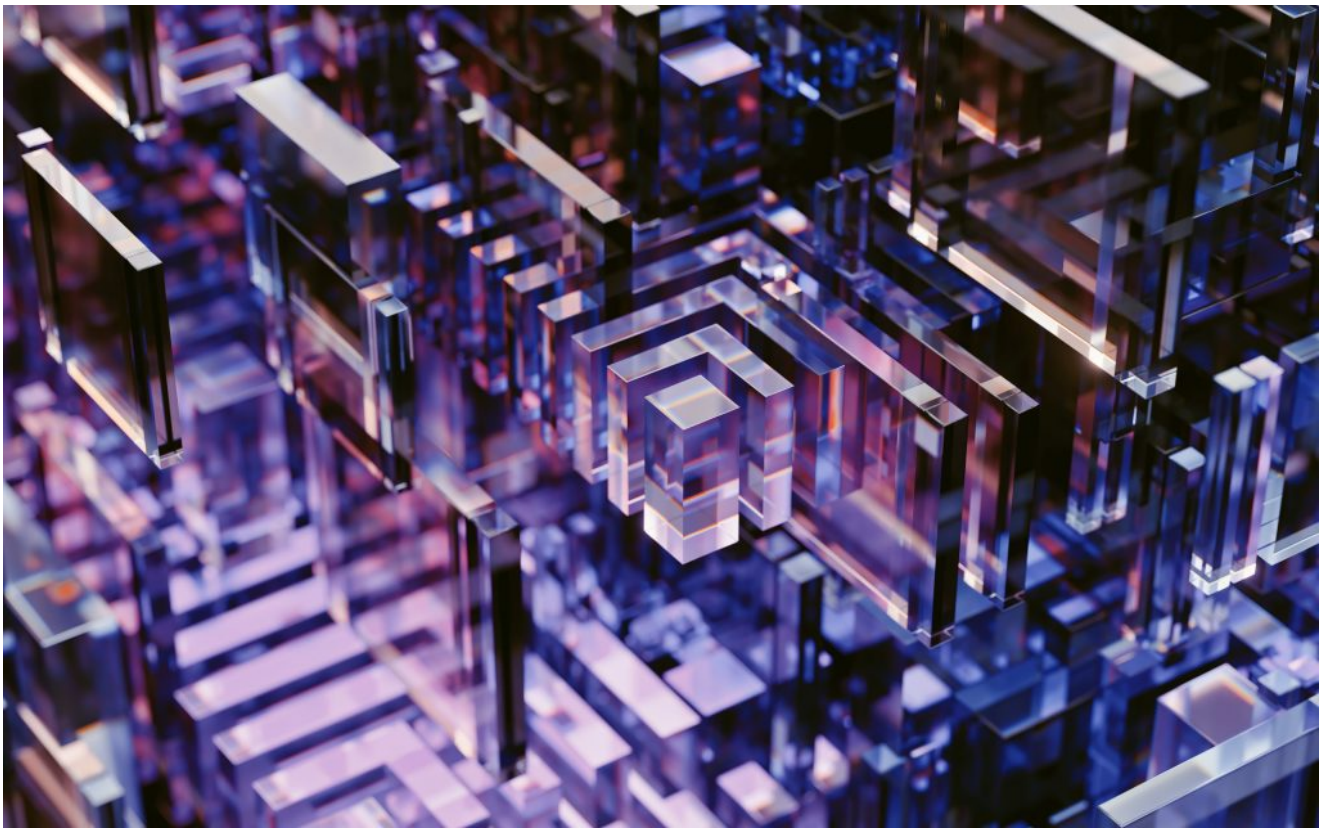
Why data and infrastructure modernization underpin the AI revolution

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Countless organizations are competing neck and neck to unlock the power of transformative AI technology. The untapped value is staggering – with McKinsey predicting anywhere from $2.6 trillion to $4.4 trillion added each year to the global economy for Generative AI alone.

From sophisticated chatbots and automated document analysis to drug discovery and manufacturing automation, AI can help analyze complex information, create valuable original content, and develop innovative new products and services that accelerate time-to-market, enhance customer experience, and attain all-important competitive advantage.

No wonder over two-thirds of businesses are increasing their Gen AI investment[1] and 78% of executives expect to see ROI in 1-3 years[2]. According to Boston Consulting Group, 8 in 10 enterprises will be using Gen AI by 2026, with the same proportion of PCs expected to be AI-powered by 2026[3]. And that's not including Deep Learning or so-called traditional AI/ML and analytics, which are more potent than ever.

At this rate, the pre-AI world will soon be a distant memory.

However...

The barriers to AI are real

Put simply, most organizations aren't quite ready to deploy AI at scale. Do any of these hurdles look familiar?

