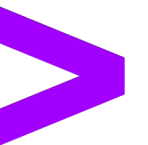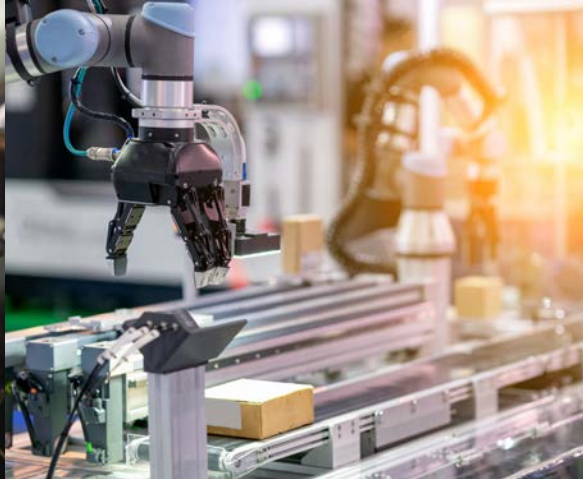# Innovate
Trends and innovations that matter

The Industrialist
inspire. innovate. ignite.

Learn about the latest announcements impacting the industrial industry, from innovative partnerships driving advancements in sustainable technology, launching 3D digital twin platform for enhanced concrete plant operations, to autonomous factories driving digital transformation in manufacturing, and more.

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Industrial is a front-runner in combining human ingenuity with technology and innovation.

Jean Cabanes
Senior Managing Director,
Global Industrial Lead, Accenture

Innovative plant for carbon negative concrete to open in Kasai

Kajima, Nikko, and Kitagawa Iron Works are constructing a demonstration plant in Kasai, Hyogo Prefecture, to produce and test carbon negative concrete. The plant will enable the trial manufacturing of concrete from various materials that reduce, fix, and absorb CO_2 on a real scale. Equipped to measure CO_2 emissions from water and electricity use, the plant aims to develop technology to minimize these emissions.

Starting from January, the plant has been evaluating electricity consumption to identify reduction strategies. As part of the NEDO project, the initiative aims to bring CO_2 emissions from concrete production to nearly zero by exploring the feasibility of both precast and ready-mixed carbon negative concrete.

Schneider Electric and ProLogium collaborate on smart battery gigafactory in France

Schneider Electric and ProLogium have partnered to develop smart manufacturing technologies for ProLogium's Lithium Ceramic Batteries gigafactory in Dunkirk, France. This €5.2 billion facility aims to enhance operational efficiency, reduce energy consumption, and cut carbon emissions. Scheduled to begin production in 2027, the factory will support Europe's electric vehicle market by supplying advanced, safer, and faster-charging batteries. The initiative is projected to create 3,000 jobs by 2030.

This collaboration is part of a broader strategy to bolster Europe's battery manufacturing value chain and aligns with the French government's green reindustrialization goals, leveraging Schneider Electric's expertise in energy management and automation to establish a sustainable, cutting-edge production environment.

