



 Tetra Laval

2019
2020

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When we send this report to print in April 2020, the Coronavirus has taken a tight grip on countries, communities and businesses globally. Our concern and thoughts are with all people affected by the virus.

The industries in which Tetra Laval operates are defined as essential, as we play an important and integral part of the food value chain. The Tetra Pak vision of 'making food safe and available, everywhere' has now been put to a tough test. Employees at DeLaval are walking an extra mile to secure that dairy farmers can continue to produce and deliver milk. Sidel is also reaching out to secure that their customers can operate in these unexpected and unpredictable times. Service engineers, factory workers and many others are making heroic efforts in helping our customers. We are proud to help our customers ensure that essential food reach consumers, everywhere.

Today no one can predict when we return to a new normal. Although the social distancing restrictions implemented by authorities will hopefully be lifted during the summer or early autumn, the impact on our business is difficult to foresee. We expect new investments by customers to be postponed, but on-going business to grow very much as expected given the need for the distribution of safe food. However, we will not speculate on this but will rather keep our focus on the continuous protection of our employees and of our customers' business.

THEME 2019/2020

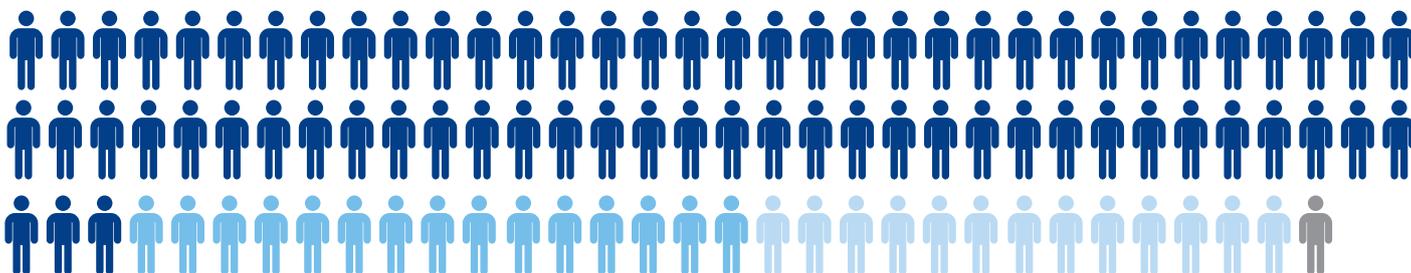
CUSTOMISED SERVICES DRIVE COMPETITIVENESS AND SUSTAINABILITY

To help customers strengthen their competitiveness while reducing their impacts on the planet, Tetra Laval has sharpened its service offering in recent years. Regardless of whether customers have a particular challenge they want to overcome, or if they want to improve operational efficiency, save costs and reduce their environmental footprint, our services help them to realise their objectives. Our service solutions are purpose-built for each customers' unique needs and situation, and focus on the customer value they will deliver.

This year's Annual Report showcases how our three industry groups have developed their service offerings to lead their markets. Tetra Pak Services draws on unique industry offerings, expertise and digital technologies to provide data, insights and actions that make customer processes more cost-effective, efficient and sustainable. Sidel has refined its service offering, in order to become a 'guaranteed performance partner', particularly by shifting from reactive to preventive maintenance. DeLaval has introduced new capabilities to monitor equipment remotely that can optimise the farmer's daily operations.

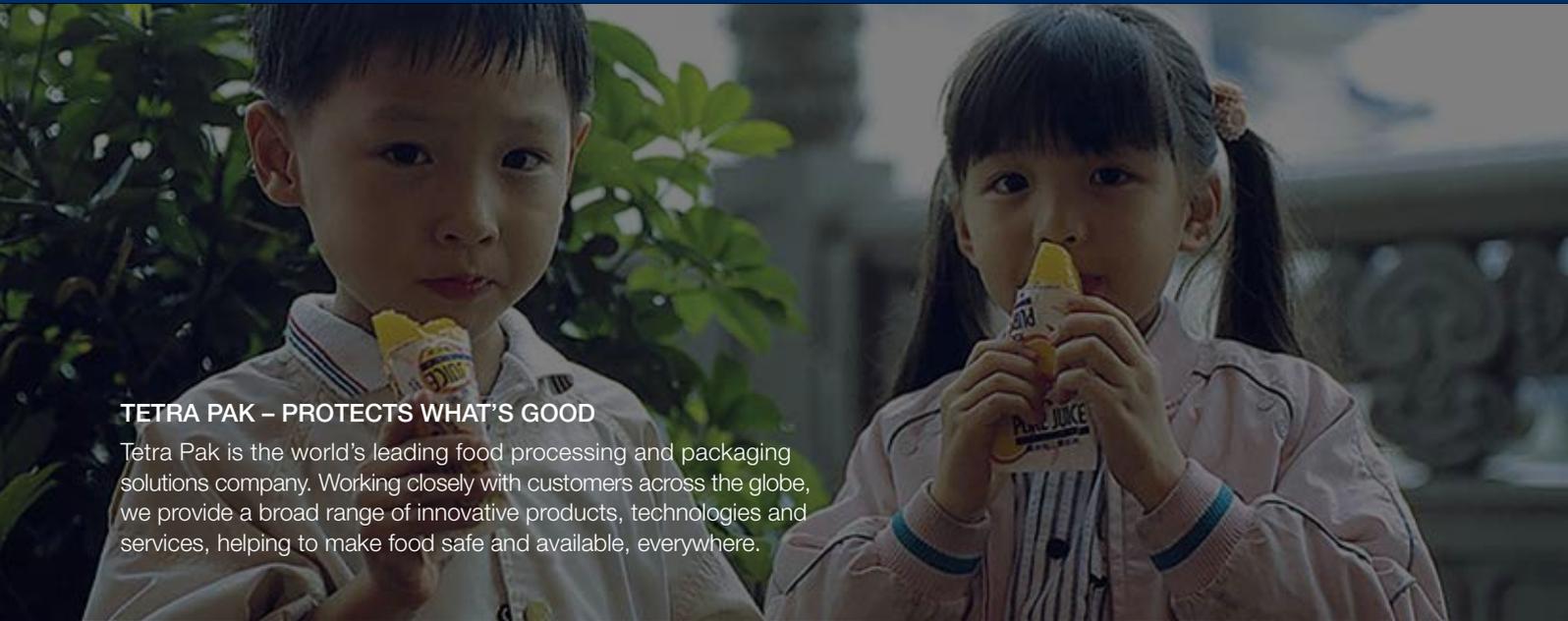
The Tetra Laval Group consists of three industry groups, Tetra Pak, Sidel and DeLaval, all focused on technologies and services for the efficient production, packaging and distribution of food. The head of each industry group has operational management responsibility for the respective industry group 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 2019



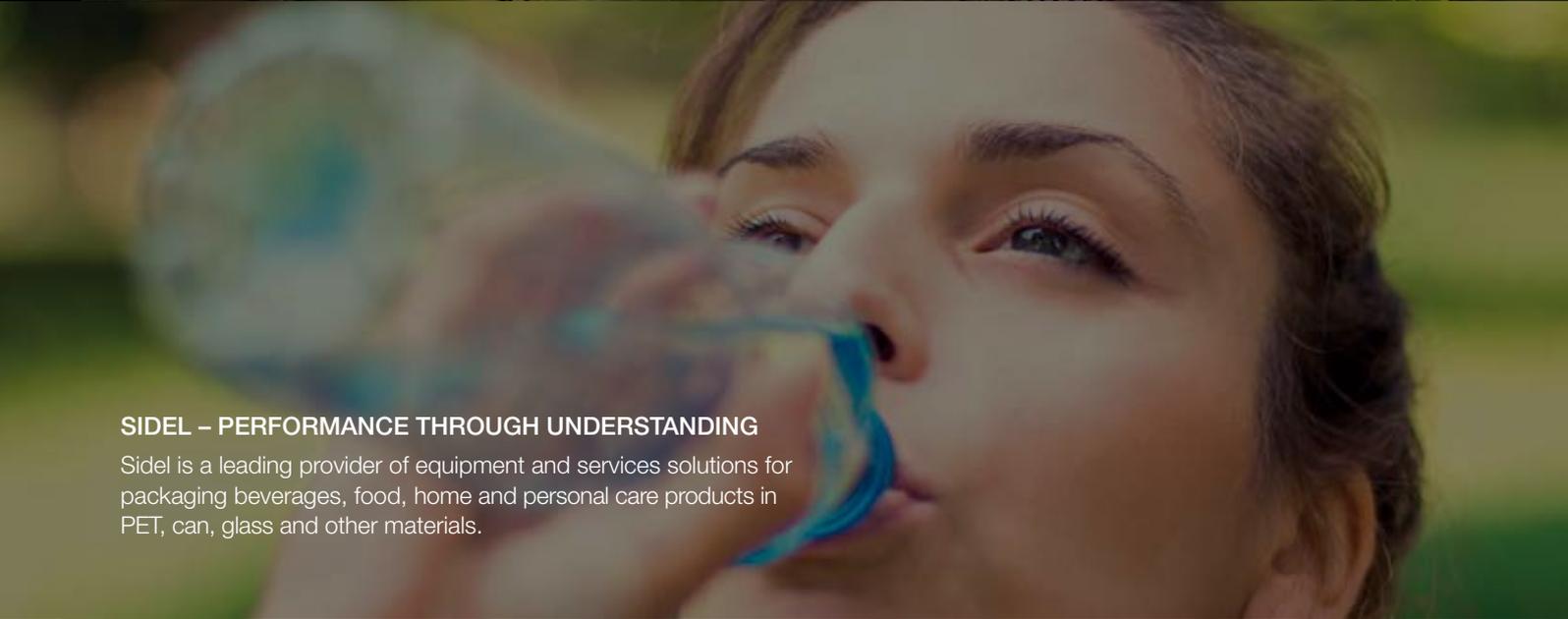
NET SALES 2019, MILLION EURO





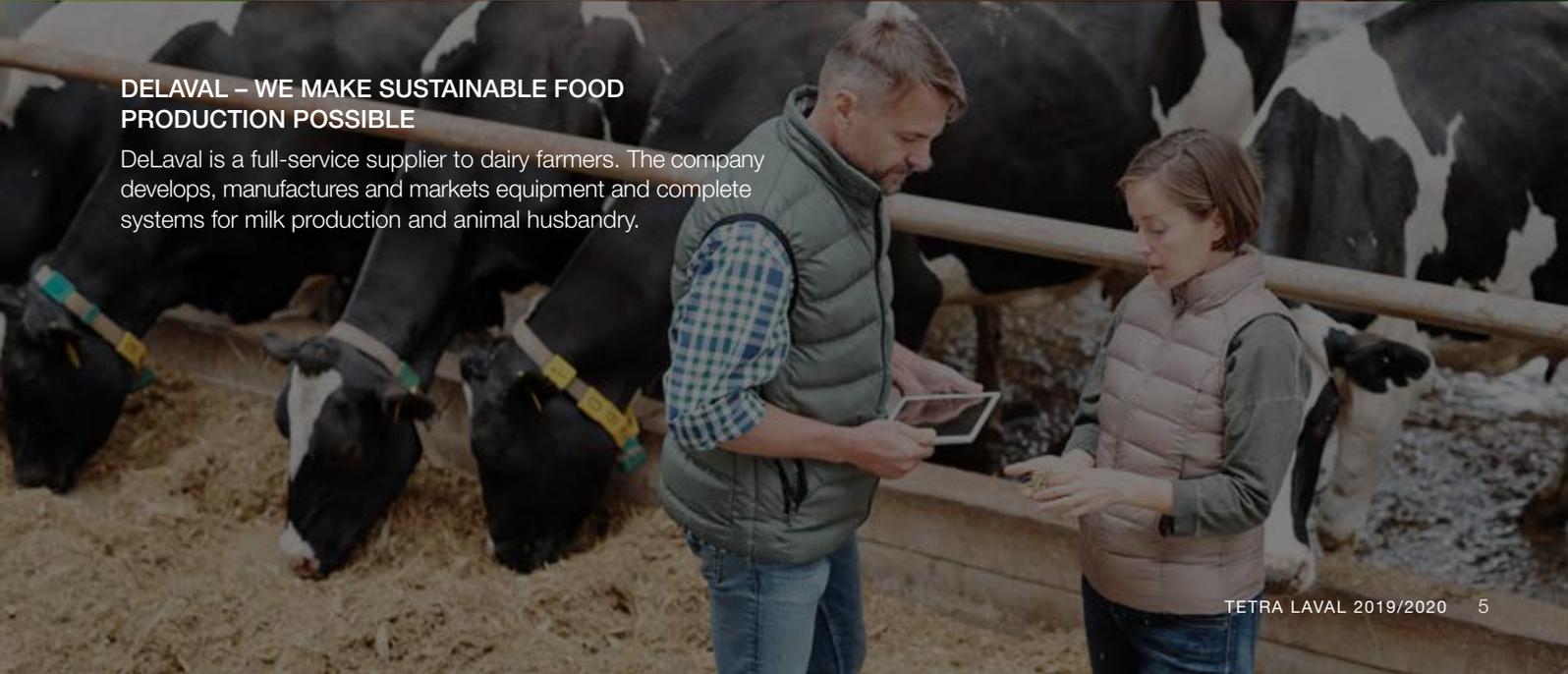
TETRA PAK – PROTECTS WHAT'S GOOD

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



SIDEL – PERFORMANCE THROUGH UNDERSTANDING

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



DELAVAL – WE MAKE SUSTAINABLE FOOD PRODUCTION POSSIBLE

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.

A successful year in a challenging environment

Despite a challenging year in a volatile economic and business environment in many parts of the world, we are pleased to report that the Tetra Laval Group had a successful 2019. The Group's net sales amounted to €14.0 billion, which is a nominal increase of 2.5 per cent compared with 2018. At comparable exchange rates, sales increased by 1.0 per cent. All industry groups successfully grew their service sales while DeLaval also increased equipment sales. The Group reported a slight increase in operating profit, mainly attributable to positive currency effects and lower raw material costs. The Group generated a very strong cash flow, thanks to a number of improvement activities.

I want to express my gratitude to our dedicated personnel for their commitment during a challenging year.

Service present significant opportunities

Service, the theme of this year's Annual Report, presents significant growth opportunities regardless of where we are in the business cycle. Digitalisation and remote monitoring enable us to help improve the operational efficiency of our customers. A higher portion of preventive maintenance will also facilitate a more efficient utilisation of our service engineers, since they will spend less time 'on the road'. In recent years we have substantially increased the number of employees working in service, and by utilising technology like virtual reality we can deliver service offerings of higher quality and with enhanced efficiency.

Geographical development

Asia Pacific and North America continued to deliver growth and a new packaging material plant in Vietnam became operational in mid-2019 to support the growth. Europe stabilised after a decline in recent years and had a positive trend towards the end of the year. The uncertain business environment in the Middle East and parts of South America subdued sales in those regions.

Tetra Pak continued to grow in a year of transition

Total Tetra Pak sales grew 0.5 per cent, excluding currency effects, in a challenging market. In Packaging, capital equipment sales grew while Processing declined slightly from the previous year's record level. We also successfully extended the offering to lease Tetra Pak's equipment to new geographical markets.

Sales of packaging material grew slightly for the first time since 2015, driven by the growth of additional materials like caps and closures. The number of packages sold grew by 0.6 per cent to 191 billion. Sales of additional material grew as the successful deployment of new packaging formats continued. The positive trend in service sales in recent years continued, with a growth rate of 4.5 per cent. Service sales now account for 15 per cent of total sales.

Profitability increased somewhat thanks to positive currency effects, higher gross profit and lower restructuring expenses.

We became the first in our industry to announce full colour digital printing on carton packages. In addition, we launched the Connected Packaging platform, which will transform cartons into interactive channels and full-scale data carriers to the benefit of producers, retailers and consumers. There was a significant ramp up in our development efforts together with customers, especially in the protein drinks, drinking yogurts and water product categories.

Sustainability is top of the agenda and we significantly increased investments in product development and responsible sourcing. We launched the first paper straws for carton packaging in Europe, which is an important step in our vision to deliver a package made entirely from plant-based packaging materials that contribute to a low-carbon circular economy. We surpassed the cumulative 500 billion FSC™ labelled package mark, reinforcing the company's commitment to promote responsible sourcing. We also launched Planet Positive, a programme that urges industry stakeholders to

take a broader view of sustainability, ensuring that the total sum of our activities has a positive impact on the planet.

Strategy 2030 was rolled out during the year, which is based on four pillars. Firstly, deliver food safety and the best quality. Secondly, lead the sustainability transformation in our industry. We are committed to improve the recyclability of our packaging and reinforce the benefits of a low-carbon, circular economy. Thirdly, integrate and optimise customer operations, and finally bring innovative products with new consumer value for customer growth.

Looking ahead, we expect continued growth for Tetra Pak during 2020.

DeLaval – innovation drives another record year

Sales excluding currency effects grew 6.6 per cent. We increased market share in a declining capital goods market thanks to an innovative range of capital goods and aftermarket products combined with a dedicated organisation.

Our successful launches in 2018 bore fruit in 2019. The world-leading DeLaval VMS™ V300 milking robot is the main driver behind our growth. At a time when farmers in many countries are finding it increasingly difficult to recruit the right staff, the efficiency benefits of automatic milking are highly relevant for farmers all around the globe. As a follow up in 2019, we launched a new upgraded milking robot, which includes DeLaval RePro that automatically detects when cows are on heat or pregnant during the milking process. The order intake for this innovation has been very satisfying. Products and services for animal welfare were also in high demand.

DeLaval In Service™ All-Inclusive is growing rapidly. The service gives the farmer a fixed-rate subscription to cater for all the required consumables on the farm, 24/7 support and the regular servicing of all machinery.

The newly created digital services organisation is developing new business models to better meet the future needs of our customers.