Difficult data. 46% of CIOs cite model capability limitations as the top challenge in adopting GenAI, and lack of data is one of their biggest concerns[4]. It's true: AI is only as good as your data. Even if you're using pre-trained models, fine-tuning and inferencing still need high-quality data – and the more of it, the better. Fortunately, many organizations already have plenty of in-house data; it's just often in the wrong place and in the wrong format. For now. Prioritize data integration and governance at the enterprise scale, and you can focus freely on extracting value from all that IP.

Legacy lag. AI is a highly valuable, highly demanding technology. In other words, if you want cutting-edge insights, out-of-data tech won't cut it. Indeed, 67% of companies say legacy systems hinder their AI adoption[5]. For many AI workloads, it only makes sense to leverage the latest GPUs and AI-enabled CPUs to get the desired results within a narrow time frame, particularly when real-time insights are required. Organizations must modernize their infrastructure to power scalable AI workloads. Even if you've recently modernized, there are always opportunities to optimize data integration, governance, and analytics and scale to get the most out of AI and build on the progress you've already made.

Budget concerns. There's no getting around it; to realize the value of AI, you need to invest in the right infrastructure and services. That doesn't mean funding constraints are insurmountable. Firstly, you don't have to do everything at once. Identify quick wins and high-impact areas, and you're already well on your way to modernizing in a phased, cost-effective manner. Furthermore, an as-a-service model can provide the scalability and expertise you need along the way and help operationalize and manage AI long-term.

Headcount headaches. Specialist expertise is a no-brainer when exploring, deploying, and maintaining AI. It's also in short supply. Many organizations lack the in-house skills to manage AI workloads, and many also lack the budgets to acquire and expand their teams. This is where a flexible, knowledgeable external provider comes in. Find someone you can plug in as and when required and who can hold your hand throughout the journey.

The compliance question. As AI grows, so do data security, ecosystem, and compliance risks. With an ever-expanding attack surface, Zero-Trust principles and privacy protocols must be built in from day one. Only 33% of organizations have implemented governance around responsible AI deployment[6]. Not good enough.

ROI, really? It's easy to forget that AI is still in its infancy for most, if not all, businesses. Owing to the above challenges, many are struggling to prove its value – or even knowing where to start. Are they even ready? It pays to get an outside perspective, ideally from a vendor who has been there and done it for themselves. An expert can help you assess overall readiness, highlight gaps, and identify high-value use cases while putting the data and AI infrastructure foundations in place to test and scale what works.

Three steps to AI transformation

The above roadblocks can initially feel overwhelming, but they're not immovable. At Lenovo, we've distilled the data and infrastructure modernisation journey into three core phases to provide clarity, vision, and a solid technological underpinning.

1. **Assess**

   Before you begin, you need to know where you're at. We rapidly assess your environment and extract insights from current infrastructure, applications, and data readiness for AI. Lenovo's AI-powered knowledge base analyzes legacy systems, and GitHub CoPilot reviews your code. Together, we'll identify optimization opportunities and deliver a strategic roadmap for your data, cloud, and security technologies in days rather than months.

2. **Advise**

   Next, we lay the data and technology foundations for your unique needs – leveraging Lenovo's generative AI tools and proven accelerators to modernize your infrastructure and drive more value from existing data, cloud, and security investments.

   Data modernization for AI is about building a foundation of well-curated data and in sufficient capacity to power impactful AI applications. We supply the right tools and methodologies to help you curate, govern, integrate, and analyze enterprise-scale data.

   Technology modernization for AI defines the architecture needed to support your goals, including microservices, containers, and MLOps/AIOps automation. A cloud-native approach will ensure your AI workloads are scalable and optimized from the start – and accelerate your transition from legacy systems.

3. **Transform**

   Once you have the right foundations in place, it's time to deploy and optimize AI/ML/LLM workloads and beyond—whether they're on-prem, hybrid, or cloud. Flexible, continuous management is essential to maintaining readiness as you expand AI usage. Opting for an as-a-service delivery model provides peace of mind with cost-efficient and responsible management for your evolving cloud, data, and security.

   Legacy tech won't build your legacy

   Start realizing the true value of your data and demonstrating ROI from AI investments. Partner with Lenovo to lay the groundwork for a successful AI journey and drive real business impact through data-driven insights.

Sources:

[1] Deloitte 2024Q3 State of AI
[2] KPMG GenAI Survey 2024
[3] Boston Consulting Group
[4] IDC and Lenovo, 2024, CIO Playbook 2024
[5] Forrester, 2023, Cloud Adoption Trends According to Media and Entertainment Leaders
[6] PwC, 2023, Emerging Technology Survey