Research
EMEA | Q2 2023

EMEA Data Centre Report Q2 2023

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Executive Summary

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Executive Summary

The first half of 2023 has seen the single busiest two quarters of data centre take up on record across the European Tier I markets of Frankfurt, London, Amsterdam, Paris and Dublin. The half yearly total is a staggering 65% jump compared to the same point in time last year.

This wave of demand coming through has been somewhat delayed. The last couple of years has seen significant levels of pre-leasing as customers look to secure brand new data centre space while it's still in development. However, due to the supply chain issues seen across the wider real estate sector, lead times and pipelines were pushed further back.

Fuelling the already stoked up sector is the emergence of one of the largest technology disrupters we have seen; Generative AI. Gartner's latest CEO and Senior Business Executive Survey found that over a fifth of respondents cited AI as the top disruptive technology to impact industries.

The high compute power of AI requirements needed in data centres that train AI models is driving a fundamental change in the very design of data centres. In order to support AI's high density and performance requirements GPU chips are needed rather than the traditional CPU chips used in current data centre design. These chips require liquid cooling rather than air cooling to keep temperatures below the thermal limit. Nvidia; the first chipmaker to reach a $1tn valuation, just announced their Q2 earnings. Their data centre revenue is up 171% YoY amid surging demand for their AI chips.

Looking at it with a macro lens, data centres used for training AI models are less reliant on latency so proximity to the end user is not a key consideration. As a result, JLL expects to see a 'bring the data centre to the power rather than bring power to the data centre' approach. These data centres can be strategically located where access to renewable energy, land and water scarcity is not an issue.

JLL anticipates that we will start to see a strategic geographic approach to site selection, particularly one that aligns with the developers ESG frameworks.

As a demand driver, we have only just scratched the surface on the possibility of AI and Machine Learning (ML) and the potential it has for the global economy. As the technology adapts and develops, more use cases will emerge including those we would not have envisaged. As a result, forecasting future growth is tricky, particularly while we remain in a state of flux.

We have however, seen private equity firms gearing up in anticipation of the growth potential of AI. Blackstone have begun to raise liquidity, and have "earmarked properties built to handle rising data needs from a surge in AI investment as a priority". DigitalBridge are following suit, and they have announced their third fund of $1.2bn, gearing towards AI. The Chief Executive Marc Ganzi said that 80% of data centre power will be consumed by AI over the next 15 years, and that an additional 38GW of power will be needed although other commentators are suggesting this might be an underestimate.

Interestingly, none of JLL's tracked pre-lets in the colocation market in FLAP-D are currently being driven by AI. Is this perhaps because AI schemes are currently being driven by hyperscalers who appear to be looking to self-build? Or will there be different types of data centres catering for different AI operations? There are still plenty of unknow, unknowns in the AI arena.

Tom Glover
Head of EMEA Data Centre Transactions

Key Highlights

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Key Highlights

There was 114MW of take up in Q2. More than double the 51MW seen in Q1 and the largest second quarter on record.

Pre-lets saw a sharp increase from the first quarter. There was 141MW in Q2 compared to the 64MW seen in Q1.

Frankfurt has seen the bulk of take up, with half of all demand so far this year being seen in this metro.

New supply is still outstripped by demand, we saw 73MW of new space come online in Q2. While take-up across FLAP-D hit 114MW. As a result we are seeing vacancy rates fall.

Frankfurt has seen a huge amount of new supply come onto the market throughout the first half of this year with 69MW of space, increasing the overall market size by 12%.

There are still a few significant developments in the pipeline across FLAP-D, which we anticipate to come through in the second half of 2023.

Demand Continues to Outstrip Supply

We saw 73MW of new space come online in Q2. While take-up across FLAP-D hit 114MW

Take up - yearly running total (MW)

It's been a record breaking year in terms of take up across the FLAP-D markets. The total yearly take currently sits at 165MW, to put into perspective the half yearly total in 2022 was 100MW.

This significant uptick in demand has been in the pipeline for some time. The last couple of years we had seen high levels of pre-leasing activity, however supply chain issues had pushed developments further down the line.

