Europe Data Centres: Frankfurt, London, Amsterdam, Paris and Dublin

▲ 2,548MW
Colocation total supply

▼ 370MW
Colocation availability

▼ 26MW
Colocation take-up

Note: Arrows indicate change from same quarter in previous year. For take-up, the figure represents a comparison of Q3, 2022 versus Q2, 2022.

Mammoth Q4 to follow a quiet Q3

- Q3 was unusual in that little new capacity (12MW) was added nor was there much in the way of take-up (26MW) recorded across Europe's five largest colocation data centre markets
- Take-up in the most recently-closed quarter was about one-fifth of the Q2 total which is a reflection of the limited supply brought online. Low take-up in Q3 isn't a cause for concern; there was strong demand in the first half of the year and a period of digestion afterwards isn't unusual
- Furthermore, any concerns that the appetite of hyperscalers for capacity may be waning amid the deteriorating macroeconomic conditions of Europe, are unfounded in CBRE's view
- In fact, we expect the market to rebound sharply in Q4 as many data centres are set to be delivered (204MW of new supply) in that three-month period. Equally, there is a healthy appetite for the capacity on the part of the hyperscalers and others (199MW of take-up) in Q4.
- Next year, we foresee even stronger demand (440MW) for colocation data centre capacity in Europe. However, providers are having to deal with extraordinary market conditions to meet the growing demand of the hyperscalers, their largest customers, and enterprises.
- For example, higher borrowing costs and soaring inflation have made project profitability ever harder to ascertain. The power shortages across many major European markets are an impediment as well.

FIGURE 1: Projected FLAPD market new supply and take-up 2022 versus 2021

Year	New Supply	Take-up
2022F	356MW	380MW
2021	404MW	389MW

Source: CBRE Research, Q3 2022. Market totals include Dublin.

Market highlights

Frankfurt	Digital Transformation Capital Partners took an undisclosed stake in Maincubes and said it will spend more than €1bn with Art-Invest Real Estate to expand the provider's operations.
London	Colt is reportedly planning a new 50MW campus in the London submarket of Hayes, a development that is expected to more than triple its existing footprint in the capital.
Amsterdam	Meta cancelled plans to develop a massive data centre near the Flevoland town of Zeewolde, three months after putting the plan on hold because of public opposition.
Paris	Digital Realty will provide tenants in its Paris data centre campus with access to Oracle Cloud Infrastructure (OCI) via the new Oracle Cloud Paris Region.
Dublin	The Irish government ordered South Dublin County Council to reverse its planned ban on the new data centre development in the area. The Council later said it will comply.

Supply

There was little in the way of new capacity delivered in the third quarter as providers are busily working to deliver schemes across Europe's five largest markets during the final three months of 2022.

Paris was the sole market where capacity was added (12MW) during the July to September timeframe. The final quarter of the year should prove to be a markedly different story.

CBRE's expectation is that over 200MW of data centre capacity will be delivered in Q4. There are 14 separate colocation data centre providers scheduled to deliver capacity across the FLAPD markets during the October to December timeframe.

If our expectation holds true, the anticipated glut of new capacity would be larger than the total amount of new supply delivered in 2020, which was an admittedly difficult year wherein schemes slipped to 2021 due to logistical issues owing to the pandemic.

Even though much capacity will be added, significant portions of it are already pre-let or potentially reserved which means that those non-hyperscalers with multi-MW requirements could very well be disappointed.

Through three quarters of 2022, 152MW of supply have been delivered across Europe's five largest markets. London and Frankfurt are the markets that will receive over two thirds (68%) of the new supply that we expect to be delivered in 2022.