With our ability to collect data on the farm, we can gather and analyse information – with the farmer’s permission – to provide more accurate recommendations that help them improve both food safety and farm profitability.

As for 2020, sales are expected to decline slightly following two years of excellent growth.

Sidel – excellent year in aseptic PET

Sidel’s sales grew by around 0.3 per cent, excluding currency effects with stable capital equipment sales and a slight growth in service sales. Sidel made progress in a number of ways during 2019. Our PET equipment order intake was quite strong, mainly driven by investments in non-alcoholic beverage lines in Asia, Oceania and Africa.

In Service, sales of spare parts and maintenance solutions developed well. However, our moulds and line conversions businesses have been impacted by a wait-and-see trend among liquid food producers based in Europe as they wait to see how the EU Single Use Plastics (SUP) Directive will translate into local regulations.

The new generation of filling equipment for can and glass has been very well received in the market and we expect good growth in 2020.

Sustainable solutions is a key feature of our customer offering. We translate our commitment to sustainable packaging into three areas. Firstly, we optimise current packaging with our Right Weight™ programme to ensure that the package’s weight is minimised but still maintains its technical properties and high consumer appeal. Secondly, we are designing to recycle, for instance, by working with our customers to increase the recycled content in their packages. PET is the only plastic packaging material that can be recycled bottle-to-bottle. This is why we expect growth to be progressively captured by recycled PET, which can be brought back into the value chain as a valuable resource.

We expect 2020 to be a year of further improvement for Sidel.

Growth, sustainability and innovation – our focus for 2020

Several of our customers are struggling with subdued growth and profitability due to changing consumer behaviour. Our commitment is to support our customers to introduce more innovative products at competitive prices – to ultimately generate growth for them. Indeed, innovation is the foundation for our long-term success in our

industries. Through our expertise, we also contribute to improving our customers’ operational efficiency. Finally, the Group’s initiatives within sustainability, be it the increased recycling of packaging material, light-weighting of PET bottles for reduced plastic consumption or more efficient milk production for lower CO₂ emissions, will help our customers to outperform their competition.

Internally, efficiency improvements are launched to adapt costs to prevailing market conditions and foreseen structural changes in customer demand.

We are used to political and macroeconomic challenges and quickly adapt to them but this year we are facing a new unknown – the COVID-19 virus. The full impact is yet to be seen, but the virus has already had a significant effect on 2020 as it disrupts consumption,

value chains and the short-term investment climate. Our three industry groups are closely monitoring the severe development of the pandemic and its effects on their businesses. They are adapting their operations accordingly by focusing on the health and well-being of our employees while continuing to serve our customers with as little disruption as possible. In this way, we can help them to continue maintain food supply to communities around the world.

Finally, in 2019 I had the pleasure of welcoming Adolfo Orive and Monica Gimre as the new CEOs of Tetra Pak and Sidel respectively. They have quickly got settled and are well on their way to make their respective industry group more competitive.

Lars Renström



TETRA LAVAL GROUP BOARD



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. 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 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 has been a frequent external speaker on Food Security & Sustainability issues worldwide.

03. Nigel Higgins

A non-executive director since 1st August 2016.

Nigel Higgins is Chairman of Barclays plc. Prior to that he was Deputy Chairman of Rothschild & Co having been Managing Partner and Chairman of the Executive Committee since 2010. He worked at Rothschild upon graduating from Oxford University in 1982. He was a member of the Advisory Board for the Commercial Directorate of the UK's National Health Service from 2002-2007. He is a member of the Trilateral Commission. He is Chairman of Sadler's Wells, the world's No. 1 venue dedicated to international dance.

04. Ola Källenius

A non-executive director since 1st June 2016.

Ola Källenius has been Chairman of the Board of Management of Daimler AG since 22 May 2019. He is also Chairman of the Board of Management of Mercedes-Benz AG and Chairman of the Supervisory Board of Daimler Truck AG. He has been a Member of the Board of Management of Daimler AG since 1 January 2015. In his prior position 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., 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 - Daimler'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.

05. Jorma Ollila

A non-executive director since January 2013.

Jorma Ollila is Chairman of Alma Media Corporation since March 2019. He was Chairman of Outokumpu 2013-2018, Chairman of the Board of Directors of Royal Dutch Shell plc 2006 – 2015, Chairman of Nokia 2006-2012, Chairman and CEO, Chairman of the Board of Directors and Group Executive Board of Nokia Corporation 1999 – 2006, President and CEO, Chairman of the Group Executive Board of Nokia Corporation 1992-1999. He is Advisory Partner of Perella Weinberg Partners as of 2014. He is Chairman of Milton as of 2015 as well as Chairman of the Board of Xinova LLC since 2016. Board member of TBG AG since 2016.

06. Dr. Bernd Pischetsrieder

A non-executive director since 1999.

Bernd Pischetsrieder was Chairman of the Supervisory Board of Münchener Rückversicherungs-Gesellschaft, Aktiengesellschaft in München 2013-2019. Dr. Bernd Pischetsrieder has been Chairman of the Board of Management of Volkswagen AG from 2002 to 2006. He has been Chairman of the Board of Directors of Scania AB, Sweden from 2002 to 2007. Dr. Pischetsrieder is a member of the Supervisory Board of Daimler AG since April 2014.

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, EQT AB, Excillum AB and SwedeShip Marine AB. Mr. Rausing is also chairman of the Stockholm Institute of Transition Economics (SITE).

08. Jörn Rausing

A non-executive director of the Tetra Laval Group Board since 1991 (an alternate director of the Tetra Pak Group Board since 1985).

Jörn Rausing is also a board member of Alfa Laval AB and 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.

09. Kirsten Rausing

An alternate director since 1985 and a non-executive director since 1991.

Kirsten Rausing is a Member of the Jockey Club and a Director of the British Bloodstock Agency. She is the Chairman of the International Thoroughbred Breeders' Federation, a world-wide organisation with some 40 members states. In addition, Ms. Rausing is the Hon. President of the European Federation of Thoroughbred Breeders' Associations (Paris), as well as a past Chairman of the Thoroughbred Breeders Association of Great Britain. She was a Trustee of the newly formed Racing Foundation (UK) from 2012 to 2017; this Foundation handles the proceeds of the British Government's sale of the Totalisator Board.



PROTECTS WHAT'S GOOD

Tetra Pak is the world leader in food processing and packaging solutions. For more than 65 years, we have worked with customers across the globe to help make food safe and available, everywhere. Continually building on our heritage of innovation, our deep market knowledge and our commitment to sustainable development, we focus on enabling them to deliver products of outstanding quality and consumer appeal, while maintaining the highest standards of food safety and operational performance.

LONG HISTORY OF DELIVERING CUSTOMER VALUE

Tetra Pak was built on delivering customer value. Dr. Ruben Rausing, who founded the company, believed that a package should save more than its costs; that greater efficiency, better quality, increased differentiation and business growth should more than offset what customers pay for packaging. That principle continues to guide our business today, with our goal to deliver outstanding performance and quality to our customers at lower comparable cost, and with higher value, than anyone else in the industry.

PRODUCTS

Tetra Pak is uniquely equipped to provide solutions that meet our customers' complete 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, thereby maximising operational and environmental performance.

Our portfolio is broad, and includes:

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

MARKETS & CUSTOMERS

In 2019, Tetra Pak sold products and services to customers in more than 160 countries, and employed around 25,500 people.

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

SUSTAINABILITY

At Tetra Pak, our approach to sustainability is shaped by our brand promise: PROTECTS WHAT'S GOOD™.

That means protecting food, through our processing, packaging and service activities. But it also means protecting people, both inside and outside the company. And it means protecting futures: our planet's, our customers' and our own. At the core of our approach to sustainability is a recognition that our future success depends on our ability to provide safe, secure and sustainable products to consumers, as well as a commitment to being socially responsible in the way that we operate across the value chain.

NET SALES 2019

€11.5

BILLION

SALES IN

>160

COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2019

25,555

CUSTOMER INNOVATION CENTRES

6

TECHNICAL TRAINING CENTRES

11

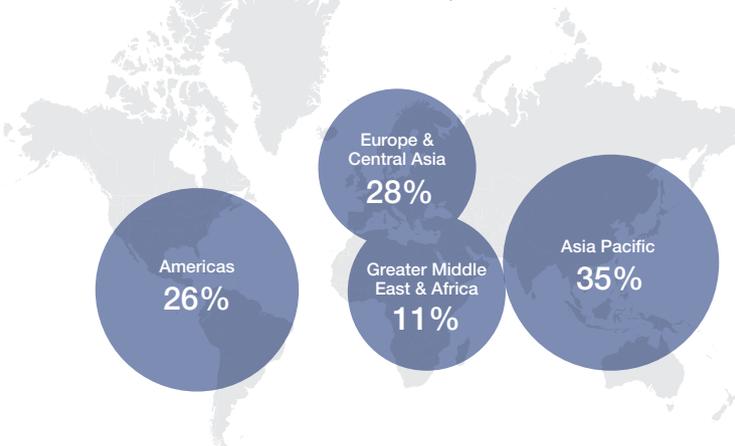
RESEARCH AND DEVELOPMENT CENTRES

5

PRODUCTION PLANTS

55*

TETRA PAK NET SALES BY GEOGRAPHY, 2019



TETRA PAK PACKAGING MATERIAL NET SALES PER CATEGORY, 2019

Liquid Dairy Products 57.9%		Dairy alternatives 7.7%	
Juice & Nectar 14.8%		Food 5.8%	
Still Drinks 10.2%		Wine & Spirits 2.4%	

Others 1.2%

* Production plants: packaging material converting factories 30, closures (caps) factories 5, additional material strips & film factories 3, additional material straws (stand-alone) factories 2, Processing Solutions production facilities 15.

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.

PERFORMANCE THROUGH UNDERSTANDING

When beverage, food and Home/Personal Care producers work with Sidel, the end result is a solution that enables them to optimise their product packaging and grow their business. They need to consider that consumer trends are changing at a very fast pace, combining a focus on safety, quality and health benefits with a desire for increased convenience, transparency, authenticity and personalisation. Now more than ever, our customers need strong, consistent performance that provides the flexibility and agility needed to cater to different packaging, product and manufacturing needs. Performance that minimises resource consumption and environmental impact – while achieving customised production at a lower cost. Delivering this level of performance requires us to truly understand our customers' products, consumers, supply chains and production needs. All so that we can create tailored solutions that consistently deliver the exact performance they seek – no more, no less. That is what we promise. That is what we deliver. We call it Performance through Understanding.

MANY MARKETS. ONE PURPOSE.

Sidel has proven experience, with over 40,000 machines installed in more than 190 countries. We focus on providing our business partners with the advanced systems, line engineering and innovation they need to reach their goals.

As a complete solutions provider, Sidel serves brand owners, manufacturers and co-packers, active in the soft and alcoholic drink business as well as in the food, home and personal care industries. We are a leading provider of blowing, filling, labelling, material-handling, end-of-line and engineering solutions for multiple applications.

Our more than 5,500 employees work to deliver all types of equipment and services within primary and secondary packaging, and we also offer processing equipment, supplied by Tetra Pak, enabling customers to work end-to-end with one partner.

Novembal is a specialist in plastic cap design and injection, and a leading supplier of closures for the bottled liquid food market with over 60 years of experience. Predominantly based and operating in North America, Novembal is an independently managed business unit of the Sidel Group.

NET SALES 2019

€1.4

BILLION

SALES IN

>90

COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2019

5,527

TECHNICAL TRAINING CENTRES

14

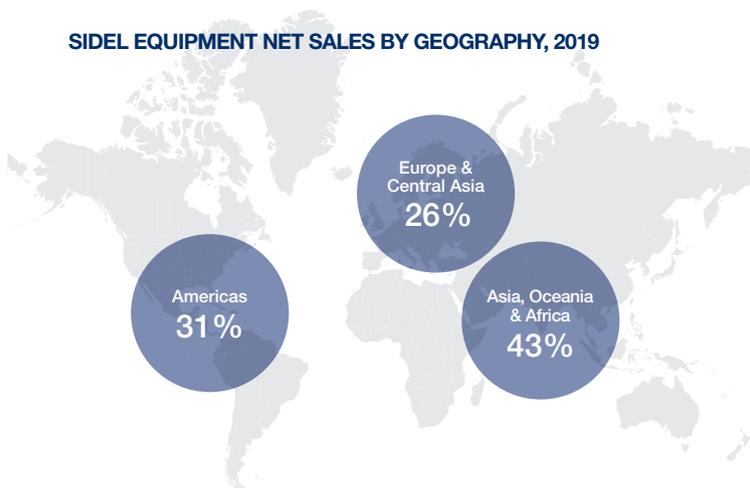
RESEARCH AND DEVELOPMENT
CENTRES

10

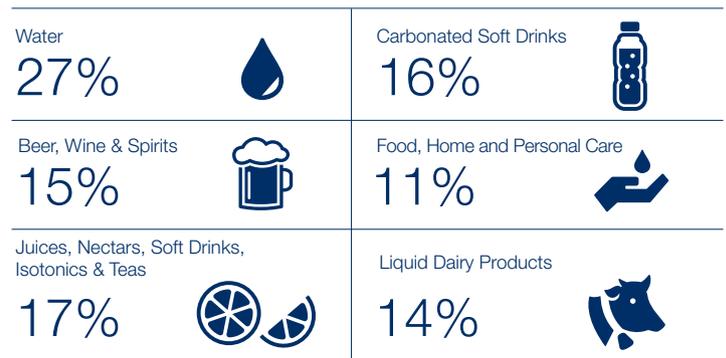
PRODUCTION PLANTS

20

SIDEL EQUIPMENT NET SALES BY GEOGRAPHY, 2019



SIDEL EQUIPMENT NET SALES BY MARKET SEGMENT, 2019



WE LIVE MILK

DeLaval is a market leader and trusted partner for thousands of farmers around the planet, providing integrated milking solutions designed to improve dairy farmers' production, animal welfare and overall quality of life. The company develops and manufactures equipment for milk production and animal husbandry worldwide.

OUR SOLUTIONS

DeLaval offers highly efficient system solutions for milking, farm and herd management, animal traffic control, feeding, cooling, manure handling, ventilation and energy recovery. DeLaval customers can also choose from a wide range of services and consumables: liners & tubes, farm supplies, services & original parts, and milk quality & animal health.

OUR CUSTOMERS

Every time we help a farmer find a way to produce more milk from the same herd, we're making food production more sustainable – by introducing a new working method on the farm, a new parlour, better liners, better hygiene, better data to make better decisions, by cutting disease, by keeping cows healthier and increasing their milking lifetime. Every time we do that, we help farmers do more with less.

Every time we do that, we're moving on the road to more sustainable food production.

RESEARCH AND INNOVATION

Research and innovation are central to the continued success of DeLaval supporting our customers and

we have seven R&D centres around the globe. We work closely with a worldwide network of farmers, academics, dedicated research facilities, scientists, sales teams and authorised dealers.

Innovation is in our blood. It's been in our blood since Gustaf de Laval patented the centrifugal cream separator back in 1878. That is more than 140 years of continuous knowledge, accumulating year after year and changing how we do things, innovating to make them better.

In short, we live milk.



NET SALES 2019

€1.1

BILLION

SALES IN

>100

COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2019

4,628

TECHNICAL TRAINING CENTRES

6

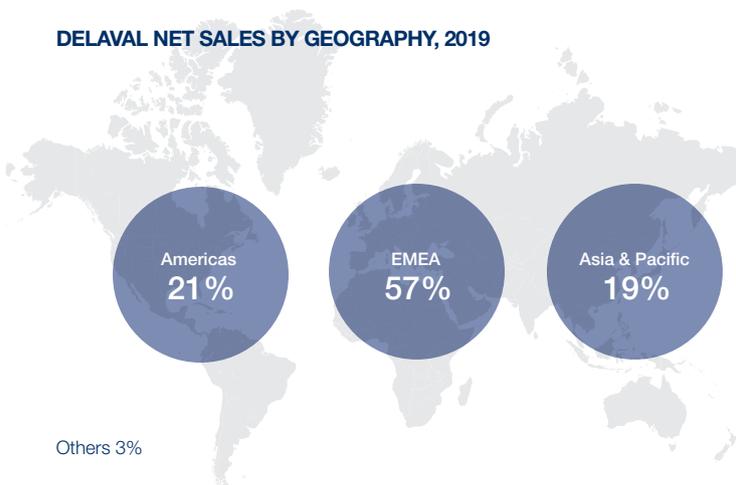
RESEARCH AND DEVELOPMENT
CENTRES

7

PRODUCTION PLANTS

14

DELAVAL NET SALES BY GEOGRAPHY, 2019



DELAVAL NET SALES BY PRODUCT SECTOR, 2019

Service and original parts 19%	Milking 38%
Farm supplies 17%	Hygiene 26%

Tetra Laval world trends

– an overview

TETRA LAVAL GROUP DONATED €10 MILLION TOWARDS COVID-19 RELIEF EFFORTS

The COVID-19 pandemic made an unprecedented impact on communities worldwide. To support the global response to this crisis, the Tetra Laval Group donated €10 million to various voluntary organisations supporting the health care systems across the countries that we operate in.

While maintaining important measures to ensure the health and safety of its employees, the Tetra Laval Group which comprises Tetra Pak, Sidel and DeLaval, is fully committed to play its part in ensuring uninterrupted food supplies during these difficult times.



TETRA PAK

RESPONSIBLE CONSUMPTION

Health and environment are among the biggest drivers of consumer behaviour. These two concerns have started to merge and consumers now want products that are healthy for both people and our planet. People want to consume mindfully and that their diet provides sustained nutrition and good quality. In the environmental sphere, the narrative is shifting to genuine harm reduction. For example, consumers are becoming more serious about offsetting. But more often, they want to be responsible for their everyday choices. This makes it important for brands to give consumers the information they need to enable informed choices.

