the potential to be a significant arena for climate mitigation and adaptation. More extreme weather events can wipe out entire harvests and changes in seasonal rainfall and temperature mean that areas may become too hot/cold or dry/wet for traditionally well-suited crops. Sea level rise and saltwater intrusion may also make some agricultural land

unproductive or even unusable. This means that a degree of climate change uncertainty hangs over the food sector that threatens food security for billions of people around the world. We urgently need to both mitigate the industry's climate change impacts and adapt how we produce, package and transport food in a changing climate.

How does packaging impact climate change?

Packaging is both a critical opportunity and a challenge for the food and beverage industry. It is one of the most important ways to not just ensure food safety but also extend shelf life and reduce food waste, which is responsible for around 8 per cent of all global greenhouse gas emissions.¹ On the other hand, packaging materials and processes have direct climate impacts, and packaging waste has emerged as a concern in countries with inadequate recycling infrastructure due to the need to incinerate packaging waste or deposit it in landfills.

How can we reduce the climate footprint of packaging in the food and beverage industry?

The industry has significant opportunities to reduce greenhouse gas emissions by incorporating more low-carbon packaging materials and efficient processes. Creating more recyclable packaging and improving collection and recycling systems for used packages are essential to reduce waste and greenhouse gas emissions while making better use of resources.

“We urgently need to both mitigate the industry's climate change impacts and adapt how we produce, package and transport food in a changing climate.”

¹ WWF, *Fight climate change by preventing food waste* - <https://www.worldwildlife.org/stories/fight-climate-change-by-preventing-food-waste>

How do you see the future of food production and climate change?

The food and beverage industry stands at a watershed moment in terms of climate change. Food and beverage companies are acutely aware of the physical risks of climate change, as well as the potential changes in expectation and regulatory requirements for the industry. The necessary shift to new production practices and processing methods as well as new delivery and packaging systems create huge potential opportunities for companies such as Tetra Laval.

What is Tetra Laval's role in mitigating climate change?

Tetra Laval and its industry groups have significant opportunities to help the food and beverage industry towards a net-zero emissions future. The company has a long tradition of innovation and technological breakthroughs that will almost certainly be part of climate mitigation efforts in the industry. Tetra Laval's leading position also allows it to rally collaboration on climate mitigation initiatives in the industry.

What was the integrated approach Tetra Pak launched at COP28?

The approach was a significant breakthrough in terms of Tetra Pak's climate leadership that identified four key pathways to accelerate the transition to more secure, sustainable, and resilient food systems. The pathways are: (1) enabling the transition towards more sustainable dairy, (2) innovating for new food sources such as alternative proteins, (3) reducing food loss and waste, and (4) scaling access to safe nutrition through sustainable food packaging.



More sustainable food packaging materials can help scale access to safe nutrition.

The approach is supported by the publication of five new white papers that were produced by Tetra Pak in collaboration with EY Parthenon. The white papers detail what needs to be done to drive the development of a more sustainable food system and the specific requirements for each of the pathways.

How can Tetra Laval help drive change throughout the value chain?

As a front-runner in the industry with strong upstream and downstream relationships, Tetra Laval has a key role to play in creating a low-carbon value chain – particularly with its involvement in the dairy industry. But the role Tetra Laval's industry groups play goes beyond their own value chains by contributing towards the creation of integrated strategies that bring together cross-related industries, companies and sectors. Such strategies are essential to deliver more successful and sweeping change that is required in society.

Tell us more about the change that is required.

What has emerged in recent years is the need for transformative change in a number of climate change intensive sectors – one of which is the food and beverage industry. In this regard there are many companies ready to move towards fundamentally changed business models that address the climate change commitments that have been made by countries all over the world. The need for corporate climate leadership represents a significant opportunity for Tetra Laval as its industry groups are well-positioned to lead the process of change in the food and beverage industry and beyond.



Innovating for new food sources such as alternative proteins is key to creating more sustainable food systems.



“The need for corporate climate leadership represents a significant opportunity for Tetra Laval as its industry groups are well-positioned to lead the process of change in the food and beverage industry and beyond.”



Dan Esty was a speaker on climate solutions at the World Economic Forum Annual Meeting in Davos in January 2024.



Strong performance in an evolving landscape

The landscape for our industry continued to evolve in 2023. Sustained higher inflation, lower consumption, a more cost-focused value chain, increasing regulation especially with regards sustainability, localisation and market fragmentation are combining to create a new operating environment for food and beverage manufacturers. In such a fluctuating environment, value becomes more important than ever – for our customers, for consumers and for Tetra Pak. Within this landscape we achieved net sales growth of 5.4 per cent in 2023, with good growth seen for all our three businesses supporting a strong profitability and cash flow performance.

We increased our total net sales to €12.8 billion,¹ delivering 179 billion packs globally, which is equivalent to 71 billion litres of food and beverages. Our three businesses – Packaging Solutions, Processing Solutions and Services – grew by 4.5 per cent, 9.7 per cent and 11.8 per cent, respectively. I would like to take this opportunity to thank our customers for their continued trust in us, and all our employees for their continued commitment, expertise and performance in 2023. Because creating value is how we fulfil our purpose – We commit to making food safe and available, everywhere, and we promise to protect what's good: food, people and the planet.

Creating value for our planet

This includes creating value for our planet. The theme of this year's report is mitigating climate change. This is a key focus area for our sustainability agenda at Tetra Pak, along with circularity, nature, social sustainability and food systems. Because fulfilling our purpose requires us to take an interconnected approach to

sustainability. A very important milestone was achieved in this regard in 2023 with the launch of our aseptic beverage carton featuring a paper-based barrier. Made of approximately 80 per cent paperboard, the package increases the renewable content to 90 per cent, reduces its carbon footprint by one third (33 per cent)² and has been certified as Carbon Neutral by the Carbon Trust™.³ This brings us one step closer to our ambition of a beverage carton made solely from responsibly sourced renewable or recycled materials, fully recyclable and carbon neutral.

We have also recently been recognised for leadership in corporate transparency and performance on climate change, forests and, for the first time, water security, by global environmental non-profit CDP, securing a place on its annual 'A List'. Based on data reported through CDP's 2023 Forests questionnaire, Tetra Pak is one of a handful (2 per cent) of players that achieved an 'A' score out of over 21,000 companies assessed.⁴ We also reported on climate change and water security, recording an 'A-' score on both, cementing our inclusion in the CDP leadership band again.

Protecting the planet by creating value across our sustainability agenda will remain a priority for us at Tetra Pak, and we know it is a priority for our customers and society also. We look forward to releasing our latest Sustainability Report later in 2024.

Delivering with our strategy

Lead the sustainability transformation is one of our four strategic pillars of course, along with deliver food safety and the best quality, integrate and optimise customer operations, and innovate for customer growth. We achieved in all these areas in 2023. For example, we launched the Tetra Pak® E3/Speed Hyper, which



uses eBeam technology for packaging material sterilisation. This lowers environmental impacts with less power (up to 30 per cent), water (up to 45 per cent) and chemicals (99 per cent), while enabling a 10 per cent reduction in customer operational cost.⁵ And it's the fastest filling machine in the aseptic carton industry, producing up to 40,000 portion packages per hour.

We also announced a new collaboration with AB Biotek Human Nutrition & Health to introduce a range of innovative postbiotic food solutions, launched a new research hub with Lund University in Sweden called Biotech Heights that will explore food and materials production using bioprocessing, and introduced new services and processing innovations such as our Tetra Pak Direct UHT unit. Our customers also continued to take advantage of our automation and digital solutions, helping them to increase packaging efficiency, reduce energy consumption and decrease the total cost of production.

Helping our teams to be more dynamic, productive and capable

The foundation of our strategy is focused on how we work, and becoming more dynamic, productive and capable. Over 15,800 colleagues learnt new skills and capabilities at our internal 2023 Learning Conference, which was just one example of how we help all our employees on this journey. We do this because we know that investing in our people, giving them the best possible workplace to create and deliver value for customers, is critical to our success.

Navigating the new landscape in 2024

This year will remain an evolving and challenging landscape. Inflation will continue to dampen consumption and increase costs, especially those related to labour. In response we will look to maximise sales opportunities where possible, while being disciplined with our cost control and selective about where we place our resources.

Accelerated regionalisation and supply chain constraints could also offer continued challenges, but as a global company with a local presence we are positioned well to succeed in regional markets. We can also take confidence from the value we created in 2023. In summary, we will continue to navigate our industry's new landscape cautiously but confidently – both with, and for, our customers.

Adolfo Orive



“We will continue to navigate our industry’s new landscape cautiously but confidently – both with, and for, our customers.”

¹ Amounts at prevailing rates, growth at comparable 2023 rates.

² Certified by the Carbon Trust™ - benchmark: Tetra Brik® Aseptic 200 Slim Leaf carton package with aluminium foil layer.

³ 'Carbon neutral' means that, after reducing the CO₂ emissions by converting the package's fossil-based polymers into plant-based polymers to the highest possible extent, the residual CO₂ emissions associated with the packaging manufacture are offset by funding Gold Standard-certified climate projects around the world.

⁴ The full methodology and criteria for the 'A List' is available on CDP's website at: <https://www.cdp.net/en/companies/companies-scores>.

⁵ Compared to the Tetra Pak® A3/Speed.

“Protecting the planet by creating value across our sustainability agenda will remain a priority for us at Tetra Pak, and we know it is a priority for our customers and society also.”



Adolfo Orive
President & CEO



Tatiana Liceti
Executive Vice President
Market Operations



Ola Elmqvist
Executive Vice President
Packaging Solutions



Charles Brand
Executive Vice President
Processing Solutions & Equipment



Roberto Franchitti
Executive Vice President
Services



Laurence Mott
Executive Vice President
Development & Technology



Bruce Burrows
Executive Vice President
Finance & Supplier Management



Lars Holmquist
Executive Vice President
Sustainability & Communications



Phil Read
Executive Vice President
Human Resources & Transformation



Sébastien Thierry
Executive Vice President
Legal Affairs & General Counsel

Tetra Pak strives towards net-zero climate impact in the value chain

As a globally recognised climate leader in the food and beverage industry, Tetra Pak has a long history of working to reduce the climate impact of its business throughout the value chain.

