REPORT SUMMARY

MARCH 2025

EUDCA

STATE OF EUROPEAN DATA CENTRES 2025

EUROPEAN DATA CENTRE ASSOCIATION

OVERVIEW

The State of European Data Centres 2025 will be one of the first comprehensive data-driven reports on the entire European Data Centre industry. It marks a new era of collaboration and data reporting based on insights from experience, operational records, and identifying future opportunities.

The European Data Centre Association (EUDCA), a non-profit organisation, commissioned the European-wide study with the objective of creating a solid, reliable data set that independently qualifies and quantifies the sector's impacts on the European economy, data sovereignty, societal development, and environment.

Leading the data centre industry across Europe, the EUDCA's State of European Data Centres 2025 report, aims to enhance an understanding of the market's fundamentals, opportunities, and challenges - contributing valuable insights to foster the sustainable development of the data centre industry in Europe.

This management summary gives a high-level overview of the full report findings, introducing the major themes and headline findings ahead of publication.

RESEARCH METHODOLOGY

To achieve these objectives, a comprehensive mix of research methodologies and analyses were employed. Extensive desk research was conducted to establish a robust database of colocation and hyperscale data centres, enabling the identification of key trends and developments.

The study includes all European countries, EU and non-EU, with the exception of Belarus, Russia, Ukraine, Moldova, and Türkiye. This foundation allowed the creation of models to quantify various data centre markets and their social and economic impacts.

Additionally, surveys involving 63 key decision makers in European colocation data centres were conducted. The findings from these surveys are presented in the final report and have been instrumental in quantifying different aspects of the market.

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INTRODUCTION

Data centres are fundamental within a competitive international landscape, serving as crucial components of Europe's digital infrastructure. They house the IT equipment necessary for storing and processing data, enabling the digital services that underpin European economies and society.

The European data centre market is experiencing rapid development, significantly driven by artificial intelligence (AI), with demand continuously outstripping supply and major investments in new locations across the continent. This expansion attracts billions of euros in investments, boosting GDP, creating new jobs, and supporting digital sovereignty.

While data centres offer substantial economic benefits, they also have a notable environmental footprint, in resources such as water, space, construction materials, and, most critically, electricity. As the sector grows, so does its responsibility.

Larger facilities, such as colocation and hyperscale data centres, are generally more efficient than enterprise data centres and typically favour renewable energy sources.

The sector's continued growth will necessitate ongoing investments in sustainability to minimise environmental impact.

DATA CENTRE FACILITIES

Within the study, a number of different data centre facilities are described:

On premises, or enterprise data centres
Facilities that have been built by businesses for their own immediate IT needs. These tend to be older facilities, due to the increase in cloud migration.

Colocation data centres
Data centres that rent out data centre space, in the form of rack units, racks, cages, rooms, halls, and complete data centres to a single user. This entails both retail and wholesale colocation, including built-to-suit (or powered shell) and built-to-scale (scale colocation) data centres.

Hyperscale
Data centres are those massive scale facilities built by the major platform providers, such as Meta, AWS, Microsoft, and Google.

Edge data centres
Smaller facilities located close to where demand or data is generated, are mentioned but not studied specifically.

CURRENT LANDSCAPE

In Europe, the demand for data centre capacity is soaring, driven by rapid technological advancements, the digitalisation of economies and the growing need for a strong, reliable and sovereign digital infrastructure to support that.

