

 Tetra Laval

2022/2023



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Theme

Food accessibility

Today, the concept of ‘food accessibility’ is more relevant than ever with a growing human population of over eight billion people – including ten per cent who are undernourished, and food systems that are unsustainable and inefficient. According to the World Health Organization, access to safe and adequate food is a basic individual right. At Tetra Laval, we promote food accessibility by ensuring access to high-quality food production for people all around the world through our products, solutions and know-how. Tetra Pak, Sidel and DeLaval all help maintain consumer access to safe and nutritious food in different ways. Our cutting-edge technology in automation and digitalisation are important enablers to promote food accessibility.

Tetra Pak

This report highlights how Tetra Pak contributes to food accessibility around the world with its technology and innovation in packaging and processing solutions, backed up by automation and digitalisation. Tetra Pak’s ambition is to contribute to secure, resilient and sustainable food systems that provide access to safe, affordable and nutritious food, and minimise food loss and food waste across the value chain. It does this by continuing to deliver high-performance food processing technology and packaging solutions. Tetra Pak also leverages new technologies such as digitalisation and connectivity in aseptic technology to further contribute to less food waste. Partnerships are important and by developing innovative food processing technologies, Tetra Pak can support food and beverage manufacturers to create nutritious and safe foods by, for example, reducing sugar content and minimising food loss and waste.

Sidel

Providing access to safe food has always been at the heart of Sidel’s business. As a leading supplier of beverage and food packaging solutions, Sidel’s equipment design and quality ensure complete reliability in terms of food safety to both customers and consumers. Sidel has developed the world’s first aseptic PET filling equipment with dry preform sterilisation. Approved by FDA in the US, this type of filling equipment is in operation all over the world. Another good example is X-LITE™ Still, a lightweight bottle for non-pressurised still water. Thanks to its very light bottle design, it is the most sustainable and cost-effective PET bottle on the market. Furthermore, Sidel’s development and design of bottles for spring water give health benefits to consumers around the globe.

DeLaval

DeLaval enables farmers to optimise the productivity of their dairy operations through precision farming. DeLaval provides industry-leading products and solutions for various kinds of dairy farms around the world – to help them to supply consumers with good quality milk. Farm efficiency goes hand in hand with reducing environmental impact and improving animal welfare and milk quality. By promoting cow health, longevity and through precision reproduction processes, DeLaval can promote resource efficiency, reduce greenhouse gas emissions and decrease waste. In addition, DeLaval plays another key role in promoting food accessibility around the world by driving the development of milking standards. In 2022, DeLaval began a three-year project to develop four separate milking standards, including the ISO 5707 standard on milking machine installations.



Theme: Food accessibility

Johan Rockström is a Swedish scientist who is internationally recognised for his work on global sustainability. He is joint director of the Potsdam Institute for Climate Impact Research in Germany, professor in Water Systems and Global Sustainability at Stockholm University, and professor in Earth System Science at the University of Potsdam. Rockström is also the Chair of the Tetra Pak Sustainability Advisory Panel.



The need for remodelling global food systems

Johan Rockström is known for his pioneering work on the planetary boundaries framework, which has proven to be fundamental to securing a sustainable future for our planet. Here Rockström gives his thoughts on how global food systems can be remodelled and how Tetra Laval can contribute to increase access to safe and nutritious food within the framework.

How would you summarise the main challenges of today's global food systems?

The global food system has enabled a ten-fold increase in the global human population over the past two and a half centuries, but still in 2020 some 770 million people were estimated to be undernourished. At the same time, more than 2 billion were overweight or obese – the result of overconsuming highly processed, energy-dense, but nutritionally deficient foods, which have been linked to diseases that cause more than a fifth of all adult deaths.

While underdelivering on healthy and sufficient nutrition for all people, the world's food value chain is placing an excessive and growing burden on its natural foundations. For instance, it accounts for 21 to 37 per cent of all anthropogenic (caused by humans) greenhouse gas emissions.

You state that humanity has entered a new epoch – the Anthropocene – how would you describe this epoch?

Science has found that the destructive and harmful practices of global economy, including food production and consumption, have gone too far, as they are pushing the planetary systems out of the Holocene, the geological epoch characterised by overall favourable climate and environmental conditions that enabled the development of agriculture soon after the end of the last ice age. The international scientific community has come to the conclusion that we have entered the Anthropocene, an entirely new period in Earth's history, in which globally aggregated human activities have become the cause of dramatic planetary climate and environmental change.

In fact, our food systems are among the main reasons why six of the nine scientifically identified planetary boundaries have been transgressed. These six boundaries are: loss of biodiversity, phosphorus and nitrogen application, greenhouse gas emissions, land use, freshwater use and release of novel entities. A scientific analysis of the role of food systems in crossing the novel entities boundary has just begun, but we already know that the food sector has exceeded its quota in the other five boundaries listed above.

How must the food sector change to deliver healthy nutrition in an environmentally sustainable way?

The current mainstream practices in the food sector have proven unable to deliver on providing sufficient and healthy nutrition for everyone now and in the future, while returning and maintaining the global food system in the safe operating zone delineated by the planetary boundaries. This is why we need to adopt a new transformational approach.

It is theoretically possible to feed the entire global population projected for 2050 with a healthy, calorically sufficient diet, without compromising the stability of the Earth's systems and the provision of essential ecosystem services. In line with the planetary boundaries framework, global action should consist of three things: 1) a shift to healthier diets, 2) radical improvements in food production practices, and 3) a halving of food loss and waste.

Can you elaborate on the three steps action?

A healthy diet is based on a wide variety of plant-based foods (excluding refined grains and starchy vegetables). Such diets can both support human health and contribute to a healthy planet, for example, by reducing greenhouse gas emissions that would otherwise be released from food production in 2050 by 90 per cent. Some of the most important actions to improve food production practices would be to stop any expansion of agriculture into remaining areas of intact natural ecosystems, to radically increase the efficiency of fertiliser use (producing more food per unit nitrogen and phosphorus) and fertiliser recycling, to bring fossil fuel use to zero, and to manage water and soil sustainably. In the developing world, where much of food is lost at the harvesting or post-harvesting stage, inter-

"On the other hand, we already have a range of solutions to halt the global climatic and environmental deterioration that are backed up by strong scientific evidence and are scalable. Businesses like Tetra Laval, with sustainability at the very heart of their business model, will play an important role."





Shift to healthier diets



Radical improvements in food production practices



Halving of food loss and waste

ventions should focus on equipping farmers with the information, knowledge and infrastructure that would combat the major causes of this food loss. In the developed world, food waste reduction measures should focus on retailers and consumers, for instance by educating on the accurate meaning of 'best before' and 'use by' labels, good storage practices and techniques for utilising leftovers.

How do you view 'food accessibility' in the light of the need for transforming global food systems?

Access to safe and nutritious food is a basic human right. Access to food must be a top priority for the international community – particularly in the light of unbalances in today's food systems with water scarcity, soil erosion, massive starvation and price volatility due to the war in Ukraine, just to mention a few.

This means that access to food at affordable prices and that is safe – from food production to packaging and throughout the entire chain to consumers – is fundamental. This ambition is also in line with the United Nations second Sustainable Development Goal: to eradicate hunger and malnutrition by 2030, making sure that all people, especially children, have sufficient and nutritious food all year round.

How can the Tetra Laval Group contribute to increased access to safe and nutritious food?

Clearly, the escalation of the global climate and environmental crises cannot be stopped and reversed without the participation of the global food sector. As a large corporation with presence in more than 160 countries, the Tetra Laval Group can certainly play an important role in transforming global food systems and contributing to safe and nutritious food for everyone.

More specifically, what can Tetra Laval contribute with?

The products, solutions and services that Tetra Laval offers within food processing and packaging, and milking equipment for dairy farming, contribute to the supply of safe and nutritious food. But its work throughout the whole value chain is just as important – from food production to the end-consumer. For instance, by reducing carbon emissions at every stage of the food supply chain or bringing innovations to the market to reduce food loss and waste. In addition, Tetra Pak is a good example with its collaboration with multiple partners such as the United Nations Food and Agriculture Organisation's Committee on World Food Security.

Are you still optimistic about the future of our planet?

I believe that pessimism is unhelpful, although there are severe difficulties to live up to the commitment of the Paris Agreement, including limiting global warming to 1.5 degrees Celsius. On the other hand, we already have a range of solutions to halt the global climatic and environmental deterioration that are backed up by strong scientific evidence and are scalable. Businesses like Tetra Laval, with sustainability at the very heart of its business model, will play an important role. So, all in all, some elements are moving in the right direction, but we need to ramp up the pace of the sustainability transition. We now need collective action more than ever before.

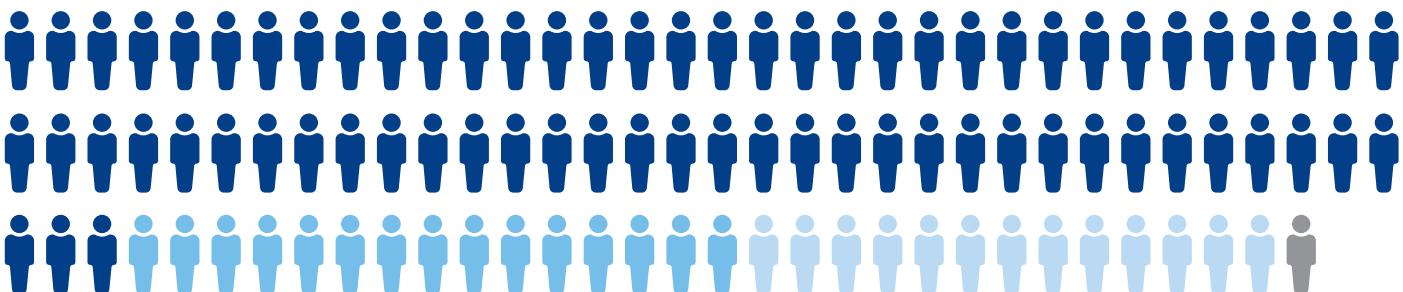
The Tetra Laval Group consists of three industry groups, Tetra Pak, Sidel and DeLaval, all focused on technologies and services for the efficient and sustainable production, processing, packaging and distribution of food. The head of each industry group has operational management responsibility for the 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.

NUMBER OF EMPLOYEES, DECEMBER 2022
TETRA Laval GROUP
33,873

TETRA PAK
23,733

SIDEL
5,096

DELAVAL
4,783

OTHERS
261

NET SALES 2022, MILLION EURO
TETRA Laval GROUP 15,290




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.



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.

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.

Good revenue growth during a very challenging year

Despite good revenue growth, we experienced a very challenging year regarding both profitability and cash flow. The Group's sales amounted to €15.3 billion, which is a nominal increase of 11 per cent compared with 2021. At comparable exchange rates, sales increased by 7 per cent. However, operating profit decreased significantly, due to unprecedented increases in raw material and logistics costs as well as supply shortages. This in combination with a build-up of safety stock, resulted in a material decline in cash flow. The price increases required to compensate for cost inflation have been implemented gradually and during 2023 we expect to catch up.

The sanctions against Russia led Tetra Pak to exit the country after 62 years of presence. In our entire history, this is the first market to be exited. Sanctions have in the past exempted the food industry in order not to hinder the supply of basic food to ordinary consumers. We divested our business to local management and the new company now operates as an independent entity, under a new name and is not affiliated to Tetra Pak. During 2022, we donated €20 million in aid to Ukraine, and we did our utmost to help our Ukrainian customers to continue their operations.

Despite these challenges, we managed to deliver overall growth, particularly in India, Mexico, the Maghreb, and the middle East, while China declined as a result of COVID-19 lockdowns.

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

Tetra Pak – strong revenue growth in a demanding market environment

Revenue rose to €12.5 billion which at comparable rates and scope is an increase of 8 per cent. Packaging solutions sales rose by 5 per cent, to deliver 193 billion packs globally, while Processing Solutions and Services grew by 8.1 per cent and 7.5 per cent respectively. For Services this followed 9 per cent growth the previous year – which is an outstanding achievement.

Automation and digitalisation are key drivers to further integrate and optimise our customers' operations – to help them to take faster and more precise decisions, especially in terms of equipment operation and performance, facility operation and integration. An important step in this direction is our recently signed long-term development agreement with Accenture that will enable a step change in end-to-end automation.

We made good progress on our journey to develop the world's most sustainable food package by testing a new fibre-based barrier with the aim to replace the aluminium layer – a first within food carton packages distributed under ambient conditions. We became the first carton company in the food and beverage industry to launch a cap made from certified recycled polymers. We also partnered with leading beverage brands across Europe to launch the world's first tethered caps on carton packages, to help prevent litter. To advance carton collection and recycling, we invested over €20 million in different projects around the world.

In 2022, one of the biggest organisational transformations ever was completed that will fundamentally change the way we operate. This will enable us to optimise our operations, promote flexibility, ensure shorter lead-times and reduce costs.

During 2023, we forecast good revenue growth, significantly increased profitability and strong cash flow by effectively managing the supply chain, cost and pricing structure.

DeLaval – Fourth year of record sales

Total net sales amounted to €1.4 billion, which is an overall increase of 11 per cent. At comparable rates and scope, revenue increased by 8 per cent, which was equally distributed between capital equipment and aftermarket business. The growth of capital equipment was driven by Automated Milking Systems. However, a significant portion of the growth derived from price increases. The decline in operating margin was mitigated by the pruning of the product portfolio in recent years,

productivity improvements and strong growth of our recently launched new products.

New products launched during the year included more versions of our E-series rotary milking parlour that provides even greater efficiency. We also introduced new improvements to our very successful robotic milking series VMS™ V300, as well as our revolutionary Evanza™ milking cluster, which is not only faster and more efficient, but is better for cows and farm employees.