The company annually updates its greenhouse gas inventory, which is externally audited and verified, to measure the impact of its operations, sourcing and products. This inventory is the company's basis for its work to achieve a net-zero greenhouse gas impact across its operations by 2030 and throughout the entire value chain by 2050.

Minimising emissions from operations

"Our operations only account for one per cent of our emissions because of the significant investments we have made in recent years," explained Gilles Tisserand, Vice President, Climate & Biodiversity. "Back in 2010, our operations represented 8 per cent of our emissions, but today 99 per cent of our value chain emissions occur beyond the walls of Tetra Pak."

Heavy investments have been made in phasing out fossil fuels and switching to renewable energy. Focus areas going forward include energy efficiency, installing solar photovoltaic panels and electrifying the company's fleet.

Focus on helping customers reduce their emissions

With 55 per cent of Tetra Pak emissions resulting from the customer use of its equipment – mostly energy-intensive food processing equipment – product efficiency is where the company can have the greatest climate benefit.

"The more we improve our portfolio, the more appealing we are to our customers – so it's a win-win situation," said Tisserand. "For example, our latest Ultra Heat Treatment (UHT) sterilising line launched in late 2023 uses 20 per cent less energy than the previous generation of UHT equipment."

In 2023, Tetra Pak launched the Factory Sustainable Solutions unit that aims to halve customer emission reductions by 2030 through incorporating more sustainable solutions, such as heat pumps and solar thermal generation systems, into its portfolio.

Innovation and collaboration on packaging materials

With packaging materials accounting for 31 per cent of Tetra Pak's emissions, packaging innovation and collaboration with suppliers are essential to develop and deliver lower carbon packaging.

"We sold over 10 billion packs made from plant-based polymers derived from sugar cane in 2023, which reduces emissions by 20 per cent on average compared with fossil-based materials," recalled Tisserand. "In addition, our latest alternative paper-based packaging barriers that can replace aluminium reduce emissions by an additional 20 per cent."

Tetra Pak's supplier initiative 'Join us in protecting the planet' involves collaborating with its entire supplier base to reduce the climate impact of what they deliver to the company. Since

2020, Tetra Pak's suppliers have reduced their greenhouse gas intensity by 18 per cent on average. The target is to achieve a 50 per cent emission reduction from materials by 2030.

Promoting more efficient transport

The transport of Tetra Pak's goods and materials accounts for around 6 per cent of its emissions. A global pilot project is currently investigating the potential to introduce internal carbon pricing for transportation throughout the company.

"Internal carbon pricing can help us make low-carbon transport decisions that are more based on the actual environmental impact of different modes of transport," said Tisserand.

Reducing the end-of-life impact of packages

Finally, used beverage cartons account for 7 per cent of the company's emissions, which highlights the importance of improving collection and recycling infrastructure.

"The more we collect and recycle – the lower the climate impact will be," said Tisserand. "This is why we directly invested €40 million in collection and recycling in 2023 and will invest the same amount again in 2024."

-20%

We sold over 10 billion packs made from plant-based polymers derived from sugar cane in 2023, which reduces emissions by 20 per cent on average compared with fossil-based materials

Paper-based barrier reduces customer carbon footprint by a third

In November 2023, Tetra Pak launched an aseptic beverage carton with a paper-based barrier as part of an ongoing large-scale technology validation with its customer Lactogal, a leading Portuguese food products company. The paper-based barrier increases the renewable content of the package to 90 per cent, reduces its carbon footprint by a third and has been certified as Carbon Neutral by the Carbon Trust™.

The Tetra Brik® Aseptic 200 Slim Leaf carton with a paper-based barrier brings Tetra Pak one step closer to its ambition to produce beverage cartons made solely from responsibly sourced, renewable or recycled materials, that are fully recyclable and carbon neutral. The technology validation involves producing around 25 million packages in Portugal.

“This represents a critical marker in our longstanding work to design beverage cartons for recycling – something that is continuing to set the pace for the paperisation of packaging,” said

Ola Elmqvist, Executive Vice President Packaging Solutions. “By joining forces with Lactogal, we’re now demonstrating that it’s possible to progress the sustainability of aseptic beverage cartons while securing food safety and enhancing food access.”

“Our collaboration with Tetra Pak centres on a shared belief that a more sustainable future is possible. Innovating together is a big part of that,” said Lactogal President José Capela. “We are both focused on an ambitious sustainability transformation, and this new carton’s 33¹ per cent reduction in greenhouse gas emissions is a significant achievement towards this goal.”

¹ Carbon Trust-certified Tetra Pak ‘Carton CO₂ Calculator’ model version 9 (valid from 2023-01-01). Scope: cradle-to-grave measurement of a Tetra Brik® Aseptic 200 Slim Leaf carton with plant-based polymers in coating and paper-based barrier compared to a standard Tetra Brik® Aseptic 200 Slim Leaf package. Geography: EU Industry data.



Innovative filtration solution helps Danish cheese customer reduce climate impact

With water scarcity – a growing issue around the world that is forecast to get worse with climate change – food and beverage companies need to make their operations more water efficient while also reducing greenhouse gas emissions. Tetra Pak helped Mammen Dairies, a Danish producer of high-quality cheese since 1911, do just that.

The customer installed a reverse osmosis membrane filtration system for whey concentration, which is a valuable protein-rich by-product of cheese production. The concentrated whey protein is sold to producers of ingredients for infant formula and sports nutrition drinks.

Removing around 75 per cent of the water from the whey reduces the number of truck journeys needed to transport it. This

annually avoids around 400 tonnes of CO₂e, which is equivalent to 460,000 truck-kilometres or 11 journeys around the world. The financial savings from avoided transport costs are also significant for the customer.

Furthermore, the recovered water is purified in the built-in reverse osmosis polisher before being used to clean the dairy equipment. The solution has helped the dairy to reduce its water intake by around 145 m³ per day.

“The installation of the whey filtration system created a win-win-win situation for the customer by saving water, energy and cost,” said Daniel Mårtensson, Director Filtration Solutions. “This is a win for the climate too in terms of reduce emissions and greater water efficiency.”



First-of-its-kind research into the package of the future

Tetra Pak is on a journey to develop the most sustainable food package that uses renewable materials and is fully recyclable. Through ground-breaking research together with the MAX IV Laboratory in Lund, Sweden, Tetra Pak is now helping to uncover fresh insights into plant-based materials as a basis for future sustainable innovations. "A fundamental understanding of the structure and properties of materials is crucial as we work towards developing the package of the future," said Eva Gustavsson, Vice President Materials & Package.



New recycling collaborations and investments unveiled

Tetra Pak has established several new partnerships to create additional recycling capacity, increase collection rates and ensure that materials from post-consumer beverage cartons can re-enter the economy. These partnerships build on Tetra Pak's long-term collaboration on recycling around the world, which has increased the number of recycling operations handling cartons worldwide from 40 to more than 200 since 2010. Tetra Pak's recycling initiatives play an important role in helping to keep valuable materials in use and out of landfills around the world.



Recognised for service excellence

Tetra Pak Services earned a second consecutive Excellence Award from the world-leading consulting firm Kepner-Tregoe. The annual award recognised Tetra Pak's commitment to continuous improvement and problem-solving to overcome both technical and non-technical issues. "This is evident through the company's learning portfolio, which includes a range of training options and learning paths to support everyone in the business develop their issue resolution skills," said Matthieu Coupeau, Senior Consultant at Kepner-Tregoe.



Advancements in packaging solutions with recycled content

Tetra Pak has made new advancements in the area of recycled content, expanding its offering of packaging solutions using certified recycled polymers to cover new formats, product categories and geographies. The expansion is a key milestone in the company's journey towards a circular portfolio, turning waste into new resources, and reducing the industry's dependence on virgin, fossil-based materials. It comes at a pivotal moment, aligning with the recently released European Commission's proposal for the Packaging and Packaging Waste Regulation.



Index findings validate Tetra Pak's strategic direction

Consumers now actively consider the environment alongside their individual health when buying food, according to Tetra Pak's Index 2023. Tetra Pak has a key role in not only delivering products that provide consumers with valuable nutrition, but that also optimise the value chain to promote resource efficiency. "The findings of this year's Index are reflective of the direction we have taken in the last few years, to decarbonise the food industry and make food systems more resilient and sustainable," said Adolfo Orive, President and CEO.



Accelerating food systems transformation

Tetra Pak launched an integrated approach to drive the transition to more secure, sustainable and resilient food systems at the COP28 climate change conference. The approach identifies four key pathways to accelerate food systems transformation – as well as roadmaps and measurable targets for each of the pathways. "Transforming food systems is crucial for a viable future," said Charles Brand, Executive Vice President for Processing Solutions & Equipment. "We cannot phase out food, but we can transform these systems to ensure they are more secure, resilient and sustainable."



Tetra Pak recognised for its climate leadership by the Financial Times

The company's inclusion on the Financial Times' final list is recognition of its progress in reducing greenhouse gas emissions and its robust commitments to climate action. Tetra Pak was ranked among the top 20 per cent of the 500 companies listed. "While we are proud of our achievements to date, we have plans to continue mitigating our environmental impact further – by decarbonising our value chain, driving circular solutions while contributing to food system resilience and protecting biodiversity," said Adolfo Orive, President & CEO.



New opportunities for postbiotic food and drinks

Tetra Pak has introduced a range of innovative postbiotic food solutions that can help boost the immune system, vitality and well-being for consumers together with AB Biotek Human Nutrition & Health. The range showcases new opportunities for food producers that exist to offer fortified products in categories such as tea, plant-based beverages and sports drinks. Postbiotics can be seamlessly integrated into food processing as a powder at the mixing stage of Ultra High Temperature (UHT) products, like beverages, dairy products, ice cream and cheese.



Protects What's Good

At Tetra Pak, our sustainability agenda is shaped by our purpose 'We commit to making food safe and available, everywhere and we promise to protect what's good: protecting food, people and the planet.'