FIGURE 2: New supply in Q3

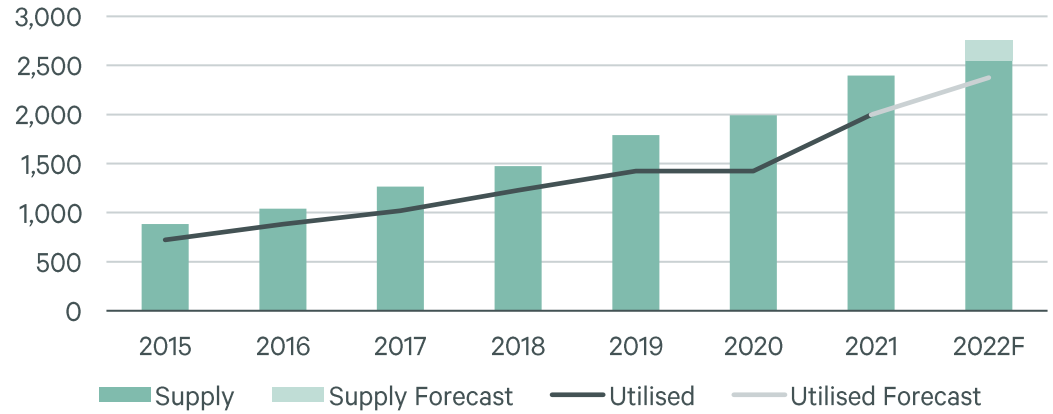
Market	Q3 New Supply
Frankfurt	0MW
London	0MW
Amsterdam	0MW
Paris	12MW
Dublin	0MW

Source: CBRE Research, Q3 2022

Q3 and forecasted build activity

Frankfurt	There are 73MW of new supply to be delivered across four submarkets of Frankfurt in Q4 alone, easily the most capacity the market is expected to see in any given quarter this year.
London	Despite the difficulties delivering new capacity in London, the market is expected to have expanded by 134MW come year end, easily the most of any FLAPD market. There are 40MW that are yet to be delivered.
Amsterdam	Comparatively, little in the way of new supply is expected in Amsterdam this year; two providers are expected to deliver 29MW. However, hyperscaler investment should lead to additional capacity next year.
Paris	An expected banner second half of year for Paris kicked off with 12 MW added by three providers. Q4 should see more than quadruple that capacity delivered with two providers responsible for over half (60%) of it.
Dublin	All of the capacity (34MW) expected this year in Dublin will be delivered in Q4.

FIGURE 3: FLAPD market supply and utilisation, 2015 – 2022F (MW)



Source: CBRE Research, Q3 2022

Take-up

Take-up across the five largest colocation data centre markets of Europe in Q3 sank to less than one quarter of the Q2 total as providers worked towards delivery of a monster final quarter.

Nearly all of the take-up (93%) CBRE recorded in the third quarter happened in Paris and London. The remaining take-up was of the retail variety and spread fairly evenly across Frankfurt, Amsterdam, and Dublin.

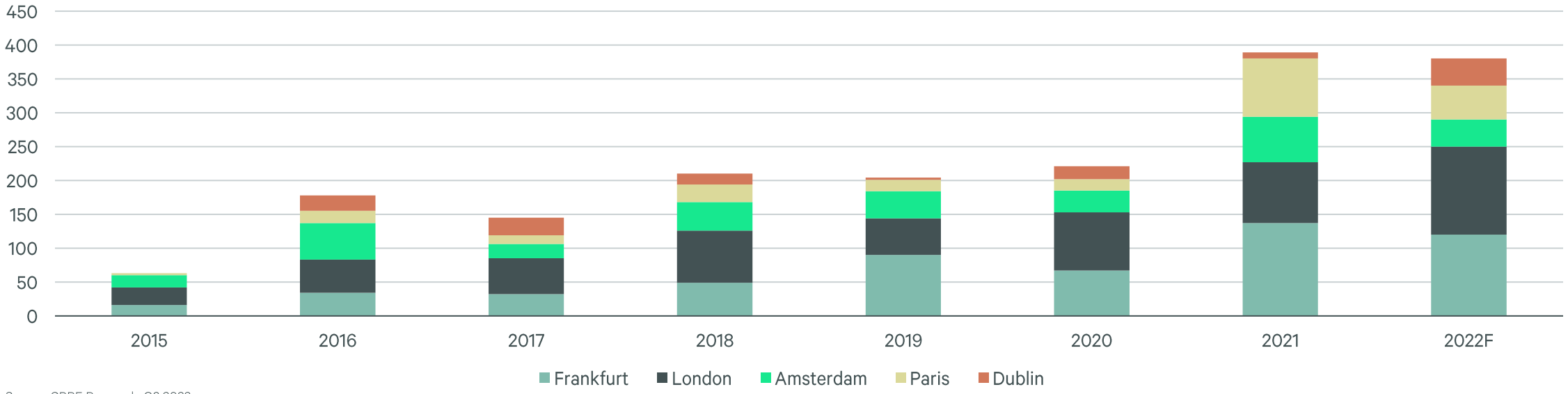
Q4 should be a different story as every market is expected to see exceptional demand except for Amsterdam. Over half (52%) of the projected 2022 take-up total will be realized in the final three months of the year, particularly in London, Frankfurt and Dublin markets, and it will be almost exclusively wholesale capacity.