At our demonstration farm, Hamra Farm in Sweden, the decision was taken to invest in a big state-of-the-art dairy with new barns, new automated milking robots and more digital solutions. The farm serves as a showcase and as an R&D centre where we test our products.

In early 2023, we divested DeLaval Cleaning Solutions in the US, as a result of our product portfolio review. There was no customer overlap with DeLaval's customer base. In 2023, we expect continued net sales growth and improved profitability based on actions taken in 2022 and a solid order backlog.

Sidel – record high order intake

Revenue increased by 2 per cent to €1.4 billion thanks to favourable exchange rates. At comparable rates and scope, revenue decreased by 2 per cent. Following the pandemic, there has been a huge demand among food and beverage producers to invest in packaging equipment and increase their production capacity. Sidel therefore had a very high order intake, but the global shortage of components significantly hampered invoicing. Order intake for capital goods increased by 3 per cent, which slightly surpassed an already outstanding 2021. Even more encouraging was the increase in service sales, up 11 per cent at comparable rates, as our customers needed to maintain and improve their existing production lines. Despite the challenges, Sidel achieved a positive operating result, excluding restructuring costs. We can conclude that Sidel has managed to develop into a more robust company compared to previous macro-economic crises.

Concerning innovations, we launched Aseptic PredisX4, which is an integrated blow-fill-cap solution that incorporates consolidated Predis™ dry preform sterilisation. We also developed 1 SKIN™, a label-less recycled PET bottle with a tethered cap and a unique streamlined design for sensitive beverages.

It is made from 100 per cent recycled PET (rPET) and was awarded Best in PET by the 2022 Global Water Drinks Award.

In early 2023, Sidel acquired Makro Labelling, Srl, an innovator and leader in modular labelling machines, based in Italy. Makro is the perfect complement to add to our existing labelling business, enabling us to offer a complete range of labelling technologies to customers, and broadening our reach within the Food, Home and Personal Care, and Wine and Spirits markets.

In 2023, we expect Sidel to grow sales, thanks to a solid order backlog, provided that components are available. An improvement in operating result is also forecasted.

Growth, sustainability and innovation – remains in focus for 2023

We forecast good revenue growth, but product volume growth will be more challenging given the decline in purchasing power among consumers globally. By introducing new innovative products, we are committed to supporting our customers in giving the retailers and consumers an outstanding offer – to ultimately enhance volume growth. In addition, we will continue our high investment levels in sustainability, digitalisation and a stronger local presence in certain markets.

The theme of this year's report is food accessibility. For decades, our aseptic technology has made safe food accessible to more people around the globe, without the need for preservatives or refrigeration.

During 2023, we forecast good revenue growth, significantly increased profitability and strong cash flow as a result of measures taken in 2022 and a solid backlog.

Lars Renström



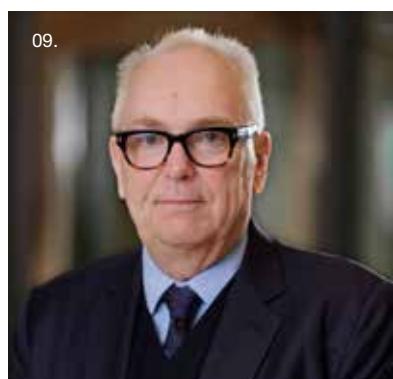
A supervisory board to all Tetra Laval units

The three Tetra Laval industry groups have 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.



01. 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. He is currently also Chairman of the Board of Assa Abloy AB.

02. 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.

03. Paul Conway

A non-executive director since 2014.

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

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.

04. Nigel Higgins

A non-executive director since 1st 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.

05. Ola Källenius

A non-executive director since 1st 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.

06. 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.

07. 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).

08. Kirsten Rausing

An alternate director since 1983 and a non-executive director since 1991. Kirsten Rausing retired on 1st January, 2023.

09. 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 and of Ocado PLC. 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. For over 70 years, we have innovated to deliver on our purpose to commit to making food safe and available, everywhere and we promise to protect what's good: food, people and the planet. We do this by working closely with our customers, consumers, partners and people all over the world.

Our commitment

We mean to protect food, through our processing, packaging and service activities. This involves protecting people both inside and outside our organisation, as well as protecting the future of our planet, our customers and our company.

We work together with our customers to provide food and beverage processing and packaging solutions that reach all corners of the world. We're passionate about delivering food of the highest quality and safety to people, wherever and whenever it's needed.

Tetra Pak was founded by Dr. Ruben Rausing on the idea that a package should save more than it costs. Armed with this mindset today, our ambition is that our commitments, solutions and partnerships help protect our planet by leaving a positive impact on our climate and resources.

We are committed to reduce the environmental footprint of our products and services, and consist-

ently pursue and initiate collective actions that will help create a sustainable tomorrow without compromising food safety or quality.

Our customers

We provide customers from across the food industry with a broad range of dairy products and dairy alternatives, beverages, prepared foods, cheeses, ice creams, wines, spirits and powdered products.

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 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 packages**
- **Processing equipment**
- **Packaging equipment**
- **Distribution equipment**
- **Automation solutions**
- **Services**

NET SALES 2022

€12.495
BILLION

SALES IN

>160
COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2022

23,733

CUSTOMER INNOVATION CENTRES

6

TECHNICAL TRAINING CENTRES

8

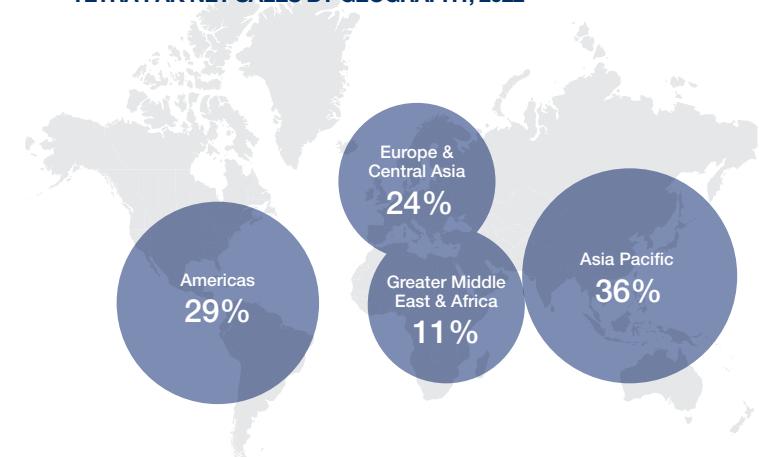
RESEARCH AND DEVELOPMENT
CENTRES

6

PRODUCTION PLANTS

52¹⁾

TETRA PAK NET SALES BY GEOGRAPHY, 2022



TETRA PAK PACKAGING MATERIAL NET SALES
PER CATEGORY, 2022

Liquid Dairy Products 57.9%		Plant-based products 7.9%	
Juice & Nectar 21.5%		Food 4.5%	
Other beverages 4.9%		Others 3.3%	

¹⁾ Production plants: packaging material converting factories 29, closures (caps) factories 4 (stand alone), additional material strips & films 3, additional material straws factories 2 (stand alone), Processing solutions and packaging equipment production facilities 14.

Market

Sustainability is at the core of the Tetra Pak agenda and it is shaping the way we do business. For the Food and Beverage industry, sustainability is rapidly moving from a differentiator to an asset to remain business-relevant. This is not only due to emerging regulations in the area but also to consumer demands that require businesses to react. Together with convenience and premiumisation, these trends are shaping Tetra Pak's food and beverage categories and are guiding our strategy.



DAIRY PRODUCTS

White milk still accounts for the largest proportion of total consumption. Milk continued to grow in 2022 and is expected to increase by 2.3 per cent around the world until 2025 – although except in Europe and North America, which are expected to see declines due to changes in consumption habits.

Natural cheese consumption is forecast to annually increase by 2.0 per cent until 2025 as brands focus on turning pandemic-induced habits into new routines while leveraging consumer enthusiasm for cooking and nutrition.



JUICE AND NECTAR

Juice and nectar consumption remained stable in 2022 driven by the return of out-of-home consumption and to immunity-boosting positioning. Innovation around sustainability and functional juice drinks is driving new product launches, while processing technology solutions are opening new product segments.



ICE CREAM

Annual ice cream consumption is forecast to grow by 3.0 per cent between 2022 and 2025. Indulgence, flavour innovation and exciting snack formats are dominating the global ice cream landscape. Environmental concerns are driving supply chain innovation and water reduction.



PLANT-BASED PRODUCTS

Plant-based beverage consumption in recent years has been annually growing at 0.9 per cent, driven by the consumption of rice, nuts, grains and seeds-based beverages. Growth in the plant-based category is expected to accelerate at an annual rate of 2.4 per cent until 2025, including soy-based beverages.



FOOD

Growth in packaged food categories increased due to the pandemic – particularly in categories such as packaged tomatoes, vegetables and sauces. Due to the rising cost of living consumers continue to cook at home post-pandemic, which drove the category in 2022.



POWDER

Growth in dairy powder consumption is being driven by flavoured milk/whey growth. Innovation focuses on nutrition, functional health benefits and sustainability. Perceptions of plant-based foods as being healthier and more ethical are set to shape new product launches.



OTHER BEVERAGES

Packed water maintained its positive trend in 2022 with growth of 4.7 per cent from both plain and flavoured/functional segments. The water category is driven by sustainability and functional claims. Ready-to-drink tea and coffee, sport and energy drinks are also growing, driven mainly by Asia and America.

Technology

Technological collaboration for sustainable solutions

Tetra Pak develops innovation partnerships throughout the value chain – to create value for all partners and develop new long-term business opportunities. This approach differs from traditional customer-supplier relationships where customers specify what they want and suppliers deliver.

"To lead the sustainability transformation, we create and maintain an ecosystem of partnerships where selected partners bring their expertise to co-create and develop the technologies necessary to optimise the sustainability performance of our packaging solutions," says Carina Ryden Pettersson, Director Materials & Recycling Partnerships. "We have developed this way of working for many years with partners from materials suppliers and customers to end-of-life recyclers."

This approach has supported the development of non-foil barrier technologies in recent years. In 2022, we completed a 15-month commercial technology validation of a non-foil aseptic packaging system, which includes both a non-foil barrier packaging material and a filling machine equipped with the necessary non-foil sealing technology. In 2023, the industry-first fibre-based barrier packaging solution will be verified for the European market.



High-performance packaging production solutions

Sidel helps package beverages, food, home and personal care products in PET, can, glass and other materials. We are passionate about providing complete solutions that fulfil customer needs and boost the performance of their lines, products and businesses.

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 factory of tomorrow, through advanced systems and services, line engineering, eco-solutions, and other innovations.

Sidel has over 40,000 machines installed in more than 190 countries, and over 5,000 employees worldwide who are passionate about providing equipment and service solutions that fulfil our customer's needs. As a partner, we apply strong technical knowledge, packaging expertise and smart data analytics to optimise performance.

Our strategy

Our strategy is customer driven, with a complete and innovative portfolio and high-performance orientation. Our aim is always to deliver the value our customers need to reach their goals. To do that, we must first understand 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 with equipment that is easy to service, focuses on digitalisation and sustainability, and lowers our customers' Total Cost of Ownership. Our packaging is designed to contribute to a better environment and our complete solutions minimise water, energy and material consumption.

Our approach to improving costs and increasing competitiveness never compromises on food safety and security, giving our customers and consumers peace of mind.

Our solutions

Sidel serves brand owners, manufacturers, co-packers, and other customers active across beverage businesses as well as in the food and Home and Personal Care (HPC) industries. We are a leading provider of blowing, filling, labelling, material-handling, end-of-line and engineering solutions for multiple applications. We deliver equipment and services for primary, secondary and tertiary packaging, and we also offer processing equipment, supplied by Tetra Pak, as well as automated warehousing solutions with our partner Elettric80 that enable customers to work end-to-end with one partner. We service both Sidel and non-Sidel equipment, with the latter served by Competek, part of Sidel Group. Gentlebrand provides branding and design services as packaging tailors. And finally, Novembal, also part of Sidel Group, boasts over 60 years as the specialist in plastic cap design and injection.

Our customers

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

NET SALES 2022

€1.440
BILLION

SALES IN

>90
COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2022

5,096

TECHNICAL TRAINING CENTRES

14

RESEARCH AND DEVELOPMENT CENTRES

9

PRODUCTION PLANTS

17

SIDEL EQUIPMENT NET SALES BY GEOGRAPHY, 2022



SIDEL EQUIPMENT NET SALES BY MARKET SEGMENT, 2022

Water	20.2%		23.7%	
Carbonated Soft Drinks	21.8%		7.1%	
Beer, Wine & Spirits	12.6%		Food, Home and Personal Care	
			13.9%	
			Others 0.7%	

Market

In 2022, the Beverages, Food, Home and Personal Care industries continued to innovate with a focus on sustainability, health and variety. Combined, these market segments sold 4069 billion units of consumer-packaged goods during the year. Global data analysts forecast that approximately 372 billion additional units will be sold by 2026 (2.2 per cent compound annual growth rate (CAGR) between 2022 and 2026). Source: GlobalData, March 2023.



WATER

Water is expected to account for the greatest share of consumption growth in the coming years due to the shortage of potable tap water in several geographic regions along with the continued health consciousness of consumer. Growth is being driven by increased consumption notably in China, India, Thailand and Nigeria. The growing consumer aversion to sugar along with increasing sugar taxes are also boosting overall demand. In the water market, sustainability is driving packaging innovation as leading brands raise their sustainability ambitions. The revival of on-the-go and on-premises consumption enabled smaller pack sizes to regain volumes. Flavoured water, premium brands, and eco-friendly packaging and functionality are other growth areas. In 2022, the total market was 365 billion units, with a projected market of 416 billion units in 2026.



