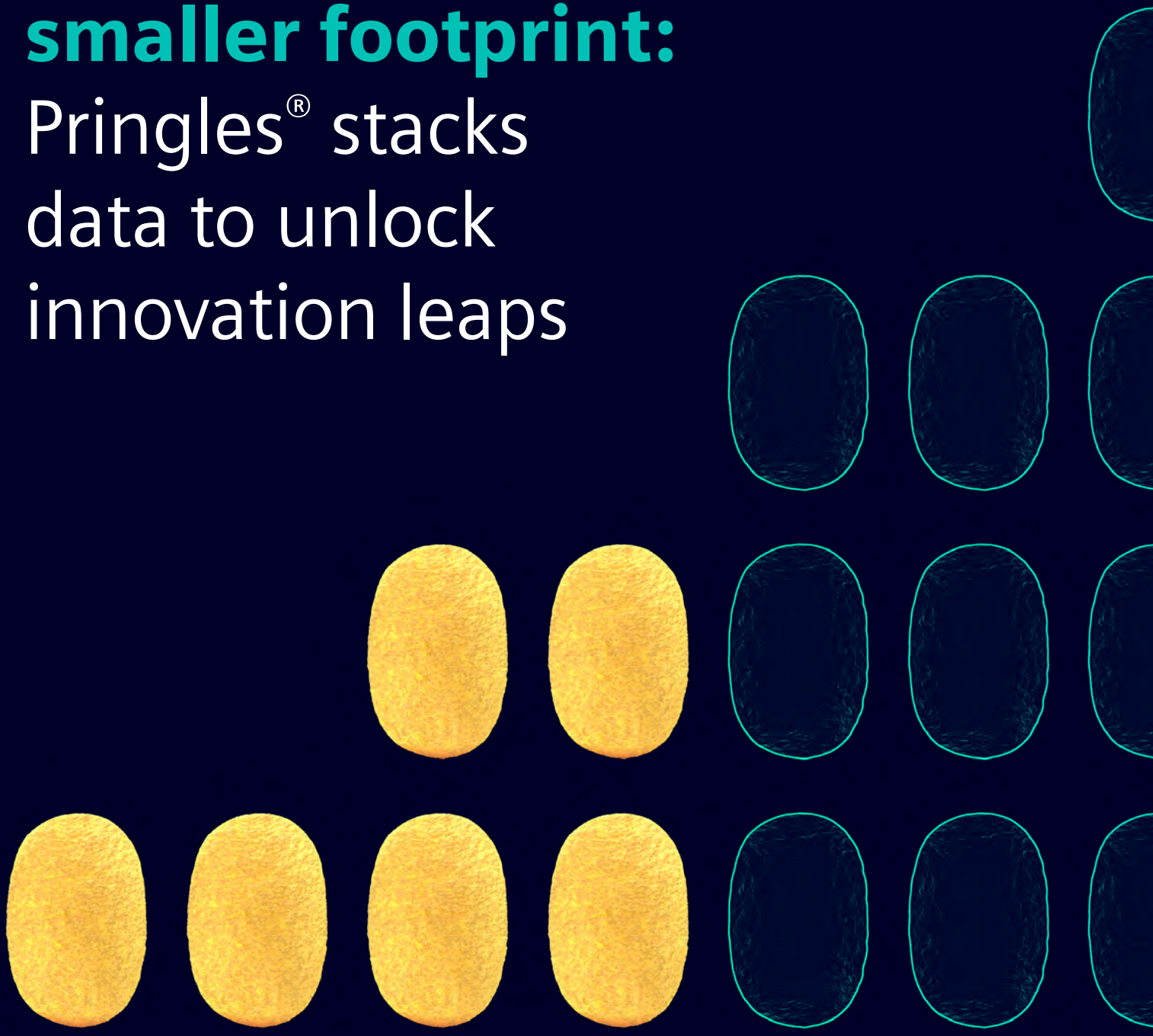
REFERENCE 2026

Bigger crunch, smaller footprint:

Pringles® stacks data to unlock innovation leaps



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Data is the secret ingredient to Pringles chips

When your production is already running at peak automation, boosting capacity while cutting costs becomes the next big challenge. So what do you do? You rethink the rules. This Pringles factory did exactly that by stepping into digital transformation.

