

The investment landscape of data centers: opportunities and challenges



Sebastian Dooley, CFA, Senior Fund Manager, Real Estate

The digital age has ushered in a paradigm shift in how businesses operate and individuals engage with technology. Data centers play a central role in this transformation and have emerged as critical infrastructure for the modern economy. For investors, the story today revolves around a simple tension: accelerating demand versus constrained supply. Exploring the investment opportunities for data centers, the factors driving demand, the sector's challenges, and the European market's unique positioning reveals a complex yet promising landscape.

Why data centers are attractive investment opportunities today

Fundamental growth drivers

Data centers, the backbone of the digital ecosystem, have become increasingly attractive investment opportunities as the world's reliance on technology has expanded dramatically. Cloud computing first drove demand for robust data storage, spurring a surge in data center construction. More recently, the rise of artificial intelligence has intensified pressure on firms to boost digital efficiency, fueling demand for advanced data-processing capabilities. As a result, global data center development is growing rapidly, and investors are following suit, attracted by assets offering durable income streams and leases with some of the world's largest, AAA-rated corporations.

Factors driving increased demand

Several key factors are fueling the growing demand for data centers:

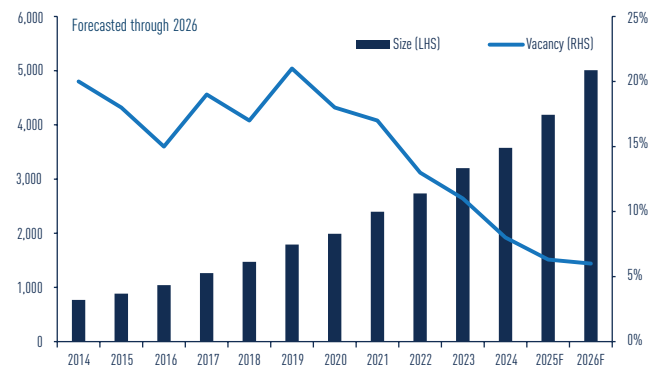
- 1. Corporate needs:** Large corporations have historically sought to house their computing needs in proprietary data centers or through co-location facilities. This trend continues to evolve as the demand for computing power increases.
- 2. The cloud:** The rise of cloud computing has fundamentally changed the landscape. Contrary to the perception of the cloud as an abstract entity, it comprises physical data centers strategically located to optimize data processing and storage. Over the last decade, data centers have proliferated in specific regions to support cloud services.
- 3. Artificial intelligence (AI):** The AI revolution has added another layer of complexity and demand. Companies are developing AI algorithms and seeking infrastructure to support the inference stage, where AI models are applied in real-world scenarios. This has led to a significant uptick in the demand for data center space, particularly in regions where cloud data centers are concentrated, allowing for easy access to underlying data.

The investment implications of supply constraints

While demand for data centers is rising, several factors limit supply. The availability of land, particularly in urban areas where data centers are often located, presents a significant challenge. Additionally, power constraints are becoming increasingly relevant. Since data centers require substantial amounts of electricity, sourcing and transmitting power to these facilities have become pressing issues.

Local government regulations are also evolving, with permitting processes becoming more stringent, further complicating the development of new data centers. For investors, these constraints present unique opportunities. The difficulty in developing new sites creates a scarcity of assets, enhancing the value of existing data centers. As demand continues to outstrip supply, rental growth and asset valuation in this sector are expected to remain strong.

FLAP-D market size (MW) & vacancy rate



Note: FLAP-D are Frankfurt, London, Amsterdam, Paris, and Dublin.

Source: DC Byte, CBRE, Principal Real Estate. Data as of Q2 2025. 2025 and 2026 are forecasts

Energy and infrastructure challenges facing the data center industry

Energy supply and management are crucial considerations for data centers. These facilities require massive and reliable electricity loads, yet the infrastructure to deliver that power often lags behind demand. Clusters of data centers in certain regions can create local bottlenecks: even when power generation is sufficient, transmission capacity often has not kept pace with the growing demand for power in these areas. As such, necessary public infrastructure upgrades can delay the development of new data centers.