CSD – 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. The market is being driven by increasing demand for products linked to health and alternatives to classic sweet flavours. Premiumisation, low-calorie variants, and more adventurous flavours are driving product innovation. Furthermore, the reinforced focus on sustainability is requiring producers to take steps to lower their environmental impact through sustainable packaging solutions. In 2022, 291 billion CSD units were sold with the market expected to amount to 318 billion units in 2026.



JUICE, NECTAR, SOFT DRINKS, ISOTONIC AND TEA

In 2022, the total market for juice, nectar, soft drinks, isotonic and tea amounted to 372 billion units, with the market projected to increase to 428 billion units in 2026. In response to heightened consumer health concerns, the consumption of juices is expected to grow, along with energy drinks particularly in Asia, which is also the market leader for Iced/Ready-to-Drink Tea.



LIQUID DAIRY PRODUCTS – LDP

The LDP market and the plant-based alternatives are very dynamic, driven by population and spending growth. Significant growth is expected in drinking yogurt in China, as well as milk in India. Product innovation is driven by increased demand for plant-based drinks, which appeals to consumers concerned about their health and the environment. Diversification with premium, making the most to enhance the customer band experience, reduced sugar, eco-friendly for improved functionality, and a focus on health benefits (e.g. boost immunity) are key growth drivers for producers. In 2022, the total market was 435 billion units, compared with 411 billion in 2021, with a projected increase to 480 billion units in 2026.



FOOD, HOME AND PERSONAL CARE – FHPC

In these markets, the increasing adoption of PET, including the growing use of recycled PET – especially in food – is driven by its transparency, branding opportunities (design freedom), cost efficiency and 'green potential'. Therefore, regulations will increasingly require producers to reduce their carbon footprint by integrating recycled materials and lightweighting into their containers. With the rise of e-commerce, digitalisation and the Internet of Things, packaging is becoming a more important consumer communication channel for brand owners. In 2022, the total market was 2,124 billion units and is projected to increase to 2,284 billion units in 2026. Flexible packaging is the most common package in these markets while PET is the fastest growing packaging material driven by food oil.



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, new flavour options and broadened sustainability claims (beyond recyclable packaging). Hard/Spike seltzers are growing in popularity, which offers an alternative to older, similar segments. In 2022, the total market was 482 billion units compared with 463 in 2021, with the market projected to grow to 514 billion units in 2026. While can packaging for beer continues to grow, glass, and particularly the sustainable 'refillable' options are seeing increased demand.

Technology

New sustainable bottle washer with ultrasound technology

Sidel has developed a new sustainable bottle washer, the 'Hydra Ultrasonic', with ultrasound technology for its beverage customers. Sound waves travel at frequencies so high that they cannot be heard by humans. This technology is essential for measuring, detecting, cleaning and sanitising, and it is the first time that this technology is applied to bottle washing. Ultrasound enhances the washing process compared to standard machines since an additional mechanical effect allows the customer to wash bottles at lower temperatures, in less time and with a reduction in the use of chemicals.

Andrea Solfa, Product Manager at Sidel explains: "We sought out to develop a more sustainable machine and answer the increasing market demand for returnable packaging. Both returnable glass and refillable PET



(RefPET) bottles can be treated with this new bottle washer. We calculated a saving of 20 per cent steam, 20 per cent of water and 2 per cent of electricity despite the addition of the ultrasound plates compared to traditional bottle washers."

Sidel has filed patent applications for the bottle washer ultrasound technology, and is looking forward to its impact for customers and the planet.

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 their overall quality of life.

Strategy

In 2022, we updated our strategy to sharpen our focus and future-proof both DeLaval and our customers. Our revised strategy is built on our sustainability model and supports our vision to make sustainable food production possible.

At DeLaval, our vision is at the core of everything we do. 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 as well as farm and herd management, animal traffic control, feeding, cooling and manure handling.

DeLaval customers can also choose from a wide range of services 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 introducing a new working method on the farm, a new parlour, better hygiene, more data to make better decisions, and the promotion of healthier cows to increase their milking lifetime.

NET SALES 2022

€1.360
BILLION

SALES IN

>100
COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2022

4,783

TECHNICAL TRAINING CENTRES

7

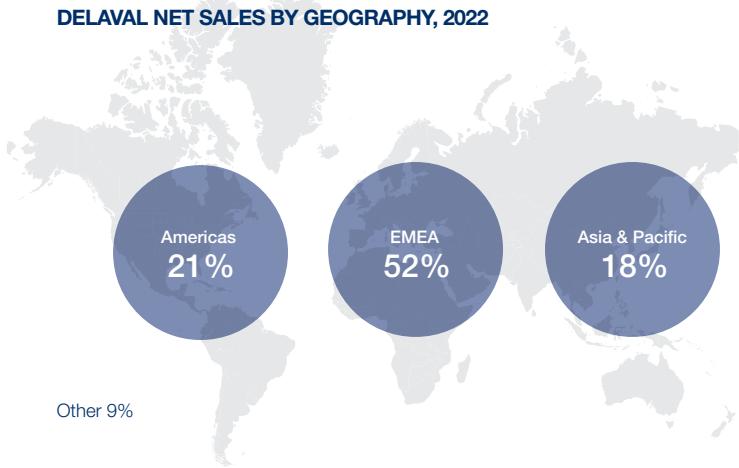
RESEARCH AND DEVELOPMENT
CENTRES

7

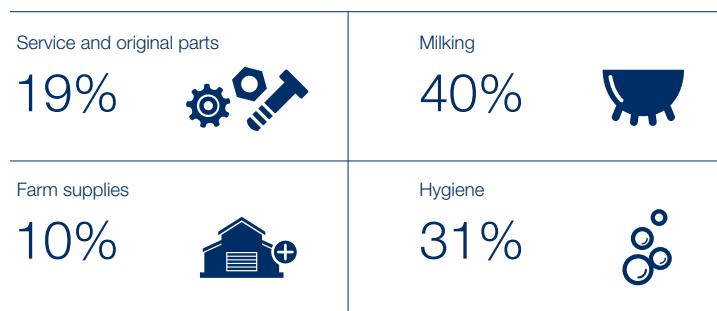
PRODUCTION PLANTS

14

DELAVAL NET SALES BY GEOGRAPHY, 2022



DELAVAL NET SALES BY PRODUCT SECTOR, 2022



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

Inflation, supply chain disruption and geopolitical tension around the world have increased challenges for DeLaval.



DEMAND FOR DAIRY WILL OUTSTRIP SUPPLY

Global milk production is expected to annually grow by an average of 1.8 per cent between 2021 and 2026. However, the demand for dairy products is expected to continue to grow by 2.0 per cent annually.



FARM CONSOLIDATION

The long-standing trend of consolidating milk production, which is giving rise to large farms, will continue in the foreseeable future. This will create business opportunities for DeLaval and shape how it interacts with customers.



SUSTAINABILITY

Topics related to sustainability are increasingly important with new policies and subsidies emerging. As a market leader in the industry, DeLaval has opportunities to innovate and offer products and services that make dairy farmers more sustainable.



DIGITALISATION

DeLaval already offers a range of digital products and services that are creating new business opportunities and more value for farmers.



LABOUR COSTS AND SHORTAGES

Increasing labour costs and shortages continue to put pressure on farmers. DeLaval offers various farm automation solutions that can help farmers to overcome these challenges.

Technology

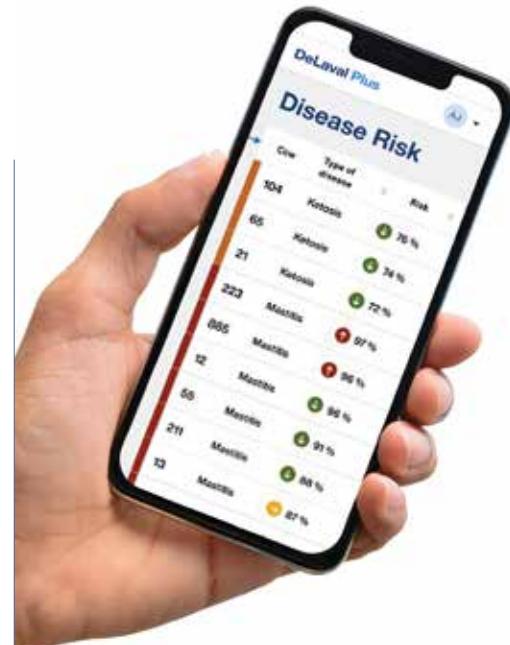
Artificial intelligence enhances farmer insight

DeLaval Plus is a portal for an ever-growing set of cloud-based services that enable advanced farm management analysis and reporting. By drawing on the latest in data processing, farmers can ensure that their cows are healthy, well looked after, and milked efficiently, safely and sustainably. The portal is powered by DeLaval DeepBlue, which uses artificial intelligence to find patterns and trends in data from connected DeLaval farms all around the world.

"We've come a long way with farm data in recent years, but DeLaval Plus takes data insight to the next level by drawing on tens of millions of data points from around the world to empower farmers to make better everyday decisions," explains René Kolbach, Business Development and Go to Market Manager. "DeepBlue will continue to evolve and better serve our customers as more farms and data points are connected globally."

As of March 2023, DeLaval Plus had been launched in 8 markets around the world, with plans to introduce the portal to another 12 countries during 2023.

"DeLaval Plus will also support our dealers who are our essential business partners," says Kolbach. "Enhanced analysis of the performance of DeLaval milking systems through DeLaval Plus will enable our dealers to better understand farmer needs and deliver an even higher level of service and more proactive support to their customers."



"We've come a long way with farm data in recent years, but DeLaval Plus takes data insight to the next level."



TETRA PAK

The growing importance of mental health and well-being

Consumers perceive their physical and mental health to be more important than before the COVID-19 pandemic. Around 65 per cent of consumers globally believe that being healthy is being safe. More consumers are seeking guidance and products that help them to eat more healthily, manage their weight, stress and energy levels, and boost their immune system. This places greater importance on packaging in terms of highlighting the wellness benefits of the product, and features such as right-sizing and reseal functionality. Besides being concerned for their own health, consumers are also concerned for the health of the planet and look for sustainable packaging, which to them means recyclable, biodegradable or made of recycled materials.



TETRA PAK

Coping with the cost-of-living crisis

Globally, 55 per cent of consumers say that price hikes will have a fair amount or a great deal of impact on their purchasing power. In South Africa, Japan and Turkey, around two-thirds of consumers say that the cost-of-living crisis will impact their purchasing power. In response, consumers are planning their shopping more, are indulging less by buying fewer non-essentials and are choosing more budget brands. This may also mean that some consumers might temporarily abandon sustainable grocery brands to save money.

But consumers adapt and 54 per cent say they are cooking more at home and 31 per cent are shopping more in bulk as a response to the rising cost of living. For packaging, size adaptation is key as larger packages can bring cost savings for those who can afford to buy in bulk, while smaller packages can provide an affordable indulgence.



DELAVAL

Farm consolidation continues

The trend of fewer and larger farms continues around the world, and is likely to be driven by inflation, increased feed and fuel prices, and economic instability at least into 2023. In Europe for example, the average farm size is estimated to increase around 4 per cent each year between 2021 and 2025, while the total number of farms is expected to annually decrease by about the same amount. Increased farm profitability is the most important driver behind dairy farm consolidation.

Farm consolidation means a greater demand for large-scale farming solutions. This includes advanced technology and automated solutions that simplify decision making on farms and help manage sustainability, promote animal welfare, and overcome labour shortages.



SIDEL

The importance of responding to consumer sustainability demands

Consumers are demanding greater focus on sustainability throughout the value chain. In terms of packaging, this means promoting resource efficiency while ensuring materials are recycled, bio-based, re-used and sourced responsibly.

Sidel is responding to these consumer requests in a powerful way. The company reduces the quantity of materials in its packaging solutions, and has developed the lightest bottle in the world – a 500 ml PET water bottle that weighs only 6.3 grams. It also develops equipment that can handle an increased amount of recycled content. This includes blowers that can blow up to 100 per cent r-PET (recycled) bottles with no impact on quality and a new bottle washer with ultrasound that reduces steam and water consumption by 20 per cent compared with the traditional solutions.



DELAVAL

Growing demand for precision dairy farming

More and more dairy farmers are drawing on data-driven precision dairy farming to promote animal welfare and cow longevity, which are essential to achieving more profitable and sustainable dairy operations. Farmers are demanding increasingly advanced sensor technologies and algorithms to monitor individual cow health and welfare 24/7. The systems are driven by a huge amount of data, but through simple interfaces, make farmers aware of particular animals that are at risk of disease or illness.

Precision dairy farming is being driven by the greater use of automated milking around the world. Europe is leading the way together with farms around the world looking to reduce their use of antibiotics and focus on animal welfare.



SIDEL

New recycled PET bottle meets the growing trend of healthy living

Sidel has developed 1SKIN™, a label-less recycled PET bottle to meet the growing trend of healthy living and user-friendly packages. 1SKIN™ has a unique streamlined bottle design for sensitive beverages like juices, teas and flavoured drinks, that efficiently communicates brand messages and sustainability commitments. The design promotes safety and protects the integrity of products with a long shelf life. The new 1 L bottle has been developed to optimise material usage and for easy recycling made with readily available 100 per cent recycled PET (r-PET). The 1SKIN concept is designed to deliver an appealing drinking experience, with an ergonomic grip for comfortable pouring. After its success at the fair drinktec 2022, the 1SKIN™ bottle won the award for Best in PET at the 2022 Global Water Drinks Awards at the 19th Global Water Drinks Congress.



Strong top-line growth despite a tough market environment

In the face of macro-economic and geopolitical volatility, we achieved a 5.8 per cent growth in net sales in 2022, and sustained good market share across all our three businesses.

2022 was characterised by several macro-economic challenges – including geopolitical tension, COVID-19 aftershocks, logistical and supply chain issues as well as rising input costs. Our equipment delivery was particularly affected by the shortage of semiconductors, while inflation remained a big concern, which negatively impacted our profitability and cash flow.