Our sustainability agenda

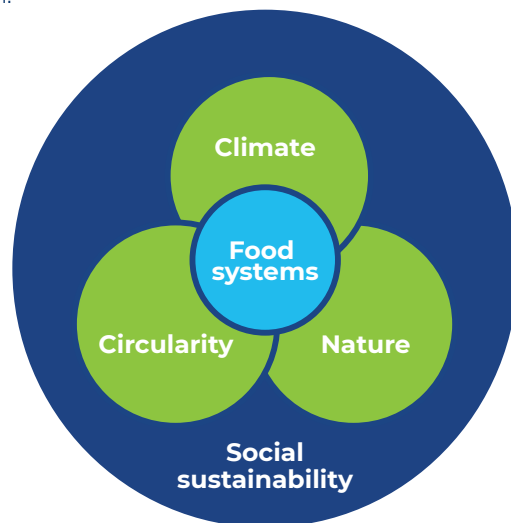
With a world-leading position in food processing and packaging, backed by more than 70 years of trusted experience, we aim to lead the sustainability transformation within our industry. To do that, our sustainability agenda focuses on five interconnected areas where we have the greatest impact, risks and opportunities: Food systems, Climate, Circularity, Nature and Social sustainability.

Food systems lie at the heart of our sustainability agenda. As a producer of 179 billion paper-based carton packages in 2023, Tetra Pak has a role to play in helping to feed the growing global population by minimising food loss and waste, reducing climate impact, acting for nature and promoting circularity – while respecting human rights across our own operations and the value chain.

Committed to openness and transparency

We are committed to monitoring, managing and transparently reporting on our performance and progress. In 2023, we conducted our first double materiality assessment, aligned with the requirements in the new European Sustainability Reporting Standards (ESRS). The assessment considered Tetra Pak's impacts on people and the environment, as well as the material risks and opportunities that various environmental, social and governance topics have on Tetra Pak's business.

Food.
People.
Planet.



Sustainability highlights

Below are some of our 2023 sustainability highlights. For the full story, see our latest Sustainability Report. www.tetrapak.com/sustainability/sustainability-updates

FOOD

Driving food systems transformation

Tetra Pak has launched an integrated approach to drive the transition towards more secure, sustainable and resilient food systems.¹ This involves harnessing the company's leading role in the food processing and packaging industry to enable greater food security and reduce food loss and waste, while improving livelihoods and increasing access to food. Four pathways – along with ambitions, roadmaps and measurable targets – have been identified to contribute and align with the critical transitions for food and land transformation set out by the Food and Land Use Coalition.²

Concrete solutions for COP28

Tetra Pak brought concrete solutions to the table at the 2023 United Nations Climate Change Conference in Dubai – COP28. "At Tetra Pak, we're not just making pledges; we're driving a transformative agenda, based on a robust evidence-base. We are answering the call for private sector engagement by demonstrating both our ambitions and our strategic plan on how we will realise them," said Charles Brand, Executive Vice President for Processing Solutions & Equipment, Tetra Pak.

¹ A food system is a system that embraces all the elements (environment, people, inputs, processes, infrastructure, institutions, markets and trade) and activities that relate to the production, processing, distribution and marketing, preparation and consumption of food and the outputs of these activities, including socio-economic and environmental outcomes. Source: High Level Task Force on Global Food and Nutrition Security (HLTF) (un.org)

² Food and Land Use Coalition | World Resources Institute (wri.org)

CIRCULARITY

Investing in collection and recycling

Tetra Pak continued to develop the collection and recycling of paper-based carton packaging by investing approximately €40 million in different projects around the world to further increase the collection and recycling of paper-based carton packages. In 2023, as part of a €29 million joint investment with Stora Enso, a state-of-the-art recycling line for used beverage cartons was opened in Poland. Other initiatives in collaboration with local organisations included investments in the first carton packaging recycling facility in Australia and an automatic sorting centre in China.

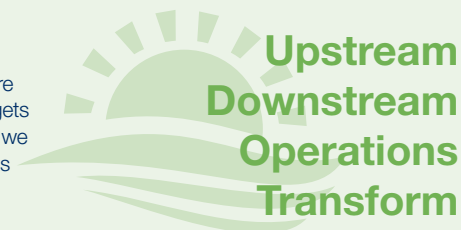
€40 million

investment in different recycling projects around the world

NATURE

The Tetra Pak approach to nature

Recognising the urgency of action to halt and reverse nature loss and achieve a water-secure world, Tetra Pak is committed to acting for nature by supporting the achievement of the targets of the Global Biodiversity Framework and the UN Sustainable Development Goals. In 2023, we implemented the 'Tetra Pak Approach to Nature' initiative, which includes quantitative targets and actions across four pillars: upstream, downstream, operations and transform.



SOCIAL SUSTAINABILITY

Strengthening social sustainability

In 2023, we strengthened our human rights due diligence process – including stakeholder engagement in our supply chain and the informal waste collection of packaging. For example, in Brazil, Colombia and Vietnam, we commissioned local non-governmental-organisation (NGO) to interview hundreds of waste collection workers. The valuable data collected will be used to inform dialogue with customers and other stakeholders working to develop collective action at country level to improve outcomes for waste collection workers.



CLIMATE

Paper-based barrier launched

Tetra Pak and Lactogal launched an aseptic beverage carton featuring a paper-based barrier. This was part of a large-scale technology validation involving around 25 million packages in Portugal. The package consists of 90 per cent renewable content and has a carbon footprint that is a third less than conventional packages.³



Tetra Pak's forestry leadership recognised for eight year running

Tetra Pak was once again recognised for its forestry transparency and performance by global environmental non-profit CDP by securing a place on its annual leadership 'A List'. Based on data reported through the CDP 2023 forests questionnaire, the company was among the 2 per cent of companies that achieved an 'A' score out of over 21,000 companies assessed. Tetra Pak also scored A- on both CDP climate change and water security, which made it the only company in the carton packaging sector to receive leadership band scores on all three questionnaires.



Join Us in Protecting the Planet

Tetra Pak takes a value chain approach, working together with suppliers, customers and other stakeholders to achieve net-zero greenhouse gas emissions across the value chain (scopes 1, 2 and 3)⁴ by 2050. In 2023, we updated and sharpened our 'Join Us in Protecting the Planet' supplier initiative from 20 actions to nine focused actions, with clear targets to drive impact together with our suppliers. The initiative started with base material suppliers⁵ and in 2023 was extended to another 100 suppliers – including many crucial players in our equipment value chain.

Net zero  **by 2050**

³ Benchmark: Tetra Brik® Aseptic 200 Slim Leaf carton package with aluminium foil layer.

⁴ Scope 1 covers direct emissions from a company's owned or controlled emission sources. Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the company. Scope 3 includes all other indirect emissions that occur in a company's value chain.

⁵ Base materials are the materials we use to produce the packaging we sell to food and beverage producers, including paperboard, polymers, aluminium foil and inks.



Meeting financial targets despite supply chain challenges

Despite on-going supply chain challenges, we exceeded our net sales and operating profit targets in 2023. We also progressed in our Leading Excellence transformation journey and continued to ensure our customers benefit from the latest sustainability innovations in the food, personal care and beverage industries.

Our net sales amounted to an all-time high of €1.6 billion in 2023 compared with €1.4 billion in 2022. Order intake levelled-off very close to budget, while we continued to considerably increase our order backlog due to the component shortages we have experienced in the last two years. We were challenged to meet the demand for our products and had to be selective on our order intake. In all regions, sales increased compared to 2022, with the strongest growth in Asia, Oceania and Africa.

Our Leading Excellence transformation

In 2023, we embarked on the implementation phase of Leading Excellence, our three-year transformation programme. Several projects entered the execution stage, which will continue throughout 2024 and 2025. Through this journey, we are fundamentally changing the way we work to become a more agile and high-performance organisation, so that we can best address the end-to-end needs of our customers.

The programme is being driven by a dedicated team of Sidel leaders and experts in a 'bottom-up' manner across our organisation. Leading Excellence will ensure we have the right tools, processes and capabilities to make us more efficient – while retaining the things that make us unique in terms of our customer centricity and focus on innovation.

During the year, we continued to optimise our industrial footprint by moving the manufacturing of two factories in France to existing Sidel factories and divesting the Novembal cap factories in the US. These changes are being complemented with on-going manufacturing evolutions to leverage more flexible and efficient production.

Helping our customers optimise their resource use

We have fully embraced the Environment, Social and Governance (ESG) framework, which goes hand-in-hand with our transformation. In 2023, we continued to drive our offering of innovative solutions that help customers to reduce, reuse and recycle resources, as well as improve quality and realise cost savings.

We continue to be a recognised leader in optimised container design where we drive the sustainability performance of our customers' packaging through our expertise and state-of-the-art laboratory in France for recycled PET. The innovative solutions we have developed include a breakthrough PET blower that produces resource-efficient, uniquely designed bottles with patented laser technology. At the same time, we completed final tests of our ultra-sonic washer for reusable bottles, that uses significantly less cleaning liquid and water.

Aseptic bottling is becoming increasingly popular for customers, for several reasons across different markets including sustainability,



quality and innovative design opportunities. We've seen the largest growth in aseptic in large markets, like China and India. And of course, all customers value the cost savings that aseptic bottling can deliver.

In addition, we are further driving digitalisation at Sidel by developing the next generation of connected machines for our customer offering and providing digital services such as 3D machine renderings that facilitate spare part recognition for customers. Our '365 Technical Assistance' service was launched in 2023 to help customers enhance their performance with 24/7 support, a two-hour response time, and the best technical experts for assistance solutions provided through remote channels. But just as important, digitalisation is helping us to optimise our own processes and operations, which will significantly benefit how we operate and better serve customers.

Our role in mitigating climate change

With 'mitigating climate change in the food and beverage industry' the theme of this year's report, we clearly have an important role in enabling customers to reduce their climate impact – particularly as 89 per cent of Sidel's life cycle climate footprint is created by scope 3 downstream activities. Climate mitigation is a major focus area for our customers, and we must similarly work to decarbonise our own operations. These topics are explored in the articles on page 34.

Our strengthened labelling offering

We acquired the Italy-based, modular labelling machine company Makro Labelling in 2023, which has provided us with innovative technologies that we did not previously have in house. We are pursuing many mutually beneficial synergies, including looking at how we can both strengthen our development capabilities. The acquisition is also supporting our growth strategy for the food, home, personal care, wine and spirits customer segments, which is really exciting.

