ENABLING TRANSFORMATION
Sustainability Report 2020
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Sustainability has long been at the heart of our business strategy and our operations. It is embodied in our brand promise – PROTECTS WHAT’S GOOD® – which is brought to life by protecting food, protecting people and protecting futures.

Our sustainability approach encompasses all three areas. We work with our customers and partners to make food safe and available, everywhere through our innovative and market-leading food processing and packaging solutions. We constantly strive towards safeguarding our own employees and supporting communities where we operate, and protecting the future of our planet and the long-term success of our customers.

Our brand promise motivates us every day as we continue to make rapid progress on a sustainability journey that began many years ago. It’s an ongoing drive that includes helping to ensure food security, securing a responsible value chain, promoting diversity and inclusion, contributing to a low-carbon circular economy, and more.

Our brand promise also ensures that sustainability remains an integral component of the decisions we make, and the actions we take, right through the value chain. To help those decisions, we are guided by the UN Sustainable Development Goals, which provide a common framework for organisations across industries to work together for a better future. This guidance builds on our ongoing commitment to the UN Global Compact, to which we have been a signatory since 2004.

Additionally, we leverage our biennial materiality assessments, which help us identify and prioritise those aspects of our business which have the greatest positive stakeholder impact. This report is a key means of sharing our approach and our progress in meeting our goals, continuing our history of sustainability and environmental reporting that extends over more than two decades.

As we reflect on last year, we must necessarily begin with the COVID-19 pandemic, an unprecedented event that has affected, and continues to affect, communities worldwide. In this context, our commitment to protecting what’s good has never been more vital – and our sense of purpose has never been stronger. Throughout this crisis, our priorities have been to protect people – keeping our own employees safe and those of our customers and other stakeholders – as well as to protect food, by helping our customers maintain continuous food supplies.

The full impact of COVID-19 is yet to be seen and it will take a while for normalcy to resume. But our commitment towards sustainability will continue, and our investment will remain at the same level, as we continue forging ahead in this area.

Addressing global challenges

As the leading provider of processing and packaging solutions, we are mindful of our responsibility to address the challenges faced by our industry as a whole. We have a long history of working in partnership with our customers and other stakeholders to that end, helping drive positive change in the sustainability arena. We believe the need for concerted action is particularly urgent today.

Over the course of 2019, we saw awareness and expectations around the environment reach a new high, among customers, consumers, media, NGOs and regulators alike. Taking a broad view of the world’s environmental challenges, we see three focus areas.

The first is to address climate change, where we as an industry need to minimise the overall impact of our products and operations on the climate. This has been in sharp focus with various legislative initiatives, such as the European Green Deal. The second is to advance the circular economy, which includes eliminating waste and ensuring end-of-life use for packaged products. Again, this is already being driven by legislation around the world, with a strong focus on single-use plastics. The third is to protect biodiversity, an issue that has been highlighted by the recent wildfires in Australia, Brazil and California.

All three areas are key to initiatives that we have been pursuing for some time. In fact, they are inextricably interlinked. In addressing climate change, we cannot ignore the materials sector and the role that packaging can potentially play. Nor is it enough to focus only on “reduce, recycle and reuse” when promoting circularity: we must take into account the climate impact of the materials that are used in the first place. Consequently, we believe in a low-carbon circular economy that drives a shift from high-carbon, fossil-based materials to low-carbon, renewable materials, which can also help to protect biodiversity.

This is why our view is that the ideal package of the future should be made solely from renewable or recycled packaging materials, 100% recyclable and supportive of a low-carbon circular economy. In 2019 we accelerated our efforts towards this goal, restructuring our developmental initiatives and significantly ramping up our R&D budget. We are already making great progress. For example, we are the first packaging company to launch paper straws in Europe. We are also now beginning a field test of our first ever aseptic package with an alternative to the aluminium barrier. Our goal is to field test an aseptic package made fully from renewable sources by 2022.
To complement our packaging innovations, we are also driving resource efficiencies with our Equipment and Services, focusing on minimising water use, food waste and carbon footprint in our customers’ operations, helping them on the journey towards achieving their own sustainability targets.

A value chain approach
In parallel with this important development work, we have continued our efforts to enhance sustainability across the value chain. That means ensuring our own operations are a global benchmark, driven through initiatives such as World Class Manufacturing and investing in renewable power and “green buildings”.

Furthermore, it includes our supply chain, where we work with our suppliers to promote renewable materials, minimise emissions and protect biodiversity and fresh water. To help further these aims, in partnership with our long-term supplier Braskem, we became the first company in our sector to obtain Bonsucro Chain of Custody certification for our plant-based polymers, ensuring full traceability from plantation to product.

We also work closely with our customers, providing them with the solutions they need to achieve their own sustainability ambitions, such as maximising production efficiency and minimising energy use, waste and emissions. Through partnerships with a wide range of stakeholders, we drive collection and recycling – a key enabler of a low-carbon circular economy. In 2019, we launched our new Strategy 2030, which includes protecting food, which is expressed in our vision as “We commit to making food safe and available, everywhere”. Faced with the COVID-19 pandemic, that vision is more important than ever. But the way we go about delivering it is changing, due in particular to the rise of digitalisation and connectivity. These trends offer new opportunities to make food safety and quality even better, while increasing production flexibility, efficiency and sustainability.

In addition, we have long worked to increase the world’s access to safe food. For decades, we have participated in the development of school feeding and nutrition programmes, working with partners worldwide. In the last year alone, these initiatives reached some 1.1 million schoolchildren, not only delivering improved nutrition and better educational outcomes, but also supporting local agriculture and promoting economic development. More recently, we have developed our Dairy Hub model to secure a long-term supply of locally produced quality milk, without increasing the cost of collection, and helping to improve the livelihoods of many thousands of smallholder farmers.

Finally, we are committed to protecting people. That includes our own employees, by providing a dynamic and productive workplace, with adequate opportunities for learning and development. Equally importantly, it means driving diversity in our workforce and fostering an inclusive culture, through several actions encompassing training, recruitment and talent development. It also includes protecting the communities where we and our suppliers operate, working in partnership to ensure that human and labour rights are respected, driving transparency and active communication across the value chain.

Enabling transformation
While we have made significant progress in protecting food, people and futures, we aspire to do much more. That is why, for example, we have set out such an ambitious new climate goal and ambition, which is a reflection of our sustainability commitment. First, to lead by example, through our own activities, innovation and expertise. And second, to lead through partnership.

In 2019, we launched our new Strategy 2030, which will guide our company over the next decade. One of its central pillars is to “Lead the sustainability transformation”, which comprises two goals: “Lead with low-carbon circular economy solutions” and “Enhance sustainability across the value chain”. Again, this is a clear demonstration of our commitment and our ambition, to drive positive change both as a company, and as one of many industry stakeholders. Hence the title of this report, “Enabling transformation”, signifying a new stage of our ongoing journey. I very much welcome your feedback on this report and our performance.

Adolfo Orive
President & CEO, Tetra Pak
FACTS & FIGURES
A round-up of key numbers from across our global business operations in 2019.

25,555
employees

90,350
processing units in operation

8,770
packaging machines in operation

11
Technical Training Centres

5
R&D centres

89
sales offices

6
Customer Innovation Centres

31
market companies

55
production plants

8,770
packaging machines in operation

11
Technical Training Centres

50 billion
of our cartons recycled in 2019

170 plants
worldwide where our cartons are recycled

190 billion
Tetra Pak® packages sold in 2019

€11.5 billion
net sales in 2019

55
production plants

31
market companies

190 billion
Tetra Pak® packages sold in 2019

5
R&D centres

89
sales offices

6
Customer Innovation Centres

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50 billion
of our cartons recycled in 2019

170 plants
worldwide where our cartons are recycled

190 billion
Tetra Pak® packages sold in 2019
We equate good governance with good business: we do well by doing good. Good governance is essential to building a sustainable business, delivering on our brand promise – PROTECTS WHAT’S GOOD™ – and safeguarding our reputation.

