# Innovation starts here.





# Innovating together towards the future of food.

Tomorrow's challenges demand innovation today.

Innovation is the spark of progress. A catalyst for change driven by the right ideas. At Tetra Pak, our commitment and history all point back to one thing: the dedication to solve things in a better way.

Like Dr. Ruben Rausing did 70 years ago when he invented the tetrahedron package. Not only did this unique invention revolutionise food and beverage packaging, but it also unleashed a power of innovation that has had a lasting impact on the industry.

As the world and consumers change, our customers in the food industry are facing a transition on several parametres: sustainability, recycling, carbon emissions, connectivity and traceability, just to name a few.

No partner to the food industry is better equipped to help in this transition than Tetra Pak. We have a solid backbone of technology and end-to-end expertise, a continuous influx of the brightest talents and a range of modern, specialised facilities – from innovation centres to high-tech labs.

And with a collaborative approach to innovation, where we gather customers, partners, and experts from academia, tech and throughout society, we can tackle some of the most pressing and challenging issues in our industry.

Let's create the future of food together.

Innovation starts here.



What drives us.

# "A package should save more than it costs."

Dr. Ruben Rausing,
Founder of Tetra Pak

# Innovating to help protect what's good.

"We want to be part of the solution to move our industry forward and continue to protect food, people and the planet."

- Adolfo Orive, President & CEO, Tetra Pak Group

To us, innovation means empowering our customers to deliver high standards of food safety and availability to people all over the world. And it means protecting the planet by leading the sustainability transformation across the value chain – to minimise the use of resources and optimise the lifecycle of everything we produce. Simply put, innovation enables us to deliver on our commitment to protect food, people and the planet.



# Working towards a world with secure and sustainable food systems requires innovation.

At Tetra Pak, we believe that everyone, everywhere deserves access to safe, nutritious food. That's why we are committed to play our part in moving food forward: creating a world with secure and sustainable food systems. We cannot move food forward alone, so we are collaborating closely with customers, governments, partners and NGOs and focusing on the areas where we can make the greatest contribution: increasing access to safe, nutritious food; reducing food loss and waste; and building sustainable food value chains.

# Developing the food package of the future.

Although critical for ensuring consumers around the world have access to safe, nutritious food, food packaging has a significant climate impact. We're on a journey to deliver the world's most sustainable food package. Our aim is to create cartons that are fully made from renewable or recycled materials, and are fully recyclable and carbon neutral. We call this ambition: Go nature. Go carton. And we know we need continuous collaborative innovation to succeed.

Shaping the industry.

# "We're collaborating to innovate breakthrough solutions."

- Laurence Mott,

Executive VP for Development and Engineering at Tetra Pak.



1951

Tetra Pak is established and introduces tetrahedron packages.

1969

Tetra Brik® Aseptic packages revolutionise the food industry. 1991

The first integrated end-to-end solutions emerge.

2015

The first fully renewable package is born.

2016

The world's most advanced plant automation and information solution. 2016

The first aseptic carton package certified for its use of renewable materials.

2030

The world's most sustainable package and much more.



# **Collaboration stories**

# Building a collaboration ecosystem with paperboard suppliers.

As the operating model of linear supply chains is running out of date, the food packaging industry needs to react. That's why we've built a new collaboration model to tackle the industry's sustainability challenges together. We form strategic partnerships with suppliers, producers, research institutions and start-ups to work towards our mission to create the world's most sustainable food package.

# Industry-academia developments with Lund University.

We've entered a five-year strategic partnership with Lund University in Sweden. By creating a platform for industry professionals, students and professors to share ideas and resources, we collectively foster new solutions along the food value chain – from developing new and sustainable materials from forest resources to advancing emulsified products and innovating the package's shape and format.

# Demand-driven manufacturing.

The food and beverage industry now requires that producers have a level of agility never seen before. That's why we're merging our food application expertise with Rockwell Automation's leading digital technology to help cheese and powder producers adapt to demand-driven manufacturing. The result: customised turnkey Cheese and Powder solutions built to reduce variability, improve quality consistency, and ensure sustainable, cost-effective production.

# Co-innovating with customers always yields the best results.

Combining expertise to seize opportunities.

We combine our capabilities with the food manufacturing expertise and know-how of our customers. By continuously raising the bar, we help our customers seize new growth opportunities and empower them to achieve higher standards and leading-edge food innovations every day.



# **Co-innovation stories**

# Plant-based products in a plant-based carton.

As a pioneer in plant-based food and drinks, creating products from almond, oat, soy, coconut, hazelnut, rice and cashew, Alpro is on a mission to change the way we look at food, consumption and production. We worked together with Alpro to develop the optimal plant-based packaging for Alpro's plant-based products. Today 84 per cent of the market leader's beverages come in carbonneutral packages.

# Driving innovation through virtual product development.

Adversity drives innovation – this has always been true, including during COVID-19. Due to quarantines and lockdowns, we quickly scaled our virtual product development offering to be sure our customers could continue testing, evaluating and modifying their product concepts in our Product Development Centres. Not only did the quality of the virtual trials match the outcomes of our face-to-face approach, but in some cases, they even increased customer involvement.

### **Explore our Customer Innovation Centres.**

In our Customer Innovation Centres you can explore every step of the innovation process. It's a space where we develop and test technologies together to come up with the ideal packaging and processing solutions that are designed to meet your needs.

Innovative solutions.

