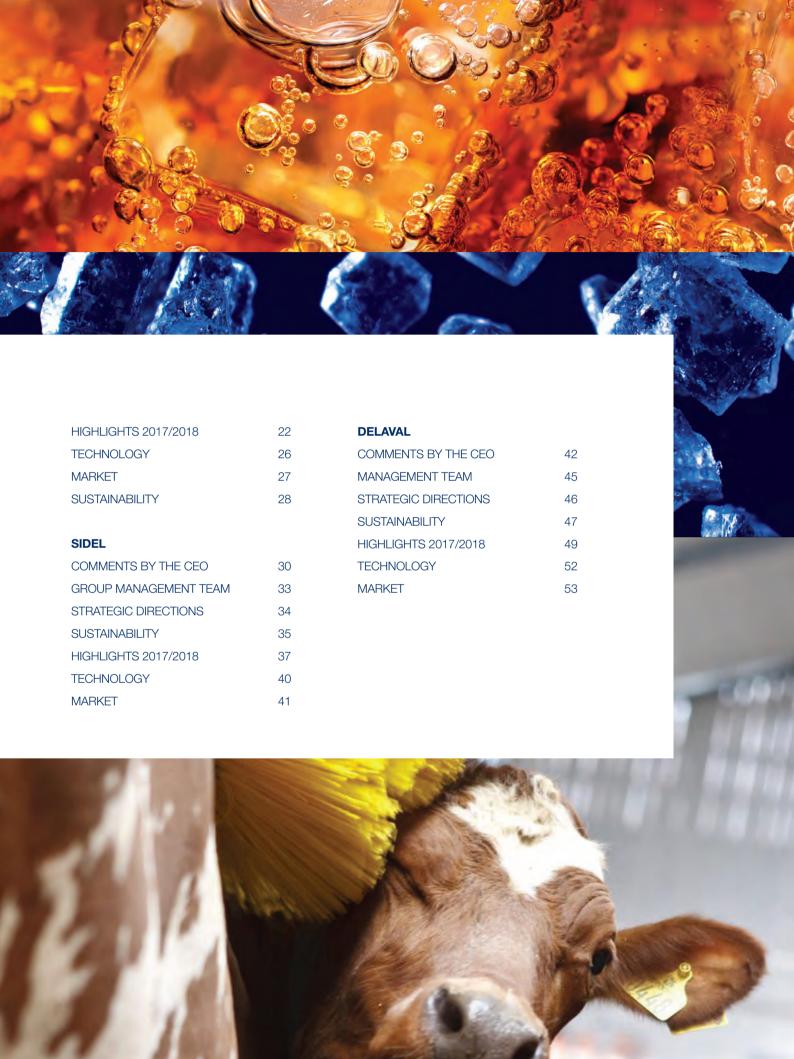


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## 

The Tetra Laval Group consists of three industry groups, Tetra Pak, Sidel and DeLaval, all focused on technologies 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.



#### 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

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



#### **DELAVAL - WE MAKE SUSTAINABLE** FOOD PRODUCTION POSSIBLE

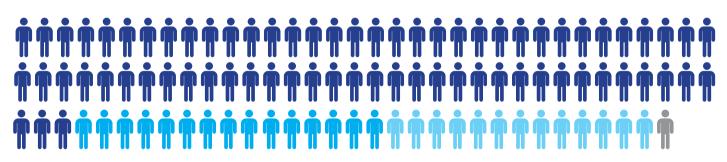
DeLaval is a full-service supplier to dairy farmers. The company develops, manufactures and markets equipment and complete systems for milk production and animal husbandry.

#### **NUMBER OF EMPLOYEES, DECEMBER 2017**

TETRA LAVAL GROUP

35,020

**1** 24,810 **1** 5,430



**NET SALES 2017, MILLION EURO** 





## 2017 - Year in brief for the Tetra Laval Group

Net sales for the Tetra Laval Group amounted to €13.9 billion.

#### **TETRA PAK**

- Net sales for Tetra Pak increased to €11.5 billion.
- Tetra Pak launched an array of new products and solutions in 2017, as its long-standing commitment to customer-focused innovation continued to deliver results. These included two new Tetra Pak® E3 filling machines, completing the range so that customers can now use this technology to produce ambient, chilled and extended shelf-life products in both family and portion sizes. The company also launched a High Shear Mixer that sets a new industry benchmark in terms of end product quality, energy consumption and cost. And it extended its leadership position in the fast growing on-the-go beverage market with new portionsize packages like the Tetra Prisma® Aseptic 200 and 250 Edge with DreamCap™ 26, the Tetra Top® 330 MiniV Nallo and the Tetra Brik® Aseptic 200 Slim Leaf.
- Tetra Pak strengthened its product offering for ice cream manufacturers with the acquisition of Big Drum Engineering GmbH, a leading supplier of filling machines for the industry. The company also acquired Johnson Industries International, which specialises in the design, development and manufacture of equipment and lines to produce mozzarella cheese.
- Construction work started on a new Tetra Pak packaging material plant in Vietnam, with commercial production scheduled to begin before the end of 2018. The company also neared completion of an extension of its Rayong factory in Thailand, dedicated to the production of caps and closures, to meet rising demand driven by the growth of new packaging formats. On the other side of the world, Tetra Pak started a €30 million upgrade of its packaging facility in Denton, USA, to support the growth of its business across North America.
- Tetra Pak was awarded the highest possible score by the CDP Forests Programme for its work in tackling deforestation. In 2017, the company celebrated 10 years of supplying FSC-certified packages, during which time more

than 300 billion FSC-labelled Tetra Pak® packages have been delivered to store shelves. Tetra Pak also announced that it now uses renewable electricity for more than a third of its total annual consumption worldwide. This is up from 22 per cent in 2015.

#### SIDEL

- Net sales for Sidel amounted to €1.4 billion.
- The Food & Drug Administration (FDA) approved Sidel Combi Predis<sup>™</sup> which makes the solution the world's first aseptic PET filling equipment with dry preform sterilisation qualified for lowacid manufacturing and commercial distribution in the United States.
- Sidel introduced the Super Combi at the 2017 Drinktec fair. The machine, integrating five process steps preform feeder, blower, labeller, filler/capper and cap feeder into an all-in-one smart system, is the next generation solution for water and CSD producers. As such, it was awarded the 'Best Manufacturing or Processing Innovation' at Drinktec.
- Gebo Cermex launched the AQFlex® system at Interpack 2017. AQFlex represents a true breakthrough solution in product handling. It delivers unprecedented packaging line performance, unique agility and smooth contactless product conveying and accumulation, in a very compact space.
- Sidel also introduced the versatile Aseptic
  Combi Predis, a new solution that can produce
  aseptically both still beverages and carbonated
  soft drinks in PET bottles. This results in a high
  degree of production flexibility and productivity
  while contributing to reduced costs and lowering environmental impact.
- Sidel continued to integrate its Agility 4.0™
   programme allowing customers to realise the
   opportunities offered by the most recent
   developments in IT, with machines smoothly
   communicating with operators, easy monitoring
   of potential faults and detection of the causes.

#### **DELAVAL**

- Net sales for DeLaval reached €980 million.
- DeLaval Calf Feeder CF1000S won the 2017
   Dairy Herd Management Innovation Award.

   At the World Dairy Expo the DeLaval Calf Feeder
   CF1000S received top honors. The automated
   calf feeder was one of ten new products to be
   recognised by Dairy Herd Management's panel
   of judges for its game-changing technology.
- DeLaval strengthened its offering with a cohesive package called InService™ All-Inclusive. Milking systems need service at regular intervals.
   With InService™ All-Inclusive, DeLaval ensures that equipment is maintained and works well with consumables such as liners, tubes, detergent, teat spray, filters and oil equipment to ensure consistent milk quality and yield.
- DeLaval opened a new European distribution centre in Gallin, Germany. The new centre is designed for energy efficiency and environmental sustainability, and will provide modern logistics services. With 57,000 square metres of storage space DeLaval increases its storage capacity. Greater order flexibility, reduced lead times and the ability to store all products under one roof means greater efficiency.
- In 2017 DeLaval VMS™ (Voluntary Milking System) celebrated 20 years of successful robotic milking. Back in 1997, engineers worked around the clock to finalise the DeLaval VMS™ to ensure DeLaval launched the most advanced platform on the market. twenty years later DeLaval can proudly present 15,000 reference customers.
- DeLaval once again achieved first place in the "Livestock Technology" category of the German Agricultural Society (DLG) Image Barometer. Particularly encouraging is the increase in the number of points in comparison to the previous year and the clear leadership in all four investigated regions of Germany.



Tetra Pak strengthened its product offering for ice cream manufacturers with the acquisition of Big Drum Engineering GmbH, a leading supplier of filling machines for the industry.



Sidel Super Combi, integrating five process steps – preform feeder, blower, labeller, filler/capper and cap feeder - into an all-in-one smart system, was awarded the 'Best Manufacturing or Processing Innovation' at Drinktec.



DeLaval Calf Feeder won the 2017 Dairy Herd Management Innovation Award.

## COMMENTS BY THE CHAIRMAN OF THE BOARD

## All industry groups delivered growth

2017 was a year when all three industry groups delivered growth. Tetra Laval Group's net sales amounted to €13.9 billion, a nominal increase of about 1 per cent compared to 2016. At comparable rates, sales increased by 1.7 per cent. The reason for the increased sales was that both capital equipment sales and service sales grew for all industry groups. Driving factors were increased demand and an attractive customer offering. However, the strengthening of the euro versus the USD negatively impacted sales. Operating profit improved in absolute terms and remained unchanged in relative terms. The main contributor was sales growth, as well as the on-going transformation programmes in all industry groups that made significant contributions. I want to express my gratitude to our dedicated personnel for their outstanding achievements during the year.

We are also pleased that we successfully expanded our ability to offer leasing of capital equipment through external banks specialised in this field. This will improve both our own and our customers' cash flow.

As for many other companies, digitalisation and cyber security is high on the company agenda. Digitalisation is highly prioritised and significant investments are being made in all industry groups. A good example is digital printing of codes on products to enable our customers to communicate efficiently with consumers. Another is a system for the traceability of the product throughout the value chain.

As for cyber security, several activities were put in place to reduce the risk of cyber attacks. This includes comprehensive online training that is compulsory for all employees.

## IMPROVING GROWTH PROSPECTS IN LARGE MARKETS

In our largest market, China, sales stabilised after last year's decline. We also saw a gradual improvement of the market conditions in Brazil and Russia. In the US, sales grew thanks to a general positive investment climate. Sales in Southeast Asia and Oceania continued to grow at a steady pace. Excellent growth in Japan was attributable to innovative products and favourable market conditions. In order to further support the growth in the region, decisions were taken to invest in a new Tetra Pak packaging material plant in Vietnam. Furthermore, Tetra Pak expanded its caps and closures manufacturing plant in Thailand, driven by the rapid growth of new packaging formats. In the Middle East, the volatile geopolitical environment and the impact of low oil prices affected sales negatively for the first time in several years.

## TETRA PAK BACK TO GROWTH IN A CHALLENGING MARKET

Total sales of Tetra Pak grew 0.5 per cent in a challenging market. Growth of capital equipment sales in both Packaging and Processing contributed with 14 per cent and 3 per cent respectively. Service sales success of recent years continued with a growth rate of about 6 per cent. Profitability grew in line with sales. Packaging material sales declined slightly due to competitive pressure and macro-economic instability, particularly in the Greater Middle East. The number of packages sold globally amounted to 188 billion in 2017.

The successful deployment of new packaging formats continued. Around half of the packages now sold by Tetra Pak come from its advanced portfolio, with attractive looks and excellent functionality boosting consumer appreciation. With the growth of advanced

formats also comes expansion of additional materials like caps and closures. The growth of capital equipment, additional materials and service compensates well for the slight decline in packaging material sales. Strong order intake of capital equipment during the year contributed to a good backlog for Tetra Pak at the start of 2018.

The expanded product portfolio in Processing contributed to favourable growth. During recent years the product offering has been strengthened in categories like cheese, ice cream and milk powder.

We expect to see continued growth for Tetra Pak for 2018.

#### STRONG DEMAND FOR DELAVAL

Order intake grew by 10 per cent and net sales by 5 per cent for DeLaval. The improvement of milk prices that occurred in 2016 continued during 2017, enabling double-digit growth in order intake for capital equipment and mid-single-digit aftermarket growth. As a consequence of the strong order intake, DeLaval entered 2018 with a solid backlog.

The strongest demand was in robotic milking, which experienced a broad-based increase. Animal Health and Milk Quality had a similar development. The improved profitability was attributable to the on-going transformation programme as well as increased sales.

Investments in R&D were at an exceptionally high level and several innovative products will be launched during 2018 to improve efficiency for dairy farmers. Furthermore, there was significant build-up of resources in the growth areas of Chemicals and Data Management, respectively. New types of customers in these areas have become an interesting business opportunity for DeLaval.

We expect to see continued good growth for DeLaval in 2018.



#### IMPROVING PET DEMAND FOR SIDEL

For Sidel, order intake increased by 3 per cent thanks to improved market share in a slightly declining market for PET equipment as well as continued growth in service. Profitability also improved, but is still not at the target level. The improvement is explained by cost reductions from the current transformation programme. A large number of important product launches and innovations were presented at the Drinktec exhibition and they were very well received. The SuperCombi® launch is a milestone for Sidel, reducing floor space requirements and providing more efficient PET-line operation. The new can and glass fillers are other highlights that created a lot of interest.

Two PET areas with very positive development are Aseptic as well as Home and Personal Care, in which Sidel has excellent product offerings. Sidel continues to build capabilities and to invest in R&D and facilities for Aseptic Technology both in Europe and China to sustain our competitive advantage in a market where continued growth can be expected.