Providing a solid framework
By providing the foundation for our strategy and approach to leadership, good governance ultimately helps us fulfill our vision to commit to making food safe and available, everywhere. Our governance framework helps us deliver on our brand promise and comply with relevant regulations and legislation, as well as guiding us to behave ethically and responsibly.

The Global Leadership Team is responsible for implementing the framework, supported by the Corporate Governance Office and a network of local governance, risk and compliance officers. As signatories to the UN Global Compact, we are committed to the implementation, disclosure and promotion of its ten principles on human rights, labour, the environment and anti-corruption. We submit a Communication on Progress every year.

To build trust and transparency with our customers and as part of our approach to responsible sourcing across our supply chain, we work with leading sustainability assessment platforms, including the Supplier Ethical Data Exchange (Sedex), EcoVadis and CDP.

In 2019, we were rated as a leader by CDP for our climate action and for driving sustainable sourcing in our supply chain – the fourth year in a row we have made CDP’s A List. We were also rated by EcoVadis in the top 1% of companies in our industry category. For more information on these ratings and our work to drive responsible sourcing and continuous improvement with our suppliers generally, see pages 20 and 27.

A matter for everyone
All employees, at all levels of the company, are responsible for complying with the governance framework in their everyday decisions and actions. Details of the framework are available on our intranet and a mandatory eLearning programme is in place.

Anyone in the company can anonymously report actual or suspected breaches of our Code of Business Conduct or any other unethical behaviour directly to either the Corporate Governance Officer or the Head of Audit, without being penalised in any way. Every case of a breach of our Code of Conduct is handled individually and investigated appropriately.

Communicating about our responsible business practices and performance is very important to us. We have been publishing environmental reports since 1999, and we have been reporting on broader sustainability issues since 2005.
We advocate for progressive, evidence-based policy to address societal challenges on a number of different topics. From a sustainability perspective, we advocate for:

- National recycling regulations such as extended producer responsibility (EPR) to improve recycling and reduce waste, supporting a circular economy.
- Climate policies that are aligned with the highest level of ambition in the Paris Agreement to reach net-zero GHG emissions by 2050. We also advocate for packaging policies to promote low-carbon materials.
- Responsible sourcing requirements for primary raw materials, such as our work with FSC™ and Bonsucro (see page 28).

**How we work**

- In partnerships and through industry and trade associations that share these same objectives (for some examples, see page 37).
- By taking part in policy events.
- Where possible, by directly engaging with national governments including ministers, department heads and members of parliament.

We have a long history of working with governments worldwide on policy issues related to sustainability, food packaging and healthy diets. We have long history of working with governments worldwide on policy issues related to sustainability, food packaging and healthy diets.

**Materials and the circular economy**

In 2019, we commissioned a report from Material Economics, a consultancy firm that specialises in sustainability and resource strategy topics, to explore the relationship between the production of raw materials and climate change. It found the following:

- Raw materials (such as cement, steel, pulp and paper, and plastics) are a major unaddressed climate challenge, accounting for high emissions that risk rising to levels that go directly counter to climate objectives. Emissions from the production of materials used for packaging alone are larger than global aviation or shipping, especially plastics, which account for 60% of this total.
- Reducing emissions from materials requires a wide range of strategies, including materials efficiency, materials recirculation, substitution with lower-CO2 materials, and clean production.
- For these strategies to be viable, there is a need for a new policy agenda. Current policy approaches will not be enough to meet climate targets. Materials emissions are hard to reduce, and current climate policy focus on energy efficiency and low-carbon electricity does not address most of the emissions. There is a need to enable not only clean production, but also improvements by stakeholders throughout the major materials-using value chains.
- There is a clear link between a circular and a low-carbon economy. Addressing the issue of emissions from materials is, in fact, indispensable to climate objectives. Conversely, circular economy policies will affect materials handling in fundamental ways. Therefore, there is much to gain from aligning the two agendas in an integrated policy framework. Correspondingly, failing to do so risks ineffective or inefficient policy.
OUR APPROACH

Our approach to sustainability encompasses our entire value chain. We take this approach because we recognise that we can only create a more sustainable future by addressing the interconnected nature of the environmental, social and economic challenges we face. Our solutions work because they are joined up. To organise and communicate our priorities, we use protecting food, people and futures as the pillars of our sustainability story, which underpins our brand promise: PROTECTS WHAT’S GOOD™.

In addition, we use the UN Sustainable Development Goals (SDGs) to help us prioritise our sustainability efforts and we have assigned the most relevant to each pillar. This focus on the SDGs builds on our ongoing commitment to the UN Global Compact and its ten principles, to which we have been a signatory since 2004.

FOOD.

We commit to making food safe and available, everywhere. This is our vision: the goal that drives our organisation. By working with our customers and partners to achieve this vision through our innovative and market-leading food processing and packaging solutions, we are contributing to SDGs 2 and 12. Moreover, by working to build sustainable value chains, such as through our participation in school feeding programmes and our Dairy Hub model, we are further contributing to these two SDGs. See page 11 for more.

PEOPLE.

We protect and enable our employees, promoting growth and development for all, and driving actions to ensure a diverse workforce and an inclusive culture. This contributes to SDGs 4, 5 and 8. We also work to protect and support communities where we and our suppliers operate, including securing a responsible value chain that protects human and labour rights, further contributing to SDG 8. See page 16 for more.

FUTURES.

We work to protect the sustainable future of our planet and the long-term success of our customers, as well as our own business. Our strategic goals are to lead with low-carbon solutions for a circular economy, and to enhance sustainability across the value chain, from sourcing to production to the end of life of our products. This includes minimising emissions and waste, protecting biodiversity and ecosystems, maintaining fresh water availability, and promoting recycling and circularity. Through these activities, we are contributing to SDGs 6, 7, 9, 12, 13 and 15. See page 21 for more.

All three of our sustainability pillars share a common commitment to SDG 17: Partnership for the goals. We know that it is only by working together with our customers, suppliers and other stakeholders that we can lead the sustainability transformation and drive the most meaningful positive change.
INTRODUCTION

FOOD.

We made strong progress in advancing our commitments to protecting food, people and futures in 2019. Here are some of our most significant achievements.

FOOD.

**68 million** children received milk or other nutritious products in Tetra Pak® packages in schools

**56** countries in which we participated in school feeding programmes

**36,420** smallholder farmers reached by Dairy Hubs

**389,470** litres of milk per day collected from Dairy Hub smallholder farmers

PEOPLE.

**+14%** rise in women in top management

**-8%** reduction in lost time accidents in our manufacturing sites

**66%** of employees utilising flexible working, now available in all countries with 50+ employees, say they are more productive

**750** leaders trained in inclusive leadership

**148** new participants enrolled in our global Future Talent programme

**93%** of respondents in our Employee Engagement survey say they fully support Tetra Pak values

FUTURES.

**4** years running we have made the CDP A List. We were rated A for our efforts against climate change and to protect forests

**#1** packaging company to launch paper straws in Europe. We were also the first F&B company to offer packaging with Bonsucro-certified Chain of Custody for plant-based polymers

**69%** of renewable energy in our operations

**10 million** tonnes of CO₂e saved across the value chain over the past decade

**2** Tetra Pak factories received World Class WCM status

**50 billion** Tetra Pak® packages were recycled

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A systematic approach

As part of our sustainability approach, we undertake a materiality assessment every two years. This ensures that we keep up to date with changing sustainability priorities and that we continue to focus on the areas that deliver the greatest positive impact for our customers, our business, society and the environment.