Because once data enters the equation, everything changes. Today, the factory taps into real-time insights to push performance further – producing faster, better, and more efficiently than ever before. And Pringles are just getting started. Automation wasn't the end point. Data is the breakthrough.

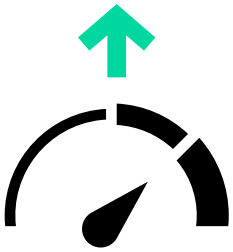
From raw dough to rock-solid data: The digital transformation of a Pringles factory

Imagine producing more than 100,000 tons of Pringles chips a year. Your production is perfectly automated, your operators are seasoned experts, and everything runs like clockwork. But the outside world doesn't. Demand shifts unpredictably, energy costs climb, and climate change disrupts raw materials. That's exactly the situation the Pringles factory in Kutno, Poland, faced.

When automation isn’t enough

With production lines already optimized to the limit, plant director Ronny Matthijs needed a new way to boost performance. His answer: digital transformation. By unlocking the power of data, the factory could push past the boundaries of automation.

“Data is an important element in digital transformation”, Ronny says. “You need data from your equipment, simulations, ingredients, and finished products to create a stable line and boost performance in your factory.” Now, he can predict dough behavior and energy consumption, helping to reduce downtime, waste, and energy costs.



10% higher capacity

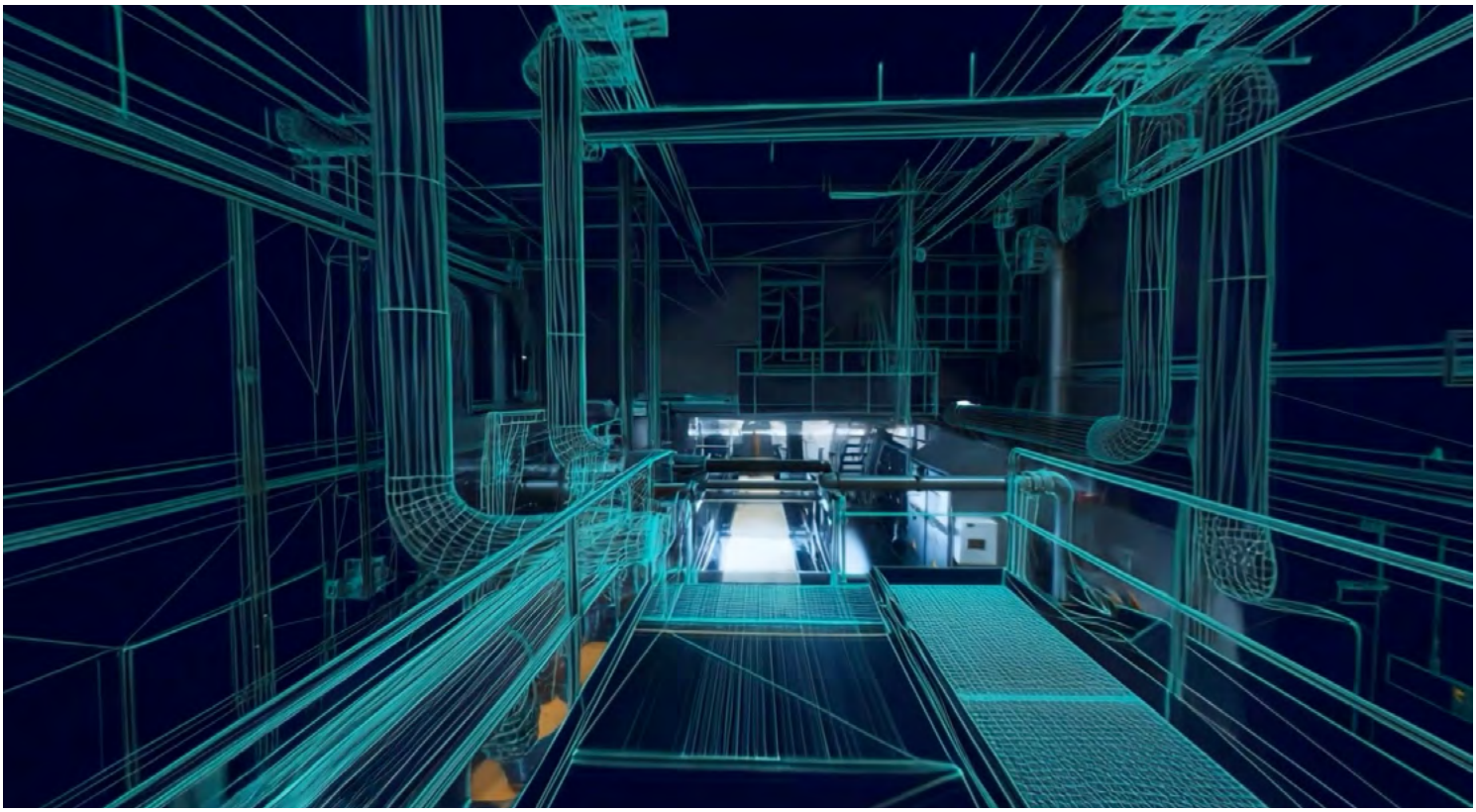
13% less waste

7% less energy

From chips to change: How Pringles uses AI to tackle agrobiodiversity

Early wins are great, but the real story is bigger. Pringles is using digital transformation to take on one of the toughest CPG challenges: agrobio-diversity. Today, 75% of global food comes from just 12 plant and 5 animal species, and we've already lost 75% of agricultural plant diversity since 1900.

