

**GLOBAL DATA CENTER ADVISORY GROUP**

# **EUROPEAN SECONDARY MARKETS: THE GROWTH STORY FOR THE NEW DECADE**

# MARKETS



**WARSAW**



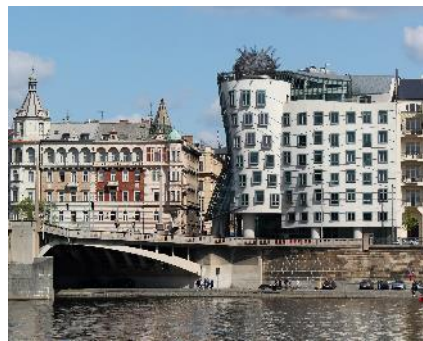
**MILAN**



**MADRID**



**OSLO**



**PRAGUE**



**ZURICH**



**MARSEILLE**



**VIENNA**



**BERLIN**



**REYKJAVIK**

Data center development across Europe has long centred around what were first known as the FLAP markets: Frankfurt, London, Amsterdam, and Paris, major global cities each with deep business and financial sectors. With the onset of hyperscale builds, Dublin became a major destination for data centre development, and the acronym became FLAP-D across these major locales. These markets are still critical to the data centre ecosystem, with over 500 MW of construction underway among them and each serving as initial entry points to major and minor cloud services embarking on Europe-wide expansion. New companies and ventures alike are still launched primarily in these markets, as the recent \$1 billion initial xScale investment between Equinix and GIC to build hyperscale campuses indicates. Interest in the FLAP-D markets now competes with physical limitations; Amsterdam has announced a temporary development moratorium on new builds and land and power remain scarce across the slate.

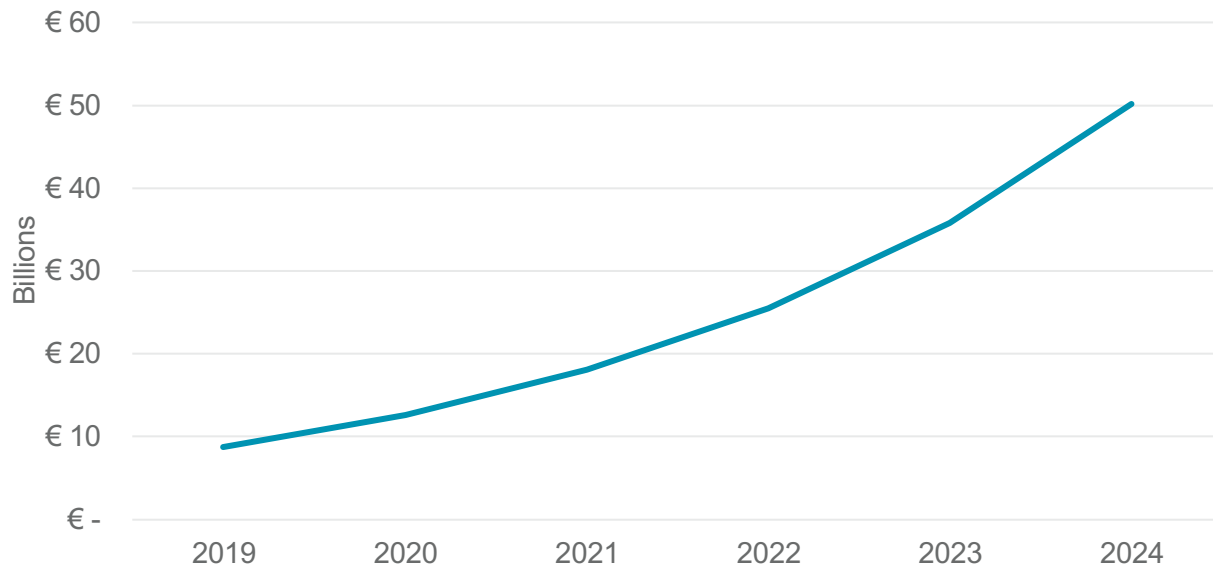
Even as these markets continue to thrive, a host of newer locations have joined the data centre landscape as operators respond to client demand across the region. Hyperscale cloud spend alone was an €8.7 billion business in 2019 across Europe, with an anticipated rise to an incredible €50 billion by 2024 as both large companies and governments alike continue their IT transformation. The recent pandemic has focused minds, as organizations have reconsidered their operations with most personnel working from home for a good portion of the year. The data centre industry has responded in kind, launching development closer to their users and investing large sums of capital in new platforms. Digital Realty closed on their €7.6 billion of Interxion early in 2020, instantly creating a pan-European powerhouse across both primary and secondary markets. Vantage followed with the acquisition of Etx Everywhere, and embarked on an aggressive development programme across several secondary markets at once. KKR placed €1 billion into a new venture known as Global Technical Realty aimed at new development and acquisitions, and a wide array of pension funds, sovereign wealth, and private equity firms continue to circle the continent looking for an initial foothold.

