AMD

THE AI ADVANTAGE

UNLOCKING BUSINESS VALUE FROM CLOUD TO CLIENT

How to deliver value from AI and ROI at scale with end-to-end IT infrastructure solutions

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WHY AI IS A BOARD-LEVEL IMPERATIVE

Artificial intelligence (AI) has moved from the experimentation phase and is now being deployed across the enterprise. Nearly 57% of COOs have integrated AI into functions throughout their organizations, and the pressure is growing[1]. As new capabilities emerge, such as autonomous agents and reasoning models, organizations need to scale AI even faster.

AI is not simply another IT initiative implemented by the CIO. It's a growth strategy for all business leaders, including CFOs, COOs, and CMOs. Across every function, this technology is evolving into a core component, driving operational efficiency, innovation, and competitive advantage.

Business leaders need to make AI central to their growth strategy. This means choosing solutions that can grow with new technology, support company goals, and deliver lasting ROI.

In order for organizations to adapt and scale as AI demands increase, they need modern, open, flexible, and trusted environments. The question is not whether to invest in AI infrastructure, but how to invest and build it the right way.

AMD helps enterprises meet this challenge as an open, trusted, and flexible partner that accelerates enterprise AI transformation. With a broad portfolio of compute engines, AMD provides business leaders with choice, flexibility, and proven performance, enabling enterprises to optimize compute for every workload, including model training and real-time analysis.

The commitment of AMD to an open ecosystem empowers industry collaboration and provides enterprises with faster access to innovation. The full-stack solutions include advanced orchestration capabilities that help enterprises deploy and scale AI initiatives more efficiently.

By aligning technology strategy with business outcomes, AMD enables organizations to accelerate AI adoption, strengthen operational agility, and prepare for the next generation of intelligent workloads.

This eBook guides enterprise leaders on how to build a strong foundation and scale AI responsibly, competitively, and profitably.

FROM PILOTS TO PROFIT

THE ECONOMICS OF AI-DRIVEN TRANSFORMATION

A recent global report revealed that 85% of CFOs focus on improving forecasting accuracy and optimizing ROI to drive business growth and allocate capital efficiently.[2] With budgets shifting to support new AI initiatives, organizations must weigh the technology's benefits against its costs. As AI investments transition from experimentation (CapEx) to value creation (OpEx), business leaders want evidence of measurable ROI.

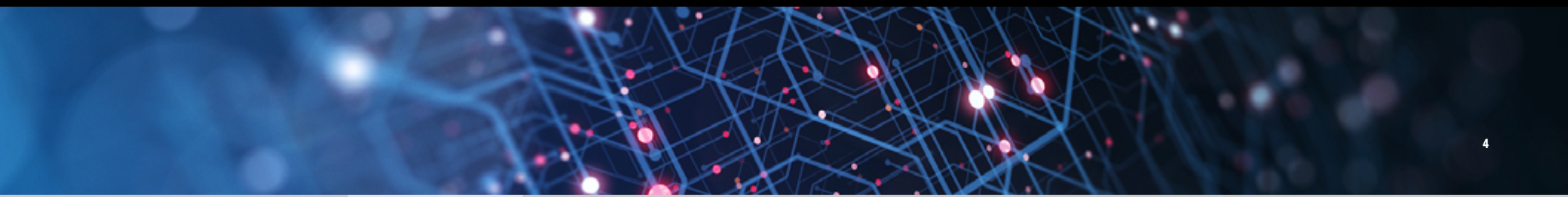
Modernization is essential to scale AI and sustain growth. Enterprises are rebuilding data centers around scalable, energy-efficient, adaptive architectures that reduce total cost of ownership (TCO) and reallocate resources to growth initiatives. These next-generation architectures not only deliver higher performance per watt but can also accelerate time-to-value, turning AI from a pilot project into a sustained operational model.

Recent studies show that 76% of organizations report accelerated innovation as a result of modernization, 71% increased operational efficiency, and 55% experienced revenue growth.[3] For enterprise leaders, AI/ML readiness is now a defining element of capital strategy. Infrastructure decisions, such as CPUs and GPUs selection, deployment models, and energy efficiency, directly affect ROI, agility, and sustainability outcomes.

As AI and machine learning (ML) become integral to business strategy, the urgent question is what infrastructure can truly accommodate their growing demands. Once a facilities concern, power and cooling are now strategic factors that shape long-term budgeting and operational resilience.

Nearly **88%** of CFOs expect their enterprises will increase spending on AI/ML infrastructure.[4]

To remain agile and adapt to AI demands, business decision-makers must balance cost, complexity, and performance across on-premises, cloud, and hybrid environments. Leaders who align modernization with financial performance metrics will be best positioned to convert AI potential into measurable profit and organization-wide value.



SCALING BUSINESS VALUE

WHAT LEADERS EXPECT FROM AI INFRASTRUCTURE

Business decision-makers increasingly evaluate AI based on measurable results, with 98% ranking resilience[5] and 92% ranking ROI[6] as top priorities to support their environmental, social, and governance (ESG) goals. This focus suggests a growing demand for AI infrastructure that produces both financial and operational gains.