The Russian invasion of Ukraine, which we strongly condemn, led us to eventually exit our Russian operations after 62 years as we divested our business to local management. During the year, we continued to support Ukraine by enabling the supply of essential foods through our customers, as well as through donations by Tetra Laval.

Navigating the externalities

Against this challenging backdrop, we increased our total net sales to €12.5 billion¹⁾, delivering 193 billion packs globally, which is equivalent to 77.6 billion litres of food and beverages. Our three businesses – Packaging Solutions, Processing Solutions and Services – grew by 5.3 per cent, 8.1 per cent and 7.5 per cent respectively. Most of our markets grew compared to 2021 as many registered double-digit growth, with the notable exception of China that declined as a result of COVID-19 lockdowns.

We navigated this turbulent environment by focusing on three areas: our purpose, our customers and our strategy. Our purpose – We commit to making food safe and available, everywhere, and we promise to protect what's good: food, people and the planet – continued to be the guiding force as our employees rallied behind it. This demonstrated the resilience of our company and its role in supporting global food systems. Our customer-centric approach

was reflected in the world-class net promoter scores of our touch point customer surveys.

The relentless pursuit of our strategy

Our Strategy 2030, which revolves around four pillars – delivering food safety and the best quality, integrating and optimising customer operations, innovating for customer growth, and leading the sustainability transformation – was also instrumental in keeping us on course.

The theme of this year's report is food accessibility, which is central to both our purpose and strategy. For decades, our aseptic technology and solutions have helped make safe food accessible to more people around the world, without the need for preservatives or refrigeration. Looking into the future, we are exploring more game-changing solutions, partnering with start-ups and technology incubators, in areas such as alternative proteins, new food fermentation and other solutions to enhance nutrition and resource efficiency.

Being a leading food processing and packaging solutions company, our customers rely on us to meet internationally leading food safety standards – both now and in the future – which explains our continuous investments and uncompromising approach towards quality.

Automation and digitalisation are key drivers to further integrate and optimise our customers' operations – to help them to take faster and more precise business decisions, especially in terms of equipment operation and performance, facility operation and business integration. An important step in this direction is our recently signed long-term agreement with Accenture that will enable a step change in codification and end-to-end automation.

Innovation remained firmly embedded into

our agenda as we introduced many industry-firsts, particularly in sustainability, where we aim to lead the transformation within the industry by taking an integrated view of various interconnected challenges such as climate, circularity and biodiversity, while driving food safety and availability. In 2022, we were recognised for the fourth consecutive year as part of the CDP 'A List' for our action on climate change and forests, and our ambition to achieve net-zero greenhouse gas emissions across the value chain by 2050 was approved by the Science Based Targets initiative (SBTi).

We made good progress on our journey to develop the world's most sustainable food package by testing a new fibre-based barrier with the aim to replace the aluminium layer – a first within food carton packages distributed under ambient conditions. We became the first carton company in the food and beverage industry to launch a cap made from certified recycled polymers. We also partnered with leading beverage brands across Europe to launch the world's first tethered caps on carton packages, to help prevent litter. In 2022, we sold 8.8 billion plant-based packages²⁾ and 11.9 billion plant-based caps, which resulted in significant CO₂ savings compared to fossil-based plastic³⁾. To advance carton collection and recycling, we invested nearly €30 million, both operational and capital expenditures, in 2022 in different projects around the world.

Driving cultural transformation

Our strategy is underpinned by cultural enablers that will make us more productive, dynamic and capable to meet our stakeholder needs. During 2022, we completed one of our biggest ever transformations, in the form of a

new operating model that aims to amplify the customer voice, simplify how we work, empower our teams and adapt to local needs while maximising scale advantages. It's still early days, but the new model has been well received internally, as indicated by our improved employee engagement survey results.

Looking ahead

2023 will present its own particular challenges and opportunities, but we expect to grow both our top line and bottom line through targeted investments in growth opportunities, while effectively managing our supply chain, cost and pricing structure. To realise our ambitions and win in this complex and uncertain environment, we remain committed to enhance customer centricity, drive cultural change and continue to execute on our strategy.

I am confident that with the dedication and professionalism of our colleagues around the world – together with support from our suppliers and extended partners – we will be able to create even greater value for our customers and stakeholders in 2023.

Adolfo Orive



“Looking into the future, we are exploring more game-changing solutions, partnering with start-ups and technology incubators, in areas such as alternative proteins, new food fermentation and other solutions to enhance nutrition and resource efficiency.”

¹⁾ At prevailing exchange rates.

²⁾ Volumes exclude Blend in BIO (BIB) sold in Brazil.

³⁾ In 2022, the amount of plant-based plastic used by Tetra Pak resulted in 131 kilo tonnes of CO₂ saved compared to the amount of CO₂ which would have been emitted if using fossil-based plastic. Calculations are based on internal climate accounting considering 72.7 kilo tonnes of plant-based plastic purchased in 2022. To calculate the avoided emissions number, we use a third-party validated emission factor for the plant-based polymers.

TETRA PAK EXECUTIVE LEADERSHIP TEAM 2023



Adolfo Orive
President & CEO



Tatiana Liceti
Executive Vice President
Market Operations



Ola Elmqvist
Executive Vice President
Packaging Solutions



Laurence Mott
Executive Vice President
Development & Technology



Bruce Burrows
Executive Vice President
Finance & Supplier Management



Lars Holmquist
Executive Vice President
Sustainability & Communications



Charles Brand
Executive Vice President
Processing Solutions & Equipment



Roberto Franchitti
Executive Vice President
Services



Phil Read
Executive Vice President
Human Resources & Transformation



Sébastien Thierry
Executive Vice President
Legal Affairs and General Counsel



Promoting food accessibility through automation and digitalisation

In recent decades, automation and digitalisation have become increasingly essential elements of our offering that enable our customers to ensure quality, reduce costs, and enable scalability and repeatability – all while contributing to global food accessibility.

Access to healthy and affordable food is a basic human need, which would be impossible to provide today without automation and digitalisation. At Tetra Pak, we complement our industry-leading processing and packaging with automation and digitalisation solutions that enable our customers to provide access to safe food for hundreds of millions of people around the world.

"In short, our automation and digitalisation solutions help customers to optimise the amount of food that gets to the consumer," says Anders Andren, Marketing and Sales Manager, Automation and Digital. "They ensure people have access to safe food at the right quality, at the right cost, and delivered to them in the most effective and sustainable way."

"By using our automation and digital solutions, customers can connect to the food industry to enable full transparency and trust across the entire value chain," says Charles Brand, Executive Vice President Processing Solutions & Equipment. "This is done by creating a unique digital identity for each finished product all the way to the end consumer."

The ongoing digitalisation of society is increasing the availability of big data and machine

learning, which in turn is driving greater automation by pushing the boundaries of what's possible. Automation and digitalisation are also promoting sustainability by optimising the use of resources and increasing safe working environments while helping to avoid human error.

Automation enables scalability and repeatability

"Automation not only allows our customers to develop the optimal recipe formulation to produce at scale, but it also helps to safeguard quality and food safety," claims Maria Estraviz Pardo, Marketing and Sales, Automation and Digital. "This ability to scale up and replicate production to provide a uniform food product would be very difficult without automation and digitalisation, and is fundamental to ensuring people have access to safe and nutritious food around the world."

Our processing and packaging expertise is also essential for creating value for our customers along with our ability to understand and use data in the right way. Our food experts help customers to develop new and exciting food products by engineering the required equipment

and automation solutions. This helps to ensure efficient and sustainable operations that come with a full range of services to continuously improve operational performance.

And when we need to, we bring in additional expertise, for example by collaborating with our world-leading technology partners to provide purpose-built solutions. Within the Tetra Laval Group, we complement Sidel's offering by supplying processing equipment to their customers, enabling them to work end-to-end with one partner.

"Our product development centres help customers to produce a particular product anywhere by identifying a set of parameters, critically controlled points and equipment sequences," says Andren. "Automation and digitalisation are essential to then implement this in the real world to optimise quality and the amount of food that reaches the consumer."

Automation and digitalisation also provide opportunities to continuously improve the production, including quality and the optimal use of resources. This is good for the producer, the consumer and the planet.

"Automation is about our machines working better and enabling the best possible end

result for the customer," says Andren. "Filling machines for example are highly complex and we need automation and interconnectivity to fully integrate all the equipment, as well as the right routines and ingredients."

Digitalisation overcomes challenges and streamlines customer operations

Major issues such as workforce shortages, which is a threat to production and food accessibility around the world, can be overcome with digitalisation.

"Digitalisation reduces human responsibility and the need to carry out repetitive and manual tasks, while guiding them to work more efficiently," says Estraviz Pardo. "This empowers people by allowing them to focus on the optimisation and continuous development of their operations."

Disruption in raw material supply chains since the pandemic is another threat to global food accessibility. Digitalisation can also help by ensuring resources are used in the best possible way. It even allows us greater traceability



tools to recall particular batches if necessary. "Another outcome of the pandemic was that it speeded up digitalisation as we were forced to provide remote support to customers," says Andren. "In a post-pandemic world, this has led to more efficient equipment commissioning, testing and overcoming technical issues remotely via cameras and digital dashboards, which means that we can now work much more efficiently and shorten issue resolution times."

Leading the industry

Food processing and packaging knowhow combined with cutting-edge automation and

digitalisation solutions specifically designed for the Food and Beverage industry make Tetra Pak an industry leader that customers can rely on. We continuously innovate to improve our product offering to bring greater functionality to our customers.

"Our worldwide full lifecycle support also differentiates us from competitors, and we always provide customers with best practices, rapid service and the latest upgrades," says Estraviz Pardo. "This comprehensive offering benefits our customers and their ability to ultimately make food more accessible to people around the world."

Transforming existing operations into a highly efficient dairy

A dairy in northern Europe used Tetra Pak® PlantMaster to transform their aging and inefficient production for filling and packaging fresh milk and juice products into one of the most efficient and sustainable dairies in northern Europe.

The operations are now fully automated with full traceability and all quality reports accessible in one tool. The system inte-

grated equipment from several different suppliers – including equipment not prepared for line integration or digitalisation.

With four filling lines, three of them using Tetra Pak equipment, the plant now produces around 36 million litres of dairy products and 5.7 million litres of juice each year. The 18,000 square metre facility is arguably the most efficient and sustainable dairy in

northern Europe.

"Thanks to Tetra Pak and its partners, we have now reached a fantastic level of plant automation. Furthermore, we have an innovative, flexible and – crucially – future-proof solution that is helping us achieve our goal of building the most sustainable and efficient dairy in northern Europe," explains the Dairy Manager of the new plant.

Increasing capacity and flexibility

A milk and whey-based powder ingredient producer in central Europe constructed a new fully integrated, automated, and high-capacity production site – with built-in flexibility and traceability.

The customer needed to increase production throughput and efficiency while replacing old equipment with the latest technology that allows automation and traceability. They also required greater flexibility – both in handling variation in incoming raw materials and to meet the fast-changing demands for different types of products.

To help them achieve all this, Tetra Pak commissioned its largest processing plant ever. All the equipment, from raw material intake to finished and packaged products, is now fully integrated and automated with one point of control.

"Our solution integrates automation for all equipment in the plant, which has enabled the customer to streamline their daily production, make quick changes and ensure full traceability throughout the plant," says Per Jansson, Tetra Pak Automation Project Leader.





Carbon neutrality targets and action plan launched in China

As a sustainability leader in China, Tetra Pak was the first in the country to launch carbon neutrality targets and a climate action plan. Tetra Pak China is targeting carbon neutrality across all its operations by 2030 and across its value chain by 2050. "We are convinced that collaboration across the value chain can not only help us lead the sustainability transformation within our industry, but also help to more effectively establish the concept of green consumption, which is necessary for the creation of a green, low-carbon, and circular economy in China," said Paul Zhu, President of Tetra Pak Greater China.



Thirty actions to celebrate three decades in Colombia

Tetra Pak launched a social programme called '30 Actions for Colombia' to celebrate being present in the country for 30 years. The programme will invest almost US\$ 800,000 in supporting rural dairy farmers, promoting more circular resource use, strengthening the recycling chain and promoting corporate volunteer actions to enhance the entire value chain. Each of the 30 projects seek to achieve long-term positive impact by collaborating with local communities to promote a more low-carbon and circular Colombia.

3D printing lab opens at Jeddah straw factory

In line with our ambition to deliver a best-in-class customer experience by deploying innovative solutions, Tetra Pak has established a world-class 3D printing lab in the Jeddah straw factory in Saudi Arabia. The lab will print, design and innovate 3D plastics, and other printable spare parts for our straw machines. "As one of our productivity initiatives, this step will help us increase flexibility and reduce spare parts inventory," says Ahmad Chishti, Maintenance Manager at the Jeddah factory. The lab will help Tetra Pak achieve the same quality standards regardless of material or supplier to ensure production quality.



Angkormilk launches Lactic Acid Drink in Cambodia

In a bid to capture the growing demand for dairy products in Cambodia, Tetra Pak's customer, Angkor Dairy, the largest dairy player in Cambodia, has launched the first locally produced Lactic Acid Drink (LAD) HERO, in Cambodia. The product has been offered in Tetra Brik® Aseptic 125 ml Slim package with a straw, in three exciting flavours: Grape, strawberry, and orange. The HERO drink is aimed at children and contains calcium and vitamin D3 for stronger bones, and vitamin A and Vitamins B6-B12 to promote child growth and development.





Partnering to create new recycling facility in Malaysia

Tetra Pak has recently teamed up with S.H.A. Hup Aik Sdn Bhd (SHA), a sustainability services company, to modernise an existing polyAl recycling facility. The upgraded recycling plant will be launched in the first quarter of 2023 with improved efficiency, which will further boost Malaysia's recycling capabilities. The plant will support the nation's aim to achieve a 40 per cent recycling rate by 2025 and a 76 per cent average collected-for-recycling (CFR) rate by 2030. The project will increase the plant's recycling capacity from 1.4 tonnes per day to 8 tonnes. Recycled polyAl is used to manufacture roofing sheets and panel boards for construction, building and furniture.