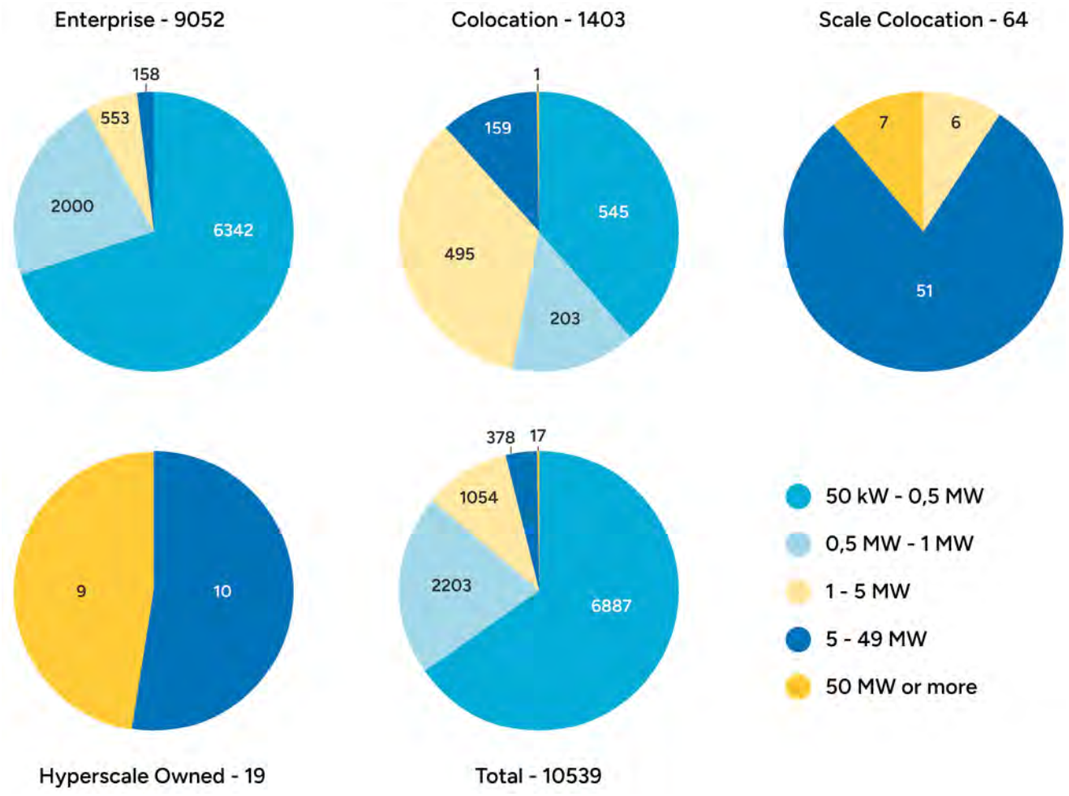
Existing active centres of growth, such as Frankfurt, London, Amsterdam, Paris, and Dublin (FLAPD), are now giving way to the Nordics, and Southern Europe, as technologies, infrastructure and demand develops.

Connectivity is a major factor too, as more subsea cables and interconnects come into play, connecting Europe to North America, Africa, and Asia, allowing new sites and services to be brought online.

With many billions of euros invested annually in building digital infrastructure, the sector faces challenges related to power availability, sustainability, and regulatory compliance. However, these challenges also present opportunities for innovation in energy efficiency, flexibility and heat reuse.

EUROPEAN DATA CENTRES: TYPE AND POWER USAGE

Figure 1. Data centres in Europe by type and IT Power (50kW or more), 2023EY



Source: *Colocation and hyperscale data centre database, Pb7 Research, 2025*

EUROPEAN GROWTH

Data centres significantly contribute to Europe's socio-economic landscape. In 2023, colocation data centres alone accounted for €30 billion in GDP, with forecasts predicting €83.8 billion by 2030, alongside the creation of thousands of direct and indirect jobs.

Investments in data centre construction and operations attract billions of euros annually, underpinning local economies and fostering innovation.

The report identified almost 9,000 enterprise data centres with a capacity of 50 kW or more, most being relatively small. However, when considering large data centres with a capacity of 5 MW or more, colocation data centres dominate.

While enterprise data centres remain the most common in terms of numbers, (scale) colocation and hyperscale data centres have outgrown the enterprise market in terms of IT power, this varies very strongly by country. Outside of the FLAPD and Nordic countries, the enterprise market generally still represents more than 50% of IT power. Colocation and hyperscale facilities are typically more modern and provide higher power (kW) per rack compared to enterprise data centres. Between now and 2030, there will be very strong growth in all commercial segments, but most strongly in the scale colocation and hyperscale markets.

Sustainability is a central focus for the industry, leading to the adoption of renewable energy and energy-efficient technologies, with over 94% of power coming from on-site or off-site renewable energy sources. Self-regulatory initiatives such as the Climate Neutral Data Centre Pact (CNDCP) is committed to achieving climate neutrality by 2030.

Substantial progress is already evident in green energy use, energy efficiency (PUE average in colocation of 1.39), water-efficient usage (WUE average 0.31 litre per kWh) and heat reuse projects. Compliance with regulations, such as the EU's Energy Efficiency Directive (EED), enhances transparency and accountability, reinforcing the sector's commitment to environmental stewardship. In report surveys conducted, only 36% believe that regulatory compliance will be a challenge in the coming years.

COLOCATION

The European colocation market is rapidly expanding, with diverse growth patterns across regions. The FLAPD countries dominate as central hubs due to their connectivity and established infrastructure, representing over 70% of Europe's IT power supply. However, other regions are emerging as key players.