Brands also need to show they act responsibly by fighting physical and mental illness, pollution and other health related issues affected by our choices.

TETRA PAK

GROWING E-COMMERCE AND FOOD DELIVERY SERVICES

According to McKinsey & Company, the global food delivery market was worth €83 billion in 2018. Almost three quarters of orders are still made by phone, but consumers that are accustomed to shopping online through apps or websites increasingly expect the same experience when ordering food. Online platforms are emerging to sell and deliver food, and retailers are increasingly tapping into these online opportunities to provide consumers with meal delivery services, or affiliating themselves with food-service companies. Tetra Pak helps brands develop single-serve pack sizes or meal kit solutions specifically tailored for online channels and home delivery.



TETRA PAK

CLEAR LABEL ASPIRATIONS

Transparency has never been more important with today's well-informed but sceptical consumers who are concerned about health, safety and where their food comes from. This affects consumer brand relationships, with many seeking reassurance from cleaner labelling that ensures greater transparency. Clean label products are increasingly looking beyond the ingredient statement to provide full transparency on processing, packaging, transport and sourcing. Tetra Pak can provide packaging that provides transparency and traceability to reassure consumers, and even profile ethical and environment-friendly brands.



SIDEL

MASS PERSONALISATION CALLS FOR FLEXIBLE MANUFACTURING

The growing consumer demand for varying formats and recipes requires shorter production batches – and ultimately an increased need for flexible manufacturing.

Our customers' top priorities are faster product and format changeovers, simpler operations and streamlined processes. At the same time, absolute product quality, minimal Total Cost of Ownership (TCO) and the ability to prepare for future production needs must all be guaranteed.

Flexible manufacturing is an area that Sidel specialises in. We help liquid food manufacturers perform changeover activities in an easy, replicable and quick way – to optimise scheduled downtime and maintain production quality and efficiency aligned with Overall Equipment Effectiveness (OEE).



SIDEL

CARE FOR THE ENVIRONMENT PUTS FOCUS ON SUSTAINABLE PACKAGING

Sustainable packaging is a clear priority for our planet. At Sidel, we respond to this demand by continuously working on reducing the carbon footprint of our equipment and optimising our packaging portfolio.

Our 'Options and Upgrades' and Packaging services, for example, help our clients become 'greener' through solutions aimed at prolonging the lifetime of their equipment, reducing resource consumption and strengthening the performance of their bottles. In recent years, Sidel has made considerable progress in this regard in the equipment we offer – for instance the Sidel Matrix™ blower is an environmentally responsible solution that minimises the energy, air, chemicals and water used in the production process.

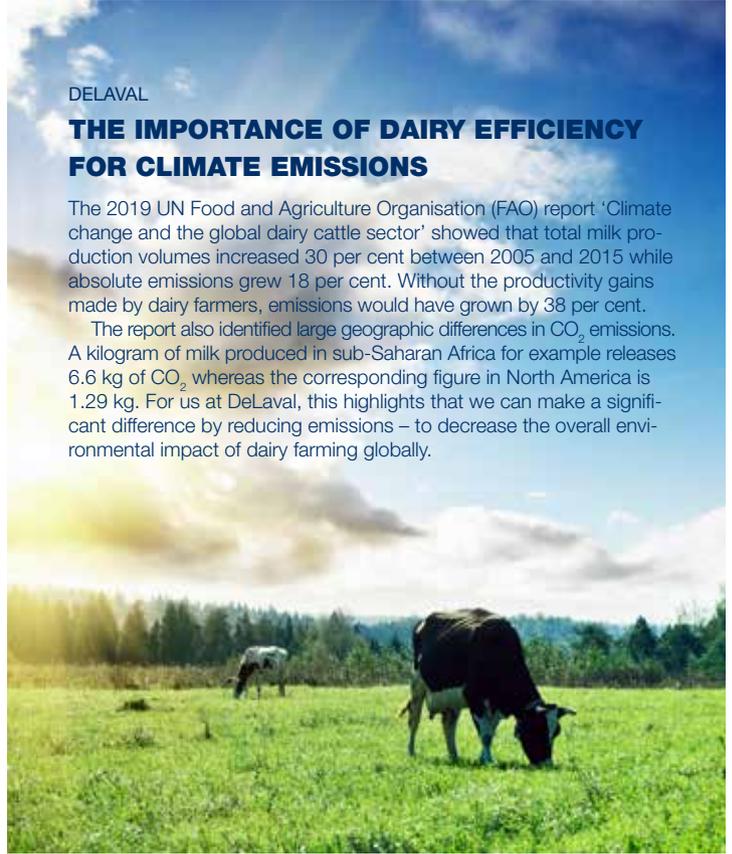


DELAVAL

THE IMPORTANCE OF DAIRY EFFICIENCY FOR CLIMATE EMISSIONS

The 2019 UN Food and Agriculture Organisation (FAO) report 'Climate change and the global dairy cattle sector' showed that total milk production volumes increased 30 per cent between 2005 and 2015 while absolute emissions grew 18 per cent. Without the productivity gains made by dairy farmers, emissions would have grown by 38 per cent.

The report also identified large geographic differences in CO₂ emissions. A kilogram of milk produced in sub-Saharan Africa for example releases 6.6 kg of CO₂ whereas the corresponding figure in North America is 1.29 kg. For us at DeLaval, this highlights that we can make a significant difference by reducing emissions – to decrease the overall environmental impact of dairy farming globally.



DELAVAL

ENABLING PRECISION DAIRY FARMING

Digital technologies are becoming increasingly important for the dairy industry to operate more efficiently and sustainably. The greater use of data collection tools, such as sensors, and more sophisticated farm hardware and software is driving the demand for analytical and technical skills.

Technological tools are a great help when overcoming herd management challenges – to enhance efficiency, animal productivity and comfort. Product traceability in the food chain is another advantage of digital technologies, which creates value for farmers, processors and consumers. Greater understanding of the economic pay-off and user-friendliness of precision dairy farming will drive the adoption of such new technologies by farmers.



Continued growth in a year of

The year 2019 was one of transition. The external environment continued to evolve, with rapidly increasing expectations on sustainability, and greater demand for customisation, both from customers and consumers. From a business perspective, we grew our net sales despite economic and political volatility, pricing pressures and increasing competition. We introduced several new industry-firsts, continued investing for the future, and pushed the sustainability and quality agenda forward.

In addition to this, we had several new members in our Global Leadership Team, initiated various organisational changes to drive efficiencies, and launched a new strategy for 2030.

Business results 2019

We ended the year with total net sales of €11.5 billion at prevailing exchange rates, growing 0.5 per cent compared to 2018 at comparable exchange rates, with good results on cash flow and return on sales.

Net sales, however, were short of our ambitions, due to a slower economic growth (global GDP growth in 2019 amounted to 2.9 per cent compared with 3.6 per cent in 2018) and continued economic and political volatility, especially in the Middle East and parts of Europe.

The Packaging Solutions business registered net sales of €9.5 billion at prevailing exchange rates, a growth of 0.8 per cent at comparable exchange rates over 2018. Packaging Material net sales grew for the first time since 2015, driven by growth in Additional Material.

Packaging Material volume grew 0.6 per cent in terms of number of packs (ending the year with 191 billion packs), while seeing a decrease of 0.5 per cent in number of litres, reflecting a higher share of portion packs in the mix. Advanced Formats kept growing in pace, now accounting for more than one-third of our volumes.

Packaging equipment also saw net sales growth of 1.6 per cent at comparable exchange rates, following an acceleration in the last quarter of 2019.

Our Processing solutions business closed the year at €1.9 billion at prevailing exchange rates, down 1.1 per cent at comparable exchange rates from an all-time high achieved in 2018.

Processing Equipment net sales decreased 2.9 per cent at comparable exchange rates mainly due to lower than expected order backlog into 2019 and some large projects being delayed.

The Services business recorded net sales of €1.6 billion at prevailing exchange rates, with an increase of 4.5 per cent at comparable exchange rates, a slower growth compared to previous years. All clusters were able to deliver growth, across both Packaging and Processing, driven by Parts, Maintenance and Upgrades categories.

From a geographical perspective, cluster Europe and Central Asia was the fastest growing with net sales growth of 1.5 per cent at comparable exchange rates, mainly driven by a strong double-digit growth in Equipment sales.

Cluster Americas grew by 1.2 per cent at comparable exchange rates, delivering growth across all business streams.

Cluster Asia Pacific saw an increase of 1.0 per cent, with Packaging Material growing by 3.3 per cent at comparable exchange rates, the highest across all clusters.

Cluster Greater Middle East and Africa declined by 1.8 per cent at comparable exchange rates, negatively impacted by the volatile economic and political environment in markets such as Turkey, Yemen and Saudi Arabia, as well as competitive pressure in several geographies. Packaging Material net sales were the most impacted, with a negative growth of 4.7 per cent at comparable exchange rates, which was partly offset by growth in Services and Equipment.

Leading the industry – Investing for the future

I am proud to say that with the relentless focus and dedication of our teams, we were able to launch many industry-firsts, taking a long-term view of the business.

We became the first company in the food and beverage carton industry to announce full-colour digital printing on carton packages, which will deliver new levels of customisation and flexibility to our customers.

We further harnessed the power of digital technology through the launch of the Connected Packaging platform, which will transform carton packages into interactive channels and full-scale data carriers, bringing a variety of benefits to producers, retailers and consumers.

Our concept of the ‘factory of the future’ looked at revolutionising the way food manufacturing plants operate, with human and AI collaboration at its core.

The in-line standardisation analyser was yet another industry-first, providing for continuous accurate measurement and control of protein and fat in dairy products, helping customers ensure consistent product quality and strengthening their profitability.

In 2019, we signed the first Tetra Pak® Plant Secure contract, taking forward the benefits of asset management and digitalisation to customers, driving productivity and sustainability.

Other products launched during the year included the Tetra Stelo™ Aseptic carton package, with a smoothly rounded, easy-grip shape and a one-step opening, as well as the Tetra Classic® Aseptic 65ml Cube package, which is designed to allow every six packages to form a cube, to optimise the use of space in distribution and storage.

There was a significant ramp-up in our category development efforts with customers, especially in protein drinks, drinking yogurt and water.

transition

“I’m confident that with Strategy 2030, we will have even more opportunities to make food safe and available, everywhere, and keep our promise to the world: to protect what’s good.”

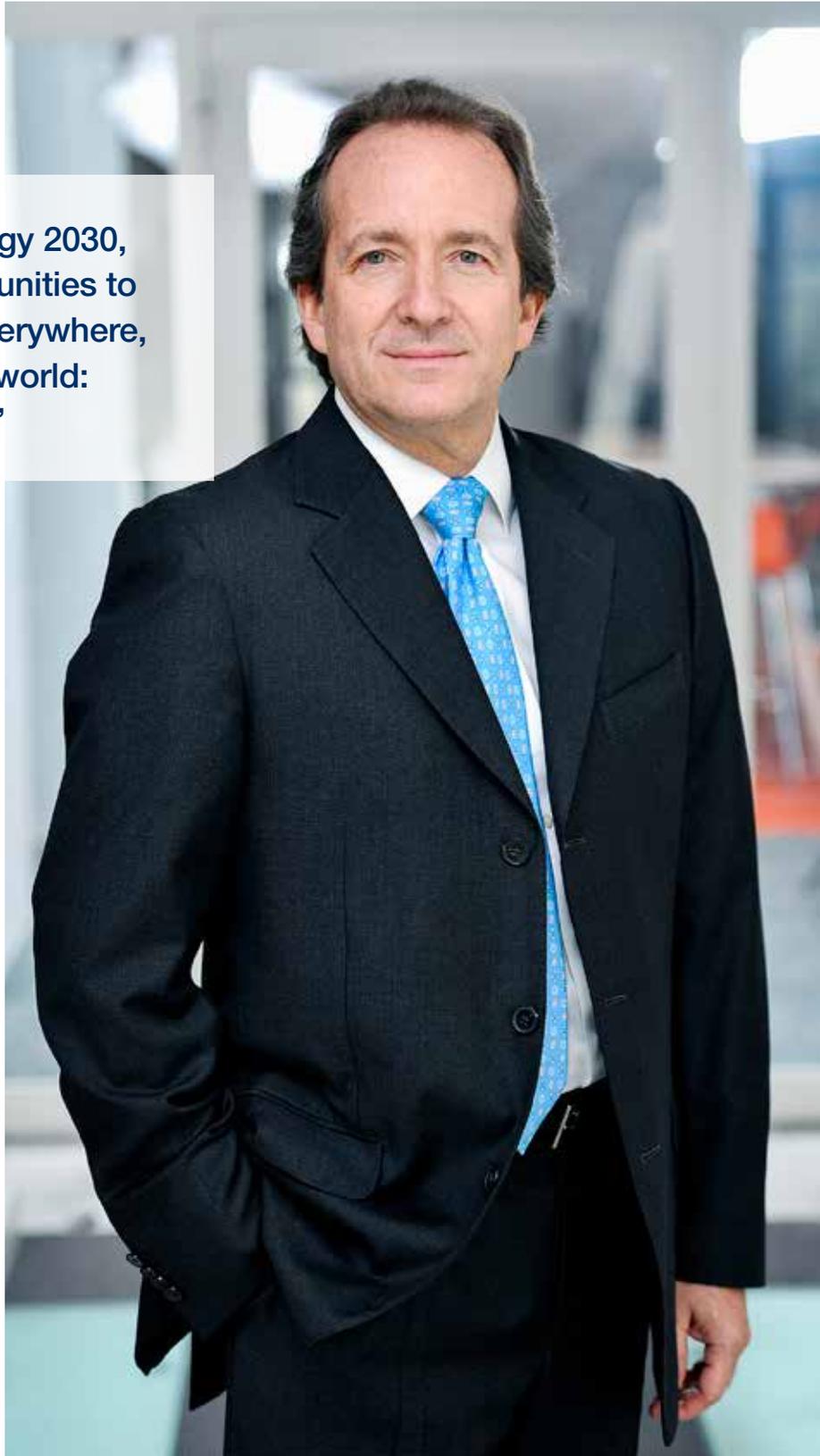
We also made significant investments in our supply chain infrastructure, with a new state-of-the-art carton packaging material factory in Vietnam and a world-class cheese production centre in Poland, reinforcing our long-term commitment to our customers.

New milestones in our sustainability journey

The demands on sustainability reached an all-time high in 2019, with stringent legislative developments across the world and rapidly increasing stakeholder expectations from the industry to solve pressing environmental issues. We too accelerated our efforts in this area, significantly ramping up investments in product development and responsible sourcing as well as forging partnerships with industry stakeholders.

Some of the key achievements included:

- The launch of the first paper straws for carton packaging in Europe, which is an important step in our vision to deliver a package made entirely from plant-based packaging materials, contributing to a low-carbon circular economy.
- We became the first company in the food and beverage industry, offering packaging with fully traceable supply chain of plant-based polymers certified by Bonsucro, reinforcing our commitment to drive transparency in our sustainability solutions.



- Inclusion in the top 1 per cent of companies assessed by EcoVadis in the Environment and Sustainable Procurement category.
- Surpassing the 500 billion FSC™ labelled package mark, reinforcing the company's commitment to promote responsible sourcing.
- Double 'A' score awarded by Carbon Disclosure Project (CDP), for our leading efforts against climate change and protecting forests.
- Finally, we launched an ambitious new initiative – Planet Positive, a programme that urges industry stakeholders to take a broader view of sustainability, ensuring that the sum total of our activities has a positive impact on the planet.

One Company initiatives

We continued to drive the 'One Company' approach within the organisation through various initiatives in 2019.

We optimised various functions to drive efficiencies and improve the way of working in order to be more productive and customer centric.

The Customer Experience (CX) programme completed its second year, giving us valuable customer feedback for 8 different touch points. In 2019, we proudly reported a Net Promoter score that was above the world class B2B benchmark.

The OHS Culture Change programme was rolled out to all employees in 2019, resulting in a significant reduction in our Lost Time Accident rate.

We also launched a programme on Quality across the three businesses, to create customer-centric quality attributes, take a system approach to quality ownership, eradicate critical systematic issues and drive a Quality culture and mindset.

Other initiatives included the Smart Sales pilot and roll-out, and a LinkedIn learning programme to improve employee competence and efficiency.

Launch of Strategy 2030

In order to drive profitable, sustainable growth in the decade ahead, we also launched Strategy

2030, taking a long-term view of the industry and the business.

As part of the strategy development process, we spoke to customers and industry experts about how the world might look in the next decade, and identified five key trends that will radically reshape the food and beverage value chain:

- **Growth with regionalisation:** The expanding global population will create more consumers, categories and market segments, each with their own specific needs requiring customised solutions.
- **Sustainability:** Climate change and resource scarcity will impact our society and the food industry like never before, requiring efforts across the value chain.
- **Technology:** There will be new opportunities from digital, science and technological advances.
- **Consumer demands:** With access to more information than ever before, consumers will expect the industry to pave new pathways to health and nutrition.
- **Supply chain complexity:** Supply chains will become even more complex through growing connectivity to external channels and demand for personalisation.

These trends provided valuable business insights and formed the basis of our 2030 ambition, to be the integration partner for the food industry, providing leading sustainable solutions, optimal outcomes and the best customer experience.

Our 2030 strategy rests on four key pillars:

- **Deliver food safety and the best quality:** Be the undisputed leader in quality in the eyes of our customers.
- **Lead the sustainability transformation:** Prioritise development investments to improve the recyclability of our packaging and reinforce the benefits of a low-carbon, circular economy.
- **Integrate and optimise customer operations:** Offer end-to-end solutions to guarantee outcomes, reduce risks and continuously improve results.

- **Innovate for customer growth:** Deliver a constant stream of synchronised and differentiated packaging, processing, services and product innovation to create new value.