Dublin is an interesting case in point. Almost all (39MW) of the 40MW of take-up in Dublin will be realized in Q4. The corresponding capacity to be delivered is virtually all pre-let.

Capacity is in high demand across the FLAPD markets. Hyperscalers need the capacity to build out availability zones in key submarkets, such as Slough in London, and increasingly in areas like the south of Paris.

On a related note, the pace of signings slowed to a relative trickle in Q3 compared to the first half of the year. However, the sum of all signings recorded in 2022 has already surpassed the 2021 total.

FIGURE 4: FLAPD market take-up, 2015 – 2022F (MW)



Source: CBRE Research, Q3 2022

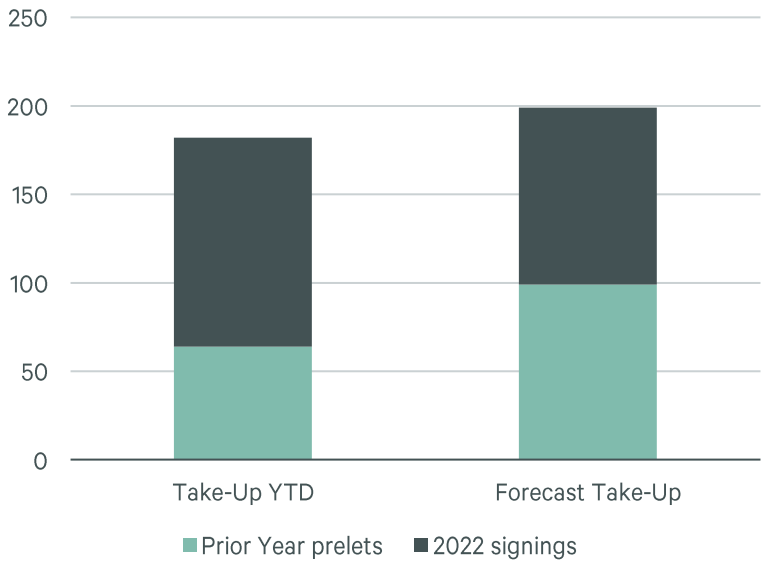
Pre-lets

Pre-lets are transactions that have been signed for future months or years. Prior-year pre-lets represent deals signed prior to 2022 but are recorded as take-up this year.

CBRE attributes take-up once the shell and core are delivered. 2022 signings represent deals signed in 2022 that will be recognised in the same year.

There was 26MW of take-up recorded in Q3, a sharp drop from the 113MW recorded in the previous quarter. We forecast 178MW of pre-lets signed in prior years that will be realised as take-up in 2022.

FIGURE 5: FLAPD take-up YTD and forecasted take-up (MW)



Source: CBRE Research, Q3 2022

Q3 activity

Frankfurt	Germany's financial capital is expected to have its second-best year of take-up ever despite a notable dearth of available capacity. Q3 was not representative of the expected annual demand however as <1 MW of take-up were recorded.
London	Take-up in Europe's largest market fell just shy of the 12+MW recorded in Paris last quarter. Almost three quarters of the take-up was a function of demand in Slough across a variety of estates in Q3.
Amsterdam	Demand in Amsterdam has been particularly weak by FLAPD standards this year and Q3 was no exception. Take-up of <1MW was recorded during the quarter; Q4 should be about the same.
Paris	The French capital's considerable growth trajectory continued in Q3 as take-up there exceeded all other FLAPD markets. Q4 is expected to be a stronger quarter in that regard.
Dublin	Like the first half of the year, there was very little demand to note in Q3. Dublin's take-up for the year is expected in Q4 with only a bit realized in Q3.
Deals signed	In Q3, the deals signed (39MW) represented a fraction of what was inked in the first half of the year. There were deals involving 200+ MW signed in the each of the first two quarters of 2022.

