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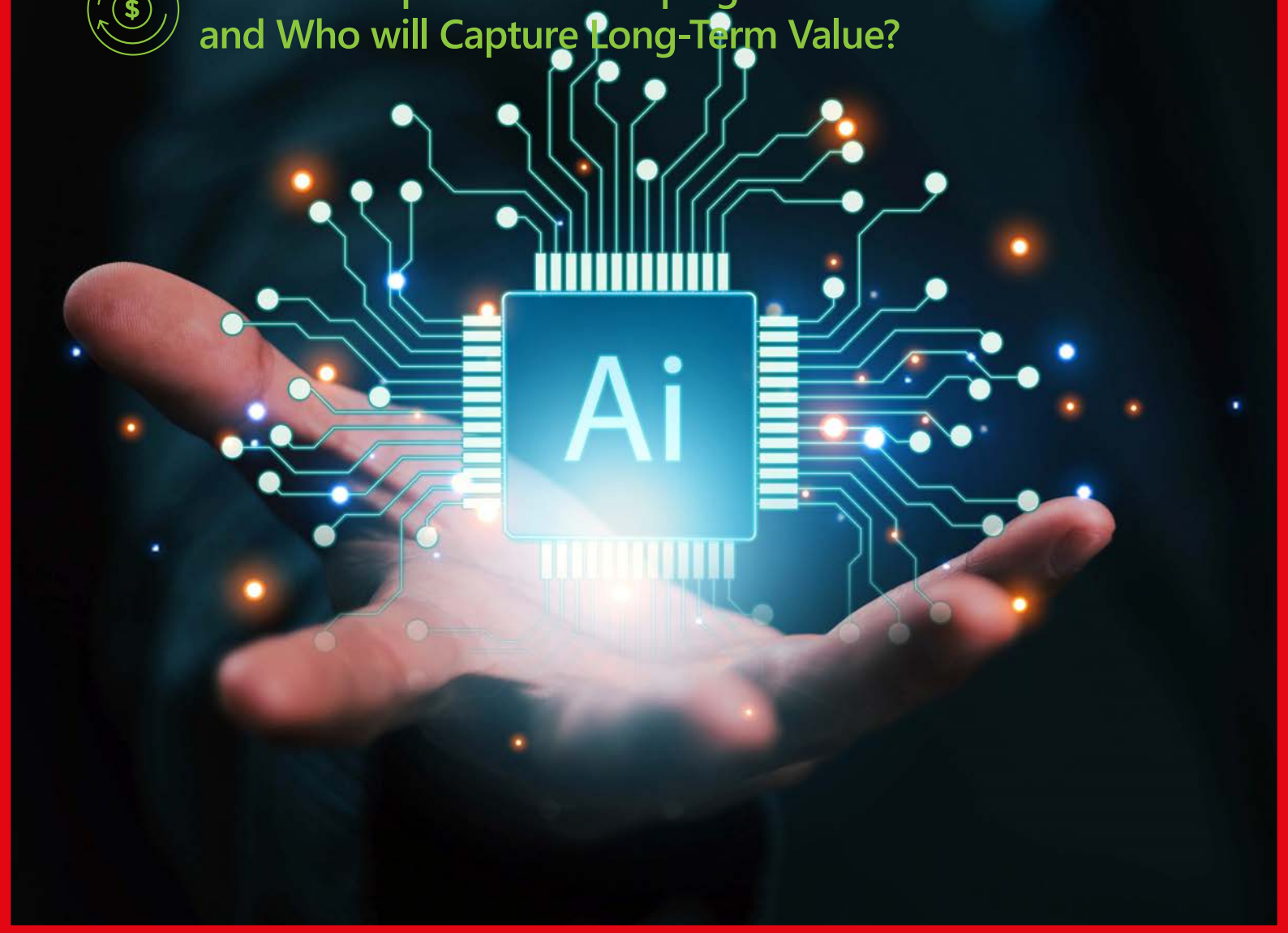
How Can National AI Infrastructure & Compute Capacity Enable Scalable Adoption Across Key Sectors?

How Can the Data Economy and Digital Infrastructure Drive Global Competitiveness in the AI Era?

How are Capital Flows Shaping the Future of AI and Who will Capture Long-Term Value?



Foreword

The launch of **THE AI ARABIA CENTER OF EXCELLENCE** represents an important milestone in Saudi Arabia's journey to become a global leader in artificial intelligence, digital innovation and knowledge-driven economic growth.

Established in early 2026 as a Saudi think tank and national resource, the Center supports the Kingdom's transition from AI ambition to implementation across government, industry and society. It convenes stakeholders to develop the strategies, partnerships and frameworks needed to translate AI's potential into measurable national impact, publishing the resulting recommendations in a series of white papers.

As intelligence and innovation reshape the global economy, the question is no longer whether AI will transform industries, but how effectively countries can harness it to create sustainable growth, strengthen resilience and secure long-term prosperity. For Saudi Arabia, this challenge aligns with Vision 2030 and its ambitions to diversify the economy, build competitive industries and develop the human capital needed for a changing world.

The Sector Skills Councils have engaged as a key stakeholder with the AI Arabia Center of Excellence, helping to align its white papers with Council members' perspectives on the skills, capabilities and workforce requirements needed to advance Saudi Arabia's data economy and digital transformation.

In the AI era, competitive advantage will depend on the ability to transform data into trusted intelligence, productivity and sustainable economic value. Data has become a strategic national asset alongside capital, energy and infrastructure. While governments and organizations are investing in cloud platforms, connectivity and analytics, early adopters have shown that technology alone does not create value. Success requires high-quality data, trusted governance and secure information flows across sectors.

This second white paper from the Center explores a critical strategic question: How can the data economy and digital infrastructure drive global competitiveness in the AI era? It examines the ecosystem required to unlock value from data at scale, including stronger governance, greater interoperability, fewer organizational silos and trusted digital environments that accelerate innovation while preserving sovereignty and security.

For Saudi Arabia, this question is particularly significant. The Kingdom has invested substantially in national data platforms, cloud infrastructure, AI capabilities and regulatory frameworks that support innovation while protecting national interests. These efforts recognize that future competitiveness will increasingly depend on converting information into economic outcomes.

The report highlights the interdependence between digital infrastructure and the data economy. Data without infrastructure cannot be activated or scaled, while infrastructure without high-quality data risks becoming disconnected from economic outcomes. The countries that succeed will integrate infrastructure, governance, talent and sectoral adoption into a coherent growth model.

Ultimately, the opportunity presented by AI is not simply to collect more information, but to transform information into intelligence, intelligence into action and action into measurable value. Harnessing the data economy will therefore play a defining role in Saudi Arabia's long-term prosperity, resilience and global competitiveness. ■

Contents

The AI Arabia Center of Excellence is a Saudi-based platform, that brings together government, industry, and technology stakeholders to support the Kingdom's transition from AI ambition to real-world execution. The Center of Excellence, which is curated by the region's leading think tank consultancy -- Gulf Intelligence, provides a structured environment in which policymakers, technology leaders, and industry stakeholders can collaborate on translating national AI strategy into measurable economic and societal outcomes. Its mission is to accelerate responsible AI deployment across priority sectors and strengthen Saudi Arabia's position in the global AI economy.

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Arabia Center of Excellence WHITEPAPER

CHAPTER ONE

How Can National AI Infrastructure and Compute Capacity Enable Scalable Adoption Across Key Sectors?

EXECUTIVE SUMMARY

Infrastructure Creates Capability, But Deployment Creates Value

The global AI race is no longer primarily about who can develop the most advanced algorithms. It is increasingly about who can build the infrastructure required to deploy AI at scale and convert technological capability into measurable economic value.

Across the world, governments and industry are investing hundreds of billions of dollars in hyperscale data centers, sovereign cloud platforms, advanced semiconductors, and high-performance computing capacity. Yet the critical lesson emerging from the market is that infrastructure alone does not create competitive advantage. The real differentiator is deployment.

Saudi Arabia's approach provides a compelling case study. Through Vision 2030, the Kingdom is combining investments in sovereign AI infrastructure with a clear focus on sectoral adoption across energy, manufacturing, healthcare, tourism, logistics, and government services. The objective is not simply to build data centers, but to create an ecosystem where compute capacity, data, talent, and innovation can be translated into productivity gains and economic growth.

As Microsoft Saudi Arabia's Zainab Alamin noted during the discussion, strategic advantage in AI is no longer defined by access to compute or data alone, but by the ability to transform those inputs into operational and economic value. The organizations moving fastest are those connecting strong data foundations to clear business use cases that deliver measurable outcomes.

The Kingdom also enjoys structural advantages that many competitors lack. As highlighted by industry participants, abundant and competitively priced energy, access to capital, rapid permitting processes, supportive government policy, and expanding hyperscale cloud investments position Saudi Arabia as a natural destination for AI infrastructure. At a time when many global markets face power shortages, grid bottlenecks, and rising energy costs, these advantages are becoming increasingly strategic.

However, scalable adoption requires more than infrastructure. Organizations must align compute investments with high-impact use cases that solve real operational challenges. Whether in predictive maintenance, refinery optimization, manufacturing productivity, customer experience, or public services, AI must demonstrate measurable returns. The challenge is no longer technological capability, but cultural readiness, organizational transformation, and execution.

Ultimately, national AI infrastructure should be viewed not as an end in itself, but as an economic enabler. Nations that successfully connect infrastructure investment to large-scale deployment will unlock productivity gains, attract investment, and strengthen their global competitiveness. Those that fail risk building capacity without capturing value. In the AI economy, infrastructure may provide the foundation, but deployment is what ultimately determines success.

What Defines Strategic Advantage in AI Today: Access to Compute Capacity, Data, or Deployment Capability?

Deployment Is the New Differentiator

Across global markets, organizations continue to face a range of common adoption challenges, including legacy infrastructure, fragmented data environments, regulatory complexity, and organizational readiness.

The first phase of the AI revolution was defined by access. Access to compute. Access to data. Access to advanced models. Access to talent. The next phase, however, will be defined by execution.

Around the world, governments and corporations are investing unprecedented sums into AI infrastructure. Hundreds of billions of dollars are flowing into hyperscale data centers, cloud platforms, semiconductors, and high-performance computing. Yet as AI moves from experimentation to enterprise adoption, a growing realization is emerging: access alone does not create competitive advantage.