Tetra Prisma® Aseptic 500 ml wins Gold at Afristar Awards 2022

Tetra Pak East Africa won Gold at the Beverages Category at the Packaging Afristar Awards 2022 for their work related to the development of the Tetra Prisma® Aseptic 500 ml packaging and interactive connected experience. "Our winning product was the first ever carton of water with connected packaging that used QR technology to offer a completely new interactive experience in Africa," says Stella Ondimu, Head of Communication, Tetra Pak East and West Africa. The product was used by the runners and attendees of the 2022 Lewa Safari marathon, focusing on unique educational content like games and videos about local wildlife.

Converting used packaging into building materials

Tetra Pak has launched the Green Shelter Project, which collects and recycles beverage cartons and converts them into building materials, such as eco-wood, eco-bricks and door frames. These are then donated to communities in Thailand affected by natural disasters to build 'homes' for those in need. The Green Shelter Project builds on the Green Roof Project that manufactured roofing sheets for disaster hit communities and plans to build on the learnings and on expanding the beverage carton collection network. Partners of the project include the Friends in Need Volunteers Foundation, the Thai Red Cross Society and the Thai government.



Collaboration on ground-breaking alternative plant-based protein



We are collaborating with Mycorena to build a greenfield production facility for fungi fermentation to develop alternative protein-based foods. This is part of our long-term work to address the challenges around food safety and security, through the exploration and advancement of innovative food sources. The new plant, located in Falkenberg, Sweden, will produce a meat replacement product from fungi with a game-changing technology that has the potential to help build a more resilient and sustainable global food system.



First-ever project to recycle used beverage cartons in Egypt

Tetra Pak and Uniboard signed an agreement to establish a state-of-the-art recycling plant at the Uniboard papermill in Sadat City prior to the COP27 climate conference in Egypt. The new recycling plant has a projected capacity to annually recycle 8,000 tonnes of used beverage cartons and is planned to be operational in 2023. Uniboard is the largest paper board manufacturer in Africa, producing over 150,000 tonnes of paper board annually which is used in a variety of high-quality packaging products. Tetra Pak, through its know-how and engagement with its global recycling solution suppliers, brings the latest technology to the project.



Protects what's good

At Tetra Pak, our approach to sustainability 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’.

Leading the sustainability transformation

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 the industry, recognising the interconnectedness of five focus areas: Food systems (which is related to protecting food), Climate, Circularity and Nature (which connect to protecting the planet) and finally Social Sustainability (which links to protecting people).

Food systems lie at the heart of this model. Given our business model and position in the value chain, we believe that we have a role

to play in helping to feed a growing global population while minimising food loss and waste, reducing climate impact, protecting biodiversity and promoting circularity – while respecting human rights across our own operations and the value chain.

By constantly innovating to develop our solutions – both in food and beverage packaging and processing – we can further support food availability, safety, and reduce food loss and waste without compromising the health of our planet.

Responsible sourcing practices and strategic collaborations help us to conserve and restore biodiversity, mitigate and adapt to

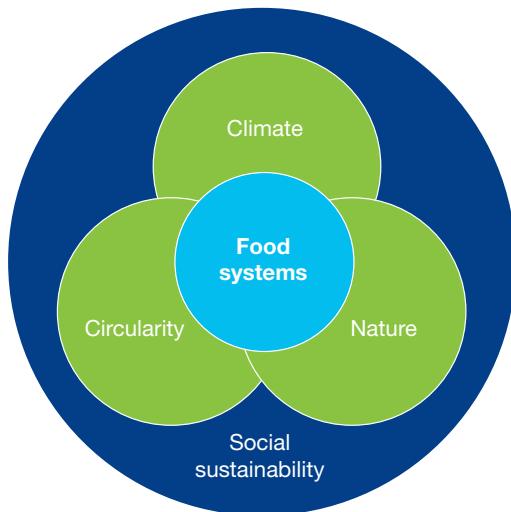
climate change and contribute to global water resilience.

We are working to decarbonise¹⁾ our value chain – including sourcing, our own operations and our products – to help mitigate climate change.

By designing recyclable food and beverage packaging, which uses recycled and renewable materials, and expanding collection and recycling to keep materials in use and out of landfills, we also support the development of circular solutions.

Our sustainability agenda

**Food.
People.
Planet.**



Contributing to the global agenda

Our approach to sustainability has always been driven by our purpose. We support the UN Sustainable Development Goals (SDGs) and have a long-term commitment to the UN Global Compact and its ten principles.

¹⁾ Our decarbonisation efforts focus on avoiding and mitigating GHG emissions correlated to our products and company, and carbon compensation to balance unavoidable residual emissions through nature-based solutions and other initiatives.

²⁾ CDP is a not-for-profit that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. www.cdp.net/en/

Sustainability highlights

Below are some of our 2022 sustainability highlights. For the full story, see our latest Sustainability Report. www.tetrapak.com/sustainability/sustainability-updates

Top rated by CDP on Climate and Forests

We were recognised for the fourth consecutive year as part of the CDP²⁾ 'A List' for action on climate change and forests. This means that Tetra Pak was rated among the best of almost 15,000 companies that were scored based on data submitted through CDP's 2022 Climate Change and Forests questionnaires.



Approved science-based climate targets

In 2022, our climate ambition for net-zero³⁾ GHG emissions across the value chain by 2050 was approved by the Science Based Targets initiative (SBTi)⁴⁾. For the company, this means a 46 per cent reduction in absolute scope 1, 2 and 3 GHG emissions by 2030, and a 90 per cent reduction across the same scopes by 2050 compared to 2019.



Helping to restore the Atlantic Forest in Brazil

We launched a pioneering land restoration initiative to help restore biodiversity and mitigate the effects of climate change in 2022. In the first year of the Araucaria Conservation Programme, around 38,000 seedlings of native trees were planted on 87 hectares of land. We plan to restore up to 7,000 hectares of the Atlantic Forest in Brazil by 2030 and map a larger area for carbon capture.



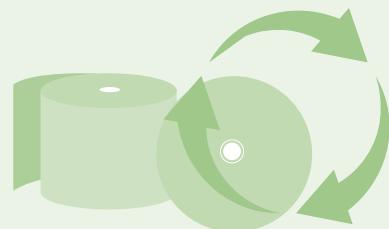
Decarbonising food systems at COP27

At the 2022 UN Climate Change Conference in Sharm el-Sheikh, we put forward our agenda to use our industry expertise to accelerate actions and enable a shift towards resilient and sustainable food systems. Our progress depends on embracing a mindset that drives both growth and sustainability for a better future – system thinking, science-based decisions and collaborative innovation are crucial to this.



Study to accelerate recycling in Benelux

The feasibility study aims to advance circular paper-based packaging solutions by assessing a new recycling facility at Stora Enso's Langerbrugge site in Belgium. In collaboration with Stora Enso, Tetra Pak is launching a new recycling process to recover the fibres of collected beverage cartons in the region that can be then used as source material for producing recycled containerboard.



Developing the world's most sustainable food package⁵⁾

We successfully completed a commercial validation of a polymer-based barrier to replace the aluminium layer in aseptic cartons and kicked off the testing of a fibre-based barrier that is a first within food carton packages distributed under ambient conditions. We also collaborated with leading beverage brands to launch a number of new tethered cap solutions that are designed to prevent litter as the cap stays attached to the package.



Collaboration with polyAI recyclers in Italy

Our collaboration with the polyAI recyclers Ecorevive and Ecoplasteam draws on our network to promote their products and find new market opportunities for recycled materials. We also work to consolidate the flow of polyAI from carton recyclers and strengthen relations throughout the recycling value chain. The two polyAI recyclers have a combined annual capacity of 14,000 tonnes and the objective for 2023 is to utilise this entire capacity while promoting sustainable and long-term business.



³⁾ Tetra Pak's trajectory towards net-zero emission across its own operations by 2030, and across the value chain by 2050, builds on a combination of reduction and mitigation of emissions in own operations as well as customers' use of Tetra Pak's products, material suppliers' emissions, and compensation of residual emissions initially via the company's land restoration project.

⁴⁾ SBTi's Corporate Net-Zero Standard is the world's first framework for corporate net-zero target setting in line with climate science. This includes guidance, criteria and recommendations companies need to set science-based net-zero targets consistent with limiting global temperature rise to 1.5°C.

⁵⁾ This means creating carton packages that are fully made of renewable or recycled materials which are responsibly sourced, thereby helping to protect and restore our planet's climate, resources, and biodiversity; contributing towards carbon-neutral production and distribution; are convenient and safe, therefore helping to enable a resilient food system; and are fully recyclable.

High order intake in a difficult year with component crisis

2022 was a difficult year for Sidel and for the entire packaging industry. Following the pandemic crisis, there has been a huge need among food and beverage producers to invest in packaging equipment and increase their production capacity. Sidel therefore had a very high order intake during the year, but the global shortage of components has prolonged delivery times in our industry substantially. On a positive note, Sidel launched several new innovations, broadened its service concept, advanced its digitalisation and pushed boundaries within sustainability. After the pandemic restrictions, we had lots of positive meetings with customers that generated new businesses. When summarising 2022, I would like to take the opportunity to express my gratitude to all our employees for their hard work and devotion to serve our customers.

Positive economic result

In 2022, Sidel Group net sales amounted to €1.4 billion, compared with €1.4 billion in 2021. Order intake increased by 3 per cent for capital goods, slightly surpassing an already outstanding year. However, the shortage of components affected our working capital negatively, as Sidel continues to work diligently to shorten lead times. On the other hand, we successfully increased our sales of services, up 11 per cent versus 2021 at comparable rates, as our customers needed to maintain and improve their existing production lines. High inflation and energy costs affected our business and were mitigated by increased prices for packaging equipment across the industry, and we introduced new efforts to improve our structural costs. Altogether, we achieved a positive operating result for the year.

While order intake increased in all our regions, equipment sales were consistently somewhat lower than last year. US and Asia, including India, and Africa stand out as growth markets. We are leveraging the proximity of our production site in Pune, India, for example, to serve customers in the surrounding regions, and we further developed transversal engineering support in the country. We also opened an office in Kenya to increase our presence in Africa.

New innovations

At the Drinktec exhibition in Germany, we launched Aseptic Predis X4, which is an integrated blow-fill-cap solution that incorporates

consolidated Predis™ dry preform sterilisation. This innovative Predis sets new standards and provides customers with a safe and sustainable platform that provides peace of mind while helping improve operational efficiency and reduce Total Cost of Ownership. We also developed 1SKIN™, a label-less recycled PET bottle with a tethered cap and a unique streamlined design for sensitive beverages. It is made from 100 per cent recycled PET (rPET) and was awarded Best in PET by the 2022 Global Water Drinks Awards. Hydra Ultrasonic is a new sustainable bottle washer for our beverage customers that uses ultrasound technology. Both returnable glass and refillable PET bottles can be treated, and we calculated a savings of 20 per cent in water versus traditional bottle washers, among other savings, thanks to this novel invention.

State of the art services through digitalisation

In 2022, we had the opportunity to premiere two more applications within our new Evo-ON® digital suite – Evo-ON Flex and Evo-ON Quality. The suite, now consisting of five unique apps, leverages built-in intelligence to supervise and optimise different aspects of the customers' line. About 300 customer machines are connected to the platform. In addition, remote support solutions like Remote Access and Remote Video Assistance continue to optimise performance and further empower customers to resolve issues quickly and efficiently. In 2023, we will continue advancing our popular

Sidel Services Online (SSO) platform, customised and designed to make it easier for our customers to not only find and order the exact parts they need, but also all the relevant services and upgrades to meet their production goals.

Sustainability progress

We revised our climate targets and, while still waiting for final confirmation from the SBTi (Science Based Targets initiative) committee, we are now on track to reduce the greenhouse gas (GHG) emissions from our own sites and facilities by 50 per cent by 2030, compared to 2019, instead of our previous target of 30 per cent. To reach this and other targets, we have strengthened our climate roadmap around four pillars: sustainability in our own operations, delivering more sustainable production lines through our equipment development and sourcing actions, advancing eco-services, and providing sustainable packaging. We inaugurated a pilot-scale rPET recycling line in Octeville, France, and services are provided in this testing platform along with laboratory capabilities to support customers in the transition from PET to rPET.

Leading Excellence at Sidel

The program 'Leading Excellence at Sidel' was initiated to manage ongoing internal projects and align our actions and initiatives across the company. It is all about how we work – with ultimate benefit for our customers from a more agile Sidel. We have prioritised

and simplified over 250 projects into a harmonised smaller list of around 65 projects. Examples of projects are improved inventory management and strengthening our capabilities in the latest digital workplace technologies. We are stimulating cooperation by increasing visibility and empowering our people. The successful implementation of Leading Excellence will create a better supply chain, improve operational efficiency and reduce costs.

Theme – food accessibility

Providing access to safe food has always been at the core of what we do at Sidel. By designing and producing our equipment to high standards, we can ensure complete reliability in terms of food safety for both customers and consumers. A good example is Sidel's high-quality bottled water solutions to meet the demand for safe drinking water. Service is also an important part of food accessibility by ensuring we have people on the ground 24/7 or supervising customers through remote digital devices to ensure customers can keep their machines running with minimal disruption.

Focus for 2023

Our main objective for 2023 is to overcome the component crisis, reduce our delivery times and become stronger as we turn learnings from recent challenges into better ways of working. Sustainability is at the core of our efforts, and Sidel will continue to take a proactive role, both in our own operations and through our solutions we develop for our customers, which is where we can make the biggest impact.

