

The Next AI Imperative: Capacity, Geopolitics, and Sustainability

The questions boards should be asking



Fumbi Chima



Andreea Bulisache

This article is the first in a four-part series designed to reframe the AI conversation for senior executives and board directors.



By now, everyone can agree on the benefits of AI in the areas of increased productivity, faster workflows, and streamlined capabilities. Boardrooms and executives worldwide are excitedly discussing use cases, pilot programs, ethics, and enhancements, like the promise of generative models. The current discourse tends to center on the “how”—how to implement, how to integrate, how to scale, how to govern. But one question is being overlooked: What’s the long-term cost of AI—not only financially, but as it pertains to capacity and access, geopolitics, and sustainability?

CIOs and corporate directors are expected to be stewards of innovation and risk. Yet, we believe there’s a missing dimension to the conversation. AI touches everything from national security to climate resilience. As adoption accelerates, boards must grapple with three critical interconnected issues:



Capacity

AI’s non-stop demand for computing power and energy. Who controls access, and how does that affect resilience and scale?



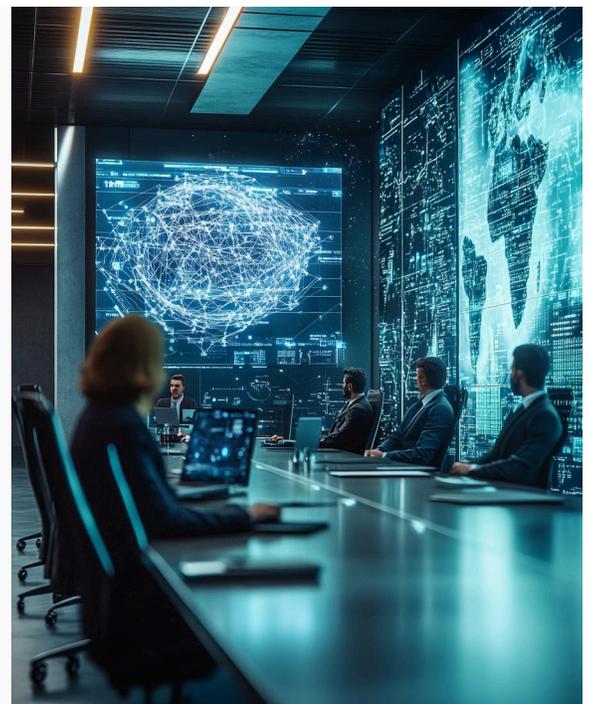
Geopolitics

How do emerging global regulations, trade policies, and diplomatic tensions influence AI strategy and sovereignty?



Sustainability

Can businesses reconcile the carbon footprint of AI with their environmental commitments and values?



These questions should be on every boardroom agenda. Not expecting and planning for AI's effects could lead to strategic misalignment, increased regulatory scrutiny, and long-term operational risk. This article serves as a guide for leaders as they navigate the fast-evolving AI landscape.



Capacity: The AI advantage no one is talking about

When we talk about AI readiness, the conversation often starts with talent, tools, and data. But there's a fundamental layer that shapes who gets to scale, and who gets left behind. *It's capacity.* AI demands massive computing power, which needs massive amounts of energy. Training a single large language model like GPT-4 consumes an estimated 1,287 MWh (the annual energy use of roughly 130 U.S. homes (MIT NEWS, 2024). Whoever has the energy has the upper hand. Capacity (access to energy and compute) may be the greatest competitive advantage.

The companies poised to win in AI are speeding to secure infrastructure. In 2023, **Microsoft pre-committed** to purchasing 485,000 NVIDIA H100 GPUs. This was their way of taking control over the energy needed to power their AI advances. The ability to source, afford, and scale *energy* access is inseparable from AI strategy. While tech giants in the U.S. make bold precommitments to secure AI capacity, other regions are racing to catch up. Take Europe, for example. Its disjointed energy grid and dependence on imported semiconductors leave it particularly vulnerable. The **EU Chips Act** and the **European Green Deal** aim to improve authority over areas, but whether Europe can move fast enough to stay in the game is yet to be determined.

