PRESS RELEASE

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South Korea's Manufacturing AI Takes the Global Stage at Hannover Messe 2026

14 AI Companies from South Korea's Yeongnam Manufacturing Belt Showcase Field-Proven Solutions — from Automotive Parts to Steel and Petrochemicals

HANNOVER, April 2026 — Fourteen Korean AI technology companies are presenting cutting-edge manufacturing solutions at Hannover Messe 2026, one of the world's largest industrial technology exhibitions. Gathered under a joint pavilion in Hall 16 (Industrie-Software), these companies — representing the automotive parts, mechanical components, intelligent machinery, chemical, and steel sectors of South Korea's Yeongnam region — are demonstrating AI solutions that have already been validated in real manufacturing environments.

About the Initiative

The participating companies are beneficiaries of the "Manufacturing AI Convergence Foundation Project" (제조업 AI융합 기반조성사업), a three-year national program (2024–2026) funded by South Korea's Ministry of Science and ICT and implemented by the National IT Industry Promotion Agency (NIPA), a South Korean government agency. With a total budget of approximately KRW 43.8 billion (approx. USD 32 million), the initiative is designed to accelerate AI adoption across South Korea's manufacturing heartland in the Yeongnam region — comprising the provinces and cities of Gyeongnam, Busan, Daegu, Ulsan, and Gyeongbuk/Pohang.

The program is coordinated by Gyeongnam Technopark, a South Korean regional technology promotion agency, in close partnership with four counterpart agencies: Busan IT Industry Promotion Agency (BIPA), Daegu Digital Innovation Promotion Agency, Ulsan IT Industry Promotion Agency, and Pohang Technopark.

Hannover Messe 2026 marks the program's second major international showcase. Building on the momentum established at Hannover Messe 2025 — where 26 companies presented their first-year results — this year's delegation represents a more focused, mature cohort of 14 companies entering a critical scale-up and commercialization phase.

What's on Display

The joint pavilion at Booth B17 (Hall 16, ~100 m²) features AI solutions purpose-built for Korea's key manufacturing sectors. All technologies on display have completed proof-of-concept validation at active South Korean manufacturing sites and are ready for broader deployment and international partnership.

Key technology themes on display:

- AI-based production planning optimization using reinforcement learning
- Digital twin-based long-range predictive maintenance for industrial equipment
- Vision AI quality inspection systems for precision machined and injection-molded parts
- LLM-powered manufacturing process and quality data analysis
- Portable and online AI diagnostic systems for chemical process facilities
- AI-driven accident prevention for large structure transport operations
- Integrated AI process control for calcination furnaces and specialty material production
- Autonomous anomaly prediction for Mold Flux drying processes in steel manufacturing

Regional Highlights

The joint pavilion brings together companies representing the full spectrum of South Korea's Yeongnam region's industrial landscape — automotive parts, mechanical components, intelligent machinery, chemicals, and steel. Together, their AI solutions span the entire manufacturing value chain: from production planning and quality inspection, through equipment predictive maintenance and energy management, to workplace safety.

▶ Gyeongnam, South Korea — Automotive Parts (3 companies)

JNE Works delivers an AI-powered Digital Twin Integration Platform for Smart Manufacturing, developed in partnership with VMS Solutions and Changwon National University. The company is presenting an autonomous production planning cloud solution powered by reinforcement learning. The platform integrates AI-based demand forecasting (Bi-LSTM), What-if production simulation, and real-time anomaly response into a single APS SaaS — enabling manufacturers to continuously optimize scheduling and automatically adapt when disruptions occur on the factory floor.

AdiaLab showcases an AI-based quality inspection and predictive maintenance system for heavy-cutting machined components. By fusing vision AI with 3D metrology, the solution automatically detects surface defects and dimensional deviations in high-mix, high-precision metal parts — eliminating reliance on manual visual inspection while delivering consistent, traceable quality records. Building on these smart industrial technologies, AdiaLab also introduces its Intelligent Integrated Safety Monitoring solution, which combines GIS and hybrid AI to provide real-time risk detection, integrated situational awareness, and faster emergency response.