Compute capacity is becoming increasingly important as a strategic national asset. Access to sovereign cloud infrastructure, advanced chips, and secure computing environments is now viewed in many countries through the lens of economic resilience and even national security. Likewise, data remains the essential fuel of AI, providing the raw material that enables systems to learn, predict, and optimize outcomes. Without high-quality, well-governed data, even the most advanced computing infrastructure has limited value.

However, neither compute nor data delivers economic returns on its own.

The organizations creating the greatest value from AI are those that have moved beyond infrastructure and into deployment. They are connecting data foundations to clear operational use cases that improve productivity, reduce costs, enhance decision-making, and create better customer outcomes.

Examples are already emerging across multiple sectors. Manufacturers are connecting thousands of machines across factory networks and using AI to optimize operations, generating significant productivity gains. Energy companies are deploying AI to improve refinery performance, enhance asset reliability, optimize maintenance schedules, and increase operational efficiency. Tourism and hospitality operators are using AI behind the scenes to personalize guest experiences while freeing employees from repetitive administrative tasks, allowing them to focus on higher-value customer interactions.

The lesson is clear: AI creates value when it is embedded into workflows, not when it sits inside a data center.

Yet deployment remains the hardest challenge. Technology is advancing at extraordinary speed, but organizational adoption often lags behind. In many organizations, the technology is ready long before the institution itself is prepared to use it effectively.

This is why strategic advantage increasingly belongs to those who can integrate all three pillars of the AI economy: compute, data, and deployment. Compute provides capability. Data provides intelligence. Deployment provides impact.

The countries and companies that succeed will be those that align infrastructure investments with real-world economic priorities, focusing on applications that deliver measurable outcomes rather than simply accumulating technological capacity. The ultimate objective is not to build the largest AI infrastructure, but to create the greatest economic value from it.

In the emerging AI economy, competitive advantage will not be determined by who owns the most compute power or the largest datasets. It will be determined by who can transform those resources into scalable solutions that improve productivity, accelerate innovation, and strengthen long-term economic competitiveness. ■

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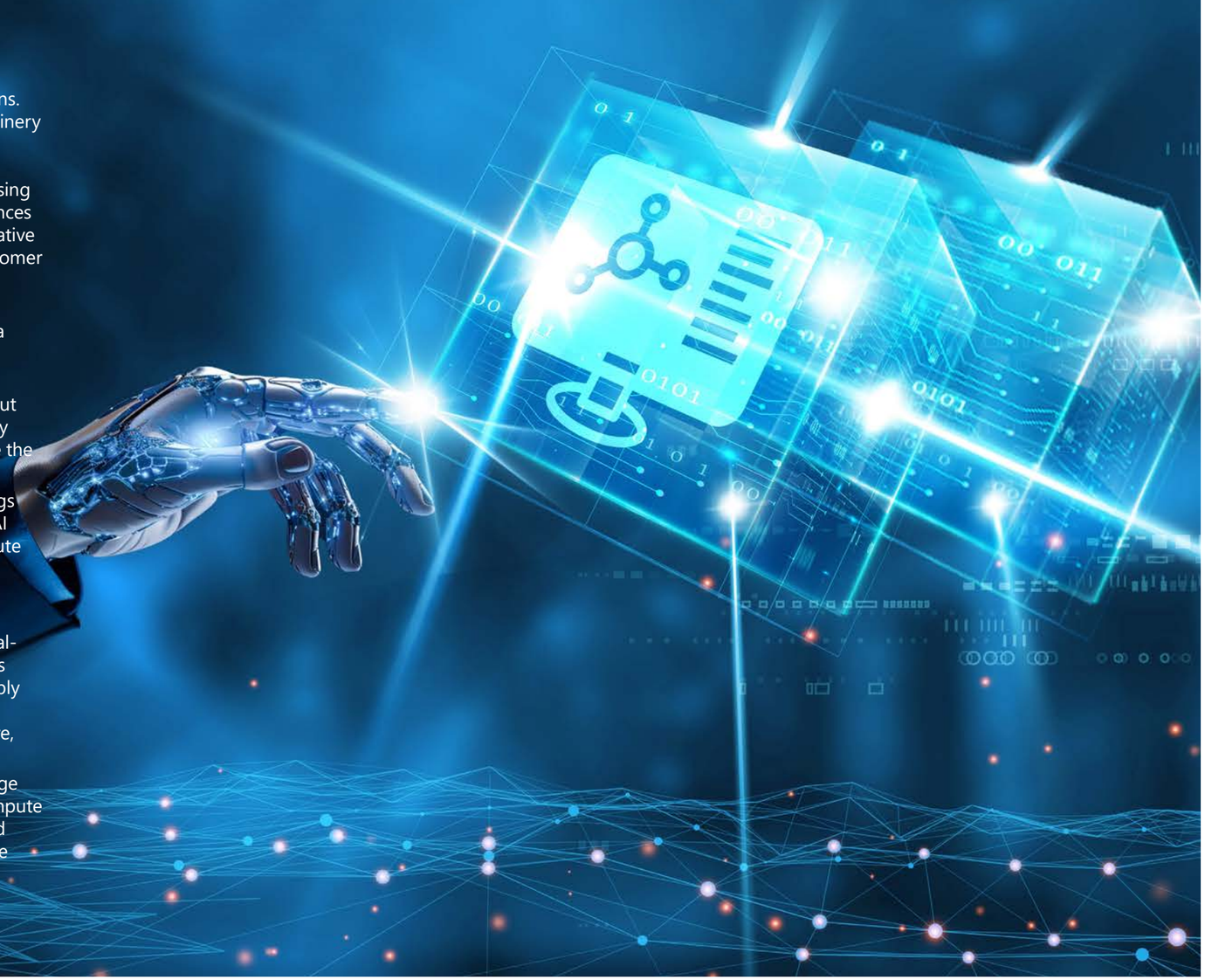

How Can Countries Ensure That Large-Scale AI Infrastructure Investments Translate into Real Economic Value?

Execution, Not Infrastructure, Will Determine the Winners of the AI Economy

The global AI race has entered a new phase. The debate is no longer whether nations should invest in AI infrastructure, but how they can ensure those investments generate meaningful economic returns.

Across the world, governments are committing hundreds of billions of dollars to hyperscale data centers, cloud platforms, advanced semiconductors, and sovereign compute capacity. These investments are becoming as strategically important as traditional infrastructure such as ports, airports, highways, and power grids. Yet history suggests that infrastructure alone does not guarantee success. The true measure of value lies not in what is built, but in how effectively it is used.

The greatest risk facing countries today is not a shortage of compute capacity. It is underutilization.

Building world-class AI infrastructure without a clear deployment strategy risks creating expensive assets that fail to generate productivity gains, business transformation, or economic diversification. The lesson emerging from early adopters is clear: AI infrastructure only creates value when it is connected to real-world applications that solve practical challenges across key sectors.

This requires a deliberate shift from technology-first thinking to outcome-first thinking. The most successful organizations are not asking how much compute they can acquire. They are asking how AI can improve operational performance, increase efficiency, reduce costs, and unlock new sources of growth.

Examples are already emerging across multiple industries. In manufacturing, AI-enabled machine networks are delivering significant productivity improvements by optimizing operations in real time. In energy, AI is being deployed to improve refinery performance, enhance predictive maintenance, strengthen safety systems, and optimize logistics. In tourism and hospitality, AI is helping personalize customer experiences while automating routine administrative tasks, allowing employees to focus on higher-value interactions. Across government services, AI is increasingly being used to improve responsiveness, streamline processes, and enhance citizen engagement.

What unites these examples is that they begin with a business problem, not a technology investment.

Infrastructure remains essential. Access to compute, cloud services, and high-quality data forms the foundation upon which AI applications are built. However, infrastructure represents only one part of the equation. Economic value is created when governments, regulators, industry leaders, and technology providers work together to align infrastructure with sector-specific priorities and measurable outcomes.

Equally important is the human dimension. Technology adoption often moves slower than technological innovation itself. Legacy systems, fragmented data environments, regulatory complexity, and organizational resistance to change frequently become the greatest barriers to realizing value. Building infrastructure is relatively straightforward. Transforming institutions and ways of working is considerably harder.

Countries that succeed in the AI economy will therefore focus on three interconnected priorities: building infrastructure, enabling adoption, and accelerating deployment. They will view compute capacity not as the destination, but as the foundation for broader economic transformation.

Ultimately, the return on AI investment will not be measured by the number of data centers constructed or the scale of compute capacity installed. It will be measured by productivity gains achieved, industries transformed, jobs created, and economic competitiveness strengthened. In the AI era, infrastructure creates opportunity, but execution is what converts opportunity into value. ■

