

Europe Data Centres, Q1 2017

Strong first quarter sets the scene for 2017

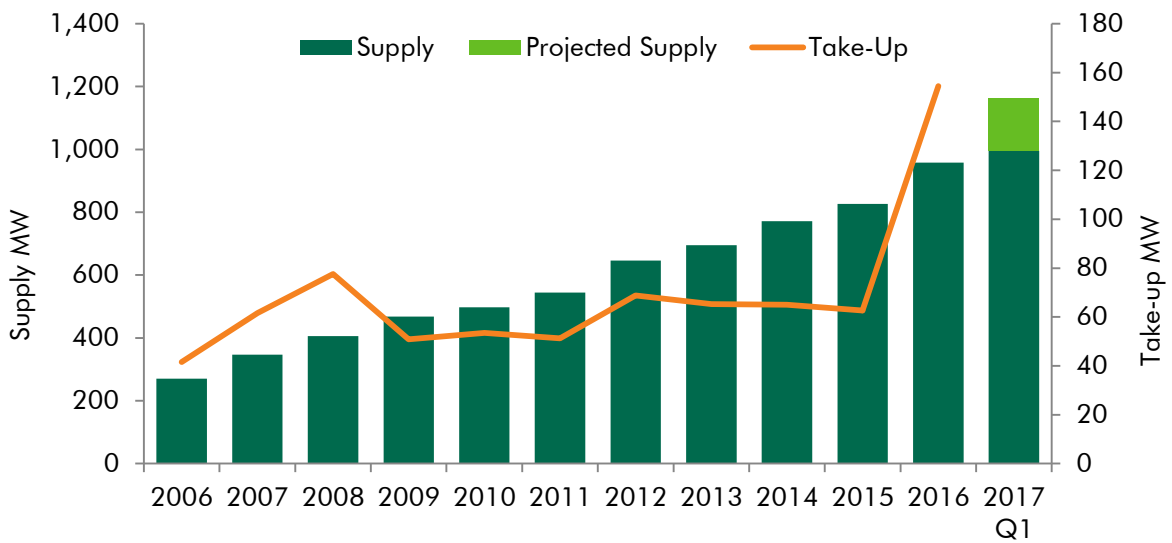
▲ Supply
3.9%

▲ Availability
11.9%

▼ Colocation Take-up
-64%

Figure 1: Europe Colocation Supply, Take-up and Year-End Projection as at Q1 2017

*Arrows indicate change from previous quarter



Source: CBRE Research, Q1 2017

QUARTERLY REVIEW

Q1 2017 becomes the fourth quarter in a row to see over 24MW of take-up across the four major markets. Prior to this we had not passed 21MW in any quarter for two years and 19MW of take-up at this time last year was considered as significantly above-par. Our long-standing quarterly average of 15MW of take-up across the markets can no longer be considered 'par'.

This large-scale take-up has led to multiple providers planning or building out new schemes. Figure 1 shows CBRE's projection that we will see 167MW of new supply across Frankfurt, London, Amsterdam and Paris in the next three quarters. To maintain the 16% current vacancy rate we will need to see 47MW of take-up in each of the next three quarters.

Q1 SNAPSHOT

- 27MW of take-up in 2017 Q1; over 7MW above the Q1 2016 figure.
- 38MW of supply added to the main markets, with key facilities and expansions in London as well as a new entrant in Frankfurt.
- Frankfurt, London, Amsterdam and Paris reach 996MW in size; we expect to see 167MW more supply added to these markets this year.

SUPPLY & AVAILABILITY

Total market supply in the four major markets reached 996MW at the end of Q1 2017. This represents an increase of over 38MW in the quarter alone and an increase in supply of 20% in the past 12 months across the FLAP markets of Frankfurt, London, Amsterdam and Paris. This annual growth is substantially more than the 8% CAGR in supply from 2012 – 2016.

18.5MW of new supply in Q1 was added in London. Already Europe’s largest market, and the second largest globally, London continues to see significant new developments and expansions. In Q1 Zenium launched its London Two facility, acquiring and adding capacity at the former Infinity Stockley Park site. Colt also expanded its capacity at Welwyn as the rate of take-up of current space continues at pace. There will be more to come in London as the year goes on: VIRTUS have announced that they will build LONDON3 at Slough, which will add capacity adjacent to its current Slough site and we expect Gyron to finish delivery of the second building on its Campus site in Hemel Hempstead.

