SIEMENS

Siemens introduces AI agents for industrial automation

- **Automating automation: AI agents enhancing Siemens Industrial Copilots**
- **Future vision: ecosystem of Industrial AI agents available on the Siemens Xcelerator platform with both Siemens and third-party AI agents**
- **Productivity aimed to increase by up to 50% for industrial companies**

At Automate 2025 in Detroit, Siemens is announcing an expansion of its industrial AI offerings with advanced AI agents designed to work seamlessly across its established Industrial Copilot ecosystem. This new technology represents a fundamental shift from AI assistants that respond to queries towards truly autonomous agents that proactively execute entire processes without human intervention. Siemens' new AI agent architecture features a sophisticated orchestrator. Like a craftsman, it deploys a toolbox of specialized agents to solve complex tasks across the entire industrial value chain. These agents work intelligently and autonomously – understanding intent, improving performance through continuous learning, and accessing external tools and other agents as needed. Users retain complete control, selecting which tasks they wish to delegate to AI agents.

"With our Industrial AI agents, we're moving beyond the question-answer paradigm to create systems that can independently execute complete industrial workflows," said Rainer Brehm, CEO Factory Automation at Siemens Digital Industries. "By automating automation itself, we envision productivity increases of up to 50% for our customers – fundamentally changing what's possible in industrial operations."

Automating automation: how the AI agent architecture works

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Reference number: HQDIPR202505097159EN

Page 1/5

Siemens' approach distinguishes between Industrial Copilots, the interfaces users interact with, and the AI agents that power them behind the scenes. Furthermore, the company is developing digital agents, and integrating physical agents, including mobile robots. This way, Siemens is creating a comprehensive multi-AI-agent system where agents are highly connected and work collaboratively.

What sets Siemens' approach apart is the orchestration of these agents utilizing a comprehensive ecosystem. These agents not only work with other Siemens agents but also integrate with third-party agents, enabling unprecedented levels of interoperability.

To further accelerate adoption and innovation, Siemens is planning to create an industrial AI agent marketplace hub on the Siemens Xcelerator Marketplace. This marketplace will enable customers to access not just Siemens' own AI agents but also those developed by third parties.

The all-encompassing Siemens Industrial Copilot

The Siemens Industrial Copilot, enhanced by Industrial AI agents, addresses every phase along the industrial value chain, across process and discrete industries:

- **Design Copilot**: Currently available for NX CAD, helps users break new ground in creativity by accelerating the product design process. Design engineers can navigate complex data, balance trade-offs, and perform multi-domain tasks more efficiently. The AI-powered assistant enables users to ask questions in natural language, quickly access detailed technical insights, and streamline complex design tasks – all leading to significant efficiency gains in product development. Siemens is also currently developing a Hydrogen Configurator for designing hydrogen production plants. Users can seamlessly generate block flow diagrams with precise plant unit layouts and interconnections with it.

- **Planning Copilot:** Currently in pre-release with customer testimonials already available, this solution optimizes production planning, resource

allocation, and scheduling through generative AI-powered insights, helping manufacturers maximize efficiency and minimize waste.
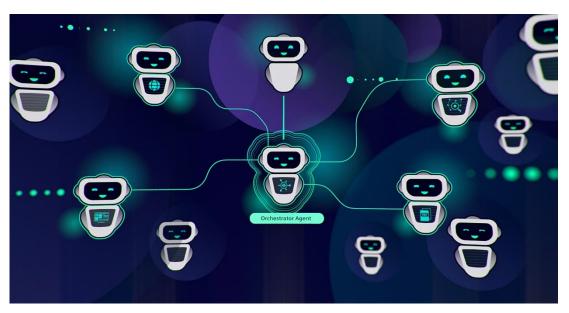
- **Engineering Copilot**: Available for TIA Portal with Managed Service coming in 2025, it enables engineering without repetitive tasks. As the first generative AI-powered product for automation engineering, it empowers engineers to generate automation code through natural language inputs, speeding up SCL code generation while minimizing errors.
In process industries, the copilot for P&ID Digitalization has already been tested by several customers. It's an AI-assisted P&ID detection cloud service to digitalize and consolidate legacy P&ID diagrams.

- **Operations Copilot**: Currently available for Insights Hub, the Copilot provides holistic insights into the entire plant. In addition, at the machine level, Siemens is planning to introduce an Operations Copilot for shop floor workers, which will be available by the end of 2025. This new product is designed to empower shop floor operators, service technicians, and maintenance engineers to work more efficiently by querying machine data and receiving error resolution guidance through natural language. The Operations Copilot can be easily implemented at the machine level to provide machine instructions and operator guidance.
For the process industries, the generative AI-based assistant Simatic eaSie, enables technicians and maintenance personnel to access relevant plant and equipment data via chat or voice interaction. This makes operations and maintenance more reliable and safer both in the control room and in the field.

- **Services Copilot**: The Maintenance Copilot Senseye provides maintenance teams with expert-level equipment diagnostics without the need for specialized technical knowledge. Recently expanded beyond predictive maintenance to cover the entire maintenance lifecycle, this solution supports everything from reactive repairs to predictive and preventive strategies, with

pilot implementations demonstrating an average 25% reduction in reactive maintenance time.

Addressing the skills gap in manufacturing

The Siemens Industrial Copilot is already delivering measurable results in both Siemens' own plants and customer implementations worldwide. At thyssenkrupp Automation Engineering, where the technology is being rolled out globally, engineers have reported improvements in code quality and development speed. Meanwhile, at Siemens' Bad Neustadt site, the Insights Hub Production Copilot has transformed manufacturing operations by turning scattered data into actionable insights.

"In a factory environment, our Industrial AI agents connect different copilots and automate workflows across the entire value chain. This creates a unified approach that makes industrial AI accessible to everyone, regardless of their technical background or experience level," said Brehm. "We envision a future where Industrial AI agents work seamlessly alongside human workers, handling routine processes independently while enabling humans to focus on innovation, creativity, and complex problem-solving."

Siemens is expanding its industrial AI offering with advanced AI agents

For more information about the Siemens Industrial Copilot ecosystem and Industrial AI agents, visit www.siemens.com/industrial-copilot

This press release can be found at: https://sie.ag/57ABV

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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 http://www.siemens.com