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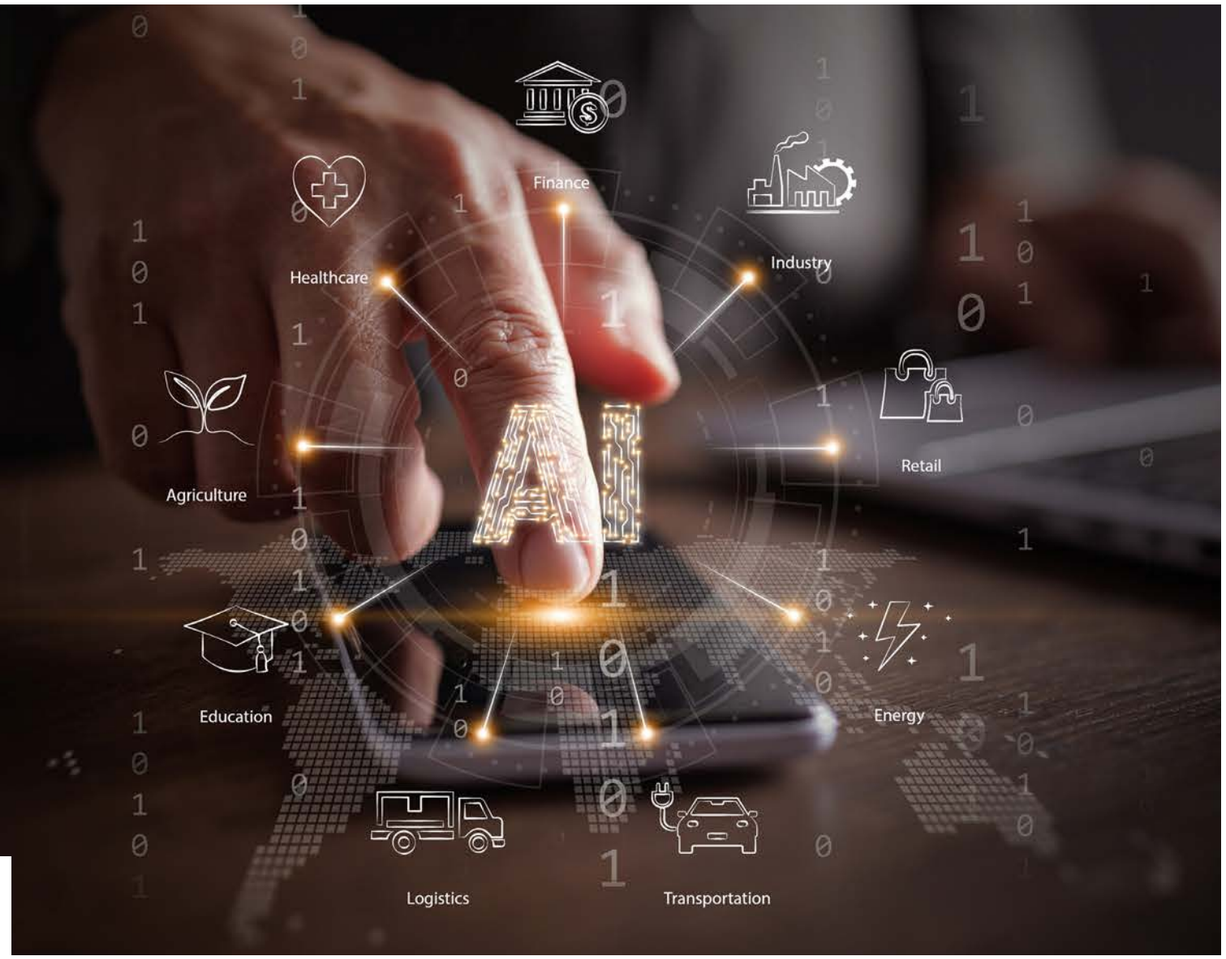
What Are the Biggest Barriers to Scaling AI Adoption Across Key Sectors Such as Energy, Finance, Healthcare, and Logistics?

The Challenge Is No Longer Building AI. It Is Embedding It into the Real Economy.



The conversation around artificial intelligence has evolved rapidly over the past two years. Much of the early focus centered on access to compute power, cloud infrastructure, advanced models, and data. Today, however, a more pressing question has emerged: why is AI adoption still moving more slowly than expected across many industries despite unprecedented investment?

The answer is increasingly clear. The greatest barriers to scaling AI are no longer technological. They are organizational, regulatory, and operational.

Across sectors such as energy, finance, healthcare, logistics, and government services, organizations have become far more aware of AI's potential. Senior leadership teams are actively exploring use cases ranging from predictive maintenance and operational optimization to customer engagement and intelligent decision-making. Yet many struggle to move beyond pilot projects and isolated successes into enterprise-wide deployment.

One of the biggest obstacles remains legacy infrastructure. Many institutions continue to operate on systems that were never designed to support real-time data processing, advanced analytics, or AI-driven automation. Integrating modern AI capabilities into decades-old technology environments can be costly, complex, and time-consuming. In many cases, organizations find themselves spending as much effort preparing their systems for AI as deploying the technology itself.

A second challenge is fragmented data. AI is only as effective as the quality, accessibility, and consistency of the information it can draw upon. Across industries, critical data often sits in disconnected systems, business units, or operational silos. Without a unified data foundation, organizations struggle to generate the insights and intelligence required to support scalable AI applications.

Regulatory complexity also plays a growing role. As governments seek to balance innovation with security, privacy, and governance requirements, organizations must navigate an increasingly sophisticated compliance environment. This is particularly evident in highly regulated sectors such as healthcare, financial services, and critical infrastructure, where concerns around data sovereignty, cybersecurity, explainability, and responsible AI can slow deployment timelines.

Perhaps the most underestimated barrier, however, is cultural resistance to change. Technology adoption often advances far more slowly than technology development. Employees may fear job displacement. Leadership teams may be uncertain about return on investment. Established processes and ways of working can create resistance even when the business case is compelling. The challenge is not simply introducing AI into an organization, but redesigning workflows, retraining workforces, and creating confidence in new operating models.

> **The institutions that successfully overcome legacy constraints, unify their data environments, navigate regulatory requirements, and foster a culture of innovation will be the ones that capture the full economic value of AI.**

The experience of early adopters demonstrates that success comes when AI is treated not as a technology initiative, but as a business transformation program. Organizations achieving meaningful results are those aligning infrastructure, data, governance, talent, and operational objectives around clearly defined outcomes.

Ultimately, the biggest barrier to AI adoption is not access to technology. Compute capacity is expanding. Investment is flowing. The models are becoming increasingly powerful. The challenge now is execution. The institutions that successfully overcome legacy constraints, unify their data environments, navigate regulatory requirements, and foster a culture of innovation will be the ones that capture the full economic value of AI. Those that do not risk remaining trapped in a cycle of perpetual pilots while the leaders move ahead. ■

How Can Governments Balance Sovereignty in AI Infrastructure With the Need for Global Collaboration and Access to Technology?

Strategic Autonomy Does Not Mean Strategic Isolation

As artificial intelligence becomes a defining force in economic competitiveness, national security, and industrial development, governments are increasingly viewing AI infrastructure through the lens of sovereignty. Access to compute capacity, cloud infrastructure, advanced semiconductors, and national data assets is rapidly becoming as strategically important as access to energy, finance, and critical supply chains.

Yet while the desire for sovereign control is understandable, the reality is that no country can build a globally competitive AI ecosystem in isolation.

The challenge facing policymakers today is not choosing between sovereignty and collaboration. It is finding the right balance between the two.

The global AI landscape is inherently interconnected. The world's leading AI models are developed through international research collaboration. Semiconductor supply chains span multiple continents. Cloud platforms operate across global networks. Talent moves between markets, universities, startups, and multinational corporations. Attempting to completely nationalize every component of the AI value chain would be prohibitively expensive and ultimately counterproductive.

At the same time, governments have legitimate concerns about resilience, security, and economic independence. Access to compute capacity, cloud services, and advanced technologies can no longer be taken for granted in an increasingly fragmented geopolitical environment. Recent years have demonstrated how quickly access to critical technologies can become subject to export controls, supply chain disruptions, and geopolitical tensions.

This is why sovereign AI infrastructure is becoming an important national priority. Investments in domestic data centers, national cloud platforms, local data governance frameworks, and indigenous digital capabilities provide countries with greater control over critical assets while strengthening resilience against external shocks.

However, sovereignty should not be confused with self-sufficiency.

The most successful nations are likely to be those that combine domestic capability with global connectivity.

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Rather than attempting to build closed ecosystems, they are creating trusted platforms that enable international partnerships, attract foreign investment, support research collaboration, and facilitate access to global innovation networks. Sovereign infrastructure provides the foundation, while international collaboration accelerates capability development and adoption.

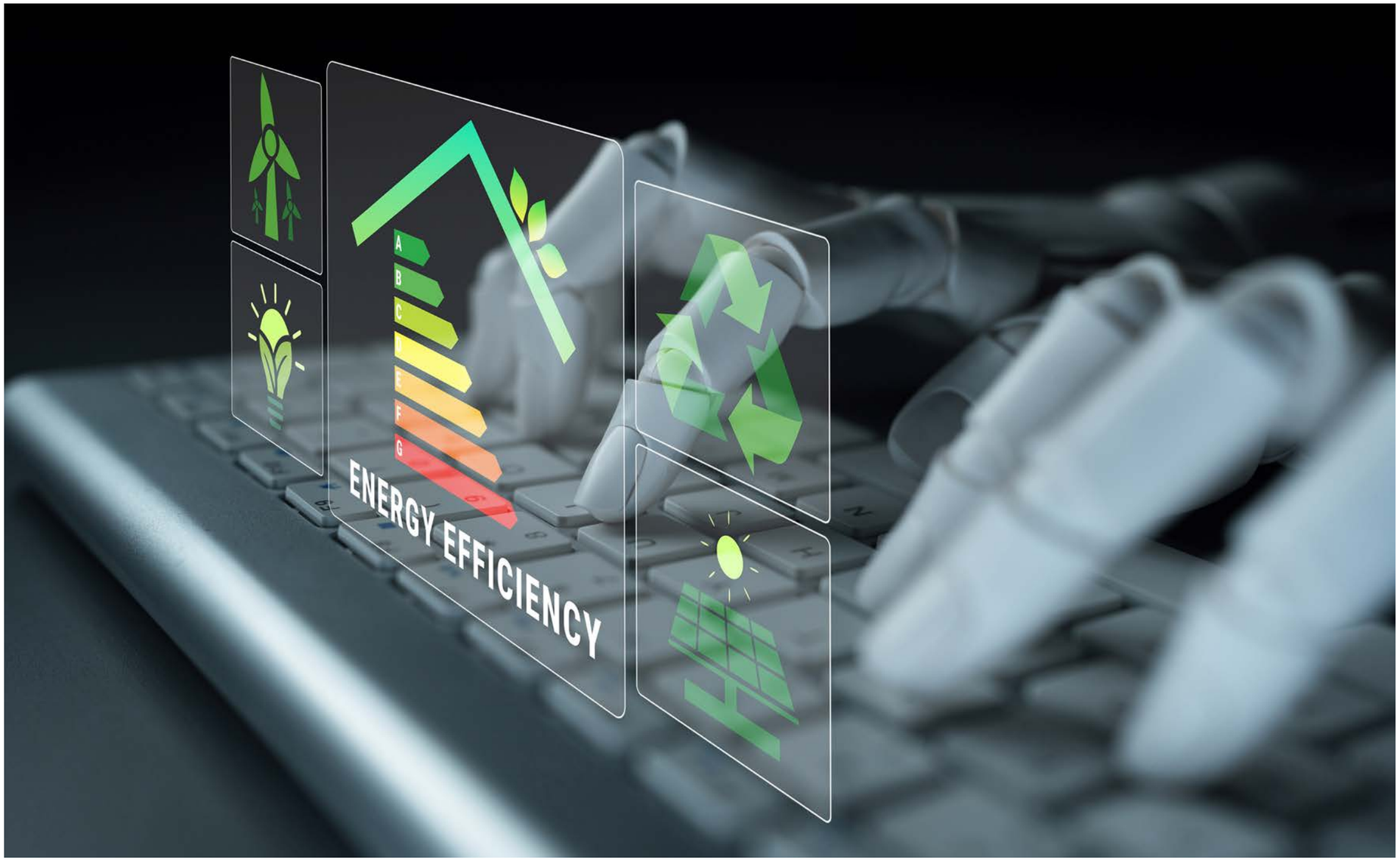
This balance is particularly important for countries seeking to establish themselves as regional AI hubs. Competitive advantage will depend not only on local infrastructure and regulation, but also on the ability to attract global technology leaders, world-class talent, venture capital, and cutting-edge research. Nations that become isolated risk limiting their access to innovation and slowing the pace of adoption.

