KPMG

The Backbone of AI
Securing the UK's Digital Future

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Introduction

Artificial intelligence is redefining global competitiveness, and robust digital infrastructure is now the critical foundation for national AI leadership. The ability to process, store and move vast volumes of data at scale underpins every stage of AI development and deployment. As countries race to attract investment and talent, the strength and resilience of digital infrastructure, particularly data centres, will determine which markets emerge as true leaders in the AI economy. For the UK, ensuring that its digital backbone is future-proof, sustainable and globally competitive is not just a technical challenge, but a strategic imperative.

The UK Data Centre Landscape

The global forces

Rapid growth and innovation in the UK data centre market is influenced by global forces that are shaping industry expansion.

The global expansion of data centres is propelled by accelerating digitisation, surging data volumes and sustained growth in internet usage. As enterprises prioritise data-centric strategies, infrastructure investment becomes essential for managing escalating user and business demands. The urgency of cloud migration, fuelled by requirements for scalability, resilience and innovation, has only intensified since the pandemic, underpinning robust optimism for future infrastructure needs and stable investment flows.

Meanwhile, the proliferation of AI is reshaping operational fundamentals, with AI-driven workloads set to surpass traditional cloud computing as the primary catalyst for new data centre development.

The state of the UK Market

The UK data centre sector stands at a critical inflection point, propelled by these global forces. Bolstered by government backing and substantial private capital, the UK is consolidating its position as a global data infrastructure leader.

The UK has 523 facilities, ranking third globally[1] with its ecosystem anchored by London and the South East, where over 70 sites in hubs like Canary Wharf and Slough deliver low-latency, high-connectivity solutions. Operators are advancing Tier 1 networks and making significant commitments to renewable energy, cementing the region's status as a hyperscale and financial infrastructure powerhouse.

Regional growth across the North West, South East and Scotland is being fuelled by access to renewables and a deepening talent pool. The sector's strategic relevance is underscored by formal designation as Critical National Infrastructure and projections of a £44 billion economic contribution by 2035[2].

Demand is being driven by technology, finance, telecom, and retail, while digital transformation and cloud adoption are expected to boost utilisation further. As edge computing, AI and cybersecurity integration mature, the UK's data centre market presents compelling opportunities for M&A and sustained private capital investment.

Sustainability pressures, tax considerations and energy efficiency regulations are set to reshape strategic priorities, rebalancing growth and expansion objectives with resilience and legislative compliance imperatives.

Comparative European perspectives

The European data centre market differs to that of the UK, in both structure and dynamics. Notably, the UK has evolved as a 'single metro' market, with London leading Europe in colocation capacity and financial connectivity. In contrast, continental Europe has adopted a more distributed model, with interconnection and capacity spread across multiple cities and hubs — reflecting a multi-metro approach to servicing demand.

Recent growth in the European data centre market has been led by Germany, France and the Netherlands. Government policy is generally supportive of industry growth, yet increasingly aligned with sustainability imperatives, particularly in Europe, where digital transformation is balanced with decarbonisation.

In Germany, investment is set to reach €24 billion over the next five years, generating an estimated 65,000 jobs[3]. Regulatory frameworks such as the Energy Efficiency Act (mandating a PUE of 1.2 by 2026) and the Heat Planning Act underscore the sector's importance in the green energy transition.

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The Netherlands continues to attract capital, underpinned by its concentration of hyperscale and SME-oriented facilities, world-class connectivity and favourable energy pricing. Yet, persistent grid congestion and regulatory headwinds introduce operational complexity and risk.

France's market is also scaling rapidly, with Paris at its core and strong regional momentum in Marseille, Lyon and Lille. Government-backed "ready-to-use" AI campuses and 800MW of planned new capacity suggest strong momentum[4].

Challenges & Growth Constraints

Despite strong momentum, the sector faces several challenges. Intensifying energy consumption is heightening pressure on national grids and fuelling public scrutiny over environmental impact. The imperative for advanced cooling solutions and cleaner energy sources continues to grow, driven by rising costs and evolving regulatory standards, such as the Cyber Security and Resilience Bill, and stricter efficiency mandates.

Planning and permitting headwinds continue to add more friction, as local authorities continue to tighten environmental and noise regulations. Community opposition to large-scale projects that lack alignment with local needs is becoming more vocal, underscoring the importance of stakeholder engagement and site-level sensitivity in execution strategy.

Supply chain constraints, zoning restrictions and limited land availability, particularly in London and the South East, are prompting a shift toward broader geographic expansion.

Talent scarcity poses a strategic risk, with 20% of UK data centre professionals now over the age of 55, and half of global engineers potentially retiring within the next three years[5]. This wave of imminent retirements underscores the urgency of workforce development and upskilling.

Inflation, constrained real estate and escalating build costs are driving rental rates upwards, with implications for both colocation and cloud providers. In this environment, disciplined capital allocation and proactive risk management will be essential to capture long-term value and sustain competitive advantage.