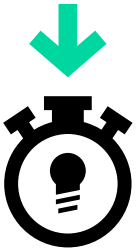
Enter the Dough Digital Twin: a breakthrough solution that gives R&D an AI-powered "virtual window" into the factory, letting them test new formula-tions and never-used-before raw materials in a digital environment before using them in the real world.



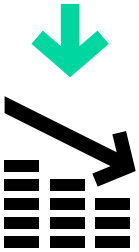
From line to worldwide: The Digital Thread redefining Pringles

And the real power move? Combining the real and the digital world with a single Digital Thread uniting manufacturing, R&D, and engineering. Next up: Digital Twin-defined raw material specs that give procurement tighter supplier control and the agility to switch ingredients as fast as R&D can innovate.

These use cases are Pringles' launchpad into the Industrial Metaverse, where they plan to slash innovation time by 50% and cut capital per unit by 20%. This isn't just transforming one factory. It's the blueprint for every Pringles site worldwide.



50% less innovation time



20% less capital per unit

Pass the knowledge: How Siemens factories accelerated Pringles' digital journey

Choosing the right partner

When searching for a partner to drive digital transformation, plant director Ronny Matthijs quickly found Siemens. "I was inspired by Siemens at one of their conventions and I saw the opportunity to bring the next level of digitalization to our factory." With additional endorsement from advisory firm Gartner and insights gained during visits to Siemens' digital factories in Amberg and Erlangen, Germany, the decision to partner with Siemens became clear.

“Siemens is the right partner because, from day one, I never felt like they were just trying to sell me a product. It was a partnership from day one.”

