

# The Industrialist

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“Innovation is at the forefront of everything we do and helps create a better planet for us all.”

**Elena Moruzzi**

Vice President, Automation & Digital Development and Technology, Tetra Pak

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# Tetra Pak: Adapting to protect our future

**Tetra Pak, a processing and food packaging company founded almost 70 years ago, was built on a single concept for a now iconic innovation.**

"Ruben Rausing, our founder, believed a package should save more than it costs," says Elena Moruzzi, Vice President Automation and Digital Development and Technology at Tetra Pak. The Swiss multinational, which is a privately held business operating across 160 countries, today provides packaging and processing solutions for a multitude of food and beverages. And every step of the way, it focuses on how innovation can drive value for food producers, including in new, efficient and sustainable processes.

We met with Moruzzi, an electronic engineer by training, to discuss the impact of recent digital acceleration on Tetra Pak's strategy, how her team translates innovative concepts into tangible value for customers and how the company plans to set itself apart with its ever-present, singular mission to protect food, people and the planet.

## What one word describes you best?

Passionate.

Passionate to make things happen and to make products that drive change.



## Can you tell us about your career journey to date?

I joined Tetra Pak back in 2010 from the network side of Ericsson. I originally trained as an electronic engineer. However, I joined Tetra Pak in the program management organization. After a few years, I was leading it, before becoming vice president of the packaging technology organization focusing on innovation. In 2018, I had the chance to combine my experience in automation and my knowledge of Tetra Pak when I became the vice president for automation and digital. This job gives me the chance to show, together with my team, how automation and digital technology can support business growth at Tetra Pak and for our customers.

## What have been your biggest learnings from the past few years?

When we started our digitalization journey approximately 5 years ago, we looked at digitization as a new gold mine of business opportunity. We began by thinking about digital as a standalone opportunity, but quite quickly learned that the real value is in using digital tools and technology to enhance our offerings, including our plant automation offering. Digital is a key enabler for enhancing our product offerings and portfolio to deliver value to our customers.

## What is your approach to innovation? Can you highlight any ground-breaking initiatives?

Innovation is at the forefront of everything we do and helps create a better planet for us all. We're collaborating with our suppliers and customers to ensure we can keep innovating and provide business growth for everyone.

One innovation we launched a few years ago still is really at our core. In 2015, we launched the world's first filling machine that uses eBeam, a new technology to sterilize packaging material, which we developed in collaboration with our supplier Comet. eBeam is more sophisticated than the traditional hydrogen peroxide sterilization process for packaging material. It uses a controlled beam of electrons to kill micro-organisms as the packaging runs through the filling machine, reducing energy consumption and food waste.

We have also recently launched our first-generation non-foil material that is now available on the supermarket shelf in Japan. It is the first step in our sustainability journey towards fully renewable and recyclable packaging. The protective aluminum layer has been replaced by a more environmentally sound polymer film, cutting the carbon footprint by almost 25%.



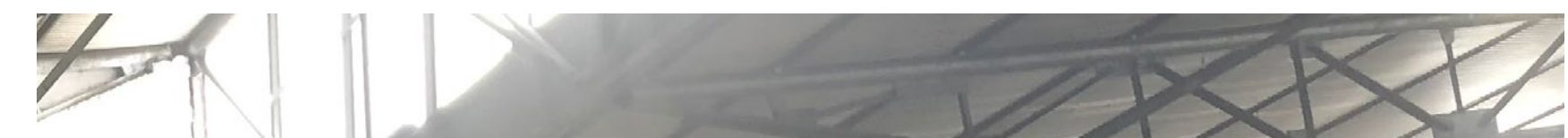


## **How is Tetra Pak differentiated from its peers?**

We have a unique end-to-end offering across packaging and processing that enables us to fully support our customers. Our expertise in food and beverage processes differentiates us, but we know other companies are better in other areas. That's why we believe that collaboration with companies that are key players in their specific segment is key to our success. For example, working with Accenture, a leader in system integration and the digital space, ensures we can deliver this full end-to-end offering that is the best in the market.

