

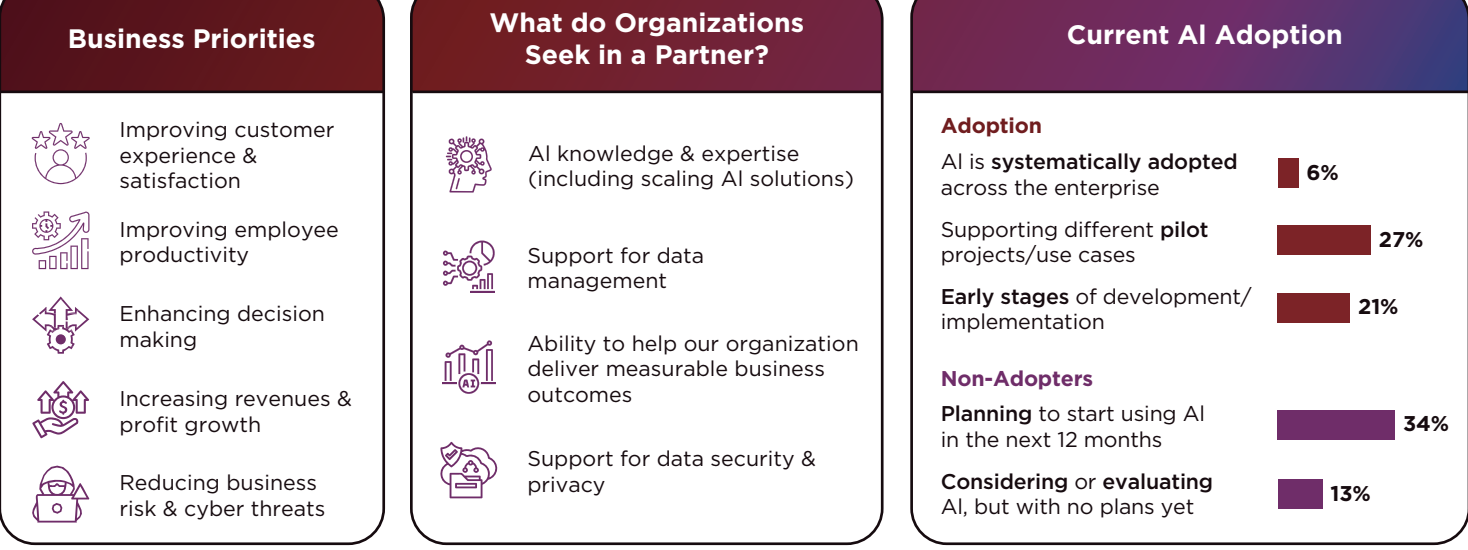
Robotic Inspection



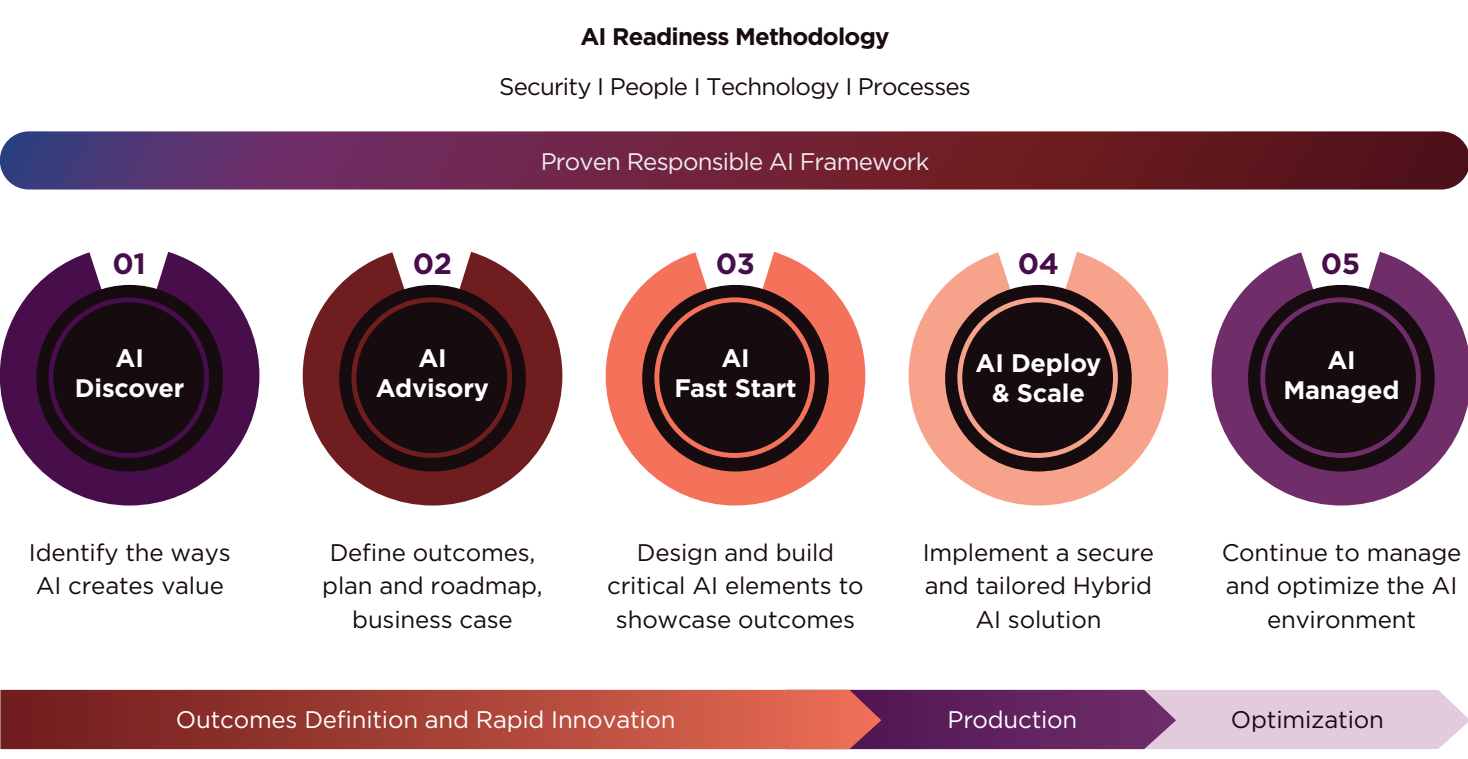
Smart Technology with AI drives the Future of Manufacturing