Ronny Matthijs, plant director

A partnership built for transformation

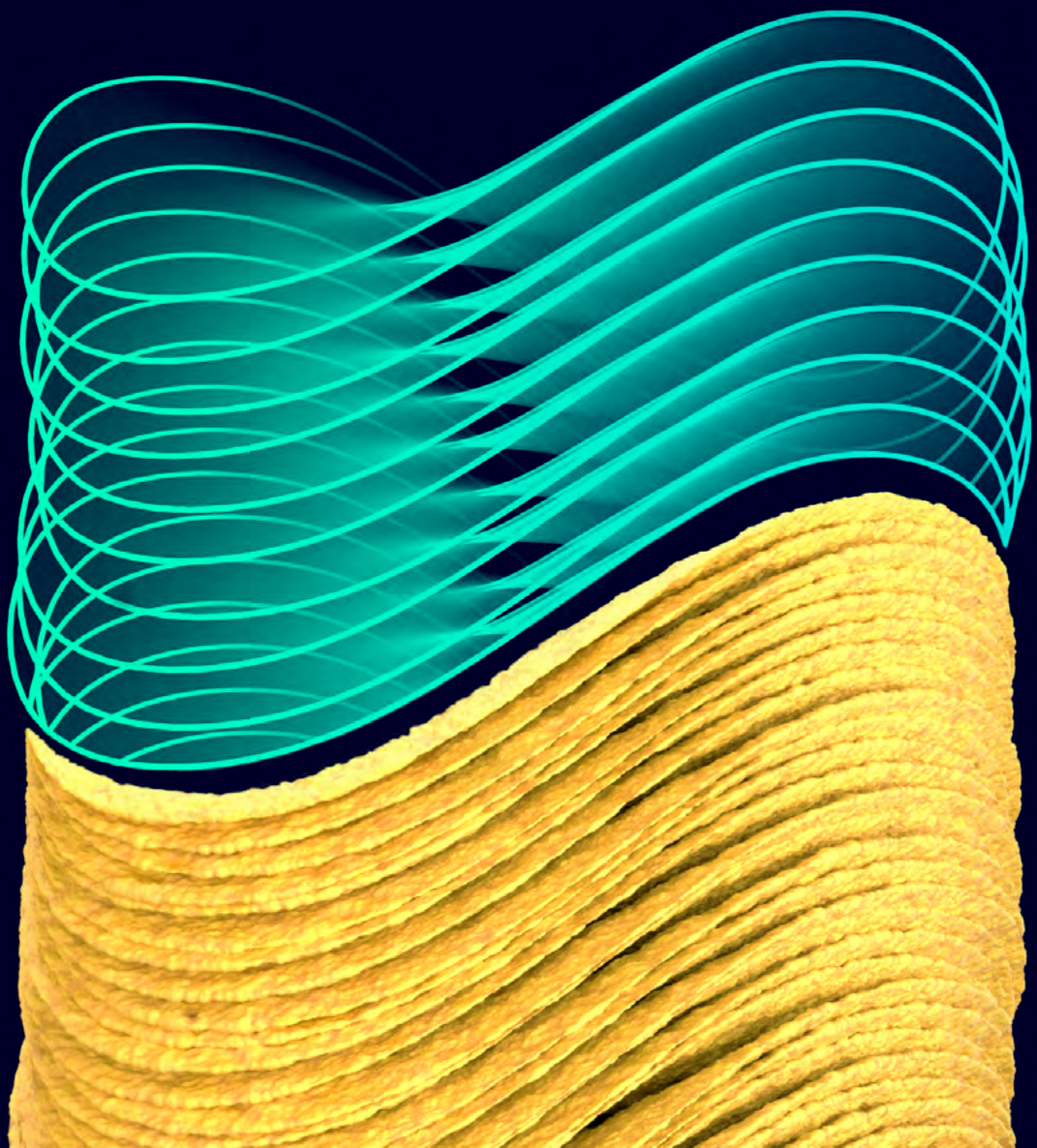
This partnership was established through thorough consulting from Siemens Advanta and on-site assessments, which helped Pringles understand the potential of digitalization and data analytics.