Take up – yearly by deal type (MW)

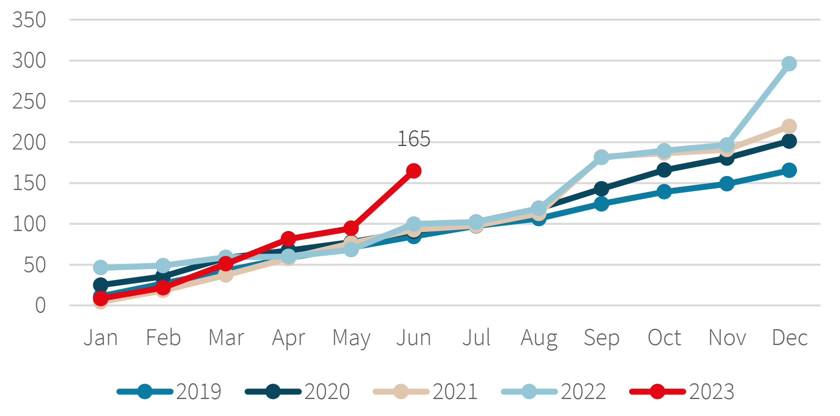
Q2 sees higher take-up and pre-lets in all FLAP-D markets compared to Q1, expect for pre-lets in Amsterdam. Pre-leasing still remains high across all the markets barring Paris and Dublin.

Market hub size forecast (MW)

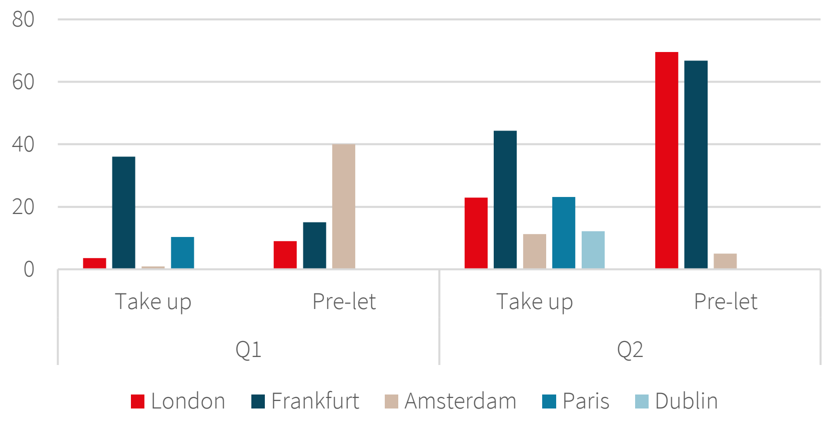
Growth forecast for FLAP-D markets are strong for the next 3 years, where London and Frankfurt set to see highest rates followed by Paris.

Amsterdam growth still remains low, with very little new supply coming through since the moratorium on data centre development back in 2020 and the subsequent regulations. Dublin's growth will start to slow on the back of EirGrid announcing no new data centre grid connections until 2028.

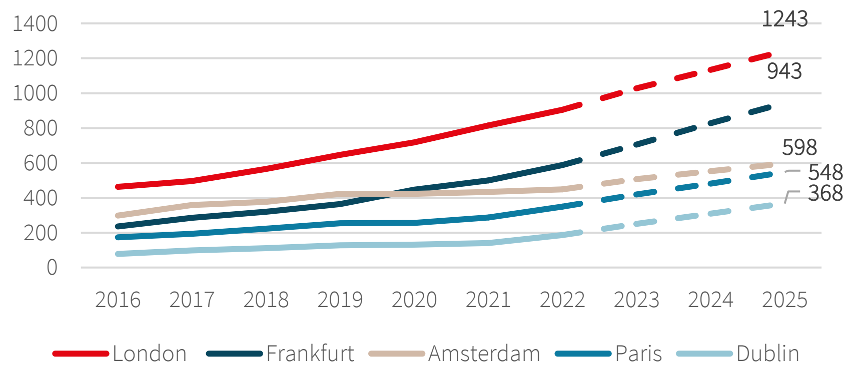
Yearly Running Total Take-Up (MW)



Yearly Take-Up by Deal Type (MW)



Market Hub Size Forecast Growth (MW)