The cities listed in this report are the vanguard of these emerging markets, each with their own local ecosystem of cloud services providers, developers, investors, and occupiers. Each is shown with current capacity, transitioning toward its future with current development and planned projects included. With all these possibilities in mind, the next several years will create a new subsector of the European data centre industry: the true secondary market.



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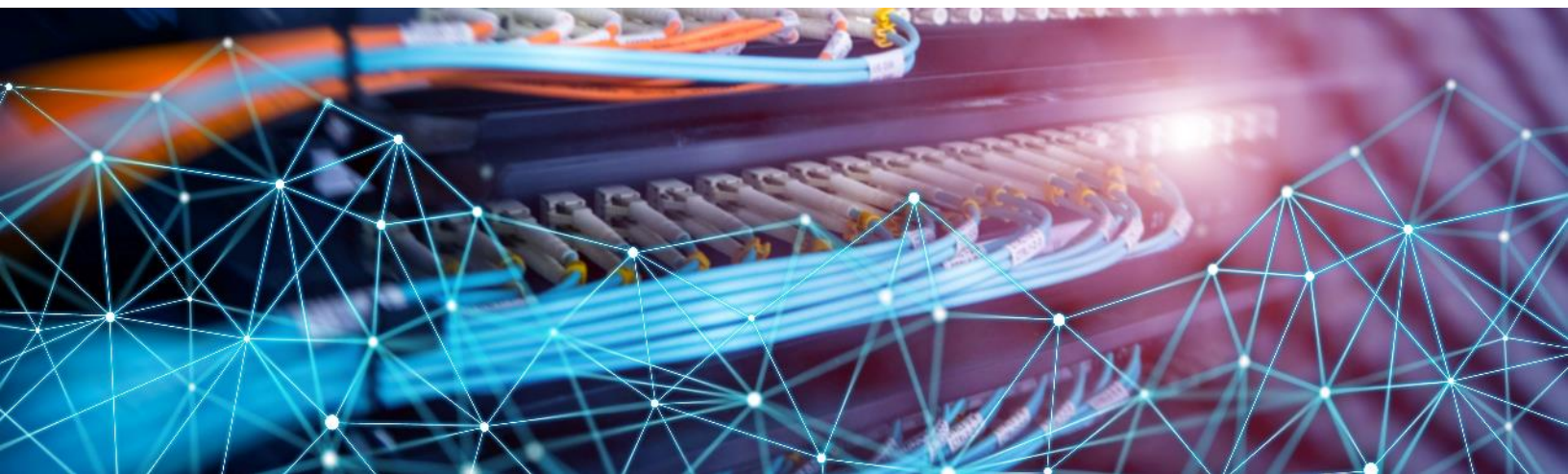
## EUROPEAN CLOUD SPEND



Source: Structure Research

## MAJOR CLOUD SERVICES IN-MARKET

	AMAZON WEB SERVICES	MICROSOFT AZURE	GOOGLE CLOUD
Warsaw		X	X
Milan	X	X	X
Madrid	X	X	X
Oslo		X	
Prague			
Zurich		X	X
Marseille		X	
Vienna			
Berlin		X	
Reykjavik			