## **How do you translate good ideas into tangible concepts and bring those to customers?**

Digital is a tool that helps us solve customer problems. And everything starts with understanding the customer and the problems we need to solve. Once we identify that, we design the solution—whether it's a new digital platform or new packaging. We leverage partnerships more and more and collaborate to ensure we have the capability and capacity to execute faster and according to the market's needs. Once again, understanding the customer's needs first is key to leveraging the right internal and supplier competencies to ensure our execution is as fast and effective as possible. We're also simplifying our operations to ensure we are closer to the market and more effective in supporting the deployment of our innovations to the market.



## What technologies are embedded in Tetra Pak's services, and how are they bringing value to customers?

In the automation space, we are moving from programmable logic controller (PLC)-based operations to industrial PCs (IPC) to ensure we have more intelligent equipment. We're also making use of independent cart technology. Our new [cap applicator](#) uses independent cart technology, which allows us to manage every cap in a specific way. We can control every single application, making the product quality extremely high. The independent cart technology will also enable us to create a digital twin where we can digitally control what's happening.

We have also developed an application in our converting factory to ensure every package has a unique ID. We use those IDs to transfer data between our converting and customer floor and will also use them to ensure our machine can adapt to each single package. This is the dream—to have a machine that can adapt its processes according to each individual package that enters the machine.

We're also working on embedding our filling machine with an artificial intelligence algorithms that helps us predict how the machine and processes will behave.

Finally, we're working on automation solutions for entire plants. This will enable customers to optimize plants according to their needs. We will be investing a lot in this space.



