

Lenovo Hybrid AI Advantage™  
with NVIDIA

# Reinventing retail with AI



## Harness AI innovation no matter where you are on your journey

Advancements in AI technologies are driving a foundational transformation of the retail industry. Building on the momentum of 2024, retailers are figuring out how to unlock value through AI, reducing costs and driving strong growth. By elevating the customer experience, syncing inventory management, and improving decision-making, AI is accelerating innovation and raising the stakes for marketplace competition.



**9 out of 10 retail businesses are actively using or assessing AI in their operations.<sup>1</sup>**



**4 out of 5 retail businesses are seeing revenue growth of more than 20% because of help from AI.<sup>1</sup>**

While AI is a growing retail technology, the market continues to evolve and grow in complexity. Being able to implement AI at enterprise scale — where purpose-built computing infrastructures can quickly deploy new agentic solutions — remains a challenging proposition. Poor data quality continues to hamper retail deployments, as does incomplete integration of AI with existing systems and processes.

**61%**

**Only 61% of retail businesses feel that they have the right data and technology in place to enable effective AI.<sup>2</sup>**

With so much potential value for AI to unlock in their organizations, retailers need to move quickly — and carefully — when exploring their options. Having a strategic roadmap for AI deployment and the right resources and expertise in place can help ensure AI projects are implemented on time, within budget, and ready to deliver ROI.

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# A smarter way forward

**Lenovo Hybrid AI Advantage™ with NVIDIA** enables retailers to streamline AI development and implementation, preparing for a new era of agentic AI with minimal complexity.

**NVIDIA's AI Enterprise Software has been integrated into scalable Lenovo Hybrid AI Advantage™ solutions to meet customers where they are on their AI journey with speed, ease, and expertise.**



## **Increase productivity**

Enable faster AI agent delivery with functional retail-specific agents, solutions, and personalized experiences, delivering value across the organization and consumers.



## **Optimize agility**

Build, scale, and operate a flexible AI development platform with ease to deliver tailored retail solutions and drive operational efficiencies.



## **Innovate for growth**

Achieve trusted, compliant, and responsible AI by managing and protecting sensitive data with Lenovo expertise, validated solutions across the organization, and managed services for post-deployment maintenance and support.



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 **NVIDIA**



# Start ahead and stay ahead

The **Lenovo AI Library** provides a suite of ready-to-customize pre-validated use case accelerators that organizations can leverage to deploy agentic AI quickly and easily. These proven solutions help reduce risk and break down barriers to ROI.

Some of the general-purpose use cases available include:

- **Marketing and content creation:**  
Generating promotional email copy, circulars, web/social content, and ad variations
- **Customer support automation:**  
Improve customer experience while adding efficiencies with AI-powered chatbots and virtual assistants
- **Internal knowledge management:**  
Speed workflows with AI-powered search across product catalogs, supplier documentation, policies, and procedures

These use cases provide flexibility for retailers to choose from a range of sizes, locations, deployment methods, and managed services options aligned to the specific needs of their business.



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# Eliminate guesswork with pre-validated infrastructure foundations

Lenovo Hybrid AI Advantage™ with NVIDIA solutions are based on industry-leading technology, including Lenovo ThinkSystem and ThinkEdge servers and ThinkAgile solutions, along with NVIDIA Grace Hopper and NVIDIA RTX PRO 6000 Blackwell Series GPUs.

Lenovo Validated Designs (LVDs) provide comprehensive, scalable, and pre-tested hybrid AI architectures for a wide range of AI workloads speeding implementation. AI services teams tap into Lenovo's agentic AI platform and enable more custom AI agent creation solving key retail needs.



## Stores

### Customer experience:

In-store experiences come to life guided by AI ambassadors that streamline shopping experiences with dynamic digital signage serving as store guide and customer service concierge.

**Checkout optimization:** Speed checkout with computer vision-based product recognition (no scanned barcodes or weights) and automated digital payment processing.

**Loss prevention:** AI agents can continuously monitor data from multiple sources, including POS transactions, security cameras, RFID systems, and inventory records to identify anomalies in real time.



## Supply chain and inventory

**Intelligent warehouses:** AI enabled automation, inventory tracking, and digital twins streamlining inventory management, stocking/picking, and workflows with visual AI agents.

**Supply chain management:** Among retail organizations surveyed, 59% reported supply chain challenges over the last year.<sup>1</sup> Many are turning to AI to analyze vast amounts of transaction data to assist in demand forecasting and inventory allocation to ensure retailers can meet customer needs.

**AI-powered catalog enrichment:** Retailers are tapping into next-gen computer vision to instantly identify product details, enrich catalog content, sharpen search accuracy, and deliver personalized recommendations that truly connect with shoppers.