Ronny also points to Siemens’ “mind-blowing technology” and its “structured and disciplined implementation.” Together, Pringles and Siemens created three use cases that proved the power of digital transformation – driven by data, Digital Twins, and AI.

Stacking data: From a perfectly automated factory to a digital lighthouse

From unpredictable dough to predictable performance

For consumers, it’s the taste and the grease-free crunch. For the manufacturer, it’s the dough’s performance. Ronny remembers his time as an operator working with limited real time visibility compared to today’s tools. “I could never predict how well it would perform. One minute my line was running great, and the next it wasn't, and I didn't know why.”



From the art of food making to the science of food making

Today, he aims to shift from intuition to intelligence – using data as the foundation of food production. His vision: use data across the entire organization to power simulations, build new Digital Twins, and train AI models that uncover insights once impossible to see.

"We use data from our lines and models across different simulations and technologies", Ronny says. "This data is fed into the cloud, where we use Siemens technology to run Digital Twins. Then we feed the data back to the line to create the perfect chip."

Pringles wired up the dough – and now every chip starts with a data stack

From instinct-driven dough to insight-driven precision

Traditional dough making relied on the instincts of seasoned operators – hands, eyes, and years of experience. “When we saw poor dough quality, we essentially had to stop the line and make some interventions before moving forward,” explains Justyna Galusa, Pringles Senior Digital Transformation Manager. Digital transformation changed the game.

Now, sensors, lasers, and cameras stream temperature, humidity, protein levels, and more into a Siemens cloud-based AI model. The model calculates the ideal dough recipe in real time and adapts to fluctuating raw materials.

Turning data into uninterrupted perfection

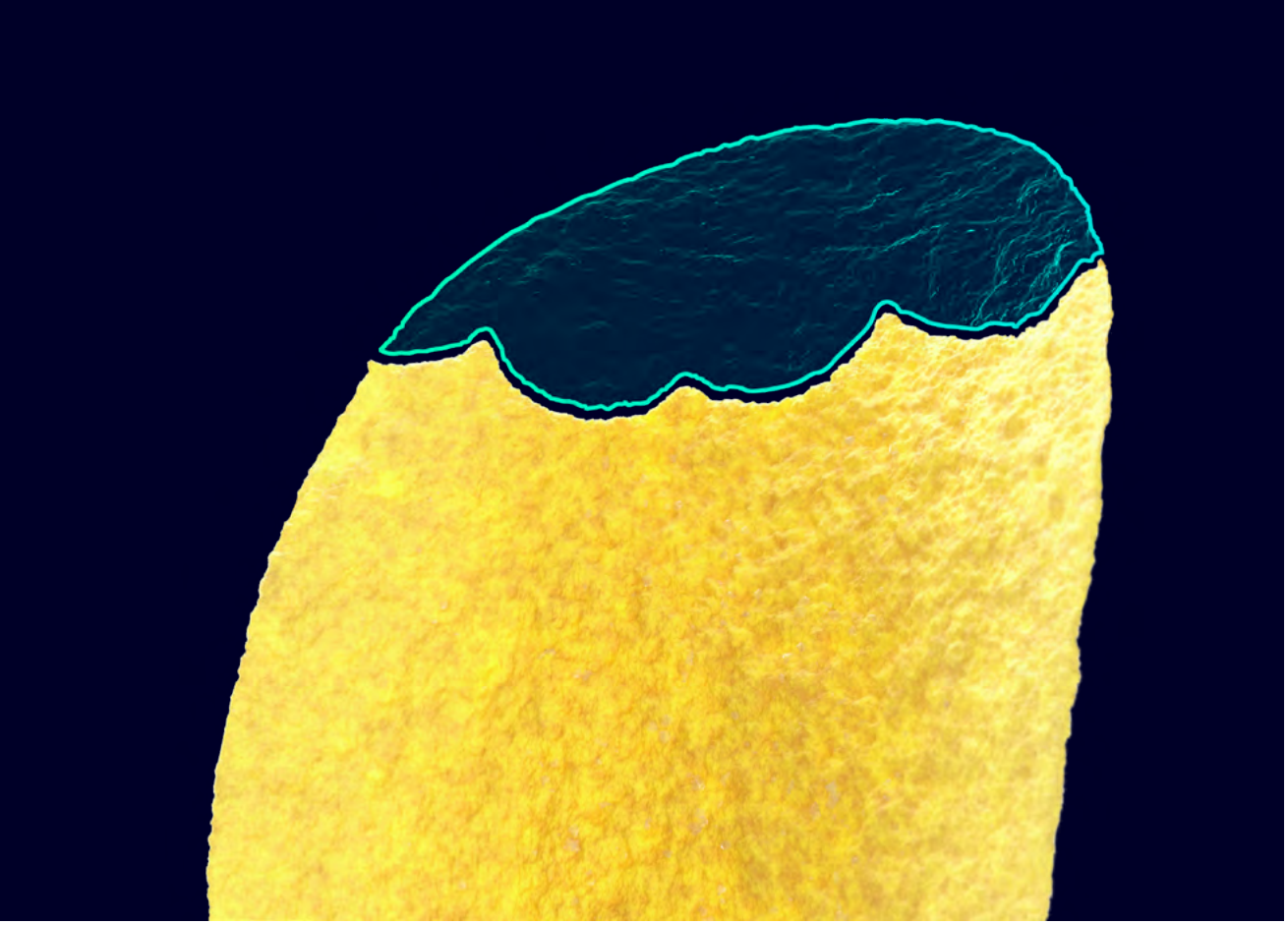
Operators receive precise recommendations, adjust the formulation, and keep production running – without the waste, stops, or yield losses that recipe changes once triggered. Today, Pringles runs on data, predicting dough quality and delivering steady, top-tier chips. “Since there is less downtime, our people are saving time that they previously devoted to fixing the line. Now, they are focusing on different activities,” Justyna says.

