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The data centre gold rush

A strategic opportunity for the UK?

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The world is experiencing an unprecedented data centre boom, fundamentally driven by the explosive growth of cloud services and the transformative power of AI.

Global data centre capacity is set to nearly triple by 2030, creating a fierce international race for investment and AI leadership. Amidst this surge, the United Kingdom stands at a pivotal juncture, uniquely positioned to harness this global momentum.

The UK boasts significant competitive advantages: unparalleled global and regional connectivity, a stable and trusted regulatory environment, a deep pool of digital talent, and extensive market access further amplified by a strategic tech partnership with the United States. These strengths make the UK a highly attractive destination for the critical digital infrastructure of tomorrow.

However, to fully capitalise on this opportunity, the UK must proactively address notable headwinds, particularly high energy costs, power grid bottlenecks, and lengthy planning processes. By implementing supportive policy reforms and embracing innovative digital construction practices, such as Building Information Modelling (BIM) and digital twins, the UK can overcome these challenges.

This white paper outlines the strategic path for the UK to solidify its position as a global data centre powerhouse, underpinning its ambitions as a leader in technology and AI.

**Simon Ordish - Director, Majenta Solutions**

01 - The global data centre boom

Unprecedented demand and transformative drivers

The digital universe is expanding at a breathtaking pace, fueling an unprecedented "gold rush" for data centre capacity. This boom is not a fleeting trend but a fundamental shift in how data is generated, processed, and stored globally, creating enormous opportunities for nations equipped to meet the demand.

The scale of this expansion is staggering. Global data centre capacity is projected to surge by 46% in just the next two years, and by 2030, it could expand a phenomenal 177% over today's levels.

Global Data Centre Growth
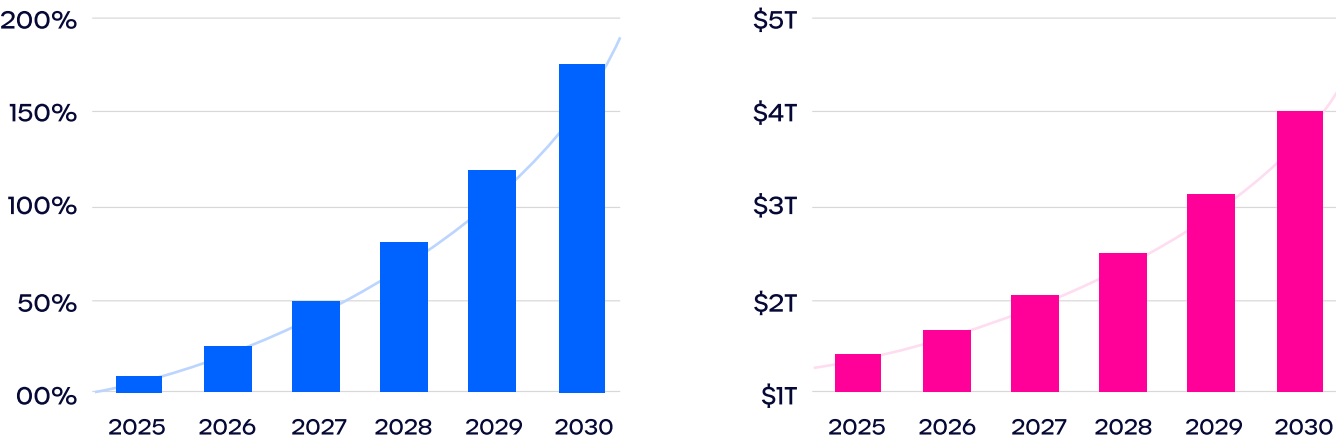
This translates into a dramatic rise in market value; global data centres, by rental revenue, are anticipated to triple in value from approximately $1.4 trillion today to an astonishing $4 trillion by 2030. That's a CAGR of 18%, underlining the velocity of digital infrastructure expansion.

The twin drivers of demand: cloud services and AI

☁ Continued growth in cloud services

Public cloud services continue their relentless deployment worldwide, as businesses and consumers alike migrate more of their digital lives and operations to agile, scalable cloud platforms.

This enduring trend creates a foundational layer of demand for vast data centre infrastructure.

AI The impact of the AI revolution

Unlike previous computing waves, the AI era is adding new demand on top of existing growth.

Generative AI and machine learning workloads require massive computational power, translating directly into a need for more servers and, crucially, significantly higher energy consumption within data centres.

Hyperscale cloud and tech firms are pouring unprecedented capital into AI-related infrastructure, with the "Big Four" (Amazon, Microsoft, Google, Meta) committing approximately €320 billion in 2025 alone. AI is not merely replacing existing compute; it's a force multiplier, augmenting conventional IT workloads and dramatically intensifying the imperative to build more, and more powerful, data centre facilities.