FormationLabs demonstrates an integrated AI brain system for mobility component manufacturing that unifies three previously siloed functions — quality prediction, power consumption forecasting and optimization, and multi-line vision inspection — into one cohesive operational platform. The system delivers simultaneous quality stability and energy efficiency across automotive component assembly lines.

▶ Busan, South Korea — Mechanical Components (3 companies)

SCT presents an AI tool management optimization solution that monitors equipment vibration and operating signals in real time to detect anomalies and predict the remaining useful life of cutting tools. By identifying wear before failure, the system reduces unplanned downtime and prevents premature tool replacement — delivering measurable cost savings in high-volume precision machining operations.

Pine Information Technology showcases a Large Language Model (LLM)-based global business support platform that transforms the way manufacturers handle process and quality documentation. The solution enables multilingual intelligent analysis of diverse factory records — from work instructions and inspection reports to non-conformance logs — significantly reducing the time engineers spend on data retrieval, reporting, and cross-team communication.

SignLab presents an AI predictive maintenance and defect analysis platform for injection mold processes. The system applies vision AI to detect forming defects in semi-finished plastic products in real time, while a root-cause analysis engine identifies the process conditions driving each failure and recommends corrective parameter settings — closing the loop between detection and prevention.

▶ Daegu, South Korea — Intelligent Machinery (3 companies)

J-Solution demonstrates a digital twin-based, on-device AI solution for long-range predictive maintenance of calender equipment. The system captures vibration signals from bearing boxes and reducer oil pumps, constructs a digital health model of the machinery, and predicts the type and timing of future failures with high accuracy — enabling proactive maintenance scheduling and eliminating costly unplanned stoppages.

THEIMC presents a real-time defect detection and predictive maintenance platform that fuses acoustic and vibration sensor data from heading and rolling manufacturing processes. An AI model trained on multi-sensor signals simultaneously classifies product defects and flags early-stage machine faults — with results surfaced through a cloud-based SaaS dashboard for immediate corrective action.

ComputerMate showcases a suite of AI-driven machining process optimization tools. The core module automatically adjusts CNC tool offset values based on real-time dimensional measurement data, maintaining tight tolerances without operator intervention. A ball-bar-based AI module proposes machine compensation parameters to correct circularity errors, while a vision-based final inspection system replaces manual part checking — collectively reducing defect rates and improving overall machining consistency.

▶ Ulsan, South Korea — Chemical & Energy (2 companies)

VITZROSYS presents an online AI condition diagnosis and prediction system engineered for multi-unit chemical process facilities. The platform collects vibration and process data from heterogeneous equipment via a multi-protocol communication middleware, then applies specialized detection algorithms to identify abnormal states and forecast equipment degradation — helping chemical plant operators prevent costly unplanned shutdowns in environments where downtime consequences are severe.

Prognosis & Diagnostics Technologies introduces a portable AI predictive maintenance system built around the practical realities of field maintenance work at chemical plants. Unlike fixed sensor networks that require permanent installation, the portable diagnostic device can be deployed on-demand at any equipment location. Captured data feeds directly into an AI prognostics engine that generates actionable condition assessments — bridging the gap between traditional time-based maintenance and fully automated continuous monitoring.

▶ Gyeongbuk / Pohang, South Korea — Steel & Heavy Industry (3 companies)

USINGTECH displays an AI-based industrial accident prevention system designed for high-risk environments where large structural components are transported by overhead equipment. Deep learning models perform real-time object detection and semantic segmentation, while a 3D coordinate transformation algorithm continuously calculates proximity hazards. Upon detecting collision or entrapment risks, the system triggers immediate on-site alerts via warning lights, speakers, and HMI panels — protecting workers in one of the sector's most hazardous operational conditions.

inGRID presents an integrated AI process management system for calcination furnace operations in the specialty materials and steel sector. Built on a Seq2Seq with Attention control architecture, the system connects to plant PLCs via OPC communication and automates real-time collection of temperature and pressure data across both large-scale (4-unit) and small-scale (1-unit) furnace configurations — delivering continuous optimization recommendations that improve product quality and reduce energy consumption per unit.