AI-ready data centers play a central role in addressing these priorities. Modern, flexible designs enable organizations to lower energy costs, maintain reliable operations, and quickly adapt to changing business needs. As a result, leaders can assess more clearly how their technology investments improve profits and competitiveness over time.

Across functions, practical examples show how infrastructure modernization supports business value:

- Operations teams integrate data into AI systems to enhance supply chain visibility, make faster decisions, address disruptions, and optimize resources and logistics in real time.
- Marketing teams use AI to unify and analyze customer data, personalizing outreach and improving engagement across channels.
- Financial teams apply predictive forecasting to anticipate demand and manage cash flow more effectively.

In each of these cases, the foundation is an AI-ready infrastructure capable of integrating data, scaling performance, and supporting innovation securely. Modernization becomes more than a technology upgrade. It connects directly to key metrics such as efficiency, resilience, and profitability.

As organizations pursue these operational efficiencies, they also face rising expectations around ESG and sustainability. This shift marks the next stage of enterprise transformation, where environmental responsibility and business performance advance together.

THE TRIPLE RETURN OF MODERNIZATION

ENERGY EFFICIENCY, SUSTAINABILITY, AND RESILIENCE

For many organizations, sustainability is a board-level directive. Globally, CEOs rank sustainability as the top external ESG factor having the most significant impact on their business in 2025.[7]

Environmental responsibility and operational efficiency are converging into a single competitive advantage rather than being separate priorities. As organizations expand their AI footprint, energy efficiency becomes essential for both profitability and sustainability.

Energy-efficient AI data centers can help achieve the dual objective of reducing costs and advancing ESG goals. Modern CPUs and GPUs can deliver higher performance per watt, and can help reduce global footprint, OpEx, and power consumption while providing the compute power required for advanced AI workloads. They enable model training and data processing to run more efficiently, helping streamline tasks and reducing overall energy use.

This efficiency—lower power consumption and cooling costs, reduced data center space requirements, and decreased software licensing fees tied to core count—can directly impact the bottom line. The savings can ultimately compound as AI workloads scale, making infrastructure decisions into potentially long-term profit drivers.

42%

of COOs report increasing their budgets and internal headcounts for sustainability initiatives[8]

Upgrading legacy infrastructure can also reduce maintenance overhead and OpEx while enhancing operational resilience. A modernized architecture can help reduce cybersecurity and operational risks and can improve system stability to support business-critical AI workloads without disruption.

The versatile portfolio powered by AMD includes CPUs, GPUs, DPUs, AI PCs, and adaptive processors, powering AI from cloud to edge to endpoint with the right combination of compute engines for any workload. Generation after generation, AMD reliably delivers world-class performance, energy efficiency, and TCO.

PREPARING FOR THE FUTURE WITH FLEXIBILITY

THE OPEN-ECOSYSTEM ADVANTAGE

Closed, proprietary systems often slow innovation by restricting access to emerging technologies. An open, collaborative AI infrastructure promotes choice, interoperability, and long-term resilience. It provides enterprises with long-term flexibility and the capacity to innovate without limits.

By adopting a collaborative ecosystem, organizations can:

Integrate best-in-class solutions from multiple providers for faster time-to-value.

Mitigate risk by ensuring compatibility with a range of software and hardware vendors and avoid single-supplier constraints.

Reduce integration overhead and simplify deployment across cloud and on-premises environments.

Shorten innovation cycles while improving resilience to market and technology disruptions.

Adapt their strategies faster and prepare for the future as new AI technologies, standards, and frameworks emerge.

AMD leads in this space, providing a flexible, open ecosystem across hardware, software, and system-level design, empowering broad industry collaboration that drives customer impact. The open-source AMD ROCm™ software stack enables enterprises to build, deploy, and scale AI workloads across diverse environments, from cloud infrastructure to edge devices. This continuity ensures that organizations can start small, scale quickly, and maintain flexibility as their AI strategies evolve.

AI technology is advancing at a groundbreaking pace, and openness provides a strategic advantage in this business environment. As AI evolves from today's generative models to tomorrow's autonomous agents, flexibility and choice allow organizations to adopt new capabilities seamlessly and maintain competitive advantage without costly platform migrations.

THE IMPACT AND ROI OF AN AI-READY INFRASTRUCTURE

BEST PRACTICES FOR BUSINESS LEADERS

01

Align Financial and Infrastructure Strategies to AI Growth Objectives

When business and technology roadmaps move in sync, AI transforms from an experimental cost center into a measurable growth driver. Close coordination among business leaders, CIOs, and data teams ensures infrastructure investments can accelerate insights, productivity, and new revenue opportunities.

Treat infrastructure modernization as a strategic enabler, not a back-office upgrade. Each investment should directly support faster insights, higher productivity, and new revenue streams.

Real-World Application

Manufacturing organizations can align financial and infrastructure strategies by linking AI investments to growth targets. For example, when planning AI-driven demand forecasting, finance and operations teams could coordinate technology capacity with expected production increases. This ensures infrastructure growth aligns with revenue expansion and enables faster market response.