> This global surge presents a strategic imperative for nations to position themselves as key hubs in the evolving digital landscape.

02 - The UK's competitive edge

Primed for growth in the digital age

The data centre boom is truly global, but not evenly distributed. This indicates that while traditional metros are straining under capacity limits, new regional hubs (including in the UK) could see significant growth if they can offer ready infrastructure. Overall, the competitive dynamic is intense: countries that provide the right mix of capacity, cost-efficiency, and connectivity are capturing the lion's share of new investment.
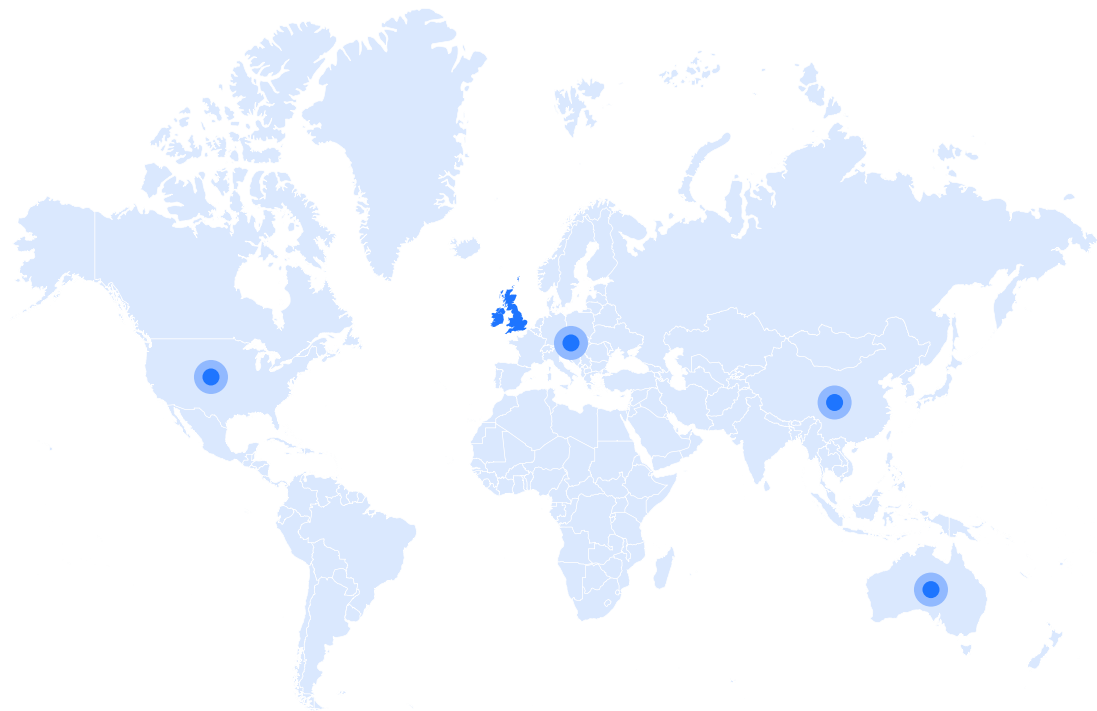
UK Continued growth in London (Slough, Docklands) with emerging hubs such as Scotland, Birmingham, Manchester, Cardiff also showing potential if energy cost, planning, and grid connection barriers can be overcome.

Asia-Pacific

The leading region for data centre investment, accounting for $25.8 billion of investment in 2024 and fully 70% of all cross-border data centre capital flows.

Australia

The second most attractive data centre investment destination after the U.S., deploying $6.7 billion in new capital in 2024 and forecast for ~18% annual growth to 2030.

USA/Canada

The largest overall market, with U.S. tech giants heavily investing at home while also seeking overseas expansion.

Europe

Experiencing strong growth in key hubs (Frankfurt, London, Amsterdam, Paris, Dublin – the "FLAP-D" markets), but also faces challenges (power and land constraints)

In the background is the strategic "AI arms race" – the "West" versus China, which adds urgency to data centre build-out. The UK, as a leading Western tech economy, has a substantial stake in this contest and an opportunity to attract investment if it can address critical bottlenecks.

The UK's attractiveness is built on four key pillars:

🌍 Global connectivity powerhouse

Geographically and digitally, the UK is exceptionally well-connected, serving as a critical nexus between North America and Europe.

- Numerous transatlantic subsea fibre cables ensure ultra-low latency links to both continents.
- Home to one of the world's largest internet exchange points (LINX).
- Robust connectivity beyond the capital, with cities like Manchester and Bristol emerging as key hubs.

✔ Trusted and stable regulatory environment

The UK boasts one of the world's most advanced digital economies, supported by a rich talent pool.

- Leading universities and research centres produce top-tier talent.
- Ranked among the top nations globally for AI readiness and capabilities (currently 4th worldwide).
- The UK workforce is highly skilled in cloud computing, software development, and data science.