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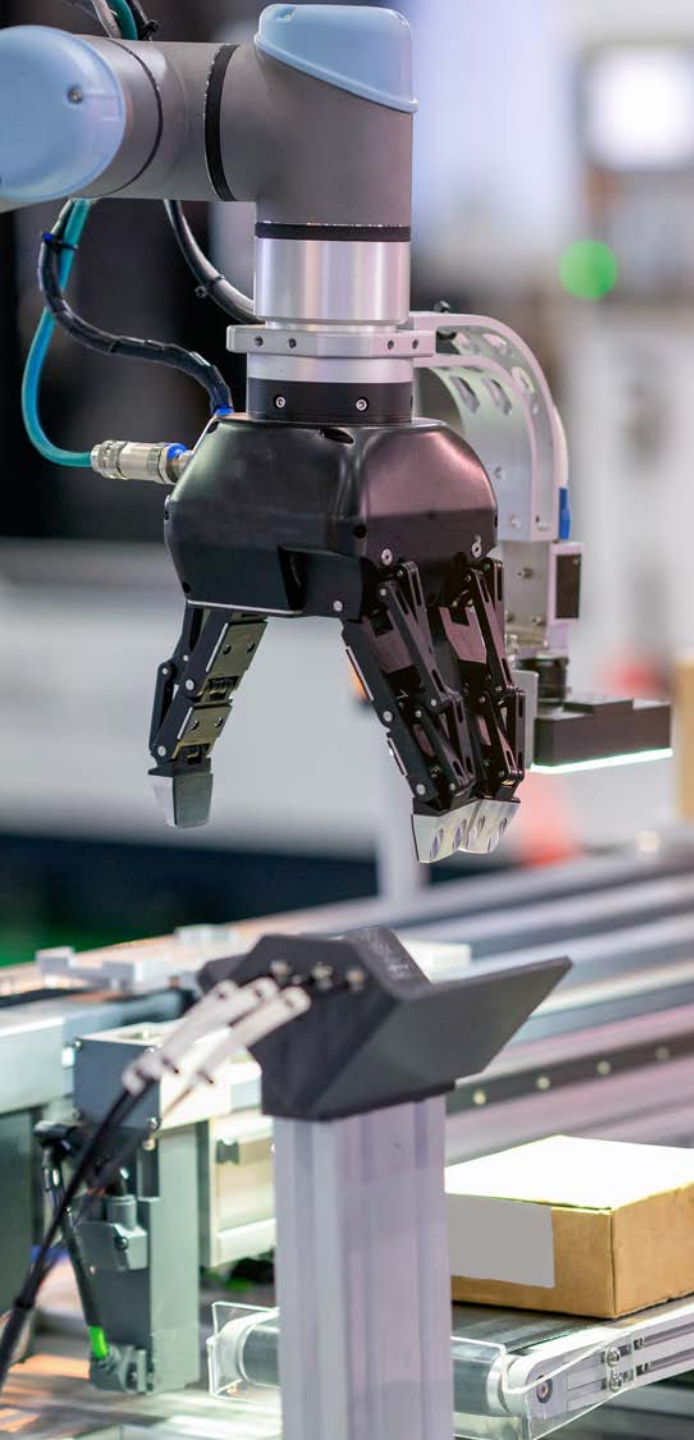
Andritz and Microsoft partner for autonomous manufacturing innovation

Andritz AG is collaborating with Microsoft to revolutionize the process industry by developing autonomous factories and creating a trusted data network. This partnership utilizes Andritz's Metris digital platform and Microsoft Cloud for Manufacturing to drive digital transformation in manufacturing. Central to this effort is the integration of a Copilot solution, powered by Microsoft Azure OpenAI Service, which enhances anomaly detection and operator-machine communication, improving decision-making and efficiency. Additionally, the use of Microsoft 365 Copilot in Andritz's internal processes automates tasks and provides actionable insights, fostering strategic focus and customer-centricity.

This initiative aims to improve plant operations, product quality, and resource utilization while addressing challenges such as operating costs, process stability, and sustainability.

Antolin enhances operations with AI and Generative AI

Spanish car parts manufacturer Antolin leverages AI and generative AI to optimize industrial, technical, and management processes, allowing employees to focus on high-value tasks. AI-driven artificial vision improves quality control by reducing operator fatigue and standardizing processes globally. Additionally, Antolin enhances workplace safety by replacing manual forklifts with autonomous mobile and collaborative robots, managing logistics flow data in production areas. This technological integration streamlines operations and supports the company's goal of increasing efficiency and safety across its facilities.

05 ——————————————————————————

Zoomlion introduces 3D digital twin platform for enhanced concrete plant operations

Zoomlion has launched a 3D digital twin platform at a concrete batching plant in Hubei, China, designed to streamline operations in the ready-mix concrete industry. This AI-powered platform enables real-time virtual inspections, equipment monitoring, and fault detection, enhancing speed, accuracy, and reliability. It integrates data from production, maintenance, inventory, raw material tracking, security, and logistics into a single control system, breaking down data silos and providing comprehensive insights for better decision-making.

This innovation supports higher efficiency, sustainability, and profitability by offering transparent, detailed management of plant operations, positioning Zoomlion as a leader in digital transformation and green technology within the industry.

Hitachi launches real-time digital twin for remote construction management

Hitachi Construction Machinery, in collaboration with aptpod and Unicast, has developed a real-time digital twin platform that replicates construction sites in a virtual environment. This innovation allows for remote management of construction progress and autonomous machinery operation via the internet. Addressing labor shortages in the construction industry, the platform integrates data on machinery, worker locations, and site conditions to enhance safety and productivity.