We expect to see continued good growth for Sidel in 2018.

#### **GROWTH, EFFICIENCY AND INNOVATION** - OUR FOCUS FOR 2018

Global GDP growth in 2018 is expected to reach the best level since the recovery from the financial crisis in 2008. Several of our customers still struggle with subdued growth and profitability due to changing consumer behaviour. Our commitment is to support our customers to introduce more attractive products at competitive prices, thus generating growth. Through our expertise we also contribute to improving our customers' operational efficiency.

Internally, continued efficiency improvement in all parts of the Group is necessary in a situation where top line growth is challenged. The on-going transformation programmes contribute to that, but this is a perpetual journey. Finally, innovation is in our genes and recent product launches create significant opportunities.

We are addressing these focus areas with speed and determination, and I am confident that the Group will deliver satisfactory results despite somewhat challenging market conditions in 2018.

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 Lic. Vice Chairman of the US-China Business Council and board member of the US-India business council. In his 36 year Cargill career 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 Managing Partner and has been Chairman of the Executive Committee of Rothschild & Co since 2010. He has worked at Rothschild since 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 is currently a member of the Board of Management of Daimler AG, responsible for Group Research and Mercedes-Benz Cars Development. He was appointed to the Board of Management of Daimler AG effective January 1, 2015 and was responsible for Mercedes-Benz Cars Marketing and Sales until December 31, 2016. 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 SUV production plant in Alabama, as its CEO in 2009. From 2005–2009 Ola Källenius was the Managing Director of Mercedes-Benz HighPerformanceEngines 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. in 2003 through 2004.

#### 05. Jorma Ollila

A non-executive director since January 2013.

Jorma Ollila is Chairman of Outokumpu since 2013. He was
Chairman 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 Vice Chairman of the Board of Directors of Otava Books and Magazines Group. He is Advisory Partner of Perella Weinberg Partners as of 2014. He is Chairman of Miltton as of 2015 as well as Chairman of the Board of Xinova Management Company LLC since 2016. Board member of TBG AG since 2016

#### 06. Dr. Bernd Pischetsrieder

A non-executive director since 1999.

He is Chairman of the Supervisory Board of Münchener Rückversicherungs-Gesellschaft, Aktiengesellschaft in München 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 1985–1989 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. He is Member of the Board of Governors of the Museum of London.

#### 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. In addition, Ms. Rausing is the Hon. President of the European Federation of Thoroughbred Breeders' Associations (Paris), as well as a past Chairman of 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. In January 2017 she was elected Chairman of The International Thoroughbred Breeders' Federation, a worldwide organisation with over 40 member states.





## 

#### 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.

#### CUSTOMER VALUE GOES BACK TO ITS ROOTS

Tetra Pak was built on delivering customer value. Ruben Rausing, who founded the company, believed that a package should save more than it 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 2017 Tetra Pak sold products and services to customers in more than 160 countries, employing around 24,800 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 2017

€11.5

**BILLION** 

SALES IN

>160

COUNTRIES

NUMBER OF EMPLOYEES
DECEMBER 2017

24,810

**CUSTOMER INNOVATION CENTRES** 

6

TECHNICAL TRAINING CENTRES

11

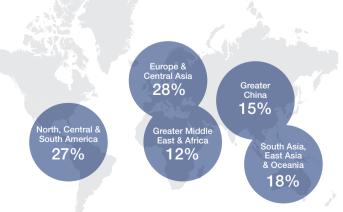
RESEARCH AND DEVELOPMENT CENTRES

5

PRODUCTION PLANTS

55

#### **TETRA PAK NET SALES BY GEOGRAPHY, 2017**



#### TETRA PAK SALES SPLIT BY MARKET SEGMENT, 2017 (EXCLUDES SERVICES)

Liquid dairy $56\%$	I	Prepared food	
Juice & nectars		Cheese 3%	
Still drinks		Wines & spirits $2\%$	
Dairy alternatives 7%		lce cream	

## **Sidel**

### HIGH-PERFORMANCE PACKAGING **PRODUCTION SOLUTIONS**

The Sidel Group helps package beverages, food, home and personal care products in PET, can, alass and other materials, Comprising three strong brands – Sidel, Gebo Cermex and Novembal - 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 liquid packaging producers work with the Sidel Group, 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 production 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.

#### THREE BUSINESS UNITS, MANY MARKETS. ONE PURPOSE.

With over 40,000 machines installed in more than 190 countries, we have nearly 170 years of proven experience, with a strong focus on providing our business partners with the advanced systems, line engineering and innovation that they need to reach their goals. Our more than 5,000 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. With our three business units, we are uniquely positioned to serve our customers' specific needs.

Sidel is a complete solutions provider that serves producers of water, carbonated soft drinks, liquid dairy products, juices, nectars, isotonics, soft drinks and teas. We are a leading provider of blowing, filling and labelling solutions for multiple applications, including food, home and personal care products.

Gebo Cermex is a complete solutions provider for beer, wine and spirits, as well as food, home and personal care markets, and a leading provider of material-handling, end-of-line and line-engineering solutions for multiple applications.

Novembal is a specialist in plastic cap design and injection, and a leading supplier of closures for the bottled liquid food market with over 50 years of experience. Predominantly based and operating in North America, Novembal is an independent subsidiary of the Sidel Group.

NET SALES 2017

**BILLION** 

SALES IN

COUNTRIES

NUMBER OF EMPLOYEES DECEMBER 2017

TECHNICAL TRAINING CENTRES

RESEARCH AND DEVELOPMENT **CENTRES** 

PRODUCTION PLANTS

#### SIDEL GROUP EQUIPMENT NET SALES BY GEOGRAPHY, 2017



#### SIDEL GROUP EQUIPMENT NET SALES BY MARKET SEGMENT, 2017





Juices, Nectars, Soft Drinks,



Food, Home and Personal Care

Carbonated Soft Drinks

14%



Liquid Dairy Products

8%



## & 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 worldwide. Service and sales of a wide range of accessories are also key aspects of DeLaval's operations. The company supplies highly efficient system solutions for milking, herd management, animal traffic control, feeding, cooling, manure handling, ventilation and energy recovery.

#### **SOLUTIONS**

DeLaval offers automatic and conventional milking systems, cooling and feeding systems, effluent and housing systems, and farm management support systems. DeLaval customers can also choose from a wide range of services and consumables which are grouped in four portfolios: liners & tubes, farm supplies, services & original parts, and milk quality & animal health.

#### **OUR CUSTOMERS**

More and more dairy farmers are turning to technology to ensure they can optimise their milk production and cows' well-being. At DeLaval, we add value by meeting and exceeding our customers' requirements on quality, productivity and safety. We design, manufacture and supply integrated milking solutions with the needs of dairy farmers in mind. At all times. We serve customers in more than 100 countries around the globe.

#### **RESEARCH AND INNOVATION**

Research and innovation are central to the continued success of DeLaval supporting our customers and we have seven R&D centres across the globe. We work closely with a worldwide network of farmers,

academics, dedicated research facilities, scientists, sales teams and authorised dealers.

#### SUSTAINABLE DAIRY FARMING

Our goal is to reduce the environmental footprint of farms, while improving milk production, farm profitability and the well-being of the people and animals involved. We believe the goal of sustainable dairy farming can be achieved by supporting dairy farmers with smart technology and services to continuously increase resource efficiency on farms. To put it another way, we support them to do more with less.



NET SALES 2017

€980

**MILLION** 

SALES IN

>100

COUNTRIES

NUMBER OF EMPLOYEES DECEMBER 2017

4,520

TECHNICAL TRAINING CENTRES

6

RESEARCH AND DEVELOPMENT CENTRES

7

PRODUCTION PLANTS

18

#### **DELAVAL NET SALES BY REGION, 2017**



#### **DELAVAL NET SALES BY PRODUCT SECTOR, 2017**



## Tetra Laval around the world

Tetra Laval contributes to the lives of people around the world in many positive ways. Our three industry groups – Tetra Pak, Sidel and DeLaval – provide innovative systems that improve the efficiency, quality and safety of food production, processing and packaging.

#### TETRA PAK MAJOR NEW FACTORY FOR SELECT MILK IN US

When Select Milk Producers in the US decided to build a new plant in Littlefield, Texas, it chose Tetra Pak to install all of the processing equipment and automation controls. Scheduled to come on stream in April 2019, the new plant will process raw milk for a variety of dried-milk products, as well as cream for butter.

The Texas plant builds on our previous experience of creating a similar factory for the same customer in Michigan. With a daily raw milk intake of 1.8 million litres,

sourced from farms spread across Southwest US, the new plant will be able to produce up to 6,800 kg of milk powder and 7,300 kg of cream for butter production per hour. Select Milk chose the Tetra Pak process because it maintains the high quality of the raw milk while also creating value-added products. This large plant is a major undertaking that reinforces Tetra Pak's position as a primary supplier in the North American market.





Two of Nestlé Waters' best performing production lines in North America are found in the Greenwood Plant in the US. Although there are many reasons for their great success, Gebo Cermex' EIT™ (Efficiency Improvement Tool) can also take part of the credit.

The EIT data acquisition & plant intelligence system – developed in 1996 and currently installed in more than 110 Nestle Waters' lines worldwide – gives employees at all levels of the organisation real-time access to relevant and actionable information on key performance indicators, for optimised efficiency and improved productivity.

In Greenwood, regular reviews of the EIT data helped achieve an impressive reduction of unplanned downtime and improve operators' awareness.



## DELAVAL PROVIDING SUSTAINABLE SOLUTIONS FOR US DAIRY CO-OPS

The dairy industry in the US needs to formulate sustainability metrics that can be presented to retailers and food processors, as consumers increasingly demand products that come from sustainable farming practices. Dairy co-operatives have been early responders, as they have close relationships with member farmers. DeLaval North America has started an active dialogue with several co-ops on how to help dairy farmers increase sustainability in a cost-efficient manner. The DeLaval solutions that support these demands include DeLaval VMS™,

which are generally more energy-efficient and provide higher productivity with better animal welfare. Consumables such as AcidiShine™ detergent and iodine-free OceanBlu™ teat dips promote animal health and food safety – and all are free of NPE.



## DELAVAL **CELEBRATING TWENTY YEARS IN AUTOMATED MILKING**

Back in 1997, engineers worked around the clock to finalise the DeLaval VMS™ to ensure we launched the most advanced milking platform on the market. With a host of patents, the DeLaval VMS™ had the first touch screen, the first teat preparation cup, the first real quarter milking system and the first rear plate to secure hygiene. Celebrating 20 years of automated milking, more than 200 events were held across Europe in 2017. Most of these were open farm days hosted by DeLaval, with up to as many as 500 visitors. "It's a great opportunity to meet customers to discuss our expertise in automated milking while presenting our product range," says Edouard Alix, Cluster Solution Manager Automatic Milking Systems.

#### TETRA PAK WORLD'S FIRST PERSONALISED CARTON PACKAGE

In an innovative campaign designed to engage children, Al Safi Danone teamed up with Tetra Pak in Saudi Arabia to launch the world's first personalised carton package for its leading Safio flavoured-milk brand. The Safio MyPack campaign was promoted in shopping malls throughout the country, allowing children to engage in various activities at Safio booths.

The 25 most common names for boys and girls were chosen by Al Safi Danone for printing on TBA 200 ml Slim Leaf carton packages for all flavours: chocolate, banana, strawberry and plain. Supported by an integrated marketing campaign that included in-store branding and radio, the Safio MyPack initiative resulted in the production and distribution of some 39 million personalised packs, boosting Safio's market share from 13 per cent to 16 per cent.





### DELAVAL CHINESE CUSTOMER IMPROVES MANURE SEPARATION

A large 2,000-cow dairy farm in southern China needed to improve their manure treatment efficiency and asked DeLaval for a solution. They required solids with an improved dry matter ratio for better composting, in addition to reducing daily separation time. The farm had three screw separators, but only one of them was running more than 20 hours a day to finish the separation job. However, the moisture level was too high and having only one operational screw separator was not sustainable in the long run.

DeLaval removed the two dysfunctional separators and used the remaining pipeline and pump to install a new DeLaval Manure Separator. The integrated system was installed and operational within one day.

With two separators now working together, daily separation time dropped from 20 hours to ten, and the solid level of the DeLaval Manure Separator meets the customer's requirements.

The customer rates the system highly on cost savings, reduced servicing requirements, the design and safety of the equipment, as well as the cleanliness of the machine.



## SIDEL DELIVERING COMPLETE END-OF-LINE SOLUTION TO THE BIGGEST ASIA PACIFIC BEVERAGE PLANT

The Cikedokan plant – a Coca-Cola Amatil Indonesia (CCAI) facility near Jakarta – produces carbonated soft drinks, tea and juice in PET bottles and tea in plastic cups. The original line featured manual palletising at its end-of-line, causing many congestion, safety and labour-management issues. Working closely with the team at the customer's site, Gebo Cermex engineers designed a new automatic palletising solution, enabling the production line to deliver 3,600 cases per hour in the most economical and operationally efficient way. Together with more

than 50 per cent line efficiency and higher OEE (overall equipment effectiveness), it allows for a much better management of the labour force.



## SIDEL HELPING SANPELLEGRINO TO INCREASE PERFORMANCE, HYGIENE AND PRODUCTION CAPACITY

Sidel has supplied two Sidel Matrix™ Combis to the Sanpellegrino plant in Ruspino, Italy, to help increase production capacity of its famous sparkling mineral water, yet ensuring utmost food safety. Combining blow moulding, filling and capping processes into a single system, the Sidel Matrix Combi reduces operating costs and uses up to 30 per cent less floor space, compared with traditional standalone equipment. In addition, it offers up to 4 per cent higher efficiency levels, faster format changeovers, lower energy consumption and a reduction of operating costs by 8–12 per cent.