Looking ahead at 2020

The year 2020 unfortunately began with the outbreak of COVID-19, declared a pandemic by the World Health Organisation (WHO). It is an unprecedented event which is affecting communities world-wide, and its full impact on the business and economy is yet to be seen.

Against this backdrop, we remain committed towards our promise to protect what's good, focusing on protecting people; Keeping people safe, our own employees as well as those of our customers and other stakeholders. As well as Protecting food; Ensuring we help our customers maintain food supply for communities worldwide.

To achieve this, we will continue to work closely with our customers, suppliers, governments and local authorities.

We sincerely hope that with the combined efforts of the entire global community, normalcy will restore soon, and we will be able to focus on our near-term objectives:

- Growth in all three businesses, especially with packaging material
- Step change to provide the best quality to our customers
- Accelerate sustainability efforts with low carbon circular economy solutions
- Driving productivity across the board, transforming the way we work

The external environment will continue to evolve and keep throwing new challenges at us, but I strongly believe that we have the people, the customers, and the legacy to build on for a successful 2020 and beyond.

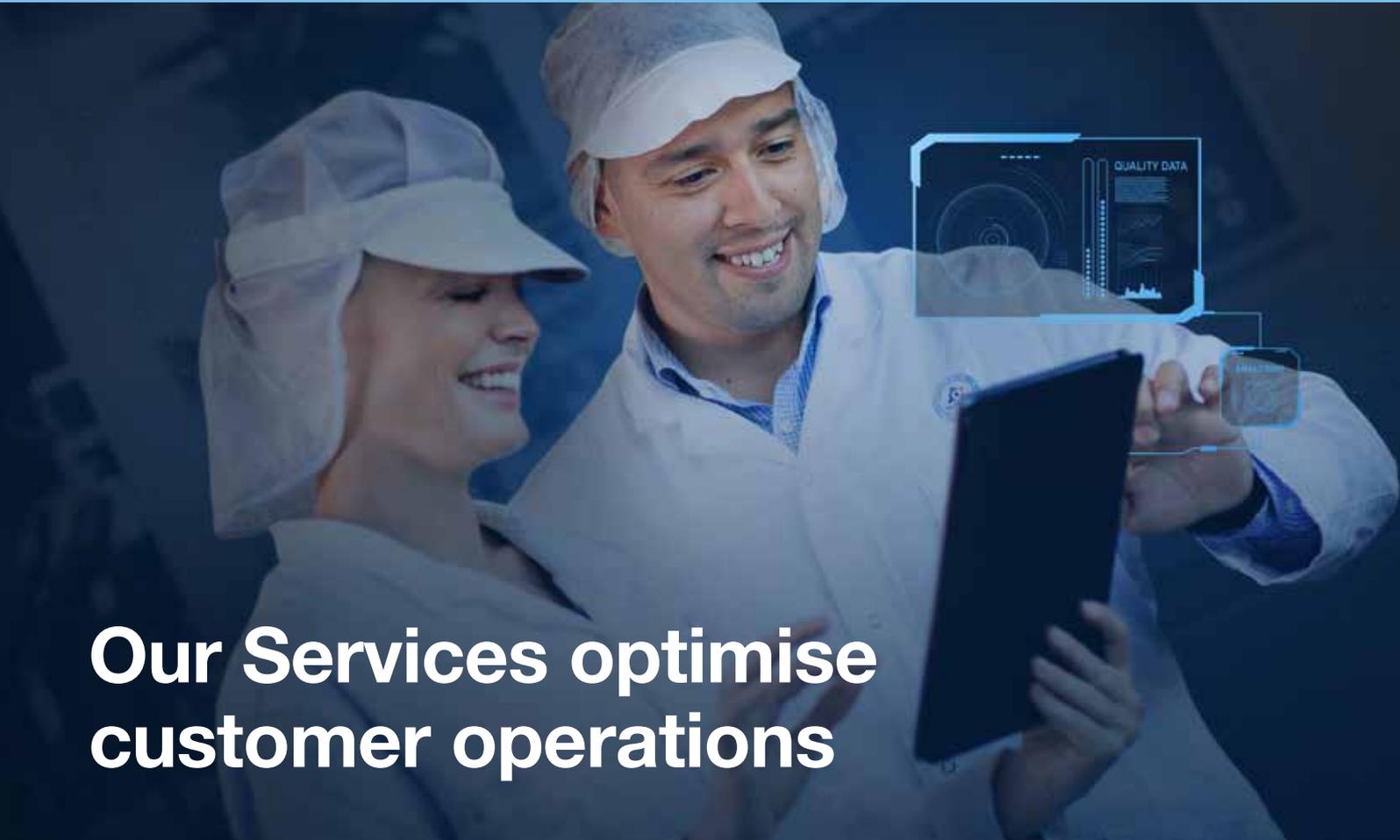
Adolfo Orive

TETRA PAK GLOBAL LEADERSHIP TEAM 2019



FROM LEFT:

- Nicholas Bloch** – Senior Vice President, Corporate Communications
- Steve Yin** – Cluster Vice President, Asia Pacific
- Amar Zahid** – Cluster Vice President, Greater Middle East & Africa
- Roberto Franchitti** – Executive Vice President, Services
- Laurence Mott** – Executive Vice President, Development & Engineering
- Adolfo Orive** – President and CEO
- Eric Baudier** – Executive Vice President, Supply Chain Operations
- Tatiana Liceti** – Cluster Vice President, Americas
- Lars Holmquist** – Executive Vice President, Packaging Solutions & Commercial Operations
- Pål Lunning** – Senior Vice President Legal Affairs & General Counsel
- Ola Elmqvist** – Executive Vice President, Processing Solutions & Equipment
- Phil Read** – Senior Vice President, Human Resources
- Charles Brand** – Cluster Vice President, Europe & Central Asia
- Bruce Burrows** – Senior Vice President, Finance, Supplier Management & Business Transformation



Our Services optimise customer operations

Tetra Pak Services draws on unique industry offerings, expertise and digital technologies to provide data, insights and actions that make customer processes more cost-effective, efficient and sustainable.

Service solutions based on customer challenges

Regardless of whether a customer has a particular challenge they want to overcome, or if they want to improve operational efficiency or save costs, our services help them to realise their objectives. Our service solutions are purpose-built for each customer's unique needs and situation, and focus on the customer value they will deliver.

"Our services combine unique industry knowledge, digital technologies and our vast data-repository to enable the optimisation of our customers' operations," explains Roberto Franchitti, Executive Vice President Services. "This provides opportunities for manufacturers to radically improve and respond to future challenges."

Delivering material customer value

Tetra Pak Services ensure that our customers' operations run smoothly and are optimised to

meet the demands of retailers and consumers. We offer a range of solutions, but the solution is not our starting point. Each customer has a unique operation, with particular needs, challenges and opportunities that call for tailor-made solutions to create value specifically for them.

We work with our customers to understand their in-depth needs and based on this analysis, suggest a solution that focuses on the desired outcome. A first step may be to gather data collected by a variety of machinery sensors from the customers' production. "But the real magic happens when our people with unique

food and beverage expertise build solutions based on this data to deliver tangible results for our customers," says Franchitti. "This is where our solutions really make a difference – to ultimately optimise customer processes, reduce costs, enhance efficiency and offer growth opportunities."

Easy to do business with

In recent years, we have significantly modernised our customer interface to make it easier to do business with us. We offer a one-stop-shop for purchasing Tetra Pak spare parts

"The real magic happens when our people with unique food and beverage expertise build solutions based on this data to deliver tangible results for our customers."

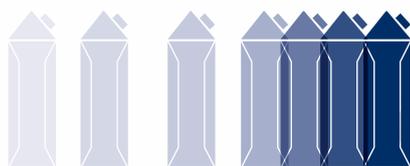
and consumables, 24/7 Remote Support and a digital operational collaboration platform that boosts competency and efficiency.

In January 2020, we also launched a virtual marketplace to dramatically expand our online offering to our customers. "This is a new way of doing business for our industry that makes purchasing even simpler, faster and more cost-efficient," says Franchitti.

Our world-class Global Spare Parts organisation serves Tetra Pak's customers around the world by ensuring that if a machine goes down today, it can be back up and running tomorrow. Tetra Pak genuine spare parts are designed and tested for the best performance in the food and beverage industry.

When an ice cream producer in North America was in urgent need to replace a

broken load cell, which is critical for production, Tetra Pak was there to quickly deliver a replacement through a hand-carried express order. This enabled production to be restored within 12 hours to minimise downtime and production losses. Tetra Pak services resolves such critical issues on a daily basis.



Dairy cooperative in the Americas

+30 million

packages production increase

Brazilian food production company:

+16%

increase in factory index



European dairy alternatives company:

+12%

increase in operational performance



Boosting customer performance around the world

Customers are increasingly interested in optimising the overall performance of their operations. "Our services look at an entire customer's operations to broaden the scope beyond Tetra Pak equipment and help optimise their entire operations," explains Franchitti.

A dairy cooperative in the Americas needed help to ensure more stable output from their production. In 2019, Tetra Pak signed and delivered the first Tetra Pak® Plant Secure contact to improve operating expenses and quality while maximising output. The contract involved managing operations, maintenance and spare parts, and utilising digital technologies to monitor and prevent the failure of key equipment before they happen through condition monitoring of auxiliary third-party equipment.

Being willing to take risks in partnership with our customer was key to sealing an outcome-based service agreement with a US based beverage manufacturer. The customer had experienced declining performance at their plants and Tetra Pak helped them to realise a 10 per cent cost saving in the first 12 months of the agreement. We have also identified oppor-

tunities to increase overall equipment effectiveness by 28 per cent, which would increase production by >30 million packages and deliver savings of approximately €2 million.

The Brazilian food production company Jussara Alimentos wanted to reduce costs and increase their production line efficiency. We helped to identify where the most cost-effective improvements could be made. This resulted in an increase in their factory index by 16 per cent, which includes production line efficiency and reduced packaging waste, to realise cost savings of around €1.6 million throughout the duration of the contract.

A European dairy alternatives company

also wanted to improve operational efficiency to produce more packs. We managed to increase operational performance in 2019 by 12 per cent, with peaks of 15 per cent, to enable additional capacity to produce an incremental 6 billion packs. The company is very satisfied with the result that has enabled more production at no investment cost.

"Our services provide customers with a unique opportunity to innovate, boost their competitiveness, enhance food safety and quality, and minimise their use of resources," concludes Franchitti. "This benefits not only their business, but also consumers and society as a whole."





World-class cheese production centre established in Poland

Building on its global cheese expertise, Tetra Pak opened a €25 million site with sales, engineering and manufacturing facilities for cheese production solutions. Employing over 350 staff, the 12,000 sqm site in Olsztyn, north-eastern Poland, will double Tetra Pak's cheese-making solution capacity in Poland to support customers to develop new production methods and processes. In line with the company's sustainability commitments, the site was designed and constructed in full compliance with Building Research Establishment Environmental Assessment Method (BREEAM) requirements.



Tetra Recart® in Japan

Tetra Pak won its first contract for installing the Tetra Recart® filling machine (Tetra Pak® R2) in Japan. Hagoromo Foods adopted Tetra Recart for its 'Crispy! Corn (T)' products, which were launched nationwide in August. Tetra Recart gives Japanese consumers the option of purchasing user and environment-friendly packages, instead of cans and glass jars, when selecting shelf-stable products. Its lower package weight is ideal for consumer handling, and the product is easy to store and open. Moreover, the Tetra Recart package has low environmental impact is recyclable and produced with renewable resources.

New paper straw lines in Portugal

With the European regulation for Single Use Plastic to be implemented in 2021, and increasing public concern over single use plastic items, the development of paper straws has been an urgent priority for Tetra Pak. A dedicated cross-functional team designed an entirely new Tetra Pak machine that meets all requirements, including stringent food safety standards, and five new paper straw lines have been established in Lisbon. The team leveraged a unique mix of internal competence, as well as expertise from external partners, and demonstrates how Tetra Pak can quickly adapt to changes in consumer and market demand.



New carton recycling partnership in Russia

Tetra Pak joined forces with L-PAK, a leading producer of corrugated carton in Russia, to launch a new recycling line for used beverage cartons. The partnership involved a €2.2 million investment that will enable the recycling of all used beverage cartons collected through existing segregated household waste management systems in Russia and Belarus. L-PAK recycles the paperboard component of the beverage cartons, which amounts to about 75 per cent of the carton, into corrugated cardboard and other materials. The remaining polyaluminium, which is a mix of polyethylene and aluminium foil, is separated and sent to another recycling partner.



First Tetra Pak® Plant Care agreement in Southeast Asia

In March, Tetra Pak Indonesia secured a 3-year Plant Care agreement with a leading dairy producer in Indonesia, including an Overall Equipment Effectiveness Guarantee (OEEG). Plant Care is a long-term customised service agreement that provides maintenance predictability and other services to offer the customer either a performance guarantee on agreed KPIs, or an operational cost guarantee. The agreement includes Total Productive Maintenance whereby Tetra Pak will increase Overall Equipment Effectiveness by at least 5 per cent, increase energy and resource efficiency, as well as reduce maintenance costs.



New converting factory inaugurated in Vietnam

Tetra Pak inaugurated Vietnam's first-ever carton packaging material factory in Binh Duong in July, creating a regional production hub. The €120 million state-of-the-art facility will annually produce up to 20 billion aseptic cartons for domestic and export markets in Southeast Asia, Australia and New Zealand. The facility is one of the first in Vietnam to be designed to LEED (Leadership in Energy and Environmental Design) certification, and is expected to use up to 34 per cent less energy and save over 17 million litres of water a year compared with a standard factory.

New packaging for a low-carbon circular economy

During the year, Tetra Pak's new Tetra Stelo™ Aseptic 1000 Edge range with an optional Bio-based WingCap™ 30 was launched in Portugal. Tetra Stelo™ Aseptic is both recyclable and FSC™ certified, and the WingCap™ 30 is made from polymers derived from sugar cane. By promoting sustainable forestry and incorporating renewable materials, the new packaging contributes towards a low-carbon circular economy while appealing to the environmentally conscious consumer. New sizes of the distinctive package are being added to the range, which is being rolled out in Poland, Romania and Brazil following its success in Portugal.



Zero Waste Education Program wins Turkish Sustainability Award

Tetra Pak Turkey's Zero Waste Education Project held in cooperation with TEMA (The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats) and The Turkish Ministries of Environment & Urbanization and National Education won the B2NGO Cooperation (cooperation between private sector and NGOs) Award at the Sustainable Business Awards Turkey 2019. The project raises awareness among students and teenagers to protect the nature and to recycle. So far 5,700 students in 20 cities attended the trainings and a digital platform was launched to make the project accessible to everyone in Turkey.



Tetra Prisma® helps boost customer sales in China

Two premium Chinese white milk brands have started using Tetra Prisma® Aseptic 250 Edge with DreamCap™ 26. Mengniu was the first drinks company in the world to use this kind of packaging as part of a relaunch of its Milk Deluxe brands. The packaging, combined with some good marketing, increased market share from 44 per cent to 48 per cent in 12 months. The company Yili also switched to Tetra Prisma® for its Satine organic milk brand. The new packaging offers a supreme drinking experience, with the DreamCap™ 26 supporting on-the-go consumption for today's busy and active Chinese consumers.



First Dairy Hub launched in Albania

Tetra Pak and Tetra Laval Food for Development have entered into a three-year partnership with dairy companies Agroal & Global Services (AGS) and Lufra to open the first Dairy Hub in Albania. The project will support more than 3,000 smallholder farmers with free training and access to a range of services that will increase dairy productivity and ensure they are able to produce higher quality milk that can be bought by our customers. The farmers are expected to boost their income by at least 20 to 30 per cent by increasing their milk yield, which will also support the local farming economy.



Services helps beverage company realise significant savings

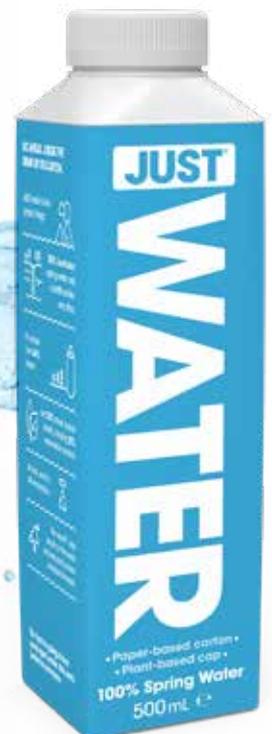
Tetra Pak Services helped a North American beverage company with high operational costs and a complex production to achieve cost savings of €1.3 million. A Tetra Pak® Plant Care services agreement with an Operational Cost Guarantee was used to help identify where the greatest efficiency gains could be made. The project also involved installing closed loop water recirculation systems for two fillers to reduce water consumption by 80 per cent, which annually saves over five million litres of water while reducing maintenance time and costs.

-80%

REDUCED WATER CONSUMPTION

IKEA Australia replaces plastic bottles with cartons

All IKEA stores in Australia have replaced their plastic bottled water with JUST Water Tetra Top cartons. The move follows a partnership between Tetra Pak and JUST Water, which has the vision to be a sustainable water company. Tetra Top cartons fit perfectly with this vision as they are 82 per cent plant-based, including a cap and top made from sugar cane. This reduces carbon emissions by 74 per cent compared with standard plastic water bottles, and the cartons are recyclable. IKEA's decision is a consequence of growing consumer concern over the environmental issues caused by single-use plastic bottles.





Growth opportunities throughout our business

Our markets are being shaped by global trends such as climate change, increasing restrictions on single-use plastics, and anticipated growth in emerging economies. In the food and beverage packaging industry, sustainability, food safety and traceability, automation, digital solutions and quality are all on high up the agenda.

At the same time, consumption and purchasing habits are being transformed by greater ethical and sustainability awareness, health and convenience. Digitalisation also presents opportunities for e-retail and mass-customisation.