Vacancy

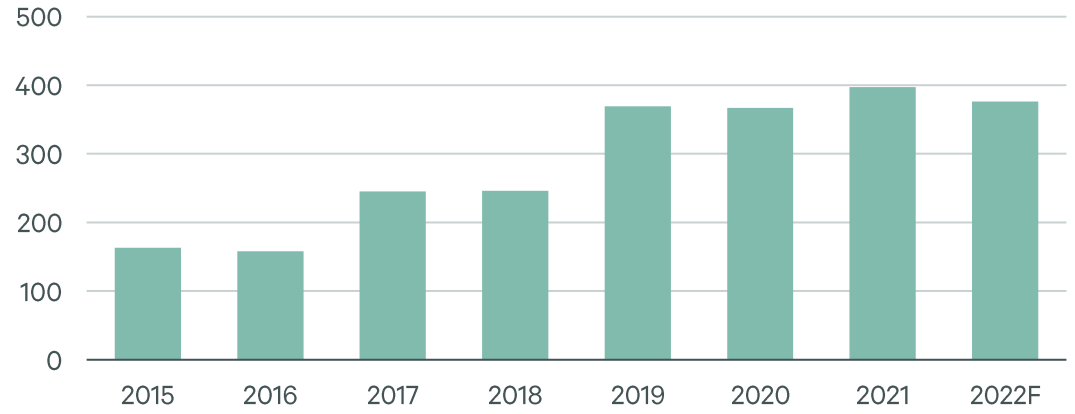
- Capacity is increasingly hard to source across FLAPD and the vacancy rates recorded this year reflect the noted scarcity factor. In Q3, the vacancy rate slipped to some degree in each of the five FLAPD markets
- The vacancy rate for Europe's five largest markets on a combined basis closed at 14.5% in Q3, a half percentage point lower than the 15% rate at the end of Q2. CBRE projects the vacancy rate will slip to below 14% by the time the year is over
- Availability remains stubbornly low across most FLAPD markets which is a problem for providers and hyperscalers alike. Data centre providers are adding ever higher amounts of capacity. However, strong demand by the hyperscalers and growing requirements from software-as-a-service providers and enterprises have meant capacity is often accounted for before it even hits the market
- Availability is lowest in Frankfurt (46MW), Paris (32MW) and Dublin (16MW). Availability is a poignant problem in Frankfurt where vacancy is expected to reach a new low by year end (6%)
- Availability has become a bigger issue in Frankfurt, for example, despite the near-record amount of new supply (107MW) CBRE expects to be delivered this year. Hyperscalers need the capacity to build out their availability zones and will sometimes pay higher prices on a per MW basis to ensure their requirements are met

FIGURE 6: FLAPD market vacancy rates, Q3 2022

Market	Q3 Vacancy (%)	Change on Q2 (%)
Frankfurt	7.2 ▼	-0.1
London	18.7 ▼	-1.0
Amsterdam	20.7 ▼	-0.1
Paris	9.7 ▼	-0.4
Dublin	10.2 ▼	-0.3

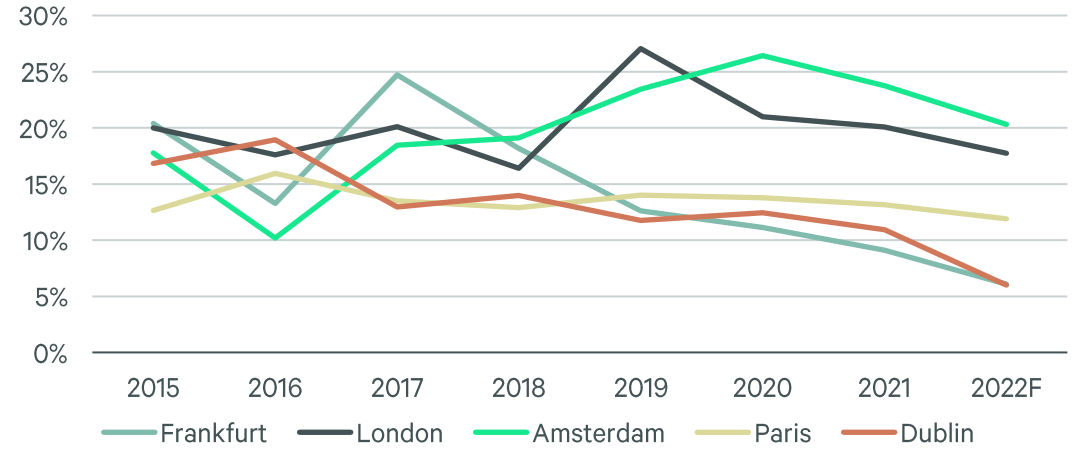
Source: CBRE Research, Q3 2022

FIGURE 7: FLAPD market availability, 2015–2022F (MW)



Source: CBRE Research, Q3 2022

FIGURE 8: FLAPD market vacancy rates, 2015–2022F



Source: CBRE Research, Q3 2022

Frankfurt

Demand for capacity remains high in Frankfurt, though operators are having to look further afield to source land and power out of necessity.