## TETRA PAK **SEIZING YOGURT OPPORTUNITY IN CHINA**

The Chinese market has seen a growth in the popularity of ambient drinking yogurt containing particles, such as fruit pieces or grains. Tetra Pak has helped Yili, one of China's largest dairy producers, to capture this opportunity with the launch of Tetra Top® Ambient Distribution (TTAD), which is based on a non-aseptic filling platform combined with ambient distribution. The Tetra Top® package itself offers premium image and shelf differentiation, with a one-step wide opening that is perfect for the viscosity of the product.



## COMMENTS BY THE CEO

# Growth in a challenging business environment

After 2016's disappointing top line decline, Tetra Pak returned to growth last year, with net sales rising modestly to €11.5 billion, up 0.5 per cent compared with the previous 12 months.

2017 was a year in which the pace of GDP growth quickened in eight of our top ten markets, including Russia and Brazil, where muted recoveries reversed two years of economic downturn. Three of our five geographic clusters reported year-on-year improvements in net sales, with Europe's 1 per cent growth ending the negative trend of the past four years. By contrast, for the first time in more than a decade, Greater Middle East & Africa reported a year-on-year fall in net sales (at comparable exchange rates), as tough market conditions in Egypt, Pakistan and the Arabia area took a heavy toll on sales of laminated packaging material.

Overall, the business climate remained harsh, with consumption in core categories continuing to decline and the competitive environment increasingly aggressive. Yet despite this, both cash flow and operating profit remained strong, ending 2017 in line with our long-term ambitions. It is an achievement that again bears testimony to the quality of our employees, the vision of our customers and the effectiveness of the strategy put in place eight years ago, focused on significantly expanding our involvement in areas beyond our category and business traditions.

## STRONG SALES OF CAPITAL EQUIPMENT

Sales of capital equipment, for both Processing and Packaging applications, bounced back strongly from last year's declines, with revenues up 2.9 per cent and 14 per cent respectively to €1.17 billion and €0.88 billion. Our Packaging business reported a healthy

rise in filling machine installations, up 24 units from 2016, with 30 per cent-plus gains in two of our five geographic clusters - South Asia. East Asia & Oceania and Greater Middle East & Africa – more than offsetting a 20 per cent drop in Greater China, following very strong sales in 2016. In our Processing business, we saw particularly strong net sales growth in capital equipment for Cheese and Prepared Food applications, up 42 per cent and 25 per cent respectively, at comparable rates, year on year. The business also secured several significant new projects in 2017, including its largest-ever contract in North America for Select Milk, worth more than €65 million. In total, orders received by Processing during 2017 rose more than 13 per cent from the previous year, passing €1.3 billion to reach a historic high.

#### POSITIVE DEVELOPMENT FOR SERVICES

Once again in 2017, sales of our Service solutions were strong, rising 6 per cent from 2016, to €1.4 billion, with particularly robust gains in machine upgrades, consumables and expert services, all of which reported double-digit growth compared with the preceding year.

As we extend our Services business, an increasing number of customers are requesting

common solutions, capable of covering all of the processing and packaging equipment within their facilities. For example, in 2017, our expert services team worked with one of our major South American customers to introduce the Tetra Pak® Total Productive Maintenance system in 11 of the company's dairy manufacturing plants, encompassing all components of the production process. The results in terms of productivity gains and cost savings were significant, leading the company to request similar installations at other sites. We expect sales in this area to gain further momentum through the years ahead.

Since the turn of the decade, the evolution of Tetra Pak Services has been stellar, with revenues now virtually double those of 2010 and the business today accounting for more than 10 per cent of annual sales. We are confident this trend will continue.

## WEAKER SALES OF PACKAGING MATERIAL

Once again in 2017, packaging materials net sales dropped, down 2 per cent year on year to €8.0 billion. In part, this was caused by the continued weakness of core categories, but a shift in product mix, from family packs

"Since the turn of the decade, the evolution of Tetra Pak Services has been stellar, with revenues now virtually double those of 2010 and the business today accounting for more than 10 per cent of annual sales."



to portion packs, also had an impact, as did net pricing reductions in response to aggressive competition worldwide.

Net sales for laminated packaging material fell 2.5 per cent, while additional materials, like caps, closures and straws, grew 2.7 per cent, reflecting the continued shift towards products in our advanced portfolio, which offer improved functionality, convenience and shelf appeal. Advanced formats now account for 47 per cent of packaging sales, up four percentage points year-on-year and 34 percentage points higher than at the start of the decade.

From a volume perspective, we sold more than 188 billion packs, slightly higher than in 2016 thanks to the continued shift to portion packs, while in litres equivalent our numbers dipped 0.5 per cent, to 77.4 billion litres.

But hidden beneath this headline is a far more positive story: the continued influx of new customers and new business in important growth categories. During the past three years these have added almost 6 billion litres equivalent of packaging material sales. In that same period, however, sales of our commodity basics formats have fallen by an even greater amount, due to category decline and low-cost competition; masking a trend that is unquestionably strengthening our position for long-term profitable growth.

Alongside the continued shift to advanced formats, and our success in important growth categories, another packaging highlight for 2017 was the continued rise of Tetra Recart, our retortable carton packaging system for food. At the start of the year, 33 Tetra Recart lines were installed worldwide; by the end, we had secured 12 further contracts for line installations, as the product gained further traction with consumers, retailers and brand owners.

"We made further progress in the development and deployment of digitally-enabled products, services and applications that will fuel growth and productivity for our customers, as well as for ourselves, from codified packages to predictive maintenance."

#### **FOCUS ON CUSTOMERS**

In 2017, we took several steps to raise the bar of our performance in the eyes of our customers. We strengthened our Issues Resolution Programme, a cross-functional, organization-wide initiative, designed to reduce the time it takes to solve product issues, adding dedicated teams that successfully closed more than 50 of the most challenging in 2017.

We also made good headway in correcting the fragmentation that customers sometimes perceive between different parts of our organisation. Among other things, we introduced new integrated service agreements and a single Key Account Team approach for multibusiness customers.

More activities are rapidly moving ahead to help ensure that all customers see we truly are *one company*, providing end-to-end solutions that support their individual needs, and putting their success at the heart of everything we do.

#### **NEW DIRECTIONS**

Through 2017, we continued to drive growth by strengthening our competitiveness and by extending our business in some important new directions.

For example, we made further progress in the development and deployment of digitally-enabled products, services and applications that will fuel growth and productivity for our customers, as well as for ourselves, from codified packages to predictive maintenance. We have several streams of activity now under way in this fast-moving and increasingly significant area of our business.

Of course, the year also saw the introduction of many other more conventional, but equally exciting, product and service offerings. From ground-breaking technologies on a small scale, like the WingCap™ 30 one-step

package opening, to those on a much larger scale, like the new High Shear Mixer for food processing, that raises the bar for ingredient mixing.

#### **OTHER HIGHLIGHTS**

Beyond the sphere of products and services, a number of events stood out in 2017.

We completed the acquisition of Johnson Industries International, a market leader in the design, development and manufacture of equipment and lines for mozzarella cheese, reinforcing Tetra Pak's position as the leading provider of cheese manufacturing solutions.

Our acquisition of Big Drum Engineering, a German company that specialises in technologies for filled ice cream products, significantly strengthened our offering in a segment that now accounts for half the global market for packaged ice cream.

We announced the go-ahead for a major expansion of our factory in Thailand, to produce around 3 billion closures for carton packaging a year in a variety of formats. We kicked off the €30 million upgrade of our packaging facility in Denton, USA, to support the growth of our business across North America. And work on our new converting factory in Vietnam made good progress, staying on track to start commercial production before the end of 2018.

At the same time, we also reached the tough decision to close our factory in Foshan, China, where local constraints on its operations meant that production at the site was no longer sustainable.

## FURTHER ADVANCEMENTS WITHIN SUSTAINABILITY

During 2017, we took further steps to ensure sustainability remains high on our agenda, including the creation of a Sustainability Forum, reporting to the Strategy Council, to govern

and lead the company's strategic and cross-functional approach to sustainability. We also achieved OHSAS 18001 certification for Occupational Health and Safety performance across all of our facilities. Our climate impact reduction targets were ratified by the Science Based Targets initiative. We increased our use of renewable electricity, which now accounts for more than a third of total consumption worldwide. We were awarded the highest possible score by the CDP Forests Programme for our work in tackling deforestation. And we celebrated 10 years of supplying Forest Stewardship Council™ (FSC) certified packages, during which time more than 300 billion FSClabelled Tetra Pak® packages have been delivered to store shelves.

## POSITIVE VIEW ON 2018 ALTHOUGH INCREASED COMPETITION

As we move through 2018, we continue to see signs of a strengthening global economy, but its fragility cannot be understated. The challenges of increasing competition and weakness in core categories will persist, as will our resolve to drive a strategic agenda that ensures sustainable, profitable growth long into the future.

We will continue to strengthen our competitiveness, and to find new ways to enhance our relevance to customers. We will expand further into fast-growing categories, where we still have a relatively low presence. And we will take major steps to ensure our different businesses are fully aligned and properly coordinated at every customer touch point, working seamlessly to deliver end to end solutions that fully address their individual needs.

Dennis Jönsson

















12.

#### TETRA PAK GLOBAL LEADERSHIP TEAM

- 01. Dennis Jönsson President & CEO
- 02. Monica Gimre Processing Solutions
- 03. Michael Grosse Development & Service Operations
- 04. Chris Huntley Corporate Communications
- 05. Pål Lunning General Counsel
- 06. Phil Read Human Resources
- 07. Adolfo Orive North, Central & South America
- 08. Steve Yin Greater China
- 09. Christopher Kenneally South Asia, East Asia & Oceania
- 10. Amar Zahid Greater Middle East & Africa
- 11. Charles Brand Product Management & Commercial Operations
- 12. Charles Héaulmé Europe & Central Asia
- 13. Eric Baudier Supply Chain Operations
- 14. Bruce Burrows Finance & Business Transformation









**VISION** 

# We commit to making food safe and available, everywhere

#### STRATEGIC DIRECTION

Tetra Pak's 2020 Strategy, introduced in 2010, focuses on ensuring the company is properly positioned to face the challenges, and capture the opportunities, of our continually-changing business landscape.

Since its launch, we have secured growth across all parts of our business model: capital equipment, packaging materials and services. In doing so, we have moved beyond our core business of carton packaging for dairy and juice, with a particular focus on strengthening our processing and service offerings, and on creating new business opportunities in non-traditional food and beverage categories.

At the same time, we have become leaner and more productive, taking steps to greatly improve our organisational effectiveness and operational performance. We have accelerated value driven innovation, developing our portfolio to help meet current and future customer needs, with particular recent focus on digital products and services.

And we have continued to pursue environmental excellence, expanding that agenda to embrace the broader elements of corporate responsibility and taking steps to ensure that sustainable thinking is embedded into our long-term business strategy.

#### **OUR VALUE PROPOSITION**

Our value proposition to customers is built on a straightforward commitment: to place their success at the heart of everything we do.

In practice, this means dedicating ourselves not only to understanding their needs, but also those of their customers, using our global resources, industry expertise and market insight to help them fulfil their ambitions.

As the leading innovator in the food processing and packaging industry, providing end-to-end solutions, we focus on ensuring that our customers deliver products of outstanding quality and consumer appeal, while maintaining the highest standards of food safety, operational performance and sustainability.

It is a value proposition designed to end a clear message: that we are one company, putting the customer first, in pursuit of our shared vision.

#### STRATEGIC PRIORITIES

#### SUSTAIN PROFITABLE GROWTH











## HIGHLIGHTS 2017/2018





Two new Tetra Pak® E3 filling machines were launched in 2017, completing the range and allowing customers to produce all types of beverage products – ambient and chilled, in family or portion-sized packages – using this state-of-the-art, eBeam sterilisation technology.

A first in the industry, eBeam is a totally innovative approach to packaging material sterilisation that maximises speed, helping customers to cut operational costs by as much as 20 per cent and reduce the environmental impact by making water recycling easier and lowering energy consumption.

This technology is at the heart of the newcomer Tetra Pak® E3/ Speed Hyper, the world's fastest aseptic carton filling machine, which can produce up to 40,000 ambient portion packages per hour.

The second newcomer to the filling machine range is the Tetra Pak® E3/Flex, which produces a new chilled family package, the Tetra Brik® 900 Ultra Edge. Taller and slimmer than many of the options currently available, the new package helps customers differentiate their products in the highly competitive chilled market. Looking ahead, Tetra Pak will continue to expand the eBeam offering to additional packaging formats to answer different market demands.

## New UHT and automation showcase in Modena

Tetra Pak inaugurated a new UHT processing plant for customer trials in Modena, Italy, in October 2017. The plant can run extensive sterile output tests of up to 30,000 packages. It is also a showcase for our plant automation offering, demonstrating Tetra Pak® PlantMaster and Packaging Line Monitoring System (PLMS) in combination with an automation control room.



## Pioneering new ice cream extrusion line

Launched last year and equipped with innovative, patented technology, our new ice cream extrusion line delivers exceptional product quality and volume flexibility to medium-capacity producers. In an industry first, the new line uses an independently controlled horizontal cutter to slice the ice cream as it emerges from the extruder. This ensures a consistently high cutting speed, regardless of line speed, resulting in a precise, clean slice – even at low rates of production. Producers can also switch between multiple products on the same line, enabling greater variety at smaller volumes.





## New carton pouch enables easy frozen products

Dairy and juice drinks can now be marketed as ice creams and other frozen products with minimal changes being made to existing production processes. The new Tetra Fino® Aseptic 100 Ultra MiM carton pouch allows liquids to be filled and distributed at room temperature, then frozen later, either in a shop or a consumer's home. It means trusted ingredients can be easily transformed into value-added frozen products for children and adults alike. A leading Chinese food company, Want Want China Holdings, was the first to trial the product, with a very positive response.