The future of AI will therefore be shaped by a new model of strategic openness. Governments must secure control over critical infrastructure, data, and regulatory frameworks while remaining deeply integrated into global technology ecosystems. The objective is resilience without isolation, sovereignty without protectionism, and national capability without sacrificing access to global innovation.

Ultimately, long-term competitiveness in the AI economy will belong to countries that understand a simple reality: sovereignty creates stability, but collaboration creates scale. Success will depend on combining both. ■

How Can AI Infrastructure Be Scaled Sustainably, Given Rising Concerns Around Energy Consumption and Environmental Impact?

The Future of AI Will Depend as Much on Energy Efficiency as Computing Power



Artificial intelligence is rapidly becoming one of the defining technologies of the 21st century. Yet as governments and companies race to build hyperscale data centers and expand compute capacity, a new challenge is emerging: how to sustain AI's extraordinary growth without creating equally extraordinary demands on energy, water, and natural resources.

The issue is no longer theoretical. Around the world, data center developers are encountering growing resistance from communities concerned about rising electricity costs, increasing water consumption, and pressure on local infrastructure. In several advanced economies, AI expansion is already running into practical constraints, including grid bottlenecks, delays in securing power connections, land availability challenges, and shortages of critical equipment needed to support large-scale computing facilities.

As AI adoption accelerates, sustainability is becoming a defining constraint on future growth.

The challenge is particularly significant because AI infrastructure is inherently energy intensive. Advanced computing requires enormous processing power, while the cooling systems needed to maintain data center performance add another layer of demand. As compute capacity expands, so too does the importance of ensuring that the underlying energy systems can support growth in a sustainable and economically viable manner.

This reality is creating a new competitive landscape. Regions that can provide reliable, affordable, and increasingly low-carbon energy are emerging as attractive destinations for AI infrastructure investment. Access to abundant energy, supportive regulatory environments, available land, and efficient permitting processes are becoming strategic advantages in the global competition to attract hyperscale data centers and advanced computing facilities.

However, sustainable scaling requires more than simply adding new sources of power. The next phase of AI development must focus on building more efficient, energy-aware systems. This includes optimizing workloads, improving cooling technologies, designing more efficient data centers, and ensuring that compute resources are directed toward applications that generate genuine economic value.

The discussion also highlighted an often-overlooked point: sustainability should be measured not only by energy consumption, but by outcomes. AI that improves industrial efficiency, optimizes logistics, reduces waste, enhances energy management, and supports smarter infrastructure can generate environmental benefits that far outweigh its own energy footprint. The key is ensuring that deployment is purposeful and aligned with measurable economic and sustainability objectives.

Ultimately, the long-term success of the AI economy will depend on balancing innovation with responsibility. The winners will not necessarily be those who build the largest compute capacity, but those who build the most efficient, resilient, and sustainable AI ecosystems. As AI becomes increasingly embedded in every sector of the economy, energy strategy and AI strategy are rapidly becoming one and the same. ■

Conclusion & Recommendations

The discussion highlighted a critical reality: national AI infrastructure and compute capacity are necessary foundations for the AI economy, but they are not the source of competitive advantage in themselves. The true value of AI infrastructure lies in its ability to enable large-scale deployment across the sectors that drive economic growth, productivity, and societal progress. As AI moves from experimentation to execution, success will increasingly be determined not by the amount of compute capacity a nation possesses, but by how effectively that capacity is translated into real-world outcomes.

Saudi Arabia's Vision 2030 strategy offers a powerful framework for this transition, combining sovereign infrastructure investment with sectoral deployment across energy, manufacturing, healthcare, logistics, tourism, and government services. The next opportunity is to continue advancing infrastructure, talent, policy, and innovation ecosystems in parallel.

To maximize return on AI infrastructure investments, stakeholders should consider five priorities:

1. **Focus on deployment, not infrastructure alone** by linking compute investments to measurable sector-specific outcomes and productivity gains.

2. **Strengthen national data foundations** through improved interoperability, governance, and secure data-sharing frameworks.

3. **Accelerate public-private collaboration** to connect government ambition, hyperscale infrastructure, startups, academia, and industry adoption.

4. **Invest in AI talent and workforce transformation** to overcome cultural barriers and equip organizations for large-scale implementation.

5. **Embed sustainability into AI strategy** by ensuring energy-efficient infrastructure, responsible AI governance, and long-term environmental resilience.

Ultimately, nations that successfully align infrastructure investment with deployment capability will unlock the greatest economic value. In the AI era, infrastructure creates possibility, but execution creates prosperity. ■

CHAPTER TWO

How Can the Data Economy and Digital Infrastructure Drive Global Competitiveness in the AI Era?

EXECUTIVE SUMMARY

Data Quality, Not Volume, Drives AI Competitiveness

The AI Arabia Center of Excellence Dialogues highlighted a growing consensus that data has become the strategic currency of the AI era and that global competitiveness will increasingly be determined by a nation's ability to transform data into trusted intelligence, economic value, and scalable innovation. The discussion emphasized that competitive advantage is no longer defined by the volume of data alone, but by the ability to govern, integrate, and activate high quality data across sectors.

Participants argued that nations are entering a new phase of competition where data, digital infrastructure, compute capacity, and governance frameworks are becoming as strategically important as traditional assets such as energy, capital, and physical infrastructure. Saudi Arabia was highlighted as a leading example of a country treating data and AI as national infrastructure through Vision 2030, supported by investments in cloud platforms, data centers, digital government initiatives, and regulatory frameworks designed to enable trusted data sharing and AI deployment at scale.

A central theme was that governance has emerged as the critical differentiator. Strong governance frameworks transform data into a trusted economic asset by ensuring quality, interoperability, accountability, and security. Participants repeatedly stressed that more data does not automatically create more value; rather, value is created when data is high quality, connected, shareable, and usable across organizations and industries.

The discussion also identified fragmentation as one of the greatest barriers to competitiveness. Data silos, inconsistent standards, disconnected systems, and regulatory complexity continue to prevent organizations and governments from capturing the full value of AI. Success will depend on building interoperable ecosystems where data can move securely across sectors while preserving sovereignty and public trust.

The panel concluded that countries capable of combining trusted governance, modern digital infrastructure, interoperable data ecosystems, and real-world AI deployment will emerge as leaders in the AI economy. Those that fail to mobilize high quality data at scale risk becoming consumers of AI technologies developed elsewhere rather than creators of future economic value and innovation. ■

What defines competitive advantage in the data economy: data volume, data quality, or governance frameworks?

Data Quality, Not Volume, Drives AI Competitiveness

For much of the digital age, the prevailing assumption was that whoever accumulated the most data would win. The logic seemed compelling: more information would produce better insights, smarter decisions, and stronger economic performance. In the AI era, however, that assumption is rapidly proving incomplete.

The new competitive advantage is not determined by how much data a country or organization possesses, but by how effectively it can structure, govern, and activate high quality data at scale.

The world is expected to generate more than 180 zettabytes of data by 2026, while the global data economy is projected to create over $4 trillion in annual economic value. Yet despite this explosion of information, many organizations continue to struggle to extract meaningful returns. The problem is rarely a lack of data. More often, it is an inability to connect fragmented systems, establish trusted governance frameworks, and transform raw information into actionable intelligence.

The challenge can be seen across industries. Energy companies collect vast volumes of operational data from production facilities, pipelines, storage terminals, and refineries. Financial institutions process millions of transactions every day. Governments generate enormous datasets through public services and digital platforms. Yet much of this information remains trapped in silos, stored in incompatible systems, or governed by inconsistent standards.

In this environment, data volume can become a liability rather than an asset. Poor quality information produces poor outcomes. As the old technology adage reminds us: garbage in, garbage out.

What separates leaders from laggards is therefore not scale alone, but trust. High quality, well-governed data allows organizations to deploy AI confidently, automate decision making, and generate measurable economic value. Without that foundation, even the most sophisticated AI models struggle to deliver reliable results.

Governance has consequently emerged as one of the most important pillars of competitiveness. Effective governance frameworks establish common standards, define accountability, protect privacy, and enable secure data sharing. More importantly, they create the trust required for collaboration across industries and institutions.

The nations moving fastest in AI understand this reality. They increasingly view data as a strategic national asset, comparable to energy infrastructure, transport networks, or capital markets. Investments are no longer focused solely on collecting information or building data centers. Equal emphasis is being placed on interoperability, security, quality control, and regulatory frameworks that allow data to move safely across sectors.

The goal is not simply to store information but to create connected ecosystems where data can be shared, interpreted and applied in real time. In such environments, AI becomes far more than a technology experiment. It becomes a driver of productivity, innovation, and economic growth.