The City of Frankfurt introduced a much-anticipated 'development masterplan' in Q3 that limits developments to certain neighbourhoods where data centres are already located; a district heating plan will be implemented as well. This is seen by some as a reflection of current market conditions, given a lack of capacity in areas where data centres are clustered. It could also be seen as an opportunity for providers to continue their expansion plans in the designated areas.

Availability in Frankfurt is at a six-year low and its vacancy rate has never been lower, which makes any curb on data centre development potentially problematic given the demand for capacity in the financial capital of Germany.

Market Opportunities	Regulation is likely to lead to additional demand in Frankfurt as German regulations stipulate that cloud deployments of German companies stay in market. Moreover, EU regulations related to the transfer and storage of data are a driver of capacity to accommodate workloads in Germany.
Market Challenges	The local authorities could dissuade investment in Frankfurt with its recently-announced development masterplan. The areas zoned for data centre development are of limited utility and could fill up in as little as five years, according to the German Datacenter Association.

London

The short-term outlook for the London market remains strong as providers are set to deliver ever greater amounts of capacity, mostly for wholesale/hyperscaler purposes, from 2023 to 2025. Demand for wholesale capacity remains strong in Europe's largest market.

However, providers are finding delivery increasingly complex. Meeting hyperscaler demand over the medium to long-term (i.e. beyond 2025) is likely to become more challenging as well.

For one, total cost of project delivery in an already high-cost market is difficult to ascertain for colocation data centre providers in London, given soaring inflation. Moreover, securing power in west London, for example, is increasingly difficult given that key electricity substations aren't expected to have power available for years, if any is made available at all by the grid operator in the areas of concern.

Market Opportunities	Building new availability zones in parts of London where power is potentially easier to source. East London could serve as an example as there are established providers with operations in the area.
Market Challenges	Equally, it is not clear that hyperscalers are keen to have availability zones, a cluster of data centres in a region, built in areas further away from their established AZs even if power is more readily available elsewhere. That leaves providers to source land and power in highly-constrained submarkets, which is an increasingly difficult task.

Amsterdam

Demand for capacity in Amsterdam this year is rather muted compared to most other FLAPD markets. Little in the way of new wholesale capacity for hyperscalers will be delivered which is the primary reason for the market's expected limited growth in 2022. Instead, a disproportionate amount of new retail capacity (35%) compared to other FLAPD markets will be delivered.

Hyperscaler requirements in Amsterdam varies annually upon their needs. However, government intervention may be the reason for lower investment in the region. A national moratorium, imposed by the Dutch government earlier this year is still in place for builds of over 70MVA of customer power. Land prices have soared of late in Amsterdam, making expansion a more expensive proposition than ever too.

Market Opportunities	Amsterdam can better serve hyperscalers as it is relatively underpenetrated when colocation data centre capacity of the wholesale variety is considered. How that's done remains an open question, though expected work on a key new Liander substation in Schiphol and a select number of hyperscaler-ready developments make for a good start.
Market Challenges	Amsterdam remains a relatively small market wherein the government has taken an active role in data centre development. Those factors could lead hyperscalers and others to look elsewhere when deployments are considered.

Dublin

Dublin remains a vibrant colocation data centre market, even if its long-term growth prospects have been called into question of late given that providers won't be able to apply for a grid connection until 2028.

CBRE believes it will be Europe's fifth-largest leased data centre market in Europe for the foreseeable future. It is where almost all of Ireland's data centre activity takes place.

There are new schemes that will be delivered in the years to come despite the halt to new applications for new connections imposed by Eirgrid, Ireland's electricity grid authority.

What remains unclear is how providers can grow the market in the years to come if they're not able to even secure power. Hyperscalers are trying to become carbon neutral which may mean some energy alternatives won't be deemed feasible.