## Consumables portfolio keeps growing

Tetra Pak® Consumables has added two major new products to its extensive range of high-quality adhesives, lubricants and chemicals, all specifically developed to meet the strict requirements related to food production. The Rapid Microbial Detection Solution quickly screens and detects contamination in liquid products. It provides test results days faster than traditional methods, accelerating both event response and product release. The other new offering is a stretch-and-shrink film for wrappers and tray shrink applications. Piloted in Brazil, it provides consistent and high film quality, improved machine performance, and better appearance of the finished product.



### Next-generation mixer

Launched in 2017, the Tetra Pak® High Shear Mixer R370-1000D is a major step forward in food-mixing technology. It has the highest shear, the lowest energy consumption, and can handle higher viscosities and smaller droplet sizes than any other re-circulation mixer in the industry.

Given that there have been no major changes in equipment, features or processes in mixing for a decade or so, the new High Shear Mixer is a groundbreaking development. Innovations include the placement of the new mixing head outside the vessel in the recirculation flow. Guaranteeing up to 15 hits in a single pass and achieving droplet sizes down to one micron, it's the perfect mixer for difficult powders such as pectin and CMC. It also has a substantially lower environmental impact, reducing energy consumption by up to 50 per cent, depending on the application.



## New green plant for Dutch cheese dairy



When Dutch cheese manufacturer CONO Kaasmakers decided to modernise production at its site 30 km north of Amsterdam, it set an ambition to build the greenest dairy in the world. Tetra Pak was contracted to deliver and install a complete processing solution at the new facility in an order worth €20m. The result? Compared with the old plant CONO Kaasmakers has doubled production, while reducing gas and electricity consumption by 25 per cent, fresh water consumption by 75 per cent, and waste water volumes by 47 per cent. The new Tetra Pak® Separators alone, for example, have reduced energy consumption by more than 50 per cent compared with conventional alternatives.

## Digital transformation in China

A growing number of Chinese customers are now using Tetra Pak® PlantMaster Manufacturing Execution System (MES) Suite to help digitise – and revolutionise – their entire operations. A single, complete solution with a common interface and intuitive

navigation, the MES Suite can connect plants across multiple sites to provide total control of every step of production, from raw material to finished goods, regardless of the brand of equipment used.

The case for the MES Suite is compelling. Total control means guaranteed food safety and consistent product quality. Overall Equipment Effectiveness is maximised and operational cost is minimised by reducing downtime, waste and recalls. Production flexibility is increased by optimising utilisation of production lines. And

process stability and reliability is boosted too, by reducing human error.

Examples of successful new installations include the food and beverage company Uni-President China, which is using MES Suite to retrofit an older factory in Taiwan, connecting equip-

ment from multiple suppliers. Bright Dairy & Food has installed the solution across its Tianjin plant,

and has an ongoing project in Shanghai with end-to-end traceability, connecting directly with the consumer via unique package IDs based on QR codes. The China Mengniu Dairy Company has selected the MES Suite for its ambitious digitalisation programme, while the Ausnutria Dairy Corporation plans to go beyond national boundaries, connecting plants in different countries.



## Meeting demand for easier opening and pouring

Family-sized packages can now be offered with a one-step opening at a lower cost than was previously possible, thanks to the new WingCap™ 30, which the company launched last year.

Available for Tetra Brik® Aseptic 500 and 1000 Edge packages, the new cap is secured to the pre-laminated hole membrane by induction welding – a new technology and a global first for the industry. The neck itself is wider, offering smoother pouring,

boosting performance as well as

functionality for consumers, while also keeping costs low for customers. This one-step opening solution is designed with the specific aim of addressing the needs of European consumers.



## Successful launch in Germany

September 2017 marked the successful debut of the world's first water product in Tetra Gemina® Aseptic 1000 ml Square packages, with bio-based HeliCap™ 27. Launched in Germany, the packages were chosen by juice and nectar producer Güldenkron for its Joyce brand of water and are filled on a Tetra Pak® A3/Flex machine. Güldenkron also produces a range of their products in Tetra Prisma® Aseptic 500 ml format on a A3/Flex machine. Packaged water is a high-growth category, forecast to account for around 84 per cent of all beverage growth in Europe, and 81 per cent worldwide, over the next few years.

## A new global standard for renovated equipment

Tetra Pak now has a single second-hand equipment offering for customers worldwide. Although part of our business for many years, second-hand equipment sales were previously managed ad hoc locally. Recognising that we could better meet our customer needs, while leveraging our global reach, a team was tasked with working across geographical boundaries to find a new approach. The team developed clear guidelines that captured the needs of all markets and defined how a returned product can be renovated and its quality certified. The result is Tetra Pak® Certified Renovated Equipment: a global standard that guarantees the quality of all products offered.



## Maximising production efficiency in Latin America

A large Latin American food and beverage customer challenged Tetra Pak® Services to help it reduce costs and improve productivity for all components of the production process in a number of its dairy manufacturing facilities. The response? Total Productive Maintenance systems now installed in 11 of the customer's plants, delivering significant savings and prompting a request for similar measures at other sites. "Putting a team together quickly and taking a pragmatic approach were both key to delivering early results," says Abdon Gonzalez, Expert Services Manager for Cluster North, Central & South America. "Instead of sitting in offices, our consultants are on the factory floor, training operators and customer management teams to help them deliver improvements."





## Local production of closures in new Asian factory

2017 saw work get under way on a new factory for the production of carton packaging closures at Tetra Pak's Rayong site in Thailand. It will become the company's first facility of its kind in Asia, and will help ensure faster delivery for customers across the region. The €24 million investment extends the Tetra Pak's existing facilities on the site, which currently produce straws and strips.

Built to meet rising regional demand for more functional and convenient packaging, the new factory will have an annual production capacity of 3 billion closures by the end of 2018, and 6 billion once fully operational. Packaging with closures is a growth area, fuelled by new products, new brands and strong trends in healthy snacking.



## Increased packaging flexibility at lower cost

Last year, Tetra Pak introduced a Volume Rebuilding Kit, enabling customers to produce the Tetra Brik® Aseptic 200 and 250 Base Crystal packages on an existing Tetra Pak® A3/Speed line. It's an innovative offer that emerged from the programme *ReFit your lines, ReShape your Future™*, lowering investment costs and reducing installation time by 80 per cent compared with installing a complete new line. Time to market is also reduced, by as much as three months. The Tetra Brik® Aseptic Base Crystal family takes its name from the two crystal-shaped panels on the front of the package, which bring attention-grabbing style to ambient beverage shelves.

## TECHNOLOGY



# Forging ahead in digital printing

Digital technologies are having a profound impact on the way food is manufactured, sold, purchased and consumed, disrupting many traditional ways and approaches. Our goal is to stay ahead of the curve, anticipating changes, addressing challenges and delivering world-leading solutions that will support the long-term success of our customers.

One specific area of focus for us right now is digital printing. Not many years from now, we expect that all printing will be digital. That's why we are investing in a number of fledgling technologies, to better understand how they can support our customers' growth ambitions, and to gain the experience and know-how needed to maximise the potential of these exciting opportunities.

## DEPRINT PROVIDES UNIQUE CODES IN ADVANCE

DePrint is a laser ablation technology that can quickly and easily produce a unique digital code on every Tetra Pak package, allowing each one to be independently tracked through the supply chain. Customers can harness the code, linking it to the product they are filling into the package and delivering full traceability, all the way to the end consumer.

DePrint promises clear benefits in relation to product quality, food safety and sustainability, enabling data to be captured and linked to every unique code across all stages of the production process, regardless of volume or manufacturing type. DePrint testing is expected to start early 2019.

## PICCO HARNESSES CONSUMER INFORMATION

PICCO is a Tetra Pak solution that enables the printing of QR codes, unique text or simple images on every package, enabling enhanced consumer interaction and full traceability.





PICCO offers customers both the printing and the data structure around each code, at a lower cost than printing such unique information themselves.

The QR codes, text or images can be used by customers in marketing campaigns or promotions, and as a means to gather valuable information about their consumers' purchasing habits and preferences. For example, QR codes can be used to create a contest or lottery that consumers enter simply by scanning the code with their smartphone. Each QR code is connected to both the specific package and to the consumer scanning the code, reducing the risk of multiple entries while capturing statistics.

PICCO is already being field-tested with QR codes at our Hohhot converting factory in China, with the gradual commercial introduction of two more systems planned for 2018.

### SUPPLY CHAIN BENEFITS OF DIGITAL PRINTING

Tetra Pak is conducting feasibility studies in areas such as full digital printing in our converting factories. Today, digital printing is more economical for short orders, but there may be potential for our large-volume customers to order printed material for smaller batches. This could provide supply chain benefits by enabling customers to place short orders for products sold, thereby reducing their packaging inventory levels.

Ultimately, digital printing will also shape how consumers engage with packages, which will become carriers of information and enablers of new interactions through the entire value chain. It will allow a fundamental shift in the way products are marketed, providing a personalised channel to every end consumer.

## TETRA PAK MARKET



The success of our customers lies at the heart of everything we do, which is why we focus significant effort on understanding their needs, using our global resources and proven industry and market expertise to help them fulfil their ambitions. Our goal is to provide end to end solutions that enable customers to deliver products of outstanding quality and consumer appeal, while maintaining the highest standards of food safety, operational performance and sustainability.

## Opportunities for growth

Between now and the end of the next decade, the global population is expected to increase by another 1 billion people, almost half of whom will be living in Africa. It is of little surprise, therefore, that many of our customers are adapting both their business models and their products to address the specific needs of the emerging African market. Our deeperin-the-pyramid initiative, launched at the start of this decade, has taken us a considerable way along this journey, ensuring we are well placed to provide processing and packaging solutions that will support our customers' ambitions in this huge but fledgling growth arena.

From a category perspective, we are confident that the next three years will see rising demand for both dairy and fruit beverages, with significant growth in differentiated dairy products that target specific consumer tastes and needs. Rising demand for edible dairy also looks set to continue its positive trend, where recent steps to strengthen our cheese and ice cream equipment portfolios provide a solid foundation for strong growth through the coming years, in sectors where there is significant opportunity to increase our market share.

Among consumers, health and longevity continue to be primary concerns, but access to information has brought a sharpening focus on food sourcing and packaging. In our annual consumer preferences survey, two-thirds of those polled said they would pay more for food and beverage packaging that is environmentally sound, a similar proportion to those who would pay more for packaging that is easy to use.

We continue to invest in understanding the shifting needs of consumers, whether arising from changes in consumption habits, demographics, lifestyle choices, shopping methods, or any one of many other factors that will shape the future of our industry.

We are actively working with many of our customers to explore these trends, and to help them identify opportunities for growth, be that in new categories, new geographies, or the upgrade and repositioning of existing brands. Supporting this effort, we have now opened six Customer Innovation Centres in key locations worldwide, where we work with our customers to develop products and solutions that meet a specific market need, moving from idea generation to trial runs of new products and marketing concepts during the course of their visit. Last year we hosted sessions for almost 700 customers

Alongside this, of course, we continue to focus significant effort on delivering processing, packaging and service solutions that will help our customers reduce waste, cut emissions, lessen consumption, drive productivity, lower costs and improve product quality. We recognise that technological innovation will continue to drive significant disruptive change in our industry, affecting the way food is manufactured, sold, purchased and consumed. Our aim is to stay ahead of the curve, anticipating these changes, addressing the challenges and delivering world-leading solutions that continue to support the success of our customers long into the future.

### TOP TEN MARKETS IN PACKAGING MATERIAL

based on 188 billion packs sold in 2017

- 1. CHINA
- 2. BRAZIL
- 3. USA
- 4. VIETNAM
- 5. INDIA
- 6. MEXICO
- 7. THAILAND
- 8. RUSSIA 9. JAPAN
- 10. SPAIN

### TOP TEN MARKETS IN PROCESSING SOLUTIONS

based on total Processing Solutions net sales of EUR 1.8 billion at prevailing rates

- 1. USA
- 2. CHINA
- 3. RUSSIA
- 4. NEW ZEALAND
- 5. GERMANY
- 6. AUSTRALIA
- 7. INDIA
- 8. FRANCE
- 9. THAILAND
- 10. BRAZIL













## SUSTAINABILITY



At Tetra Pak, our approach to sustainability is shaped by our brand promise – PROTECTS WHAT'S GOOD™. It is a promise that extends beyond our long-held commitment to protect food. It is also about protecting people, both inside and outside the company. And it is about protecting futures: the planet's, our customers' and our own. It is a promise that ensures sustainability is not an isolated function within Tetra Pak, but rather an integral part of the decisions we make and the actions we take, throughout the value chain.

## Understanding our role in the world

During the past year, we have made significant progress in identifying and prioritising those aspects of our business which have the greatest stakeholder impact. We spent nine months working alongside sustainability experts on a rigorous materiality assessment, applying the Global Reporting Initiative principle of materiality, as well as reflecting our wider contribution to the 17 UN Sustainable Development Goals (SDGs). This work builds on our ongoing commitment to the UN Global Compact and its ten principles, to which we have been a signatory since 2004.

#### **PROTECTING FOOD**

Together with partners and customers around the globe, we work towards our vision of making food safe and available everywhere, which is widely recognised as one of the most pressing issues of our time.

We expanded our involvement in school feeding programmes, working with governments and other partners to bring nutritious beverages in Tetra Pak packages to more than 72 million school children in 58 countries.



Tetra Pak packages are now used in school feeding programmes for more than

72 million children in 58 countries

We have been engaged in these programmes for more than half a century.