## Omnichannel

**AI-powered product tagging:** Retailers are using next-generation computer vision to recognize image attributes and automatically generate meta-tagging and cataloging, and improving search, and personalizing recommendations.

**Multi-modal shopping assistants:** These highly skilled AI shopping assistants can understand text- and image-based prompts, search for multiple items simultaneously, complete complicated tasks, and answer contextual questions.

# 10K

Lenovo Retail Solutions empowers more than 10K retail stores with end-to-end turnkey AI solutions to help retailers surpass customer expectations, operate more efficiently, and explore new revenue streams.

# 20%

Lenovo created its own AI-powered solution called Supply Chain Intelligence (SCI) which has reduced logistics costs by ~20% and reduced order-to-delivery lead time.<sup>7</sup>





## Drive continuous, responsible innovation

Flexible access to Lenovo's AI expertise and proven tools helps retail businesses make faster, more informed decisions so they can find innovative ways to improve operations.

- ✓ To help you get started safely and responsibly, **Lenovo AI Services** provides assessments to help evaluate your organization's AI readiness and provide a concrete action plan to start adopting AI in a way that delivers results quickly while proactively mitigating risks.
- ✓ Safe, compliant, AI-ready data is key to AI deployment success. Lenovo and NVIDIA have collaborated with Centific AI Data Foundry to provide a pre-tested, scalable AI agent to solve data complexity, access challenges and accelerate insights.
- ✓ Scaling seamlessly as needs evolve, **Lenovo TruScale Infrastructure as a Service (IaaS)** helps you transform without disruption through a convenient pay-as-you-go model.

## Delivering AI insights where they are needed

To help bring AI where it makes the most impact, empowering teams to be more productive, **Lenovo Hybrid AI Advantage™ with NVIDIA** solutions provides pre-validated, purpose-built full-stack infrastructure where custom AI agents can be utilized or developed from the AI Library or Lenovo's agentic AI platform, unlocking relevant intelligence from your data and AI models securely, efficiently, and responsibly.

**Discover what your organization can accomplish with Lenovo Hybrid AI Advantage™ with NVIDIA solutions today.**

Visit [Lenovo.com/hybridai](https://lenovo.com/hybridai) to learn more.

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## Ready to enhance the retail experience?

Lenovo Hybrid AI Advantage™ with NVIDIA solutions streamline the process of deploying agentic AI, and through the process, they can help retailers address key needs to ensure long-term success. Review this checklist to assist you in a successful agentic AI rollout.

### ☐ 1. Build a strategic plan and clear objectives.

Align strategy and objectives with cross-functional teams and identify repetitive tasks that would benefit from automation. Specify goals for your agentic AI systems. **Lenovo AI Services** can help you address concerns around unclear ROI and secure stakeholder support by presenting a well-defined AI roadmap with measurable KPIs.

### ☐ 2. Determine readiness of data and infrastructure.

A strong data foundation built on a data warehouse infrastructure is key. Assessing data sources and quality ensures more predictive and effective models and insights. Implement data governance to address quality issues and assess data readiness. Review and refine datasets to be used by the agentic AI.

### ☐ 3. Develop your agentic AI resources.

Lenovo can help you evaluate your current infrastructure situation and provide pre-validated reference architectures with the latest Lenovo and NVIDIA technologies through **Lenovo Validated Designs** (LVDs). Also, look at the Lenovo AI Library, a suite of ready-to-customize retail and general-purpose use case accelerators, including 165 ISV solutions in the **Lenovo AI Innovators** program. Organizations can leverage these validated and tested solutions to deploy agentic AI quickly and easily.

### ☐ 4. Pilot and deploy your AI agents.

Start your pilots in controlled environments to refine workflows and measure impacts. Automate deployment processes and confirm any restrictions on agent access to resources. Conduct robust testing of all components and make sure the agent is pulling data from relevant external systems.

### ☐ 5. Monitor and optimize your AI agents.

Keep an eye on output and performance logs, while also tracking your own metrics and KPIs. Automate performance tracking and implement feedback loops that deliver continuous learning and improvements to the AI agents.

### ☐ 6. Scale wider use of agentic AI in your retail business.

As successful implementations surface, add more instances to handle increased workloads across departments and teams. Grow your data-driven culture so you can further enhance your customer experience and improve decision-making across the business.

**Take the next step toward an AI-powered future today with Lenovo and NVIDIA.**

Visit [Lenovo.com/hybridai](https://lenovo.com/hybridai) to learn more.

#### Sources

1 NVIDIA, "State of AI in Retail and CPG: 2025 Trends," January 2025

2 Foundry, "From hype to reality: AI adoption gains traction in 2025," February 2025