Source: JLL

Markets Overview – Tier I

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Frankfurt

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
656 MW	**69 MW**	**80 MW**	**6%**

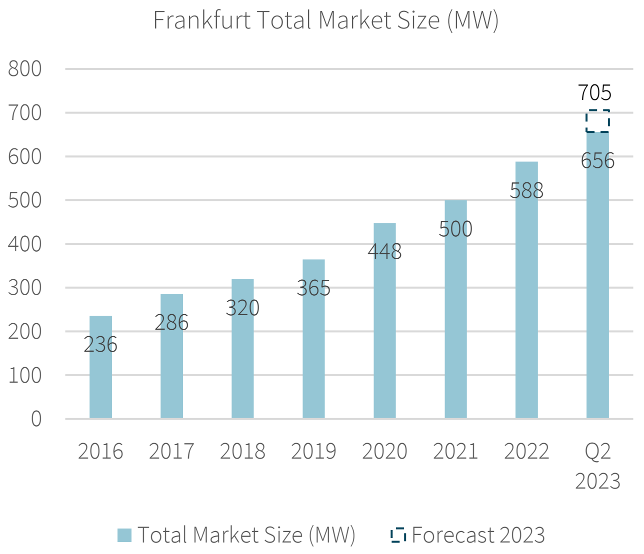
Supply

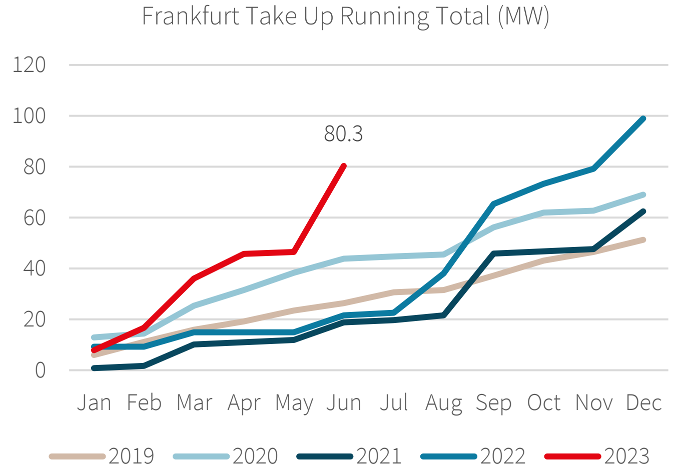
Frankfurt has seen immense levels of growth in 2023, with 69MW of new supply added in the first half of the year. The Frankfurt colocation market now sits at 656MW, with the total market size increasing by over 11% in the first two quarters alone.

We originally forecast that Frankfurt will see a record breaking 118MW of new supply added in 2023 and we are currently on target to reach this figure with more developments due to come online later this year.

Against the backdrop of expansive data centre development in this metro, the German Bundestag is expected to debate an energy efficiency act (EnEfG) in September. The current draft has a number of requirements for data centre operators including 10% waste heat reuse from 2026 and targets for both PUE and renewable energy (50% by 2024, 100% by 2027).

The GDA (German Data Centre Association) has publicly announced that the proposed bill could have a negative impact on the sector, making Germany a less attractive destination for data centres.





Demand

Frankfurt saw 44MW of take up in Q2, bringing the year to date total to 80MW. In comparison we had seen just 26MW at the same point last year.

The first half of the year also saw strong levels of pre-leasing, with 82MW signed but currently in development.

We had forecast that Frankfurt will hit 129MW in take up, based on the sheer level of pre-leasing seen last year due to come online throughout 2023. With over 80MW seen so far this year, we are on track to exceed this target.

Latest News and Updates

Green Mountain has formed a JV with KMW Energy to build a 54MW data centre in Mainz, 30km to the south west of Frankfurt. Power will be covered by KMW's energy portfolio and waste heat will be fed into the Mainz district heating system. Construction is scheduled to start in Q3 2023.

CyrusOne has announced its plans to build a new 72MW Frankfurt data centre at the EuroPark office site they acquired at the start of 2023.