These trends influence our business by creating challenges, but also growth opportunities in our various categories.

Liquid dairy products



White milk consumption increased by 2.2 per cent during the year, driven by India and Pakistan despite a decline in Europe. Competition in ambient liquid packaging is intensifying. The market for specialised nutrition products grew by 1.6 per cent in volume, with new launches in functional products for specific segments driven by the USA.

Plant based beverages



The demand for plant-based beverages has increased by 0.6 per cent on average per year since 2016. The category is mainly driven by soymilk in China, but there are significant opportunities for other plant-based beverages in Europe and America.

Food



The food category shows strong growth potential, both in the solid and viscous segments and across all businesses. Healthy trends are also impacting food and the number of launches grew by 3 per cent during the year driven by low/no/reduced sugar and no additives/preservatives claims.

Cheese



The market for cheese is annually growing at 2.4 per cent with local variations closely tied to food culture. Consumers are seeking transparent, convenient, healthy and environmentally friendly choices – including vegan or plant-based cheese substitutes. Snacking and on-the-go trends support the use of cheese as a snack product and ingredient in easy-to-prepare meals.

Ice cream



Ice Cream is being driven by innovation to deliver greater consumer convenience and indulging experiences. Health trends and ethics are also increasingly important market trends.

Juice, nectars and fruit flavoured still drinks



The juice and nectar category continues to decline, but at a slightly slower pace. The main reasons are public debates on sugar consumption and health trends that motivate consumers to choose other alternatives.

Other beverages



The focus on water continues with growth driven by both plain and flavoured/functional water. Product launches increased 4.5 per cent between 2018 and 2019 driven by sustainability claims, mainly related to recyclable packaging. For RTD Tea, RTD Coffee, Sport and Energy drinks, consumers are seeking to manage their energy levels, which has resulted in growth in these categories of 4.1 per cent, mainly driven by Asia and North America. North America is driving the growth in sport drinks while Asia is driving growth in the rest of the categories.

Pioneering smart and connected packaging technology

Tetra Pak's new PICCO smart and connected packaging technology presents new ways for customers to reassure and engage with consumers.

PICCO (Printing codes in converting) is a Tetra Pak solution, which enables the printing of dynamic QR codes that are unique for every package and can be scanned using ordinary smartphones. The solution is an enabler for different kinds of connected features, such as productivity tracking, product traceability, and promotion and campaign tools that have been developed within Tetra Pak's digitalisation programme.

Enabling traceability, promotions and engagement

"We are establishing ourselves as a leader in this type of connected packaging solution, with the potential to create huge value for our customers and their consumers," says Christer Karlsson, the PICCO Project Owner at Tetra Pak Packaging Solutions. "Our PICCO technology gives customers the tools to enable product traceability and to promote particular con-

sumer campaigns."

Food safety and traceability, plant productivity and consumer engagement are the most obvious benefits. But the technology can also be used for many other benefits like sharing information about the nearest recycling centre by leveraging the post-consumer recycling value chain.

A Tetra Pak solution

India is one of three Tetra Pak markets to invest in specialised PICCO printing technology for printing the dynamic QR codes, which is done at Tetra Pak India's manufacturing facility at Chakan, near Pune. Tetra Pak has built the ecosystem in-house, from developing the QR codes, to designing the related apps as well as helping brands gain deeper consumer insights through analytics. Other key markets for the PICCO technology are China and Russia.



Overcoming technical challenges to create fully renewable and recyclable packaging

Tetra Pak is promoting recycling by developing alternative barriers for its packages, which involves overcoming difficult material and filling equipment challenges.

Today, all Tetra Pak packages can be recycled, but by replacing aluminium foil with new barrier technologies, we can improve the recycling of Tetra Pak packages. This also creates opportunities to make the packages fully renewable.

Towards fully renewable and recyclable packaging

Efforts to replace the aluminium foil in our aseptic packages are a fundamental part of our Strategy 2030. "We have real challenges to find the right barrier material – and any modifications to our packaging material requires changes to the package opening as well as our filling equipment and customer lines,"

explains Magnus Johansson, D&E Programme Management. "Overcoming these challenges requires close collaboration with our equipment teams, suppliers and customers."

Incorporating new barriers that require different sealing techniques is a monumental change – not just for Tetra Pak, but the entire industry. "We are innovating potential solutions for filling equipment," says Lydia Loudjertli, Packaging Equipment TPO Manager. "This involves rethinking our equipment, incorporating cutting-edge technologies, and greater digitalisation and automation, all while maintaining the highest level of quality and exploring the potential to retrofit existing customer equipment."



A gradual shift

Testing new packaging materials and technical solutions with customers is a gradual process that will begin in 2020. "Our challenge now is to create new technological solutions that can maintain shelf life and quality, while improving the environmental profile of packaging," says Johansson.



Building a low carbon, circular economy in the food and beverage industry

As a global food packaging and processing company, we have a key role in ensuring the food and beverage industry of the future is based on a low-carbon and circular economy.

In a rapidly changing world, the food and beverage industry is transforming to meet new challenges and demands, including how we create a more sustainable future. Sustainability has never been more important, and with technological innovation and international frameworks such as the United Nations Sustainable Development Goals, we have the tools to create a more sustainable industry for ourselves and future generations.

Sustainability – the core of what we do

As a company committed to doing good – for consumers, customers, employees and society – sustainability has always been at the core of who we are and what we do. Over the decades, our business success has been built on innovation driven by sustainability. Our innovations such as aseptic solutions, e-beam technology and fully renewable packaging have not only benefited Tetra Pak, but made the wider food and beverage industry more sustainable.

Responding to sustainability trends

Major packaging sustainability trends include a greater focus on the circular economy, and the reuse and prevention of waste, which have all challenged us to focus on recyclability and the use of recycled materials. We have strengthened our packaging portfolio innovation strategy with the ambition that our packages should be made solely from renewable or recycled materials, fully recyclable and in line with a low-carbon circular economy without ever compromising on food safety requirements.

We have also signed the Ellen MacArthur Foundation New Plastics Economy Global Commitment and initiated partnerships with companies like Veolia to expand collaboration

and accelerate global beverage carton recycling. Ultimately, we want all beverage cartons to be collected for recycling, and for no carton to end up as litter or in landfill.

A promise to Protect What's Good involves constantly striving to be better. While the challenges of single use plastics are real, climate change will have an even more profound impact on the complex infrastructure of the food and beverage industry. The consequences of climate change – drought, floods, unreliable access to water and energy – threaten to disrupt our operations, customers and suppliers.

Towards a low-carbon and circular economy

We believe that the economy of the future must be circular and low carbon with minimal climate impact throughout the entire food value chain. We are working to achieve this by delivering solutions with the lowest carbon footprint and highest efficiency – by minimising the environ-

mental impact on our own operations and working with partners to address the end-of-life of our products. We have committed to reduce our direct greenhouse gas (GHG) emissions by 42 per cent by 2030 and by 58 per cent by 2040, from a 2015 baseline. By 2020, we have pledged to reduce our absolute GHG emissions by 16 per cent per unit of revenue, from a 2010 base-year. We are proud to be on track with our 2020 carbon emission reduction ambitions and ahead of our RE100 commitment to use 100 per cent renewable electricity, which is projected to be reached in 2025 – 5 years ahead of the commitment.

To be successful in creating a low carbon, circular economy in the food and beverage industry, we have to deliver processing and packaging solutions to our customers to help them reduce their energy and carbon footprints, and prevent food waste. We also need to draw on our global network of customers to take bold steps with us, and in partnerships across industries, governments and NGOs.

PLANET POSITIVE

In 2019, we launched an ambitious new initiative that imagines a world where business has a positive impact on our planet. Planet Positive is a new way of thinking that inspires us to take sustainability much further – to ensure that the sum total of our activities has a positive impact on the planet. This is a journey that will take time, but will ultimately enable us to provide solutions to some of the world's sustainability challenges.

Planet Positive goes beyond our own business. The initiative aims to not only inspire our employees, but also our customers, societal influencers and policymakers. It also involves taking a holistic approach throughout the entire food and beverage value chain to encourage our partners to take a Planet Positive approach. We cannot build a low carbon, circular economy in the food and beverage industry alone, but Planet Positive provides us with the platform to succeed together with our stakeholders.

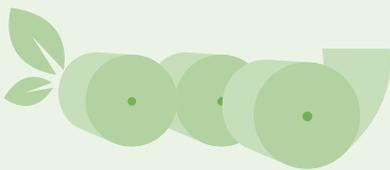
www.tetrapak.com/sustainability/planet-positive





Bonsucro Chain of Custody Certification

Tetra Pak, together with its supplier Braskem, has become the first company in the food and beverage industry to responsibly source plant-based polymers using the Bonsucro standards for sustainable sugar cane. From 1 March 2020, Tetra Pak is able to offer Bonsucro certified packaging material to all customers around the world.



Responsibly source plant-based polymers

Tetra Pak double 'A' from CDP

Tetra Pak has achieved CDP 'A' for both its leading efforts against climate change and protecting forests, which highlights the company's commitment to transparency and the measurement of its sustainability work. Tetra Pak has been highly commended for its climate action and work to drive sustainable sourcing in its supply chain for the fourth year in a row, again achieving a place on the non-profit CDP's prestigious 'A List' based on the company's reporting in 2019.



68 million children



68 million children benefit from school feeding programmes

During 2019, Tetra Pak delivered over 9.4 billion packages to more than 68 million children in 56 countries through governmental school feeding programmes in partnership with customers.

56 countries



The Ellen MacArthur Foundation's New Plastics Economy Global Commitment

During 2019, Tetra Pak became a signatory of the Ellen MacArthur Foundation's New Plastics Economy Global Commitment, and continued to develop partnerships and collaborations in order to expand and accelerate global beverage carton recycling. Ultimately, Tetra Pak wants all beverage cartons to be collected for recycling, and for no beverage cartons to end up as litter or in landfill.



United Nations Sustainable Developments Goals (SDGs)

Tetra Pak is committed to support all of the UN 17 SDG. Out of the 169 targets associated with the 17 SDGs, Tetra Pak has identified those we are best able to contribute towards. This led us to focus our commitment on 9 of the 17 goals.



Greenhouse gas emissions

Tetra Pak has committed to reduce its direct greenhouse gas (GHG) emissions by 42 per cent by 2030 and by 58 per cent by 2040, from a 2015 baseline. By 2020, Tetra Pak has pledged to reduce its absolute GHG emissions by 16 per cent per unit of revenue, from a 2010 base year. Additionally, Tetra Pak is already on track to achieve the RE100 commitment to use 100 per cent renewable electricity, which is projected to be reached in 2025 – five years ahead of the commitment.

2019 – Progress in a demanding

In the context of a challenging macroeconomic environment – with delays in equipment investments and pricing pressures – Sidel made progress in a number of ways in 2019. Sales developed particularly well within our aseptic PET business, non-alcoholic lines and services. Our new organisational set-up has paid off by strengthening the autonomy of our regional branches and further improving customer proximity. At the same time, there are several areas of our business with the potential for significant improvements. In summary, I would like to thank our employees for all their hard work that has contributed to our achievements during the year.

Sales amounted to €1.4 billion in 2019, which was similar to 2018. Our PET equipment order intake was quite strong, mainly driven by investments in non-alcoholic beverage lines in Asia, Oceania & Africa. On a global scale, it is worth mentioning the leading position we continue to enjoy in aseptic applications and the positive performance recorded in Carbonated Soft Drinks (CSD). Despite severe competition and low investments from major key accounts, we managed to grow in the alcoholic beverages market – traditionally featuring can and glass as the preferred packaging materials.

Customers are continually demanding greater flexibility and more affordable products. We are relentlessly working on the competitiveness, flexibility and sustainability of the solutions we develop, which are all key focus areas for improvement. In addition, we

are increasingly looking at the full value chain when addressing new business developments.

The performance of Services surpassed what was achieved in 2018, particularly fuelled by sales of spare parts and maintenance solutions. However, our moulds and line conversions businesses have been impacted by a conservative approach by liquid food players based in Europe, that are waiting to see how the Single Use Plastics (SUP) directive will translate into local regulations. Here, it is important to stress that PET represents 5 per cent of the global plastic production.

Challenges for the industry and Sidel

I joined the Sidel Group as its new CEO and President on 1 July 2019. There were many things that attracted me to the position, not

only the fact that I enjoy new challenges and meeting new people – I also really love the food and beverage industry and think there are many great opportunities ahead of us. This is particularly the case for a company like Sidel that shares my passion for solutions that meet customer needs. Nevertheless, our entire industry stands at a crossroads right now. It is clear that everyone in the packaging business – including Sidel – needs to evolve, not only in terms of its approach to sustainability, but also in terms of flexibility and digital competences to better serve our customers' production lines.

At Sidel we strive to meet these challenges in various ways. For instance, within filling technologies, our latest solutions such as EvoFILL Can (launched in 2018) and EvoFILL Glass (introduced to the market in 2019) are exactly designed with today's manufacturers' requirements in mind, with special focus on greater performance, absolute product quality and expanded versatility. Another example of pushing the boundaries of performance while reducing our demands on the planet is an exciting packaging innovation we launched in 2019 – X-LITE™ Still. This innovative 500 ml PET packaging solution is the world's lightest bottle for non-pressurised still water (6.5 g), significantly saving on raw material and energy consumption. We also broadened our capabilities and customer base in packaging design and tooling with the acquisition of COMEP last year, following PET Engineering in 2018, enabling us to address all customers' packaging needs.

“Our entire industry stands at a crossroads right now. It is clear that everyone in the packaging business – including Sidel – needs to evolve, not only in terms of its approach to sustainability, but also in terms of flexibility and digital competences to better serve our customers' production lines.”

market

Trend for healthy living creates opportunities for aseptic PET bottling

There are a number of current trends affecting our industry and Sidel. For example, 'better for you' beverages and foods are gaining real traction with consumers nearly everywhere. Together with a strong demand for personalised nutrition, which helps promote all-natural products without added sugars and preservatives, such as coconut water, Aloe Vera drinks and almond milk, while also driving product innovations.

**“ ‘better for you’
beverages and foods
are gaining real traction
with consumers nearly
everywhere”**

This development is leading to an increasing format and recipe diversification, especially in the Liquid Dairy Products (LDP) and Juices, Nectars, Soft Drinks, Isotonics and Teas (JNSDIT) categories, which creates many business opportunities around aseptic bottling. In fact, preservative-free beverages and a widening portfolio call for absolutely safe, easy to operate, cost effective and flexible aseptic solutions.

At Sidel, we are addressing this set of applications as one of our key business areas. Our patented Aseptic Combi Predis™ solution – enabling aseptic PET bottling with dry pre-form sterilisation – can now count on more than 180 references installed globally.

We design packages for recycling

We also see a strong focus on environmentally friendly packaging, which is a clear priority for our planet. At Sidel, we translate our commitment to sustainable packaging into three areas. Firstly, we are optimising current packaging with our RightWeight™ programme



“To help our customers protect their competitiveness while reducing their impacts on the planet we are re-shaping our services offering, with the goal to move from ‘equipment providers’ to ‘guaranteed performance partners’.”

to ensure that the package's weight is minimised but still maintains its technical properties and high consumer appeal. Secondly, we lead the refillable PET segment, with the technological expertise and a worldwide reputation in this market. Most importantly, we are designing to recycle, for instance, by working with our customers to increase the recycled content in their packages.

On this note, it is key to remember that PET is the only plastic packaging material that can be recycled bottle-to-bottle. This is why we expect growth to be progressively captured by recycled PET, which can be brought back into the value chain as a valuable resource.

Being the knowledge partner for our PET customers

One important way for us to contribute to a better environment is to become the knowledge partner for PET customers. We do this through our innovation capabilities and our packaging design expertise: for instance, we are establishing the correct infrastructure to test the complete lifecycle of the bottle in-house, plus deepening our existing co-operations across the plastics industry. Working together with every actor in the value chain is key, if we want to achieve a packaging change that lasts.

In this regard, we have enhanced the Sidel portfolio with our own design agency. By combining the design and branding capabilities with our engineering competences, we'll make sure the bottle will not only be aesthetically pleasing but will also perform optimally across the value chain – to offer a unique proposition and, even more importantly, the ideal consumer experience.

Re-shaping our service offering

To help our customers protect their competitiveness while reducing their impacts on the planet we are re-shaping our services offering, with the goal to move from ‘equipment providers’ to ‘guaranteed performance partners’.

We are doing this across three strategic directions: first and foremost, by strengthening our services foundations. Secondly, by shifting from reactive to preventive maintenance, and thirdly by placing greater focus on digitalisation.

Clear focus on our strategic plan

Our three-year strategic plan has a focus, among other things, on continued leadership in aseptic PET packaging, driving more business in services and revising our approach for stand-alone equipment. In a flat equipment market, price pressure will remain, and we believe that by leveraging the strengths and the width of our equipment portfolio we can achieve the right balance between lines

and stand-alone sales, for better pricing and the greater utilisation of our assets. Two key enablers will be instrumental in securing our success in the market – our responsibility to raise awareness around sustainability within the liquid food industry, and the digitalisation of our equipment, our services and the way we work. The third enabler will be to drive productivity in how we work, in collaboration with suppliers, customers and colleagues.

Focus areas for 2020

With 2020 looking like another challenging year, at Sidel we have implemented a number of initiatives to strengthen our position in the market. Among other things, our recently revamped filling portfolio for can and glass can help us offset some flatness in the PET market. In addition, we are also reviewing how our ‘End to End’ packaging offering will adapt and best contribute to the circular economy. This is already leading to the development of a consolidated packaging solution by encompassing primary, secondary and tertiary packaging and the best environmental impact of the complete production line.

