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Press

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Siemens partners with NVIDIA to advance AI-driven, autonomous factories

- **New AI solutions showcased at Siemens' Erlangen factory advance its role as a global blueprint for AI-driven, autonomous manufacturing**
- **Fully virtual production ramp-up reduces engineering effort by up to 85 percent**
- **Agent-based production planning enables more adaptive manufacturing and cost savings of up to 20 percent**

Siemens has unveiled new AI solutions at its Electronics Factory in Erlangen, Germany, marking a new milestone in its partnership with NVIDIA to advance AI-driven, autonomous manufacturing. The applications that are currently unique in the manufacturing industry use AI and digital twins to accelerate production ramp-up and enable more adaptive production planning. Both companies announced at CES in Las Vegas in January 2026 that they would build the world's first fully AI-powered manufacturing sites. Since then, both companies have been co-developing and testing applications in live production at the Erlangen plant.

Erlangen serves as a living lab for industrial AI and a blueprint for scaling these capabilities across industries. Siemens and NVIDIA aim to make artificial intelligence the operating system of manufacturing, transforming how products are designed, manufactured and delivered across the entire value chain. Further applications are planned in the coming months.

"The historic opportunity for Germany and Europe lies in bringing artificial intelligence out of the data centers and into the factories – and applying it on an industrial scale," says Cedrik Neike, member of the Managing Board of Siemens AG and President Digital Industries. "Today, together with NVIDIA at our Siemens

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Electronic Works in Erlangen, we are showing how this can be done. With an annual productivity increase of seven percent, Erlangen is one of the most advanced manufacturing plants in the world. At the same time, with around 3,000 customer visits every year, it is a global meeting place for industrial innovation. Here, the future of industry is not just discussed; it is becoming reality today."

"Factories need to handle change as well as they handle repetition. AI and simulation make that possible," said Rev Lebaredian, Vice President, Physical AI Simulation at NVIDIA. "At Erlangen, Siemens and NVIDIA are putting years of collaboration to work on the factory floor – training inspection systems before physical prototypes exist, designing and testing production plans in simulation before changing the real world. Together, we're building a blueprint for autonomous factories everywhere."

The joint Siemens and NVIDIA team developed the first new AI offerings in less than ten months, combining NVIDIA's AI, simulation and accelerated computing technologies with Siemens' industrial software, automation and manufacturing expertise. Testing the solutions directly in a production environment enabled the teams to develop solutions around real manufacturing requirements. These new technologies can deliver unprecedented improvements in areas such as production planning and product development.

For new printed circuit boards (PCB) assemblies – the core of the drives and frequency converters manufactured in Erlangen – virtual production preparation can reduce engineering effort by up to 85 percent and cut time-to-market by up to 40 percent. The workflow addresses a critical bottleneck: preparing quality inspection previously took several weeks, because teams had to wait for physical prototypes to train vision systems and manually configure inspection equipment. AI now generates photorealistic representations of PCB assemblies from their digital twins to train the vision systems, enabling engineers to prepare inspection before physical prototypes are available.

In the plant's production planning, new AI technologies also promise to master the balancing act between capacity, material availability, delivery dates and production

lines much faster and more efficiently. Previously, planners had to weigh various factors against each other based on their experience to make the best possible decision. At the Siemens Electronics Factory in Erlangen, an AI agent now supports this process. When new orders arrive, it automatically generates various production scenarios and shows planners the impact of each option based on defined KPIs. Before implementation, these proposals are validated using a Digital Twin of the entire production facility. This end-to-end agent-based production planning can enable cost savings of up to 20 percent, while allowing manufacturing operations to respond more flexibly to new orders, material shortages, or shifting customer requirements.

These advances combine Siemens' industrial software and manufacturing expertise with NVIDIA technologies. NVIDIA Cosmos world models generate realistic training data for quality inspection. The NVIDIA Factory Operations Blueprint supports AI agents that create production plans and help factories respond to changing production needs, while NVIDIA Omniverse libraries enable teams to test those plans virtually using real factory data.

Established in 1971, the Siemens Erlangen plant in Southern Germany employs approximately 1,000 people and manufactures power electronics and automation technology for industry and infrastructure – including machine tools, battery production, as well as the process and discrete manufacturing industries. For more than a decade, new digital manufacturing technologies have been tested, developed and deployed at the site during live operations. Currently, more than 100 AI algorithms are already in active use across production, logistics, quality inspection and maintenance. The location is set for further expansion through 2030, with Siemens investing €500 million in the transformation.

This press release is available at https://sie.ag/3SzdvZ

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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. A leader in industrial AI, Siemens leverages its deep domain know-how to apply AI – including generative AI – to real-world applications, making AI accessible and impactful for customers across diverse industries. 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 2025, which ended on September 30, 2025, the Siemens Group generated revenue of €78.9 billion and net income of €10.4 billion. As of September 30, 2025, the company employed around 318,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com.