AI at Scale

What it Means for the UK's Digital Backbone

Evolving data centre demands

The rapid adoption of AI, particularly large language models, is fundamentally reshaping data centre demand and design. While global incremental data centre capacity grew at a 14% CAGR between 2020 and 2023, driven largely by non-AI applications, the surge in AI workloads since 2022 is accelerating this trajectory, with capacity forecast to grow at 29% CAGR through 2030. AI training is set to become the primary driver of new capacity as of 2025, with inference workloads expected to dominate in future years as commercial applications scale[6].

Strategic initiatives and infrastructure investments in the UK

The UK, now the world's third-largest AI market, benefits from robust public and private sector support. The government's AI Opportunities Action Plan prioritises foundational infrastructure investment, advanced AI application leadership, and cross-industry enablement. A significant pipeline of data centre projects, valued at £14 billion, underpins this strategy and includes the development of scalable, secure facilities capable of supporting intensive AI training and inference[7].

To accelerate deployment, the UK is advancing AI Growth Zones, offering clean power planning, renewable energy access and targeted incentives for AI-focused data centres. A planned 500MW AI infrastructure cluster by 2030 exemplifies this ambition, with local authorities playing a pivotal role in site selection and ecosystem development.

Energy demand and sustainable expansion

Meeting AI-driven demand requires a step-change in infrastructure. Global data centre spending is projected to rise by 23.2% year-on-year in 2025[8] compared to the previous year, driven by investments in advanced cooling, edge computing and modular construction. Liquid cooling is becoming essential for high-density AI workloads, while edge computing and modular builds enable flexible, scalable and efficient deployment.

AI's energy intensity is a critical consideration: a single generative AI query can consume 15 times the energy of a standard web search. By 2027, AI servers could account for 100TWh of annual consumption, representing 20% of total data centre electricity use[9]. This dynamic presents both risk and opportunity for investors, underscoring the need for scalable, low-carbon power procurement and strategic partnerships with hyperscalers.

Operators are differentiating through high-performance, energy-efficient sites, rapid deployment capabilities and long-term power purchase agreements. Geographic diversification, particularly into regions rich in renewable resources such as the North West and Scotland, is increasingly central to long-term growth and grid resilience, aligning with government objectives and enhancing the investment profile of UK digital infrastructure.

Outside London, network latency and limited fibre density continue to constrain execution, with internet exchanges, cloud on-ramps, and interconnection ecosystems still heavily concentrated in the capital — the most efficient metro for serving enterprise and hyperscale demand.

M&A Activity & Investment Opportunities

Recent major deals and capital flows

Regional markets, most notably the North West, North East, South West and Scotland, are emerging as key development corridors underpinned by significant renewable energy capacity and availability of land for development.

Recent commitments, such as Google's US$1 billion investment in a 33 acre facility in Hertfordshire, Blackstone's £10 billion pledge for an AI facility in North East England, AWS's £8 billion plan to scale UK operations over five years, and BlackRock's £500 million investment in the UK data centre market through a joint venture with Digital Gravity Partners signal confidence in the UK's long-term digital infrastructure [10].

The convergence of scalable infrastructure, grid resilience and access to renewable energy is creating a favourable environment for institutional capital, particularly as operators seek to future-proof assets against energy market volatility and evolving ESG requirements.

M&A activity in the UK data centre market is increasingly driven by the sector's capital intensity and the need to fund the substantial upfront costs associated with land acquisition and facility development. The migration from on-premises to off-premises hosting is further fuelling consolidation, presenting operators with opportunities to acquire corporate facilities and expand their footprint.

Conclusion

Securing the UK's Digital Future

The UK is at a strategic crossroads in the global AI and data centre landscape. With the third-largest data centre market globally, a robust growth trajectory and government-backed infrastructure initiatives such as the introduction of AI Growth Zones, the UK is attracting leading operators and capital investment. Regional clusters beyond London and the South East are increasingly the focus of data centre expansion, fuelled by access to renewable energy, supportive policy frameworks and a pipeline of flagship projects such as the 500MW AI infrastructure cluster. Intensifying demand for high-density, AI-ready capacity is driving both private equity investment and M&A activity, with ongoing operational efficiencies, clean energy integration and liquid cooling technologies at the forefront of value creation.

Generating returns in this evolving market demands disciplined capital deployment and active risk management. As operators navigate tightening energy supplies, workforce attrition and rising build costs, investors must target scalable platforms and regional diversification, align with government policy on sustainability and resilience, and partner strategically with local authorities. Investment in future-proofed, AI-focused infrastructure and addressing talent and energy constraints directly will position the UK as a leader in the next phase of sector growth as it solidifies its AI leadership on the global stage.

Sources:

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7. AI opportunities action plan
8. Gartner: Why Global IT Spending Will Hit US$5.61tn in 2025
9. Data centres improved greatly in efficiency as they grew massively larger, Economist
10. Investment in UK data centres to prepare the infrastructure needed for AI - Bird & Bird

Whether you're navigating market entry, scaling platforms, or rethinking portfolio strategy in light of regulatory and sustainability pressures, our team brings deep sector insight and transaction experience across the digital infrastructure landscape.

Connect with us to explore how we can help you unlock value and drive resilient growth.

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