London

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
902 MW	**7 MW**	**27 MW**	**17%**

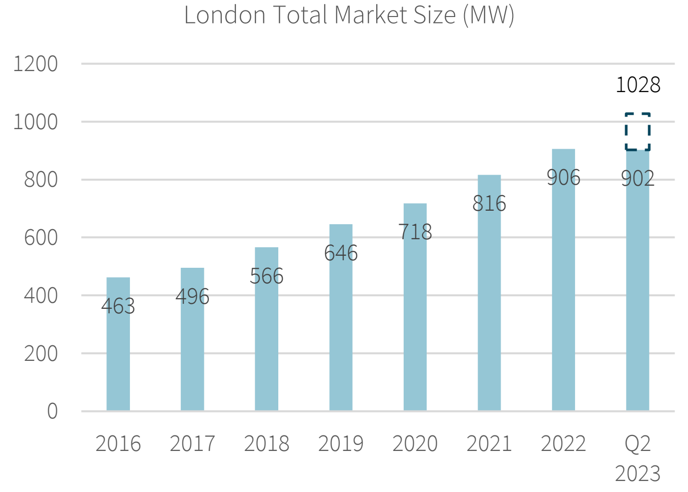
Supply

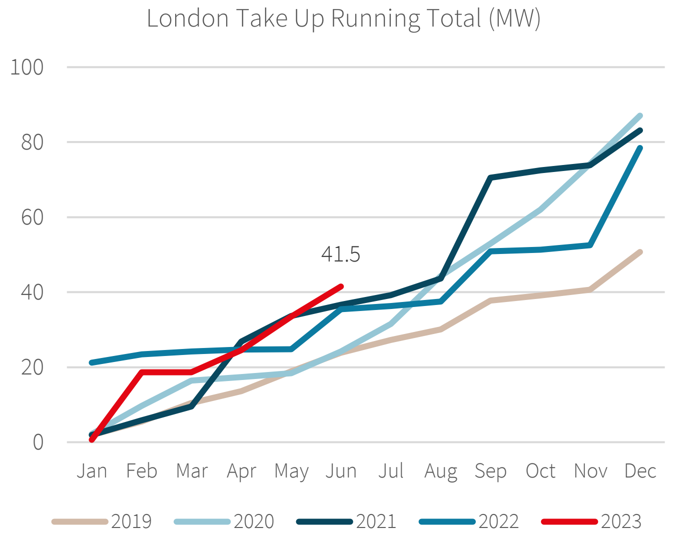
The London colocation market stands at 902MW, the largest market in EMEA with a 35% share of the total Tier I supply. London has grown at a rapid pace, despite being the most mature data centre metro in Europe. However, 2023 has seen a marked slowdown in the levels of new supply coming to market, with only 7MW added so far this year.

The development pipeline for London still remains very strong, with a string of new campuses being announced in Q2. Vantage confirmed their second campus based in West London that will deliver 20MW in early 2025.

Equinix received planning permission to build a new 30MW data centre at Segro's trading estate in Slough.

Greystoke Land has filed for planning application for a £1bn hyperscale data centre development near Abbots Langley. The intent is to build two data centres on a 33 hectare site in the Three Rivers local authority which will have 96MW of IT load. The site sits on the Green belt, north west of London.





Demand

We saw 23MW of take up in Q2, more than double the 11MW saw in the second quarter of 2022. Despite this, London has seen an overall drop in the usually high levels of take up, currently sitting below both Frankfurt and Paris year to date.

This in part is due to the lack of new supply coming through. We have however seen strong pre-leasing activity with 70MW secured in Q2.

We forecast at the start of the year that London will once again fall just short of Frankfurt in terms of total take up. However, we do anticipate demand to pick-up in the second half of the year once construction has completed on a number of key developments.

We are still seeing hyperscalers continue to discuss with operators about new schemes over the next couple of years.

