

## Siemens and Spinnova drive innovation and sustainability in textile manufacturing

- **Siemens enables Spinnova to develop sustainable fibers at scale.**
- **Spinnova fiber is known for minimal CO<sub>2</sub> emissions and water use, uses no harmful chemicals and is recyclable.**
- **The Siemens Xcelerator automation and software portfolio allowed a quick ramp-up of production at Spinnova's and Suzano's joint venture Woodspin factory.**

Today, Siemens, a leading technology company announced an innovative collaboration with Spinnova, a sustainable textile technology company, to help transform the textile industry with sustainable fiber production. This collaboration underscores Siemens' strategic commitment to driving sustainability and digitalization in manufacturing industries.

Spinnova is known for its groundbreaking technology for producing textile fibers with minimal environmental impact, has teamed up with Siemens to transform the way textiles are manufactured globally. Siemens has helped Spinnova reduce its time to market with its Siemens Xcelerator automation technologies, software, and services.

### **Scaling sustainability impact with Siemens Xcelerator**

Spinnova's patented technology produces textile fiber using a mechanical process that mimics how spiders weave their webs. This process can be used to produce fiber from a variety of raw materials, from wood to leather, textiles, and agricultural waste. SPINNOVA® fiber can then be processed into yarn and fabrics like any other conventional fiber.

"With their unique technology, based on circularity, Spinnova is setting a new standard for environmental sustainability in the textile industry," said Eryn Devola, Head of Sustainability at Siemens Digital Industries. "Our Siemens Xcelerator portfolio, our know-how and global network are helping Spinnova scale, reduce time to market, and increase operational efficiency."

According to Spinnova, the production of SPINNOVA® fiber emits 74 percent less CO<sub>2</sub> and uses 98 percent less water than the global average of conventional cotton, generates zero process waste and requires zero harmful chemicals.

### **Siemens Xcelerator enables sustainable fiber production at industrial scale**

The transformative power of the collaboration to produce sustainable textiles is showcased at the Woodspin factory in Jyväskylä, Finland, a joint venture between Spinnova and pulp producer Suzano. With digital twins to optimize the product and production processes, IT and OT convergence for enhanced transparency, and robust cybersecurity measures, Siemens is enabling Spinnova to scale up its innovation. This has increased the company's confidence and expedited time to market, which are crucial factors in today's fast-paced market environments.

"Working with Siemens has transformed how we approach manufacturing. Their technological expertise has enabled us to ramp up production quickly and brings credibility to our mission," says Tuomas Oijala, CEO of Spinnova. "This collaboration isn't just about advancing technology; it's also paving the way for a sustainable future in the textile industry."

The Woodspin factory was simulated and virtually commissioned using a digital twin with Plant Simulation in the Tecnomatix® portfolio, including its operations, material flow, what if-scenarios and identification of bottlenecks. This saved time, maintained quality and increased the efficiency of operations. A digital twin of the product was used to speed up, optimize and coordinate the research and development of the raw material base using Siemens' Opcenter™ software, which ensures consistent quality from raw material to finished fiber.

The entire automation architecture is based on Siemens' Totally Integrated Automation concept, where TIA Portal integrates line control, safety technology, end-to-end

diagnostics, drives, and field devices in a unified platform. Siemens Industrial Edge enables Spinnova to collect, process and send operational data to the cloud for analysis in order to track key performance indicators like energy consumption and provide transparency to customers and partners. Spinnova's cybersecurity concept is based on the Defense-in-Depth concept and uses cybersecurity technology from Siemens.

The collaboration with Spinnova is part of Siemens' broader strategy to encourage sustainable practices using technological innovations. Siemens is dedicated to shaping the future of industries where technology meets sustainability, to create a positive impact on the planet and society.



Image source: Siemens AG. At the Woodspin factory, a joint venture with Brazilian pulp producer Suzano, Spinnova implementing its technology on an industrial scale with the help of Siemens.



Image source: Siemens AG. From left to right: Tuomas Oijala, Chief Executive Officer (CEO), Sanna Haavisto, Information Solutions Manager, and Juha Salmela, Chief Technology Officer (CTO) and Co-founder of Spinnova PLC.

This press release is available at: <https://sie.ag/6UyJ6k>

For more information on how the textile industry can become more sustainable, please see: [www.siemens.com/spinnova](http://www.siemens.com/spinnova)

**Contact:**

Patrick Lunn, Siemens AG

Phone: +49 (162) 2638785

Email: [patrick.lunn@siemens.com](mailto:patrick.lunn@siemens.com)

Sophie Jolly, Spinnova PLC

Interim Head of IR and Communications

Phone: +358 20 703 2430

Email: [comms@spinnova.com](mailto:comms@spinnova.com)

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**Siemens Digital Industries (DI)** empowers companies of all sizes within the process and discrete manufacturing industries to accelerate their digital and sustainability transformation across the entire value chain. Siemens' cutting-edge automation and software portfolio revolutionizes the design, realization and optimization of products and production. And with Siemens Xcelerator – the open digital business platform – this process is made even easier, faster, and scalable. Together with our partners and ecosystem, Siemens Digital Industries enables customers to become a sustainable Digital Enterprise. Siemens Digital Industries has a workforce of around 70,000 people worldwide.

**Siemens AG** (Berlin and Munich) is a leading technology company focused on industry, infrastructure, mobility, and healthcare. The company's purpose is to create technology to transform the everyday, for everyone. By combining the real and the digital worlds, Siemens empowers customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a leading global medical technology provider pioneering breakthroughs in healthcare. For everyone. Everywhere. Sustainably.

In fiscal 2024, which ended on September 30, 2024, the Siemens Group generated revenue of €75.9 billion and net income of €9.0 billion. As of September 30, 2024, the company employed around 312,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at [www.siemens.com](http://www.siemens.com).

**Spinnova** technology transforms the way textiles are manufactured globally. Based in Finland, Spinnova has developed breakthrough patented technology for making textile fibre out of wood pulp or waste, such as leather, textile or agricultural cropping waste, without harmful chemicals or dissolving. Spinnova technology creates no side streams in the fibre production process, and the SPINNOVA® fibre has minimal CO2 emissions and water use, as well as being biodegradable and recyclable. Spinnova technology uses a mechanical process which gives the fibre the look and feel of a natural cellulosic fibre such as cotton. Further information is available on the Internet at [www.spinnova.com](http://www.spinnova.com) and [www.spinnovagroup.com](http://www.spinnovagroup.com).