We conducted our most recent materiality assessment update in 2019. This involved a three-stage process:

1. We identified and prioritised stakeholders upstream across the supply chain, downstream and within Tetra Pak.
2. We identified and prioritised social and environmental topics applicable to the food and processing and packaging industry, taking into account the voices of all stakeholders.
3. We applied our own expert trend analysis and forward-looking perspective to map topics against relevance to Tetra Pak and to external stakeholders.

The update identified ten material aspects. These are shown in the matrix below, which positions the aspects according to priority and relevance to Tetra Pak and to external stakeholders, and in the table opposite, which identifies where in the value chain they occur.

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Material aspects</th>
<th>Upstream supply chain</th>
<th>Tetra Pak operations</th>
<th>Food processing, packaging &amp; distribution</th>
<th>Consumption</th>
<th>Post consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Food safety &amp; availability</td>
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<tr>
<td>People</td>
<td>Securing a responsible value chain</td>
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<td></td>
<td>Promoting OHS &amp; employee wellbeing</td>
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<td>Promoting diversity &amp; inclusion</td>
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<td></td>
<td>Transparency/active communication in the value chain</td>
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<tr>
<td>Futures</td>
<td>Contributing to a low-carbon society</td>
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<td></td>
<td>Promoting recycling &amp; circularity</td>
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<tr>
<td></td>
<td>Protecting biodiversity &amp; ecosystems</td>
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<td></td>
<td>Maintaining fresh water availability</td>
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<td></td>
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<tr>
<td>Governance</td>
<td>Securing a solid governance framework</td>
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</tbody>
</table>

This table lists the ten material aspects identified in our latest materiality assessment and shows where in the value chain each one occurs.

Definition & verification

Our sustainability work and focus areas are defined by our Sustainability Forum, which comprises ten senior leaders from across Tetra Pak who represent a wide range of areas of responsibility. Sustainability is also embedded as a pillar of our Strategy 2030: Lead the sustainability transformation.

Verification is essential to our sustainability process. Our practices and performance are externally verified and our GHG emissions data is externally audited. As a partner to this report, we will publish a GRI Standards Content Index later in the year. Our GHG emissions and other data will also be published on our global website.
Helping to feed the world
We commit to making food safe and available, everywhere. Now, faced with the COVID-19 pandemic, our vision is more vital than ever. But at the same time, our means of achieving it is changing, thanks to the rise of digitalisation and connectivity. These trends offer new opportunities to make food safety and quality better than ever, while increasing production flexibility, efficiency and sustainability.

Our packaging protects food without the need for preservatives or refrigeration, saving energy, and helping make safe, nutritious and flavoured some products available to more of the world’s rapidly growing population, even in remote areas with no cold chain. Our solutions also help to prevent food loss and waste across the value chain, from the efficiency of our processing equipment in production, to the right-sizing and functionality of our packaging at consumption.

Furthermore, by working to build sustainable value chains, such as through our participation in school feeding programmes and Dairy Hubs, we are helping to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture and production.

Our material aspects
- Food safety and availability

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FOOD SAFETY & QUALITY

Food safety has always been at the heart of what we do. It is embedded in our vision to commit to making food safe and available, everywhere. Now, faced with the COVID-19 pandemic, that vision is more important than ever – and our means of fulfilling it has never been more innovative and effective.

Pioneering food solutions
Since launching the Tetra Classic® Aseptic carton in 1961, we have created hundreds of new packaging solutions that protect food without the need for a cold chain, saving energy use and minimising food waste.

Our Food Safety Policy commits us to maintaining internationally recognised leading standards of safety. Our ambition is to help customers achieve full product traceability through the entire food processing and packaging value chain.

We back this commitment in a number of ways, including through the development of automated solutions such as Tetra Pak® PlantMaster, a factory-wide control system that fully and seamlessly integrates intelligence from each unit of the dairy production line.

We are committed to Food Safety Certification for all our food contact materials, adhering to the internationally recognised high standards set out in EU, US and now Chinese legislation. Assessment of all food contact safety aspects and issuing of certificates is managed by our dedicated Food Packaging Safety & Interaction organisation, based in Stuttgart.

Safety through innovation
We are also pioneers in food safety technologies such as juice pasteurisation and UHT treatment. We are continually finding new ways to help our customers respond to market conditions and consumer demands around the world.

In 2019, we received the prestigious IFU Innovation Award for our long-term project to develop a new sustainable JNSD line. This groundbreaking development – which can reduce energy and water consumption by 67% and 50% respectively, while maintaining very high levels of safety and quality assurance – has been launched in 2020.

“We challenged ourselves to set really ambitious goals to redesign the traditional JNSD line: to develop a more sustainable solution while also helping our customers to ensure food safety. The success of the project is a result of team effort, with many dedicated people at Tetra Pak involved.”

Maria Norlin, Subcategory Manager, JNSD & Other Beverages
Driving the industry forward
Digitalisation and connectivity is changing the food and beverage industry as we know it. It offers unprecedented opportunities both to improve food safety and quality, and to increase production flexibility and efficiency.

In 2019, we unveiled our vision of the “factory of the future”, in which digitalisation revolutionises the way food manufacturing plants operate, continuously increasing the speed of production, reducing errors and minimising product waste.

Developed with a number of technology partners, our factory of the future utilises Industry 4.0 technologies such as big data and advanced analytics, artificial intelligence and the Industrial Internet of Things. It builds on our existing digitalisation measures, such as Tetra Pak® Plant Secure and condition monitoring, which predicts and prevents system breakdowns before they occur.

New levels of transparency
Also in 2019, we launched our connected packaging platform (see right), which transforms our cartons into interactive information channels, full-scale data carriers and digital tools. For our customers, the connected package offers end-to-end traceability to improve production, quality control and supply chain transparency. For consumers, it means the ability to access vast amounts of information such as where the product was made, the farm that the ingredients came from and where the package can be recycled.

We followed up these new launches with a series of technical thought leadership papers to help our customers benefit from Industry 4.0 in such key areas as food safety and quality, productivity and flexibility. We also launched a dedicated website called “Connecting the food industry”.
We have long worked to increase the world’s access to safe food. Since 1962, we have participated in the development of school feeding and nutrition programmes, working with partners worldwide. In recent years, we have developed our Dairy Hub model to secure a long-term supply of locally produced quality milk without increasing the cost of collection.

**Sustainable value chains**

We believe that the most effective way to tackle global food security and nutrition challenges is to build sustainable food value chains. For more than 57 years, we have proven the value to society and individuals of participating in the development of school feeding and nutrition programmes around the world.

Such programmes have been shown to be effective in delivering improved nutrition and better educational outcomes, supporting local agriculture and promoting economic development. According to the UN World Food Programme, they are making a significant contribution to the UN SDGs, in particular SDGs 1, 2, 4, 5, 8 and 10.

Effective practical implementation is key to achieving the best possible results. In those parts of the world that face significant challenges in infrastructure and logistics, our food processing and packaging technology plays a vital role in ensuring that children can access safe nutrition in schools.

**An experienced partner**

We offer our customers and partners technical assistance and practical support in implementation and evaluation, and advise on best practices for food safety and quality control. Through collaboration and partnerships, for example with UN agencies, governments, NGOs and international aid agencies, we share knowledge and best practice drawn from programmes worldwide.