And we broadened our "deeper in the pyramid" activities, working with customers in various parts of the world to help bring a wide variety of affordable, safe, nutrient-rich products to the market. In doing so, we offered a broad range of services, based on our long experience in this area. From helping customers to identify nutritional gaps, develop product concepts and define regionally-appropriate recipes, to working with them to negotiate funding alliances, develop distribution solutions and secure local suppliers.

#### **PROTECTING PEOPLE**

When it comes to protecting people, one of our principal areas of focus is our Occupational Health and Safety (OHS) agenda, designed to help ensure the wellbeing of all who work for, or with, our company. In 2017, we completed the certification of all our manufacturing sites in accordance with OHSAS 18001. About 110 OHS officers received training and each factory now has a three-year plan for OHS.

On another level, our commitment to protecting people is about supporting the development of our employees, offering rewarding careers with opportunities for progression and continuous learning. Last year we launched our Future Talent programme, which reflects our long-term commitment to hiring a steady stream of graduates from around the world, offering them a structured agenda of on-the-job training and development, as part of their career with Tetra Pak.

#### **PROTECTING FUTURES**

Following the commitment, we made in 2016 to be using only renewable electricity by 2030,

last year we made further progress towards that goal, with five of our factories now purchasing 100 per cent green electricity. By the end of the year our proportion of renewable electricity passed 40 per cent of our total consumption.

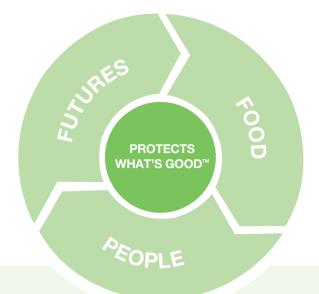
The year also marked the tenth anniversary of the decision to use paperboard sourced from forests that are certified by the Forest Stewardship Council™ (FSC™). In the decade since, we have delivered more than 300 billion FSC-labelled packages to customers across the globe and we have achieved full FSC Chain of Custody certification of our converting plants and market companies. It means we can now supply FSC-labelled packages from anywhere in the world.

Also in 2017, we became the first company in the food packaging industry to have our climate reduction targets approved by the Science Based Targets (SBT) initiative. We are committed to reducing our operational greenhouse gas emissions by 42 per cent by 2030 and by 58 per cent by 2040, from a 2015 baseline.

SBT is a global partnership between CDP, the World Resources Institute, World Wide Fund for Nature and the United Nations Global Compact, to which over 210 companies have committed.

Post-consumer recycling remains a top priority for Tetra Pak and we continue to make good headway in many geographies. For example, in 2017 we passed a key milestone in the US when it was confirmed that more than 60 per cent of households now have access to carton recycling. It means cartons can now carry a "Please Recycle" logo, without the additional caveat "where facilities exist".

## TETRA PAK SUSTAINABILITY APPROACH







### PROTECTING FOOD

Working with our customers and partners to make food safe and available everywhere through our innovative and market-leading food processing and packaging solutions.

#### TOP MATERIAL ASPECTS (FROM MATERIALITY ASSESSMENT):

- Food availability
- Customer health and safety
- Food waste

#### **OUR COMMITMENT TO THE UN SDGS:**









### PROTECTING PEOPLE

Safeguarding and enabling our people and supporting communities where we operate.

#### TOP MATERIAL ASPECTS (FROM MATERIALITY ASSESSMENT):

Occupational health and safety

#### **OUR COMMITMENT TO THE UN SDGS:**







### PROTECTING FUTURES

Supporting the sustainable future of our planet and the long-term success of our customers.

#### TOP MATERIAL ASPECTS (FROM MATERIALITY ASSESSMENT):

- Supplier environmental assessment Machine and equipment:
- Supplier water use
- Packaging design and resource use
- Packaging renewability
- Energy use and GHG emissions
- Machines and equipment: waste generation
- Machine and equipment: energy use and GHG emissions
- Machines and equipment: water use
- Packaging recycling
- Packaging climate impact

#### **OUR COMMITMENT TO THE UN SDGS:**















## COMMENTS BY THE CEO

## Focus on customer success

In 2017 we had the opportunity to show the world how we are enabling customers' success via easy-to-use, future-proof, flexible technologies that add value to their businesses. Particularly impressive was our performance in aseptic applications, where our expertise on sensitive products is being well recognised by the market. With more than 100 Sidel Combi Predis™ installations worldwide, we received further endorsement of this system last year, via the approval of the Food & Drug Administration (FDA). This validation makes the solution the world's first aseptic PET filling equipment with dry preform sterilisation qualified for low-acid manufacturing and commercial distribution in the United States. We also launched a number of new solutions and continued to integrate our Agility 4.0™ programme into our product offering, creating great interest among our customers. In summarising 2017, I would like to highlight my personal satisfaction of being part of a team of committed colleagues. All the achievements from the past year come down to the hard work accomplished throughout the organisation and I would like to thank all our employees for their support and dedication.

flat net sales compared to previous year. In most regions, we have expanded our presence. This positive trend was particularly evident in Latin America and North America, where we reconfirmed the strong growth achieved in 2016. The Chinese market is picking up after two slow years. In South East Asia Pacific and the Middle East, we did not perform as expected; this is mainly due to a low level of investment. The equipment market overall saw strong demand for aseptic solutions, a segment where Sidel is a clear leader. In the Liquid Dairy Products (LDP) category, we have increasingly captured opportunities for conversion to PET, especially around on-the-go formats, designed to suit younger, more active consumers. The growth in the aseptic market reflects burgeoning consumer preference for healthy and functional products. The beer, home and personal care markets also showed positive figures, while we registered softer development in the water segment.

glass and material handling. This resulted in

## SUCCESSFUL PARTICIPATION AT DRINKTEC

One of the year's highlights and an important milestone was our participation at the Drinktec fair. It gave us a good opportunity to show our customers, business partners and industry players what we really mean by Performance through Understanding. It all boils down to our ability to deeply understand our customers' needs, targets, and the markets they serve, and to demonstrate how our solutions and equipment can improve their performance, lower their total cost of ownership and contribute to a reduced environmental impact. What they buy from us are production capabilities. As such, cost of ownership and revenue generation possibilities must be attractive for them. The many positive comments we collected from our visitors during the show has been reconfirmed by the deals we signed during the last quarter of 2017: this is a clear signal that we are going in the right direction.

## SATISFACTORY FINANCIAL DEVELOPMENT

From a financial point of view, we were pleased to see growth in order intake, because of good levels of demand in the second half of 2017, after a weak start of that year. This is placing us almost 3 per cent ahead of 2016, with the PET business growing by 6 per cent, continued overall growth in Services and a strong backlog to start 2018. In terms of sales, our PET business grew, counterbalanced by a slight decline in can,

"Particularly impressive was our performance in aseptic applications, where our expertise on sensitive products is being well recognised by the market."



## LAUNCH OF SEVERAL KEY INNOVATIONS

In 2017 we launched a significant number of product innovations. The global introductions of Sidel Super Combi at Drinktec, and the Gebo Cermex AQFlex® system at Interpack, were both monumental in their own right. The Super Combi, integrating five process steps - preform feeder, blower, labeller, filler/ capper and cap feeder into an all-in-one smart system – is the next-generation solution for water and CSD producers. As such, it was awarded the 'Best Manufacturing or Processing Innovation' at Drinktec. AQFlex represents a true breakthrough solution in product handling: suitable for all the markets we serve, it delivers unprecedented packaging line performance, unique agility and smooth contactless product conveying and accumulation, in a very compact space. Drinktec enabled us also to highlight our innovation capabilities, via concepts we are currently developing, for instance the Sidel Combi+, combining labelling and filling steps in an innovative way, and laser oven technology.

## SMART SOLUTIONS FOR TODAY'S DEMANDS

In 2017 we continued to embed smart automation, innovative technologies of connected machines, and data-analytics management into our portfolio. One example is our Sidel Super Combi: its integrated intelligence helps manufacturers keep and improve performance, leading to optimised production and maintenance services. Two units of our Super Combi are already in use at the Niagara Bottling LLC production plant, allowing this leading US bottler to enhance performance in a smart way. Another valuable

example is the Sidel InUse platform, able to predict potential failures and optimise maintenance plans. Accessible via smartphone or tablet with a dedicated mobile app, it helps producers share and interpret data from connected equipment, for faster problem solving and timely detection of possible issues. Our data acquisition & plant intelligence system EIT™ - Efficiency Improvement Tool – is also highly appreciated by the market, as it allows manufacturers to optimise efficiency and improve productivity of packaging lines over the lifetime of their investment. As such, it is particularly endorsed by customers working according to LEAN methodology and applying TPM, 6 sigma and similar approaches for continuous improvement.

Our Agility 4.0 programme allows customers to realise the opportunities offered by the most recent developments in IT, with machines smoothly communicating with operators, easy monitoring of potential faults and detection of the causes. For example, the intelligent end-of-line solution installed by Gebo Cermex at one of the main industrial bakeries for the Intermarché Group, in France, is managed via a centralised supervision system connected with the site's ERP (Enterprise Resource Planning system) for a smoother production flow. In Indonesia, Gebo Cermex engineers designed a new automatic palletising solution tailored to the needs of the region's biggest beverage plant - a Coca-Cola Amatil Indonesia (CCAI) facility. Since its installation, the plant has seen a 50 per cent increase in line efficiency and higher overall equipment effectiveness. All in all, we are helping customers to lower cost and improve performance of their lines, while benefitting from increased ease of use.

## OUR LONG-TERM GROWTH AND BUSINESS STRATEGY

Looking forward, we can ensure to expand our presence only by making our customers successful. This is why we are relentlessly working at improving capabilities of our equipment and at optimising our Services portfolio, to offer our customers greater performance over the lifetime of their installations. We are developing our Services offering along two main directions: the optimisation of our maintenance portfolio, aimed at increasing uptime while lowering costs for producers, and the enhancement of our field service organisation, in terms of size and expertise. All of that by combining the diverse competences and resources of the entire Sidel Group.

#### **FOCUS IN 2018**

In 2018 we aim to continue the implementation of our strategy. In order to further connect to our customers on this regard, we recently launched our "Customer eXperience" programme, an initiative that will help us structure the feedback we are receiving from our clients, focusing on five touch points along the customer journey. By quickly implementing their input in our routines and procedures, we are significantly improving the quality of

our business relationships and of our offering, while measuring our performance in real time. From a market perspective, we expect to see developments in the aseptic seament. allowing us to strengthen our position in China and South East Asia Pacific. Our Sidel product pipeline this year includes solutions that improve the flexibility and process speed of production lines, thus responding to customer demands for greater performance. In this regard, we should mention our new filling technology for bottling still water, EvoFILL HS Still; our new can filler, EvoFILL Can: and the new EvoDECO, the labelling platform providing manufacturers with reliability and performance, regardless of label type, with no compromises on efficiency. This is how we will continue to generate Performance through Understanding for our customers.

Sam Strömerstén

"We are developing our Services offering along two main directions: the optimisation of our maintenance portfolio, aimed at increasing uptime while lowering costs for producers, and the enhancement of our field service organisation, in terms of size and expertise. All of that by combining the diverse competences and resources of the entire Sidel Group."









- 01. Sam Strömerstén President & CEO
- 02. Juergen Voss Finance & Strategic Planning
- 03. Clive Smith Sales
- 04. Andrea Forzenigo Supply Chain
- 05. José Luis Yécora Sourcing
- 06. Pavel Shevchuk Services
- 07. Frédéric Sailly Product Management & Development
- 08. Deepak Kumar Human Resources
- 09. Marina de Barros Marketing & Communications
- 10. Christer Carling Legal Affairs
- 11. Marc Aury Gebo Cermex President & Managing Director















## STRATEGIC DIRECTIONS



## Performance you can trust

We know that performance criteria and targets are business-specific, so we use our understanding to create tailored solutions that deliver value across our customers' businesses.

## End-product value

Achieving the greatest value in end products requires full comprehension of more than just packaging – deep knowledge of package/content interplay and a thorough grasp of the supply chain conditions, from concept to consumer, are also necessary. Only in this way can consumers enjoy the same taste profile and experience every time, as the product is protected across the entire supply chain, thanks to operations complying with the highest standards in hygiene, traceability and safety. Besides protecting its content, great packaging is also instrumental in securing brand differentiation, capturing consumer attention and clearly communicating unique attributes. Requirements linked to product safety and brand enhancement are changing at a fast pace, driven by consumers' ever-shifting demands: this is why counting on a full solution partner's ability to provide expert, long term support is a key variable in a successful business equation.



Delivering value in production requires an understanding of facilities and targets, so that liquid packaging manufacturers get a solution that enables them to reach their objectives today – and tomorrow. Nowadays, benefitting from faster time-to-market and shorter product cycles, while achieving a flexible cost structure, is a must: production lines need to ensure high versatility, with single lines producing multiple SKUs (Stock Keeping Units) and packages in various sizes, shapes and weights. All of that with no compromises on reliability: customers can commit to quality and consistent delivery only by maximising uptime, productivity, operator safety, and equipment usability and maintainability.

### Business value

Delivering business value means understanding our clients' ambitions regarding their financial results and the environment in which they operate. We are dedicated to help manufacturers operate in an environmentally responsible manner without putting their economic performance at stake. TCO (Total Cost of Ownership) minimisation guides our product and service portfolio development: reduction of production waste, shortening changeover times, and lowering resource consumption are just a few examples of how we can help customers optimise the balance between capital and operating expenditure. Sustainability is also high on our agenda: from implementation of innovative packaging materials or encouraging reuse and recycling to tested and proven equipment, able to deliver cost-efficiency and reduce the carbon footprint of production lines. All of that enhanced by eco-friendly services designed to eliminate inefficiencies and increase savings.







