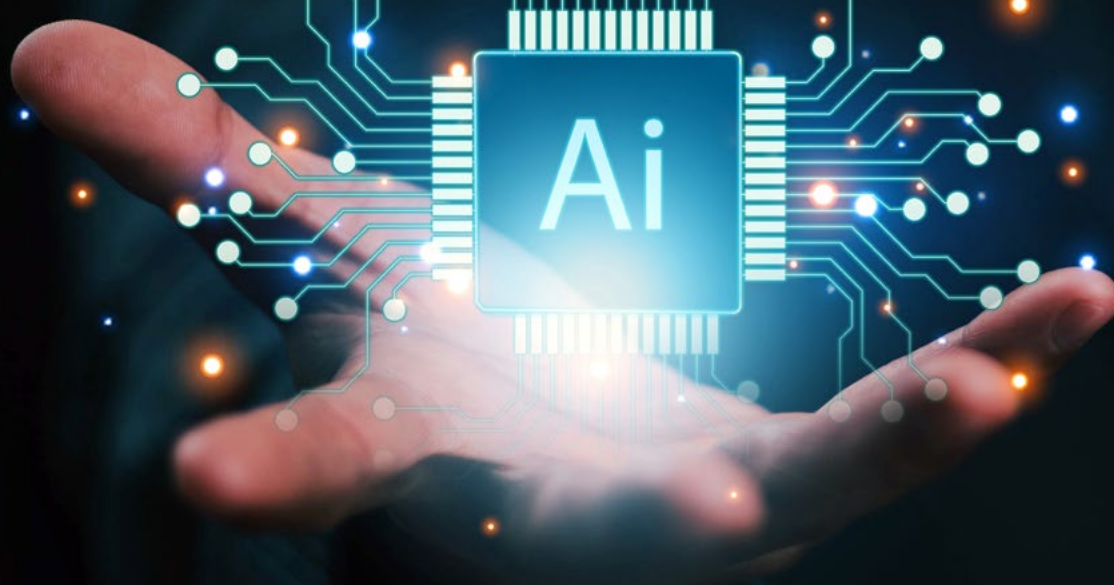




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ROUNDTABLE PODCAST SERIES – EPISODE FOUR SPECIAL REPORT

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



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Zainab Al Amin
Vice President of National Digital Transformation
Microsoft Saudi Arabia

Deployment Capability Will Define Saudi Arabia's AI Success

Saudi Arabia's AI ambitions will not be measured by the number of data centers it builds, but by how effectively it translates infrastructure into economic value. AI infrastructure is not the final objective — it is the enabler supporting Saudi Arabia's broader Vision 2030 ambition to diversify its economy and establish itself as a global AI hub.

Microsoft's upcoming Saudi cloud region, consisting of three data centers in the Kingdom's Eastern Province, reflects how seriously the country is investing in long-term AI capability. The project also highlights another strategic priority often overlooked in AI discussions: localization. Nearly 86% of the workforce supporting the initiative is Saudi, with strong female representation across the operation.

AI Must Deliver Operational Outcomes

The real competitive advantage in AI no longer comes from compute access alone. Organizations moving fastest are those connecting strong data foundations directly into operational use cases capable of generating measurable business outcomes.

Saudi Arabia is already seeing practical examples emerge across industries. Manufacturing facilities are connecting over a thousand machines through AI systems to improve productivity, while airlines are integrating copilots to enhance traveler experiences and operational efficiency. Deployment capability — not infrastructure alone — is becoming the true differentiator. The organizations that succeed will be those capable of translating technology into productivity gains, service improvements, and long-term economic value.