Finally, I am excited about our recent acquisition of Makro Labelling, Srl, an innovator and leader in modular labelling machines, based in Goito, Italy. Makro is a perfect complement to add to our existing labelling business, enabling us to offer a complete range of labelling technologies to customers, and broadening our reach within the Food, Home and Personal Care, and Wine and Spirits markets.

Despite the challenging market conditions, I am optimistic about 2023. We see signs that the component situation will improve, and with a record order book as we start 2023, we have many opportunities to make a sustainable difference for our customers as we commit to our vision of shaping the future of the packaging industry.

Monica Gimre



“On a positive note, Sidel launched several new innovations, broadened its service concept, advanced its digitalisation and pushed boundaries within sustainability. After the pandemic restrictions, we had lots of positive meetings with customers that generated new businesses.”

SIDEL GLOBAL LEADERSHIP TEAM 2023



Monica Gimre
President & CEO



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



Frédéric Sailly
Executive Vice President
Customer Management
Americas



Igor Glaser
Executive Vice President
Finance, Business Transformation & IT



Pavlo Shevchuk
Interim Executive Vice President
Product Supply & Sourcing



Ko Hoepman
Executive Vice President
Portfolio, Innovation & Marketing



Clive Smith
Executive Vice President
Customer Management
Asia, Oceania and Africa (AOA)



François Lejard
Executive Vice President
Services



Deepak Kumar
Executive Vice President
Human Resources



Christer Carling
Executive Vice President
Legal Affairs

High-quality bottled water solutions for access to safe water

The World Health Organization (WHO) estimates that around 2.2 billion people are living without access to safe water. One of United Nations Sustainable Development Goals states that every inhabitant should have access to 20 litres of water per day and within a 15-minute walk. Sidel helps to meet this UN goal by supplying high-quality bottled water solutions.



With more than 40 years of experience, Sidel offers solutions for producing high-quality bottled water with minimal environmental and cost impact. Sustainable bottled water production requires the utmost attention to hygienic conditions and product quality, as well as appealing bottle design to win on the shelves, as consumers demand unique bottle shapes with a premium look and feel that

exceeds the quality of tap water. At the same time, bottle lightweighting is needed to reduce the environmental impact and cost of bottling operations and transportation.

An extremely light bottle

A good example is X-LITE™ Still – Sidel's latest innovative 500ml PET packaging solution for non-pressurised still water.

"Thanks to its extremely light industrial bottle design, it is the most cost-effective and sustainable packaging available on the market. This pioneering solution addresses the still water market for small size PET bottles, in particular producers looking to optimise their packaging and production costs," says Vincent Le Guen, Vice President Packaging at Sidel.

Health benefits

"The health benefits of mineral water are another asset, as thanks to our packaging solutions and equipment designs, bottled spring water, for example, can be transported safely even to more remote regions," adds Francesca Bellucci, Sustainability Portfolio Director at Sidel. "PET allows optimum distribution while minimising environmental impact, especially with the increasing incorporation of post-consumer recycled PET. This is why PET is used for almost all bottled water containers."

Tap or bottled water: the wrong debate

There is no doubt that water networks are needed for home consumption, sanitary facilities, farming and industries. In several developed countries, we have the luxury of potable tap water, but this is far from the case everywhere. Water and sewage networks are capital and maintenance intensive. They also generate huge losses, as even the best-in-class water distribution networks leak at least 20 per cent of what they deliver. Considering that drinking water represents only about 1/1000 of the many uses water is put to, it makes sense to deliver high-quality potable water in bottles, especially where it is scarce.



Sidel helps Mexican company to deliver food to the local market

Oleofinos, a Mexican company manufacturing fats, oils and soaps recently selected Sidel's Synergy blow moulder as the most efficient solution for producing its own bottles and meeting increasing local market demand. By choosing Sidel's equipment, Oleofinos could overcome the challenges of long-distance transportation and deliver edible oil to the local market.

Oleofinos, which was founded in 1978 and is part of the Oleomex Group, has developed its own vegetable oil brands such as Olein oil and Aceite Hogar. In 2015, the oil producer started its bottle filling operations at the Chinameca plant in Veracruz. The company ran into problems in transporting the bottles from Guadalajara to Veracruz, and from Mexico City to Veracruz. In 2019, demand increased in the south-eastern region of Mexico, and with long distance transportation, the company needed to reduce costs.

As a solution, Oleofinos bought Sidel's Synergy equipment for blow moulding in February 2022, which allows the Mexican oil producer to make its own bottles. The machine has a capacity of 4,800 bottles per hour, and requires limited labour and

a compact installation space. In addition, it has low energy consumption.

"Sidel has built our confidence in the ability to deliver on time, and in general for their excellent aftersales service, regular communication, and meeting our needs for

spare parts," says Nahúm Antonio Chávez, Operations Manager of the Oleofinos Chinameca Plant.

In 2023, Oleofinos plans to increase its bottle packaging capacity by 50 per cent to meet the growing demand from its customers.



Meeting the growing demand for edible oil

According to Global Data, bottled oil accounted for six billion units in the Middle East, Africa, and India region in 2021 and edible oil will reach a compound annual growth rate (CAGR) of 4.4 per cent by 2024. For consumers, price is a decisive factor for their edible oil purchase decisions. For producers, product and brand differentiation, cost and productivity are key to competitiveness. Sidel has created several success stories with edible oil players in these regions, both in the low and high-speed market. A recent customer and owner of Novia Industries in Africa confirmed,

"Many edible oil producers in Africa have already installed Sidel lines; therefore, it was an easy decision for us to take, following the positive feedback we heard from the market."



High-speed aseptic line supports China's fastest growing beverage company

Sidel has delivered its Aseptic Combi Predis™ FMac system to Genki Forest, the fastest-growing beverage company in China. Genki Forest's low-calorie, low-sugar products have captured the market for China's Generation Z consumers since its launch in 2016 and the company's sales grew by 160 per cent between 2020 and 2021 to reach CNY7 billion. Sidel installed the new packaging line ahead of schedule despite pandemic restrictions at the customer's plant in the Hubei province. The high-speed packaging line can produce both carbonated and still drinks, with low energy consumption and an output of up to 48,000 bottles per hour. A two-year packaging service agreement gives Genki access to Sidel's leading PET packaging development and design capabilities, with continuous support from Sidel's local and central packaging teams.



NBC in Nigeria chooses Sidel Super Combi

In June 2022, Sidel installed its Super Combi high-speed, flexible and digitally empowered packaging line for carbonated soft drinks at the Nigerian Bottling Company (NBC) plant in the northern city of Challawa. NBC is part of Coca-Cola Hellenic, the Coca-Cola Company's third largest bottling partner. Carbonated soft drinks are popular in Nigeria, with a growing consumption higher than the regional average at 17 litres per capita per year¹⁾. The Sidel Super Combi is an all-in-one solution comprising blowing, labelling and filling. This technology is increasingly being chosen by large beverage companies to ensure the latest high-speed, high-efficiency equipment. To ensure maximised line performance, NBC has opted for Sidel's Evo-ON® software suite, which aggregates and analyses equipment data to provide real-time and pro-active alerts, notifications, customisable dashboards and reports.



Sidel opens a new hub for PET recycling

Sidel has established a new hub for PET recycling in Octeville, France. The purpose of this unique small-scale PET recycling line is to develop advanced knowledge of PET recycling and support the market as it switches from virgin PET to recycled PET. The proportion of recycled PET in packaging is currently 15 per cent in Europe and is projected to grow to 35 per cent in 2030²⁾. As Sidel packaging experts assess the impact of additives and primary packaging materials on recycled PET (r-PET) resin, the facility will become an important reference for external parties. Sidel will collaborate with customers such as brand owners, converters and co-packers, as well as other partners like raw material producers, recyclers and regulatory organisations, to enable the scaling-up of r-PET capacity.





French bottled water producer grows with the support of Sidel's turn-key PET project

The bottled water producer Mont Roucous chose to partner with Sidel for a turn-key project for a complete new PET line. Located in the Lacaune Mountains in France, Mont Roucous has positioned its water as ideal for mothers and babies. With its low mineral content, the water is perfect for the digestive system of newborns and infants, who do not yet have mature kidneys. Mont Roucous needed to expand its production due to strong demand from customers, as well as switch from 1.5 L to 1 L bottles, which are more convenient to handle for mothers. Sidel managed the entire project – from design and engineering to the manufacture and installation of the equipment. The complete PET bottling line was installed on schedule to produce 40,000 bottles per hour, and in May 2022, the 100 million bottle milestone was reached.



Complete PET bottling line boosts Mai Dubai's high-quality water sales

Mai Dubai LLC, a leading water company in the United Arab Emirates (UAE), has chosen Sidel's Super Combi solution to support the rapidly growing demand for bottled water. UAE has one of the largest water consumption per capita as consumers seek healthier products instead of sugary drinks. The PET complete bottling line, which fills 86,000 bottles per hour in three different formats, is considered to be one of the fastest single lines in the Middle East, Africa and Asia. The complete high-performance line delivers optimum water quality and includes blowing, labelling and filling. Besides consistent quality and high operational efficiency, Mai Dubai appreciated Sidel's Efficiency Improvement Tool (EIT®) that enables them to track the performance of every part of the line.



Guerlain chooses Sidel's end-of-line solution to fight counterfeiting

Sidel has supplied its latest end-of-line and traceability technologies to Guerlain, one of France's oldest perfume and cosmetics brands and a subsidiary of luxury goods house LVMH, to expand its production capacity for advanced skincare and prevent counterfeiting. Sidel's solution has been installed at Guerlain's site near Chartres, in the heart of France's 'cosmetics valley'. The robotic packing and palletising combi solution, designed by Sidel to function in a compact space of less than 20m², manages the physical flow of products, cases and pallets. It handles 60 cartons of skincare product bottles per minute in four formats. Sidel is popular among luxury brands, which value the high level of efficiency and traceability provided by its solutions.

PET line promotes sustainability and meets the growing demand for CSD in Pakistan

Northern Bottling Company (NBC), a PepsiCo partner, has assigned Sidel to install a high-volume, high-speed PET line for carbonated soft drinks (CSD) in the city of Peshawar, Pakistan. NBC saw increased volume growth of 30 per cent between 2021 and 2022, and with a capacity of over 45,000 bottles per hour, the new line will enable the company to meet the growing consumer demand. The new innovative line will handle four bottle sizes and five recipes, to produce the PepsiCo beverages Pepsi, 7up, Mirinda, Pepsi Diet and the Sting energy drink. The innovative StarLite bottle base optimises the quantity of PET per bottle, which contributes to sustainability by both reducing the amount of material and transport-related emissions. The high-tech PET line and packaging design improvements, together with service and aftersales support, will add value and reduce NBC's Total Cost of Ownership.



Raising our sustainability ambition

At Sidel, we believe that good business is founded on sustainable practices. By placing sustainability at the heart of everything we do, we are protecting our precious environment and ultimately creating a better future for all.

Sidel is fully engaged with the 17 Sustainable Development Goals of the United Nations. We contribute to many of these goals through various ways, such as by developing our portfolio of innovations, reducing our emissions and supporting our customers in reducing their water consumption. In 2022, we revised our climate targets and, while still waiting for final confirmation from the Science Based Targets initiative (SBTi) scientific committee, we are now on track to reduce the greenhouse gas (GHG) emissions from our own sites and facilities by 50 per cent by 2030, compared to 2019. This represents a significant increase in our level of ambition compared to our previous goal of a 30 per cent reduction in emissions in the same timeframe set only a year ago.

Our vision

"We consciously act for the sustainable transformation of the packaging industry, providing safe and innovative eco solutions for a circular economy and a positive impact on our planet."

A science-based climate approach

The COP27 climate conference in 2022 emphasised the urgent need for climate action, and we have a clear strategy on how we can play our part.

Based on a GHG inventory we have focused on three scopes:

- scope 1 for direct emissions: CO₂ emitted from our sites and company vehicles.
- scope 2 for indirect emissions: CO₂ emitted because of energy consumption at our sites.
- scope 3 for upstream CO₂ emissions related to our supply chain and downstream CO₂ emissions related to everything we sell, i.e., the energy consumption of the equipment we sell once installed at customers' sites.

Ambitious goals with a clear roadmap

Our climate goals

Climate action requires a science-based approach, and the SBTi is the most-recognised independent authority. Science-based targets provide companies with a clearly defined path to reduce their emissions in line with the Paris climate agreement objectives. Our climate targets have been validated by the SBTi since 2021.

In 2022, we raised our scope 1 and 2 emissions target to a 50 per cent reduction of Greenhouse Gas (GHG) emissions across our sites and facilities by 2030 compared to 2019. While we are waiting for final approval of our targets, we also completed the switch to renewable energy at our 17 production sites around the world, which is part of our commitment that is aligned with the pathway to limit global warming to 1.5°C.

We will reduce our scope 3 emissions related to what we buy and sell by 25 per cent compared with our 2019 baseline by 2030. We will continue to work closely with our suppliers to help them find ways to reach our common sustainability targets and to further support the sustainability journey of our customers.

Our climate roadmap

To achieve our goals, we have drawn up a climate roadmap with two areas focusing on our own operations and our supply chain, and two on our customers:

A Sustainable Sidel – we are targeting our scope 1 and 2 emissions to decrease GHG at our sites through measures such as reducing energy consumption for lighting, heating, cooling, improving building insulation and generating our own renewable energy.

Sustainable Lines & Sustainable Sourcing

– we focus on reducing our scope 3 emissions by improving the energy efficiency of Sidel equipment when in operation at our customers' sites through our product development plan. In sourcing, this involves creating a Low-Carbon Purchasing Policy and setting reduction targets for our suppliers.