We have a strong background in supporting our customers in developing and launching new fortified and nutritious beverages for programmes. Environmental education and best practice in recycling carton packages also form an important part of the support we offer.

**Helping schools worldwide**

For example, a new school milk programme launched by the government of Sri Lanka is raising awareness of environmental issues, including recycling, at the same time as tackling child malnutrition and promoting growth in the local dairy sector.

In 2019, 68 million children in 56 countries received milk or other nutritious beverages in Tetra Pak packages in their schools.

Click to find out more about the new school feeding programme in Sri Lanka and other recent initiatives.
Tackling the milk shortage
Global demand for milk is set to overtake supply within the next decade. In the long term, the dairy industry is facing a persistent gap between supply and demand – a supply deficit fuelled by population growth and rising prosperity and urbanisation, particularly in Africa, Asia and Latin America.

As nearly 1 billion people live on dairy farms, smallholdings or in landless households keeping one or a few animals, the dairy industry holds huge potential to create jobs and increased incomes right the way along the value chain.

According to the International Farm Comparison Network, of the 867 million tonnes of milk produced globally, 360 million tonnes are produced by smallholder farmers. Much of that milk is not formally processed, and is lost, thus limiting their access to market.

Through our Dairy Hub model, we help to build sustainable value chains by linking smallholder farmers with dedicated processors in a selected area. Tetra Pak and Tetra Laval then provide technical assistance and “hands-on” practical knowledge transfer through our international dairy experts.

More access for smallholders
By providing smallholder farmers with training and setting up appropriate cooling infrastructure and technology, dairy processors in developing markets can increase their stable supply of locally produced quality milk. This helps them to grow their business and increase profitability by creating a more efficient local supply chain (see graphic below for how this works). At the same time, thousands of smallholder farmers gain access to market for their milk, improving their livelihoods.

Three new Dairy Hubs were set up in 2019, in Albania, Tanzania and Uganda, bringing the total number of smallholder farmers reached by the programme to 36,420. This represents a 27% increase compared with 2018.

Click to find out more about these new Dairy Hubs and others.
All about our employees

Our biggest asset is our people. We believe that becoming a more modern and attractive employer is key to attracting and retaining the talent we need to achieve our Strategy 2030 ambitions. To that end, we are driving actions to ensure a diverse workforce and an inclusive culture, where all employees can thrive; to enable flexible working; and to promote learning and development.

We safeguard our employees, promoting OHS and wellbeing, as we work towards our ultimate goal of zero accidents and work-related ill health. This goal is more important than ever in the current COVID-19 pandemic, as we take extraordinary measures to ensure we can continue to deliver on our promise to protect what’s good.

From inside to outside

We also work to protect and support people in the communities where we and our suppliers operate. That includes securing a responsible value chain which protects human and labour rights. We are also driving transparency and active communication. To that end, we are ensuring third-party certification and beyond for key suppliers, and enhancing reporting and knowledge exchange around sustainability topics, sharing both achievements and challenges.

Our material aspects

- Securing a responsible value chain
- Promoting OHS and wellbeing
- Promoting diversity and inclusion
- Transparency/active communication in the value chain

Our commitment to the UN SDGs

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From inside to outside

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Our material aspects

- Securing a responsible value chain
- Promoting OHS and wellbeing
- Promoting diversity and inclusion
- Transparency/active communication in the value chain

Our commitment to the UN SDGs
Creating an inclusive work environment
We recognise the value of diversity and we strive to ensure an inclusive work environment and equal opportunities for all. As we work to achieve this ambition, we focused on three key areas in 2019:

Building awareness and skills
We trained 750 leaders in inclusive leadership and we will continue this in 2020 to ensure that all our leaders have been reached. Feedback from participants was very positive.

Driving D&I actions
All our business organisations have built specific action plans around diversity and inclusion (D&I). Many of these focus on closing gaps in the area of women in leadership and providing growth opportunities for all. Clusters and market companies are also now systematically focusing on D&I to ensure that any local issues are addressed.

Measuring D&I
We measure our progress towards achieving an environment that supports development and growth via our Diversity Dashboard and Inclusion Index. On our Diversity Dashboard, we are seeing some positive trends in gender diversity: the number of women in leadership positions continues to increase; the percentage of women hires is trending up; and participation of women in learning is high. We are also seeing the number of women in our talent pools slowly growing. Work is still needed, though, to bring about a step change, not least as the talent pool of women in sciences generally remains small.

On our Inclusion Index, which is based on the results of our Employee Engagement survey (see next page), we have not seen the progress that we had hoped for.

Questions and comments from respondents point to a number of areas where we need to increase our focus in order to create an even more respectful environment. Consequently, we have identified six actions to address these areas going forward (see also next page).
Flexible working arrangements
We continued to roll out flexible working arrangements (FWAs) throughout 2019 and we now have policies in place in all countries with more than 50 employees, nearly doubling the previous total.

Overall, employee reaction is highly positive: 51% have requested an FWA in the last 12 months, with flexible time and place being top of the list, and 66% of FWA workers report a boost in productivity.

The most frequently cited benefits are better work/life balance and less time spent on commuting (see video below for some user comments). However, while the Employee Engagement survey is positive, comments show there is room for improvement in our support of FWA and in mitigating some of the potential negative consequences, such as long hours and difficulty "switching off".

Learning and development for all employees
With the creation of Strategy 2030, our learning focus has increased, as building the right capability to deliver moves centre stage. Accordingly, we did the following:

- Built a new set of leadership behaviours – Create Dynamism, Drive Productivity, Build Capability – in order to enable future success.
- Started work on a comprehensive leadership development portfolio.
- Completed our onboarding programme, which is now available to all newcomers.
- Launched LinkedIn Learning to all employees, which exceeded expectations with 56% take-up and an average 90 minutes of usage.
- Our pilot of driving a continuous feedback culture to support learning was successful and the approach has now been launched to the whole organisation.

Hiring and developing future talent
Our Future Talent graduate leadership programme continued in 2019. We hired our third annual cohort, with 148 participants joining us around the world, bringing the total to 487.

Since the programme began in 2017, 268 participants have completed the programme and are continuing their journey of growth at Tetra Pak; only 30 have left us. We are now using the programme to continue to strengthen both our national and gender diversity and our fourth round of recruiting for 2020 has started.

Employee engagement
Having engaged and productive employees is key for us, especially as we work towards achieving our Strategy 2030 ambitions. In 2019, we conducted our biennial Employee Engagement survey, which generated a number of pleasing results, including:

- A participation rate of 87%, our highest ever.
- Our overall engagement score remains stable at a high level.
- Employees continue to believe in our values (see opposite).
- Improvements in career development and performance management.

However, we are concerned with issues in areas such as speed of change, process and customer focus, especially as these are key to Strategy 2030. We addressed and communicated action items quickly and will run two shorter electronic “Pulse” surveys in 2020 to check that these actions are working and to correct our course if needed.

Six actions to improve inclusion based on survey responses
1. Monitor KPIs and drive gap closure
2. Communicate and engage on inclusion
3. Build inclusive skills and behaviours
4. Expand growth and development opportunities
5. Attract diverse external talent
6. Secure local focus, as required
**SAFE & HEALTHY WORKPLACES**

In the face of COVID-19, protecting our people is more important than ever. In addition to measures to ensure this, we made good progress towards our ultimate goal of zero accidents and work-related ill health.