Startups Will Drive Sector Innovation

AI transformation will also depend heavily on startups capable of solving highly specialized industry challenges. Platform providers can supply infrastructure and tools, but sector-specific innovation increasingly comes from smaller companies building practical solutions tailored to real operational problems. Long-term AI leadership therefore requires balancing trusted global partnerships with strong governance, resilient infrastructure, and national strategic alignment. ■

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POWERING SAUDI ARABIA'S AI FUTURE
Zainab Al Amin
Vice President of National Digital Transformation
Microsoft Saudi Arabia

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| 1.
AI infrastructure is not the end goal itself, but the foundational enabler helping Saudi Arabia transition from an oil-based economy into a diversified AI-driven knowledge economy. | 2.
Access to compute and data matters, but competitive advantage ultimately comes from transforming those capabilities into operational applications that improve productivity, services, and measurable economic outcomes. | 3.
Microsoft's Saudi cloud region demonstrates how national AI ambitions are accelerating through large-scale infrastructure investments, localization strategies, and strong public-private sector collaboration. |
| 4.
Building local cloud infrastructure with highly localized Saudi talent supports national digital sovereignty while simultaneously strengthening long-term workforce development and innovation capabilities across the kingdom. | 5.
Successful AI adoption happens when organizations connect strong data foundations with practical operational use cases that directly address measurable business and industry challenges. | 6.
Sector-specific AI innovation increasingly depends on startups capable of solving niche operational challenges faster than large platform providers or generalized enterprise technology ecosystems. |
| 7.
AI transformation requires collaboration between regulators, cloud providers, enterprises, startups, and ecosystem partners to accelerate innovation and scale sustainable digital transformation nationally. | 8.
AI sovereignty is not about isolation, but about combining trusted global partnerships, governance frameworks, and resilient infrastructure aligned with national priorities and economic security. | 9.
Saudi Arabia's combination of infrastructure investment, regulatory support, startup acceleration, and national AI strategy positions the kingdom as an emerging global AI innovation hub. |

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"Saudi Arabia is not pursuing AI sovereignty through isolation, but through trusted partnerships, resilient infrastructure, and alignment with national priorities."

Zainab Al Amin
Vice President of National Digital Transformation
Microsoft, Saudi Arabia

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SOUNDINGS



"Saudi Arabia is not pursuing AI sovereignty through isolation, but through trusted partnerships, resilient infrastructure, and alignment with national priorities."

Zainab Al Amin
Vice President of National Digital Transformation
Microsoft, Saudi Arabia

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Dr. Ahmed Alfadhel
Executive Director of Innovation & Technology Commercialization,
Dhahran Techno Valley (DTV)

Innovation Will Determine AI Leadership
Owning massive GPU clusters alone will not determine long-term leadership in artificial intelligence. Competitive advantage increasingly depends on combining compute infrastructure with innovation ecosystems capable of solving real commercial and industrial problems. The intersection of AI, energy, sustainability, and commercialization represents one of Saudi Arabia’s strongest opportunities for building globally differentiated technology ecosystems.

Infrastructure Alone Is Not Enough
The AI race is no longer simply about who has the deepest pockets or the largest compute capacity. True value emerges when infrastructure connects directly with deployment, applied research, startup ecosystems, and operational commercialization. Purpose-built AI infrastructure tailored to specific industries — including energy and Arabic-language systems — may create stronger long-term economic advantages than generalized compute environments alone. Geographic proximity, infrastructure clustering, and lower latency also provide important strategic benefits for Saudi Arabia’s evolving AI ecosystem.

Sustainability Can Strengthen Competitiveness
Saudi Arabia’s investments in sustainability and climate technologies could become a major advantage in scaling AI infrastructure responsibly. Research into efficient algorithms, advanced hardware systems, and lower-carbon technologies can strengthen both scalability and long-term competitiveness. At the same time, maintaining global collaboration remains critical. Innovation cycles are accelerating too quickly for any country to operate in isolation. ■

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BUILDING AI THROUGH APPLIED INNOVATION
Dr. Ahmed Alfadhel
Executive Director of Innovation & Technology Commercialization,
Dhahran Techno Valley (DTV)