👥 World-class digital talent pool

Investors and operators are drawn to the UK's mature, predictable, and transparent regulatory landscape.

- Consistent rule of law, coupled with government policies that actively support digital business growth.
- Strong cybersecurity laws and robust, business-friendly UK GDPR.
- Designation of data centres as critical national infrastructure.

Unrivalled market access and demand

The UK itself is a major market with approximately 67 million people and high internet penetration.

- Strong domestic demand for digital services across finance, e-commerce, media, and healthcare.
- Post-Brexit trade agreements, including CPTPP membership and digital economy pacts with nations like Singapore
- UK-hosted data can flow seamlessly to European customers and connect to global markets.

A key amplifier: The UK-US tech partnership

The 2023 Atlantic Declaration, a landmark UK-US trade deal focused on technology, significantly enhances the UK's competitive edge. This partnership emphasises deep collaboration in AI, R&D, and digital trade, aiming for joint leadership in critical and emerging technologies.

For the data centre sector, this translates to:

Boosted AI R&D and talent flow: Joint initiatives and talent exchange programs will enrich the UK's AI ecosystem, driving demand for advanced computing infrastructure and easing skills shortages.

Streamlined digital trade: Support for free data flow and interoperable regulations lowers barriers for cloud providers, making the UK an even more attractive base for regional data centres.

A more favourable investment climate: Coordinated efforts on supply chains and innovation funding bolster investor confidence in the UK as a secure location for long-term digital infrastructure projects.

> The UK combines intrinsic strengths with powerful transatlantic and cross-channel links: a compelling proposition for leadership in the global data centre race.

03 - Addressing the UK's critical challenges

Overcoming barriers to market leadership

While the UK possesses a strong foundation for data centre growth, realising its full potential requires a clear-eyed acknowledgement and a proactive approach to several significant challenges. These headwinds, if left unaddressed, could temper the UK's momentum in the global race for digital infrastructure investment.

Energy costs

Electricity is the lifeblood of data centres, and in the UK, it comes at a premium.

The nation faces some of the highest industrial electricity prices in Europe. Analysis indicates that powering a large data centre in the UK can be substantially more expensive, as much as four times higher than in parts of the United States. This cost disparity, driven by factors including reliance on volatile natural gas prices and network costs, directly impacts operational expenditure, making the UK less competitive for power-hungry AI workloads compared to markets with cheaper, often greener, energy sources like the Nordics.

Power availability

Beyond cost, securing sufficient and timely power connections is a major hurdle.

The national grid, particularly in high-demand areas like Greater London and South East England (which hosts the bulk of UK server farms), is straining under current capacity. Data centre developers report facing multi-year waits for grid connection slots, leading to project derailments and increased costs. These bottlenecks in energy supply risk pushing investment to regions with more readily available power infrastructure.

Planning delays

Lengthy and complex planning processes make agile development challenging.

The UK's planning and permitting system for large infrastructure projects, including data centres, is often cited as slower and more convoluted than in some competitor nations. Navigating multiple layers of bureaucracy, environmental assessments, and potential community objections can lead to extended project lead times before construction can even begin, creating uncertainty and delaying the delivery of much-needed capacity.

> Addressing these challenges is critical. Steps such as the proposed Planning and Infrastructure Bill – aimed at fast-tracking energy infrastructure and cutting grid connection wait times – will be vital in maintaining the UK's attractiveness.
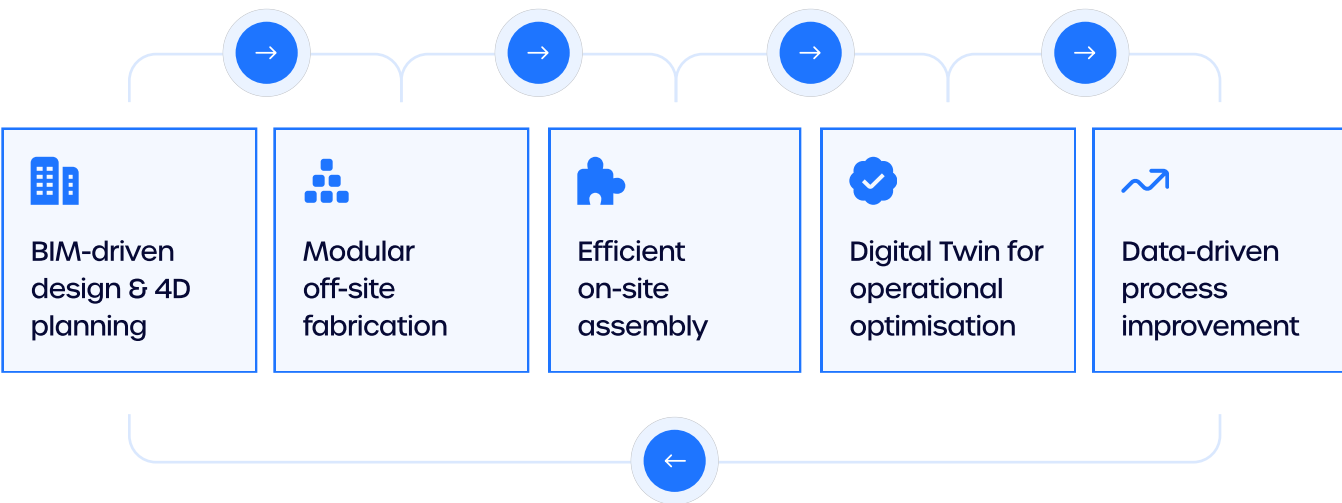