Sustainability adds another layer of complexity. Regulators and investors alike are pushing for greener operations, and data centers are under pressure to source renewable energy. Many operators pursue power-purchase agreements or carbon offsets to meet these expectations. In practice, however, most facilities still draw directly from the grid, where renewable power is blended with fossil fuel sources. The challenge, however, is that renewable energy resources

are unreliable power sources, and the need for gas, nuclear, or even coal-fueled base power needs can entangle power projects in environmental red tape that can delay uninterrupted energy, a requirement for data centers. These dynamics are likely to make innovations such as grid-scale battery storage and infrastructure modernization critical for long-term growth.

The unique opportunity of the European market

Nowhere are these challenges more visible than in Europe. Demand for capacity continues to surge, yet supply is constrained by limited land availability, strained grids, and evolving regulation. Urban expansion is making it increasingly difficult to secure suitable sites, while permitting and environmental reviews have lengthened development timelines.

Land availability: Finding suitable locations for new data centers is increasingly difficult, as urban development continues to encroach on potential sites.

Power supply constraints: The availability of reliable power sources is becoming a critical consideration in data center development. The government in the Netherlands has twice imposed moratoriums on the establishment of new data centers to better assess power requirements and grid capacity. These pauses underscore the scarcity of viable sites and the premium attached to projects with secured access to reliable electricity.

Geopolitical factors: The current geopolitical climate is driving nations to prioritize data sovereignty and security, especially regarding cloud storage facilities. European governments increasingly advocate for data storage and processing to remain within national boundaries, further fueling the demand for data center localization.

For investors, Europe illustrates the sector's dual nature: heavy constraints that complicate new supply, but also scarcity value that enhances the appeal of existing facilities and well-sited projects.

Evolving dynamics in the data center market

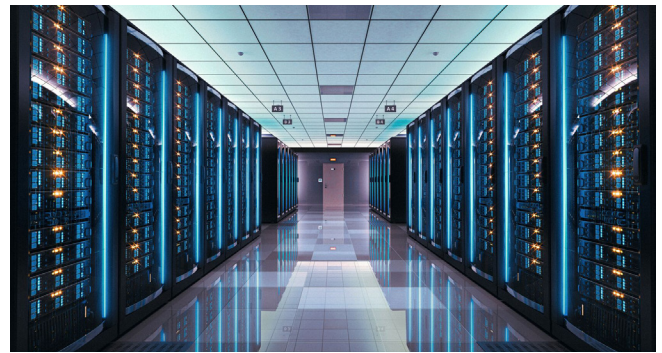
Although the global outlook for the data center market remains positive, facilities built for generative AI tend to be far more speculative than those supporting cloud and AI inference activities. Inference—the use of trained models to perform real-world tasks like image recognition, language translation, or fraud detection—demands substantial computational resources.

Cloud and AI inference data centers address established, durable demand. In contrast, data centers associated with generative AI are primarily driven by forecasts of future AI adoption and are likely a key source of today's near-term oversupply. Still, overall demand for data centers is expected to persist and intensify over the coming years, and

the combination of robust demand and constrained supply will likely lead to continued rental growth and increased asset valuations.

One emerging trend is the shift toward edge computing, where data centers are placed closer to end-users to reduce latency and enhance performance. This trend presents both opportunities and challenges. While it allows for greater responsiveness and efficiency, it also complicates sourcing appropriate sites due to urban density, existing infrastructure, and reliable power. The potential to identify and retrofit existing assets to meet the requirements of edge computing presents a unique investment opportunity in a rapidly changing landscape.

As capital requirements for data centers continue to grow, investors are likely to increase their allocations to this sector. The evolving landscape will likely see data centers become a more mainstream component of investment portfolios, appealing to a broader range of investors seeking stable returns.



Data centers are essential assets in a digital economy

Data centers are at the heart of the digital economy, and their importance will only grow as corporate needs, cloud computing, and AI drive relentless demand. For investors, the opportunity lies in scarcity value: data center facilities that can secure reliable power and scale with the demand for AI will command a premium. At the same time, supply constraints, energy management, and regulatory hurdles present challenges that only skilled managers can navigate effectively. In the near term, a wave of announced expansions risks temporary oversupply, but such dislocations can create attractive entry points for active investors. Over the long term, data centers are poised to become a core allocation in portfolios—offering stability, growth, and exposure to one of the most critical infrastructures of the digital age.

Learn more at www.principalam.com/datacenters

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