The current escalating situation involving the COVID 19 pandemic is bringing further uncertainty to the business for the year. While we monitor the situation, our first priority is preserving our employees health while we contribute to our mission to support our customers to deliver beverage and other products all around the world.

Monica Gimre

“Among other things, our recently revamped filling portfolio for can and glass can help us offset some flatness in the PET market. In addition, we are also reviewing how our ‘End to End’ packaging offering will adapt and best contribute to the circular economy.”

SIDEL GLOBAL LEADERSHIP TEAM 2019



FROM LEFT:

Christer Carling – Legal Affairs

François Lejard – Customer Management – Region Europe and Central Asia (ECA)

Clive Smith – Customer Management – Region Asia, Oceania and Africa (AOA)

Frédéric Saily – Product Management and Development

Monica Gimre – President and CEO

Juergen Voss – Finance, Business Transformation & IT

Deepak Kumar – Human Resources

Andrea Forzenigo – Product Supply and Industrial Base Management

Marina de Barros – Strategy, Sustainability and Communications

Pavel Shevchuk – Services

Marc Aury – Customer Management - Region Americas

José Luis Yécora – Sourcing

From equipment providers to guaranteed performance partners

Pavel Shevchuk – Executive Vice President Services, Sidel – explains why a holistic approach to modern maintenance is needed in today’s packaging industry. By leveraging the effects of reduced costs and increased production levels, manufacturers will be able to enjoy higher profitability.

How are Services evolving to meet ever changing market demands?

The entire liquid packaging industry is taking an increasingly holistic approach. Starting with packaging, market and industry experts help design and manufacture a complete line solution that looks at not only rapidly ramping-up performance but that is able to adapt over time to new customer needs.

Technological advancements are making production lines more sophisticated and line automation is expanding performance possibilities. At the same time, there is a constant drive towards greater productivity and flexibility.

To help our customers protect their competitiveness while reducing their impacts on the planet we are re-shaping our Services offering, the goal being to progress from ‘equipment providers’ to ‘guaranteed performance partners’.

We are doing this across three strategic directions: first and foremost, by consolidating our services foundations. Secondly, by shifting from reactive to preventive maintenance. Thirdly, by placing extra focus on digitalisation.

Can you expand on the three main axes supporting the Services business in Sidel?

The fundamentals of a properly executed service lie with people, quality parts delivered on time and comprehensive information. With this in mind, we are strengthening our Field Services Engineers team, while continuously developing their competencies. This leads to maximised customer satisfaction – and ultimately loyalty to Sidel.



“The fundamentals of a properly executed service lie with people, quality parts delivered on time and comprehensive information. With this in mind, we are strengthening our Field Services Engineers team, while continuously developing their competencies.”



“We are placing additional focus on digitalisation and expanding the opportunities offered by agile e-business solutions integrated with our expertise.”

But how to sustainably grow our services business? At Sidel, we are reconsidering our maintenance contracts portfolio, to offer preventive, condition-based or performance-targeted solutions and deliver guaranteed line performance.

In addition, we are placing additional focus on digitalisation and expanding the opportunities offered by agile e-business solutions integrated with our expertise. The success recorded by the Sidel Services Online platform – covering approximately 1,500 plants globally – and the solid reputation of the Sidel EIT® (Efficiency Improvement Tool) are only two examples of how we are designing a complete digital ecosystem to optimise production output and quality for our customers.

How do you envisage the shift from reactive services on demand to preventive maintenance?

Against an operational background of reduced budgets, ageing assets, a shrinking skilled workforce and rising material costs, many

manufacturers are currently under great pressure to minimise capital expenditure (CAPEX) and operating expenditure (OPEX). This involves maximising equipment availability and overall equipment efficiency (OEE) – in order to get maximum return from their assets. A forward-looking maintenance strategy can contribute to ensuring sound financial operations by preserving the availability of assets and minimising unplanned downtime to optimise total cost of ownership (TCO).

In fact, a purely reactive maintenance approach can result in significant losses, such as:

- additional costs for emergency work,
- unplanned stoppages, resulting in unforeseen costs and customer dissatisfaction that can potentially lead to a loss of business,
- operator frustration as productivity declines and emergencies increase.

Manufacturers that want to secure their competitiveness in a fast-changing market are increasingly seen to shift from a reactive to a



proactive maintenance approach. The combined effect of the reduced costs and increased production levels will inevitably lead to higher profitability.

A well-designed preventive maintenance programme implemented without a special focus on flawless execution, is unlikely to be successful – just like the pit-stop teams of Formula One racing are a vital element in any race team’s strategy for success. Racing teams enjoy most success when all factors work seamlessly and smoothly together. This happens when the cars themselves, the tools, each team member, the work practices and their successful implementation and the leadership provided by the management team – are all focused on pre-determined and common goals.



Sidel expands glass bottling flexibility for Italy's iconic brand, Birra Peroni

A growing domestic market and a trend towards premium beer in the UK and the US recently led Birra Peroni, part of Asahi Group Holdings Ltd., to upgrade their glass bottling capacity. The primary objectives for the leading Italian brewer were increased productivity, flexibility and sustainability. A new complete glass line from their long-term partner Sidel, featuring the EvoFILL Glass filler and EvoDECO Cold Glue labeller and capable of running at 50,000 bottles per hour, helped achieve these goals. The line is installed at the company's factory in Bari, Southern Italy, and is intended to bottle two products in their portfolio: Peroni, both as returnable and one-way glass bottles, and Peroni Nastro Azzurro.

Success at Nestlé Special.T factory with safe and easy-to-use cobotic palletisers

The global market for tea is projected to grow due to trends such as premiumisation, the addition of exotic flavours and health positioning. Nestlé capitalised on these positive developments by installing two CoboAccess™_Pal units at their site in Orbe, Switzerland, where they produce tea in capsules under the Special.T brand. CoboAccess™_Pal is an industrial, safe and easy-to-use cobotic palletising solution from Sidel. Through automated palletising, Nestlé Suisse SA Orbe gained higher pallet quality while ensuring operator safety. The solution's automation platform also promotes the ease of operations, which allows better-controlled trajectories for improved cobot picking and placing.



Italian water bottler benefits from Sidel's new labelling system

With a growing demand for bottled water, Levissima, part of Sanpellegrino Group (Nestlé Waters), installed a new complete line to produce its re-designed 1.5 litre bottle of pure, Alpine water. The leading Italian water brand opted for the Sidel Matrix™ Combi with integrated blow moulding, filling and capping processes to significantly increase performance and production capacity, without compromising food safety. To ensure precise label application on a squared 1.5 litre container at an output speed of more than 46,000 bottles per hour (bph), Levissima chose Sidel EvoDECO Roll-Fed. With enhanced ergonomics and the ability to handle lightweight bottles and ultra-thin labels, the latest addition to the Sidel labelling portfolio ensures excellent quality and high reliability.





StrongPack and Sidel partner to create leading co-packing hub for non-alcoholic beverages in Africa

StrongPack Ltd. recently established its operations in the Nigerian market with the mission to become the number one, high-quality, non-alcoholic contract packaging company in Africa. To address the growing carbonated soft drinks (CSD) market, which is the second most popular beverage category in the region, StrongPack installed four Sidel packaging lines over two years, including a can line, two regular complete PET lines and a PET line integrating Sidel's Actis™ coating system. The latter was essential to increase beverage shelf life and enable the customer to reach other markets in West Africa. Actis also reduced bottle weight by 25 per cent, which saves around three tonnes of resin per day. Based on these tangible benefits, StrongPack recently decided to order a second Sidel PET line featuring the Actis technology.



Bali Hai in Indonesia trusts Sidel's complete can line

A growing market for beer has led Bali Hai Brewery Indonesia to install a new canning line that accommodates a higher production capacity while ensuring the quality of their premium beers. Designed and supplied by Sidel, the line runs at up to 33,000 cans per hour for the 330 ml format, which is twice as fast as its previous line and features a very compact layout to overcome the brewer's space constraints.

As the country's leading independent brewery, Bali Hai Brewery Indonesia has been developing and distributing a distinctive range of beer brands for the national and international markets since 1975. To keep up with the growing demand in the domestic market, while protecting the consistent taste and quality of their products, Bali Hai decided to partner with Sidel for the very first time and invested in a complete canning line. Featuring a very compact footprint, the line includes the latest Sidel volumetric electronic filler for cans and the proven PAMA pasteuriser to help the brewer maintain quality.



China's largest beverage producer invests in the world's fastest aseptic PET line

Jin Mai Lang, China's largest beverage producer, recently installed two Sidel complete aseptic PET lines, which both integrate Tetra Pak Processing System technologies and the company's Aseptic Combi Predis™. With a production output of 60,000 bottles per hour, these are the world's fastest aseptic PET lines with dry preform decontamination for low acid products. The turnkey project, alongside newly designed PET bottles by Sidel, helped the customer increase the production capacity of their black and green tea, plus various kinds of flavoured water, while reducing their Total Cost of Ownership (TCO). Following these successes, Jin Mai Lang recently invested in another three Sidel aseptic complete lines, running at the same speed.

Offering market-tailored packaging solutions

The packaging market

In 2019, beverage, foods, home and personal care market segments have seen over 3,600 billion units of consumer-packaged goods sold.

Global data analysts forecast that approximately 267 billion additional units will be sold by 2022 (2 per cent compound annual growth rate – CAGR – from 2019 to 2022).

Within consumer-packaged goods, beverages account for 46 per cent of the packaged units sold. Food is the largest market, representing 49 per cent, and the remaining 5 per cent are home and personal care products. Fast-moving consumer goods (FMCG) are packaged using a large range of materials. The most common packaging materials are PET (15 per cent share of total consumer packaged goods), glass (13 per cent) and metal (9 per cent).

Soft drinks industry favours PET

In a market dominated by China (22 per cent) and Europe & Central Asia (17 per cent), the packaging material that is most widely adopted is PET, accounting for 42 per cent of packaging units. PET is the packaging material of choice for mineral water, but is also leading in carbonated soft drinks and iced/ready-to-drink teas. Additionally, it is showing interesting growth opportunities within the dairy segments.



The alcoholic drinks market is valued at €1,670 billion in 2019, with the wine and spirits segments showing dynamism in terms of packaging line investments, due to multiple packaging changes taking place at a fast pace.

FHPC is driven by innovation

Food is an innovative and growing market. PET is very attractive in this segment, mainly due to its transparency, branding opportunities, practical benefits (squeezability) and cost efficiency, coupled with producers' incremental need to reduce their carbon foot-

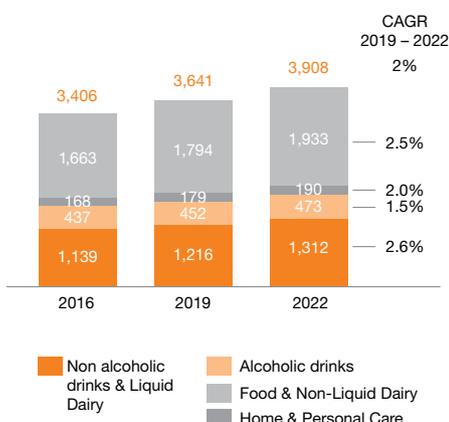
print and weight of containers.

With the home and personal care market accounting for 179 billion units in 2019, the beauty care subcategory (58 per cent of the total) expects a 2.0 per cent increase in CAGR until 2022, mainly driven by the increasing adoption of functional, transparent packaging, 'greener' and innovative formulations. Home care is also set for an equivalent growth path with a 2.0 per cent increase in CAGR by 2022, with Asia leading in population, production and consumption.

PACKAGING MARKET & CATEGORIES

CONTAINER DEMAND BY PRODUCT CATEGORY

Billion units, compound annual growth rate (CAGR) % 2016 – 2022

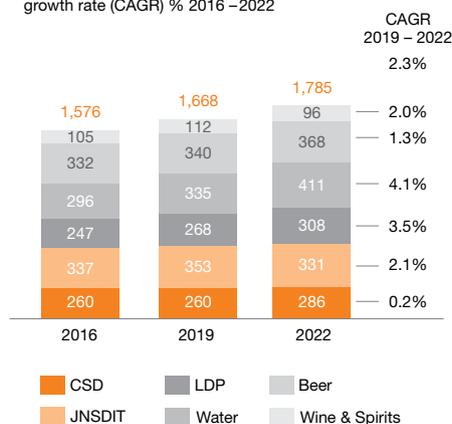


Source: Euromonitor

BEVERAGE

CONTAINER DEMAND BY PRODUCT CATEGORY

Billion units, compound annual growth rate (CAGR) % 2016 – 2022

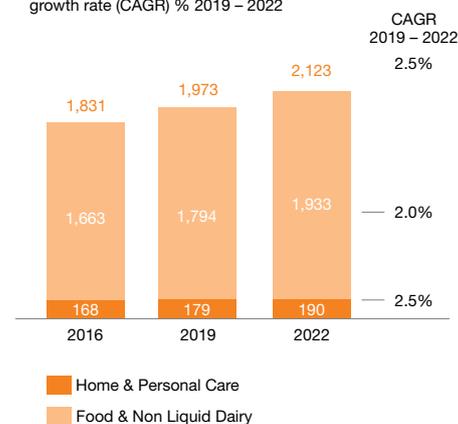


Source: Euromonitor

FOOD, HOME AND PERSONAL CARE

CONTAINER DEMAND BY PRODUCT CATEGORY

Billion units, compound annual growth rate (CAGR) % 2019 – 2022



Source: Euromonitor

Sidel introduces the most cost-effective and sustainable PET packaging solution

With the new X-LITE™ Still bottle design, Sidel has taken another big step on the light weighting journey. At just 6.5 grams and a height of 195 mm, X-LITE Still is the lightest ever PET bottle designed and qualified for 500 ml non-pressurised still water. It offers outstanding performance even at very high production speeds.



How has it been possible to achieve incredible light weight and still be robust enough to manage production and distribution challenges?

“Our engineers have integrated the proven StarLITE™ Still base solution in the new bottle design. This ensures increased bottle stability and stress resistance throughout the value chain, coupled with endless design flexibility and clear light weighting possibilities,” says Vincent Le Guen, Vice President Packaging at Sidel.

What sort of savings can producers expect with this new bottle design?

“When compared to PET bottles weighing 12 grams, Sidel X-LITE Still can help save a remarkable 1,485 tonnes of PET per year while generating energy savings of up to 335,000 kWh/year. Combined, these reductions amount to 3,000 tonnes of CO₂ savings, making X-LITE Still the most cost-effective and sustainable PET packaging solution available on the market,” explains Le Guen.

Is this packaging solution designed with circular economy in mind?

“At Sidel, whenever we develop new packaging designs for our clients, we focus on design for recycling – this is the big driver behind any new concept we create. The X-LITE Still bottle design, for example, is compatible with r-PET (recyclable PET), as long as the quality of the r-PET is appropriate. According to the blowing tests we have performed under industrial conditions, it can contain between 25 per cent and 50 per cent of r-PET, while ensuring the quality and the performance of the bottle,” concludes Vincent.

LEADING IN ASEPTIC PET FILLING:

Sidel celebrates three years of FDA validation for its Aseptic Combi Predis



In 2017, the Sidel Aseptic Combi Predis™ blow fill seal filler was validated by the US Food and Drug Administration (FDA) for low acid products sold in the country – an industry first. With more than 180 references at major beverage and dairy companies since the launch of the solution in 2000, the repeat orders for this technology underline its success.

Since the first FDA approval, many beverage and dairy players in the US, Asia and South America have trusted Sidel's proven dry preform decontamination system to develop their business in the US. The Aseptic Combi Predis differs from former aseptic bottling technologies because the PET package steri-

lisation takes place at the preform stage rather than during the bottling phase. This promotes production simplicity, while marking an important step towards a more sustainable process because it does not require any water and uses only a minimal amount of chemicals. Since its launch, the solution has helped to save more than 10 billion litres of water while decontaminating 60 billion bottles. The dry preform sterilisation also eliminates the constraints related to the bottle's shape complexity and allows for greater flexibility as the Combi's compact and accessible design offers easy and fast format changeovers.

With more than 1,000 installed references

for sensitive products worldwide, and nearly 100 joint complete line projects with Tetra Pak Processing Systems, Sidel has enjoyed a continuously growing global leadership role in sensitive beverages and liquid dairy production technology. In 2019, the company further strengthened its capabilities in this field by inaugurating two new laboratories in Parma, Italy, and Beijing, China. Both new labs include a testing room as well as a cleaning and sterilisation room, and are mainly used for the validation tests of aseptic and ultra clean equipment as well as offering customers training support.

Working together for sustainable packaging

Marina De Barros, EVP Marketing, Communications and Commercial Practices at Sidel elaborates on how the company is addressing the need for packaging change.

What are the main trends you see influencing the marketplace?

There are couple of trends that we are currently witnessing. ‘Better-for-you’ beverages and foods are gaining real traction with consumers nearly everywhere, which includes all-natural drinks without any added sugars and preservatives and is driving product innovations.

Widening the range of formats and recipes is also a clear trend across other beverage segments, generating a demand for higher flexibility. At the same time, production routines that reduce energy, water, chemicals and raw material consumption are being applied.

The need for reducing our impact on the planet bridges very naturally with sustainable packaging, which has today become priority number one for all our customers.

Can you tell us how Sidel participates in the hot topic within packaging – sustainability?

It would be naive not to recognise that we are living in an era when plastics are perceived as a contributor to pollution. In this regard, note that PET represents only 5 per cent of the global plastic production. PET is the only plastic packaging material that can be recycled bottle-to-bottle, which has significant environmental benefits, besides its unique properties in terms of food safety, convenience, design flexibility, transparency and affordability. However, we acknowledge that the better management of waste and close cooperation throughout the value chain are key success factors for a true circular economy of plastics.