The Nordics benefit from renewable energy, cool climates, and improved connectivity, while Southern Europe is experiencing rapid growth, driven by renewable energy investments, enhanced connectivity, and government incentives, particularly in Spain, Italy, and Portugal.

Central and Eastern Europe, led by Poland, shows steady growth, although some countries face infrastructure limitations.

The market is increasingly leaning toward scale colocation to meet demand from hyperscalers and AI workloads, with investment well exceeding €100 billion by 2030. Despite this growth, power constraints, regulatory hurdles, and sustainability challenges remain critical issues, shaping the future trajectory of the sector.

HYPERSCALE

Hyperscale data centres, driven by US tech giants, are experiencing robust growth across Europe. These facilities utilise a hybrid model, leveraging both self-built and colocation data centres to optimise scalability, efficiency, and proximity to customers.

Investment in hyperscale infrastructure is accelerating, particularly due to advancements in AI and increasing demand for cloud services. **By 2030, the total investment in hyperscale data centres in Europe is projected to exceed €40 billion**, with an average annual IT power supply growth of 11%, reaching 5,6 GW.

While Ireland and the Nordics currently dominate hyperscale capacity, regions such as Southern Europe (notably Spain and Italy) and the UK are emerging as significant growth areas. Despite the rapid expansion, challenges such as construction delays and the need for flexible designs to accommodate dense AI workloads are shaping the sector's trajectory.

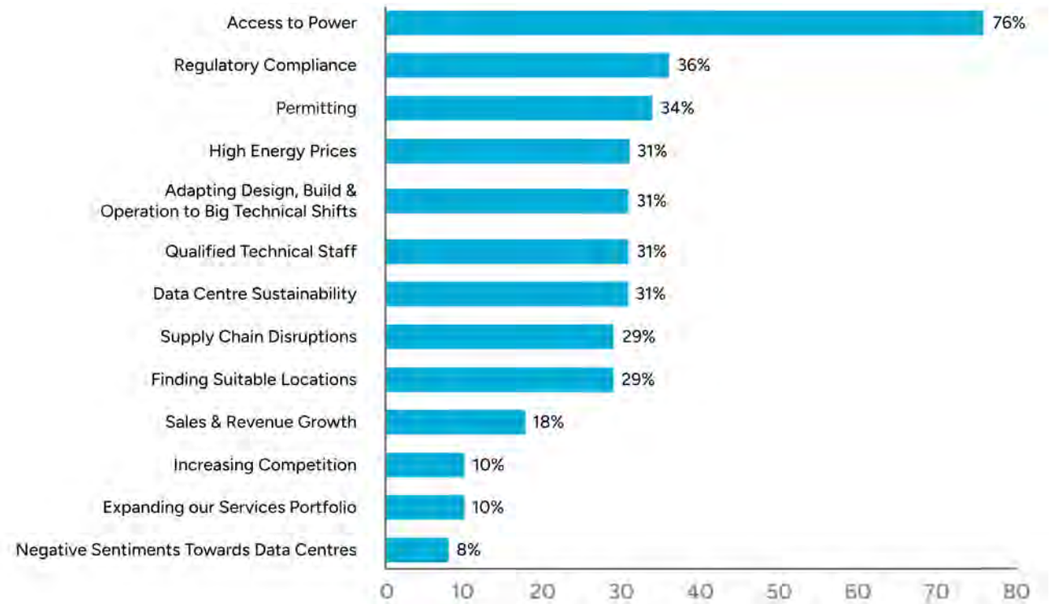
CHALLENGES & INHIBITORS

Despite these achievements, the industry faces significant challenges, including power supply constraints, permitting delays, and a growing skills gap in technical fields. More than 75% of survey respondents consider access to power as the biggest challenge for the sector in the next three years, despite a willingness to invest in alternative solutions to access power. (Over 50% expect to have grid stabilisation/energy trading in place.)

Addressing these issues will require coordinated efforts in grid infrastructure improvements, streamlining regulatory processes, and investing in education and diversity initiatives to develop a skilled workforce.

DATA CENTRE OPERATOR CHALLENGES IN THE COMING YEARS

Figure 2. Greatest organisational challenges over the next three years



Source: *Colocation and hyperscale data centre database, Pb7 Research, 2025*

While the sector already employs thousands of people and contributes significantly to the GDP growth of Europe, it still struggles to be considered an attractive career option, with more than 50% of survey respondents considering the lack of data centre-oriented studies as the main cause for shortages of people in the industry.

