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**DATA CENTRE
TRENDS IN 2023**



– THOUGHT LEADERSHIP

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DATA CENTRE TRENDS IN 2023

The data centre industry is poised for growth in 2023 due to increased demand from businesses. However, factors such as higher costs, a slowing economy, new capacity challenges and increased regulation due to sustainability concerns about energy and water consumption, will impact growth. The pandemic has fueled the growth of the global data centre market, projected to reach 235 billion euros by 2026 with a projected Compound Annual Growth Rate of 4.5%. Companies must consider the latest tech trends when selecting a data centre partner or colocation provider.

1

The data centre market continues to grow

The digitalisation of corporate operations and the increasing use of streaming and internet usage are driving demand for data and boosting the data centre market with positive long-term growth opportunities. However, the European market faces challenges such as the ongoing conflict in Ukraine, high inflation, energy constraints, community opposition, and supply chain disruptions. These issues could lead to delays and increased costs in building data centres. Budget limitations due to the political and economic climate and a slowing economy add to the challenges, but growth is expected to continue in 2023, driven by the growing popularity of public cloud services and the recovery in returns. Europe is expected to see 15% growth, slightly higher than the global average of 13%. Investors remain confident in the market's revenue potential and security despite these uncertainties.

2

Sustainability

The data centre industry is facing increasing pressure to become more sustainable, environmentally friendly and energy efficient. Data centres currently contribute to 2% of global greenhouse gas emissions, so there is a growing need for measures to make data centres greener by focusing on reducing energy consumption, using renewable energy sources, and improving cooling systems. This pressure is coming from customers, investors, and regulators. The industry is exploring new ways to increase energy efficiency and reduce environmental impact, such as designing taller buildings, more efficient hardware and infrastructure, and an increased focus on the use of renewable energy.

Investing in sustainability has become an important issue in the data centre industry, with 87% of corporate executives planning to invest more in sustainability technology in 2023 and 2024 according to a recent Gartner survey. The European data centre industry is required to meet its environmental, social and governance (ESG) goals, and major data centre operators have signed self-regulatory agreements including the Climate Neutral Data Centre Pact, with the goal of being net-zero by 2030. Sustainable objectives are already partly covered by improvements in efficiency because the energy consumption of the data centre industry has remained relatively stable despite the rising demand for data. Moving towards sustainability may result in higher costs in the short term but will bring long-term benefits such as improvements in reputation and reduced community resistance. IT organisations will need to establish more rigorous measurement capabilities and establish key performance metrics to meet their net-zero targets. The push towards green data centres is a growing trend that will benefit the industry's reputation.

3

Edge computing

The further roll-out of 5G technology is having a significant impact on the data centre industry as it brings in data-hungry technologies such as virtual and augmented reality, self-driving cars, remote healthcare, precision farming and digitized logistics. Further growth in data centre automation is expected because of a boost in cloud-native server users and enterprise spending on cloud services. The expectation is that the

global data centre automation market will reach 19.6 billion euros by 2030 – an annual growth rate of 13.5% (according to data from Grand View Research). These technologies require both specialised infrastructure and software to be used effectively and low latency for efficient functioning, which will drive the growth of local and regional data centres known as edge computing. Edge computing, where data is processed closer to where it is generated, will continue to be a major development in the industry, with a focus on building small data centres for near real-time analytics and to minimise service interruptions. This shift towards distributed data centres is also driven by the limitations and challenges faced in constructing larger data centres and the need for faster deployment of data centre capacity. We see big players already investing in edge computing, and expect to see a rise in 1-10 MW data centres and continued development of 500+ MW data centres this year.

Construction and supply chain delays

Data centre construction is a long process, and with current supply chain uncertainties, it may only worsen. Despite developers claiming one year to 18 months for construction, these estimates often do not consider the preliminary work such as assessment, planning, site selection and design. Some of the largest data centres take a minimum of five years from the initial concept to moving in. Supply chain disruptions are also affecting cost and timelines, with steel prices up 50% and extended delivery times for items such as chillers, generators, and lighting. The industry is adapting by pre-assembling components in factories, placing early orders and stocking material components to speed up construction. These solutions may become industry standards in the next decade.