## SUSTAINABILITY



## Moving forward with purpose and responsibility

At the Sidel Group, we believe that sustainable practices and good business is a winning combination with benefits for all. We understand that we play an active role in protecting the environment and, by extension, our future.

### PEOPLE



We recognise the diversity, development and well-being of our people as essential to both society and our success as a company.



We aim to create shared value together with our customers, suppliers, external partners and, most importantly, the communities in which we do business, via close collaboration and dialogue.

### **FUTURES**



While delivering on our goal

– to create customer success –
our strong Corporate Governance focus ensures that all of our
stakeholders are well protected.



Our business is built with the aim to conserve the planet's resources in an ethical, socially responsible manner.

### **PRODUCTS**



Worldwide 36 billion bottles have been manufactured with the Sidel aseptic Combi Predis™, contributing to the saving of 4 billion litres of water.



With its new ergonomic, compact design – up to 30 per cent smaller than standalone equipment – and increased visibility of all blocks, Sidel Super Combi makes single-operator control possible.



Gebo Cermex EvoFilm™ shrink-wrapping solution delivers 20 per cent energy saving, thanks to a full set of modules, smart systems and sophisticated programming.



Gebo Cermex AQFlex® offers 99.5 per cent efficiency at any speed from 1,000 to 100,000 bph, yet delivering energy savings of up to 60 per cent.



#### SIDFL

### HIGHLIGHTS 2017/2018





# Niagara Bottling LLC invests in the Sidel Super Combi

Niagara Bottling LLC has built its success on supplying high-quality, low-cost water to major retailers from its many plants throughout the US and Mexico.

With 55 years of business experience and more than 15 complete PET lines from Sidel installed at its production sites, the company recently enriched its operations by adding two Super Combis. The solution is already producing bottled water for Niagara's markets, enabling this ambitious bottler to increase efficiency through high-speed manufacturing and data management - key to guiding information assessment and decision-making from operator to management level.

"The Super Combi concept is going to allow us to enhance our performance in a very smart way," says Bill Hall, Executive Vice President of Manufacturing at Niagara Bottling LLC.

# Sidel partners with Coca-Cola in developing new design for Fanta bottle in PET

Sidel has collaborated with The Coca-Cola Company (TCCC) in the new "spiral" PET bottle project. The company's 40 years of experience in PET packaging was instrumental in the successful rejuvenation of the Fanta brand and the challenges involved in getting it right.

First appearing on shelves in the 1940s, Fanta is TCCC's biggest brand after Coke. After years of success in the international soft drinks market, the Fanta Splash shape had effectively become owned by the beverage category rather than the brand. Consequently, Coca-Cola decided to develop a new proprietary Fanta packaging shape.

TCCC involved Sidel in this design journey as an experienced supply partner and Sidel has qualified the new Fanta bottle for industrial production.

The company's expertise in PET packaging

helped the customer overcome the deformation and stability issues presented by the new "spiral" design.

A similar bottle shape has been deployed for the whole Fanta PET bottle family and it is now available for 500 ml, 1 litre, 1.5 litre and 2 litre formats.





# First in Italy to invest in Sidel aseptic Combi Predis

Centrale del Latte di Brescia has doubled its aseptic production of UHT milk in PET bottles and in doing so is benefitting from Sidel's aseptic and environmentally friendly combined blow-fill-cap solution with dry preform decontamination – the aseptic Combi Predis™.

This innovation-driven choice – a first for Italy - was an important step forward in terms of food safety, ease of operations and sustainable production, as well as cost-savings, with Sidel dry preform decontamination technology using no water and only minimal amounts of chemicals.



## Logoplaste benefits from Sidel Services Online

Logoplaste, a leading global manufacturer of rigid plastic packaging, is benefiting from Sidel Services Online. This new, user-friendly web interface maximises line uptime by providing fast, easy and reliable online searching for Sidel original spare parts. The interface also gives customers a comprehensive online view of their existing Sidel equipment with access to technical documents and e-catalogues.

"Today all fifteen Logoplaste plants in Europe are already connected to Sidel Services Online," explains Diogo Cortez, Industrial Buyer at Logoplaste. "Given the amount of references for spare parts we are handling in each region around the world – approximately 27,000 – the tool increases the potential of our factories, so that they operate in a much more efficient way."

# Gebo Cermex brings intelligence and a complete end-of-line solution to Intermarché plant

After a serious fire Moulin de la Chaume, one of the four industrial bakeries of the Intermarché Group, rebuilt and re-equipped its plant in France. Gebo Cermex, part of the Sidel Group, was chosen for its ability to provide, within a challenging timeframe, a complete end-of-line solution managed through a centralised supervision system connected with the site's Enterprise Resource Planning (ERP). This enabled the integration of production order management, as well as the traceability and intralogistics functions.



## Solid growth for Twellium in Africa

Twellium brings beverages – such as still water, carbonated soft drinks (CSD) and sensitive products that have proven popular in Europe and the Americas – to African consumers. Due to the positive trajectory of these drinks in their market, the company needed to increase production capacity while still securing high flexibility. This is why they decided to renew their confidence in Sidel by adding two new complete PET lines to the ones they already had, which are all from Sidel.

Hassan Kesserwani and Hussein Kesserwani, Chairmen of Twellium Industrial Company, explain, "Versatility is imperative for our company. Our recent investment in a Sidel Matrix™ complete PET line has fulfilled this need by offering faster changeovers and the ability to handle many different bottle formats."



## Second complete hot-fill PET line for Nanjing Ziquan

Nanjing Ziquan, one of China's leading co-packers, has again turned to Sidel to increase its hot-fill production capacity of Mizone, a functional drink brand particularly popular in China and packaged in PET. The new line follows positive feedback on a similar complete hot-fill PET line installed in 2013.

Because Nanjing Ziquan bottles products in PET on behalf of leading brands such as Danone, Coca-Cola and others for distribution in Greater China, they were looking for a solution able to respect the highest hygienic standards required by customers, while ensuring cost efficiency, so to keep the positive trajectory of their profitability. On top of the excellent and reliable performance of the previously installed Sidel line, another key factor driving the supplier's choice was the

design and food safety.
According to the management team of Nanjing Ziquan, "Sidel has helped in optimising uptime and operating costs."

reputation built by Sidel in China in terms of hygienic

# Two complete PET water lines from Sidel run at top speed in Saudi Arabia

Following the successful installation two years ago of what was Sidel's fastest bottling line in the world at the time, the Health Water Bottling Company (HWB) of Saudi Arabia turned to Sidel again. Producing the company's Nova brand of water in 330 ml format, the two new

complete PET water lines run at the new, recordbreaking output rate of 150,000 bottles per hour each, for a total installed output of 300,000 bottles per hour.

HWB also partnered with Sidel to refresh the look and branding of its Nova water bottles. By adopting the StarLite™ base, the company ensured complete product integrity across the supply chain and gave the popular, premium brand a more modern image, while achieving significant savings.

HWB Plant Manager Harry Nowers comments, "With everything centred on Sidel as a single supplier, we continue to leverage the company's knowledge of the entire water bottling process, from minimising waste of resources, to ensuring the bottle is durable and attractive to consumers."



### Sidel receives FDA approval for its aseptic Combi Predis

The approval by the Food and Drug Administration (FDA) means that this solution is validated for low-acid manufacturing and commercial distribution in the US market. As such, it is the world's first aseptic PET filling equipment with dry preform sterilisation approved by the FDA.

More than 100 Combi Predis™ installations worldwide are a clear endorsement of this technology by major beverage and dairy companies. This regulatory acceptance further demonstrates how this Sidel patented technology is 100 per cent safe for the packaging of UHT milk, soy milk, coconut water, or teas in PET bottles that are sold through the ambient chain market in the US and the rest of the world.



### So much more than a piece of machinery

At Interpack 2017, Gebo Cermex, world leader in packaging line engineering and material-handling solutions, introduced the Smart Machine, a comprehensive robotic/cobotic case packing solution embedding advanced and connected systems. This is a 360° integrated approach to case packing, delivering all functionalities via four main innovative modules:

- CareSelect<sup>™</sup>, an awarded, patented universal and modular shaped-bottle infeed and collating system, able to surpass traditional 'endless screw' collation systems in terms of bottle integrity and protection.
- The fenceless robotic FlexiLoad™ for automatic magazine loading, eliminating the need for time-consuming, manual corrugated board magazine feeding and, importantly, the potential for operators' musculoskeletal disorders (MSDs).
- The WB46 wrap-around packing system, offering excellent performance in terms of flexibility, hygiene and ergonomics. This set of benefits has been recently enlarged, with a new on-the-fly robotic product loading station, which reduces the overall footprint of the machine, and the implementation of a new, user-friendly human machine interface (HMI).
- The company's Equipment Smart Monitoring (ESM) system that connects to the machine in order to read, transmit and organise performance data into a coherent dashboard, helping customers maximise the efficiency of component machines within their packaging lines.





### TECHNOLOGY



### Super Combi brings intelligence to today's production

By utilising integrated data-driven intelligence and innovative technologies from Sidel, the new Super Combi makes optimum performance easily and continuously achievable across the entire production process for manufacturers of PET bottled water and carbonated soft drinks (CSD). This cutting-edge solution has been recognised as 'Best Manufacturing or Processing Innovation' in the World Beverage Innovation Awards presented at the Drinktec trade fair in 2017.

Sidel Super Combi is the next generation solution integrating five process steps: preform feeder, blower, labeller, filler/capper and cap feeder into an all-in-one smart system. To deliver this self-optimising performance and increased long-term value, it combines intelligent automation with innovative technologies of connected machines and data-analytics management, leading to optimised production and maintenance services.

### A smarter solution for today's demands

"Beverage producers simply want a solution that does the thinking for them and acts on their behalf. This is where Sidel Super Combi, with its data-driven intelligence and advanced automation, provides the answers," says Frédéric Sailly, Executive Vice President of Product Management and Development at Sidel.

For instance, autonomous regulation is achieved via Sidel Intelli-adjust™ controlling the system's performance and automatically applying adjustments wherever they are needed. Long-term enhancement without compromising on simplified operation, reduced maintenance time and minimal downtime are all also possible thanks to intuitive interfaces such as augmented reality guidance and GPS localisation. By 'learning from experience', the Sidel InUse platform is able to predict potential failures and optimise maintenance plans.

### The lowest production cost per square metre

To ensure an even more sustainable production, the Super Combi has been entirely engineered to significantly reduce the use of resources. Moreover, via minimised changeover times, a new ergonomic, compact design - up to 30 per cent smaller when compared to standalone equipment - and increased visibility of all blocks, the solution makes single-operator control possible.

### Innovative labelling flexibility to minimise downtime

With different machine configurations possible based on the output required, the new label-ling process is highly efficient and provides unmatched process flexibility. The integrated labeller is able to carry out different labelling processes, to deliver uncompromising continuous high-speed production with no product loss or reduction in speed.

### AQFlex – the smart product-handling solution

With the packaging industry facing increasingly sophisticated consumption trends that present challenges to the production and distribution of goods, Gebo Cermex is responding to these complexities with the introduction of AQFlex® - a breakthrough product-handling technology. Thanks to its radically new approach of conveying and accumulation, AQFlex delivers unprecedented packaging line performance. It offers this in a very compact space, together with unique agility and smooth contactless product conveying and accumulation.

With packaging quality playing a key role in brand recognition and ever-increasing production diversity, manufacturers and brand owners are making higher demands when it comes to their line requirements. They cannot afford to compromise on extended performance in terms of production uptime, efficiency and reliability, always paying close attention to minimising TCO (total cost of ownership).

"AQFlex is the new IQ in product handling, encompassing all the advantages of the existing conveying machines in a much smarter way," says Ludovic Tanchou, Vice President Strategy, Products and Innovation at Gebo Cermex.

### Freeing product innovation thanks to total flexibility

AQFlex is a new concept in packaging solutions that accommodates any product, whatever the application, whatever the market, in all container

materials, formats and shapes, full or empty, while also enabling automatic changeovers and ensuring total care of product integrity.

### High performance through unprecedented capability

More proof of the unique packaging line performance of AQFlex is its ability to operate at any speed, from 1,000 to 100,000 containers per hour, delivering energy savings of up to 60 per cent, without compromising high efficiency (99.5 per cent even at high speeds). Additionally, the system offers the best accumulation to space ratio on the market: It is up to 40 per cent smaller compared to traditional solutions.



### Offering market-tailored packaging solutions

#### Packaging market & categories

In 2017, beverage, foods, home and personal care market segments have seen over 3,000 billion units of consumer packaged goods sold. Analysts from Euromonitor International forecast that approximately 250 billion additional units will be sold by 2020 (3 per cent compound annual growth rate - CAGR from 2017 to 2020).

Within consumer packaged goods, beverages account for 55 per cent of the packaged units sold. Food is the second largest market, representing 38 per cent; the remaining 7 per cent are home and personal care products.

Fast moving consumer goods (FMCG) are packaged using a large range of materials. The four most common packaging materials for these categories remain PET - 21 per cent share of total consumer packaged goods, glass - 15 per cent, can - 13 per cent and carton - 11 per cent.

#### Non-alcoholic drinks

In a market dominated by China - 23 per cent and USA - 16 per cent, the packaging material that is most widely adopted is PET, accounting for 46 per cent of the packaging units. PET is the packaging material of choice for carbonated soft drinks and mineral water, showing interesting growth opportunities within tea and dairy segments.

#### **Alcoholic drinks**

Alcoholic drinks market is valued at 1.320 billion euros, 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.