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|--|---|---|
| 1.
Access to compute and data alone is insufficient. Long-term AI competitiveness depends on integrating innovation, research commercialization, startups, and operational deployment capabilities together. | 2.
The intersection of AI, sustainability, and energy innovation represents one of Saudi Arabia’s strongest opportunities for building globally differentiated technology ecosystems. | 3.
AI startups play a critical role in translating research and emerging technologies into practical commercial applications capable of solving real industrial challenges. |
| 4.
Owning massive GPU clusters is no longer enough. Competitive advantage now depends on combining infrastructure with deployment, innovation, and industry-specific problem solving. | 5.
Purpose-built AI infrastructure tailored for specific industries such as energy or Arabic-language ecosystems may generate stronger economic value than generalized platforms alone. | 6.
Saudi Arabia’s location, lower latency, infrastructure clustering, and proximity to regional developers create strategic advantages for scalable AI infrastructure deployment. |
| 7.
Investments in climate technologies, efficient hardware, and sustainable infrastructure can improve AI scalability while supporting Saudi Arabia’s long-term environmental and economic goals. | 8.
Saudi Arabia must balance localized AI infrastructure and national security priorities while maintaining strong global collaboration across innovation and technology ecosystems. | 9.
Translating applied research into deployable technologies remains essential for creating sustainable AI ecosystems capable of delivering measurable commercial and industrial value. |

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"Global collaboration remains essential because technology innovation is happening worldwide and competition within AI ecosystems never stops evolving."

Dr. Ahmed Alfadhel

Executive Director of Innovation & Technology Commercialization, Dhahran Techno Valley (DTV)

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"The intersection of AI, energy, and sustainability represents one of Saudi Arabia's strongest opportunities for building globally differentiated innovation ecosystems."

Dr. Ahmed Alfadhel

Executive Director of Innovation & Technology Commercialization, Dhahran Techno Valley

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James McCallum

Executive Chairman of Xergy, Professor of Energy Strathclyde University

AI Adoption Is Still Lagging Behind

Artificial intelligence may dominate headlines globally, but real-world adoption is still moving far slower than the pace of technological innovation itself. The challenge is no longer infrastructure alone. Cultural resistance, organizational inertia, and operational complexity remain some of the largest barriers preventing businesses from fully unlocking AI's potential.

AI Is Not A Magic Wand

Too many organizations continue treating AI like a "magic wand" capable of instantly solving operational problems. In reality, AI systems are only as effective as the data structures, workflows, and business processes supporting them. Without properly structured data and clearly defined operational objectives, AI deployment struggles to create meaningful commercial outcomes. Performance improvement still depends on fundamentals: execution discipline, repeatable best practices, continuous improvement, and strong operational alignment.

Open Ecosystems Empower Innovation

One of the most significant changes in the AI economy is the growing power of smaller technology companies. Open APIs and cloud ecosystems are allowing startups to collaborate, integrate, and build highly specialized digital solutions far more efficiently than before. Saudi Arabia's approach stands out because it is investing simultaneously in infrastructure, startups, deployment capabilities, and commercialization ecosystems rather than focusing on compute capacity alone.

Access to capital and energy gives the Gulf a major strategic advantage. The real question is whether the region can fully capitalize on the opportunity before others catch up. ■



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James McCallum

Executive Chairman of Xergy, Professor of Energy Strathclyde University

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SCALING AI THROUGH EXECUTION EXCELLENCE

1.

Artificial intelligence is no longer simply the technology story of the year — it is rapidly becoming the defining transformation shaping industries, economies, and societies globally.

2.

While AI technologies are advancing at extraordinary speed, organizational adoption and real-world implementation are progressing much slower than global ambitions currently demand.

3.

The biggest barrier to AI scalability is often organizational culture, where employees and institutions resist operational change despite rapidly evolving technological capabilities.

4.

Organizations expecting AI to automatically solve operational problems without properly structured data and strategic implementation will struggle to generate meaningful business outcomes.

5.

