Lenovo Manufacturing Solutions

Digital Twins

Smart Technology with AI drives the Future of Manufacturing

While the manufacturing sector is large and diverse, its core companies remain sharply focused on operational efficiency and product quality. To achieve this, manufacturers are increasingly adopting AI to enhance customer experience, productivity, and decision-making—with 34% planning implementation within a year. Interpretive AI (39%) and generative AI (39%) are top priorities, driven by a 159% surge in AI investment. Success hinges on sufficient budget, management commitment, and strong AI partnerships, while overcoming hurdles like scaling challenges, IT costs, and data quality.

Data is central to AI in manufacturing, with production, supply chain, and quality control data as key inputs. Nearly a third of manufacturers aim to improve data management—critical for AI adoption. The primary approach is to adopt on-premises, private, or hybrid infrastructure for AI workloads, with manufacturers seeking partners for AI expertise to scale solutions.

Business Priorities

- Improving customer experience & satisfaction
- Improving employee productivity
- Enhancing decision making
- Increasing revenues & profit growth
- Reducing business risk & cyber threats

What do Organizations Seek in a Partner?

- AI knowledge & expertise (including scaling AI solutions)
- Support for data management
- Ability to help our organization deliver measurable business outcomes
- Support for data security & privacy

Current AI Adoption

Adoption

AI is **systematically adopted** across the enterprise — **6%**

Supporting different **pilot** projects/use cases — **27%**

Early stages of development/ implementation — **21%**

Non-Adopters

Planning to start using AI in the next 12 months — **34%**

Considering or **evaluating** AI, but with no plans yet — **13%**

Lenovo AI Services: For every stage of the AI journey

AI Readiness Methodology

Security I People I Technology I Processes

Proven Responsible AI Framework

01	02	03	04	05
AI Discover	AI Advisory	AI Fast Start	AI Deploy & Scale	AI Managed
Identify the ways AI creates value	Define outcomes, plan and roadmap, business case	Design and build critical AI elements to showcase outcomes	Implement a secure and tailored Hybrid AI solution	Continue to manage and optimize the AI environment

Outcomes Definition and Rapid Innovation → Production → Optimization

* All data are from 2025 CIO Playbook.

Maximize Efficiency with a Virtual Replica.

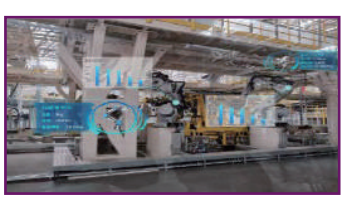
The Virtual Factory Floor Made Real - Lenovo Manufacturing Solutions brings **intelligent digitalization and optimization** to manufacturing with a virtual replica of your physical space and operations. The manufacturing industry is challenged with increasing efficiency and reducing costs. Lenovo Manufacturing Solutions offers a smarter approach through the use of **digital twin** technology.

By creating a virtual replica of the physical factory, it enables **real-time monitoring**, **predictive analysis**, and **simulation optimization** of equipment and processes in the virtual space to allow customers to save time and cost during physical deployment.

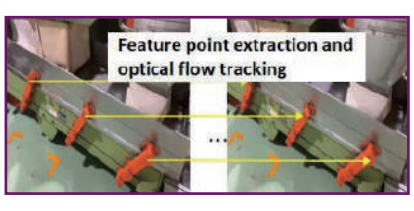
With comprehensive sensor data integration and AI-driven insights, Lenovo Manufacturing Solutions transforms operations for **maximum productivity**, making the **virtual factory** floor a reality.

Solution Components

Factory digital twin platform



Digital twin application



Intelligent Algorithm

Production line equipment linkage

1

Smarter Insights for Smarter Decisions

See your factory floor like never before with real-time data visualization and monitoring. Get instant access to equipment status, production metrics, and supply chain logistics, all in one intuitive interface.

Predict and Prevent with AI-Driven Analysis

2

Leverage predictive analytics and machine learning algorithms to identify issues before they occur. Diagnose faults, schedule preventative maintenance, and optimize production with artificial intelligence.

3

The Virtual Advantage for the Real World

Create digital twins of facilities, production lines, and processes. Simulate scenarios to solve problems virtually before applying solutions physically. Reduce downtime and validate changes through virtual modeling simulation.

Features

Intuitive Visualization

- Real-time 3D visualization of equipment, processes, and data
- Dynamic monitoring of overall equipment effectiveness
- Easy to understand overview of factory operations

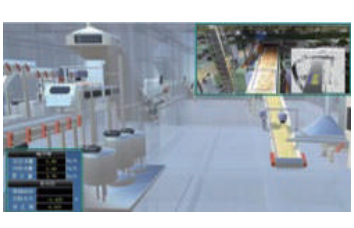
Digital Twin Simulation

- Virtual mapping of physical space, assets and processes
- Test solutions and changes in a virtual environment
- Validate improvements through digital modeling simulation

AI-Driven Optimization

- Machine learning for intelligent analysis and control
- Automated optimization of manufacturing operations
- Continuous improvement through simulation and data insights

Use Cases



Production Line

Substation

Automobile Workshop

Lenovo's global strength

180 Markets	**10M+** Order lines per year	**1B+** Global customers
120M+ Shipments	**30+** Global manufacturing sites	**2000+** Suppliers
>$160M Digital transformation investment	**18** R&D locations worldwide	**69.5K** People

Global supply chain ranked 8th by Gartner®

World Economic Forum Global Industry 4.0 Lighthouse Recognition

AAA-rated for ESG by MSCI

Smarter manufacturing sees the factory floor like never before. Lenovo Manufacturing Solutions optimize manufacturing end-to-end with a virtual replica.

Contact us today to discover how Lenovo Manufacturing Solutions can bring the future of manufacturing to you.
Learn more on: http://lenovo.com/manufacturing

Smarter technology for all

Lenovo