This global gap has real implications for businesses. Companies without long-term compute strategies, or those overly reliant on third-party providers, may find themselves priced out or left behind. Adding even more complexity is the fact that the majority of the world's chips are created in Asia, particularly Taiwan and South Korea. U.S.-China tensions are rising. Rising tensions may impact availability, which in turn will impact capacity. Providers may be forced to prioritize capacity based on political and economic considerations, not just contracts. Boards must consider how geopolitical risks may restrict capacity, altering pricing and access.

Boards and CIOs should ask:

- ▶ What percentage of our AI workloads depend on external providers?
- ▶ Do we have a long-term strategy for securing energy and compute capacity?
- ▶ Are we vulnerable to geopolitical risks in the semiconductor supply chain?
- ▶ Should we build, buy, or partner to secure our AI infrastructure in the future?



Geopolitics and the ever-evolving AI regulatory complexity

Which leads us into the next concern: AI advancement is entangled within the global geopolitical landscape. The most notable tension currently lies between the U.S. and China. Recent U.S. export restrictions on advanced AI chips are intended to slow China's military and economic advancement as we have seen in the recent embargo of an additional dozen Chinese companies on the export blacklist. In response, China is accelerating domestic semiconductor production and setting up its own AI development ecosystem.

These moves lay the foundation for a potential "AI splinter net"—separate, regionally defined ecosystems governed by different values, policies, and technical standards. Companies working across borders may face increasing barriers to compute infrastructure, talent mobility, and cross-border data flow. What was once a global platform for innovation is becoming more fractured and politically influenced.

At the same time, AI governance frameworks are tightening across the world. According to consulting firm McKinsey, the EU's AI Act delivers a tiered approach to risk and compliance, while China promotes AI models that align with state-approved content and policies. These regulations affect how AI systems are trained, monitored, and maintained. In short: compliance just became even more complex, and AI strategy is inseparable from regulatory strategy. Boards must shift from reactive compliance to proactive planning and be prepared to vary their approach based on jurisdictions. Companies must be ready to adapt. Beyond governance, political pressure around automation and job displacement continues to build. In some areas, we may see regulations that intentionally slow or restrict AI-driven automation to preserve employment or align with domestic policy priorities. At the same time, some sustainability mandates push companies to account for AI's energy usage and environmental impact, further complicating deployment at scale.

Boards and CIOs should ask:

- ▶ How do regional AI regulations impact our global operations?
- ▶ What contingency plans exist if geopolitical shifts disrupt our AI supply chains?
- ▶ Are we aligning our AI strategy with data sovereignty and localization requirements?
- ▶ How are we balancing automation ambitions with emerging labor and ESG expectations?





Sustainability: AI's Hidden Environmental Costs

The conversation around AI's carbon footprint is still catching up to its technological momentum. While some boards have made progress with ESG and climate targets, many have yet to fully consider the climate implications of AI at scale. At the core of this issue is a concept known as **Jevons' Paradox**, which states that as efficiency improves, consumption often increases. Applied to AI, this means that even if algorithms become more energy-efficient, the sheer volume of AI usage and the business incentives behind it can still drive up overall energy demand.

For example, AI data centers need water to stay cool and avoid overheating, which may contradict some of AI's efficiency gains. On the other hand, AI may also be used positively in climate action, such as by analyzing satellite imagery or detecting deforestation. The balance sheet between these examples can become foggy. These effects are often invisible in standard AI ROI conversations but carry real consequences.



There is also a deeper structural challenge at play. The most prominent AI breakthroughs today—think large language models—reward growth and scale over sustainability. As long as market forces and short-term returns primarily drive innovation, aligning AI development with climate goals will remain difficult unless it also serves those same incentives.

But the climate stakes are non-negotiable. A recent report from MIT notes that scientific consensus warns that global warming must be limited to 1.5°C to avoid the worst-case climate change scenarios. Every sector, including technology, must adapt. Boards must consider whether their AI ambitions align with their sustainability commitments or whether they risk building systems today that will conflict with policy, investor expectations, or social license tomorrow.