Eco Services – we proactively work with our customers to help them reduce their energy consumption and GHG emissions. We provide 'eco' options and upgrades of our customers' lines to make them more sustainable, rPET related services to help them increase the amount of recycled content in their containers, and tethered caps to adhere to the upcoming legislation. As an example, the ecological upgrades we provided to customers in 2022 on blowers alone are estimated to have saved up to 4,200 tonnes of CO₂. We also offer virtual remote assistance capabilities and the 3D printing of spare parts to reduce the carbon footprint of our services operations and digital services, such as Evo-On Eco, which we launched in 2022.

Sustainable Packaging – we focus on reducing, recycling, reusing, replacing and reinventing – to also serve the circularity targets of our customers and their scope 3 emissions. This involves providing more sustainable packaging solutions, such as new packaging formats or developing new distribution models.

ISO

85% of all sites are ISO 45001 and ISO 14001 certified.

Our ISO 14001 environmental management system and ISO 45001 health and safety management system certifications target 100% of sites in the first quarter (Q1) of 2024.

Certification roadmap

From 19 individual certificates to a Global one



2020
70% certification
Two new sites

2021
80% Environment
75% H&S
Project launched for Pune, Atlanta, Cognac, San Vendemiano

2022
80% certification

2023
85% certification

2024
Q1: 100% certification



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi objectives

We set clear science-based targets:

-30%

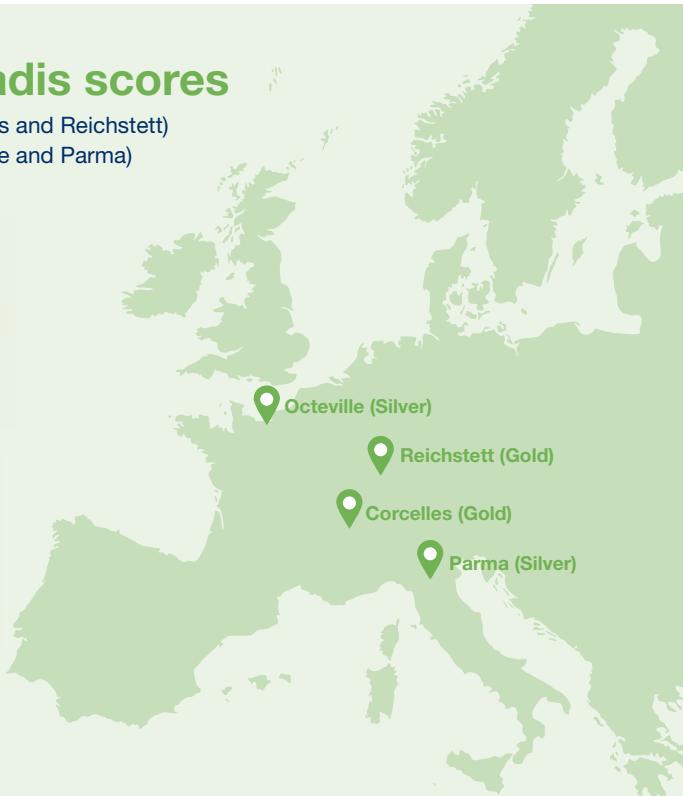
in scope 1 & 2 Sidel's emissions by 2030

-25%

in scope 3 customer emissions by 2030

Our EcoVadis scores

2 sites Gold (Corcelles and Reichstett)
2 sites Silver (Octeville and Parma)



Ellen MacArthur Foundation

Ellen MacArthur Foundation Brand and retail signatories have increased the post-consumer recycled content between 2019 and 2021 by 54% (from 6.5% to 10%).



More customers than ever put their trust in DeLaval

DeLaval broke new sales records in 2022, with more customers putting their trust in us to help increase their farm productivity and make sustainable food production possible.

We continue to see great customer demand for our products, solutions and services. This is being driven by the growing global need for milk, which is fuelled by population growth, increasing life expectancy, urbanisation and the growing middle class. The global demand for milk is reflected in our order intake, which reached a record high during the year. Sales growth for the DeLaval Group amounted to 7.8 per cent and customer orders grew by 8.4 per cent.

Overcoming challenges during the year

As with many other companies, we faced significant challenges related to inflation and supply chain disruption during the year. Without key raw materials and components, we had to be creative to find new solutions to serve our customers and by finding alternative business partners. Faced with higher inflation, we were able to absorb some of our cost increases in 2022, although we had to pass on increased costs to the market.

The resilience of DeLaval and our business partners were key factors that helped us overcome these challenges, along with the diligence and dedication of our employees. This meant that we were able to keep customer delays to a minimum despite the extreme challenges we faced.

We continue to support our colleagues in Ukraine in various ways, as well as providing Ukrainian farmers with our products, services and other support. We also work with the Ukrainian Ministry of Agriculture and donated to the Ukrainian Agrarian Council during the year.

Sustainability – an integral part of our strategy

Sustainability is a cornerstone of our strategy as it is key to future-proofing farms. DeLaval's offering not only allows farmers to do more with less and reduce their environmental impact through more optimal farm management, but also promotes better animal well-being, enables greater traceability, and helps to overcome labour shortages.

During the year, DeLaval has increased its efforts to help create more resilient farms that can cope with increased instability and our contribution to a sustainable development is significant. Naturally, we also work to limit the impact from our own operations.

Hamra Farm

Our demonstration farm, Hamra Farm in Sweden, is a huge asset to DeLaval that showcases our latest solutions. It is also an R&D centre where we test our products. We began planning the redevelopment of our farm during

the year with the aim to create a more modern and sustainable dairy with new barns, new automatic milking robots (DeLaval VMS™) and more digital solutions to further improve animal health, quality and efficiency.

We have always focused on our animals and their well-being at Hamra Farm. But this redevelopment will take our farm to a new level – to both lead by example and drive positive change in the industry. The redeveloped farm will continue to be a world-class meeting place for dairy professionals around the world.

New products launched in 2022

We introduced several exciting new products onto the market during the year. These included more versions of our E-series rotary milking parlour that provides more information and automation features for even greater efficiency.

We also introduced new improvements to our DeLaval VMS™ V300 series as well as our revolutionary DeLaval Evanza™ milking cluster, which is not only faster and more efficient, but is better for cows and farm employees.

Our product innovation is driven by sustainability – to ultimately drive more sustainable milk production while promoting greater animal welfare. How we design the next generation of our products and solutions can play a key role in a more sustainable dairy production.

“We continue to support our colleagues in Ukraine in various ways, as well as providing Ukrainian farmers with our products, services and other support. We also work with the Ukrainian Ministry of Agriculture and donated to the Ukrainian Agrarian Council during the year.”

Outlook for 2023

We expect the macroeconomic uncertainty to continue in 2023 with short-term market instability. The long-term trends of sustainability, automation and digitalisation will remain and provide opportunities for us to continue our growth journey in the years ahead.

With our passionate colleagues and business partners, we are well positioned to make sustainable food production possible for our customers. By collaborating with all our value chain partners, as well as other stakeholders, we continue to drive our sustainability agenda forward while pushing the boundaries of what is possible in the dairy industry as a whole.

Paul Löfgren



“Our product innovation is driven by sustainability – to ultimately drive more sustainable milk production while promoting greater animal welfare. How we design the next generation of our products and solutions can play a key role in more sustainable dairy production.”

DELAVAL GLOBAL LEADERSHIP TEAM 2023



Paul Löfgren
President & CEO



Jonas Hällman
Executive Vice President
Cluster EMEA



Fernando Cuccioli
Executive Vice President
Cluster Americas



John-Erik Hermanson
Executive Vice President
Supply Chain



Christian Poggensee
Chief Financial Officer



Lars Johansson
Senior Vice President Corporate
Communications & Sustainability



Johan Ledel
Executive Vice President
Cluster Asia Pacific



Magnus Berg
Executive Vice President
Product Management &
Development



Lars Bergmann
Executive Vice President
Digital Services



Valerie Binner
Senior Vice President
Human Resources



Johan Swahn
Senior Vice President
Legal Affairs



DeLaval contributes to global food accessibility

By providing industry-leading products and services, DeLaval enables dairy farmers to optimise productivity, profitability, milk quality and animal health – which makes milk available to more people around the world.

Milk is one of the most essential foods and is of huge nutritional importance for people – particularly for the growth and development of children. With the demand for dairy growing around twice as fast as population growth, global access to good-quality milk is more important than ever.

"We give farmers around the world the tools to optimise the productivity of their dairy operations through precision farming," explains Carl Oskar Paulrud, Dairy Development Director. "We do this by providing industry-leading products and solutions for various kinds of dairy farm. In this sense, DeLaval plays an important role in helping farmers to supply the world with good quality milk."

Making sustainable food production possible

"Farm efficiency goes hand in hand with reducing environmental impact, animal welfare, and milk quality," says Ilka Klaas, Dairy Development Director. "For example, by promoting cow health, longevity and through precision reproduction processes, we can promote

resource efficiency, reduce greenhouse gas emissions and decrease waste."

Lifecycle assessments show that improving farm efficiency also reduces the carbon footprint of milk production in intensive dairy production systems. Studies demonstrate that small-scale dairy farms can have three times the climate impact compared to large-scale modern dairies that use the latest technology.

Healthier and more productive cows

The global trend is towards larger farms in the world, which research shows tend to be more efficient, more sustainable, better for animal welfare and can deliver greater milk quality and profitability. As an industry leader in cutting-edge automated dairy farm solutions and sensors, DeLaval has an important role in empowering farmers to make better decisions for their cows, the environment, consumers, and their business.

"Our solutions optimise milking, monitor and promote the health, prevent illness, and increase the longevity of animals by enabling farmers to make better decisions and interventions," says Klaas. "Optimised milking and cow health directly translate into farm productivity and profitability."

Good cow health is also fundamental for avoiding milk losses during withdrawal periods for veterinary treatment when milk cannot be used. In fact, precision dairy farming has proven to help reduce the need for various medicines, hormones and antibiotics.

Inspiring the scientists of tomorrow

DeLaval has a long history of supporting research collaborations with leading research institutions and universities including master's theses, PhD theses, and other research and networking projects. A new initiative launched in 2022 was the Gustaf de Laval Fund that supports young scientists and students with their innovative research projects.

"As part of our work with PhD and master's students on cutting-edge research, two of our PhD students recently completed their projects on how to monitor and manage mastitis with sensor systems," says Klaas. "Both these PhD students are now employed at DeLaval and their work with cow health is influencing the next generation of our sensor solutions."

Proactively driving the dairy industry

DeLaval also promotes food accessibility around the world by driving the development of new milking standards. This includes an ongoing three-year project to develop a new modern standard to replace four existing ISO milking standards. Carl Oskar Paulrud chairs the work with dairy partners around the world.

"A new merged standard will be a huge step forward for modern milking by focusing on what matters – the cow, milk quality and the user. This is a concrete example of how we at DeLaval contribute to food accessibility around the world by further driving productivity, profitability, quality and animal health across the dairy industry," concludes Paulrud.



Ilka Klaas



Carl Oskar Paulrud

Compliance and food accessibility

Compliance is a prerequisite for DeLaval to promote global access to its industry-leading products and services that enable farmers around the world to deliver safe working environments, healthy cows and safe milk.

How DeLaval works with compliance

DeLaval products and services are subject to a variety of local, regional and international regulations that must be complied with before it can do business in particular countries. Most of the relevant regulations are related to safety – such as to ensure they can be used safely and enable a good working environment, food safety standards and end-of-life environmental regulations.

"We focus on meeting leading industry regulations from the EU, US and China, as well as meeting or exceeding all local requirements and constantly monitoring legislative changes," explains Susan Ballhausen Bjelke, Director Quality & Compliance. "Our 'safety first' approach helps farmers run more sustainable operations that deliver good-quality milk to consumers around the world."

Enabling farmers to go beyond compliance

"Providing products and services that make things easier for farmers is at the heart of what we do," says Ballhausen Bjelke. "Doing so isn't directly part of our compliance, but it helps farmers to meet the obligations they have for their workers, animals and milk."

Examples of this include solutions that promote a safer work environment by reducing the need for heavy lifting or features that check milk quality. In this way, DeLaval helps farmers to meet local regulations.

"By continuously working to design and offer smarter products and services, we promote food accessibility around the world," says Ballhausen Bjelke.



Customers have their say on DeLaval's advisory services.

Darita Holsteins, USA

Herd size: 115 milking cows

DeLaval has provided advisory services to support the farm to meet their production, machine performance, and cow management and reproduction goals. Good communication between service technicians and advisors has been key to success for the farm.

"We have appreciated the close collaboration with DeLaval experts, which has overall been a very positive experience where both farmer and advisors have pushed each other to become better in all aspects of farm management. Our farm has always been highly productive but being the first V300 farm in our area and transitioning to robotics further improved our milking efficiency and allowed our excellent genetics to shine."

Darrell Richard,
Farm Manager at
Darita Holsteins.



Jason Martin Farm, USA

Herd size: 268 milking cows

"During my transition to DeLaval Robotic Milking over the last three years, Advisory Services have provided me with close assistance and support throughout. From the remote meetings during the months leading up to the start-up of my equipment and visiting in person to assist in learning new routines, to reviewing data and finding ways to improve my operation and understanding the dynamics of my herd – it's been a pleasure to work with the entire DeLaval team to help me to achieve my goals."

Jason Martin, Owner





DeLaval redevelops its demonstration farm

DeLaval began redeveloping its Hamra Farm into a more modern and sustainable dairy in 2022. The 18,000 m² demonstration farm will include new barns, four new automatic milking robots (DeLaval VMS™) and more digital solutions to further improve animal health, quality and efficiency. Hamra Farm will be home to twice as many cows. "With a focus on our animals and their well-being, our philosophy has always been that good animal husbandry and long-term planning often result in good yield," says Johan Bjurevall, Managing Director at Hamra Farm. "We are incredibly happy with the new possibilities the investment will give us."