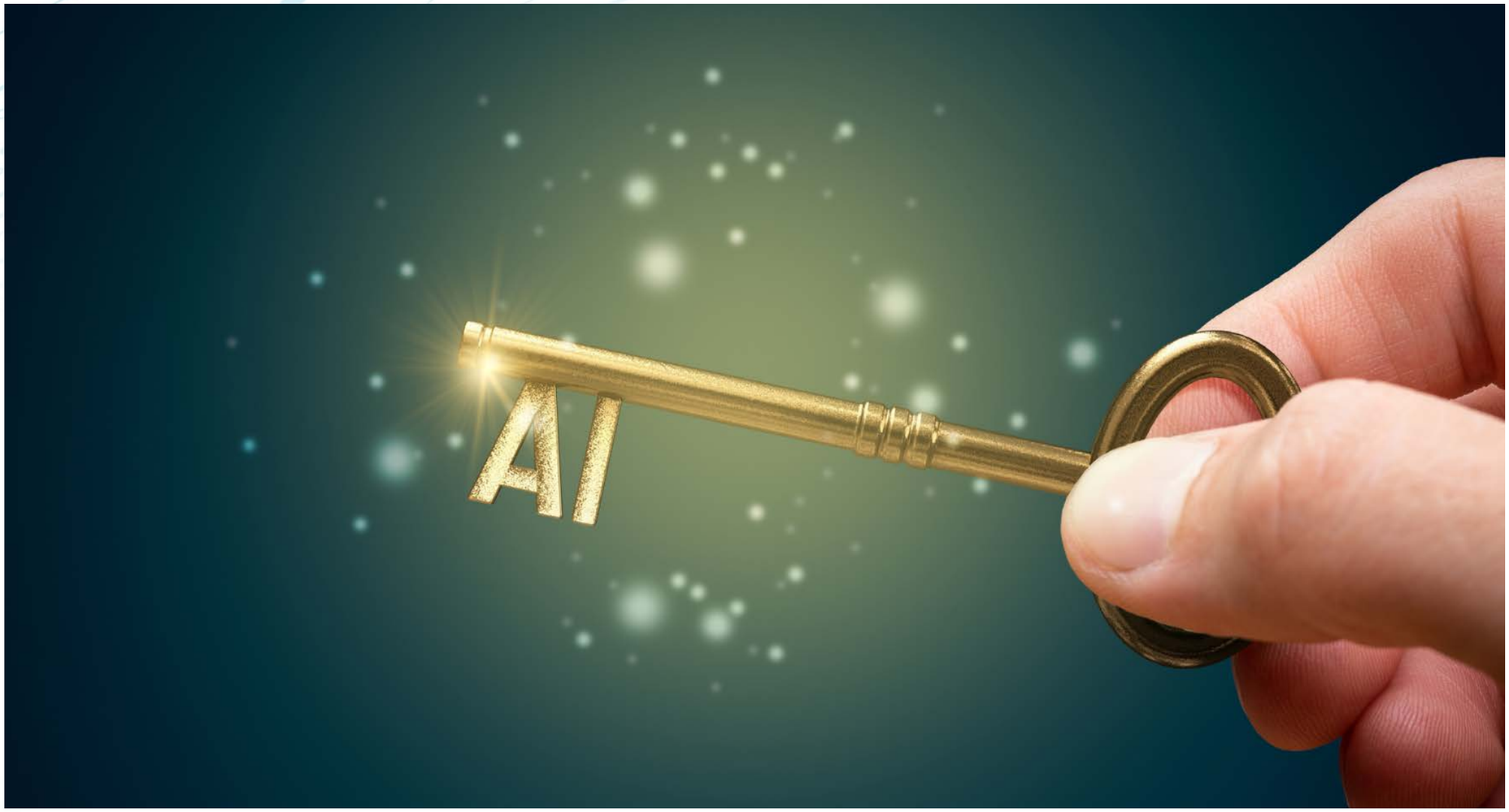
This marks an important shift in how competitiveness should be measured. In the past, the race was about accumulating data. Today, it is about transforming data into trusted intelligence. Tomorrow, it will be about creating continuous feedback loops where information, AI systems, and decision makers learn from one another at scale.

The winners of the AI economy will not necessarily be those with the largest datasets. They will be those that build the strongest foundations of quality, governance, and interoperability. In the emerging data economy, competitive advantage belongs not to those who own the most information, but to those who can turn it into value. ■

The goal is not simply to store information but to create connected ecosystems where data can be shared, interpreted and applied in real time.

How can Nations Enable Data Sharing at Scale While Maintaining Sovereignty & Trust?

Trust is the Currency that Unlocks the Data Economy



The promise of the AI economy rests on a simple but increasingly difficult challenge: how can nations share data at the scale required to drive innovation while maintaining sovereignty, security, and public trust?

For years, policymakers viewed data sharing and data sovereignty as competing objectives. One demanded openness; the other required control. Today, the most successful digital economies are demonstrating that the future depends not on choosing between the two, but on balancing them.

The stakes could hardly be higher. Global data creation is expected to surpass 180 zettabytes by 2026, while the data economy is projected to generate more than $4 trillion annually. Yet much of this value remains locked away inside government agencies, private enterprises, and sector-specific platforms that are unable—or unwilling—to share information beyond their organizational boundaries.

The obstacle is rarely technology. It is trust.

Organizations will not share sensitive information if they fear losing control of it. Citizens will not support large-scale data initiatives if they believe privacy is being compromised. Governments will not permit unrestricted cross-border flows if they perceive risks to national security or economic competitiveness.

The result is a fragmented landscape where enormous volumes of potentially valuable data remain trapped in silos.

The solution lies in governance.

Strong governance frameworks provide the rules, standards, and accountability mechanisms that make large-scale data sharing possible. They define who can access information, under what conditions, for what purpose, and with what safeguards. Most importantly, they create confidence that data can be shared without surrendering control.

This is why the leading digital economies are increasingly treating data as a strategic national asset. Rather than focusing solely on storage and infrastructure, they are investing in regulatory frameworks, interoperability standards, cybersecurity systems, and consent-based models that enable trusted collaboration between public and private sectors.

The banking industry provides one of the clearest examples. Open banking initiatives have shown that data sharing can flourish when clear governance rules, consumer consent, and accountability mechanisms are established. The lesson extends far beyond finance. Similar principles can unlock value across healthcare, energy, logistics, manufacturing, and government services.

Equally important is interoperability. Data cannot generate value if systems cannot communicate with one another. Too many organizations continue to operate with disconnected platforms, inconsistent standards, and fragmented architectures. Building digital infrastructure without ensuring interoperability risks creating larger silos rather than stronger ecosystems.

> **Nations that successfully balance sovereignty, security, and collaboration will unlock the full economic value of their data assets.**

The most competitive nations will therefore be those that move beyond simply collecting data toward orchestrating trusted data ecosystems. They will establish frameworks that allow information to move securely between institutions while ensuring sovereignty remains intact. They will create environments where innovation is accelerated, not constrained, by regulation.

The debate is not about openness versus control. It is about designing systems that achieve both.

In the AI era, trust has become the essential enabler of data sharing. Nations that successfully balance sovereignty, security, and collaboration will unlock the full economic value of their data assets. Those that fail will find themselves rich in information but poor in insight, unable to convert one of the world's most valuable resources into lasting competitive advantage. ■

Breaking Down the Data Silos Holding Back the AI Economy

The AI economy is generating unprecedented excitement around the transformative potential of data. Governments are investing billions in digital infrastructure. Enterprises are accelerating AI adoption. Entire industries are being reimagined through automation, predictive analytics, and intelligent decision-making.

Yet despite these advances, one of the most significant barriers to realizing the full value of AI remains surprisingly old-fashioned: data that cannot talk to itself.

Across industries and institutions, valuable information continues to reside in isolated systems, disconnected databases, and incompatible platforms. The result is a fragmented digital landscape where enormous amounts of data exist, but relatively little of it can be combined, shared, and transformed into meaningful economic value.

This challenge is becoming increasingly urgent. Global data creation is expected to exceed 180 zettabytes by 2026, while the data economy is projected to generate more than $4 trillion in annual value. However, creating data and creating value are not the same thing. The true economic opportunity lies not in individual datasets but in the ability to connect them across organizations, sectors, and national ecosystems.

The largest obstacle is the persistence of data silos.

Many organizations have spent decades building technology systems tailored to individual business units, departments, or operational functions. Energy companies often operate separate platforms for production, logistics, trading, and maintenance. Governments maintain independent databases across ministries and agencies. Financial institutions frequently rely on multiple legacy systems accumulated through years of expansion and acquisitions.

Each system may function effectively on its own. The problem arises when organizations attempt to combine information to create a unified view.

Fragmented standards further complicate the challenge. Data is often collected, categorized and stored using different formats and definitions. Information that appears identical on the surface may carry different meanings depending on the system that generated it. Without common standards and shared taxonomies, interoperability becomes expensive, complex, and often impractical.

Regulation presents another hurdle.

While governments are rightly focused on privacy, security, and sovereignty, regulatory frameworks frequently evolve more slowly than technology itself. Organizations must navigate an increasingly complex landscape of compliance requirements, consent mechanisms, cybersecurity obligations, and cross-border data restrictions. While these safeguards are necessary, excessive complexity can discourage collaboration and limit innovation.

The consequence is that countries often struggle to capture cross-sector value. AI systems perform best when they can draw insights from multiple sources. Healthcare outcomes improve when clinical data can be linked with research and public health information. Energy systems become more efficient when operational, environmental, and market data are integrated. Smart cities depend on transport, utilities, security, and citizen services working from a shared data foundation.

The solution is not simply more infrastructure. It is greater interoperability.

Leading economies are increasingly recognizing that competitive advantage depends on building integrated ecosystems rather than isolated platforms. This requires common standards, shared governance frameworks, secure data-sharing mechanisms, and architectures designed to enable collaboration from the outset.

The greatest barrier to the AI economy is not a shortage of data. It is the inability to connect it.

The countries that succeed in breaking down silos, simplifying standards, and enabling trusted interoperability will unlock the next wave of productivity, innovation, and economic growth. Those that do not risk creating vast stores of information that remain trapped, underutilized, and unable to deliver their full value to society. ■

How Can Governments Ensure That Investments in Digital Infrastructure Translate into Real Economic Value?

Infrastructure Alone Does Not Create Economic Value

The global race to build digital infrastructure is accelerating at remarkable speed. Governments are investing billions of dollars in data centers, cloud platforms, connectivity networks, and AI-enabled technologies, recognizing that digital infrastructure is becoming as strategically important as roads, ports, airports, and power grids.

Yet a growing challenge is emerging. Building infrastructure is the easy part. Generating economic value from it is harder.