# WARSAW

**64 MW → 128 MW**

Warsaw has received considerable interest of late from hyperscalers, developers, and across the greater ecosystem as each determines how best to service Central and Eastern Europe. As the largest city in Poland (and among the largest regionally), Warsaw has attracted considerable investment from international companies, headlined by Microsoft's recent decision to invest over \$1 billion in local infrastructure, training, and cloud services for enterprises and government. Not to be outdone, Google has made their own \$2 billion investment announcement, expecting their own cloud region and associated infrastructure to go live in 2021. Global data centre REIT Equinix has three locations in Warsaw, and international edge player EdgeConneX is a more recent entrant that has announced relationships with Megaport and Ori Industries for improved local connectivity. These companies are joined by Italian cloud firm Aruba, locally-based Atman with two large facilities, and a host of smaller operators. Of note is American hyperscale operator Vantage, who plans on entering the market in 2021 with the first phase of a campus that will span 64 MW at full build-out, or double the current market size.



# MILAN

**61 MW → 95 MW**

Milan is the financial and business hub of Italy, home to a variety of sophisticated banks, investment managers, insurance firms, and industrial conglomerates, all with varying IT needs as they progress toward the cloud. The largest cloud services firms have entered the market, albeit through a variety of methods. Amazon Web Services (AWS) launched a full region with three availability zones in May 2020, their first region in-country and across Southern Europe. Microsoft had their own major Azure announcement in the same month, with a \$1.5 billion investment plan over the next five years to bring Azure to Italy and a major IT and skills partnership with Poste Italiane. These releases followed a partnership announcement in November between Google Cloud and Telecom Italia that will develop an array of data centres across the country in coming years and diversify the telecom giant's offerings. On the operator front, Aruba and Telecom Italia are joined by pan-European operator DATA4, global firms Colt and Equinix, and the Switch-backed SUPERNAP Italia campus. American hyperscale operator is at work on the first phase of what will be a 32 MW campus at full buildout, and Equinix is working on a local expansion of their own.



# MADRID

**71 MW**

Long mooted as a data centre destination for Southern Europe, Madrid finished at the top of the recent C&W Global Market Comparison for lowest natural disaster risk. The city boasts a variety of facilities and operators, whether pan-European in scope (DATA4, Interxion), globally focused (Colt, Equinix, Global Switch) or major telecoms (GTT, Telefonica). Google Cloud recently announced a new partnership with Telefonica, with plans for a new cloud region, collaborative 5G solutions, and a suite of services for Spanish companies looking to develop a more robust IT structure. Amazon Web Services has local plans as well, with a new local cloud region marking their official entry into Spain by late 2022 or the beginning of 2023, and Microsoft Azure will be launching their Spain Central region soon. To assist local companies with their interconnection needs, Global Switch recently launched a new partnership with Frankfurt-based internet exchange DE-CIX, the latest of four locally-enabled sites.



# OSLO

**50 MW → 125 MW**

As data centre operators and their clients aim at becoming greener, the low-cost hydropower on offer throughout Norway and in Oslo have served to make the area more attractive for large deployments. The Norwegian government has assisted with this development, rolling out a package of energy and property tax incentives to attract hyperscalers in both Oslo and regionally. The Oslo colocation market is dominated by local players, including DigiPlex (with three facilities in the area), local internet exchange OS-IX (backed by Bulk Infrastructure), and Green Mountain with their major upcoming campus that will offer 75 MW of capacity at full buildout. Connectivity to the rest of Europe will become even quicker late in 2020, with the new 170-kilometre Skagenfibre cable coming online to link Hirtshals in Denmark to Larvik and Oslo in Norway.