**Driving a culture change**

In May 2019, we launched the Occupational Health and Safety Culture Change Programme. This is built around the following three elements and has been rolled out across the whole organisation:

1. **A Fair & Just (F&J) culture**

   This aims to build an environment of trust and fairness where it is safe to report and learn from mistakes, errors and system flaws, but where violations of safety rules are not tolerated. F&J places more responsibility on all employees, from workshop operators to managers.

2. **Life-Saving Rules (LSR)**

   These nine rules (see graphic below) have been developed from the major hazards that employees in our manufacturing, services and project organisations are most likely to be exposed to.

3. **“STOP! Are you in the danger zone?”**

   Because we cannot cover everything in nine rules, the F&J culture and LSR are accompanied by a campaign to raise awareness of any and all potential risks.

**COVID-19 response**

The COVID-19 outbreak has been an unprecedented event, affecting communities worldwide. In this context, extraordinary measures have been needed to ensure we can continue to deliver on our promise to protect what’s good. This includes making changes in our own facilities and in our operations with customers, and leveraging our resources to support the supply of safe and nutritious food (see video on the left for more).

**Safety performance**

Compared with 2018, lost time accidents fell by 8.5% across the global organisation and by 33% in our manufacturing sites. Lost time accidents involving contractors fell by 44%. However, there was an increase in lost time accidents for employees working at customer sites, particularly in Services.

A number of initiatives are under way aimed at ensuring that there are fewer accidents in 2020.

**Health & wellbeing**

We appointed Laura Mohomed as our new Global Health & Wellbeing Manager. Her priority is to roll out our Global Mental Wellbeing Programme to new countries beyond the 14 already participating.

**Travel security**

We appointed Shaun Taylor as Global Travel Security Manager. The COVID-19 outbreak and recent security issues in the Middle East have shown us just how important this area is.
Our commitment to protecting people extends beyond our own and our customers’ operations to include the communities where we and our suppliers operate. We work in partnership with our suppliers to minimize human and societal, as well as environmental, risk, while also driving transparency and active communication across the value chain.

Responsible sourcing is the right thing to do as a business, and it is a strategic objective for our procurement organisations. All our centrally and locally managed suppliers must endorse the Tetra Pak Code of Business Conduct for Suppliers and comply with its requirements. We regularly check performance against these commitments through desk-based assessments and on-site audits, followed up by improvement activities. We also expect our suppliers to demonstrate continuous improvement in their own operations and across their supply chains. These activities are part of our procurement processes and our Corporate Governance Framework. In 2019, they comprised:

- We enhanced partnerships with third parties, such as Sedex and EcoVadis, to optimise the coverage of assessments across our supplier base, using a risk-based approach.
- We increased collaboration with suppliers in follow-up activities to ensure that they take any necessary actions identified, thereby driving continuous improvement.
- We selected a new system for supply chain risk management that integrates third-party data, such as from EcoVadis, with artificial intelligence and media screening. This allows continuous monitoring, strengthening our responsible sourcing and supplier risk management activities.
- We created a central governance function as part of the transformation of our Supplier Management organisation, which is working alongside purchasing categories to set strategies and provide expert support in the areas of sustainability, compliance and risk management.
- We embedded our mandatory requirements for responsible sourcing in our “Sourcing Critical Terms” guidance, which ensures that they are covered in all supply contract negotiations.
- We improved our criteria for selecting suppliers that we assess, building on both category and country risk, as well as supplier dependency and strategic importance. Going forward, we will further strengthen our category approach, to ensure we address the most relevant risks and opportunities with our suppliers.
- We updated our mandatory training for responsible sourcing, included in the Tetra Pak Academy for the attention of all employees involved in procurement.

- We were also in the top 1% of companies assessed by EcoVadis in its Manufacturer of Special Purpose Machinery industry category; in the top 1% in Environment; in the top 1% in Sustainable Procurement; and in the top 4% in Labour and Human Rights.

This is the fourth year in a row we have been rated as a leader by CDP’s annual environmental disclosure and scoring process, widely recognised as the gold standard for corporate environmental transparency. We are one of 179 companies – just 2% of the many thousands scored – recognised as a leader for actions to cut emissions, mitigate climate risk and develop the low-carbon economy. We are also one of just eight companies identified as a leader in preventing deforestation in supply chains via sustainable sourcing.
Two important goals for tomorrow

We are working to support the sustainable future of our planet and the long-term success of our customers, as well as the success of our own business. These ambitions are embedded in two of our Strategy 2030 goals: to lead with low-carbon circular economy solutions; and to enhance sustainability across the value chain.

Our approach begins with our commitment to a low-carbon circular economy. To that end, we have worked for years to reduce the environmental impact and increase the renewability of our packages. Now we are accelerating our efforts as we pursue our vision of the ideal beverage carton: a fully renewable and recyclable package.

At the same time, we are contributing to a low-carbon society by striving to minimise impact across our entire value chain. We are working to protect biodiversity, and establishing water stewardship, by working with our suppliers and through third-party verification. We are also working to optimise our own operations and, through our solutions and services, those of our customers. And finally, we are promoting recycling and circularity, through our own activities and through partnerships worldwide.

Our material aspects

- Contributing to a low-carbon society
- Promoting recycling and circularity
- Protecting biodiversity and ecosystems
- Maintaining fresh water availability

Our commitment to the UN SDGs
LOW-CARBON CIRCULAR ECONOMY SOLUTIONS

Our sustainability strategy is founded on our commitment to a low-carbon circular economy. We believe that such an economy should take into account not just recycling and reuse, but also the climate impact of raw materials and manufacturing, as well as impacts on biodiversity and fresh water availability.

Our New Plastics Economy Global Commitment

- **We have already fulfilled our first commitment by launching a paper straw in 2019. We expect to industrialise production on a scale to meet global demand by 2025.**
- **We will increase recycling for PolyAl – the non-fibre components of a beverage carton – both when they are recycled as a blend and when they are recycled separately.**
- **We will incorporate a minimum of 10% recycled plastics content on average across our beverage cartons sold in Europe by 2025, subject to suitable food-grade recycled plastic being technically and economically available.**
- **We will use recycled plastics for secondary packaging and distribution material.**

Taking circularity further

In a circular economy, manufacturers design out waste, reuse and recycle materials and regenerate natural systems to reduce impact on the environment.

We believe that this approach is an essential part of sustainability today. That’s why in 2019, we signed the Ellen MacArthur Foundation (EMF) New Plastics Economy Global Commitment, which is founded on circular economy principles (see left for our commitments.)

However, we believe that this approach needs to go further. It is not enough to think about issues such as waste and climate in isolation; we must look at them together. This is why we are committed to a circular economy that also has a low-carbon focus: one that takes into account not just recycling and reuse, but also the carbon impact of manufacturing and, particularly, raw materials.

In a low-carbon circular economy, the whole value chain is optimised for minimum climate impact. This means operations that are powered by renewable energy, manufacturing processes that are highly efficient and logistics that reduce fuel use.

It also takes into account the positive impact of plant-based renewable raw materials, which can reduce carbon emissions as they grow and are reused and recycled. For example, a 2016 EU Bioeconomy Report estimates that European forests and the forest-based bioeconomy could capture 25% of current CO₂ emissions within the coming two to three decades with the right policy incentives.

Thinking positive

Indeed, we believe that everything a business does should have a positive impact on our planet. So in 2019, we launched our Planet Positive initiative. It’s a new way of thinking that inspires business to take sustainability much further, so that our collective actions add up to solve some of our greatest environmental challenges.

Planet Positive guides our approach to forming the partnerships and collaborations which are now so vital to bringing about meaningful change. It is also highly practical. Through our sustainable end-to-end offering, we support our customers as they work to transform their business and realise their own sustainability ambitions.