With the global data economy projected to generate more than $4 trillion annually and worldwide investments in AI and digital infrastructure continuing to surge, the question facing policymakers is no longer whether to invest. The question is how to ensure those investments produce measurable returns in productivity, innovation, employment, and economic growth.

History offers a useful lesson. No country ever became prosperous simply by building roads. Economic value emerged because businesses, industries, and communities used those roads to move goods, connect markets, and create opportunity. Digital infrastructure follows the same principle. Data centers, cloud platforms, and AI systems are enablers of growth, not growth itself.

The greatest risk facing governments today is underutilization.

Around the world, ambitious infrastructure projects are being announced with considerable fanfare. Yet without clear deployment strategies, digital infrastructure risks becoming a solution in search of a problem. A hyperscale data center may represent a significant engineering achievement, but its economic contribution depends on whether it enables businesses, public institutions, and industries to become more productive and competitive.

Execution therefore matters more than investment.

The countries generating the greatest returns from digital infrastructure are those that align technology investments with sectoral priorities. Rather than treating infrastructure as a standalone objective, they focus on how it can transform core industries such as energy, finance, healthcare, manufacturing, logistics and government services.

In the energy sector, digital infrastructure enables predictive maintenance, operational efficiency, and smarter resource allocation. In healthcare, it supports data-driven diagnostics and personalized treatment. In logistics, it improves supply chain visibility and reduces costs. In finance, it accelerates innovation, enhances risk management, and expands access to services. Economic value is created not by the infrastructure itself, but by the outcomes it enables.

Investments in digital skills, AI literacy, research capabilities, and entrepreneurship must therefore accompany investments in technology. Infrastructure without talent risks becoming an underutilized asset rather than a catalyst for growth.

Talent is equally important.

Even the most advanced infrastructure will struggle to deliver results without a workforce capable of using it. Investments in digital skills, AI literacy, research capabilities, and entrepreneurship must therefore accompany investments in technology. Infrastructure without talent risks becoming an underutilized asset rather than a catalyst for growth.

Governance also plays a critical role. Clear regulatory frameworks, interoperability standards, and trusted data-sharing mechanisms help ensure infrastructure can be deployed efficiently across sectors. Without these foundations, organizations often face fragmentation, duplication, and unnecessary barriers to adoption.

Governments should measure success not by the number of data centers built or the scale of technology investment announced. Success should be measured through productivity gains, business creation, workforce development, innovation output, and improvements in public services.

The AI era will not be won by those who invest the most in digital infrastructure. It will be won by those who deploy it most effectively.

In the years ahead, the distinction between success and failure will not be measured in gigawatts of compute capacity or billions of dollars invested. It will be measured by the ability to convert digital infrastructure into real economic outcomes. The challenge is no longer investment. The challenge is execution. ■

How Will Control Over Data Shape Global Competitiveness and Economic Power in the AI Era?

The Next Global Power Race Will Be Fought Through Data

Throughout history, economic power has been shaped by control over strategic assets. In the industrial age, it was coal, oil, ports, and manufacturing capacity. In the digital age, it was connectivity, computing power, and software platforms. In the AI era, a new asset is emerging at the center of global competition: data.

The nations that can mobilize, govern, and activate high quality data at scale will increasingly determine the future balance of economic power.

This shift is already underway. By 2026, global data creation is expected to exceed 180 zettabytes, while the data economy is projected to generate more than $4 trillion in annual value. Yet the defining issue is no longer who possesses the most data. The real question is who can transform that data into intelligence, productivity, innovation, and competitive advantage.

Data has become the raw material of artificial intelligence. But like crude oil before it, raw data has limited value on its own. Economic power comes from refining it, connecting it, governing it, and deploying it effectively across entire economies.

The implications are profound.

Countries that fail to build sovereign, high quality data ecosystems risk becoming consumers of intelligence created elsewhere. They may adopt AI applications developed abroad, rely on foreign platforms, and increasingly depend on external providers for critical technologies. Those that succeed in building trusted data ecosystems, by contrast, will become exporters of innovation, talent, and digital services.

This is why governments around the world are increasingly treating data as strategic national infrastructure.

The debate is no longer limited to technology policy. It now sits alongside discussions of economic security, industrial strategy, and geopolitical competitiveness. Investments in cloud infrastructure, hyperscale data centers, cybersecurity, digital government platforms, and AI capabilities are all part of a broader effort to strengthen national competitiveness in the emerging AI economy.

Yet ownership alone is insufficient.

> **The next phase of global competition will not be defined solely by access to capital, energy, or compute capacity. It will be defined by the ability to mobilize data as a strategic economic asset.**

One of the strongest themes emerging across industries is that value comes not from data volume but from data quality, governance, and interoperability. Vast quantities of fragmented information generate little value if systems cannot communicate with one another. As many organizations have discovered, disconnected databases, inconsistent standards, and poor governance often create more noise than insight.

The most competitive economies will therefore be those that build integrated data ecosystems rather than isolated repositories. They will establish governance frameworks that create trust, interoperability standards that enable collaboration, and regulatory environments that encourage innovation while protecting sovereignty.

Control over data will also influence where talent, investment, and entrepreneurship gravitate. Businesses increasingly seek locations where they can access secure digital infrastructure, trusted data environments, and clear regulatory frameworks. The countries that create these conditions will attract the next generation of AI innovators and technology investors.

Perhaps most importantly, control over data will determine who captures the economic value generated by AI. Every intelligent system improves through feedback loops of data, usage, and learning. The more effectively nations can create these loops across industries, the faster their economies will innovate and grow.

The next phase of global competition will not be defined solely by access to capital, energy, or compute capacity. It will be defined by the ability to mobilize data as a strategic economic asset.

In the AI era, data is becoming the foundation upon which future economic power will be built. Nations that can transform data into trusted intelligence at scale will shape the rules of the next global economy. Those that cannot, may find themselves increasingly dependent on those that can. ■

Conclusion & Recommendations

The discussions throughout this chapter reveal that the future of global competitiveness in the AI era will not be determined by data volume alone, but by the ability to transform data into trusted intelligence and measurable economic value. As data becomes a strategic asset alongside capital, energy, and infrastructure, nations are increasingly competing to build high quality, interoperable, and secure data ecosystems capable of supporting AI at scale.

The key lesson is that digital infrastructure and the data economy are mutually dependent. Data without infrastructure cannot be activated, while infrastructure without high quality data risks becoming underutilized. Competitive advantage increasingly depends on governance frameworks that enable trust, interoperability standards that break down silos, and digital ecosystems that allow data to flow securely across sectors while preserving sovereignty.

The nations that succeed will be those that move beyond technology deployment toward ecosystem orchestration—connecting infrastructure, data, talent, governance, and industry adoption into a coherent economic strategy. In the AI era, prosperity will belong not to those who collect the most data, but to those who can mobilize it most effectively to drive productivity, innovation, and long-term economic growth.

Five Recommendations for Stakeholders

1. Prioritize Data Quality Over Data Quantity
Focus investments on improving data quality, governance, and accessibility rather than simply accumulating larger datasets. High quality, trusted data delivers significantly greater economic value than fragmented information stored at scale.

2. Establish National Data Governance Frameworks
Develop clear policies, standards, and accountability mechanisms that enable secure data sharing, strengthen public trust, protect sovereignty, and create the regulatory certainty required for large-scale AI deployment.

3. Break Down Cross-Sector Data Silos
Promote interoperability through common standards, shared platforms, and collaborative ecosystems that enable data to flow securely between government, industry, and research institutions to unlock greater value.

4. Link Infrastructure Investment to Sectoral Outcomes
Measure success through productivity gains, innovation, business creation, and public service improvements rather than infrastructure capacity alone, ensuring investments translate into tangible economic returns.

5. Build Continuous Data, Talent, and AI Feedback Loops
Integrate workforce development, digital infrastructure, and AI adoption strategies to create self-reinforcing ecosystems where data, innovation, and talent continuously strengthen national competitiveness.

CHAPTER THREE

How are Capital Flows Shaping the Future of AI and Who will Capture Long-Term Value?

EXECUTIVE SUMMARY

Across the wider global AI investment landscape, infrastructure spending is in some cases outpacing realised business value, creating potential risks of valuation inflation, overinvestment, and capital misallocation.

AI Capital Flows Will Determine Tomorrow's Economic Winners Globally

Capital is fundamentally reshaping the future of artificial intelligence, accelerating investment across the entire AI value chain—from semiconductors, data centers, and cloud infrastructure to platforms, applications, and industry-specific solutions. Global AI investment is expected to exceed $300 billion annually by 2026, driven by expectations that AI will become a defining engine of productivity, innovation, and economic growth.

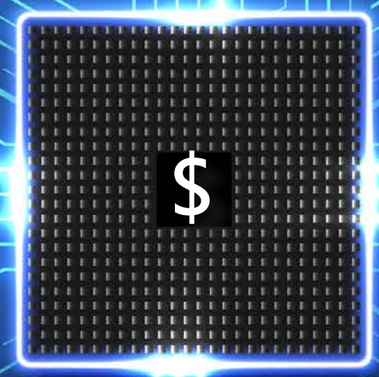
While capital is currently concentrated in infrastructure and hyperscale platforms, the discussion highlighted that long-term value is unlikely to be captured by infrastructure alone. The greatest and most sustainable returns will accrue to organizations that build scalable AI ecosystems combining compute, platforms, proprietary data, talent, and sector-specific applications. Platforms are increasingly viewed as the operating systems of the AI economy, creating durable competitive advantages beyond the application layer.

A key challenge is that enterprise adoption is progressing more slowly than investment. Many organizations lack the data foundations, technical capabilities, and change-management capacity required to generate measurable returns. As a result, infrastructure spending is outpacing realized business value, increasing the risk of valuation inflation, overinvestment, and capital misallocation.

Saudi Arabia is emerging as a significant player in this transformation. Through sovereign investment, strategic partnerships, and Vision 2030, the Kingdom is building a vertically integrated AI ecosystem spanning infrastructure, applications, governance, and talent development. This positions Saudi Arabia not only as a global investor, but as a future AI hub serving regional and international demand.

Ultimately, the winners in the AI economy will not be those who simply deploy the most capital, but those who allocate it most effectively. As AI adoption matures, disciplined investment in resilient platforms, talent, and ecosystems will determine who captures long-term value and shapes the next phase of global economic growth. ■

Across the wider global AI investment landscape, infrastructure spending is in some cases outpacing realised business value, creating potential risks of valuation inflation, overinvestment, and capital misallocation.