Transformation for a better future

In the last quarter of 2023, we were able to begin to reduce our order backlog and are already returning to better delivery times for customers in 2024. We look forward to continuing the implementation of our Leading Excellence transformation journey in 2024, while stabilising our supply chain, and really starting to reap the benefits of our enhanced way of working.

With innovation a core part of our DNA, we will fuel this passion by improving how we innovate for a more efficient and faster flow from idea to market. This will involve offering more innovations that help boost our customers' efficiency and sustainability performance. I am confident that our transformation will ensure we have the tools and the evolving culture we need to safeguard our own destiny and be better prepared for the future.

Monica Gimre



“I am confident that our transformation will ensure we have the tools and the evolving culture we need to safeguard our own destiny and be better prepared for the future.”

“We clearly have an important role in enabling customers to reduce their climate impact – particularly as 89 per cent of Sidel life cycle climate footprint is created by scope 3 downstream activities.”



Monica Gimre
President & CEO



Clive Smith
Executive Vice President
Customer Management
Asia, Oceania & Africa



Simone Mondini
Executive Vice President
Customer Management
Americas



Marina de Barros
Executive Vice President
Customer Management
Europe & Central Asia



Riccardo Codega
Executive Vice President
Go to Market



Ko Hoepman
Executive Vice President
Equipment Portfolio & Innovation



Paulo Picca
Executive Vice President
Supply Chain



François Lejard
Executive Vice President
Services Portfolio & Solutions



Igor Glaser
Executive Vice President
Finance & Business Transformation



Deepak Kumar
Executive Vice President
Human Resources



Christer Carling
Executive Vice President
Legal Affairs

Sidel enables customers to reduce their climate impact

Through a holistic approach to sustainability that includes packaging and equipment efficiency, Sidel has an essential role in helping customers to drive climate action.

Our double materiality assessment identified climate change as our most relevant environmental topic. Sidel has the target to reduce its scope 3 emissions, which originate from sources outside the company's direct control, by 27.5 per cent by 2030 compared with 2019. This target has been validated by the Science Based Targets initiative (SBTi).

Climate mitigation is an important part of Sidel's ESG work but is just one element of its holistic perspective on sustainable development. Other environmental topics include circularity, waste and water, which also have important climate dimensions in customer operations.

"The climate impact of the packaging our customers use in their lines is up to ten times greater than the impact from the energy used by their equipment," explained Francesca Bellucci, Director Sustainability. "We help customers mitigate climate impact in both these areas by developing more sustainable packaging solutions and providing more energy-efficient equipment."

Reduced climate impact through more sustainable packaging

Sidel works with customers to develop different packaging solutions that are cost and resource efficient by using less plastic, glass, aluminium and cardboard. This not only involves improving the packaging solution, but also adapting packaging lines to lighter packaging.

"By developing lighter packages, we use less resources and decrease climate impact as well as reduce transport-related emissions," said Bellucci. "We also integrate circularity into our equipment by increasing durability and repairability – to ultimately make them last longer."

More efficient packaging equipment

"We have been helping customers to reduce their packaging line energy use for decades – historically from a cost-saving perspective, but increasingly from a climate impact perspective too," said Bellucci. "Our Product Development Plan (PDP) guides the development of more energy-efficient products. We currently have tens of projects in the pipeline, across different technologies and all

product lines, and we are assessing and prioritising the most interesting ones."

Recent Sidel solutions that have enabled customers to reduce energy include Sidel's EvoFilm® Stretch secondary packaging solution that uses 90 per cent less energy compared with traditional solutions.¹ More compact conveyers use around 70 per cent less energy compared with the market standard² and innovative



"The climate impact of the packaging our customers use in their lines is up to ten times greater than the impact from the energy used by their equipment. By developing lighter packages, we use less resources and decrease climate impact as well as reduce transport-related emissions."

blower solutions can help customers use 45 per cent less energy³ compared with Sidel's previous models. In 2023, Sidel empowered its customers to drive energy efficiency and reduce their emissions by around 6,540 tonnes of CO₂.⁴

Circularity is a key focus area when considering the entire lifecycle of Sidel's business to ensure it considers the materials it uses in products and that they are designed for repair, refurbishment and ultimately recycling. Sidel's equipment as a service business model promotes circularity by optimising and extending the lifespan of equipment.

Sidel also offers various solutions that reduce water use, such as dry aseptic and sterilisation solutions that use no water at all, which can offer significant benefits in water-scarce regions.

Collaboration is key

Working together with partners throughout the food and beverage value chain is essential for Sidel to be able to reduce its climate impact.

"We work closely with customers to develop, implement and further refine climate-smart solutions," said Bellucci. "We also closely involve our suppliers and other partners to innovate and drive positive change throughout our entire value chain."

Sidel has many innovative solutions that help customers to mitigate their climate impact⁵

Pasteurising solutions – use 25 per cent less energy and 60 per cent less water.

Hydra Ultrasonic bottle washing – reduces steam by 20 per cent and water by 15 per cent.

Aseptic Combi Predis dry sterilisation – uses 100 per cent less water.

AQFlex® product handling and accumulation – achieves energy savings of 70 per cent.

EvoBLOW – uses 45 per cent less energy and 23 per cent less plastic.

EvoFILL filling machines – reduce energy by 50 per cent, water by 30 per cent and chemicals by 36 per cent.

EvoFilm packing solution – cuts energy by 50 per cent and plastic film by 15 per cent and can use 100 per cent recycled film.

Towards the decarbonisation of Sidel's operations

Sidel's decarbonisation strategy includes a 50 per cent reduction target for scope 1 and 2 emissions (which arise from the organisation's operations and energy consumption) by 2030 compared with 2019. The targets have been approved by the SBTi and align Sidel's operations with the Paris climate agreement.

"Our operations only account for a small proportion of our life cycle climate footprint, but we still have a responsibility to minimise this impact as much as possible – particularly as it is under our direct control," said Bellucci. "We are implementing a multifaceted approach to optimise energy efficiency across our manufacturing processes, source renewable energy, and explore innovative technologies to reduce emissions."

Sidel's decarbonisation journey touches everyone across our sites globally. Through training programmes and awareness campaigns, Sidel empowers colleagues to play their part in contributing to its decarbonisation goals. This not only enhances operational efficiency but also strengthens the ESG culture at Sidel.

"Through our bold decarbonisation targets, we will not only contribute to global efforts to combat climate change but also position ourselves as an industry leader in sustainability," concluded Bellucci. "Responsible business practices and environmental stewardship are at the core of our corporate identity."

Read more about Sidel's work with sustainability on page 38.

¹ EvoFilm® Stretch consumption compared with EvoFilm standard shrink solution.

² AQFlex® Accumulation system consumption compared with standard conveying solution.

³ EvoBLOW with eco-oven and air recovery system compared with the previous generation of Sidel blowers.

⁴ Data based on eco-options and upgrades sold in 2023 assuming 5,000 working hours and using Tema 2019 emission factors.

⁵ All figures are calculated customer savings compared with traditional solutions or Sidel's previous model. Savings may vary depending on the particular customer line.

Cutting-edge PET lines strengthen production capabilities in the Middle East

The multinational IFFCO Group is expanding its condiments production capacity by installing Sidel's complete PET lines in the UAE and a new facility in Iraq. IFFCO Group entrusted Sidel to oversee the entire turnkey line project and ensure optimal efficiency. The lines comprise cutting-edge equipment and produce up to 9,000 bottles per hour (bph). "The project management was commendable, and our collaboration proved effective in overcoming challenges," explained Andrey Dribny, CEO of IFFCO Group – Culinary. "By partnering with Sidel, we benefit from their impeccable service, consistent reliability, and exceptional quality, which are vital for our daily operations."



Collaborating on tethered caps and lighter bottles

Sidel drew on its expertise to support Coca-Cola Europacific Partners (CCEP) to introduce tethered caps for its PET bottles to increase recycling and prevent litter. Following a successful pilot, CCEP began converting all its Sidel lines within European factories to accommodate both tethered capping and a new bottle with a lighter neck. Sidel worked closely with CCEP to optimise the equipment configuration and validate quality. "The combined project management between CCEP and Sidel was key to the success of the project," said Geert Marse, Technical Packaging Lead at CCEP.



Breakthrough contactless solution enhances product quality

Sidel optimised product quality and line operations at a brand-new bottling facility for Suntory Japan, a worldwide leader in beverage production and manufacturer of soft drinks and spirits. Sidel's Gebo AQFlex® contactless single-file container handling solution avoids damaging or denting the light PET bottles. "Gebo AQFlex® has improved our production line in many ways, from the space-saving aspect, the simplicity of layouts to the wide range of automation solutions, and it has contributed to improving the line's operating rate and quality," said Toshiya Kobayashi, Chief Operating Officer at Suntory Japan.



PepsiCo PET lines converted to new bottle design



Sidel worked closely with the PepsiCo bottler MenaBev in Saudi Arabia to convert two Combi PET lines into seven new bottle formats in just one week at its 300,000 m² plant. The conversion improved line performance and efficiency with a new lightweight design for the iconic Aquafina brand that uses 10 per cent less raw materials. The Aquafina line can now run up to 60,000 bottles per hour (bph) compared to its previous speed of 54,000 bph. "Our ability to adapt and convert existing Sidel lines enables customers such as MenaBev to rapidly respond to global changes and market needs," said Karim Abdel Wahed, Service Manager at Sidel.

Aseptic solution helps leading Chinese food brand to move into the beverage market

Hainan Chunguang Foodstuff Co. Ltd chose Sidel's Aseptic Combi Predis™ to bottle coconut milk in Sidel's premium PET 350 ml design. The installation can run 28,000 bottles-per-hour (bph) and adds to the more than 100 Sidel aseptic line installations already installed in China. Sidel's patented Predis™ aseptic filling solution, with dry preform decontamination, ensures product integrity, production flexibility, cost efficiency and sustainability. "We have been very satisfied with the service we have received from Sidel from the point of engagement to aftersales support," said Xin Yan, Board member of Hainan Chunguang Food Co. Ltd.