#### Food, home and personal care

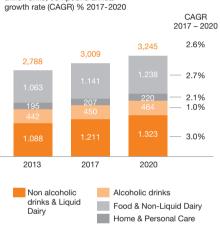
Food is an innovative and growing market. PET is very much attractive in this segment, mainly due to its transparency, branding opportunities, practical benefits (squeezability) and cost-efficiency, coupled with producers' incremental need to reduce carbon footprint and weight of containers.

With the home and personal care market accounting for 207 billion units in 2017, home care subcategory (61 per cent of it) expects +2.3 per cent CAGR (up to 2020), mainly driven by increasing adoption of functional.

transparent packaging, 'greener' and innovative formulations. Personal care is also set for growth (+1.7 per cent CAGR up to 2020), with Asia leading in population, production and consumption.

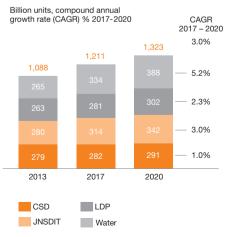
#### **PACKAGING MARKET & CATEGORIES CONTAINER DEMAND BY PRODUCT CATEGORY**

Billion units, compound annual



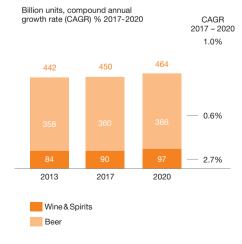
Source: Furomonitor

#### NON-ALCOHOLIC DRINKS **CONTAINER DEMAND BY PRODUCT CATEGORY**



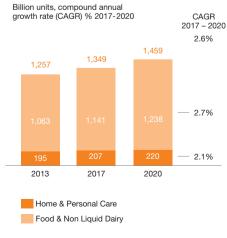
#### Source: Furomonitor

#### ALCOHOLIC DRINKS **CONTAINER DEMAND BY PRODUCT CATEGORY**



#### Source: Furomonitor

#### FOOD, HOME AND PERSONAL CARE **CONTAINER DEMAND BY PRODUCT CATEGORY**



Source: Euromonitor

### COMMENTS BY THE CEO

# A year for positive growth and regained stability

We've just experienced a year that began hesitantly before growing faster than many of us had anticipated.

Farmers endured difficult years in 2015 and 2016, and were unable to make larger investments due to uncertain market conditions. 2017 was the year when the markets regained stability and farmers felt more comfortable about growing their businesses again.

#### THE AUTOMATIC MILKING TREND

The automatic milking segment is taking a large share of this growth, even though many large farms continue to invest in conventional milking systems.

The installed base that we have in the conventional milking market has also helped us maintain stability in our aftermarket products and services. This segment also saw a significant upturn in growth.

#### **UNSYNCHRONISED MARKETS**

The growth spurt, however, did not occur simultaneously across the globe.

There were not just differences between continents but even between regions.

Northern Europe grew early in 2017 while Central and Southern Europe experienced swift improvements in the middle of the year.

The Dutch market performed ahead of expectations. Forecasters predicted a reduction in milk production of 10 per cent due to new phosphate legislation, but in the end, production levels remained stable and similar to the previous year.

The positive market situation has been reflected in DeLaval's figures. The year ended with net invoicing of €979 million in prevailing currencies, up 4.8% compared with the previous 12 months.

What we now see is double-digit growth in Europe for order intake and similarly positive

developments globally. Japan continues to grow strongly and we are increasing market share there. The North American market took off early in the year for us and Latin America has been exceptional in terms of sales growth.

Some markets, however, have remained hesitant, such as Oceania and China. China is experiencing extensive farm consolidation resulting in fewer overall investments. Additionally, the Chinese government has introduced much stricter environmental controls. These restrictions are also an opportunity as many of our solutions can contribute to China's ambitious sustainability targets.

#### SUSTAINABILITY AT THE FOREFRONT

Sustainability continues to be one of the key cornerstones of our business. We are convinced that our vision *We make sustainable food production possible* is right not only for

"The positive market situation has been reflected in DeLaval's figures. The year ended with net invoicing of €979 million in prevailing currencies, up 4.8% compared with the previous 12 months."



the greater good, but for the wealth and well-being of our customers and their animals.

Sustainable farming practices is in everyone's interests and improving the productivity of every animal in a herd is central to our work. It lowers the environmental impact on farms per litre of milk produced while enabling farmers to take even better care of their animals and deliver better results.

We have worked in several developing countries where small measures can result in doubling a cow's daily milk yield. Our cooperation with the Tetra Laval Food for Development Programme is a case in point.

As a market leader we have both an obligation and an opportunity to contribute to better milking practices in all parts of the world.

#### STRUCTURAL CHANGES INTERNALLY

Internally, three major projects have taken place that have been both rewarding and challenging.

Our extensive investment in research and development continued and evidence of these efforts will emerge later in 2018 and into 2019 even if other evidence already exists. For example, the German Agriculture Society (DLG) ranked DeLaval number one in Livestock Technology in 2017 based on their annual survey of 650 German farmers.

The second major project for us was moving our main distribution centre in Europe from Glinde, a suburb of Hamburg, Germany, to a new site in nearby Gallin. The Gallin facility is a state-of-the-art operation with a LEED

"2018 has begun with much higher milk production volumes than the preceding year. Price pressure is emerging as a result, but also a positive margin between feed and milk. We believe that this positive market growth will continue for at least the first half of 2018 and expect strong growth in both capital goods and aftermarket products and services."

gold certificate and a small environmental footprint.

The move was challenging, however. The cumbersome transition led to delays in our supply chain. For a company that prides itself on focusing on its customers, this was a difficult period for everyone involved. We are grateful to our customers for their professionalism, understanding and loyalty as we worked to fix the problems associated with the move. Our own employees worked tirelessly to address these issues and succeeded in doing so by the end of the year. This will result in more efficient and sustainable operations in the future, thanks to the Gallin centre.

The third major project for us was to transform the IT system infrastructure from an in-house to an outsourced managed system. This creates more agility in our IT infrastructure and helps pave the way for the increased digitalisation of our operations. Complex IT transformations are always challenging and there were, of course, unforeseen hurdles as this project was exe-

cuted also. Thankfully, we have managed to deal with these comprehensive changes and look forward to the benefits in the year ahead.

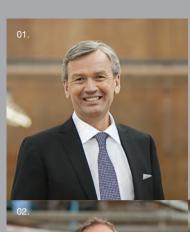
After several investments in these and other non-recurring items, we see that the underlying business is showing significant productivity improvements.

These large-scale projects are a continuation of our transformation program that began in 2016. Further activities will take place in 2018 and we view the year ahead with optimism.

#### POSITIVE FORECAST

2018 has begun with much higher milk production volumes than the preceding year. Price pressure is emerging as a result, but also a positive margin between feed and milk. We believe that this positive market growth will continue for at least the first half of 2018 and expect strong growth in both capital goods and aftermarket products and services.

Joakim Rosengren



















#### **DELAVAL MANAGEMENT TEAM**

- 01. Joakim Rosengren President & CEO
- 02. Magnus Berg Cluster Americas
- 03. Jonas Hällman BA Milking Systems
- 04. Lars Johansson Corporate Communications & Sustainability
- 05. Valerie Binner Human Resources
- 06. Johan Ledel CFO
- 07. Paul Löfgren Cluster EMEA
- 08. Tim Nicolaï BA Aftermarket, Services & Barn Environment
- 09. Johan Swahn Legal Affairs
- 10. Sören Lundin Cluster Asia & Pacific
- 11. John-Erik Hermanson Supply Chain

### STRATEGIC DIRECTIONS



#### **VISION**

# We make sustainable food production possible

Milk products are superfoods. Our world needs more of them and needs to produce them more efficiently. That's where we come in. As a world leader in the dairy farming industry, we live milk. Our vision is to make sustainable food production possible, helping our customers do more with less.

#### **OUR MISSION**

We team up with customers for results that last. From our leading position in dairy farming, we innovate and expand into new segments and new geographies. We provide integrated solutions and ensure that everywhere we do business, we lead. We exist for the customer, around the clock.

#### **OUR BRAND**

DeLaval is a world leader in the dairy farming industry, providing integrated milking solutions designed to improve diary farmers' production, animal welfare and overall quality of life.

#### **OUR STRATEGY**

We analyse both our market and industry in terms of the entire value chain. We study factors that will impact our customers as well as our business, such as the external market environment, dairy supply and demand, trade, agricultural policies, milk and feed prices, profitability, competitors, customers and potential growth for the market in which we operate. We then link the external factors with our key strategic priorities: Customers and markets, Assortment and innovation, Quality management, Capabilities and productivity improvements, and Transformation. Finally, we connect our strategic priorities to the financial plan.

#### **STRATEGIC PLAN 2018 - 2021**



### SUSTAINABILITY



Our vision is to make sustainable food production possible. This means finding ways to help our customers – dairy farmers – create sustainable businesses. At the same time, we continuously monitor and improve the sustainability of our own operations.

### Doing more with less

For us, sustainability means helping our customers do more with less and succeed in their business. Optimising profitability means taking care of animals and assuming environmental responsibility. We also look at our own operations and see how and where we can improve.

Our vision is to make sustainable food production possible. We look at this from four main perspectives.



**Environmental sustainability** involves taking a long-term perspective while using the latest scientific insights and technologies to improve the resource efficiency of not only our customers' operations, but also our own. The aim is that common natural resources and materials are used in a way that create sustainable, safe and healthy lives for all humans.

Social responsibility is about respecting and advancing human rights according to the UN definition. We particularly focus on creating sound working conditions for both our employees and farm workers. Ensuring food safety is another important aspect of social sustainability, in addition to having a positive impact on local communities by providing both employment and nutritious foods.

Farm profitability entails helping our customers maintain a profitable business in the long term through leadership and driving improvements. This underpins steady revenues,

cost reductions and cash flow improvements while minimising financial risk. With a profitable business, farmers can implement improvements in productivity, social progress and environmental performance.

Animal welfare relates to extending the productive lifetime of the cow, which is one of the best things we can do to reduce the environmental impact of the dairy sector. By providing better conditions for animals, farmers can improve their milk yield and milk quality.

Our investments in social and environmental sustainability are guided by our vision, code of business conduct, environmental policy, local legislation and by sustainability frameworks. Our materiality assessment helps us focus our efforts where they matter most.





#### DELAVAL

### HIGHLIGHTS 2017/2018







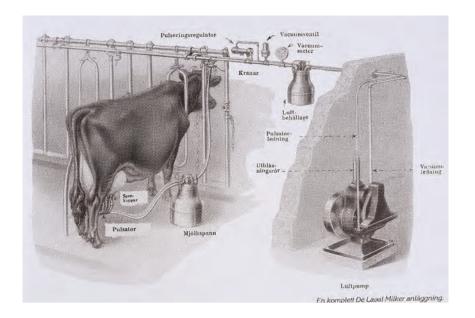
## Tetra Pak and DeLaval partner in cleaning solutions

In 2017, DeLaval and Tetra Pak joined forces to offer chemical cleaning solutions to common customers in North America. The division responsible for the initiative provides consumables to food production facilities, now with a formalised business model that identifies cleaning chemicals that are best suited for Tetra Pak customers and clarifies the total solutions approach to ensure safe food production in less cleaning time. "The combination of innovative cleaning products, food production knowledge and a strong, loyal customer base creates a unique opportunity for DeLaval and Tetra Pak to jointly offer customer value beyond what we could do alone," says Steve Harris, Director of DeLaval Cleaning Solutions.

# Young European farmers speak up

CEJA – the European Council of Young Farmers – and DeLaval conducted an EU-wide survey among young farmers in 2017. The survey revealed interesting factors that are important in running an economically sustainable farm. Young farmers feel responsible for ensuring a sustainable agricultural sector and see the importance of animal welfare to improve both profitability and sustainability. Furthermore, the survey pointed out that the significant barriers for young people to enter or remain in the agricultural sector are: a fair income level, access to land, simpler administration and fair competition in global markets. Farmers need investments for farmland expansion, knowledge development and new technology, which future policymakers should take into account.

A: DeLaval





# 100-year anniversary of the first modern milking machine

The milking machine that laid the foundation for modern dairy farming, the DeLaval Milker, just celebrated its 100-year anniversary. Patented by New Zealander Norman John Daysh in 1917, it has been used as the model and inspiration for all vacuum-operated milking machines ever since. When Norman looked for a company that would be interested in his design, DeLaval recognised the potential of the machine that would revolutionise the industry. The innovative spirit remains strong, as engineering excellence, the welfare

# An all-inclusive solution helps farmers plan

DeLaval offers service and consumables in a cohesive package called InService™ All-Inclusive. Everything customers need for daily operations can come from one speaking partner. Consumables such as liners, tubes, detergent, teat spray, filters and oil that work seamlessly with DeLaval milking equipment can always be well stocked to ensure consistent milk quality and yield. Milking systems need service at regular intervals and with InService™ All-Inclusive, DeLaval ensures that equipment is well maintained. The solution is based on a fixed payment model so that farmers can more easily plan their operations.



of dairy cows and the vision of an

efficient and safe industry remain

just as important today as they

were a hundred years ago.

# Advisory services take a global approach

Solving our customers' biggest challenges is our job. To do this, we have a variety of packages and services that offer training and advice to our many customers around the world. From milking performance and milk quality advisory in China, to VMS and nutritional support in Denmark, we have advice experts working in local markets to support and consult.

A recent initiative in Advisory services focuses on standardising customer product training and certification on a global level to create better alignment, transparency and consistency. By bringing together key people who work closely with our customers worldwide, we asked them to share their knowledge and experience to form a common strategy for our services. The result is a consistent, high-quality, and robust offering that we can apply in any of our markets as well as a deeply connected global team, strengthening the knowledge base that we share with our customers.