The question is no longer whether AI has an environmental impact. It's how boards will choose to respond—and whether they can lead with clarity as the regulatory and public landscape evolves. Boards must urgently evaluate whether their AI ambitions align with sustainability commitments and consider potential conflicts with policy, investor expectations, and social accountability.

Boards and CIOs should ask:

- ▶ How are we measuring and managing the environmental impact of our AI initiatives?
- ▶ Are our AI growth plans aligned with our stated ESG goals and commitments?
- ▶ What actions are we taking to mitigate AI-driven increases in resource consumption?
- ▶ Have we assessed the long-term regulatory and reputational risks associated with our current AI sustainability practices?





How can boards move forward: Frameworks to consider

Boards and CIOs need robust frameworks to assess and guide their AI strategies through a lens that includes climate impact, regulatory readiness, and long-term risk. We recommend starting with a combination of quantitative and qualitative assessments. Companies should consider regularly stress-testing AI infrastructures against energy volatility and shifting regulations and conducting scenario planning exercises to anticipate geopolitical disruptions. Finally, they should evaluate integrating sustainability metrics into AI procurement and infrastructure decisions.

Ultimately, proactive boards will mitigate risks, align AI with core business values, and gain stakeholder trust. Responsible AI strategies position companies for sustainable, resilient growth in an increasingly scrutinized business landscape.

AI is not just the next wave of digital transformation; it's a fundamental shift in how businesses operate, compete, and contribute to the world. As leaders, we are only beginning to understand the true scope of what this means. The questions we ask today will shape tomorrow's AI ethics, infrastructure, and global impact. This is about fulfilling our duty to shareholders and our responsibility as global citizens.



In our next article, we'll uncover the hidden battleground of AI capacity, revealing why control of computing infrastructure and energy resources will define strategic winners. Companies overlooking these invisible factors risk being left behind in AI's next evolution.



Fumbi Chima

<https://www.linkedin.com/in/fumbi-chima/>

Dr. Fumbi Chima is a global technology executive who has led digital and operational transformation initiatives at industry-leading brands including adidas, Burberry, Walmart, Boeing Credit Union, and Fox Networks. Her experience spans P&L ownership, M&A, operations, and enterprise technology leadership across retail, CPG, digital, and financial services. She is widely recognized as an AI thought leader with a strong reputation for aligning innovation with business goals to deliver sustainable value and competitive advantage. At adidas AG, she spearheaded large-scale infrastructure and process transformations, achieving cost savings, accelerating speed to market, and enabling cross-market scalability. Known for bridging the gap between technology and business, she fosters high-performance cultures rooted in innovation, accountability, and transparency. Her leadership has consistently increased employee engagement and organizational impact. Throughout her career, she has championed innovative solutions in data strategy, digital marketing, and cybersecurity, always with a relentless focus on driving growth and enhancing customer experience.



Andreea Bulisache

<https://www.linkedin.com/in/andreeabulisache/>

Andreea Bulisache is a global tech executive and strategist with deep expertise in AI, cybersecurity, and digital transformation. A former Microsoft leader, she played a key role in scaling emerging technologies and leading complex integrations such as GitHub and Databricks, translating innovation into tangible business value. As Founder of Stratified Advisory, she partners with CEOs, PE-backed companies, and boards to drive enterprise innovation and navigate digital and regulatory complexity. Known for her ability to bridge technical depth with strategic insight, Andreea has contributed to national AI and cybersecurity frameworks and frequently advises on risk, governance, and sustainable innovation. She serves as Chair of Young & Bold and sits on the International Advisory Board of Nyenrode Business University. A graduate of the Harvard Business School Women on Boards Program, she brings a forward-thinking lens to the evolving intersection of technology, geopolitics, and long-term boardroom resilience.

Links to sources referenced in this article:

[Explained: Generative AI's environmental impact | MIT News | Massachusetts Institute of Technology](#)

[Financial Times: Microsoft pre-committed to purchasing 485,000 NVIDIA H100 GPUs](#)

[Power Hungry Processing: Watts Driving the Cost of AI Deployment?](#)

[European Chips Act](#)

[Reuters: What's in the EU's plan to boost clean tech, lower energy bills?](#)