Ghana's first locally produced and aseptically bottled chocolate milk

Niche Cocoa Industry Ltd, Ghana's largest cocoa processor, successfully installed its first-ever aseptic line through Sidel. The customer opted for Sidel's Aseptic Combi Predis™ with dry preform sterilisation technology, which provides optimum food safety and product quality. The complete PET solution integrates Tetra Pak Processing Systems technologies and Sidel's market-leading EIT® (Efficiency Improvement Tool) data system. "We selected Sidel because of its leadership in aseptic beverage production and packaging design," said Edmund A. Poku, Niche Cocoa Industry Ltd's Chief Executive Officer. "Our expectations were fully satisfied."



Edible oil bottling customer benefits from Sidel's high-speed solutions

Following the installation of Sidel solutions, the customer Lesieur enhanced sustainability and flexibility at its edible oil bottling facility in Coudekerque, Northern France. The oil, sauce and condiment company can now produce lightweighted bottles and use recycled PET (rPET). The solutions also helped Lesieur rationalise its number of bottle formats, reduce its overall changeover times as well as optimise its energy consumption. "We were able to increase our general production capacity thanks to Sidel's high-speed solutions. There has been a very positive impact on our production costs as well," said Francis Arulraj, Project Manager at Lesieur.



Sustainability at the heart of our business

At Sidel, sustainability is not only related to the environment, but also to social and governance (ESG) topics. We have ambitious targets to ensure Sidel contributes positively to combatting climate change, protecting water and biodiversity, enforcing human rights and promoting responsible governance.

Planet

At the end of 2023, 100 per cent of Sidel's production sites were certified to the ISO14001 environmental management system, which provides a framework for Sidel to establish, implement, maintain and continually reduce its environmental footprint. Sidel's objective is to maintain all sites certified by 2024. In 2024, Sidel will also develop a comprehensive strategy to ensure it plays its part in managing water and protecting biodiversity.

People

People are always at the centre of what we do, both within our own organisation, at customer sites and in the communities we engage globally. Our strong commitment to safety is demonstrated by our aim to achieve zero work-related accidents and includes a focus on mental health. This safety culture extends to cover our customers to proactively prevent accidents related to Sidel machines at their sites.

We fully support international human rights principles and are dedicated to diversity and inclusion, and to promoting equity. We also prioritise employee well-being and provide personal development opportunities to ensure Sidel employees are life-long learners.

5,000 solar panels
have been installed at
Sidel's site in Parma, Italy

Responsible Business Practices

Sidel's Corporate Governance Framework provides us with a moral compass to guide our decision making and run an ethical business. It also helps to abide by our values and engage with stakeholders throughout the value chain on a broad range of topics.

In terms of responsible sourcing, we work closely with our suppliers to build a culture of climate action and environmental responsibility through our Responsible Sourcing Procedure. Responsible governance also covers our products and our unique ability to meet customer needs as sustainably as possible through innovation.

As everyone at Sidel needs to be brought along on the company's ESG journey, employee engagement is another cornerstone of its strategy for example driven by our newly created Sustainability Builders network. Through training programmes and awareness campaigns, Sidel empowers colleagues to play their part in contributing to its decarbonisation goals and its work to create a more inclusive workplace and to drive sustainability throughout the supply chain.



Sidel's Aseptic Predis X4 packaging system combines the highest food safety standards, unprecedented ease of use and lower environmental footprint. The system saves 220 litres of Peracetic Acid (PAA) per day compared with wet sterilisation.

ISO

100% of all production centres are ISO 45001 and ISO 14001 certified.

Our ISO 14001 environmental management systems and ISO 45001 health and safety management systems help drive our sustainability work.

Target: maintain
100%
of production centres

Certification roadmap

From 19 individual certificates to a global one

2020

- 70% certification
- Two new sites

2021

- 80% Environment
- 75% H&S

2022

- 80% certification

2023

- 100% certification

2024

- Maintain 100% certification

EcoVadis silver

Our site in Octeville in France received an EcoVadis Silver rating in 2023 and is working to achieve a Gold rating in 2024. Sidel is also starting an EcoVadis certification for the entire Group, with the objective to obtain a medal by 2025.



Octeville (Silver)



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi objectives

We set clear science-based climate targets:

-50%

reduction in Sidel's emissions from operations (scope 1 and 2) by 2030

-27.5%

reduction in Sidel's customer emissions (scope 3) by 2030



A year of strong performance and accelerated transformation

In 2023 – the year DeLaval turned 140 years old – we achieved our best financial results ever. We continued to innovate to make sustainable food production possible by enabling our customers to do more with less. DeLaval also teamed up with the agricultural machinery company John Deere to develop a digital ecosystem tool aimed at helping farmers enhance the efficiency and sustainability of their operations.

We continued to see strong demand for DeLaval's products and services in 2023, with the DeLaval Group delivering record sales, profitability, and cash flow. Sales growth for the DeLaval Group amounted to 8.6 per cent at comparable rates.

The demand for milk and dairy products continued to grow along with the demand to produce dairy more sustainably and efficiently. Long-term demand for DeLaval's offerings, particularly in the areas of automation, digitalisation, and sustainability remain high.

Continuing to support farmers in a challenging market

Inflation and the rising cost of living affected the demand for dairy products in 2023, which put pressure on raw milk prices. Combined with higher milk production costs and interest rates, this reduced farmers' margins and dampened their investments.

Sourcing continued to be a challenge, which meant that we had to continue to be smart with how we source the raw materials and components we need to manufacture our products. We had a great collaboration between designers, factory personnel, and sourcing professionals to ensure we could deliver on our customer promises – often in very creative ways such as re-designing some products and finding alternative logistical solutions. Lastly, our field personnel showed passion and professionalism to maintain excellent customer service despite market challenges.

Sound strategic progress drove accelerated transformation

Our business strategy is helping us to rationalise our product offering by giving it greater strategic focus. For example, we allocated more R&D resources to drive innovation in more sustainable solutions during the year. Further, we divested the DeLaval Cleaning Solutions unit in the US, which specialised in solutions for processing industries, as it did not fit with our overall strategic direction. Efficiency gains were also made through the closure of our production facility in Argentina, with products to be sourced from other companies within the Group.

Mitigating climate change in the dairy industry

Most emissions from the dairy industry occur at farm level, and we can have a significant positive impact through our products and solutions. To drive impact in this area, we kept a high innovation pace, conducted a double materiality assessment, and made a scope 3 downstream emission calculation to further optimise our customer offering.

We formed a strategic partnership with John Deere to launch the Milk Sustainability Center in an effort to create an opportunity for dairy farmers to manage data more efficiently while unlocking more sustainable and profitable outcomes – as showcased in the article on page 44.



An update on Hamra Farm

Hamra Farm in Sweden serves as our dedicated Research and Development (R&D) and demonstration facility, where we actively engage in the development, testing, and showcasing of our latest agricultural solutions. Commencing in 2022, we initiated a significant expansion, focusing on constructing new barns and increasing our herd size.

This is a strategic investment in the future of dairy farming, with sustainability and animal welfare at its heart. We are looking forward to welcoming customers and visitors to Hamra to see how modern dairy farming can be run more sustainably.

Continued focus on sustainability and animal welfare in our product offering

We introduced several new products that promote sustainability and animal welfare during the year. Animal welfare is an essential part of our sustainability strategy as the more milk produced per cow and the longer that cow remains productive, the lower the environmental impact of every kilogram of milk produced.

New products included the next-generation rotary milking system DeLaval Rotary E500, which achieves 30 per cent more throughput and the OptiWagon autonomous feed distribution robot that promotes animal welfare by providing more frequent

feeding. OceanBlu™ teat disinfectant was introduced in different variations as well as in more markets – including Europe – to deliver superior teat conditioning whilst controlling the spread of mastitis-causing pathogens. We also began offering the DeLaval Plus Behaviour Analysis, which is a digital farm management tool that uses sensors and artificial intelligence (AI) to help identify sick cows and cows in heat.

Continuing to lead the dairy industry

Despite milk production and investments constrained by low farmer margins as of early 2024, world dairy demand is expected to gradually increase this year due to higher farm gate milk prices. We will continue to proudly lead the dairy industry just as we have done throughout our long history. By continuing to make sustainable food production possible through innovation in our products and services, we are well positioned to support successful farmers for at least another 140 years.

Paul Löfgren



“By continuing to make sustainable food production possible through innovation in our products and services, we are well positioned to support successful farmers for at least another 140 years.”

“Animal welfare is an essential part of our sustainability strategy as the more milk produced per cow and the longer that cow remains productive, the lower the environmental impact of every kilogram of milk produced.”



Paul Löfgren
President & CEO



Jonas Hällman
Executive Vice President
Cluster EMEA



Fernando Cuccioli
Executive Vice President
Cluster Americas



Yunfei Sha
Executive Vice President
Cluster Asia & Pacific



Magnus Berg
Executive Vice President
Product Management &
Development



Lars Bergmann
Executive Vice President
Digital Services



John-Erik Hermanson
Executive Vice President
Supply Chain



Christian Poggensee
CFO



Anna-Pia Järnfors-Dixner
Senior Vice President
Corporate Communications &
Sustainability



Valerie Binner
Senior Vice President
Human Resources



Johan Swahn
Senior Vice President
Legal Affairs

DeLaval partners with John Deere to reduce climate impact in the dairy industry

The Milk Sustainability Center (MSC) digital ecosystem will help dairy farmers improve their operations by automating and consolidating farm data flows as well as provide valuable insights into how they can enhance both sustainability and profitability.



Growing global demand for dairy is putting pressure on natural resources such as freshwater and soil, while dairy operations produce greenhouse gases that contribute to climate change. At the same time, there are increasing demands on dairy farmers to adopt more sustainable practices, which involve cutting emissions, operating more efficiently and reducing costs.

Introducing a unique collaboration for more sustainable dairy farming

In the summer 2024, DeLaval and John Deere are to launch the MSC – a unique digital ecosystem that will provide farmers with a more comprehensive overview of the sustainability impacts of their dairy operations, as well as provide actionable insights. The initial version of the MSC will focus on environmental sustainability. MSC is built and powered by Dairy Data Warehouse BV (DDW), a Dutch-based company in operation for the last 10 years offering data solutions for sustainable dairy.