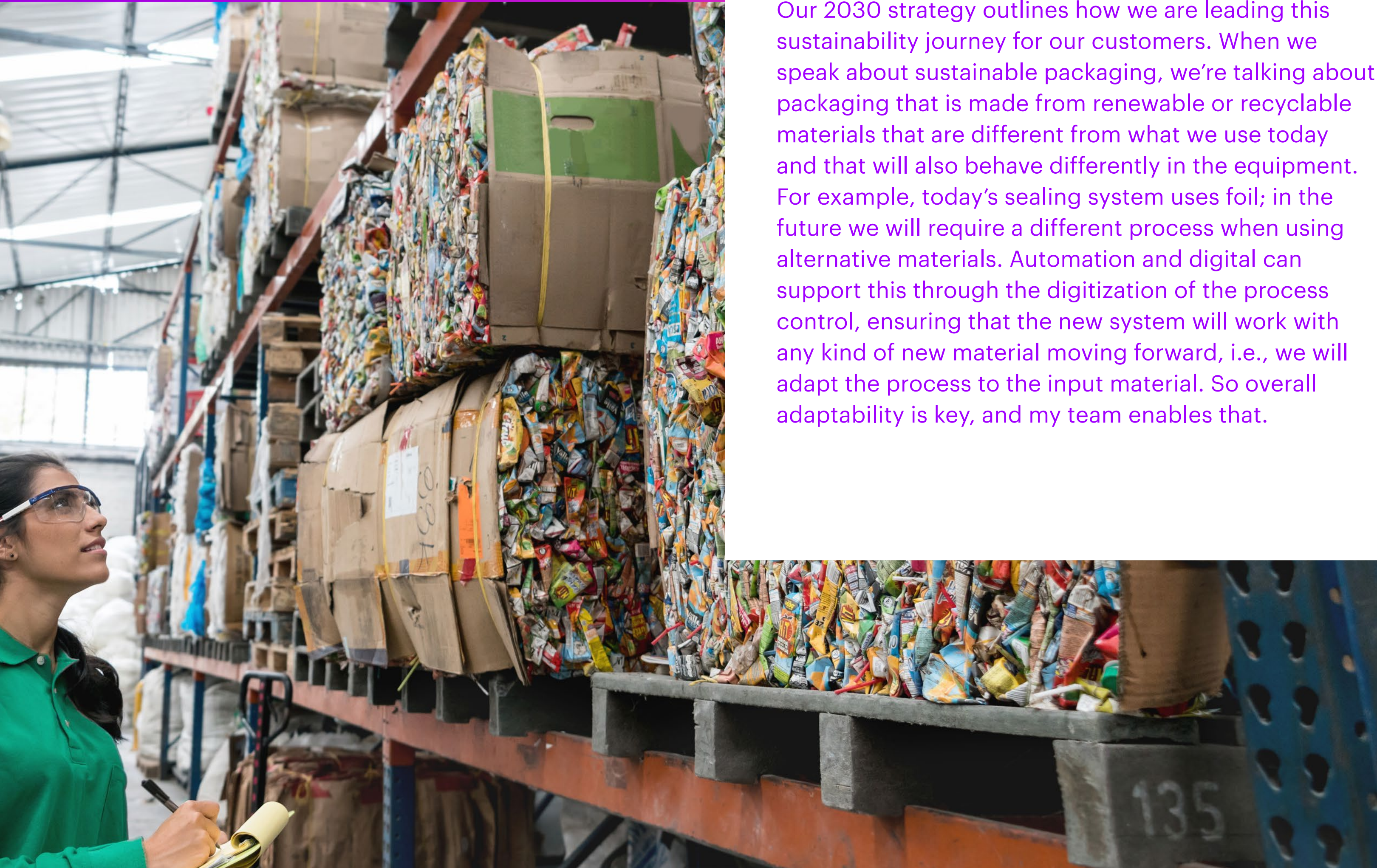


## **Tetra Pak aims to deliver the most sustainable food packaging. How is your team contributing to that vision?**

Our 2030 strategy outlines how we are leading this sustainability journey for our customers. When we speak about sustainable packaging, we're talking about packaging that is made from renewable or recyclable materials that are different from what we use today and that will also behave differently in the equipment. For example, today's sealing system uses foil; in the future we will require a different process when using alternative materials. Automation and digital can support this through the digitization of the process control, ensuring that the new system will work with any kind of new material moving forward, i.e., we will adapt the process to the input material. So overall adaptability is key, and my team enables that.

Traceability and transparency around materials is also critical. Digital tools ensure that what we are using is transparently tracked across the value chain, in order to give customers and consumers evidence that what they are buying is made from sustainable materials.

Recycling is a key element of the sustainability journey, and with digital tools we can support the consumer to recycle in the best way and support the recycler to differentiate the material.





## What emerging trends will be game changers in the market and for Tetra Pak?

Sustainability is the first one. It's a big revolution for this sector and a big challenge. But it's also a great opportunity for us, our customers and for the consumer. Another trend we believe is important is one we're calling "integrate and optimize." Our customers will increasingly be faced with the need to optimize their processes to reduce waste and costs. Optimization of plants and production is key and something we would really like to lead in, together with our customer.

Consumer needs are evolving, and we believe personalization of the product will be important in the future. Specific innovations and customization are therefore very important, and we are investing a lot in digital printing to ensure we can create the right flexibility in our processes.

"Batch-of-one" (single-item or made-to-order production) is not just about printing; it is about ensuring the entire value chain is ready, modern and flexible to get to that point. We lead in food and beverage packaging, making food safe and available everywhere. Food safety, while also safeguarding sustainability, is crucial for us and will continue to be important in the future. I think it is the responsibility of every player in the food and beverage value chain.





## Where do you see Tetra Pak in the next five to ten years?

Tetra Pak is committed to protecting food, people and the planet, and we have detailed our ambitions in our 2030 strategy. Part of that ambition is to lead in sustainability and ensure we are the preferred partner for our customers when it comes to the optimization and integration of their plants and providing an end-to-end solution that ensures they are the best in the market. At the same time, we will continue ensuring food quality and transparency.

## What inspires you most?

It inspires me to see technology translating into something of great value for our customers. Sometimes you struggle with these breakthroughs, but it's a journey. However, when you realize how important those technologies are, that is really exciting to me. Technology is key, and it's important to keep a long-term view, to help the next generation.



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