Planet Positive

In 2019, we published a hands-on guide to helping our customers transform their business sustainably in four steps. Click above to find out more about our Planet Positive sustainability offering.
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OUR PORTFOLIO

We have worked for many years to reduce the environmental impact and increase the renewability of our packages, and to promote collection and recycling worldwide. As a result, our low-carbon circular portfolio is already strong.

Average package
- 72% materials from renewable sources (average based on total purchased materials)
- 100% paperboard from FSC™-certified and controlled sources
- Lower carbon footprint than alternative packaging (IFEU LCA meta-analysis)
- Recyclable and increasingly being recycled at more than 170 sites worldwide

Tetra Brik® Aseptic 1000 Edge with Plant-based LightCap™ 30
- First aseptic carton package certified for surpassing 80% renewable materials
- Up to 23% reduction in CO₂ emissions compared with a standard Tetra Brik® Aseptic package

Fully renewable package: Tetra Rex® Plant-based
- First beverage carton package in the market made only from renewable packaging materials
- Up to 35% reduction in CO₂ emissions, compared with standard Tetra Rex® package
- Multi-award winning

In July 2019, we became the first carton packaging company to launch paper straws in Europe, fulfilling our first EMF New Plastics Economy Global Commitment.
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While we have already made great progress in developing our low-carbon circular portfolio, our current innovation journey is truly transformational as we work towards our vision of the ideal beverage carton: a fully renewable and recyclable package.

OUR ROADMAP

Four key R&D focus areas
In 2019, after consulting extensively with our customers to ensure alignment, we accelerated our efforts to restructure our packaging innovation strategy around our vision of the ideal beverage carton: a fully renewable and recyclable package. In order to achieve this step change in development, we have considerably increased our investment in this area.

Arguably, this transformation represents the biggest change to our portfolio since the aseptic package was first introduced in the 1960s. It involves the following key R&D workstreams.

1. Renewable package
Vision: To increase the share of renewable materials, removing layers of fossil-based plastic and/or replacing them with plant-based alternatives.

Workstreams
• Further develop and deploy plant-based products
• Develop and launch fully renewable aseptic carton package (see timeline on next page)

What we did in 2019
• We made significant investment so that all our European factories are now capable of plant-based lamination.
• We continued development work to extend our fully plant-based offering to other products in our portfolio.

2. Recycled content
Vision: To use recycled polymers and paper in all our packaging materials, while never compromising food safety.

Workstreams
• Primary packaging (beverage cartons and openings/closures)
• Secondary packaging

What we did in 2019
• We initiated a close supplier collaboration to explore utilising recycled content in paperboard.
• We collaborated with customers on recycled content in secondary packaging in certain markets.

3. Sustainable & anti-littering openings
Vision: This has been a priority area, driven by legal compliance and customer demand. In addition to contributing to our wider goals around renewability and recycling, the aim is to develop innovations that address litter.

Workstreams
• Paper straws
• Non-detachable alternatives
• Biodegradable straws
• Tethered caps

What we did in 2019
• We became the first carton packaging company to launch paper straws in Europe.
• We have initiated several developments on sustainable openings beyond paper straws.

4. Enhancing recycling by design
Vision: To work with partners along the value chain to develop a package that has a high post-consumption value to both recyclers and consumers. This makes it more economically worthwhile to collect and process our material, improving circularity.

Workstreams
• Develop new packaging material structures
• Develop smart packaging that aids collection, sorting and recycling

What we did in 2019
• We delivered our first ever filling machine for aluminium-free aseptic packages and the solution is now being field-tested.
• We participated in the testing of Holy Grail, a new recycling sorting technology based on digital watermarking. We have since joined Holy Grail 2.0, a major consortium now seeking to industrialise the technology.
OUR ROADMAP

The journey to a fully renewable aseptic package

- Plant-based caps
- Fully renewable chilled package
- Aseptic package with highest renewable share
- Deployment of plant-based coating and Tetra Pak® Craft
- Market trial with alternative non-foil barrier
- Field test of aseptic package made fully from renewable sources
We measure our climate performance not just on our own operations, but across our whole value chain. Our main goal is to cap climate impact across the value chain at 2010 levels despite business growth, and we are making fantastic progress to achieve that. In fact, according to our latest audited figures (for 2019), we have actually reduced total emissions by 11%.

In addition to our main climate goal, we are also on target to achieve our commitments under the Science Based Target initiative (SBTi): to reduce direct GHG emissions by 42% by 2030 and 58% by 2040, from a 2015 baseline; and to reduce GHG emissions across the value chain by 16% per unit of revenue by 2020 from a 2010 baseline.

Beyond our climate goals, we are working with our suppliers to minimise our environmental impact by protecting biodiversity and ecosystems, and maintaining fresh water availability in our agricultural and forest supply chains (see next page). We are also working with our customers to help them meet their own sustainability goals (see page 33).

We are a signatory to Caring for Climate, UN Global Compact, The Paris Pledge for Action, Science Based Targets and RE100.
OUR BASE MATERIALS

Looking closely at all suppliers
Responsible sourcing is a strategic objective for our procurement organisations. In addition to the requirements we apply to all our suppliers, we have even stricter rules for the suppliers of the 3.1 million tonnes of base materials (paperboard, polymer and aluminium) that we source for our packaging every year.

Our management process for base material suppliers includes setting reduction targets for CO2 emissions and we report supplier performance against these. We focus on improvement opportunities and allocate purchasing to maximise carbon footprint reduction.

Other key criteria include promoting biodiversity and water stewardship, and ensuring no direct or indirect negative land use change. In 2019, we were one of only eight companies to make the CDP Forests A List for our work to prevent deforestation in supply chains via sustainable sourcing of key commodities.

Our goal is to use as much plant-based renewable base material as possible, as this is essential to our low-carbon circular economy approach.

Current base material responsible sourcing objectives
• Full traceability for our raw materials
• Certification and third-party verification
• No direct or indirect negative land use change
• Promote biodiversity, reforestation and regeneration
• Promote water stewardship

Going beyond: our objectives for 2030
• Going beyond certification to minimise sourcing risk, such as by using satellite sensing to monitor forests
• Going beyond “do no harm” to lead our industry by positive example
OUR BASE MATERIALS

Paperboard: 71%

Paperboard makes up the bulk of our packages. Although we don’t own or manage any forests, we apply our purchasing power to promote sustainable forest management and water stewardship, and to protect biodiversity. We do this by working together with suppliers, NGOs, customers and other stakeholders, and through independent certification and labelling.

All our paperboard comes from wood from forests certified to Forest Stewardship Council™ (FSC™) standards and other controlled sources. With 25 years’ experience, FSC™ is widely recognised as the highest global certification standard for forest management. Its logo is well known to consumers and confirms that the forest is being managed in a way that preserves biodiversity and benefits the lives of local people and workers, while ensuring it sustains economic viability.

Polymers: 24%

Our packages have thin layers of polymer, or plastic, to prevent moisture getting in or out and to keep the product inside safe to consume at a high quality for a long shelf-life. Polymers are also used in our caps, closures and straws.

Our ambition is for all our packages to use renewable and/or recycled polymers, or alternative fibre or cellulose-based materials, with no further extraction of fossil feedstock necessary. However, there is much work still to be done before renewable polymers can fully replace traditional fossil-fuel based polymers, since the industry to convert the raw materials is still embryonic.

In October 2019, in partnership with our long-term supplier Braskem, we became the first company in our sector to obtain Bonsucro Chain of Custody certification, which includes all stages in the supply chain from feedstock production to consumption (see next page). Bonsucro standards follow environmental, social and economic principles, promoting human rights and labour standards, biodiversity and efficiency, and adherence to EU directives.