Dairy farmers will use the MSC to monitor carbon dioxide equivalent (CO₂e), for their entire farm, specific fields or their herd. The MSC will also enable them to optimise their use of nitrogen, phosphorous and potassium by calculating the Nutrient Use Efficiency (NUE). NUE measures the entire dairy farm cycle – from fertilising fields and using the crop to feed cows, to measuring milk and meat outputs, and manure management.

“This is the first partnership of its kind in the dairy industry,” said Joanna Daugaard, DeLaval representative for the MSC. “Bringing various companies together to support dairy farmers to become more sustainable in an open system is crucial as farms are responsible for the majority of CO₂e in the food system. The MSC presents a huge opportunity to collaborate across the industry and create value for farmers.”

Automating and consolidating farm data flows

With farmers currently using several non-connected farm software solutions to run their business, the MSC is set to revolutionise how dairy farms operate on a daily basis. The cloud-based ecosystem will automate and consolidate both dairy and arable data flows into one single tool with minimal manual data entry. It will also compare a farmer's data with an anonymised benchmark group to provide insights into potential farm improvements they can implement.

“By combining a farm's data, the MSC will provide farmers with a more holistic perspective on farm sustainability that is centred around them and their particular farm operations,” said Daugaard. “It will also help farmers to develop much more sustainable dairy operations by identifying potential improvement areas, monitoring sustainability KPIs as well as simulating how particular improvements in their operations can promote sustainability and benefit their dairy farm.”

A tool to drive sustainability

The MSC has sustainability at its core and aims to reduce environmental risks and increase the resilience of societies and the environment. The initial version of the MSC will focus on areas where dairy farming can have the greatest positive impact – climate change and the better management of nitrogen and phosphorus fertilizers.

“Dairy farms can make a significant sustainability contribution – particularly if the MSC can involve thousands of farmers around the world,” said Daugaard. “The MSC will also create an essential platform for us to share data with our partners to create greater insight into the role dairy farms can play in contributing towards profitability and environmental objectives. As this does not currently exist in the industry, the MSC will be a useful contribution to driving climate mitigation and promoting sustainability globally.”

An open eco-system

The MSC will be open for other partners to join and aims to serve dairy farmers in a way that is independent of farm machinery brands and herd management software.

“The open and collaborative nature of the MSC ecosystem is not only a recognition that we can’t do everything ourselves and that partnering in the industry is essential – it’s also about supporting the farmer to be more sustainable,” concluded Daugaard. “This mentality of partnering on sustainability and pooling our data together with various actors across the industry will create the most powerful data tool in the industry to mitigate climate change and reduce the environmental impacts of dairy farming in general.”

The initial version of the MSC will be free of charge for farmers to subscribe to and a premium version with enhanced capabilities will be launched at a later date.

Check out the MSC website for the latest:
www.milksustainabilitycenter.com

Could Nutrient Use Efficiency enable more sustainable dairy?

Many dairy farmers do not use Nutrient Use Efficiency (NUE) in their everyday operations, but the KPI could hold the key to more sustainable dairy farm operations with lower climate impact.

Studies show that the world currently far exceeds safe limits in terms of nitrogen and phosphorus use. Dairy farms can play an important role in optimising the use of these elements to minimise inflow to freshwater while also reducing greenhouse gas emissions.

“At DeLaval, we see the bigger picture and what is needed to create a more sustainable dairy industry – including working with NUE, which goes beyond focusing on greenhouse gas emissions,” said Daugaard.

Doing more with less through precision farming

“Applying sufficient quantities of fertilizer is essential for attaining good feed yields and good feed quality,” explained Daugaard. “However, managing the use of nitrogen and phosphorus fertilizers on dairy farms is critical for farm profitability and mitigating environmental impact as improper fertilization and poor manure management can harm the environment.”

Improper fertilization and poor manure management can have several negative impacts, such as eutrophication that can lead to

changes in aquatic life and harmful algal blooms. Greenhouse gases can also be emitted, such as nitrous oxide from fields and methane from manure lagoons. Monitoring NUE is crucial as it helps to optimise the use of nitrogen, phosphorus and potassium to contribute to better management practices.

“The MSC provides a holistic life cycle approach that combines barn and field data to give a full-farm perspective, while being able to zoom in on specific herds or fields,” added Daugaard. “From a NUE perspective, it will help farmers to analyse the current state of their soils to calculate the exact amount of fertiliser they need to optimise their crop through precision farming.”

The more sustainable use of fertilizers will help promote healthy soils that can capture and store more carbon from the atmosphere. It can also avoid harming natural environments and help to reduce greenhouse gas emissions by maintaining healthy ecosystems.



DeLaval launches the next-generation automated rotary milking system

The E500 rotary milking system increases milking efficiency and streamlines worker routines. It also automates the selecting and sorting of cows and minimises stress on animals. The operator has access to the status of each cow being milked, automatic start and speed functions, monitoring cameras and crowd gate controls. "The DeLaval E-series rotaries represent a new era in efficient dairy technology," said Gary Edwards, Rotary Cluster Solution Specialist. "We have taken a 360-degree view of our customers' needs, prioritising operator safety, animal welfare, farm profitability, food safety and work efficiency."



New autonomous feeding robot

Feeding is one of the biggest costs on a dairy farm and is the most labour-intensive activity after milking. The OptiWagon is an autonomous feed distribution robot that is part of DeLaval's complete automated feeding solution, DeLaval Optimat™. The comprehensive feeding solution provides everything from weighing, cutting and mixing to delivering the feed to the feed table. "Including the OptiWagon as part of the Optimat system provides an efficient and flexible feeding system that can help save valuable time and limit energy costs on farms," said Ludo Bols, Feeding Systems Specialist.



Investment in automatic milking capacity

DeLaval is doubling its production capacity of automatic milking machines to meet rising customer demand, shorten lead times and maintain its focus on product development. The investment will involve upgrading DeLaval's automatic milking robot production facility in Tumba, Sweden, in 2024 with optimised and automated flows. "The high demand we have seen for our VMS V300-series in recent years and the future expected demand allows us to make this investment," said Paul Löfgren, President & CEO at DeLaval.



DeLaval celebrates 140 years in dairy

Ever since its establishment in 1883, DeLaval has focused on pioneering solutions that help dairy farmers and their animals. This focus lives on today with solutions that promote greater automation and digitalisation to help lead the dairy industry into the future. "It is our role to make the dairy farmers' lives better through innovation, quality and commitment. This means finding more sustainable ways to farm so that they can be successful and in turn, provide the world with nutritious food now and in the future," said Paul Löfgren, DeLaval President & CEO.

New innovative teat disinfectants

DeLaval has expanded its udder health assortment with three new innovative glycolic acid-based teat disinfectants to the European market: OceanBlu™ spray, OceanBlu™ pro and OceanBlu™ barrier. Good udder preparation and milking routines, combined with post-milking teat disinfection, are proven to reduce mastitis. Udder health in general is vital to dairy farmers as it affects the performance of the herd and profitability of the farm. OceanBlu is being launched in additional selected countries in 2024.



New study shows importance of Body Condition Score to improve herd performance

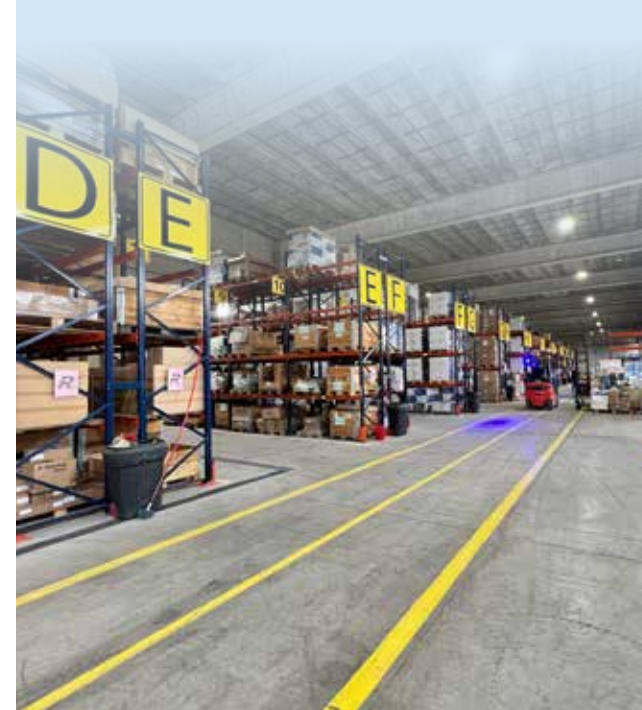
In a recent study conducted in the United States in collaboration with DeLaval's Scientific Committee, Colorado State University and the University of Florida, Body Condition Score (BCS) proved to be key in improving performance in herds. The study's main objective was to better understand the impact of the changes in BCS during the dry period and early lactation on variables that are significant to the farmer, including fertility, milk yield, and cow health. The results showed the value of monitoring BCS to maximise cow performance while improving the health status of the animals.

Joaquin Azocar, co-author of the study and DeLaval Solution Manager in North America, said: "The information that we have collected gives us a light to understand how to implement this type of technology in a successful way, helping our customers improve their cows' productivity and welfare. The collaboration from the local and global DeLaval teams was key to the overall success of this project." The results of the study were released in December 2023 and are available online.



Reducing the environmental impact of Latin American logistics

DeLaval has optimised its logistics in Latin America with a new warehouse in Argentina, streamlined inventories, an additional sea freight each month and 46 per cent less air freight. Outgoing pallets with 20 litre chemical products have also been increased from 36 pieces to 48 pieces per pallet to reduce outbound freight costs and reduce packaging material. "We have reduced our outbound logistics footprint from Argentina by 19 per cent, from Brazil by 6 per cent and our product packaging material by 7 per cent," said Julian Gonzalez, Purchasing & Logistics Manager Latin America.



Enabling a more sustainable dairy industry

DeLaval provides products and solutions that improve working conditions for farmers and ensure that animals are well taken care of, while reducing farm environmental impact and ensuring long-term profitability.