Market Opportunities	Addressing hyperscaler demand in Dublin, if not elsewhere in Ireland, with the help of colocation data centres. Even in Dublin, hyperscalers need more than self builds to fulfil requirements. More colocation data centre capacity will be needed in the long term.
Market Challenges	Ensuring there's sufficient capacity will be easier said than done given the constraints of the Dublin market. The first challenge will be to meet long-term hyperscaler demand, as the grid operator isn't accepting applications for new connections for the next five years. Dublin runs the risk of losing more hyperscaler business to other locales if it can't accommodate.

Paris

Paris is closing in on the Amsterdam market.

The French capital is the fourth largest market when total supply is considered. However, the difference between Paris and Amsterdam, the third-largest market in Europe, is expected to be nominal by the end of 2024.

Paris is maturing quickly as a data centre market, due partly to developments in the South that are expected to be delivered over the next two years.

Market Opportunities	For years, hyperscalers invested more heavily in London and Frankfurt availability zones. That is changing to a degree. Oracle and Google opened AZs this year. Hyperscalers are building or are looking to build out availability zones in Paris and are working with wholesale and build-to-suit providers to do so.
Market Challenges	Site acquisition is increasingly difficult in Paris especially in the north east, where the largest concentration of data centres can be found. It is a highly developed region and finding sites in the area can be difficult.

CBRE's Premier Colocation Report

CBRE has created the sector's Premier Colocation Report to provide the industry with the most in-depth market analysis in Europe. The report provides access to the key metrics specific to each FLAPD market on a quarterly basis.

The report is comprised of take-up, supply, availability, absorption (all of which are forecasted) as well as market maps, new schemes in the supply pipeline, colocation pricing (rental ranges) and occupier and investment commentary.

For more details or to register for a demo of the report click here

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Supply	Aggregated, annual and YTD – chart	✓	✓
Let and available capacity	Aggregated, annual and YTD – chart	✓	✓
Take-up	Aggregated, annual and YTD – chart	✓	✓
High-level market commentary and quarterly highlights		✓	✓
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Occupier take-up review and trends			✓
Colocation pricing analysis			✓
Leading market focus			✓
Investment focus			
Corporate M&A tracker			✓
M&A market commentary			✓
Investment market commentary			✓
+ All charts and data available by individual market			✓
+ Data table with time series available for all charts			✓
+ Wholesaler and retailer split where appropriate			✓
+ Data tables available in Excel for in-house design and analysis			✓

Definitions

Supply

Retailer colocation supply comprises fitted data centre space only – unbuilt shell phases of the data centre are excluded.

Wholesaler colocation supply includes both fitted and shell data centre space. Typically wholesale operators sell shell space which is built out to suit customers.

Vacancy rate

The vacancy rate is a function of availability/total supply.

FLAPD markets

The five largest colocation markets in Europe. FLAPD is an acronym used to represent Frankfurt, London, Amsterdam, Paris and Dublin collectively.

Availability

Retailer availability of space is based on fully fitted space, vacant and available to sell.

Wholesaler availability is based on all vacant space.

Take-up

This comprises data centre capacity sold at retailer and wholesaler colocation facilities in the relevant quarter where that capacity is in our supply figures. Capacity that will be realised as supply in future is considered “pre-leased”.

Headline signings

Headline signings are a measure of contracted capacity plus pre-lets during any period of time.

Market absorption

Market absorption is the number of years it would take current vacant supply to be fully let based on the fixed average take-up of the previous five years (i.e. not including take-up in the current year).