Aluminium: 5%

Although thinner than a human hair, the aluminium layer inside our aseptic package is responsible for about a third of the climate impact of our base materials. Working to replace this layer is a development priority.

In the meantime, as a founding member of the Aluminium Stewardship Initiative (ASI), we are helping to set global standards that improve aluminium production, both environmentally and socially.

In 2019, we helped ensure that six more of our ten aluminium suppliers became certified for the ASI Performance Standard, which addresses GHG emissions, water use, biodiversity, human and labour rights, and OHS. The final two suppliers are due to be certified in 2020.

We also helped ensure that four of these suppliers were certified for ASI Chain of Custody (CoC), which enables a link between verified ASI Performance Standard practices at successive steps of the supply chain. We expect ASI CoC certification to extend across all our aluminium suppliers by the end of 2020.
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27% of the world’s sugarcane land is engaged with Bonsucro

72m tonnes of the world’s sugarcane is certified annually by Bonsucro

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1 Sugarcane is cultivated on large plantations in the south east of Brazil, far away from the rainforest, where it absorbs CO2 from the atmosphere as it grows.

After being harvested, the sugarcane is crushed and its juice is captured, fermented and distilled to produce ethanol.

3 The ethanol is dehydrated into ethylene, which is then polymerised to polyethylene.

4 The polyethylene is used to make components including caps and laminate film which have the same properties as ordinary polyethylene and can be recycled in existing recycling streams.

Bonsucro Chain of Custody certification

In October 2019, Tetra Pak, in partnership with our long-term supplier Braskem, became the first company in our sector to obtain Bonsucro Chain of Custody certification. The certification reinforces the existing Responsible Ethanol Sourcing Programme from Braskem with traceability of the entire sugarcane value chain, all the way back to the growers and mills. All our products made from plant-based polymers are now being delivered to customers as Bonsucro certified, as from March 2020.
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OUR OPERATIONS

As we strive to lead the sustainability transformation, we want our own operations to be a global benchmark. This means maximising efficiency and minimising waste through World Class Manufacturing, using and investing in renewable power, and utilising certified “green buildings”.

World Class Manufacturing

In 2019, we celebrated 20 years of World Class Manufacturing (WCM), a systematic approach to reducing waste, minimising water loss, improving efficiency and reducing energy consumption. Applied across all our operations, it has led to a 62% reduction in total waste and a threefold increase in productivity since 1999.

Today, we are considered a world leader in WCM. In 2019, our factories in Hohhot, China and Lahore, Pakistan (the factory team is pictured opposite, with their Tetra Pak 2019 Factory of the Year award) were awarded the highest level of the prestigious Total Productive Maintenance (TPM) awards by the Japan Institute of Plant Maintenance.

This World Class award is presented to facilities that have achieved outstanding levels of production quality, reliability, efficiency and environmental performance. It is the first time it has been awarded to any factory in China or Pakistan.

This is the third time in five years that our facilities have received a World Class award, following the successes of our Gornji Milanovac, Serbia factory and the Izmir, Turkey factory in 2015 and 2017 respectively. Only 24 plants in the world have achieved World Class status: our facilities represent a sixth of this total.

Out of the 30 Tetra Pak packaging material factories currently in operation worldwide, 27 have received one or more TPM awards.

90% of Tetra Pak factories now have TPM awards

4 Tetra Pak factories have World Class TPM status

62% reduction in total waste since WCM began in 1999

3x increase in productivity
GREEN BUILDINGS

Certified factories and offices
In addition to our production processes, the quality of our buildings makes a significant difference to the sustainability of our operations. In all new projects and major fit-outs, where possible, we now aim for Gold level certification from Leadership in Energy and Environmental Design (LEED), a leading international certification standard. Even when we choose a small office, sustainability and accreditation of the building is a key deciding factor.

In July 2019, we inaugurated Vietnam’s first ever aseptic carton packaging material factory, in Bình Dương (see annotated image, left). Our eighth factory in the Asia Pacific region, the €120 million new facility has an expandable capacity of 20 billion packs per annum to supply both domestic and export markets in ASEAN, Australia and New Zealand. It is one of the first factories in Vietnam to be certified Gold according to the latest, most demanding LEED Version 4 certification.

Sustainable around the globe
Additionally, our factory in Chakan, India is currently in the process of renewing its LEED Gold certification. Certification is also under way for parts of our factories in Kunshan and Hohhot in China, and our new test hall facility in Modena, Italy.

In October 2019, we opened our new head office in Shanghai, China. Again, sustainability was key to the choice of building and fit-out. Located within a LEED Platinum-rated development, the newly remodelled 7,600 sq m office has been awarded LEED Gold certification for its interior design and construction.

Also in October, we announced the opening of a €25 million site with sales, engineering and manufacturing facilities for cheese production solutions in Olsztyn, north-eastern Poland.

The site was designed and constructed in full compliance with requirements laid out by the Building Research Establishment Environmental Assessment Method (BREEAM), another well known and respected international standard.
RENEWABLE ENERGY

Right on track to 100%

In 2019, renewable electricity use across our operations increased from 55% in 2018 to 69%. We are on track to meet our RE100 targets of 80% by 2020 and 100% by 2030. All of our converting factories within the EU are already now using 100% renewable electricity.

We commissioned a total of more than 1600 kilowatts of solar photovoltaic capacity at our factories in Rayong, Thailand and Denton, US (pictured). This represents over 5,000 solar panels.

Our total energy use has been kept relatively flat in recent years. It has grown by just 2% since 2010, despite significant increases in production and the addition of new facilities, thanks to improvements in energy efficiency.

Our energy audit programme is a major contributor to this increased efficiency, realising total energy savings of 345 gigawatt hours since 2010, and avoiding what would otherwise have been a growth in energy use of 23%.

69% of renewable electricity supplied to our operations

8 solar photovoltaic installations on Tetra Pak factories
Tetra Pak Processing Solutions, Equipment and Services are highly focused on minimising water use, food waste and carbon footprint in our customers’ operations, helping them on the journey towards achieving their ambitious targets in these areas. Here are some of the key developments during 2019.

- At Davos in January 2020, we launched Tetra Pak® Marketplace, the industry’s first full-scale virtual marketplace (see below). Created in partnership with Mirakl, the marketplace is open 24/7 and hosts more than 300,000 spare parts and consumables from Tetra Pak as well as 200,000 products from vetted sellers, giving customers access to a large variety of products in real time.

- In Q1, 2019, our Water Centre of Expertise in Silkeborg, Denmark started providing our customers with water recovery and savings assessments. Ways in which we can help our customers minimise their water footprint include: a hygienic treatment solution for standardising supply water with minimal water loss; process water recovery solutions for the dairy industry; and on-site water reuse and recovery assessments. The Centre has been working with Carlsberg at its site in Fredericia, Denmark to develop a solution that reduces water waste in carbonated soft drink water production by almost 100%.

- From the start of 2020, production at our customer CONO Kaasmakers’ cheese-making plant in Beemster, the Netherlands has been officially certified as climate neutral. As communicated in our 2017 Sustainability Report, we supported CONO Kaasmakers’ ambition to build “the greenest dairy in the world”, providing the most advanced water and energy recovery solutions and minimising product losses.