Where is the Real Value in AI Today: Infrastructure, Platforms, or Applications?

The Future of AI Value Lies in Platform Ecosystems

The global AI investment cycle has entered a new phase. After two years of unprecedented enthusiasm, the question is no longer whether artificial intelligence will transform the economy, but where sustainable value will ultimately concentrate.

Today, capital is flowing overwhelmingly into infrastructure. Data centers, advanced semiconductors, cloud capacity, power systems, and compute networks have become the foundational assets of the AI era. Investors are deploying hundreds of billions of dollars into what many view as the digital equivalent of railroads, highways, and electricity grids. The logic is clear: without compute, there is no AI.

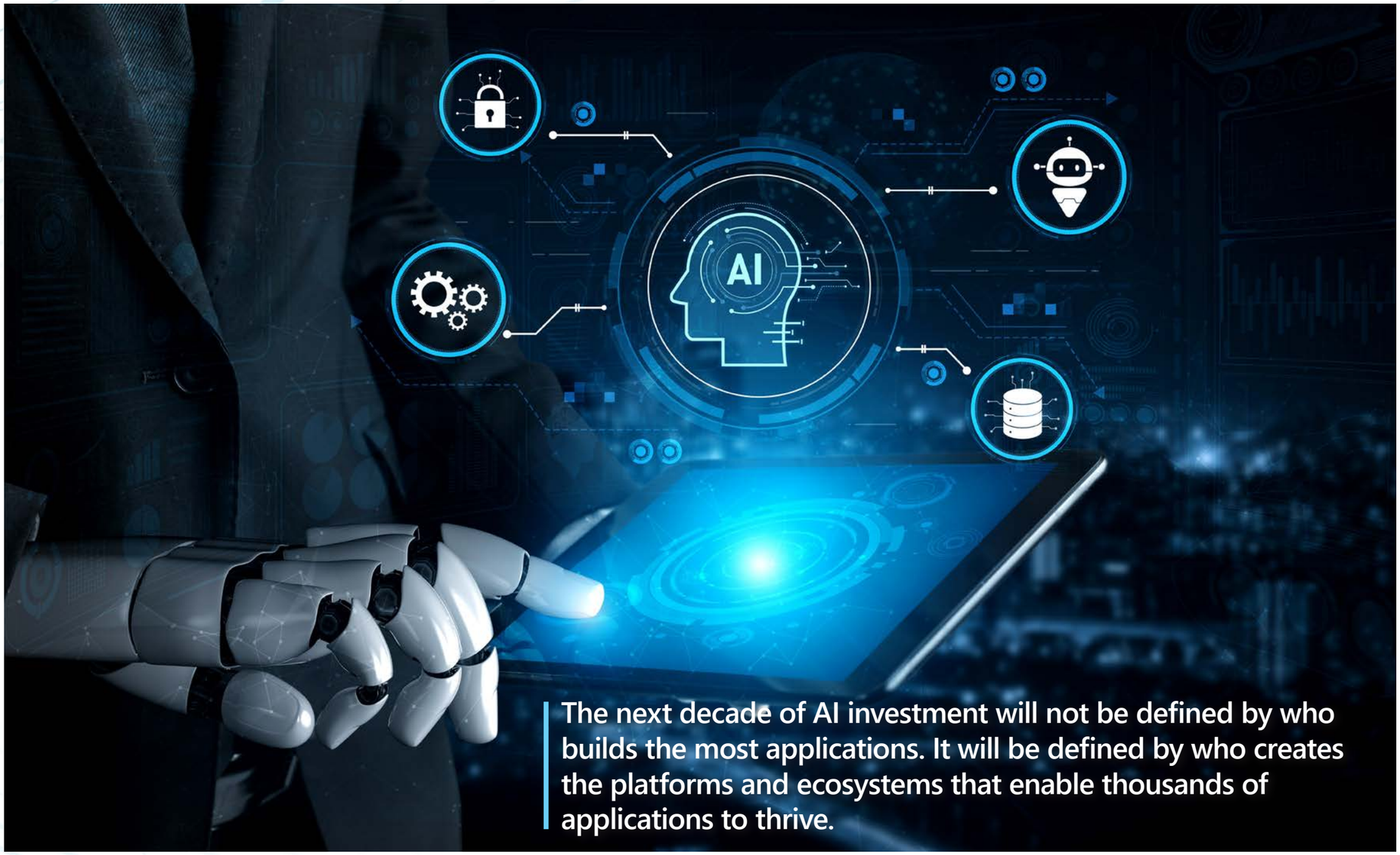
Yet infrastructure alone rarely captures the greatest long-term returns.

History offers an important lesson. In previous technology cycles, the companies that generated the most enduring value were not always those that built the physical foundations. The greatest winners were often those that created the platforms sitting on top of those foundations—operating systems, marketplaces, ecosystems, and networks that became indispensable to users and developers alike.

The same dynamic is beginning to emerge in AI.

While infrastructure remains essential, platforms are increasingly becoming the operating systems of the AI economy. They connect models, data, tools, developers, enterprises, and users into scalable ecosystems capable of generating recurring value. The largest opportunities are no longer simply about building more compute capacity, but about creating environments where innovation can be deployed repeatedly across industries and use cases.

Applications, meanwhile, play an important role but face a different challenge. Individual AI applications can be highly successful, but many are vulnerable to rapid replication. New features emerge daily. Competitive advantages can disappear quickly. In contrast, platforms create network effects. The more developers, enterprises, and users participate, the stronger and more defensible the ecosystem becomes.



> The next decade of AI investment will not be defined by who builds the most applications. It will be defined by who creates the platforms and ecosystems that enable thousands of applications to thrive.

This distinction explains why many investors are increasingly focused on platform-centric strategies rather than chasing the next AI application. As one participant in the AI Arabia Center of Excellence Dialogues observed, capital is no longer simply pursuing the "next shiny app"; it is reorganizing itself across the entire AI stack in search of scalable ecosystems capable of generating durable value over decades rather than quarters.

The challenge is that returns may not materialize immediately. Enterprise adoption remains slower than the pace of technological innovation. Many organizations are still grappling with talent shortages, legacy systems, governance requirements, and organizational transformation. As a result, infrastructure spending is running ahead of measurable return on investment.

This does not mean the investment thesis is flawed. Rather, it suggests that AI should be viewed as a long-duration transformation. Infrastructure provides the foundation. Applications demonstrate the possibilities. Platforms capture the value.

Saudi Arabia's approach reflects this reality. Under Vision 2030, the Kingdom is not merely investing in isolated AI projects. It is building integrated ecosystems that combine infrastructure, platforms, talent, data, and sector-specific deployment. The objective is not only technological adoption but the creation of national capability and long-term economic competitiveness.

The next decade of AI investment will not be defined by who builds the most applications. It will be defined by who creates the platforms and ecosystems that enable thousands of applications to thrive. In the AI economy, infrastructure may be the foundation and applications may be the storefront, but platforms are where enduring value is most likely to reside. ■

How are sovereign wealth funds and institutional investors shaping the global AI investment landscape?

Sovereign Capital is Seeking Influence in the Emerging AI Economy

Artificial intelligence is often described as the defining technology of the next decade. Yet behind every breakthrough model, data center, and AI platform lies a less visible force that may prove equally important: capital.

The global AI race is no longer being driven solely by venture capital firms, technology companies, or private investors. Increasingly, sovereign wealth funds, pension funds, and institutional investors are emerging as some of the most influential architects of the future AI economy. Their role extends far beyond financing innovation. They are helping determine where AI capabilities are built, which ecosystems scale, and which nations emerge as long-term leaders.

This shift reflects a fundamental change in how capital is being deployed.

Historically, institutional investors sought primarily financial returns. Today, AI investment is becoming inseparable from national competitiveness, economic resilience, and strategic influence. Capital allocation is increasingly viewed as a mechanism for securing a position in the future global economy rather than simply generating portfolio performance.

The scale of the opportunity explains why.

Global AI investment is now approaching $300 billion annually, while AI's projected contribution to the global economy could reach between $15 trillion and $20 trillion by the end of the decade. These figures have transformed AI from a technology trend into a strategic asset class.

As a result, sovereign wealth funds are increasingly investing across the full AI value chain. Rather than focusing on individual companies or applications, many are targeting integrated ecosystems that combine compute infrastructure, advanced semiconductors, cloud platforms, data assets, talent development, and industry-specific deployment capabilities. The objective is to participate in every layer of value creation while strengthening long-term national capability.

Valuations remain elevated, return horizons remain uncertain, and geopolitical tensions surrounding semiconductors, supply chains, and technology access continue to influence investment decisions. In this environment, access to capital is no longer the primary challenge. Disciplined allocation is.

Saudi Arabia provides one of the clearest examples of this approach. Through Vision 2030 and the growing role of sovereign capital, the Kingdom is positioning itself not simply as an investor in AI, but as a builder of AI ecosystems. Investments are being directed toward infrastructure, partnerships, platforms, and innovation environments designed to create sustainable economic value and support diversification beyond traditional sectors.

This broader strategic perspective reflects an important realization: ownership of AI infrastructure alone will not determine future leadership. The countries and institutions that successfully combine infrastructure, talent, platforms, governance, and sectoral adoption are more likely to capture durable value. Capital is therefore flowing toward ecosystems rather than isolated assets.

At the same time, institutional investors face growing risks. Valuations remain elevated, return horizons remain uncertain, and geopolitical tensions surrounding semiconductors, supply chains, and technology access continue to influence investment decisions. In this environment, access to capital is no longer the primary challenge. Disciplined allocation is.

The next decade of AI investment will therefore be defined not by who spends the most money, but by who deploys it most effectively. Sovereign wealth funds and institutional investors are becoming strategic actors in the AI economy, shaping the infrastructure, platforms, and ecosystems that will underpin future growth.

In the AI era, capital is no longer simply funding innovation. It is actively determining where innovation happens, who benefits from it, and which economies will lead the next phase of global development. ■

What risks are emerging from the rapid concentration of capital in AI?

Hidden Risk in the AI Boom: Capital is Moving Faster Than Value Creation

Artificial intelligence is attracting capital at a pace rarely seen in modern economic history.