In this regard, we have long collaborated with different FMCG (Fast Moving Consumer



Goods) companies, leading industry players and associations to raise end user awareness about PET packaging, and to develop designs with lower environmental footprint while increasing the recycled content input. In addition, we look at packaging and equipment with a 360° perspective. Sidel’s ‘End-to-End’ packaging approach aims to offer a consolidated packaging solution that encompasses primary, secondary and tertiary packaging and the best environmental impact of the complete production line.

Do you give PET a chance (for the future)?

Absolutely! PET can be brought back into the value chain as a valuable resource. The light weighting of PET bottles began many years

ago. I think we can expect that containers to incorporate more and more recycled content, from an average of 10 per cent, which is the status today in Europe, to a value ranging from 30 per cent (in Europe by 2030) up to 100 per cent, depending on the development of collection and recycling capacity and the determination of brand owners.

At Sidel, we are actively working with our customers and the many stakeholders throughout the plastic value chain to ensure we push the technical boundaries in this regard. Recycled PET will be more and more valued in the years to come, and for good reason – it has the potential to both support the evolution of consumption habits and lower the burden on our planet.

LESS IS MORE: MINIMISING ENVIRONMENTAL FOOTPRINT



100%
RECYCLED PET

PET is the most collected and recycled plastic material. Bottles made from 100 per cent recycled PET are already available to consumers and Sidel can qualify r-PET content from preform design to bottle process and performance.

Demand for recycled PET is increasing, driven by many brand owner commitments to achieve 50 per cent r-PET content in their bottles by 2025. This will further strengthen PET's environmental credentials compared with other packaging materials.



Worldwide, 60 billion bottles have been manufactured with the Sidel Aseptic Combi Predis™, contributing to saving 10 billion litres of water and 60,000 tonnes of PET.

10 BILLION
LITRES



30%
REDUCTION
OF PET RESIN



The BoostPRIME™ packaging solution for hot-filled beverages can reduce consumption of PET resin by up to 30 per cent, whilst offering a bottle with a premium look and feel.



2,135

OLYMPIC SWIMMINGPOOLS

Since its launch, the SWING® pasteurisation system has helped save 2,135 Olympic swimming pools of water, while cutting energy consumption by 25 per cent.

-25%
ENERGY CONSUMPTION



100%
RECYCLED MATERIAL



The film used on shrink wrapping systems can be made from 100 per cent recycled material, which also helps close the loop from a secondary packaging perspective.

Innovation drives another record year

It is pleasing to report another record year in 2019 for the company, with continued growth and increased market share. We grew faster than the market and our new products such as our DeLaval VMS™ V300 were very well received.

Sales and market share

Our successful launches of 2018 bore more fruit in 2019 and we saw continued interest and an increasing amount of orders for several of our latest innovations, not least our world-leading DeLaval VMS™ V300 milking robot. Orders from farmers increased all around the globe.

Similarly, the 2018 launches of the DeLaval Rotary E300 milking system, the DeLaval Rotary E100 and the DeLaval Parlour P500 milking system were positively received by the market in 2019. DeLaval OptiDuo™, an automated feed pusher and remixer and our DeLaval Eanza™ milking cluster have also established themselves firmly in the market as we reap the rewards.

Sales in Europe have been particularly strong, and I believe we have significantly strengthened our position in the European automatic milking market. We also had strong sales in Asia-Pacific and it was a good year in the Americas despite the challenges in the market.

I think the continued success in our markets was largely due to the innovations that were launched in 2018 as well as our dedicated and competent teams on the ground.

In 2019, net sales amounted to 1,082 million in prevailing currencies, compared with 1,011 in 2018.

Our commitment to innovation

While our latest range of innovations are continuing to gain traction around the globe, our commitment to further innovation continues. In 2019, we launched the DeLaval VMS™ V310, an upgrade to our record-breaking VMS™ V300. The new upgraded milking robot includes DeLaval RePro™ that automatically detects heat and pregnancy during the milking process, using progesterone-based sampling and analysis in real time. The innovation can also detect cows with a lack of heat expression and the presence of abnormal ovarian structures such as cysts. It is the first milking system that automatically confirms pregnant cows and can determine early embryonic loss. We began developing this innovation around 15 years ago, so I very am proud of our long-term commitment to developing a highly innovative technology that

enables farmers to save time and reduce costs.

We are also seeing a strong uptake of DeLaval InService™ All-Inclusive, which is a very useful service for farmers as it gives them a fixed-rate subscription to cater for all the required consumables for their farm. With DeLaval InService™ All-Inclusive, a farmer's consumables arrive before they even need to be ordered. The service also provides 24/7 support and the regular servicing of all machinery. This allows dairy farmers to run their farms in a more efficient and professional way and gives them better control of their budget and time.

Our continued commitment to innovation with constant investments in R&D are also leading to changes in our internal structure to meet future customer needs. We're in the midst of creating a dedicated organisation focusing on digital services. This team will work on developing new business models to better meet the future needs of our customers.

An example of this is how we are developing connectivity to be able to monitor and upgrade software remotely on farms around the world. This allows the analysis of data, so farmers can use their data to make better decisions using intelligence and recommendations.

“In 2019, we launched the DeLaval VMS™ V310, an upgrade to our record-breaking VMS™ V300. The new upgraded milking robot includes DeLaval RePro™ that automatically detects heat and pregnancy during the milking process.”

“We are also seeing a strong uptake of DeLaval InService™ All-Inclusive, which is a very useful service for farmers as it gives them a fixed-rate subscription to cater for all the required consumables for their farm.”

Greater productivity for DeLaval and our customers

I would say that much of our progress is based on the organisational changes we made back in 2016 that have helped us bring more competence closer to our customers. In 2019, we have really benefitted from this, and I am particularly proud of the dedication of our sales and installation teams that have worked extremely hard to ensure successful customer deliveries.

We continue to make organisational changes where we see fit to improve our own productivity. We have also combined our two business areas into one unit, which is improving productivity by finding synergies and making use of common processes from our two previous business areas.

While we enjoy strong sales, we are refining and adjusting our existing offering and ensure the right solutions for our clients while maintaining and improving our own efficiency.



“Our vision is to make sustainable food production possible and I firmly believe that our continued efforts to help farmers produce more and higher quality milk with less resources have a significant positive impact.”

Enabling sustainable production

Our vision is to make sustainable food production possible and I firmly believe that our continued efforts to help farmers produce more and higher quality milk with less resources have a significant positive impact. Automation has helped a lot in this regard and has the potential to do even more.

Well positioned to create opportunities

While DeLaval enjoyed significant growth in 2019, growth in the dairy industry as a whole was flat. Political uncertainty around the world, including trade tensions between the US and China and the uncertainty surrounding the new Common Agricultural Policy (CAP) in the EU, are raising doubts amongst our customers and could present challenges in the future.

We expect to see further market consolidation and a continued restructuring of dairy farms.

Furthermore, we are experiencing some unprecedented times with the Coronavirus situation. This pandemic will have an effect on businesses worldwide. We always try to find the best possible ways to support our customers regardless of the challenges being faced. In addition, safety of our employees and their families is our number one priority in a situation like this, and we are constantly working to prepare for the changes the situation might require, in our offices, factories, warehouses and service organisations.

DeLaval is an important part of securing global food production. The food and agriculture sector has in relation to the effects of the Coronavirus been identified as a critical infrastructure sector in many countries. Our con-

tinued ability to, together with our dealers, perform services at dairy farms during restrictions in society is essential. We are doing everything we can to continue to serve them with as little disruption as possible, so they can continue to milk their cows.

The mid and long-term consequences of the situation remains to be seen, but it will vary in different areas. We are here to support the farmer to supply food to the societies. A most important task during all times, and especially now.

The opportunities we foresee for 2020, we believe we create ourselves, rather than opportunities available to the market in general.

Joakim Rosengren



“Our strategy is centred around the customer. We know that the way to meet customer needs is to ensure improvements in food safety, work efficiency, animal welfare and farm profitability. These criteria are valid everywhere around the globe and help us focus our efforts in both R&D and sales. They are also important when we improve our internal productivity.”

DELAVAL MANAGEMENT TEAM 2019



FROM LEFT:

Johan Swahn – Legal Affairs

Jonas Hällman – Digital Services

Magnus Berg – Product Management & Development

Lars Johansson – Corporate Communications & Sustainability

John-Erik Hermanson – Supply Chain

Joakim Rosengren – President & CEO

Sören Lundin – Special Projects

Fernando Cuccioli – Cluster Americas

Johan Ledel – Cluster Asia & Pacific

Valerie Binner – Human Resources

Christian Poggensee – CFO

Paul Löfgren – Cluster EMEA

Tim Nicoali – Research & Innovation

Connected services can drive sustainability

DeLaval's latest connected services can contribute to a more sustainable business, both for DeLaval and farmers.

DeLaval's connected services can make farms more sustainable by optimising the productivity and resource efficiency of our products.

"A more efficient production is a more sustainable production, and connected services can increase efficiency by gathering data from farms and optimising equipment settings by learning from good practice," says Claes Åkerlund, VP Commercial Offering, Digital Services at DeLaval. "We can then either advise farmers on how they can improve efficiency, or we can implement improvements directly through connected equipment. All our new products are now connected."

DeLaval's latest connected services

Pilot projects in 2019 have led to the development of new connected services that are being launched in 2020.

Following successful pilot farm projects in the Netherlands, Poland and Sweden, a connected service to monitor milk temperature and cooling systems was launched. "This connected service allows informed decision making for servicing, ensures quality and avoids milk wastage," says Åkerlund. "It can also act as quality assurance throughout the value chain to ensure the milk has been handled correctly."



Another example is a connected pulsation monitoring system that will be released in the second half of 2020. This service monitors the actual usage of teat liners to ensure they are replaced at the optimal time. "By ensuring the right things are done at the right time at the farm, we can promote better decision making and ensure milking performance and

DeLaval InService™ All-Inclusive ensures excellent support in China

The service team in China includes nearly 100 full-time certified service engineers that provide customers with 24/7 tailored services to meet their particular needs.

A unique customer offering

No other competitor can provide such strong service support for their Chinese customers, with many competitors heavily reliant on dealers. DeLaval InService™ All-Inclusive provides clearly defined and consistent service procedures that have a fixed price and guaranteed quality. Quality is assured by supervising and monitoring procedures, and every service visit is followed up by a customer satisfaction survey that is conducted by a third-party organisation.

DeLaval InServices All-Inclusive include preventive maintenance, DeLaval Dynamic Analysis and DeLaval Cleaning Analysis testing,

udder health inspections, milk quality inspection and ISO certification. We also offer tailored customer training services, which can help to ensure a smooth start to operations, comprehensive milking procedure training and promote operational safety.

Customer added value

Benefits for the customer can include higher milking efficiency, better animal health and improved milk quality. Competitor comparisons that are conducted by our customers themselves show that the service from DeLaval typically outperforms competitors in terms of equipment performance, cost effective-



ness, service frequency, as well as training quality and quantity.

One satisfied customer of many

DeLaval has worked closely with the Kang-Hong farm in Hebei province, China, and provided various services since it was established in 2016. For example, DeLaval InService All-Inclusive has overcome an



optimal material utilisation to reduce waste,” says Åkerlund. “It also ensures they are not worn out, which can lead to poor milking and even poor udder health.”

Such new services will drive DeLaval’s sustainability strategy by ensuring we contribute towards more efficient resource use.

Training and advisory services empower customers to optimise their performance

Our training and advisory services ensure customers get the very best out of their DeLaval products – to deliver optimal performance on their farm.



DeLaval provides training for customers that have purchased new DeLaval equipment, and advisory services to optimise a particular farmer’s operations.

Tailored advisory services

We offer customised advisory services to both new and existing customers – with either a specific challenge they would like to overcome or simply to support their operation from the very start. “Either way, we put together a tailored package to cater for their particular needs, with specialist advisors that have the relevant expertise,” says Ahtonen. “Such advisory services have increased milk production and profitability for our customers in markets all around the world.”

Advisory services are either provided on the farm with staff and farm managers or online. “The benefit of our online services is that they can be conducted whenever and wherever,” says Ahtonen. “We can monitor the farm remotely in real time from DelPro™ Farm Manager, which can deliver more customer value by quickly identifying and advising on any issues.”

The online advisory services are currently being further developed and offered to more markets. We are also currently working to productise our assortment of training and advisory services into ‘products’ each with a clear scope as part of a comprehensive portfolio of services.

Training services – an excellent basis for profitability

DeLaval’s standardised training packages for a particular product take place on the customer’s farm to ensure they get the best possible basis for a profitable business. Our vision is to always deliver training for newly purchased equipment to ensure our customers really get the most out of their new product.

“Our training is always carried out by certified trainers to ensure they understand farm challenges and have excellent product knowledge, regardless of whether they are our own employees, a dealer or another external partner,” explains Emma Ahtonen, Farm Advisory Service Manager for EMEA at DeLaval. “Our trainer certification, together with our work to standardise training in all markets, promotes a high standard of training throughout our offering.”

abnormal milk taste issue that lasted several days and that other experts could not resolve. In four years, DeLaval’s high quality equipment has only suffered one minor glitch at KangHong, which was resolved by a DeLaval service engineer within two hours. The farm has also enjoyed good milk quality and animal health.



European young farmers General Assembly

During the year, DeLaval partnered with LRF (The Federation of Swedish Farmers) to host the General Assembly of the European Council of Young Farmers (CEJA) at DeLaval's Hamra farm just outside Stockholm. The event featured a presentation from DeLaval experts on the future of data collection and management for dairy farmers, and a workshop on IOT (Internet of Things) technologies for different farms. In total, 68 young farmers attended, along with Joakim Rosengren, DeLaval President & CEO. "The General Assembly was a great opportunity for us to gain an insight into the needs of young farmers," concludes Lars Johansson, SVP Corporate Communications.

Boosting cow longevity and profit

Cluster EMEA launched a marketing campaign to raise awareness of how cow longevity can boost profit. The customer-targeted campaign focused on longevity, cow cooling, farm management, reproduction and barn stalling. "We involved all parts of the organisation and I am very pleased with the cross-portfolio activities and synergies," says Willem Woudstra, CSM Farm Supplies EMEA. During the year, Cow Longevity events were held for solution managers in Sweden and farmers in the Baltics and France. Marketing materials on longevity and the farm visit station programme were communicated during the meetings.



New e-commerce platform

A new digital engagement platform was piloted in Finland in 2019 – with aspirations for global roll out during 2020-21. The channel will ensure we stay relevant to a new generation of customers and promote our market share, while also generating revenue for our aftermarket assortment. "The introduction of e-commerce is a first step in developing and growing our digital customer relationships," says Petter Sahlström, Strategic Commercial Development Director, EMEA. "The e-commerce channel will challenge our current business model and lead to increased price transparency."



Collaboration with Swedish University of Agricultural Sciences

As part of a collaboration agreement, DeLaval donated four new DeLaval VMS™ V300 milking robots to the Swedish University of Agricultural Sciences (SLU) to milk their herd of 280 dairy cows. The state-of-the-art equipment has allowed SLU to step up its research by improving data collection and management. A DeLaval Herd Navigator™ also automatically analyses the milk to detect when the cows are in heat, if they are about to develop mastitis (udder inflammation) and when feed changes are required. "The cutting-edge equipment has enabled us to better monitor cow health and milk quality," says Rauni Niskanen, the Dean of Faculty of Veterinary Medicine and Animal Science at SLU.

New emerging market business model

DeLaval has won a 70 per cent market share in Croatia by connecting with dairies through Tetra Pak. "We used the same model in Albania where we educated farmers on nutrition and why hygiene and milk quality are important," explains Aleksander Zember, Sales Manager in the Balkan region. "Through the dairies, we offer credit to farmers, which they pay back with milk." There are significant opportunities for DeLaval to leverage Tetra Pak's global presence by replicating the model in other emerging markets. By focusing on emerging markets, we can improve efficiency and reduce greenhouse gas emissions per kg of produced milk.



Hamra Farm attractive to customers

Hamra Farm is DeLaval's own innovation, testing, and exhibition centre, and one of Sweden's most efficient dairy farms. The farm is a DeLaval subsidiary that also rents out properties, has crop husbandry, forestry, a gravel pit and a modern conference facility. Last year it welcomed around 3,000 visitors, and the number increases every year. The visitors are mainly farmers from all around the world who are interested in learning more about DeLaval and its products. Hamra Farm plays an important part in DeLaval's global marketing.



Comestar Holstein invests in robotic milking

The Quebec based dairy farm known across the globe for its outstanding genetics, signed an agreement to purchase a total of eight DeLaval VMS™ V300 with Herd Navigator™. A pillar of the Canadian Holstein industry, Comestar Holstein is preparing for a new phase in its history, one that will see them move to automatic milking. As well as an anticipated increase in yield, Comestar owners Marc and France Comtois, were very clear on the benefit of the new system for their much-envied Holsteins. "There will be more freedom and comfort for the animals," says Marc.



Exposure-4-Development (E4D) in Brazil

DeLaval joined the International Federation of Agricultural Journalists (IFAJ) on their E4D trip to the Parana region of Brazil. This year, a group of selected journalists from all over the world were invited to learn more about farms, processors and companies that make up Brazil's agricultural infrastructure. "It's essential to showcase the nutritional value of dairy as a key player in providing nutrients to a growing world population. The E4D programme is an excellent initiative to understand how developing countries contribute to feeding the world," says Lars Johansson, SVP Corporate Communications.



Leading the industry around the world



EUROPE, MIDDLE EAST & AFRICA (EMEA)

The EMEA cluster is driven by customer demands for

farm management that draw on high levels of automation and advanced technology.

In Europe, the large number of family farms, combined with the lack of labour in the dairy industry, is a solid base for the automatic milking market to expand further. Farmers are also seeking to increase their productivity and reach the highest standard of animal health and milk quality, supported by various automated sensor technologies. Meanwhile, animal welfare and environmental protection are hot topics with new regulation coming into force. The new CAP will also be launched in 2021, but should not reverse the expected rationalisation of the farming industry in Europe, and productivity gains through digitalisation and advisory services are expected to increase.