### Hamra – our own dairy farm

Ever since 1894 when our founder Gustaf de Laval purchased Hamra farm, it has been a constant source of inspiration and innovation. It's not only a working modern dairy farm, it's the heart of DeLaval's R&D and product development, where all of our products are tested on our own cows before they are released on the market. The facilities include several barns with about 250 milking cows and 240 heifers.

Both software and equipment undergo constant testing on the farm and there are rapid developments in both automated and manual milking, especially when it comes to software that controls management systems and feeding solutions. A relatively new product is the DeLaval body condition scoring BCS, which scans cows and determines their body fat, enabling the farmer to individually adjust and optimise feed amounts and identify problem cows, thereby improving animal welfare and securing food safety.







# Ensuring product and food safety

DeLaval takes food safety seriously and is committed to ensuring that materials and products that may come into contact with milk comply with applicable laws and regulations, wherever DeLaval places them on the market. Our agreements with suppliers obligate them to comply with applicable laws and regulations.

To further ensure that product and food safety is an integral part of DeLaval's procedures, we recently established a global policy to further clarify our commitment to fulfilling this undertaking. Every part of the DeLaval value chain contributes – from safe and hygienic design, selection of suppliers of components and materials, to user instruction books, installation and customer service. This is an important foundation for how we are committed to work with our customers.

# "Virtual reality" visit to goat farm

In October 2017, DeLaval, in partnership with Business France, brought some 200 goat farmers together in Moscow for an international conference. Topics ranged from the global experience of building goat and sheep farms to technology and the challenges of herd management. Participants could, thanks to virtual reality, "visit" goat farms that are using DeLaval equipment. Goat cheese was of course a major part of the conference and French cheese expert Quentin Lecornu shared his expertise in addition to a large-scale testing of products.

### TECHNOLOGY



# From teat to tank – the DeLaval Rotary E100 milking system integrates the entire process





The DeLaval Rotary E100 is the result of an idea to create the ultimate rotary system for dairy farmers with grazing herds. Key members of the engineering team at DeLaval's hub in Hamilton, New Zealand, utilised the research, innovations and developments of our global team of engineers and designers. This meant applying everything we have learned over the last 135 years designing, building and installing dairy systems throughout the world to the challenges and demands of today's dairy farmer.

In the past, rotary systems tended to be assembled ad hoc with various components, but the DeLaval Rotary E100 combines the best of all existing milking shed technologies, while being durable, operator-friendly and protecting animal welfare. It is a single solution from a single provider, and it looks at milking cows from a farm management perspective.

The integrated system features the DeLaval CockPit $^{\mathsf{M}}$ , which allows farmers to run the entire shed within an arm's length of where they

stand at "cups-on". It allows full control of the entire milking process, with an ergonomically designed interactive data display. Improved access to relevant data and improved visibility means cows can receive more individual attention and farmers are supported with information to make better decisions.

In order to create a stress-free milking environment, the DeLaval ComfortBail™ was designed for the DeLaval Rotary E100. This bail integrates and hides the wires, pipes and technology needed for the rotary milking platform, ensuring clearer lines of visibility for worker and cow, safer access for the milker and a more consistent approach to getting the cows on and off the platform. Additional productivity features include built-in automatic teat spray as well as construction design that helps cows enter the milking bail willingly and quickly, in order to maximise the let-down process.

In the most efficient systems, the key limitation to throughput has always been cow traffic. The new DeLaval FastLane™ bridge is designed to make sure cows move as quickly, calmly and efficiently as possible through every DeLaval Rotary E100. Features such as rounded curves prevent injury to cows in the entry and exit areas, a vision barrier keeps cows from seeing each other, and there are various rubber flooring options for greater hoof comfort.

Launched in June 2017, the DeLaval Rotary E100 had been tested on a 500-cow farm in New Zealand. Sharemilker Chap Zweirs commented, "Any cowshed will do the basic job, so the built-in technology was the deciding factor for us to purchase the DeLaval Rotary E100."

Even though the DeLaval Rotary E100 was developed for rigorous New Zealand conditions and requirements, the system is ideal for other markets with predominantly pasture-based herds such as Australia, South Africa, the UK, Ireland, France and Latin America.



# Large-scale production and automation trends prevail globally



#### **ASIA PACIFIC**

The new DeLaval Rotary E100 system was launched in New Zealand in 2017, followed by large numbers of enquiries

from both New Zealand and Australia. Otherwise Oceania experienced climatic extremes, which had a direct impact on milk production and income, affecting profitability.

In Japan there was a strong focus on automatic milking in 2017, with DeLaval gaining market share. Both DeLaval VMS™ and DeLaval Herd Navigator™ have performed very well, with customers recognising the value of accurate diagnostic tools. These products address labour shortage issues through automation, providing both reproduction accuracy and

mastitis management, which drive profitability on dairy farms. Government programmes are in place to support dairy farming in Japan, keeping the market buoyant.

In China, the number of large industrialised farms is growing, with milking facilities for 3,000 cows or more. The DeLaval InService™ All-Inclusive programme has been successfully introduced to work directly with these large farms, focusing on milk quality, milking routines and cow health.

Russia experienced considerable growth with large farms adopting the DeLaval PR3100 heavy-duty rotary for herds of 2,500 cows and upwards. The combination of our unique project management approach and advisory support services are highly appreciated there.



#### **AMERICAS**

Many large farms in North and South America invested in high-efficiency rotary milking systems, such as the DeLaval

PR3100, and DeLaval VMS™ automatic milking systems. There was robust development of the installed parks of DeLaval VMS™ in both of these regions, with some of the largest robotic milking systems in the world to start milking in 2018. The deployment of service contracts for DeLaval VMS™ has been successful. There were favourable growth opportunities for DeLaval Cleaning Solutions in North America, as well as investment rounds in Cuban dairy value chains.

There was new concern about the lack of milk processing capacity in certain US states, in addition to the pressure on milk prices going into 2018. Another factor causing uncertainty is the future of the NAFTA negotiations and how this could impact both the North and South American markets.



#### **EMEA**

In the Middle East/North Africa region, political instability and an overall fragile economic situation contributed to weak

market conditions. Despite this, some markets, such as Egypt, performed well with large tenders being signed.

In many European markets there was strong pressure on milk demand and milk production in 2017. The challenge was to obtain the right quality and DeLaval was proactive in offering services that address milk quality and animal health.

Benelux, primarily the Netherlands, was directly affected by new phosphate regulations, requiring creative solutions to the situation. The financial situation of many farmers in France was difficult after the crisis of 2016/2017. But in general, milk price and feed price conditions were favourable in several regions, including Northern and Eastern Europe as well as Germany.

DeLaval experienced stronger aftermarket sales for original parts, an indicator that our

service level performance is positive. Within the farm supply business, the hot summer season impacted ventilation sales positively and innovations to our LED lighting range boosted sales in this area as well.



### TETRA LAVAL INTERNATIONAL

# Further progress for the financial support and control function of the Board

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 2017.

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.

#### **ACHIEVEMENTS IN 2017**

In 2017, TLI upgraded its financing platforms and further expanded standard financing solutions to support Group sales of capital equipment in cooperation with banking partners.

The Group has continued to enhance its risk management policies to respond to challenging business conditions and rapidly changing regulatory environments. Focus was put on reviewing tax processes and on reinforcing cyber security in the Group. The use of technology has been further expanded through the development of new data analytics in tax, finance and audit.

There was continued focus in 2017 on ensuring that TLI had the appropriate professional skills and adequate resources to support these evolving business and technical needs.

#### **FOCUS AREAS FOR 2018**

Performance of the different businesses of the Group and return generated on capital employed continue to be monitored closely. Productivity remains an area of considerable Board attention, with initiatives focusing on restructuring, forecasting and cost management planned in 2018.

In the light of evolving business requirements, legal and regulatory developments and technological changes, TLI has initiated a review of its longer-term priorities. In 2018 a set of projects will be launched applying innovation to transform the way TLI delivers value to the Board and the Group.

The team at TLI remains focused on delivering on a highly professional and effective level in each of its areas of expertise and its impact on the long-term performance of the Group.

"The Group has continued to enhance its risk management policies to respond to challenging business conditions and rapidly changing regulatory environments. Focus was put on reviewing tax processes and on reinforcing cyber security in the Group."



#### **TETRA LAVAL INTERNATIONAL MANAGEMENT**

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



#### **TETRA LAVAL GROUP SUPPORT FUNCTIONS**

- 01. Jörgen Haglind Group Communications
- 02. Phil Read Group Human Resources

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

### SUSTAINABLE DEVELOPMENT





# Tetra Pak China leads the way in milk safety in schools

In 2017, a total of 53 schools in China were named Promotion Model Schools for food safety as part of China's National School Milk Programme. During the past three years, 132 schools have been awarded after having met strict rules of school food safety. Tetra Pak's experience in supporting school milk programmes in China for more than a decade provided the basis for setting the safety standards.

Initiated and promoted by Tetra Pak China, the certification program was jointly launched with the country's student nutrition and health promotion organisation and the national dairy association in 2015. The purpose is to promote a "campus operational standard" for school milk to ensure that it's safe for students to drink.

Each school was evaluated on staff training, operational standards, process manage-

ment and safety issue management, including inspections, storage, distribution and carton recycling.

Officials from China's Ministry of Education and Ministry of Health attended the ceremony and presented the certifications. In just three years, a total of 132 schools in 16 provinces have been awarded the status of Promotion Model Schools by passing the strict regulations of school food safety.

### Disaster relief after Hurricane Irma

In September 2017, Tetra Laval supported Hurricane Irma relief efforts and donated, in collaboration with Gossner Foods and Diversified Foods, nearly 1.5 million Tetra Pak cartons of shelfsafe UHT milk to storm-ravaged areas in Florida and Georgia. In addition, Tetra Pak teamed up with La Estancia to donate fruit compote to Cuba's relief efforts. With widespread damage and extensive power outages throughout the region, Tetra Pak is committed to doing its part to make food safe and available everywhere for those impacted by Hurricane Irma

# Dairy Hub project in Honduras to fight poverty and malnutrition

Tetra Laval Food for Development and Tetra Pak Central America & Caribbean have implemented a Dairy Hub project together with a local customer, Lacthosa. The customer has signed a memorandum of understanding with the government to revitalise the dairy sector by providing technical assistance and technology transfer to smallholder farmers. So far,100 smallholder farms have been trained with knowledge provided by Tetra Laval Food for Development. The project will grow with another 200 farms in 2018. The objectives are to increase milk quality, quantity and profitability for the farmers.

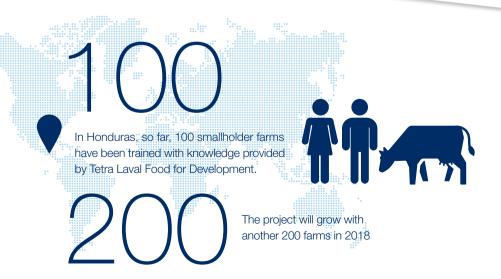
Food security and malnutrition are serious challenges in Honduras. According to the World Food Programme, the poverty rate is 68 per cent and one in four children suffers from chronic malnutrition. Agriculture is the most important economic sector but only about 35 per cent of the annual milk production is industrially processed. In addition, the average milk yield is only 3.4 litres a day per cow.

Tetra Laval Food for Development has supported Lacthosa with initial farm assessment and training. The project is now covering 1,013 farms with the objective of increasing coverage to 1,240. Lacthosa will collect the smallholder farmers' milk and provide them access to the market. Lacthosa's staff are being trained with the latest best practices on feed and animal nutrition, milk hygiene, animal health and eproduction by the Tetra Laval Food for Development specialists.

"We are very happy about the joint work we have been developing in the Dairy Hub project together with Tetra Laval Food for Development and Tetra Pak. This has contributed greatly to the strengthening of our relations with our milk suppliers," says Christopher Millensted, Head of Supplier Development of Lacthosa.

The dairy development initiative also aims to benefit child nutrition in the future by focusing efforts on re-launching the school milk programme.







A new Dairy Hub project supporting 30,000 farmers will be launched in Kenya. Tetra Laval Food for Development and Tetra Pak are partnering with several public-sector organisations in Kenya in this four-year, USD 12.6 million investment project. The project will help farmers increase the quantity and quality of the milk they produce to meet the growing demand for dairy products in the Kenyan market.

In what is a true public-private development partnership (PPDP), Tetra Pak has joined forces with the Swedish International Development Cooperation Agency (Sida), the customer New Kenya Co-operative Creameries (NKCC) and Heifer International, a US-based non-profit organisation. The partnership development was driven by Tetra Laval Food for Development supporting Tetra Pak East Africa and NKCC. It is the third PPDP with Sida.

According to the Kenya Dairy Board, smallholder farmers with an average of one to three cows account for nearly 80 per cent of total milk production in the country. However, many smallholder farmers struggle with low yields per cow, profitability and the need to improve quality. Due to insufficient infrastructure and cooling centres, many smallholder farmers rely heavily on informal channels to supply their milk. Unexpected weather patterns and drought has also caused farmers' earnings to drop recently.

"We're very excited to kick off the Kenya Dairy Hub project in collaboration with a committed group of partners," says Rafael Fábrega, Director of Tetra Laval Food for Development. The Dairy Hub model links smallholder farmers to a dedicated dairy processor, which provides access to the market and safe distribution of UHT milk everywhere. We work closely with DeLaval and Tetra Pak to support our customers. Our role is to provide technology and hands-on training through practical knowledge transfer to smallholder farmers."

The primary goal is to improve the livelihoods of 30,000 smallholder dairy farmers and their families, through increased dairy productivity, increased incomes and increased participation of women in the dairy value chain.

The programme will work through producer

organisations, which operate as dairy cooperatives engaged in milk production, collection, bulking, chilling and selling. It's expected to double dairy production for NKCC, as well as growing incomes and creating important employment opportunities in the areas of agriculture and dairy.



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