Real-World Application

Financial services firms modernizing their data center infrastructure can significantly reduce energy costs while meeting ESG commitments. Energy-efficient processors and optimized cooling systems lower power consumption per transaction, cutting operational expenses while reducing carbon emissions. This dual benefit strengthens margins and demonstrates environmental leadership to stakeholders.

02

Reduce Costs and Boost Efficiency through Modern Infrastructure

Modern, energy-efficient infrastructure can help reduce operational costs and support measurable progress toward ESG goals. Energy-efficient CPUs and GPUs can improve performance per watt, which can decrease energy expenditure while reducing carbon footprint.

These outcomes can strengthen profit margins while meeting stakeholder expectations and enhancing brand credibility.

03

Define and Track Time-to-Value for AI Initiatives

Clear time-to-value metrics bridge the gap between technology investments and financial accountability. Establish clear, shared KPIs across business and IT teams to ensure AI deployments align with corporate strategy and build C-suite confidence by demonstrating disciplined execution and accountability.

Connecting AI performance to business outcomes transforms innovation from experimentation to competitive advantage, moving from pilot to proven impact in months, not years.

Real-World Application

For diagnostic AI pilots, healthcare organizations could track patient throughput and clinician efficiency, in addition to model accuracy. These operational metrics demonstrate value in terms executives understand, making it easier to secure funding for broader deployment.

Real-World Application

Complying with data residency across regions can be challenging for a multinational enterprise. By deploying high-core-count processors in each location (such as the European Union or Asia-Pacific), teams could run localized AI, analytics, and transaction processing on shared infrastructure. As business needs or regulations shift, the organization could redistribute workloads across existing infrastructure rather than provisioning new hardware in each region.

04

Build Agility to Adapt to Evolving AI Governance and Compliance Requirements

AI ethics, transparency, and sustainability regulations are evolving rapidly. Modular infrastructure enables enterprises to update data governance, compliance, and reporting capabilities without disruption. Agility is a governance imperative that can reduce compliance risk, reinforce investor trust, and strengthen customer loyalty.

05

Choose Partners Who Prepare Your Enterprise for Tomorrow, Today

When selecting infrastructure partners, prioritize those who offer interoperability and flexibility across deployment models (on-premises, cloud, and hybrid) and support open standards and multiple AI frameworks rather than proprietary ecosystems. Partners offering processors optimized for diverse AI workloads, from model training to real-time inference, enable organizations to scale seamlessly from pilots to production across different environments. This flexibility allows companies to adapt as use cases evolve without technology constraints, positioning them for success both in the short and long terms.

Real-World Application

An organization piloting AI-powered customer analytics on-premises may eventually need to scale to cloud infrastructure as data volumes grow. Selecting partners who support seamless workload migration between environments, without requiring application rewrites, allows the company to start quickly with existing infrastructure while preserving the option to expand to hybrid or cloud models as business needs evolve.

BUILDING THE FOUNDATION FOR TOMORROW WITH END-TO-END AI SOLUTIONS FROM AMD

To advance your AI initiatives, organizations need a trusted partner with comprehensive AI technology that delivers scalable, high-performance, and energy-efficient infrastructure. This is especially important as AI advances toward autonomous and reasoning capabilities, requiring systems that can handle growing complexity and evolving business demands.

AMD provides choice, flexibility, and proven performance with a reliable roadmap enterprises can count on. As a leading provider of fully open technology platforms, AMD drives broad industry collaboration that delivers tangible business impact.

The new era of AI draws on diverse data sources, including applications, databases, unstructured data, and more, at a massive scale, to power advanced AI capabilities. Flexible, full-stack solutions powered by AMD address today's enterprise needs with integrated platforms that span from silicon to systems. These comprehensive solutions combine advanced technologies that simplify deployment across the AI infrastructure, accelerating scalability and enabling faster time-to-value.

As enterprises navigate the next wave of AI-driven transformation, AMD stands as a trusted partner, delivering the technologies, ecosystem, and innovation freedom needed to build the foundation for tomorrow's intelligent, sustainable, and resilient enterprise.

DISCOVER HOW YOU CAN DRIVE BUSINESS OUTCOMES WITH AN AI READY INFRASTRUCTURE.

LEARN MORE

TALK TO AN AMD EXPERT FOR YOUR ENTERPRISE NEEDS.

Get started

[1]PwC, Digital Trends in Operations Survey 2025, 2025. [2]FTI Consulting, Global CFO Report, 2025. [3]IDC White paper, IT Modernization Maturity Assessment Prepares Enterprises for AI-Fueled Digital Business Success, doc #US53640525 July 2025. [4]S&P Global Market Intelligence, Data center transformation and AI considerations, 2024. [5]5-Point Likert Scale; Watchtower AI-powered research platform powered by Intercept, Global, n=8,668. [6]5-Point Likert Scale; Watchtower AI-powered research platform powered by Intercept, Global, n=147,984. [7]The Conference Board, CEO and C-Suite ESG Priorities for 2025, 2025. [8]Kearney, Beyond survival: the new operational playbook separating leaders from laggards in, 2025.