In the Middle East and Africa, political instability and a weak economic outlook are driving the dairy industry into 'opportunistic strategies' that could change 'go to market' models in the future.



AMERICAS

The Americas cluster continues to be an important area for DeLaval, with the U.S. being one of our largest mar-

kets worldwide. The Americas produce more than 25 per cent of the world's milk supply.

While challenges like extreme weather conditions and geopolitical uncertainties have created some volatility, a more favourable milk price and reduced trade tensions mean analysts are optimistic about the prospects for dairy in 2020.

Farm consolidation and labour shortages are driving the adoption of high-tech solutions to achieve scalability and greater efficiency. Dairy producers in the U.S. and Canada are already benefiting from the newly launched DeLaval VMS™ V300 milking system that meets the needs of the large-herd segment for 1,000+ cows.

Producers in Latin America are also interested in robotics to increase milk production and modernise operations. DeLaval continues to benefit from the tremendous success of the largest robotic dairy in the world – Ancali Agrícola in Chile where 72 VMS units milk 4,000 cows. Latin America also sees increasing demand for various solutions to improve milk extraction and farm management.



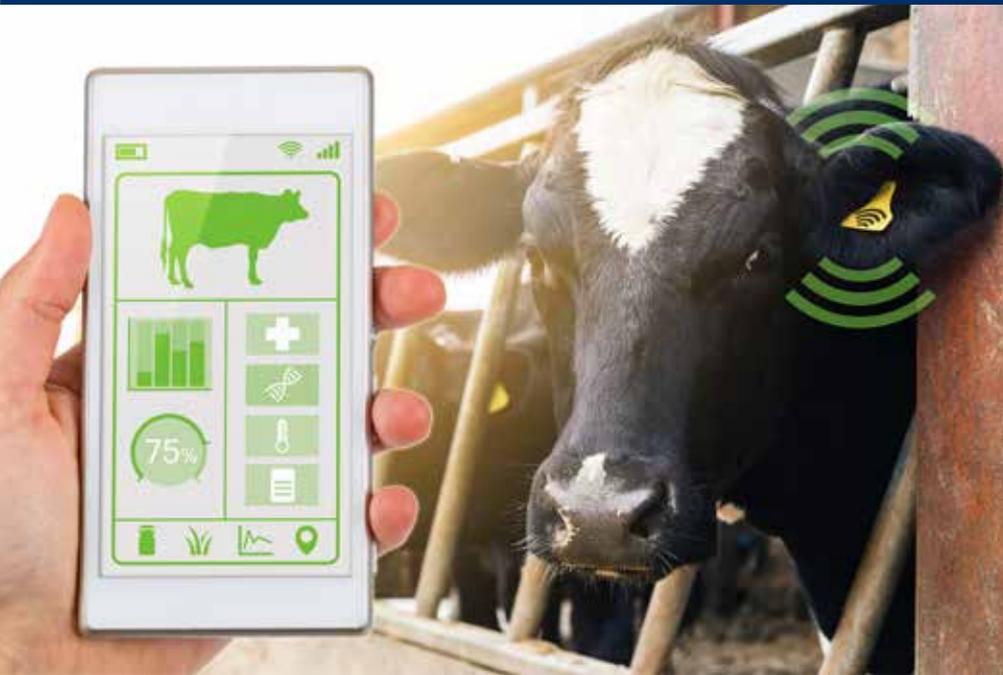
ASIA PACIFIC

The Asia Pacific cluster provides a dynamic business environment with different farming styles – including

traditional family farming systems in Japan, small herd production in India and South East Asia, low-cost pasture production systems in Oceania and intensive large farms that are growing rapidly across China and Russia. Consumer demand projections for dairy products continue to grow rapidly throughout the region with many larger customers now operating outside their traditional country of origin.

Increased automation, digitalisation and interconnectivity continue to be key customer demands. Data collection and milk analysis management are a major focus for our large customers, with products like the DeLaval Herd Navigator™ HN500 proving very successful in Japan.

Customer programmes like the InService™ All Inclusive performance plans provide our customers with quality hygiene and teat care products, preventative maintenance programmes, and both off and on farm diagnostics. China has been very successful in the delivery of these programmes, including operator training, not only on equipment but also covering animal welfare and milk quality.



Digital services future proofing our business milking system

A new strategic direction taking shape to focus on enhancing our digital offering to ensure we stay competitive in the dairy farming industry.

Digital Services

In recent years, we have seen a strong market demand for technologies that support our farmers and partners in making better use of their equipment and utilising farm data to run more efficient and sustainable dairy operations. Today's digital technologies are presenting us with many new opportunities in this area.

A new Digital Services team was created last year, which is responsible for our journey towards an aligned digital services offering. The team will establish a common DeLaval digital platform to collect and make use of data from our sensors on cows and equipment. With machine learning and deep learning algorithms, this data will then be used in our digital services offering. Such services range from information on cow health and milk quality to equipment performance services, like remote surveillance for farmers and other partners. These services will be offered and sold through digital channels in alignment with our market area organisations.

DeLaval's leading position in the market is based on innovations and our ability to bring a constant flow of relevant new products to our customers.

New opportunities from remote monitoring

We see a clear market demand for new technologies, which is constantly presenting us new opportunities and challenges that we need to grasp in order for us to drive a sustainable and forward-thinking business and industry. Digital technologies enable us to extend our current product offering to include digital services.

There are opportunities for us in all three elements of our company strategy: Sales, Innovation and Productivity.

Digital and connected solutions allow remote monitoring of a farmer's needs, including monitoring real-time data on an app from the other side of the world. "Remote management not only enables us to serve the equipment remotely, we can also compare performance with other farms to suggest efficiency improvements to the farmer's operations," says Jonas Hällman, Executive Vice President Digital Services.

Such solutions have the potential to deliver significant value to our customers – while creating new business opportunities for DeLaval.

Introducing the next generation of robotic milking system

The DeLaval VMS™ V310 milking system is a new concept in automatic milking that incorporates a complete reproduction management tool to enable farmers to save time and reduce costs.

The DeLaval VMS™ milking system is already the most effective on the market while also monitoring cow health and performance. With the VMS™ V310, DeLaval built on its industry-leading expertise to take milking to the next level.

Based on the latest technology

The V310's state-of-the-art features include the new DeLaval RePro™ that uses progesterone-based sampling and analysis to detect heat and pregnancy in real time as well as cows that are not cycling as they should. This provides dairy farmers with accurate insights into the reproductive status of each cow in their herd, and allows them to save both time and costs associated with managing reproduction and unwanted open days.

Healthier cows and greater productivity

DeLaval VMS V310 is the first milking system that automatically confirms pregnant cows. This can result in healthier cows and reduced veterinarian costs due to cows becoming pregnant at the right time with more productive lactations.

"With VMS V310, the robot manages 90 per cent of the tasks," says Christian Legret, DeLaval VMS V310 owner, France. "RePro ensures that ultrasounds are hardly needed anymore because the system informs the farmer when cows are pregnant."

With two models available, farmers can choose the voluntary milking system that best meets their needs. The new DeLaval VMS™ V310 milking system was launched on 1 January 2020.



We make sustainable food production possible

We have refined our approach to sustainability to ensure it covers everything we do – both within our company and how we benefit our customers. Based on direct customer insight and our materiality analysis, we developed a new sustainability model in 2019. The model focuses on three main perspectives – Environment, Food and Animal Welfare, and Social and Economic.

Environment

The greatest environmental contribution we can make is on the farms of our customers as we strive to reduce the environmental impact of every litre of milk produced. This typically involves providing solutions that improve efficiency and milk yield.

Within our own operations, we are committed to constantly finding ways to reduce waste, and the use of energy and water. We are also committed to contributing towards a low carbon economy by taking action to combat climate change and its impacts.

Food and animal welfare

Contaminated milk presents obvious risks to both consumer health and the operations of our customers. Food safety is critical for all parts of the dairy value chain. We work with food safety through stringent compliance controls but also by promoting animal welfare.

A healthy animal provides more milk, at a better quality and for more years. By providing better conditions for animals, farmers can improve the animal's health and longevity while at the same time maintaining or improving farm profitability and reducing their environmental impact.

Social and economic

Social sustainability involves respecting and advancing human rights as they are defined by the UN. Economic sustainability is how we create long-term economic growth without negatively impacting social or environmental sustainability.

Our Corporate Governance framework including our Code of Business Conduct guides us in how to act sustainably, and in compliance with laws and ethical standards. Through innovation, we provide solutions to dairy farmers to make their lives easier and their farms more profitable whilst reducing their environmental impact.



Key sustainability challenges for DeLaval

During 2019, we identified 12 key sustainability challenges that we will focus on. Each challenge is driven by a member of our Group Management and during 2020 we will work on setting targets for our challenges.

ENVIRONMENT

Waste and recycling

Sustainable waste management and recycling policies.

Emissions to air

Reduction of carbon emissions throughout the whole value chain.

Natural resources

Usage of materials in a way that does not lead to the depletion of natural resources.

Water use

Responsible water use in both products and processes.

FOOD AND ANIMAL WELFARE

Food safety

Meet all regulations regarding food safety to ensure milk is safe to consume.

Animal welfare

Extend longevity and improve milk yield by creating the best possible living standards for cows on farms.

Product development

Develop products that increase productivity to help farmers do more with less.

Partnerships

Ethical business partnerships that can help us achieve our corporate goals.

SOCIAL AND ECONOMIC

Diversity and inclusion

An inclusive work environment with equal opportunities for all.

Employee satisfaction & wellbeing

A safe and healthy work environment with an ambition to have zero accident and no work-related illness.

Work efficiency

Develop products and processes that result in more efficient use of resources, while ensuring data security.

Profitability

Make sure both our own operations and our customers' businesses are profitable in the long-term.

At DeLaval we aim to contribute toward the UN Sustainable Development Goals. The most relevant goals to our business are:



The United Nations has set 17 sustainable development goals as a blueprint to achieve a more sustainable future for all. These goals address the global challenges we face today covering areas such as poverty, inequality and climate change. At DeLaval, we have looked at how we can contribute to these goals based on the challenges facing our customers and our industry.

Within our three sustainability categories, we have identified the following UN Sustainable Development Goals and the specific targets that the UN has set for each goal where we believe we can contribute the most.



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 implemented in 2019.

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 2019

- 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. **Jörgen Haglund** – Public Affairs & Group Communications
- 02. **Phil Read** – Group Human Resources

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



School milk programme in Kenya increases school enrolment

Food security and nutrition are key challenges in Kenya. According to the World Food Programme (WFP), stunted growth caused by malnutrition affects 29 per cent of children in rural areas and 20 per cent of children in cities. According to UNESCO, school enrolment rates still remain a challenge at 75 per cent, although they have showed improvement in recent years.

School milk programmes around the world have demonstrated to improve school attendance, nutrition, and support the local dairy value chain. Learning from success stories from around the world, local county governments worked in collaboration with the Kenya Dairy Board and local dairy processors to initiate school milk programmes at 1,767 schools in seven counties.

The objectives were to address malnutrition, school enrolment rates, and provide farmers with access to market for their milk. One important initiative involved measuring the impact of the school milk programme to validate progress.

Another important action was to source milk from smallholder farmers and provide technical assistance and training. Tetra Pak and Tetra Laval Food for Development are supporting customers by providing training to the smallholder farmers that supply milk.

The measured data is showing significant results. For example, schools that have a school milk programme have shown an increase in school enrolment of up to 55 per cent in Nairobi County compared to schools without a programme. In Meru County the average enrolment increased by 20 per cent, in Mombasa County by 25 per cent and in Embu County by 14 per cent.

INCREASE IN SCHOOL ENROLMENT

+55%

in Nairobi County

+20%

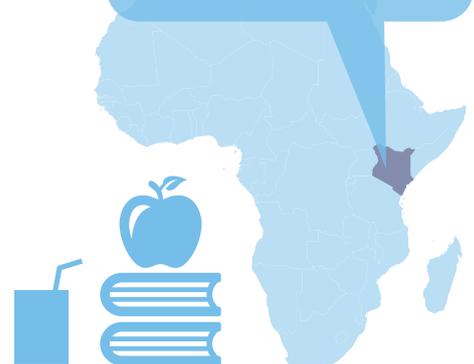
in Meru County

+25%

in Mombasa County

+14%

in Embu County



Technical assistance programme drives positive developments for the Ugandan dairy sector

Uganda's dairy sector plays a very important role – both in the economic development and as a source of nutrition in the country. Although the dairy industry has maintained an average positive growth rate of 3 per cent per year, the sector faces various challenges. Through the Pearl Dairy Farmers' Community (PDFC) initiative, a technical assistance programme was set up for the dairy farming community in the South West Region of Uganda to improve productivity, share best practice and scale-up milk production. Among other things, milk production has increased by nearly 78 per cent per farm on average, thanks to the programme.

Despite its importance, the Uganda's dairy sector struggles with a number of problems. Only 33 per cent of the country's milk output is processed, while the remaining 67 per cent is not formally collected and much is lost. Besides the lack of processed milk, the average productivity per cow is low at only around 4 litres per day. According to the FAO (Food and Agriculture Organisation of the United Nations), 95 per cent of the milk production comes from smallholder farmers living in impoverished rural areas, and 41 per cent of the population is undernourished.

Growing programme benefits dairy farming

The Pearl Dairy Farmers' Community (PDFC) is an initiative led by Pearl Dairy Farms, Ltd. (a leading dairy processor based in Mbarara, Uganda), in collaboration with the IFC (International Finance Corporation), Bles Dairies, VetEffect, SNV (Foundation of Netherlands Volunteers), Tetra Pak, and Tetra Laval Food for Development. The PDFC initiative has been steadily expanding its technical assistance programme to benefit the dairy farming community in the South West Region of Uganda.

The programme aims to achieve the following objectives:

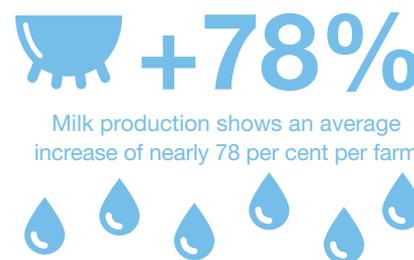
- Establishment of a professional extension services team that trains dairy farmers on best practices in farm management – focusing on productivity and milk quality improvement.
- Improve the productivity of the initial 1,000 farms by at least 30 per cent.

- Scale-up the programme long-term through an outreach campaign targeting 5,000 smallholder farmers.

Increased productivity, improved livelihoods and new jobs

Through the programme, the lead farms are continuing to show positive improvements. Overall, milk production shows an average increase of nearly 78 per cent per farm. The increase is due to the technical assistance provided by the project team on proper feed, nutrition and animal husbandry. The project has helped to create 150 new direct jobs and improved the livelihoods of more than 1,000 farmers, and plans to scale-up to benefit 5,000 smallholder farmers.

"We are honoured to have Food for Development's technical support, offered as practical hands-on training to the dairy farmers. Their vast knowledge in dairy farming is a valuable resource for the farmers," says Amit Sagar, CEO, Pearl Dairy Farms, Ltd.



School milk programme launched to improve food security in Sri Lanka

According to the World Food Programme, Sri Lanka has levels of acute malnutrition – ranging between 14 and 35 per cent. According to Ministry of Agriculture in Sri Lanka, less than 40 per cent of the milk demand is produced locally, and the yields per cow are low. To address these challenges, the Government launched a school milk programme in 2019, with the objectives of providing locally sourced quality nutrition and boosting milk production. It is initially covering 400,000 children, and Tetra Pak is already supplying Tetra Fino® Aseptic 150ml packages for milk to 185,000 school children.

Malnutrition is considered to be an obstacle for socio-economic development in Sri Lanka, which has a growing population of 21 million. However, malnutrition can be combated by increasing the local milk production, with low yields per cow being at less than 2 litres per day.

100 per cent locally produced UHT milk

To cope with these challenges, the Government of Sri Lanka launched a school milk programme initially covering 400,000 children from 950 schools and is using 100 per cent locally produced UHT milk. It is fully funded by the Government and implemented by the Ministry of Education.

“Our customer Cargills Ceylon started supplying milk in Tetra Fino® Aseptic 150ml packages to 185,000 school children in 400 schools,” says Ashutosh Manohar, Managing Director Tetra Pak South Asia Markets.

Technical assistance ensures good support

Tetra Pak South Asia and the Tetra Laval Food for Development team supported Cargills Ceylon and the Ministry of Education by providing technical assistance and sharing best practices used in school feeding programmes around the world.

As part of the technical assistance support, essential training was provided to the customer and the Ministry of Education’s implementation team on proper food safety protocols, environmental education and recycling. Tetra Pak has also identified and engaged a local partner to collect and recycle the used carton packages from schools.

400 schools participating in environmental education workshops

“This is a unique programme that balances two important priorities of Tetra Pak – food



safety & access and sustainability. Children from the 400 participating schools now have access to quality nutrition and are also learning about their environmental responsibility,

Tetra Fino® Aseptic 150ml packages to

185,000

185,000 school children in 400 schools,



making sure that used carton packages are recycled,” said Ashutosh Manohar.

The school milk programme has the common objective of providing locally sourced quality nutrition and boosting milk production. The Ministry of Education is measuring nutritional indicators among children such as height, weight and how the improved attendance can eventually benefit learning.

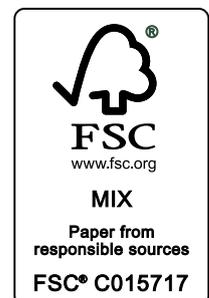
“As a long-term objective, we look forward to continuing to provide technical assistance and training to the farmers working through our Dairy Hub model to improve the milk production,” concludes Rafael Fabrega, Director Tetra Laval Food for Development.

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