# PRAGUE

**41 MW**

As among the smaller operational markets covered in this report, Prague remains intriguing by its physical location as a potential connection point across the continent. The city is home to three internet exchanges, including NIX.cz, Peering.cz, and NetIX, providing connectivity across Central Europe and beyond. Colocation operators are either local in scope (CE Colo, ServerPark, TTC Teleport, the Foxconn-backed SafeDX) or part of larger international telecoms groups such as O2 or T-Mobile, with the market yet to expand to hyperscale-sized facilities. Major cloud players have yet to enter Prague with full regions, leaving the market open for competition.



# ZURICH

**62 MW → 117 MW**

A major financial centre and the largest city in Switzerland, Zurich has a thriving data centre market with a mix of global operators (Equinix, Colt), pan-European stalwarts (Interxion, NTT's e-shelter) and local firms (three locations for Green Datacenter among others). Google Cloud and Microsoft Azure both have local regions, with Equinix recently launching an Azure ExpressRoute for faster access in their Zurich facilities. Secondary cloud software firms have also found Zurich attractive, with the recent entry of Oracle Cloud in support of both their local Smart Innovation Lab and the continued IT development plans of regional clients. Local development in the near-term includes the impending arrival of American hyperscale developer Vantage, with plans for the 8 MW first phase of an eventual 40 MW campus slated for 2021.



# MARSEILLE

**39 MW → 50 MW**

Although currently on the smaller side in terms of operational capacity, Marseille looks to have an outsized future thanks to the many undersea cables that connect the city to key emerging markets in the Middle East and Africa. No fewer than ten operational cables currently connect at Marseille and surrounding areas of southern France, with the PEACE Cable arriving in 2021 and the 2Africa cable in 2023, both with broad connectivity throughout Africa. Interxion is the current colocation market leader, with the first phase of their third local data centre just completed and two further phases coming shortly. The company also recently announced the initial entry of Megaport in Marseille, coinciding with a larger push throughout the country. Microsoft Azure is the first of the major cloud service providers present in the area via their France South region.



# VIENNA

**46 MW → 61 MW**

Vienna and Prague are similar as potential growth markets for Central Europe, benefited by a convenient mid-point location on the continent amidst other large regional economies. Pan-European operators with local operations include Interxion and e-shelter, with local operators such as A1 and Nessus also providing capacity. While the city has yet to develop a singular data centre cluster, there are a couple of facilities each in the Floridsdorf and Favoriten districts. Current development plans centre around future phases of the e-shelter campus, with another 15 MW possible, and none of the major cloud services providers have yet to open local regions.





# BERLIN

**45 MW → 199 MW**

With Frankfurt as Germany's financial and data centre hub, the question has long existed as to which city would emerge as the country's secondary market among Munich, Berlin, Hamburg, Cologne, or possibly even elsewhere. Recent developments increasingly indicate that winner to be Berlin, with major campuses planned by both e-shelter and new entrant Vantage. At full buildout the two projects would take Berlin to a near-200 MW market, adding to a local scene already populated by e-shelter's initial location, GTT, Colt, and CarrierColo among a handful of local operators. Microsoft Azure operates their Germany North region locally, though other major cloud services have yet to enter.



# REYKJAVIK

**52 MW → 212 MW**

An alternative for those looking for closer deployments to the Americas while remaining in Europe, Reykjavik has served as a destination for high-performance compute needs and cryptocurrency mining alike thanks to the low-cost geothermal and hydroelectric power on offer. Recently-acquired Etix has one campus locally, while Advania, Reykjavik DC, and Verne Global all have their own options, with each offering expansion capability across several phases. An array of tax incentives and an amenable local utility are also on offer.

# GLOBAL DATA CENTER ADVISORY GROUP

Cushman & Wakefield's Data Center Advisory Group is a global team of elite professionals delivering specialized real estate solutions for mission critical users, owners, and environments. With scalability, reliability, and security as a driving force, our highly knowledgeable and responsive professionals guide clients to make effective financial decisions. Our expertise ranges includes colocation facilities, control centers, greenfields, powered shell, and trading floors. We lend additional value through our understanding of global dynamics and their impact on local markets.

## MORE INFORMATION

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