The rise of AI

Artificial intelligence has made rapid progress in the past decade, with ChatGPT a notable example. This growth has led to a demand for specialised, high-performance computing platforms in the data centre sector. Leading cloud providers are expected to play a crucial role in this, but forward-thinking businesses may also want to take advantage of these tools to extract value from their proprietary datasets that may not be suitable for the cloud. This presents opportunities for high-density colocation, as well as offerings optimised for new AI-focused processors and software frameworks. To meet demand, large colocation and wholesale data centre providers may accelerate plans for high-density zones within their facilities.



Hyperscale data centres

Hyperscale data centres are large-scale data centres that support the needs of internet giants and other companies processing high amounts of data. They are more complex and require more automation than traditional data centres. The hyperscale data centre market, dominated by companies including Amazon, Microsoft, Alphabet, Alibaba, and Facebook, is projected to grow at 3.38% annually from 2021 to 2026. The trend is shifting towards building self-owned data centres for reasons such as vendor reduction, customisation and access to renewable energy resources. The use of prefabricated, modular designs is becoming the norm for increased speed and efficiencies through standardisation. Colocation providers are being relied on for this standardisation, leveraging their market expertise and rapid deployment.



Data centre growth in secondary markets

Data centres are being built in secondary markets due to the rising demand for data centre services and constraints in the major regions (such as power and land shortages) and the need for more coverage from a latency standpoint due to the higher use of personal and household devices pushing greater data consumption and creation. Cities outside the major markets are attracting investment from hyperscalers and wholesale data centre builders, such as Facebook and Microsoft, seeking new locations. These cities are leveraging their ability to incentivise the hyperscalers to build in their locations, with the hope of receiving an influx of capital to support other physical infrastructure projects. However, these secondary markets may have lower latency and fibre connectivity. It is up to the individual application providers to decide where and how big a major operator's data centres will be built.



8

Surge in data centre M&A deals driven by private equity investment

Private equity investment has surged in data centre M&A deals, according to research from Synergy Research Group, accounting for 65% of total deal value in 2019-2021 and over 88% in the first three quarters of 2022. The value of M&A deals in the sector reached 45 billion euro in 2022, close to the 46 billion euro record set in 2021. The seven-year total value has surpassed 187 billion euros, with private equity funding contributing 91% of the 41 billion euro deals in 2022, the two largest being CyrusOne by KKR and Global Investment Partners for 14 billion euros and Switch by DigitalBridge for 10 billion euros. The trend for private equity funding flooding into this market is expected to continue in 2023, but economic conditions, regulatory changes and market sentiment must be monitored.

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Expected rise in regulation

Governments are under increasing pressure to control energy and water usage by data centres, which are expected to account for 4% of global electricity consumption by 2030. The typical hyperscale facility consumes 20-50 MW of electricity annually, enough to power 37,000 homes. Dublin and Singapore have already taken steps to regulate data centre energy and water usage, especially in drought-prone regions. According to the U.S. Department of Energy, a data centre using evaporative cooling systems has a water usage effectiveness of 1.8L per kWh and can consume 3-5 million gallons of water per day, equivalent to the capacity used by a city of 30,000-50,000 people. The industry will self-regulate and adopt eco-friendly designs, but increased regulation is expected in 2023.

How Clifford Chance can support you

The data centre industry is advancing rapidly, with AI, machine learning, renewable energy, and sustainable design innovations. The growth of cloud and edge computing makes it more accessible and affordable for all organisations to utilise the computing resources necessary. Automation improves data centre efficiency and simplifies IT management, while sustainable design makes technology more eco-friendly. The COVID-19 pandemic has intensified the demand for data centres, highlighting the importance of staying updated on tech trends and changes in the industry. These technological advances are shaping the future of data centres and will continue to drive progress in various fields.

There are several key legal and regulatory issues that may affect deal economics and certainty. The Clifford Chance data centre team can help clients navigate these issues as we have a deep understanding of the market. We are well-placed to assist you with the opportunities for investment in this asset class.

We provide commercially focused legal advice and practical solutions and can support you in every step of your data centre transaction. We have dedicated teams with in-depth experience in finance, real estate, M&A, financial regulation and the technology sector. Our global experts are well-used to operating as a single team, maximising efficiency for our clients.



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