# "We need innovation at the forefront to tackle challenges and unlock new opportunities for our customers."

– Adolfo Orive,

President & CEO, Tetra Pak Group



# **Consumer-driven solutions**

# The connected package increases value chain transparency.

Traceability is becoming increasingly important in demonstrating food safety for manufacturers and consumers. We enable transparency on our connected packages with a code that allows producers to turn their products into data carriers. Full traceability of individual packages will soon be possible for the first time, adding value to stakeholders along the value chain – from logistics to recycling.

### The mission to reduce sugar in juice.

Consumers are increasingly on the lookout for low-sugar juice products. We are continuously improving processing solutions to help reduce sugar content while protecting the vital nutrients that consumers also want and need.

## Consumer usability studies.

In order to closely follow how consumer mindsets and preferences are changing, we conduct regular studies across demographic and geographic groups. This helps our customers ensure they are meeting the right expectations and has resulted in innovations like our ergonomic openings, which offer functionality perfectly suited to different demographics.

# Developing sustainable materials for food and beverage packages. Clean label and sustainable foods are in demand. The environment and health are the top two concerns for consumers globally. As more and more consumers reach for clean label and sustainable foods and beverages, the quest is on for new ways to approach product innovation. We are constantly working to help our customers develop and process new products that meet the latest sustainability demands. Innovative solutions.

# Sustainability-driven solutions

## Advancing sustainable packaging.

Our ambition is to deliver the world's most sustainable food package, made solely of responsibly sourced renewable or recycled materials, fully recyclable and carbon-neutral. Today we have a range of sustainable packaging solutions available, offering paper-based straws and sugarcane-based plastic layers and caps. We are also working according to voluntary sustainability standards such as those from the Forest Stewardship Council® (FSC®) and Bonsucro.

### Tethered caps and paper straws.

Tethered caps are designed to prevent plastic litter, and avoid plastic lids getting lost in the environment, where they could take hundreds of years to degrade. They are available as plant-based options, made from sugarcane-based polymers. Together with our paper straws, these solutions reduce the environmental impact of our carton packages.

# Towards a fully renewable aseptic carton package.

We are working hard to develop our first-ever fully renewable aseptic carton package with an alternative to the aluminium barrier. Our goal is to field test an aseptic package made from renewable sources by 2022. In 2019, we delivered our first filling machine for aluminium-free aseptic packages that is currently being field-tested. We look forward to reporting on our progress. Today our Tetra Brik® Aseptic 1000 Edge with Plant-based LightCap™ 30 is the first aseptic carton package certified for surpassing 80 per cent renewable materials.

### Introducing certified recycled polymers.

We introduced certified recycled polymers and became the first company in the food and beverage packaging industry to be awarded the Roundtable on Sustainable Biomaterials (RSB) Advanced Products certification. Through close supplier collaboration with INEOS, we are converting waste plastic into high-quality polymers, a move that is a key step in our approach to circularity. Our long-term ambition is for all our packaging to use renewable or recycled polymers, ending the extraction of fossil feedstock.

# Connecting the food industry through digitalisation.

# Transparency. Flexibility. Efficiency.

Digitalisation and connectivity are changing the food and beverage industry as we know it. Using a range of emerging technologies, we are working to offer new, unprecedented opportunities to increase food safety and quality,



# **Connected solutions**

# Our Digital Plant Engineering platform.

We collaborated with Hexagon, a global leader in sensor, software and autonomous solutions to offer virtual visualisation of plants. It allows us to collaborate with customers, colleagues and suppliers globally in designing a total production plant, making it easy to simulate, evaluate and select optimal solutions for specific customer needs.

# Automation and information in one solution.

Increasing production control can help improve food safety, reduce operational costs and minimise unplanned downtime. Tetra Pak® PlantMaster is an integrated automation and information solution developed specifically for food production. It's a single flexible, scalable and customisable solution with open MES software platform and common data management system that helps you digitalise your entire operation, share data throughout your factory and the supply chain, and secure your plant for the future.

# A promise of operational success.

Overcome your operational challenges and achieve tangible results over time with tailored services solutions. Our solutions are customised to meet your specific needs enabled by digital offerings. We do a thorough analysis to figure out exactly what your pain point is and how to fix it. Using our range of digital tools and services we turn your pain into gain.



# **Integrated solutions**

# Customised, optimised production.

Utilising proven equipment combined with industry-leading expertise, Tetra Pak has launched new best-practice lines for different categories such as yoghurt, juice, cheese and milk. These best-practice lines contain sets of guidance that can be tailored to match production needs of different products.

### eBeam: Sterilisation at the speed of light.

eBeam technology is a sophisticated and safe way to sterilise and further advance our aseptic technologies and solutions. Tetra Pak® E3 filling machines, based on eBeam technology, sterilise packaging material using electron beams. As an alternative to the hydrogen peroxide sterilisation process, it guarantees the same performance while also reducing operational costs, improving environmental performance and offering greater production flexibility.

# End-to-end innovations across packaging, processing and service.

Keeping up with consumer demands requires scaling up your operational capabilities while at the same time optimising and reducing your environmental impact. By taking a holistic approach and seamlessly integrating processing, packaging, automation and services, you can increase efficiency, quality and reliability along the entire value chain.

# Let's drive innovation together.

The world is always evolving, and we are continually faced with new challenges. We believe innovation is the answer as we continue to push forward into the future. Every day brings new exciting technological developments all around the world, and we are committed to playing our part in developing the breakthrough solutions that will shape a more sustainable tomorrow.

But we know we can't achieve the breakthroughs we need in a vacuum. Inspired and driven by our customers' challenges, we will continue to collaborate across the value chain and across several realms of society to rethink our current issues and discover new innovative ways to solve them. Let's work together to drive food and beverage innovation around the world.



# Innovation starts here.