"MORE THAN THREE QUARTERS OF INDUSTRY PROFESSIONALS CONSIDER ACCESS TO POWER AS THE BIGGEST CHALLENGE FOR THE SECTOR IN THE NEXT THREE YEARS, DESPITE A WILLINGNESS BY MORE THAN HALF TO INVEST IN ALTERNATIVE SOLUTIONS TO ACCESS POWER."

IMPACTS

Data centres have a significant socio-economic impact in Europe. The most important contribution of data centres is providing the digital infrastructure required to build the digital economy.

Digitalisation makes enterprises more efficient and competitive: It empowers employee productivity, finds new solutions to old and new problems, and allows national governments and the public to build new value-added services and develop entirely new business models. These "downstream effects" are key to modernising the European economy, enabling it to "stand on its own feet".

Taking a narrower perspective by focusing only on data centres themselves and the impact on the value chain, "upstream", the impact can be quantified using an economic impact analysis. Data centres bring billions of euros of foreign and domestic investments, create thousands of jobs in data centres and through suppliers, along with new taxes that support local communities. These effects can be examined with some of the challenges such as technical skills and training.

Broadly speaking, impacts can be measured on three levels:

Direct effects
This includes the value of the goods and services produced by the company, or direct GDP contribution: the sales revenue minus the cost of goods and services purchased from other companies (intermediate consumption) - Employment within the data centre.

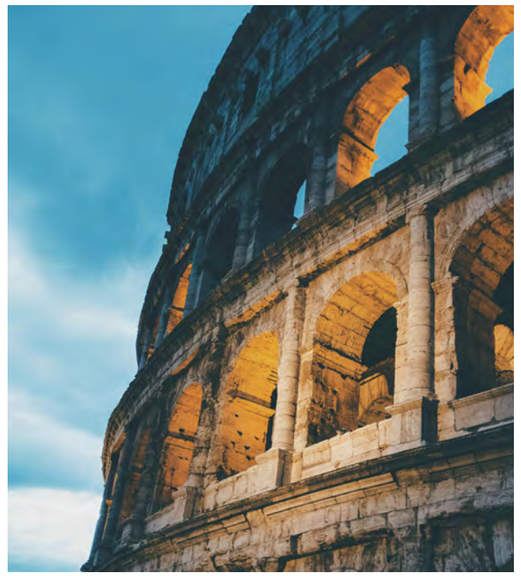
Indirect effects
This includes the GDP contribution of the company's supply chain. It involves the production of goods and services by other companies that are necessary for the operation of data centres, such as materials, utilities, and business services - Employment within the value chain.

Induced effects
Consumer expenditures of the employees of both data centres and suppliers, such as groceries, housing, or hospitality - Associated employment in the local economies.

The State of European Data Centres 2025 report details how data centres' substantial socio-economic impact on the European economy are multifaceted, encompassing direct GDP growth, significant employment creation across direct, indirect, and induced levels, and substantial tax revenues that support local, regional, and national initiatives.

Despite their efficiency and scalability, the report shows the sector faces challenges, particularly in recruiting skilled technical staff, which requires investment in education, training, and diversity initiatives.

Data centres also foster community development, sustainability projects, and vital infrastructure investments, solidifying their role as a cornerstone of Europe's digital economy.



DESIGN & OPERATION

EED REPORTING

Under the EED, member states are required to ensure that data centres with a total rated energy input exceeding 1 MW utilise the waste heat, or other waste heat recovery applications, unless they can show that it is not technically or economically feasible in accordance with the assessment.

Germany has gone further, and by 2026, new data centres with an energy capacity of 1 MW or more, must reuse at least 10% of their heat, increasing to 20% by 2028, or establish contracts to supply heat to district heating networks.

Currently, 31% of colocation and hyperscale data centres, as cited in the report, have the capability to provide heat coupling, with 38% investing in such initiatives.

SUSTAINABILITY

Sustainability is a core commitment of the European data centre industry. This is demonstrated by initiatives such as the Climate Neutral Data Centre Pact (CNDCP), the voluntary initiative launched in 2021 by leading data centre operators and cloud providers. It focuses on several key areas, including improving energy efficiency, transitioning to 100% renewable energy, reducing water consumption, promoting a circular economy by reusing and recycling equipment, and reducing greenhouse gas emissions.

SUSTAINABILITY INITIATIVES NOW & IN THE NEAR FUTURE IN COLOCATION DATA CENTRES

Figure 3. Current sustainability initiatives in operation; sustainable initiatives on agendas in the next two years

Source: *European colocation survey, Pb7 Research, 2024 (N=63)*

POWER

Colocation and hyperscale data centres in Europe are rapidly transitioning to the use of green power. Given the industry is inherently electrified, it has a distinct advantage over other energy-intensive sectors that are only beginning to adopt electrification. Currently, 94% of electricity consumed by surveyed colocation data centres comes from green energy contracts, with all large and very large data centres typically already achieving 100%.