Amsterdam

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
458 MW	**10 MW**	**12 MW**	**18%**

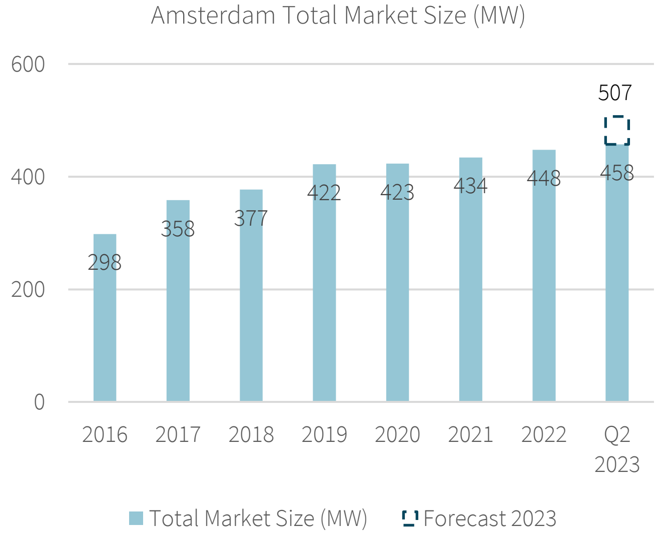
Supply

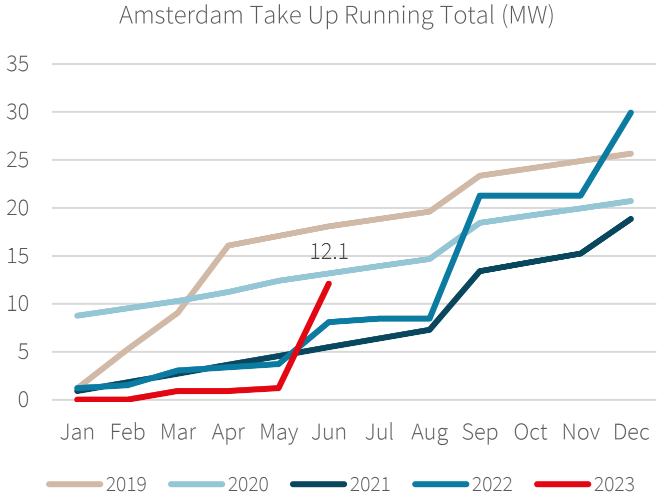
Supply in Amsterdam sits at 458MW, with 10MW of new colocation space added in Q2. We have still seen no real significant new supply added to the market since the moratorium on new data centre development ended in 2020.

This quarter saw Digital Realty acquire a 9 acre site, intended for a 20 MW data centre located on its existing Amsterdam Schiphol campus. The site has the capacity to support a maximum of 40MW.

Currently under construction is the 100MW Westpoort Data Center. The facility will consist of three 12 story towers and due to be developed in 2025. It is understood that EscherCloud will be one of the first key anchor tenants in this new scheme. Waste heat from the scheme will also serve the local district heating network in a joint venture between Vattenfall and the municipality of Amsterdam.

We also understand that a circa 11 acre plot located in Uithoorn, south of Amsterdam has been sold and is intended for a data centre development.





Demand

JLL saw 11MW of take up this quarter with a further 5MW of pre-lets. The metro remains on track to hit the 29MW the JLL team forecast at the start of the year.

We have seen a total of 45MW of pre-lets signed this year, so we will see a further boost in take up once the developments complete in 2024. To put into context we only saw 3MW of pre-let deals in the whole of 2022.

Interestingly, Amsterdam has the highest vacancy rate out of the FLAP-D markets with 18% despite very little new supply added over the past couple of years. As a result, this metro has an opportunity for short to medium term solutions as it is one of the only metros with shell sites with power readily available within the availability zones.

Latest News and Updates

In addition to the two land deals in Uithoorn and Schiphol, we also saw Yondr Group, who's headquarters is located in Amsterdam, agree a strategic partnership with US based private equity firm Apollo Global Management.