AmberRoad showcases an AI solution for autonomous operation and anomaly prediction across

Mold Flux drying processes in steelmaking. The system addresses two critical subsystems: a Slurry Pump predictive maintenance module that correlates viscosity, density, pressure, vibration, and RPM data to anticipate pump failures before they cause production stoppages; and a Spray Dryer optimization module that monitors burner temperatures, exhaust conditions, and spray parameters to maintain stable product quality — automatically correcting deviations to minimize non-operational losses and improve overall production yield.

> *Across all five regions, the 2026 pavilion addresses the full manufacturing lifecycle: production planning optimization, AI-powered quality inspection, equipment predictive maintenance, energy and process management, and industrial safety. Every solution on display has been field-validated at active South Korean manufacturing sites — making this a showcase of proven, immediately deployable technology, not prototype concepts.*

Strategic Significance

The 2026 delegation represents a strategic evolution from the program's first year. Whereas 2025 was a validation milestone — proving that South Korean regional AI companies could compete on a global stage — 2026 is focused on international business development, technology transfer, and establishing partnerships with overseas manufacturers, system integrators, and research institutions.

The shift from 26 companies to a concentrated group of 14 reflects a deliberate effort to showcase solutions at a higher level of technological maturity. All participating companies have completed multi-site field demonstrations in South Korea and are actively seeking global deployment partners.

> *"Global buyers at Hannover Messe ask very practical questions — where has this been deployed, what did it actually improve, and can it work in our environment. The fact that every solution in our pavilion comes with field validation data from Korean manufacturing sites gives us a strong foundation for those conversations. That is what we are here to build on."*
>
> **— Lee Chang-seok, Project Manager**
> Gyeongnam Technopark (South Korea)

About Hannover Messe

Hannover Messe is the world's leading trade fair for industrial technology, attracting approximately 4,000 exhibitors and more than 100,000 visitors from across the globe each year. The event serves as a premier platform for showcasing advances in AI, automation, robotics, digital manufacturing, and energy innovation.

About the Manufacturing AI Convergence Foundation Project

The Manufacturing AI Convergence Foundation Project (2024–2026) is a national AI industrialization initiative led by South Korea's Ministry of Science and ICT and implemented by NIPA. The program targets the Yeongnam region of South Korea — home to the country's core manufacturing industries — and supports the development and field validation of AI solutions tailored to the specific challenges of local manufacturers. The project operates across three tracks: demand-customized AI solutions (2024–2025), inter-regional linked projects, and diffusion hub-type projects (2025–2026). Five regional agencies coordinate program activities across Gyeongnam, Busan, Daegu, Ulsan, and Gyeongbuk/Pohang.

Pavilion Information	
Exhibition	Hannover Messe 2026
Hall / Booth	Hall 16 (Industrie-Software) / Booth B17
Pavilion Size	Approx. 100 m²
Participants	14 companies, approx. 45 delegates
Regions	Gyeongnam · Busan · Daegu · Ulsan · Gyeongbuk/Pohang (South Korea)
Lead Organizer	Gyeongnam Technopark (South Korea)
Program	Manufacturing AI Convergence Foundation Project (NIPA / Ministry of Science and ICT)
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Participating Companies — 2026 Joint Pavilion

