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Sumitomo Wiring Systems, Ltd.

Sumitomo Wiring Systems and ExaWizards Jointly Develop AI Agents for Global Production Sites Utilizing Physical AI Technology

AI Agents Detect Production Abnormalities and Learn Expert Skills
on the Shop Floor Commencing the Development of Multiple AI Agents
for Anomaly Detection and Skill Succession

Sumitomo Wiring Systems, Ltd. (Headquarters: Yokkaichi, Mie, Japan; Representative Director: Kenichi Urushibata; hereinafter, "Sumitomo Wiring Systems"), together with ExaWizards Inc. (Headquarters: Minato-ku, Tokyo, Japan; Representative Director, President and CEO: Makoto Haruta; hereinafter, "ExaWizards"), have begun development of multiple AI agents designed to operate at production sites utilizing physical AI technology.

By combining AI agents with hardware such as cameras and sensors, the two companies aim to develop AI agents capable of detecting abnormalities at production sites and learning the skills of expert workers. As a first step, we have commenced development of multiple AI agents, including Audit AI, Intervention AI, and Review AI.



■ Background: Labor Shortages and Skill Succession as Social Challenges, and Expectations for Physical AI

In manufacturing, energy, and infrastructure industries, the loss of tacit knowledge resulting from the retirement of skilled workers, chronic labor shortages, and skill disparities across production sites are causing instability in quality and productivity, which have become pressing issues. Although the application of generative AI has progressed mainly in office work, its extension to frontline work involving physical activities remains in its early stages.

Sumitomo Wiring Systems is promoting its Smart Factory concept using AI under its "Mid-Term Management Plan 2028" (28M), which was formulated to achieve its "2030 VISION" (30V). Based on this concept, the company aims to realize an autonomously controlled factory that integrates fully unmanned production lines and collaborative lines where humans and robots collaborate by utilizing physical AI robots*1 and AI agents*2. The company has designated 2025–2026 as the "Foundation Establishment and On-site Verification" phase.

In addition, the company is developing "Multi-AI Agents," in which various specialized AI agents—such as agents for demand forecasting, personnel allocation, and logistics delay prediction—consult and collaborate with one another to derive optimal instructions. As part of this initiative, Sumitomo Wiring Systems has begun developing AI agents for production sites in collaboration with ExaWizards, which has extensive experience in AI development and social implementation.

By transforming the tacit knowledge and expertise accumulated by skilled workers at Sumitomo Wiring Systems' production sites into explicit knowledge through AI technology, and applying it at production bases in Japan and overseas, the two companies aim to realize Sumitomo Wiring Systems' Smart Factory concept and improve production quality and productivity globally.

*1 Next-generation robots equipped with advanced AI capabilities that work flexibly in collaboration with humans.

*2 Systems that learn on-site expertise and autonomously make decisions and issue instructions for optimal production planning and anomaly prediction.

■ Initiatives with ExaWizards: Development of Multiple AI Agents

Sumitomo Wiring Systems and ExaWizards began developing multiple AI agents in August 2026. These agents will serve as the foundation of the Multi-AI Agents that form part of Sumitomo Wiring Systems' Smart Factory concept. Specifically, the two companies are developing and verifying the following AI agents on actual production lines:

- **Audit AI:** Detects signs of declining production pace and potential abnormalities in real time based on production-line camera footage and equipment data.
- **Intervention AI:** Prompts on-site leaders to take appropriate action. (STEP 1: See and Notify)
- **Review AI:** Learns and accumulates tacit knowledge from production sites through dialogue with skilled workers and leaders. (STEP 2: Learn and Teach)

In the future, the accumulated knowledge will be fed back into education and human resource development. In addition, the two companies plan to conduct global verification within the current fiscal year, with the aim of achieving "Model Line Construction" in 2027–2028 and "Global Full-Scale Rollout" in 2030, in accordance with Sumitomo Wiring Systems' Smart Factory roadmap.

■ Comments from the Companies

Makoto Haruta, Representative Director, President and CEO, ExaWizards Inc.

"The applications of AI agents are now expanding from the back office to the production floor. Enabling AI to learn the on-site knowledge that represents a strength of Japanese manufacturing and applying it at production sites around the world is a priority area that ExaWizards believes should be addressed in physical AI. We will contribute to the realization of Sumitomo Wiring Systems' Smart Factory concept through AI development grounded in frontline operations."

Kenichi Urushibata, Representative Director, Sumitomo Wiring Systems, Ltd.

"Through this collaboration, we will combine ExaWizards' advanced AI technology and extensive track record in social implementation across a wide range of industries with our operational expertise. This will enable us to build a more advanced and autonomous problem-solving system, thereby accelerating the fundamental transformation of existing business processes and the creation of new business value. Moving forward, both companies will promote the development and practical implementation of these AI agents, contributing to the advancement of DX in the industrial sector and the development of a sustainable society.."

End

—For your reference:—

- [Announcement of Sumitomo Wiring Systems Group's "2030 VISION Mid-Term Management Plan 2028"](#)
- [ExaWizards Press Release](#)
- [Release on the Development of Physical AI Robots](#)