A world first for the food and beverage industry, Tetra Pak® Marketplace offers customers a vast variety of the products they need to run their plant. The assortment will continue to grow as more sellers join the marketplace over time. Click the screen to watch the video and find out more.
OUR SUSTAINABLE EQUIPMENT

Tetra Pak® Cheese Vat Yieldmaster 2
As the largest cheese vat available in the world, with the highest yield, the Tetra Pak Cheese Vat Yieldmaster 2 continues to gain global acceptance by customers for its economic and environmental benefits. A typical* 10 ton/hr cheese plant can produce up to 600,000 kg of extra cheese per year with the same volume of milk simply by installing Yieldmaster vats. Its size advantage means fewer physical vats, and fewer batches, to get the same throughput, which means less environmental impact. In 2019, our customers installed a total of 26 Yieldmaster Cheese Vats, producing more than 1.9 million kg of additional cheese, while saving more than 23 million litres of water over the course of the year.

*Typical for many customers. Numbers vary with cheese type, cheese milk composition and plant capacity.

Tetra Pak® Tubular Heat Exchanger with P2P
This unit saves a significant amount of the energy typically required for steam and cooling in a product-to-water (P2W) heat exchanger. Overall energy consumption is up to 55% lower compared with a conventional P2W unit, and its insulation capabilities also reduce heat loss by up to 67% compared with P2W alternatives.

Tetra Pak® Standardisation unit with continuous protein control
The industry’s first in-line standardisation analyser, developed in partnership with FOSS, experts in milk analysis. This new solution utilises automation hardware and software algorithms that react and adjust in real time, offering unique guaranteed ratio performance. It delivers key data accurately every seven seconds, enabling quicker reaction times to ensure on-specification product quality 24/7. The benefits for customers, especially producers of cheese and powder, include significantly better standardisation performance for fat-to-protein ratios, uniform product quality, improved sustainability and elimination of uncertainty associated with manual sampling.
**OUR SUSTAINABLE EQUIPMENT**

**Tetra Pak® powder mixer range extension**
Powder-to-powder mixers are key elements in food production lines and one of the biggest equipment investments producers make, but cleaning them has previously been a time-consuming and costly affair. This unit delivers the industry’s fastest dry cleaning and lowest downtime, allowing energy consumption significantly lower than the competition due to its design and automated power control.

**Best practice lines for yoghurt products**
A suite of expert services that support a wide variety of yoghurt innovations to address growing consumer demand. The best practice lines support the design of customised solutions for five types of yoghurt products: stirred, set, drinking, concentrated and ambient. These are specific sets of guidance which can be tailored to match the particular production needs of different types of yoghurt.

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**TETRA PAK® CERTIFIED RENOVATED EQUIPMENT**
Another way that we have built circularity into our portfolio is through our Tetra Pak® Certified Renovated Equipment (CRE) business, which we introduced in 2018. We define CRE as previously used capital equipment that has been renovated and certified according to a single global quality standard. CRE fulfils circular economy principles, thereby reducing scrappage, and means customers can buy equipment with certified performance at an economical price. In 2019, we delivered 172 CRE machines, comprising 57 filling machines and 115 items of downstream equipment.
Recycling & Circularity

Recycling is one of the key enablers of a low-carbon circular economy. We have worked to develop collection and recycling infrastructure in all of our markets for many years, investing €23 million between 2012 and 2019. We have helped to grow the number of facilities that recycle beverage cartons worldwide from 40 in 2002 to more than 170 today.

As a key part of Strategy 2030, we are now working in an ever more holistic way, focusing both on recycling and recyclability in the design of our packaging, at the same time as accelerating our efforts to drive infrastructure development to improve collection and recycling.

Today, we have around 150 to 200 people working on enhancing recycling by design in our packaging, and another 50 people focused on collection and recycling around the world. The experience, expertise and contacts we have developed over the years is crucial to accelerating our work. But we cannot do this on our own. In particular, when it comes to advancing collection and recycling on the ground, partnership is the game-changer. Here are some of the ways we are leading transformation through collaboration.

50 bn
Tetra Pak® packages were recycled in 2019

26%
of total Tetra Pak® packages were recycled in 2019

170
plants worldwide recycle Tetra Pak® packages

77
Tetra Pak markets have used package collection

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WORKING TOGETHER

Individual customer partnerships
We work closely with our customers to help them achieve their own circularity ambitions. Here are some examples of how we work together with key customers:

- We continuously update and consult with them on our R&D and portfolio strategic direction to ensure alignment around future packaging.
- We work with them to scale up collection and recycling collaboration in prioritised markets through our partners and existing platforms.
- We integrate sustainability information, such as recycling messages on-pack and online, to help drive new behaviour and understanding.
- We collaborate on advocacy initiatives, including participation in associations and other platforms, in order to foster communication and engagement.

Global industry alliances
Building on our contribution to existing alliances such as the New Plastics Economy and the Alliance for Beverage Cartons and the Environment (ACE), in 2019 we worked to advance the following new initiatives:

- Launched in July 2019, the 3R Initiative is a first-of-its-kind global effort designed to reduce, recover and recycle the growing amount of plastics generated by companies. It creates a transparent standard ensuring robust and consistent measurement and reporting of projects that reduce plastic in the environment. Uniquely, it also creates a “plastic crediting” mechanism that motivates companies to maximise the recycled content of the plastic they use and also incentivise recycling activity. We are a co-founder of 3R along with Danone, Veolia and Nestlé. It is led by international standard-setter Verra and environmental market developer BVRio, both non-profit organisations.
- In November, we became a founding member of 4evergreen, a new alliance that aims to boost the contribution of fibre-based packaging materials, advocate for EU legislation supporting product design for recyclability and call for the development of optimised collection systems and appropriate recycling infrastructures. Among the first members are a number of our customers, suppliers and competitors, including Nestlé, Danone, Stora Enso, SIG Combibloc and Elopak.
- Tetra Pak is a participant in the Consumer Goods Forum Plastic Waste Coalition of Action, which is in the process of outlining and agreeing ambitious deliverables around product design, extended producer responsibility (EPR), chemical recycling and collaborative initiatives in priority markets.

Local alliances
In addition to our global initiatives, we work to increase recycling on a local level through our cluster and market activities. Read more on our website.
RECYCLING PARTNERS

Giving cartons a new life
All components of our carton packages are recyclable and can be transformed into a wide range of products. But more needs to be done to enhance the value of the recycled materials, so that they can be turned into industrial products with high value and large volumes. This is particularly true of the recovered polymer and aluminium mix (PolyAl), for which recycling capacity and increased value is lacking on a large commercial scale. We are working with a growing number of recyclers and other stakeholders to develop viable and sustainable business solutions. Here are two examples:

• In 2018, we announced a new partnership with Veolia group, the global leader in optimised resource management, to expand collaboration and accelerate global beverage carton recycling to create an efficient circular economy. (See diagram right for an outline of Veolia’s recycling process.) Our goal is to demonstrate that PolyAl recycling is sustainable, also by 2025. By creating demand, we aim to incentivise recycling of available and accessible PolyAl generated by companies currently recycling fibre from used beverage cartons.

• For the past three years we have been acting as a key knowledge partner and contact facilitator with Furukawa Electric, also introducing them to Veolia. In May 2019, Furukawa announced a breakthrough new technology that can combine plastic and paper waste in a single process to make a material comparable with glass-fibre-reinforced plastic, but at a much lower cost. Furukawa started utilising material made from the new technology in its own commercial products soon after the announcement.
Tetra Brik®, Tetra Classic®, Tetra Pak®, Tetra Rex®, Tetra Pak® Cheese Vat Yieldmaster 2, Tetra Pak® Tubular Heat Exchanger, Tetra Pak® Standardisation unit, Tetra Pak® Powder mixer, and PROTECTS WHAT’S GOOD™ are trademarks belonging to the Tetra Pak Group.