DeLaval invites research collaboration with young scientists

The DeLaval Scientific Committee began accepting funding applications from master's and Ph.D. students all over the globe to join the DeLaval student programme. In 2022, the focus area was precision dairy farming and production management, and in particular the monitoring and management of dairy cattle to improve health, welfare and efficiency of milk production to strengthen sustainable food production. Projects that promote more sustainable dairy production, improved animal welfare, milk production efficiency, farm economics, or health and longevity were prioritised in the evaluation process.



DeLaval part of CBS News Global Thought Leaders

In 2022, DeLaval was included in the CBS News Global Thought Leaders series, which is a platform managed by CBS News to highlight how business today can shape the world of tomorrow. DeLaval uses the platform to showcase its various solutions that help farmers to streamline their production and reduce their environmental footprint, with a focus on improved food production, profitability and the well-being of people and animals. "We are very proud to be part of CBS News Global Thought Leaders. The platform gives us the opportunity communicate to a wider audience on how we are part of the solution for more sustainable food production," says Anna-Pia Järnfors, Corporate Communications.





DeLaval launches next-generation E-series rotary milking system

The new system increases milking efficiency, streamlines worker routines, automates the selecting and sorting of cows, and minimises stress on dairy cattle. It does this through features that provide more information, automation, functions and technology. “The DeLaval E-series rotaries represent a new era in efficient dairy technology,” says Pat Wiltzius, Milking Systems Development Manager. “We have taken a 360-degree view of our customers’ – to prioritise animal welfare, farm profitability, food safety and work efficiency.”

Poland's factories go renewable

Based on an assessment of the company's CO₂ footprint, DeLaval switched to sourcing renewable electricity for its Polish factories. “When we found out about our high emissions due to the fact that we sourced much of our electricity from coal-fired power stations in Poland, we switched to sourcing renewable electricity from wind and hydro energy,” says Katarzyna Dzusajew, DeLaval Detergent Plant Manager and part of the DeLaval Sustainability Group. By sourcing renewable electricity, DeLaval's four factories in Poland avoided producing around 3,413,091kg of CO₂ in 2022.



DeLaval comfort control wins silver at Elmia, Sweden

The DeLaval comfort control CL unit controls all the manure scrapers and wooden culverts in a barn from a single user-friendly and intuitive touch screen. The system is fitted with adaptive scraping that uses advanced algorithms to optimise its operation over time. The smart solution helps farmers to reduce electricity costs as the scraper is not used unnecessarily and because the operating times are set automatically. Having well-scraped floors also promotes clean barns that improve hoof health for cows. DeLaval comfort control CL is available in two different versions – for scrapers using either a chain cable or a hydraulic system.



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.

Our approach to sustainability has three main perspectives – Environment, Food Safety & Animal Welfare and Social & Economic.

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.

Food Safety & 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.

Animal welfare is key

Animal welfare is an essential part of a sustainable dairy farm, and our products and services are developed with cow health and welfare in focus.

"Every farmer wants healthy animals that provide more milk, at better quality and for more years," says Cecilia Bågenvik, VP Animal Intelligence & Welfare Solutions. "Our role at DeLaval is to give the farmer the tools to make this happen through various features and measures that for example allow the early detection of disease that can avoid milk loss and help to reduce the use of antibiotics. We always strive to create comfortable and stress-free environments for the animals. What's good for the animals is good for the farm and the profitability of our customers."



DeLaval Sustainability

Vision

We make sustainable food production possible

Focus areas

Environment

- Reduce GHG emissions
- Responsible water use
- Reduce energy and waste

Food Safety & Animal Welfare

- Animal welfare and cow longevity
- Food safety and milk quality

Social & Economic

- Diversity and inclusion
- Employee engagement & well-being
- Profitability

DeLaval actions

Measure and reduce emissions from our own operations and throughout the value chain (scope 1, 2 and 3 emissions according to the GHG protocol).
Developing a process for product sustainability improvements, including energy and water usage, circularity and material efficiency.

Follow 'five freedoms' of animal welfare
Awareness raising activities
Innovations to ensure food safety

Implement and follow up actions to improve employee engagement
Raise awareness and implement guidelines on gender diversity
Accident and incident reporting

UN SDGs



Our sustainability goals, targets and progress

We have comprehensive goals and targets for our three sustainability focus areas. We made good progress in 2022 on our targets and are implementing prioritised actions in 2023 and beyond.

Below are some of our key targets and significant progress made in 2022. For the full story, see our latest Sustainability Report at www.corporate.delaval.com/sustainability.



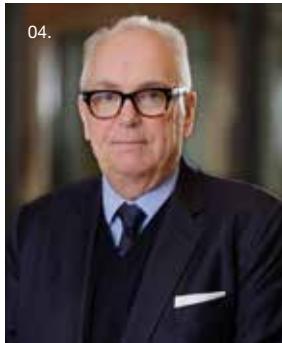
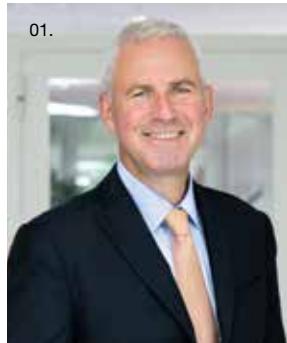
Our continuous work with Food Safety and Animal Welfare

We strive to meet all relevant regulations and minimise negative impact concerning food safety and animal welfare. These topics are always the cornerstone of our product development and customer advisory services. In 2022, our latest 'clean in place' methods further reduced the amount of energy, water and detergent needed to clean contact surfaces.

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 2023. 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 2022

- 01. **Martyn Zedgitt** – President
- 02. **Robert Swan** – Holdings
- 03. **Robert Norris** – Group Financial Planning and Reporting
- 04. **Jörn Rausing** – Mergers and Acquisitions
- 05. **Antoine Jomini** – Finance
- 06. **Mark Masek** – Audit
- 07. **Tuomo Rautiainen** – Tax
- 08. **Maurizio Proietti** – Operations



TETRA Laval Group Support Functions

- 01. **Lars Holmquist** – Group Corporate Affairs Officer
- 02. **Phil Read** – Group Human Resources

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

New Super Porridge combats child malnutrition and improves school attendance in Kenya

Tetra Pak and Food for Development are working with partners and collaborating with the Kenyan government to combat child malnutrition and improve school attendance in rural Kenya. A key part of the initiative has been the development of a liquid ready-to-drink cereal-based 'Super Porridge' for school children that is packaged in Tetra Brik® Aseptic 250 ml.



In the Arid and Semi-Arid Lands (ASAL) region of Kenya, food insecurity and malnutrition are major challenges for the 15 million people living there. The malnutrition rate in this region is 65 per cent compared to the national average of 29 per cent. In addition, 90 per cent of the 2.4 million children not attending school in Kenya live in the ASAL region, according to the Kenya Population and Housing Census (KPHC).

Porridge 4 Education Programme

As a key action, the 'Porridge 4 Education Programme' was implemented by the National Council for Nomadic Education in Kenya (NACONEK), a semi-autonomous government agency under the Ministry of Education. A survey conducted by NACONEK and UNICEF highlighted school feeding as a key initiative to bring back children to schools and address issues related to food security and nutrition. To address the issues of food safety and access to safe nutrition in schools, a collaborative partnership approach was established between Tetra Pak, Food for Development, Ingredion, DSM, and the Tetra Pak customer Jetlak Foods Limited to develop the liquid ready-to-drink cereal based 'Super Porridge' for school children.

The porridge is made from locally sourced crops, with an emphasis on locally grown climate-resilient crops containing maize, soy, sorghum and sweet potato. Ingredion, a leading global ingredients solutions company, contributed with their expertise and technology in texturising and stabilising solutions, and formulation development. Through the expertise of Royal DSM, a global purpose-led science-



based company, the product is fortified with 15 micronutrients including vitamin A, C, E, calcium, zinc and iron. The fortified beverage is packaged in Tetra Brik® Aseptic 250 ml for safe distribution to schools.

Collaborating with technical assistance and sharing best practices

Food for Development has supported with the implementation of the pilot programme that is currently reaching 5,000 children across three counties. Baseline data has been collected to measure improved school attendance, enrolment and health. Product acceptability tests were conducted with the

school children having an acceptability rate of 88 per cent. After the consumption of the porridge, the empty carton packages are collected and transported to a recycling facility in Nairobi to be converted into items such as school materials and desks.

The programme – from training, production, aggregation, processing, storage, transport logistics, marketing and consumption – will create 5,000 jobs for young people throughout the value chain. It will also help to create stable and secure livelihoods to address poverty among 12,000 smallholder farmer households that produce the cereals for the porridge.



The Dairy Hub model continues to boost dairy productivity and self-sufficiency

The Dairy Hub model, which helps Tetra Pak customers to connect with local smallholder farmers and milk collection centres, is helping to build more sustainable dairy value chains around the world.

Introducing the Dairy Hub model

The Dairy Hub model aims to secure a long-term supply of locally produced, quality milk, without raising the cost of collection in emerging economies. It does so by linking smallholder farmers to a dairy processor, with Tetra Pak and Food for Development offering the technology and 'hands-on' practical knowledge and training.

The model links smallholder farmers to a more stable market through a committed dairy processor willing to invest in the local milk supply chain. The farmers receive training and technical support from local Extension Officers that are focused on improving farm profitability and development. The Extension Officers in turn receive technical training from dairy experts at Food for Development, and then share their knowledge with reference farmers, who transfer it to a wider community of farmers.

Increasing milk production in Panama

The local dairy sector in Panama annually produces around 180 million litres of milk while the domestic demand is 480 million¹⁾, including fluid milk, various national milk products and imported dairy products. Smallholder farmers struggle with low incomes and a low average daily yield of 3.8 litres per cow²⁾. To support the development of a more self-sufficient dairy

sector, Tetra Pak customer and dairy processor Industrias Lácteas, S.A. with the support from Tetra Pak and Food for Development, has introduced the Dairy Hub model.

There were improvements already in the first few months of the project in 2022, where milk collection increased 8.5 per cent, from 106,000 to 115,000 litres per day. The reference farms also improved milk yield per farm about 4.4 per cent, and the average smallholder farmer gross income increased 4.2 per cent compared to before the hub.

Creating a more self-sufficient dairy sector in the Dominican Republic

While the Dominican Republic's dairy sector is an important source of local employment, it is not able to supply the full range of dairy products consumed domestically. Dairy processors source all the locally produced milk that meets the quality standards and cooperate with farmers and milk collection centres to improve compliance with these standards. However, the Ministry of Agriculture estimates that about 70 per cent³⁾ of milk produced does not meet the standards due to inadequate sanitary standards and cold chain limitations.

To ensure a more self-sufficient dairy sector and supply of local quality milk, a Dairy Hub model has been introduced by Tetra Pak customers Coopesur and Agampta, together

with Food for Development.

Coopesur is working with 40 reference farms that will benefit from the project during the first year. In the first few months, the farmers reported a 15 per cent average increase in milk production per farm compared to the baseline prior to their involvement in the Dairy Hub. At the 18 reference farms that Agampta is working with, milk production increased on average by around 21 per cent compared to the baseline. In addition, Coopesur reported an increase of smallholder farmer income by almost 15 per cent on average and Agampta by 26 per cent. Both companies also presented an improvement of productivity per cow and the total collection of raw milk.



1) El Ministerio de Desarrollo Agropecuario (Mida), 2021.

2) El Ministerio de Desarrollo Agropecuario (Mida), 2021.

3) Source: Dirección General de Ganadería (DIGEGA)

School feeding programme addresses malnutrition in the Philippines

One in four children in the Philippines are considered to suffer from malnutrition. To address the problem, the Department of Education has launched a national school feeding programme. Tetra Pak and Food for Development play an active role in the programme by sharing best practices in food safety and providing technical assistance so children can have access to safe nutrition.

School feeding and nutrition programmes around the world have proven to have a major positive impact on children's physical health, development and learning outcomes as food at school often is the first meal of the day for many children. They have also proven to play an important role in supporting local agriculture development.

According to the Philippines Expanded National Nutrition Survey, one in four children aged of five to ten are underweight. One in four children are 'stunted' (below their expected height for their age) and 7.8 per cent of children are 'wasted' (below their expected weight for their height).

To address these challenges, the Department of Education introduced a School Based Feeding Program (SBFP) with the objective of improving nutrition and school performance among school children. As part of the initiative, a law was passed by the government to institutionalise a national school feeding programme for undernourished children in public day-care, kindergarten and elementary schools. The national school feeding programme benefits 1,837,000 children, mainly from five to twelve years of age. As part of the meals, fortified white milk and flavoured milk are being prioritised as a valuable source of nutrition.

UHT milk in Tetra Wedge® Aseptic

Tetra Pak and Food for Development provide technical support to the school feeding programme where they share best practice in the organisation and implementation of school milk programmes, as well as provide environmental education. To tackle the infrastructure problems and the lack of refrigeration, Ultra High Temperature (UHT) milk in Tetra Wedge® Aseptic 200 ml Slim packages have been introduced to ensure that children in various parts of the country have access to safe nutrition. In the first phase, the UHT milk is being



distributed by Tetra Pak customer RFM Corporation in three of the seventeen regions in the country, covering almost 360,000 children.

Long engagement in school feeding programmes

"For decades, we have been working with our customers and relevant stakeholders to support school feeding programmes around the world because we believe they are effective in addressing poor health and nutrition in disadvantaged communities," says Michael Wu, Managing Director, Tetra Pak Malaysia, Singapore, Philippines, and Indonesia. "We commit to making food safe and available,

everywhere. This is why we make sure that school children get all the goodness of milk to have the energy to stay in school and get that brain boost they need for learning."

"Milk helps school kids reach their physical and cognitive potential. Aside from making it accessible, it is imperative that the milk stays fresh and safe even as we transport it to hard-to-reach areas or those with limited storage facilities," says Marie Concepcion-Young, Senior Vice President and General Manager, Consumer Group of RFM Corporation.

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