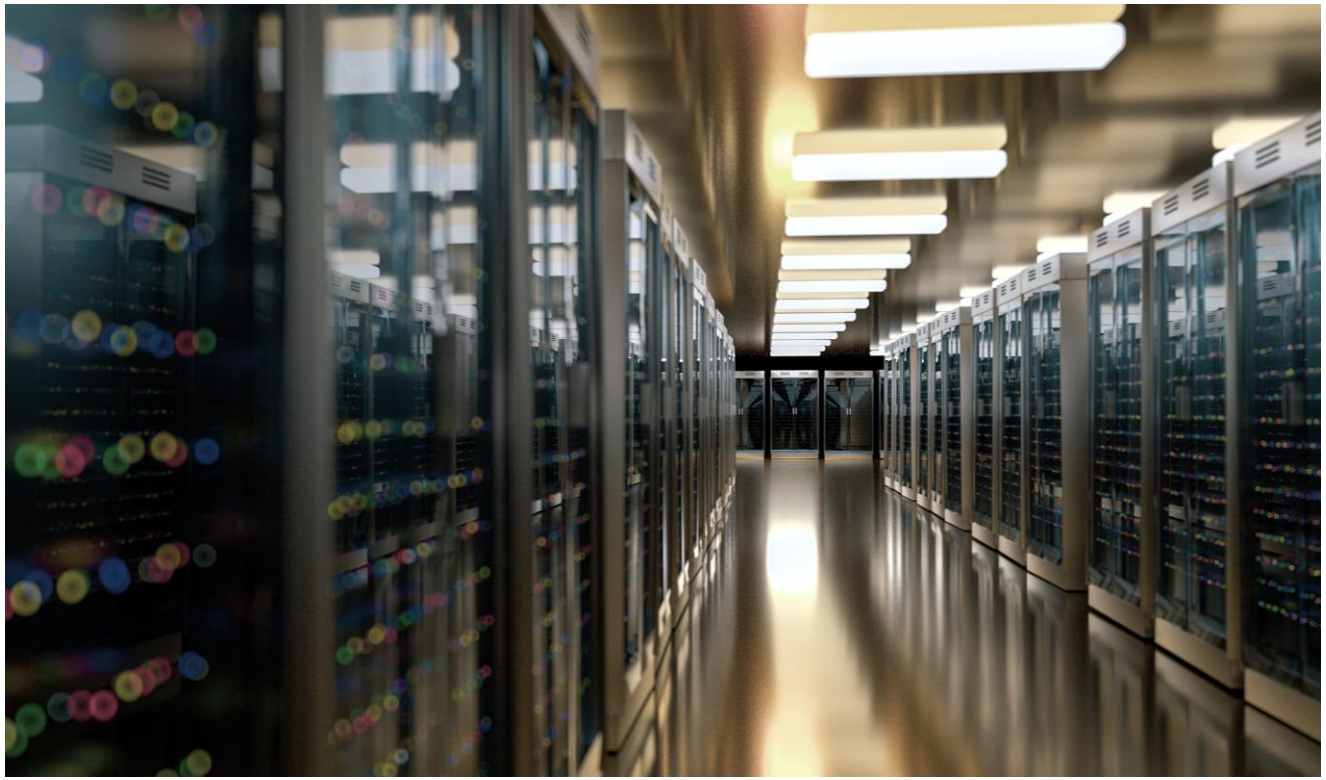
Space type

Shell: Shell & core space is the base real estate of a data centre, a wind and watertight structure with exposed floor and ceiling slabs and exposed finishes to the walls. The landlord obtains permissions for data centre use and makes provisions for tenants to install their own chillers and back-up power generating equipment, or the landlord would provide these on a build-to-suit basis.

In addition, an incoming diverse raw HV (high voltage) power supply would usually be provided.

Fitted: Fully fitted space is ready for tenant IT equipment to be installed almost immediately or subject only to minor works being carried out to account for bespoke equipment and layouts.

Europe Data Centres



CBRE Data Centre Solutions

CBRE formed a Data Centre team in 1994 to address the specialised technical real estate needs of high-tech firms such as telecommunications companies, data centre operators and corporates.

Core technical real estate services provided by the CBRE Data Centre Solutions team include:

- Acquisition – One-off assignments, worldwide network rollouts
- Disposal – One-off assignments, multi-site marketing campaigns
- Investment – Due diligence and transactional services
- Consultancy – Consolidation strategies, mergers & acquisitions
- Asset Valuation – Bank, corporate
- Project management, development monitoring, due diligence, building and M&E surveys
- Research – Market statistics, forecasting
- IT Consultancy

CBRE has monitored worldwide colocation supply statistics since 1999. This bulletin relates only to the four largest European Colocation markets. Additional market statistics are available on request.

To learn more about CBRE Data Centre Solutions group, please visit:

www.cbre.co.uk/services/industries-and-specialties/data-centre-solutions

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Contacts

Andrew Jay

Head of Data Centre Solutions,
Advisory & Transaction Services, EMEA
D:+44 (0)20 7182 3461
M: +44 (0)7802 361 351
E: andrew.jay@cbre.com

Kevin Restivo

Head of Data Centre Research,
Advisory & Transaction Services, EMEA
D: +44 (0)20 3257 6669
M: +44 (0)7876 742 554
E: kevin.restivo@cbre.com