HEAT REUSE

A growing number of data centres are exploring opportunities to reuse the heat generated by computing operations. Over the past couple of years, most initiatives have been small-scale and focus on nearby applications, such as heating office spaces within the same building. The next step involves connecting to nearby facilities, such as neighbouring offices, local swimming pools, or other community infrastructure.

It is anticipated that in the future, new data centres in the EU—and eventually existing ones—will be required to offer connections for residual heat reuse and comply with minimum Energy Reuse Factor (ERF) standards.

WATER

Water is typically used for cooling purposes, either in evaporation towers or through closed-loop water cooling systems. Efforts to lower Water Usage Efficiency (WUE) can sometimes negatively affect PUE. As a result, data centres strive to find the right balance between water and energy efficiency. High concentrations of facilities, particularly large hyperscale campuses, can have a significant local impact. Reducing water consumption often involves a trade-off with energy efficiency.

Operators that were able to report their WUE reported an average of 0.31 litre per kWh for 2023, notably below the CNDCP's targets for water-stressed areas.

Rather than solely focusing on reducing water usage, many data centres are exploring alternative sources to potable water. This includes collecting and storing rainwater, using surface water where it is plentiful, or tapping into industrial water supplies. Currently, about 28% of colocation data centres are investing in the collection of rainwater, with another 47% looking into it.

DESIGN OPPORTUNITIES

Innovations such as liquid cooling, workload shifting, hydrogen power, and small modular reactors are on the horizon, offering promising solutions to further reduce environmental impact.

While challenges remain, including retrofitting existing facilities and balancing energy and water efficiency, the sector's proactive efforts position it as a frontrunner in its commitments to improving sustainability. By continuing to invest in cutting-edge technologies and aligning with regulatory goals, the industry continues to work on building a sustainable footprint.

MARKET INSIGHTS

The European data centre market is experiencing significant growth, driven by the increasing demand for cloud services, AI-driven applications, and edge computing technologies. Data centres are essential to Europe's digital infrastructure, supporting a wide range of services. Their growth is also contributing to Europe's GDP, employment, and overall economic development.

With a direct GDP contribution of €30 billion in 2023 and a forecasted annual growth rate of 15.8%, the colocation sector's economic importance will continue to grow, reaching an estimated €83.8 billion by 2030.

Sustainability will remain a key focus for the European data centre industry. Although data centres consume significant amounts of electricity and water, they are leading in the adoption of renewable energy sources and innovative efficiency solutions.

The sector is also advancing technologies like liquid cooling and heat reuse to improve efficiency and reduce its environmental footprint. These efforts align with regulatory initiatives such as the Climate Neutral Data Centre Pact (CNDCP) and the Energy Efficiency Directive (EED).

Key Market Drivers

Digitalisation
Increasing digitalisation across sectors is driving higher demand for data storage and processing capabilities.

Cloud and Edge Computing
The shift towards hybrid IT environments and the rise of edge computing are addressing low-latency requirements and data sovereignty concerns.

Artificial Intelligence
The rapid development of AI technologies, particularly generative AI, is driving substantial investments in high-density, high-performance data centres.

Key Challenges

Power Constraints
Access to reliable and sustainable power remains a critical issue, compounded by grid congestion in high-growth regions.

Regulatory Compliance and Permitting
Adhering to EU and national regulations, particularly those addressing energy efficiency and environmental impact, presents complex hurdles for operators. Additionally, data centres face lengthy and complex permitting processes.

Technical Skills Shortage
A shortage of skilled technical personnel poses significant challenges for the design, construction, and operation of data centres, with intense competition for talent across industries.

Sustainability Pressures
While the industry has made significant strides, there is ongoing pressure to further reduce its environmental footprint, including better water management and more comprehensive heat reuse solutions.

SUMMARY CONCLUSION

The European data centre market is at a pivotal moment, with significant growth opportunities driven by digitalisation, cloud adoption, and AI advancements.
The industry's focus on sustainability and the shift from enterprise to colocation data centres are shaping its future trajectory.

Addressing key challenges such as power constraints, regulatory compliance, technical skills shortages, and sustainability pressures will be crucial to maintaining this growth.
Continued investment in green technologies, streamlined regulatory frameworks, and workforce development will be essential to ensure Europe's competitiveness in the global digital economy.

These headline themes are examined in detail and supported with data in the full State of European Data Centres 2025 report.

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