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.



Lenovo AI Services: For every stage of the AI journey



* All data are from [2025 CIO Playbook](#).



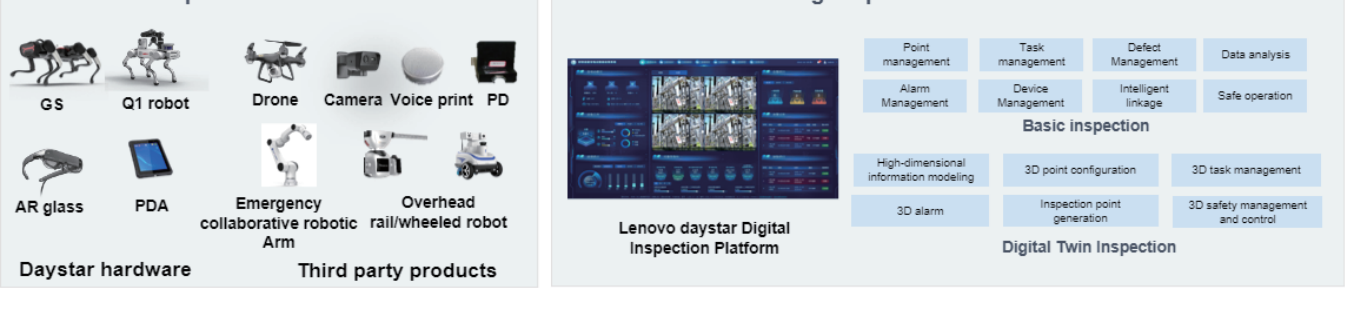
From Inspection to Insight - AI Takes the Tedium Out of Infrastructure Monitoring

Infrastructure monitoring is often a tedious and labor-intensive process, but it doesn't have to be. Robotic Inspection leverages **AI and automation** to take the drudgery out of defect detection.

By integrating **intelligent sensors** and technologies like **computer vision** and **edge computing**, Robotic Inspection enables round-the-clock automated monitoring of assets like substations and pipelines.

It identifies defects and anomalies in real time and generates reports instantly, boosting productivity by up to **80%-300%***. With its virtual simulation and digital twin capabilities, the system also reduces the risks of unplanned downtime by up to **50%***. Robotic Inspection brings **infrastructure monitoring** into the future with intelligent automation that transforms inspection from a chore into an insight.

***Note:** these figures are calculated based on customer existing condition prior to digital inspection. These figures may vary depending on each customer's requirement.



Automated 24/7 Monitoring

Robotic Inspection works tirelessly day and night to monitor infrastructure. Integrated with various sensors and devices, it detects **defects and anomalies around the clock** without any human effort required.

24/7

Virtual Simulation Reduces Downtime

Robotic Inspection leverages **digital twin** technology to simulate equipment and infrastructure in a virtual environment. By modeling changes and predicting risks, the system enables **early warnings** that reduce unplanned downtime by up to **50%**.