The system enables real-time adjustments and low-latency control of construction machinery from remote locations. Hitachi's "ZCORE" system and contributions from aptpod and Unicast in data collection and 3D visualization are key components. The platform was showcased at the CSPI-EXPO in May 2024.

# C.H. Robinson uses AI to streamline logistics email responses

C.H. Robinson, a leading logistics company, has implemented generative AI to automate responses to over 2,000 daily email inquiries, significantly enhancing efficiency. The AI technology reads and classifies incoming emails, providing pricing quotes within 2 minutes, a task previously handled manually. This automation frees up employees to focus on complex tasks, improving productivity and customer service.

The AI's ability to handle email requests has also paved the way for automating other logistics transactions, such as load tenders and shipment tracking. This innovation, leveraging a large language model, marks a significant step in the logistics industry's digital transformation, enabling faster market responses and cost savings.

ZF's metaverse revolutionizes talent acquisition and employee engagement

ZF Group has launched an Employer Branding Metaverse to enhance talent acquisition and employee engagement. This virtual environment immerses candidates and employees in ZF's brand and corporate culture, offering tools like one-on-one recruiter meetings, employee spotlights, live events, and interactive games. The platform includes global and regional spaces, providing comprehensive information about ZF and local career opportunities. It supports internal mobility with virtual career fairs and confidential interview rooms.

Developed internally, the Metaverse aims to attract talent, particularly in future-oriented tech areas, and offers a real-time glimpse into ZF's innovative practices and collaborative work culture.
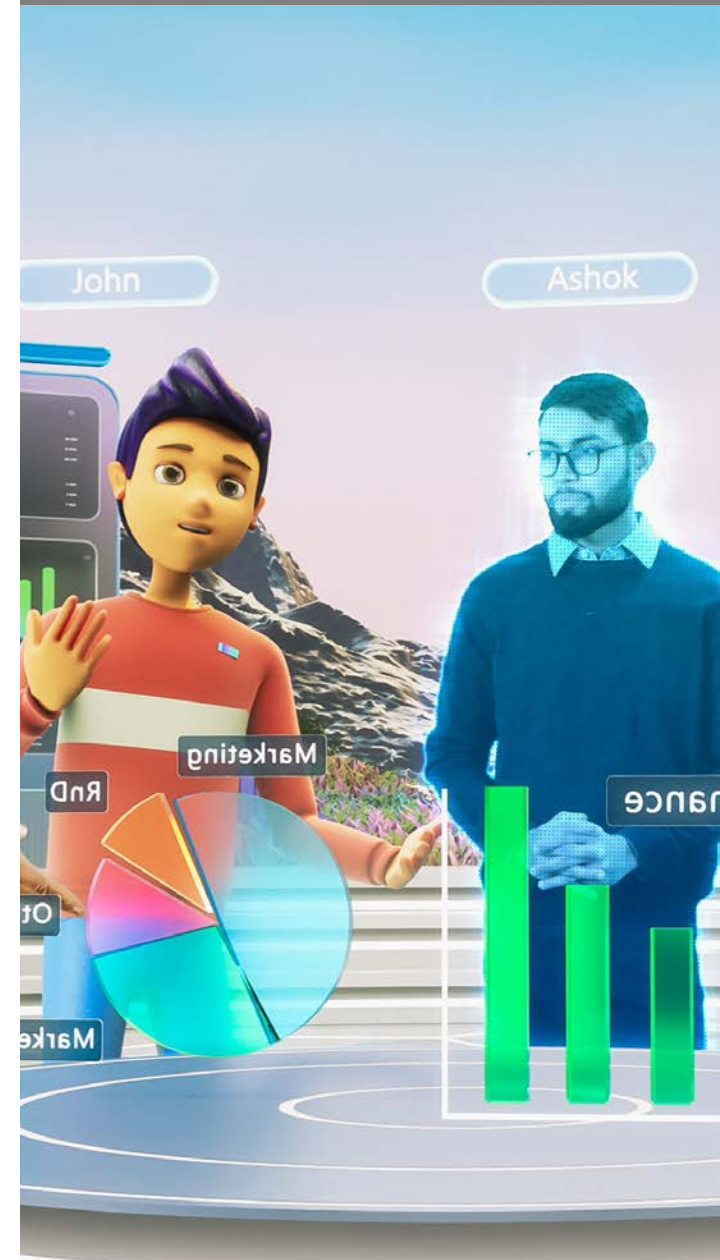
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