AI systems only become effective when organizations organize, standardize, and structure operational data in ways that support intelligent analysis and decision-making.

6.

Cloud computing and open APIs are enabling startups and smaller technology firms to build specialized AI solutions previously dominated by large enterprise vendors.

7.

Saudi Arabia's focus on infrastructure, energy access, innovation ecosystems, and deployment capabilities aligns closely with the global requirements for successful AI scalability.

8.

The Gulf region's abundant energy resources and capital availability provide significant strategic advantages for scaling AI infrastructure and compute-intensive operations sustainably.

9.

Ultimately, AI competitiveness depends on high-performance delivery, operational discipline, continuous innovation, and strong global collaboration across industries and technology ecosystems.

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"AI is not a magic wand capable of automatically fixing operational problems without structured data and clearly defined objectives."

James McCallum
Executive Chairman of Xergy,
Professor of Energy, Strathclyde University

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"The Gulf region possesses unique advantages in AI because of its abundant energy resources, access to capital, and long-term infrastructure investment capability."

James McCallum
Executive Chairman of Xergy,
Professor of Energy, Strathclyde University



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Omar AlSheikh
Country Head & Senior Director, KSA & Bahrain
Energy, Services & Government, Infosys

AI Scalability Is Now A National Imperative

Artificial intelligence is no longer a future ambition for governments and industries. The real challenge now is how quickly, securely, efficiently, and sustainably organizations can scale implementation across entire economies. Saudi Arabia's Vision 2030 and National Strategy for Data and AI are accelerating this transformation through major investments in cloud infrastructure, hyperscalers, and civilian data centers. These investments are helping industries transition from legacy operating environments into AI-enabled ecosystems capable of improving productivity, efficiency, and decision-making at scale.

AI Is Already Delivering Economic Value

Across sectors such as oil and gas, utilities, healthcare, education, and real estate, AI adoption is increasingly moving beyond experimentation into operational deployment. In refinery operations, AI is already improving product quality and optimizing production efficiency. Real estate firms are exploring predictive maintenance, cloud-based asset management, and intelligent energy optimization systems. The value of AI lies in its ability to solve operational challenges dynamically and in real time. Organizations are becoming far more mature in understanding how AI can directly enhance profitability, operational performance, and business resilience.

Sovereignty Requires Governance And Trust

AI sovereignty is not about technological isolation. Maintaining national control over sensitive data, regulatory frameworks, and critical workloads must happen alongside global collaboration and innovation. Trusted partnerships with hyperscalers, system integrators, and research ecosystems remain essential for long-term competitiveness. The countries that succeed will be those capable of balancing governance, innovation, and strategic collaboration without compromising national interests. ■

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DRIVING SAUDI ARABIA'S AI ECONOMY

Omar AlSheikh
Country Head & Senior Director, KSA & Bahrain
Energy, Services & Government, Infosys

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|--|--|--|
| <p>1.</p> <p>AI adoption is no longer optional. Nations and industries must now focus on implementing scalable, secure, and sustainable AI systems across critical economic sectors.</p> | <p>2.</p> <p>Saudi Arabia's Vision 2030 and National Strategy for Data and AI are rapidly enabling economic diversification through advanced digital infrastructure and innovation investments.</p> | <p>3.</p> <p>Cloud platforms, hyperscalers, and data centers are becoming the critical foundations allowing industries to modernize operations and transition from legacy systems into AI-enabled ecosystems.</p> |
| <p>4.</p> <p>Organizations across energy, utilities, education, and real estate are increasingly leveraging AI to improve productivity, optimize operations, and strengthen real-time decision-making capabilities.</p> | <p>5.</p> <p>AI deployment succeeds when organizations combine operational use cases with governance frameworks that directly improve profitability, efficiency, product quality, and business performance.</p> | <p>6.</p> <p>Saudi industries are becoming significantly more mature in understanding how AI can reshape operational models, predictive maintenance, energy efficiency, and</p> |
| <p>7.</p> <p>AI's biggest advantage lies in enabling organizations to solve operational challenges dynamically through real-time insights, automation, and intelligent predictive capabilities across daily activities.</p> | <p>8.</p> <p>National AI sovereignty depends on maintaining strong governance, trusted partnerships, localized infrastructure, and regulatory control without isolating from global innovation ecosystems.</p> | <p>9.</p> <p>Long-term AI competitiveness requires collaboration between hyperscalers, system integrators, governments, and research ecosystems to support innovation while protecting national interests.</p> |