From energy to maintenance, Pringles isn’t managing. It’s predicting.

Predicting tomorrow’s energy needs today

Another AI model Pringles and Siemens deployed targets energy efficiency. Together, they built a model for SIMATIC Energy Manager Pro that analyzes historical consumption. “We use current data from today and the model to predict a new target based on yesterday’s and today’s performance. This way, we are predicting a new target for tomorrow and asking operations to run against it,” Ronny explains.

With energy as one of the company’s biggest expenses, real-time monitoring and optimization deliver both cost savings and a lower environmental footprint.



From preventive to predictive maintenance

To cut maintenance costs, Pringles and Siemens introduced predictive maintenance by installing sensors across all equipment. With Senseye Predictive Maintenance, operators can use vibration analysis to know exactly when maintenance is needed – replacing routine schedules with data-driven insights.

“The work we are doing on predictive maintenance will bring us real value by reducing maintenance costs and downtime due to equipment deterioration,”

Justyna expects to reduce maintenance spending by 25 percent by moving from preventive to predictive practices.

Threads, Twins, sensors: Pringles is building the Industrial Metaverse chip by chip

Scaling intelligence across every Pringles factory

Pringles' digital transformation is powered by Siemens Xcelerator – the foundation for everything from Digital Twins to Industrial AI. In the Kutno factory, the company is constantly scaling its models and expanding its use of Siemens Xcelerator technologies. More simulations. More AI-driven solutions. More Digital Twins. And soon, this blueprint will extend to Pringles sites across the globe.

Reaching the next frontier

But the real vision goes further. For Ronny Matthijs, the destination is the Industrial Metaverse. He aims to build Digital Threads that link the factory to the teams behind it – R&D, which creates the products, and engineering, which designs the production lines. When these functions share and act on the same data, speed increases, adaptability grows, and sustainability strengthens.

And at the center of it all are the people. Because no matter how far digitalization goes, it's the operator who makes the final call on the line – the most essential asset in every factory.

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