Data centers are being built at unprecedented speed. Semiconductor manufacturers are expanding capacity. Cloud providers are investing billions in compute infrastructure. Governments, sovereign wealth funds, and institutional investors are directing vast amounts of capital toward AI ecosystems in anticipation of a transformational economic opportunity.

The scale is undeniable. Global AI investment is projected to exceed $300 billion annually, while AI's contribution to the global economy could reach between $15 trillion and $20 trillion by the end of the decade. Yet beneath the optimism lies a growing concern: is capital moving faster than value creation?

One of the clearest risks emerging from today's AI investment cycle is the widening gap between investment and measurable return on investment.

While infrastructure providers, hyperscalers, and chip manufacturers continue to attract enormous capital inflows, enterprise adoption remains relatively slow. Organizations are still grappling with talent shortages, governance requirements, legacy systems, and business transformation challenges. As a result, investment is accelerating while commercial outcomes remain uncertain.

This creates the first major risk: valuation inflation.

When capital concentrates around a rapidly growing technology, valuations can become disconnected from underlying economic performance. Investors increasingly price companies based on future expectations rather than demonstrated value creation. In AI, this risk is amplified by the fear of missing out on a technology many view as a generational opportunity.

A second risk is concentration itself.

Much of today's investment is flowing toward a relatively small group of platforms, hyperscalers, semiconductor manufacturers, and infrastructure providers. Yet the ultimate winners of the AI economy have not been determined. Infrastructure is attracting capital today, but long-term value may ultimately emerge in platforms, ecosystems, and industry-specific deployment models.

A third challenge is uncertainty around return horizons.

AI requires significant upfront investment in compute, talent, infrastructure, and organizational change. While the long-term benefits may be substantial, the timeline for sustainable returns remains unclear. Many enterprises are still experimenting with how best to capture value at scale.

Finally, geopolitical considerations are becoming inseparable from investment decisions. Semiconductors, supply chains, energy infrastructure, and access to compute are increasingly shaped by strategic competition between nations.

The long-term AI opportunity remains extraordinary. The challenge is no longer access to capital, but disciplined allocation. The winners of the next decade will not be those who deploy the most capital, but those who allocate it most effectively.

In the AI economy, the greatest risk may not be missing the opportunity. It may be investing in the wrong part of it. ■

The long-term AI opportunity remains extraordinary. The challenge is no longer access to capital, but disciplined allocation.

How should investors navigate geopolitical risk in AI – particularly around semiconductors and supply chains?

Geopolitics is Becoming the Defining Variable in AI Investment

Artificial intelligence is rapidly becoming one of the most consequential investment opportunities of the modern era. With AI projected to contribute between $15 trillion and $20 trillion to the global economy by 2030, investors are racing to secure exposure across the AI value chain—from semiconductors and compute infrastructure to platforms, data ecosystems, and enterprise applications.

Yet as AI investment accelerates, a new reality is emerging. Success will depend not only on identifying the right technologies, but on navigating an increasingly complex geopolitical landscape.

For much of the past decade, technology investment was largely assessed through commercial fundamentals: market opportunity, innovation, scalability, and financial returns. Today, geopolitical considerations are becoming equally important. Supply chains, semiconductor access, energy security, and technology sovereignty are reshaping how capital is allocated across the AI ecosystem.

Nowhere is this more evident than in semiconductors.

Advanced chips have become the critical foundation of AI development. They power large language models, support hyperscale data centers, and enable the compute capacity required for next-generation applications. However, semiconductor production remains concentrated within a relatively small number of countries and companies, creating vulnerabilities throughout the global technology supply chain.

This concentration creates a significant challenge for investors. Access to advanced chips is increasingly influenced by export controls, trade restrictions, industrial policy, and geopolitical competition. As a result, investment decisions can no longer be based solely on technological merit or market demand. Investors must also assess resilience to regulatory shifts and supply-chain disruptions.

The same applies to AI infrastructure more broadly.

Data centers require not only compute capacity, but also reliable access to energy, specialized equipment, cooling systems, and critical materials. Disruptions in any of these areas can affect project economics, deployment timelines, and long-term returns. What once appeared to be operational risks are increasingly becoming geopolitical risks.

At the same time, governments are becoming more active participants in shaping AI ecosystems. Across the world, nations are investing heavily in sovereign compute, domestic infrastructure, and strategic technology partnerships. The objective is not simply economic growth, but technological resilience and national competitiveness. This trend is creating new opportunities for investors, while also increasing the importance of understanding policy direction and geopolitical alignment.

For investors, the implication is clear: diversification must extend beyond asset classes and sectors to include geography, supply chains, and technology dependencies.

The most resilient AI investment strategies will likely combine exposure to high-growth opportunities with investments in infrastructure, platforms, and ecosystems that are less vulnerable to single points of geopolitical failure. Flexibility, redundancy, and strategic partnerships may prove as valuable as technological innovation itself.

The long-term AI opportunity remains extraordinary. But as AI becomes increasingly central to economic growth, geopolitical dynamics will play a greater role in determining who captures that value.

The next phase of AI investing will not be defined solely by identifying the best technology. It will be defined by identifying the most resilient ecosystems in an increasingly fragmented world. ■

What will define successful AI investment strategies over the next decade?

The Next Decade of AI Investing will Reward Discipline, Not Hype

Artificial intelligence has already become one of the largest capital allocation themes of the modern economy.

Investors are pouring billions into data centers, advanced semiconductors, cloud infrastructure, large language models, and AI startups. Governments are deploying sovereign capital to secure national capabilities. Institutional investors are racing to gain exposure to what many believe will be the defining technology of the twenty-first century.

Yet as the AI investment cycle matures, a more important question is beginning to emerge: what will actually define successful AI investment strategies over the next decade?

The answer is increasingly clear. Long-term success will depend less on identifying the next breakthrough application and more on backing resilient ecosystems capable of generating sustainable value over time.

Much of today's investment activity remains concentrated in infrastructure. Data centers, compute capacity, and advanced chips have become essential foundations of the AI economy. These investments are necessary, but infrastructure alone does not guarantee value creation. History shows that transformative technologies create lasting winners when infrastructure is combined with platforms, talent, data, governance, and widespread adoption.

This is why many investors are increasingly shifting their attention toward ecosystems rather than isolated assets.

An ecosystem creates connections between infrastructure providers, platform developers, enterprises, researchers, talent, and end users. The more participants it attracts, the stronger its competitive position becomes. Unlike individual applications, which can often be replicated quickly, ecosystems benefit from network effects that strengthen over time and create more durable economic value.

The challenge for investors is that these returns may take longer to emerge than current market expectations suggest.

While AI adoption is accelerating, many organizations remain early in their transformation journeys. Talent shortages, legacy systems, governance requirements, and organizational readiness continue to slow deployment across industries. As a result, measurable returns often lag behind investment activity. The temptation for investors is to chase near-term momentum. The opportunity is to identify the organizations building foundations for long-term scalability.

Successful investment strategies will therefore require a broader perspective than previous technology cycles. Investors will need to evaluate not only products and companies, but also ecosystem resilience, platform scalability, talent availability, regulatory readiness, and geopolitical exposure.

This is particularly important as AI becomes increasingly intertwined with national competitiveness. Access to compute, semiconductors, energy infrastructure, and trusted data ecosystems will shape future growth. The strongest investment opportunities may emerge in regions and organizations capable of integrating these capabilities into coherent and scalable ecosystems.

Saudi Arabia's Vision 2030 strategy reflects this ecosystem approach. Rather than focusing solely on individual technologies, the Kingdom is investing across infrastructure, talent, partnerships, innovation platforms, and sectoral deployment. The objective is to build a self-reinforcing AI ecosystem capable of delivering economic value long after the current investment cycle has passed.

The next decade of AI investing will undoubtedly produce new market leaders and new sources of disruption. But the investors who generate the greatest returns are unlikely to be those chasing every new breakthrough.

They will be those who recognize that enduring value is built through resilient ecosystems, scalable platforms, and sustained execution. In AI, the future belongs not to those who invest fastest, but to those who invest for durability. ■

Conclusion & Recommendations

As artificial intelligence moves from experimentation to economic transformation, investors, policymakers, and business leaders face a critical challenge: distinguishing between short-term momentum and sustainable value creation. The evidence presented throughout this chapter suggests that while infrastructure remains the essential foundation of the AI economy, long-term value is likely to concentrate in scalable platforms, integrated ecosystems, and the institutions capable of translating technological capability into measurable economic outcomes.

The AI investment landscape is becoming increasingly complex. Sovereign wealth funds and institutional investors are deploying capital not only to generate returns but also to secure strategic positioning in a future economy increasingly defined by data, compute, talent, and innovation. At the same time, rising valuations, concentrated capital flows, geopolitical tensions, and uncertain return horizons are introducing new risks that require greater investment discipline and longer-term thinking.

The most successful AI economies and organizations will be those that move beyond isolated technology investments and focus on building resilient ecosystems that connect infrastructure, platforms, talent, governance, and sector-specific adoption. As Saudi Arabia's Vision 2030 demonstrates, competitive advantage will increasingly depend on creating environments where innovation can scale sustainably and deliver enduring economic value.

RECOMMENDATIONS

1. Build Ecosystems, Not Isolated AI Assets, for Sustainable Growth
Long-term value emerges when infrastructure, platforms, talent, governance, and applications operate together within scalable ecosystems.

2. Prioritize Long-Term Value Creation Over Short-Term Investment Momentum
Successful investors must focus on durable returns, recognizing AI adoption and monetization will evolve gradually.

3. Diversify Supply Chains to Strengthen Resilience Against Geopolitical Risks
Reducing dependence on single markets, suppliers, or technologies improves stability amid rising geopolitical uncertainty.

4. Invest in Talent and Governance Alongside Technology Deployment
AI success depends equally on skilled people, organizational readiness, trusted data, and effective governance.

5. Measure Impact Through Economic Outcomes Rather Than Capital Deployed
Competitive advantage comes from scalable productivity gains, innovation, and measurable economic value creation.

The next decade of AI leadership will not be defined by who builds the most infrastructure or deploys the most capital. It will be defined by who creates the most resilient, scalable, and trusted ecosystems capable of transforming innovation into sustained economic prosperity. ■

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