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"Saudi Arabia's Vision 2030 and National Strategy for Data and AI are accelerating transformation through investments in cloud platforms and hyperscaler infrastructure."

Omar AlSheikh

Country Head & Senior Director, KSA & Bahrain - Energy, Services & Government, Infosys

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"Industries across Saudi Arabia are becoming significantly more mature in understanding how AI can transform operations, profitability, and long-term business performance."

Omar AlSheikh

Country Head & Senior Director, KSA & Bahrain- Energy, Services & Government, Infosys



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Sultan Moraished

Group Head of Technology & Corporate Excellence
Red Sea Global

AI Must Remain Human-Centered

Artificial intelligence is already deeply embedded inside modern operations, but the customer experience should still feel entirely human. That balance between automation and personalization is becoming one of the defining challenges of AI deployment across hospitality and smart city ecosystems. At Red Sea Global, AI operates extensively behind the scenes — supporting workflows, optimizing operations, and improving guest journeys — while frontline interactions remain intentionally personalized and human-centered. Routine administrative tasks are increasingly automated, allowing employees to focus on higher-value service and hospitality experiences.

Greenfield Projects Have A Unique Advantage

Greenfield developments possess an enormous advantage in AI adoption because they can integrate advanced technologies from the very beginning without the burden of legacy infrastructure. Rather than relying solely on large technology providers, Red Sea Global has also opened its ecosystem to startups developing AI-enabled solutions across transportation, energy, mobility, security, and guest experience systems. The objective is not simply to run pilots, but to create scalable products capable of becoming part of live city operations. In that sense, Red Sea Global functions not only as a tourism destination, but as a real-world AI innovation sandbox.

Understanding Data Unlocks Opportunity

Data sovereignty concerns are often driven more by misunderstanding than by actual technical limitations. Organizations frequently assume all operational data is highly sensitive, when in reality many systems can safely integrate global platforms and hyperscalers if governance and consent frameworks are properly understood. Understanding exactly what data is being used, who owns it, and how it is governed creates far more flexibility for innovation than many organizations initially assume. ■



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Sultan Moraished

Group Head of Technology & Corporate Excellence
Red Sea Global

TOP 9 TAKEAWAYS

AI POWERING FUTURE SMART CITIES

1.

AI is not a future concept at Red Sea Global. It is already enhancing operations, optimizing workflows, and improving guest experiences across the destination ecosystem.

2.

While AI powers backend systems extensively, Red Sea Global intentionally keeps customer-facing experiences highly personalized and human-centered to preserve hospitality excellence.

3.

Automation is replacing routine administrative work, allowing employees to focus on higher-value responsibilities centered around guest service, creativity, and operational excellence.

4.

Building AI capabilities from the beginning gives greenfield projects greater agility, allowing them to integrate advanced technologies without legacy operational constraints.

5.

Working simultaneously with multiple hyperscalers enables Red Sea Global to leverage broader AI capabilities and continuously improve operational performance across the destination.

6.

Red Sea Global is creating real-world environments where startups can move beyond pilots and deploy scalable AI products integrated directly into operational systems.

7.

Future smart city ecosystems will depend heavily on startup collaboration, AI experimentation, and operational environments capable of testing scalable real-world applications rapidly.

8.

Organizations overcome data sovereignty concerns by understanding precisely what data is sensitive, how it is used, and where operational flexibility exists safely.