50%

Instant Insights Boost Productivity

Robotic inspection automatically generates reports on defects and abnormalities detected. The system is **customized for business scenarios** and supports five key categories of image recognition in inspection environments: meter reading (deviation ≤ ±2%), equipment defect detection (recall ≥ 90%, precision ≥ 90%), environmental condition monitoring (accuracy ≥ 96%), personnel operation recognition (accuracy ≥ 96%), and equipment status monitoring (accuracy ≥ 99%).

It significantly lessens the burden of manual inspection and boost productivity by up to **80%-300%**. The system takes the tedium out of infrastructure monitoring.

80%
|
300%

Key Features

- 01**

Task configurations:

Easily set up and customize inspection tasks like routes, schedules, emergency as well as anomaly detection rules.
- 02**

Report query and export:

Query inspection data on demand and export customizable reports.
- 03**

Alarm:

Get real-time alerts when defects or anomalies are detected.
- 04**

Real time monitoring:

View live status and streaming data from inspections points.
- 05**

3D display:

Visualize assets and infrastructure in interactive 3D.
- 06**

Account configuration:

Manage user accounts and permission levels.
- 07**

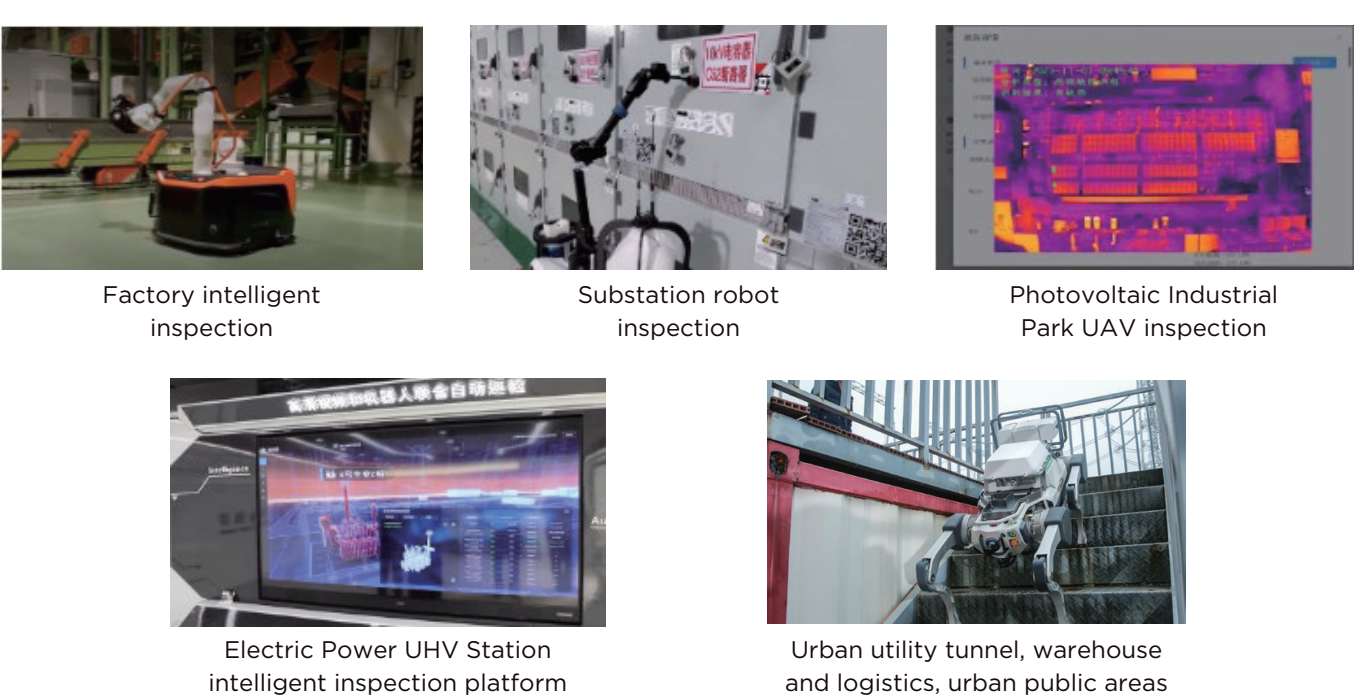
AI self-test:

The system automatically performs self-check to ensure accuracy.
- 08**

AI interaction:

Use natural language to query the system and get insights.

Use Cases



Lenovo's global strength



Inspections made intelligent. Transform infrastructure monitoring today.

Contact us today to discover how Lenovo Manufacturing Solutions can bring the future of manufacturing to you.

Learn more on: <http://lenovo.com/manufacturing>

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