No.	Company	AI Solution / Product
1	JNE Works Co., Ltd.	Autonomous Production Planning System (Reinforcement Learning-based APS Cloud Solution)
2	AdiaLab Co., Ltd.	AI-based Quality Inspection & Predictive Maintenance System (3D measurement + AI vision for heavy-cutting machined parts)
3	FormationLabs Co., Ltd.	Integrated AI Brain System for Mobility Component Manufacturing (Quality, Power & Vision AI platform)
4	SCT Co., Ltd.	Tool Management Optimization via AI Anomaly Detection (Equipment predictive maintenance & tool lifecycle management)
5	**Pine Information Technology Co., Ltd.**	LLM-based Global Business Support Solution (AI analysis of manufacturing process & quality data)
6	SignLab Co., Ltd.	AI-based Injection Mold Predictive Maintenance System (Vision AI defect detection & process optimization)
7	J-Solution Co., Ltd.	Digital Twin-based Long-range Predictive Maintenance (On-device AI for calender equipment bearing & reducer)
8	THEIMC Co., Ltd.	AI Defect Detection via Sound & Vibration Data (Real-time anomaly detection SaaS for heading/rolling processes)
9	ComputerMate Co., Ltd.	AI-based Machining Process Optimization (Tool offset auto-adjustment + vision-based final inspection)
10	VITZROSYS Co., Ltd.	Online AI Condition Diagnosis & Prediction for Chemical Facilities (Multi-protocol data integration middleware)
11	Prognosis & Diagnostics Tchnologies	Portable AI Predictive Maintenance System for Chemical Facilities (Field worker-centric portable diagnostic device + AI)
12	USINGTECH Co., Ltd.	AI-based Accident Prevention System for Large Structure Transport (Deep learning object detection + 3D coordinate transformation)
13	InGRID Co., Ltd.	Integrated AI Process Management for Calcination Furnace (Seq2Seq with Attention control algorithm + PLC integration)
14	AmberRoad Co., Ltd.	Autonomous Operation & Anomaly Prediction for Mold Flux Drying (Slurry Pump predictive maintenance + Spray Dryer optimization)

Photo 1

Photo 2

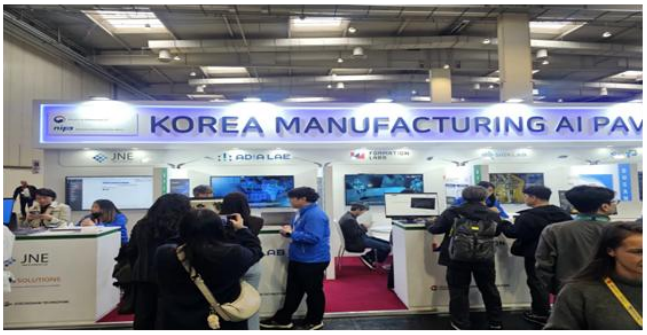

Photo 3

Photo 4

[Photo 1] Group Photo

Participants of the Korea Manufacturing AI Pavilion gather in front of the joint exhibition booth at the opening of Hannover Messe 2026 on April 21 (local time). The pavilion brings together approximately 45 delegates, including representatives from 14 AI companies and five regional support agencies — Gyeongnam Technopark, Busan IT Industry Promotion Agency (BIPA), Daegu Digital Innovation Promotion Agency (DIP), Ulsan IT Industry Promotion Agency (UIPA), and Pohang Technopark.

[Photo 2] FormationLabs Booth Consultation

A FormationLabs representative introduces the company's integrated AI brain system — unifying quality prediction, power optimization, and vision inspection for mobility component manufacturing — to visitors at the Korea Manufacturing AI Pavilion. In the background, exhibition booths of Busan-based companies including SignLab, SCT, and Pine Information Technology (PINEIT) are visible.

[Photo 3] Pavilion Overview

An overview of the Korea Manufacturing AI Pavilion in Hall 16 of Hannover Messe 2026. Exhibition booths from Gyeongnam and Busan-based companies — including JNE Works, AdiaLab, FormationLabs, SignLab, and SCT — are in full operation, drawing a steady stream of global buyers for technology demonstrations from the opening day.

[Photo 4] Live Consultation with Global Buyer

A European visitor receives a hands-on briefing from an AdiaLab representative at their booth, covering the company's AI-based quality inspection and intelligent integrated safety monitoring solutions. A case study video showcasing real-world deployment results plays on the screen to the right.

Photo 2

Manufacturing AI Convergence Foundation Project | Organized by Gyeongnam Technopark
Commissioned by Ministry of Science and ICT | Implemented by NIPA (National IT Industry Promotion Agency)

#HannoverMesse2026 #KoreanManufacturingAI #SmartManufacturing #AIforIndustry #YeongnamAI