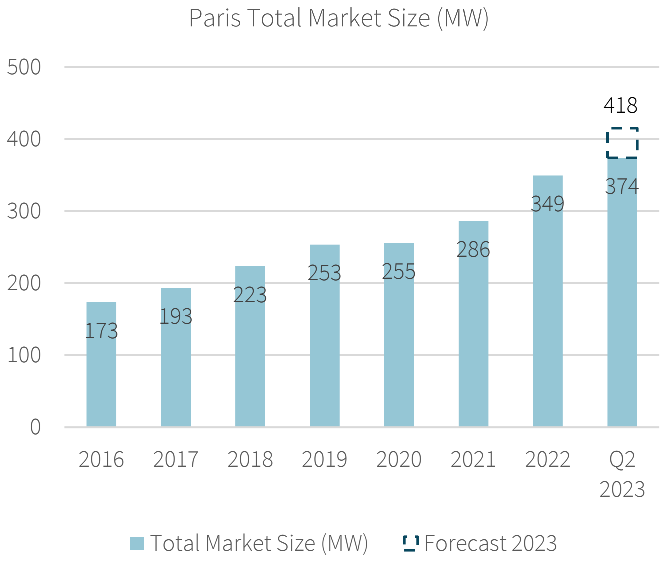
Paris

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
374 MW	**24 MW**	**33 MW**	**17%**

Supply

Paris as a data centre market has seen a recent boost in developments and new supply after stagnating between 2018 and 2020. The market will overtake Amsterdam in the next couple of years as the third largest market in Europe.

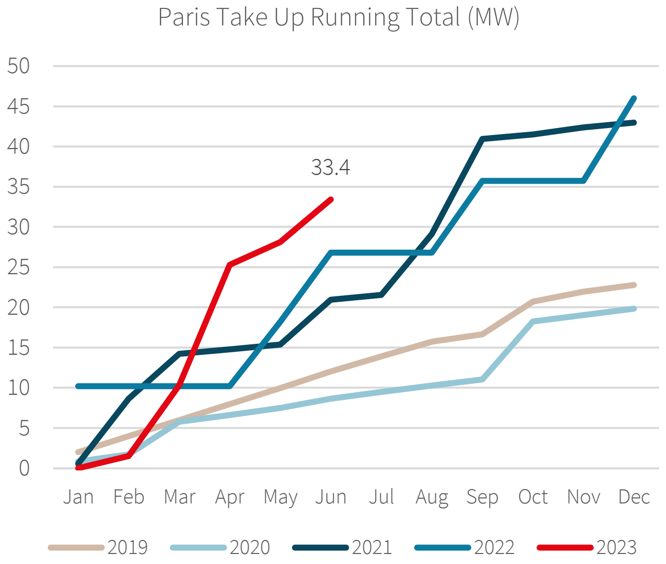
So far in 2023 we have seen 24MW of new supply added, with a further 40MW due to come through in the later stages of the year.



Demand

Take up for Q2 hit 23MW, the single busiest quarter for this metro since we began tracking the stats in 2016.

For the first half of the year we have seen 33MW signed, currently higher than London, and on track to hit the 73MW we forecasted for the year.



Latest News and Updates

Q2 saw CyrusOne gain planning permission for a data centre located in Wissous, south of Paris. The development plan is for six data halls with a total of 83MW. 27MW is currently developed and occupied by a major cloud provider.

We also saw DataBank agree to sell their portfolio of five data centres, operating as zColo France, to Etix Everywhere. Three of the data centres are located in Paris. Etix Everywhere announced that the acquisition is a key step towards doubling their data centre portfolio over the next three years.

Digital Realty announced that their data centre in La Courneuve, north of Paris will be equipped with direct liquid cooling to support high-performance computing equipment and enable customers to deploy high compute intensive applications.

Dublin

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
199 MW	**12 MW**	**12 MW**	**4%**

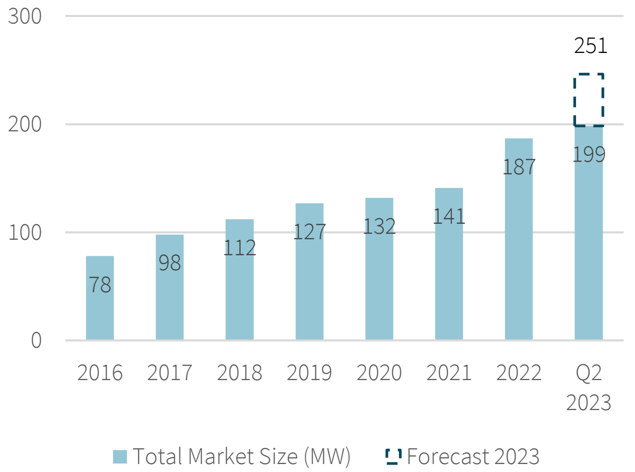
Supply

New colocation supply continues to come through despite a de-facto moratorium on new data centre developments with EirGrid not providing any new connections until at least 2028.