In 2023, we updated our three-leaf clover based on the double materiality assessment we conducted during the year. It places innovations in the centre, surrounded by our three pillars and governance.

Environment

We are committed to reducing our greenhouse gas emissions, ensuring water is used responsibly, and decreasing energy use and waste. We have a long history of developing products and solutions that reduce the environmental impact of every litre of milk produced and improve efficiency and milk yield on farms.

Animal welfare

We focus on animal welfare and cow longevity by promoting and enabling best management practices. A healthy animal provides more milk, at better quality and for more years. Our approach enables us to meet all regulations regarding milk quality to ensure food safety, while developing products and services with cow health and welfare in focus.

Social & Economic

We aim to be a diverse and inclusive employer to attract and retain the talent we need to achieve our strategic ambitions. We also promote the engagement and well-being of our employees and the farmer communities in which we operate. Our approach helps both our customers and DeLaval to maintain a profitable business in the long term while supporting our suppliers to act ethically.

DeLaval's 14 Sustainability Focus Areas

Our 14 focus areas are based on the results from our double materiality assessment.



Innovations

- R&D, innovation and digital services
- Value generation and distribution
- Product safety, quality and compliance
- Collaboration and partnership

Environment

- GHG emissions
- Energy efficiency
- Water management

Animal welfare

- Milk quality
- Animal welfare

Social and economic

- Employee safety and well-being
- Employee engagement, retention and talent acquisition
- Diversity, equity and inclusion
- Customer satisfaction

Governance

- Governance and ethics

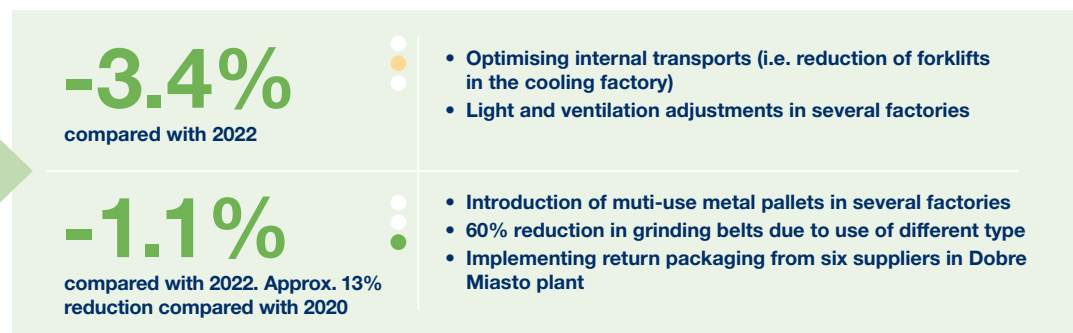
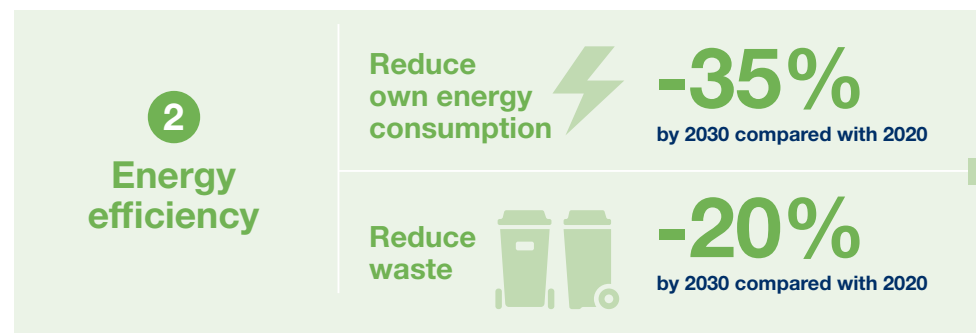
Our sustainability goals, targets and progress

We have comprehensive goals and targets for our three sustainability pillars. We made good progress in 2023 on our targets and are implementing prioritised actions in 2024 and beyond. Below are some of our key targets and significant progress made in 2023. For the full story, see our latest Sustainability Report at <https://corporate.delaval.com/sustainability/>

Key environment targets

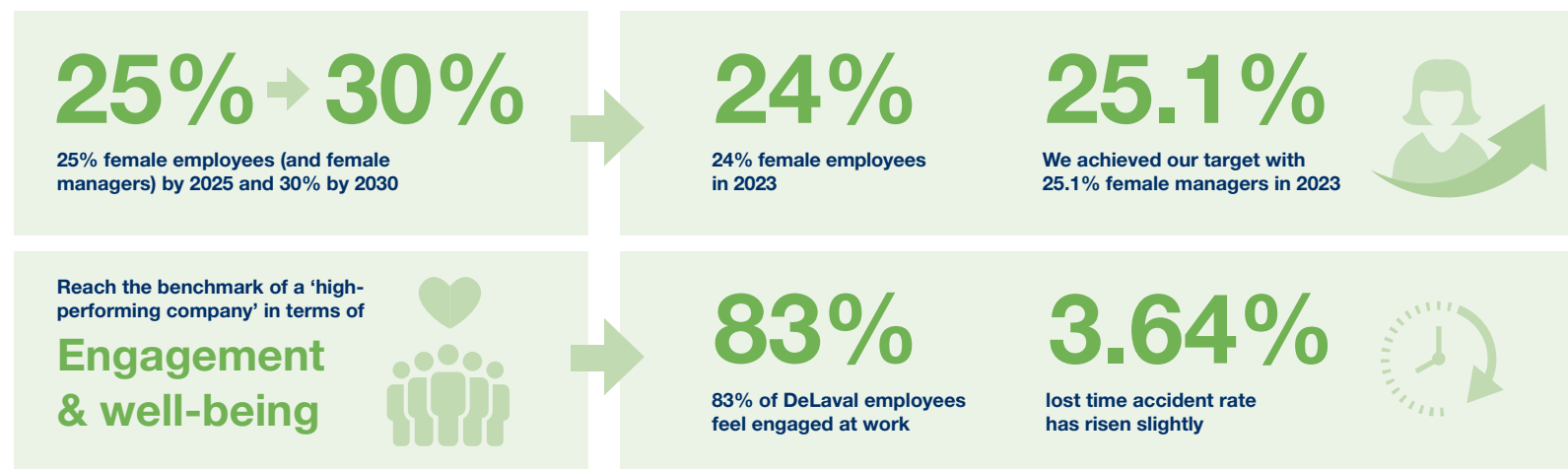


Key environment progress in 2023



Key social targets

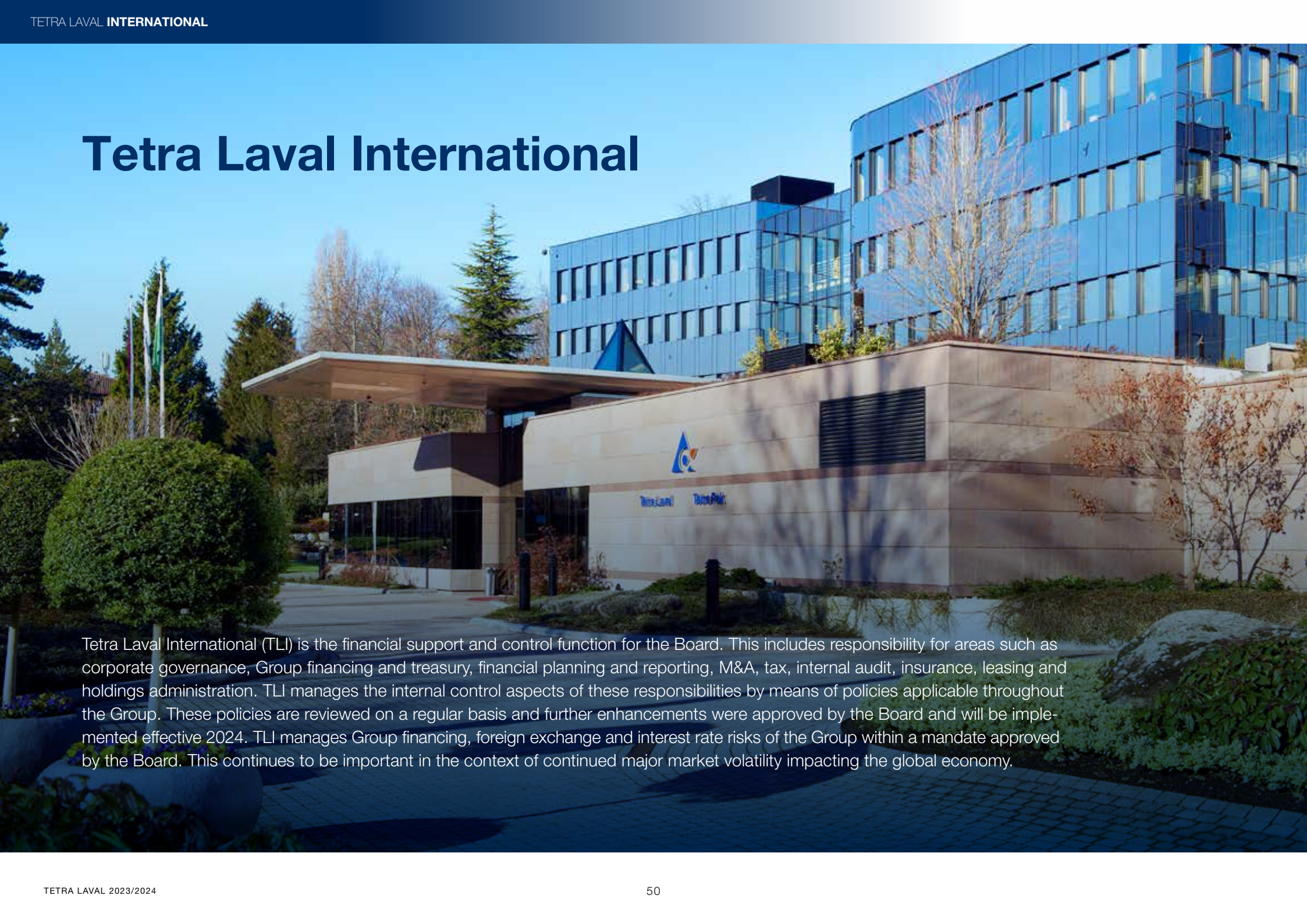
Key social progress in 2023



Our continuous work with animal welfare

Healthy animals are productive animals, and we strive to develop products that are good for the herd through our product development and customer advisory services. In 2023, we launched several new products that have been developed to make farmers' and cows' lives better. We continuously invest in R&D to improve cows' well-being when interacting with DeLaval products and we remain committed to making sustainable food production possible.