04 - Smarter, faster, greener

Digital construction as a key accelerator

To effectively navigate the challenges of cost, power, and planning, while rapidly meeting the exponential demand for data centres, the UK can strategically leverage cutting-edge digital construction innovations.

These modern methodologies offer pathways to expedite project delivery, contain costs, optimise energy usage, and enhance sustainability, critical for building the next generation of resilient and efficient digital infrastructure.

| BIM-driven design & 4D planning | Modular off-site fabrication | Efficient on-site assembly | Digital Twin for operational optimisation | Data-driven process improvement |

BIM & 4D planning

Data-driven design

Building Information Modelling (BIM) is revolutionising the design and construction of complex facilities like data centres. By creating a rich 3D digital model encompassing all architectural, electrical, mechanical, and IT components, BIM allows project teams to detect and resolve clashes virtually before they become costly on-site problems. This significantly reduces errors and rework. Integrating the time element through 4D planning allows for virtual simulation of the construction sequence, optimising schedules and identifying potential delays proactively.

For the UK, this means faster project timelines and greater budget certainty, helping to offset planning delays and manage high construction costs.

Modular & Sustainable Construction

Faster, higher-quality builds

The adoption of modular construction—where components such as power units or cooling modules are prefabricated off-site and assembled on-site—is accelerating build times and improving quality control. BIM complements this by providing precise fabrication specifications, thereby reducing material waste. On the sustainability front, BIM aids in material optimisation and can integrate carbon accounting, helping developers choose lower-impact materials and methods.

These modern construction methods improve resource allocation and minimise downtime, ensuring projects are completed faster and more sustainably.

Digital twins

Lifecycle efficiency and optimisation

Beyond construction, digital twin technology offers profound benefits for the operational lifecycle of a data centre. A digital twin is a dynamic virtual replica of the physical facility, continuously updated with real-world performance data. This allows for AI-driven simulations of various operational strategies, particularly for cooling and power management, which can yield significant energy efficiency gains—industry reports suggest improvements of up to 30%. Even before construction starts, digital twins can model airflow and temperature changes to optimise design for minimal energy draw.

Once operational, digital twins enable predictive adjustments to maintain peak efficiency, directly mitigating the impact of high UK energy costs and supporting sustainability goals.

> By embracing these digital construction techniques, the UK can not only build data centres more quickly, but also ensure they are inherently more energy-efficient and cost-effective to operate.

05 - Seizing the moment

The UK's path to data centre leadership

The global data centre boom presents a truly once-in-a-generation strategic opening for the United Kingdom. The surging demand for cloud adoption and AI applications, coupled with a flood of investment capital, signals an unparalleled opportunity for nations ready to build the future of digital infrastructure. The UK, with its powerful inherent strengths, is exceptionally well-placed to emerge as a dominant force in this transformative era.

Leveraging its enviable global connectivity, stable pro-tech business climate, rich digital talent pool, and the amplified advantages of the UK-US tech partnership, the UK has a compelling story to tell international investors and cloud giants. The government's commitment to treating data centres as critical infrastructure further solidifies this attractive proposition.

However, realising this ambition requires decisive and concerted action. The critical challenges of high power costs and infrastructure build-out delays must be met with robust solutions.

This demands a united front from government, regulators, and industry to accelerate clean energy projects, streamline planning processes, and foster an environment where innovation can thrive. Thought leaders have already outlined pragmatic paths forward, from "AI Growth Zones" to new energy paradigms, which now need swift implementation.

The UK's embrace of sustainable digital construction will be a key amplifier in this journey. Building data centres smarter, faster, and greener not only addresses immediate capacity needs but also demonstrates leadership in creating efficient, low-carbon digital foundations. By strategically harnessing its strengths, boldly tackling its challenges, and championing innovation, the United Kingdom can ride the data centre wave to greater digital prosperity.

> The coming decade offers a unique opportunity for the UK to evolve into a critical transatlantic and regional hub, securing a leading position in the global digital and AI economy.
>
> Quite literally – building the future, one data centre at a time.