We have in fact seen a significant uptick in the amount of new supply come onto the market, in part due to the sizeable backlog of existing permissions and also the number of developments pushed through before the restrictions were put in place.

2023 has seen 12MW of new supply added, increasing the market size by 6%. We are forecasting a further 52MW to also come through in the second half of the year.

Dublin Total Market Size (MW)

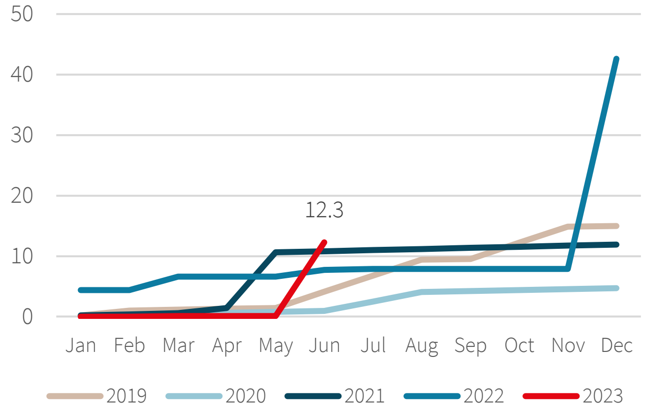


Demand

Dublin has the lowest vacancy rate of all the Tier I colocation markets, currently sitting at 4%. The last two years has seen huge levels of pre-leasing activity, with customers looking to secure any new colocation 16-18 months before completion.

As a result, vacancy rates will continue to remain low. We saw 77MW of pre-lets last year so any new supply coming to the market has already been taken.

Dublin Take Up Running Total (MW)



Latest News and Updates

Q2 saw Microsoft given permission to build a 170MW gas power plant for its Grange Castle, Dublin development.

The amount of energy consumed by data centres has been under immense scrutiny over the past few years. The Central Statistics Office of Ireland highlights that the amount of electricity consumed by data centres has risen by 5% in 2015 to 18% in 2022.

Microsoft's plan is that their new data centre will use the gas power plant as a back up power source when Ireland's grid is at capacity or for an outage.

Vantage also in Q2 saw their planning permission refused on the grounds of energy use and lack of onsite renewable energy. The decision has been appealed and will be reviewed by October.

Markets Overview – Tier II

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Madrid

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
97 MW	**12 MW**	**7.6 MW**	**16%**

Supply

Madrid continues to grow with a further 7MW of new supply added in Q2, totalling 12MW added for the year so far (a 15% growth in the total market size).

We are still just at the inception of the development of this market. Last year we saw Oracle, AWS and Google launch their cloud regions. We have just seen IBM launch their new cloud region in 2023 and we have Microsoft, Akamai and a sovereign Oracle cloud all planned for the metro.

Demand

We saw 3.1MW of take up in Q2, taking the yearly total to 7.6MW.

Latest News and Updates

Form8tion, funded by Thor equites has broken ground on the first 24MW facility at its Madrid One campus. Nabiax has begun work on expanding its Alcala data centre, increasing the facilities capacity from 15.1MW to 22MW. Data4 has also began work on its third data centre at its Alcobendas campus.

Berlin

Market Size	New Supply YTD	Take Up YTD	Vacancy Rate
92 MW	**0 MW**	**0 MW**	**4%**

Supply

We are still waiting for any significant new supply to be added in 2023. The Berlin market currently remains at 92MW.

Last year saw Berlin begin its development stage of the market with the total capacity of the metro more than triple in size.

The imminent arrival of the Google Cloud region (the 2nd cloud region in this metro after Microsoft Azure), is leading to an influx of global operators arriving.

This quarter we saw Netherlands based developer Van Caem announce plans for a 100MW data centre and Virtus released details for their planned campus both scheduled to be operational in 2026.

Demand

With vacancy rates being very low and no new supply yet to come to the market in 2023 we have seen no take up so far this year.

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