9.

Successful AI solutions implemented at Red Sea Global can scale across Saudi Arabia, positioning the project as a national catalyst for AI-driven innovation ecosystems.

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"AI is already shaping the Red Sea ecosystem today by improving operational efficiency, employee productivity, and the overall guest experience journey."

Sultan Moraished
Group Head of Technology & Corporate Excellence
Red Sea Global

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MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY



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"Startups should move beyond pilots into scalable deployments integrated directly into live smart city ecosystems capable of supporting real operational environments."

Sultan Moraished
Group Head of Technology & Corporate Excellence
Red Sea Global



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Robin Mills
Chief Executive Officer
Qamar Energy

Energy Will Define The AI Race
The global race to scale artificial intelligence will ultimately be constrained by energy availability. While hundreds of billions of dollars are being invested into AI infrastructure globally, many regions are simultaneously facing major barriers related to electricity costs, water consumption, permitting delays, and grid limitations. The Gulf region enters this race with major structural advantages: abundant low-cost energy, available land, fast permitting processes, and rapidly expanding renewable energy capabilities. These advantages position the region as one of the world's most attractive destinations for large-scale AI infrastructure deployment.

Optimization Is Only The Beginning
The energy industry is already aggressively adopting AI across logistics, seismic analysis, operational efficiency, environmental optimization, and production systems. But most current AI adoption remains focused on optimization rather than true transformation. Fully unlocking AI's long-term value will require energy companies to fundamentally rethink organizational structures, operating models, workforce capabilities, and decision-making cultures. That transition may prove difficult for traditionally conservative industries built around long investment cycles and risk-averse operating environments.

Sustainability Cannot Be Ignored
AI infrastructure growth cannot happen without addressing sustainability challenges. Data centers require enormous amounts of energy and cooling, particularly in hot climates such as the Gulf region. Advanced cooling systems, renewable integration, carbon capture technologies, nuclear energy, and flexible grid balancing will all become increasingly important components of future AI infrastructure ecosystems. The regions that succeed in AI will not simply be those with the most compute capacity — but those capable of scaling infrastructure sustainably, efficiently, and competitively over the long term. ■

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THE GULF'S AI ENERGY ADVANTAGE
Robin Mills
Chief Executive Officer, Qamar Energy

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| 1.
The Gulf region's abundant low-cost energy resources create a major competitive advantage for scaling AI infrastructure compared with energy-constrained markets globally. | 2.
Many countries are struggling to scale AI infrastructure because of grid limitations, high electricity costs, land availability challenges, and environmental concerns. | 3.
Fast permitting, government support, available land, renewable energy growth, and abundant gas supplies position the Gulf as an attractive AI infrastructure destination. |
| 4.
Critical materials such as helium, specialty plastics, and semiconductor inputs are becoming strategically important components of global AI infrastructure development. | 5.
National energy companies are increasingly using AI to improve logistics, operational efficiency, environmental performance, predictive maintenance, and resource optimization capabilities. | 6.
Most energy companies currently use AI for efficiency improvements, but the next transformational phase requires fundamentally redesigning organizational structures and workflows. |
| 7.
Traditional energy companies must rethink operating models, workforce structures, and decision-making systems to fully unlock AI's long-term transformational potential. | 8.
AI infrastructure growth must balance scalability with environmental sustainability, especially as data centers significantly increase energy consumption and cooling requirements. | 9.
Future AI infrastructure will increasingly rely on renewable energy integration, advanced cooling technologies, flexible grid systems, and lower-carbon power generation strategies. |

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"The Gulf can move beyond simply hosting data centers and instead leverage AI infrastructure to create genuine long-term strategic advantages."

Robin Mills
Chief Executive Officer, Qamar Energy

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"National energy companies are aggressively adopting AI to improve logistics, operational efficiency, environmental performance, and resource recovery capabilities across the sector."

Robin Mills
Chief Executive Officer, Qamar Energy



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