Tetra Laval International



Tetra Laval International (TLI) is the financial support and control function for the Board. This includes responsibility for areas such as corporate governance, Group financing and treasury, financial planning and reporting, M&A, tax, internal audit, insurance, leasing and holdings administration. TLI manages the internal control aspects of these responsibilities by means of policies applicable throughout the Group. These policies are reviewed on a regular basis and further enhancements were approved by the Board and will be implemented effective 2024. TLI manages Group financing, foreign exchange and interest rate risks of the Group within a mandate approved by the Board. This continues to be important in the context of continued major market volatility impacting the global economy.

TETRA LAVAL INTERNATIONAL MANAGEMENT 2023



Martyn Zedgitt
President



Robert Norris
Group Financial Planning
and Reporting



Jörn Rausing
Mergers and Acquisitions



Antoine Jomini
Finance



Tim Bishton
Audit



Tuomo Rautiainen
Tax



Maurizio Proietti
Operations

TETRA LAVAL GROUP SUPPORT FUNCTIONS

These functions are responsible for their respective area throughout the Tetra Laval Group.



Lars Holmquist
Group Corporate Affairs Officer



Phil Read
Group Human Resources

Delivering fortified milk to Yemeni school children

A new partnership to deliver fortified milk to 10,000 children is demonstrating how challenges such as inadequate refrigeration and poor infrastructure can be overcome in the country.

Childhood malnutrition and barriers to food distribution

A report by UNICEF states that 45 per cent of children in Yemen experience irreversible stunted growth. Child wasting rates in the country are among the highest in the world, with estimates for some areas surpassing 25 per cent.

Yemen's Ministry of Education runs an emergency school feeding programme covering 1.8 million children together with the World Food Programme. However, the programme faces many challenges, including a lack of refrigeration and potable water, poor infrastructure and logistical challenges.

UHT technology can be part of the solution

To address the issues of food safety and access to safe nutrition in schools, a collaborative effort between HSA Group (an international conglomerate of Yemeni origin), its subsidiary NADFOOD, Tetra Pak Arabia Area and Tetra Pak Food for Development has been established to serve fortified milk to 10,000 children in Yemeni schools. The UHT milk is processed locally in Tetra Brik® Aseptic 125 ml packages and is fortified with micronutrients and vitamins.

UHT technology enables school milk to be stored for 6 months without refrigeration while retaining its nutrients. The technology is critical to the viability of many school milk programmes around the world – including locations with no reliable cold chain and schools without refrigerators. This ensures that even children in the most remote locations can have access to safe, nutritious milk.

“Food security is a real challenge for children in Yemen, and thanks to our UHT technology we can support in providing 10,000 children with the nutrition they need to grow, while encouraging them to attend school,” said Niels Hougaard, Managing Director Tetra Pak Arabia Area.

International collaboration and potential scale up

“To support NADFOOD and Tetra Pak Arabia, we are sharing our experience and best practices used in School Feeding Programmes worldwide,” explained Rafael Fabrega, Tetra Pak Food for Development Vice President. “By collaborating in this way, we can help Yemen's school milk programme be as efficient and effective as possible, while strengthening the bonds between our organisations for future advancements in the fight against childhood malnutrition.”

The International Food Policy Research Institute (IFPRI) will assess the educational and health benefits of the initiative for the 10,000 participating children. The plan is to ramp up the school feeding programme in Yemen to include more children and to investigate the potential for more nutritious, dairy and cereal-based beverage formulations.



45%

of children in Yemen experience irreversible stunted growth

Fortified milk to

10,000

children in Yemeni schools



School milk can be stored for

6 months

with UHT technology





Partnering on school milk in Uganda

Tetra Pak East Africa and Food for Development are working closely with stakeholders to transform the Ugandan dairy industry – to improve nutrition, enhance livelihoods and stimulate economic growth.

With low levels of milk consumption, combined with deficiencies in other key food groups, Uganda has a high prevalence of malnutrition. An estimated 2.3 million children in the country are chronically undernourished and 29 per cent of children under five suffer from stunting. Furthermore, Ugandan schools face poor educational outcomes, with a high level of absenteeism (30 per cent for primary school children) and a low level of conversion from primary to secondary school (25 per cent).

Initiative to improve nutrition and enhance livelihoods

A pilot Uganda School Milk Programme is currently improving both nutrition and educational performance among 50,000 school children by supplying them with safe, nutritious milk. The programme is also creating a predictable demand for dairy products in the local market, enhancing the livelihoods of small holder farmers and stimulating wider economic growth.

The pilot initiative is primarily funded by parents, supported and managed by local dairy processing firms and backed by government policy and resources. Tetra Pak East Africa and Food for Development are also key partners that are driving

the objective of establishing a national school milk programme.

In the proposed national programme, four Tetra Pak customers in Uganda will supply the milk: Pearl Dairy, Brookside Dairy, JESA Farm Dairy and Vital Tomosi. The ambition is to create a national school milk programme that can supply domestic milk across the country, including to non-milk-producing regions.

Aseptic technology ensures food safety and quality

The milk is processed and packaged using Tetra Pak's aseptic technology to help ensure food safety and quality, while providing the children with important nutrition. With aseptic technology, UHT milk can be safely transported to schools without the need for a cold chain as it can be stored at room temperature.

"To improve school children's health and support their development and school performance is very important for the future of Uganda," said Jonathan Kinisu, Managing Director Tetra Pak East Africa. "Through great collaboration with our customers, the government and parents, we are able to provide children with much needed nutrition and our UHT technology ensures we can reach rural areas where cold chains are a challenge."

In August 2023, Tetra Pak East Africa and Food for Development held a School Milk Programme workshop in Uganda to ensure stakeholder alignment and cooperation for scaling up the programme nationally.

Partnering to make a difference

The Uganda School Milk Programme will be essential in improving the health of school children and creating an incentive for them to attend school. In the long term, it will boost literacy rates, drive economic growth and reduce poverty in Uganda. This potential is being unlocked through innovative collaboration between a wide range of stakeholders.

"Pearl is proud to participate in the Uganda School Milk Programme as we strongly believe that this initiative will play a pivotal role in not just addressing the nutritional needs for children but also in sculpting the dairy consumption landscape in Uganda," said Rohit Rajasekharan, Chief Transformation Officer, Pearl Dairy. "As one of the largest stakeholders in Uganda's dairy value chain, our purpose is to change the livelihoods of the small holder farmers in Uganda and make a more resilient next generation for Africa by catering to the nutrition needs to today's children."

Improving child health and school attendance in Bangladesh

A new school milk programme, which involves three Tetra Pak customers, has been established to provide milk to 60,000 Bangladeshi school children.



Childhood malnutrition and lack of formal milk collection

According to figures from UNICEF, millions of children, adolescents and mothers in Bangladesh suffer from malnutrition.¹ At the same time, milk consumption per capita in Bangladesh ranks among the lowest in the world with milk availability of 175 ml compared to the recommended minimum daily intake per capita of 250 ml.²

Low milk availability is mainly due to inadequate collection, processing and packaging in the domestic milk industry. Only nine per cent of milk in Bangladesh reaches industrial processors where it can be processed and packaged into safe dairy products.³

A partnership for better nutrition and school attendance

In 2023, a new school milk programme was launched in Bangladesh to promote child health while improving school attendance and local dairy development. The programme involves Bangladesh's

Ministry of Primary and Mass Education, three dairy processors that are Tetra Pak customers – Pran Dairy, Brac Dairy and Akij Dairy – and a dairy organisation. The goal is to supply 60,000 primary school-age children at 300 schools with safe and nutritious milk.

The programme will boost future milk consumption and help improve the country's daily per capita milk intake. Serving school milk that is processed and packaged using Tetra Pak's aseptic technology will help to ensure food safety and quality, while providing children with much-needed nutrition. Aseptic technology enables UHT milk to be safely delivered to schools without the use of preservatives or refrigeration, including schools located in the remotest regions of Bangladesh.

Tetra Pak will continue to provide its customers and partners with training and technical assistance. Such support will help promote efficiency, effectiveness and food safety. It will also help reduce logistical costs while preventing food loss and waste during transportation and storage.

“Serving school milk that is processed and packaged using Tetra Pak’s aseptic technology will help to ensure food safety and quality, while providing children with much-needed nutrition.”

¹ UNICEF – <https://www.unicef.org/bangladesh/en/nutrition>

² DLS: Department of Livestock Services, Bangladesh.

³ Ibid.

TETRA PAK INTERNATIONAL S.A.

CASE POSTALE 446
70, AVENUE GÉNÉRAL GUISAN
CH-1009 PULLY, SWITZERLAND
TEL +41 21 729 21 11
WWW.TETRAPAK.COM

SIDEL INTERNATIONAL S.A.

AVENUE DE LA PATROUILLE DE FRANCE
76930 OCTEVILLE-SUR-MER, FRANCE
TEL +33 (2) 32 85 86 87
WWW.SIDEL.COM

DELAVAL INTERNATIONAL AB

P.O. BOX 39
GUSTAF DE LAVALS VÄG 15
SE-147 21 TUMBA, SWEDEN
TEL +46 8 530 660 00
WWW.DELAVAL.COM

TETRA LAVAL INTERNATIONAL S.A.

CASE POSTALE 430
70, AVENUE GÉNÉRAL GUISAN
CH-1009 PULLY, SWITZERLAND
TEL +41 21 729 22 11
WWW.TETRALAVAL.COM



TETRA LAVAL S.A.
CASE POSTALE 430
70, AVENUE GÉNÉRAL GUIBAN
CH-1009 PULLY, SWITZERLAND
TEL +41 21 729 22 11
WWW.TETRALAVAL.COM

