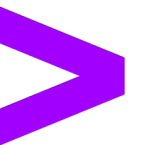


March 2024

Innovate

Trends and innovations that matter





Learn about the latest announcements impacting the industry, from Data4Industry-X supporting the international Manufacturing-X initiative to foster open and sovereign data exchange in key industry sectors, to harnessing AI for infrastructure transformation to boost productivity and innovation through an AI CoE, and more.



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

Thomas Rinn

**Senior Managing Director,
Global Industrial Lead, Accenture**

Antora Energy Secures \$150M to Drive Industrial Decarbonization with Innovative Thermal Batteries

Antora Energy, a California-based startup, has raised \$150 million in a Series B financing round for its zero-emissions heat and power solution. The funds will accelerate the production of Antora's thermal batteries, designed to decarbonize industrial facilities. Industrial heating, often reliant on fossil fuels, poses a challenge for renewable energy adoption due to intermittent sources. Antora's thermal batteries convert low-cost, intermittent renewable electricity into reliable industrial energy. The technology involves heating solid carbon blocks with renewable energy, storing heat at industrial scale, and generating electricity with high efficiency using thermophotovoltaic (TPV) technology. Founded in 2017, Antora Energy aims to revolutionize industrial processes by providing sustainable, efficient alternatives for zero-emissions heat and power solutions.

Data4Industry-X: Secure and Sovereign Data Exchange Revolutionizes Industrial Sectors

Data4Industry-X, a secure and compliant data exchange environment for industries, focusing initially on automotive and power generation, aims to enhance global industrial competitiveness and reduce carbon footprints. Supported by the French government's France 2030 initiative and the European Next Generation program, it is backed by industry leaders such as Dawex, Schneider Electric, Valeo, CEA, and Prosyst. The solution implements Gaia-X standards and complies with new European data regulations. Addressing decentralized manufacturing's data exchange challenges, Data4Industry-X seeks to boost efficiency, productivity, and innovation, contributing to Europe's industrial competitiveness and fostering a sustainable ecosystem through extensive cross-border data exchanges. The project is lauded for its potential transformative impact on industrial growth and collaboration.



Sumitomo (SHI) Demag Enhances Customer Support with XMReality Remote Guidance

Sumitomo (SHI) Demag Plastics Machinery North America, a leading injection molding machinery provider, is integrating XMReality Remote Guidance into its operations to bolster customer support services using augmented reality (AR). With a track record of delivering over 150,000 state-of-the-art injection molding solutions globally, Sumitomo (SHI) Demag is committed to excellence in quality and customer satisfaction. The implementation of XMReality Remote Guidance demonstrates their dedication to unparalleled service.

This technology will enable Sumitomo's team to remotely troubleshoot, guide, and collaborate with clients, ensuring optimal performance and efficiency of injection molding machinery. Ryne Simeone, Vice President of Business Development at XMReality Inc., expressed enthusiasm for the collaboration, aiming to enhance Sumitomo's customer support experience and operational excellence.

Samsung, Magna, Allison Transmission Invest \$25M in Niron's Rare Earth-Free Magnets

Niron Magnetics, a Minnesota-based startup specializing in rare earth-free permanent magnets, has secured a \$25 million funding round led by Samsung Ventures, with participation from Magna and Allison Ventures. The investment aims to expand Niron's pilot production facilities, scale magnet production, and accelerate research and development. Backed by major automakers like GM, Stellantis, and Volvo Cars, Niron's magnets, made from iron nitride, eliminate rare earth metals, potentially reducing the auto industry's reliance on China. The technology is not only sustainable but also cost-effective, with iron nitride magnets costing 50% less than traditional rare earth magnets, contributing to more affordable electric vehicles.



Mitsubishi and TomTom's FLEXConnect: Advancing Safe and Customizable Vehicle Cockpits

Mitsubishi Electric Automotive, in collaboration with TomTom, unveils FLEXConnect, a cutting-edge cockpit combining advanced features like simplified controls, precise maps, and effective voice recognition. The digital platform enhances road safety by utilizing sensor data to anticipate risks, reduce distractions, and provide new consumer experiences. FLEXConnect monitors driver concentration, detects signs of drowsiness, and even assesses mood. The system incorporates a thermal camera for biometric tracking, offering insights into the driver's physical status. Additionally, it facilitates personalized identification, correlates user preferences with environmental data, and integrates TomTom's high-definition mapping system for AI-powered navigation. FLEXConnect marks a step toward autonomous driving, utilizing Mitsubishi's sensor components and TomTom's advanced mapping technology.

Nexen Tire Unveils VR Design Review for Advanced Digital Tire Innovation

Nexen Tire Corp. introduces a groundbreaking Virtual Reality (VR) design review system at its Central Research Institute in Seoul, aiming to enhance digital design capabilities. This innovative system enables users to appreciate real tire scale within a virtual environment, focusing on tread performance, styling, and sidewall patterns. As the first Korean tire company to adopt VR design reviews in this manner, Nexen aims to boost product completeness and evaluate design sensitivity while reducing development time and costs compared to traditional mock-ups. The technology aligns with Nexen's strategy to adapt to the evolving automotive industry, enhancing global competitiveness through superior performance and quality. The company plans to showcase its VR capabilities through an exhibition using head-mounted display equipment, offering users a comprehensive experience of products and design philosophy.





Ferrovial's Digital Transformation: Harnessing AI for Infrastructure Innovation

Ferrovial, a major infrastructure and transportation company, places artificial intelligence (AI) at the core of its transformation efforts. The Digital Hub, established over five years ago, collaborates across business units to integrate digital strategies, focusing on AI, IoT, big data, and more. The AI Center of Excellence (AI CoE) within Ferrovial advances AI projects globally, enhancing processes, efficiency, and creating competitive advantages. Examples include the Herbicide Train project utilizing computer vision for vegetation detection and cost reduction. The company is a founding partner of IndesIA, promoting AI in the Spanish industry. While AI brings substantial benefits, challenges like privacy and ethics require careful regulation. Ferrovial envisions AI as a key factor in its digital transformation, boosting productivity, innovation, and adaptability.

Samsung C&T Pioneers Low-Carbon Concrete with Certified Emission Reduction Methodology

Samsung C&T Construction Division in South Korea has developed a methodology certified by the Korea Chamber of Commerce and Industry for measuring emissions reduction from low-carbon concrete. This achievement positions Samsung C&T to potentially secure carbon credits in the future. The methodology outlines standards, procedures, and principles for objectively measuring emissions reduction in low-carbon concrete technology. It is the first certification received by a domestic construction industry player from the KCCI Carbon Reduction Certification Center. Samsung C&T's low-carbon precast concrete reduces emissions by approximately 40% compared to regular concrete, while eliminating cement usage reduces emissions by 70%. The company estimates a potential reduction of 0.1 metric tons per cubic meter compared to regular concrete, contributing to sustainability in construction.



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