Frankfurt saw the addition of 9.5MW of new supply in Q1 2017, to reach 213MW in size. This new capacity largely came from Keppel who launch in the market as a new colocation

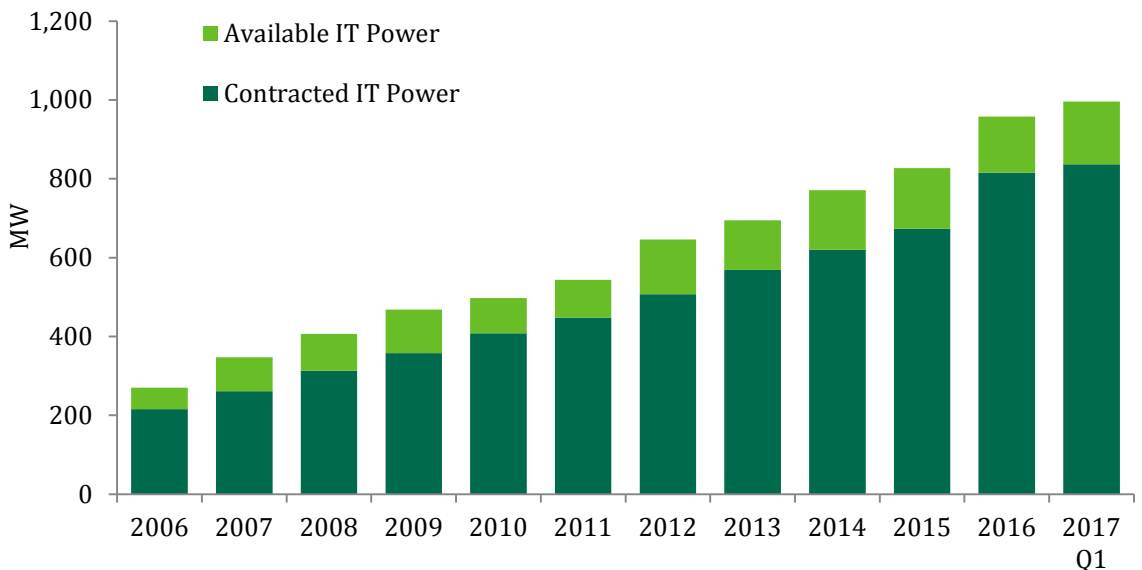
provider having acquired a former corporate data centre at the end of 2016. This new capacity will ease some concerns of a lack of fitted, wholesale space in the market currently. In the year we will also see maincubes, another new entrant, launch its first facility in Frankfurt.

Amsterdam now sits at 212MW in size after 8MW was added in Q1 2017. This market, like the others, is primed for increased development in 2017 as we will imminently see Digital Realty deliver their new wholesale capacity in Hoofddorp, and further down the line we expect to see new entrants to this market as well, such as datacenter.com and others.

There was little change to the landscape in Paris during Q1, as the market rose marginally to 148MW. However, with Iliad working on DC5, and Data4 able to deliver new halls, as well as expansions at Equinix and Interxion we will see an increase in both wholesale and retail supply this year.

Overall, retailers are still responsible for 57% of the total supply across the big four markets; although in the past 12 months alone, wholesalers have added 67MW more to new supply than retailers in the same period.

Figure 2: Europe Colocation Supply and Availability as at Q1 2017



Source: CBRE Research, Q1 2017

TAKE-UP & DEMAND

Take-up across the FLAP markets in Q1 2017 was 26.6MW. Pre-2016 this would have been nearly double the five-year average for quarterly take-up, but given the incredibly strong past year, it records as only the third-largest quarterly take-up figure in the past four.

If we see 26.6MW per quarter each quarter this year we will hit over 100MW of take-up for the second consecutive year. No full year has beaten 80MW previous to this.

This continued rate of demand shows no immediate signs of slowing down. We are aware of multiple deals in the market, some of which may well sign during Q2 to ensure continued momentum in the first-half of 2017.

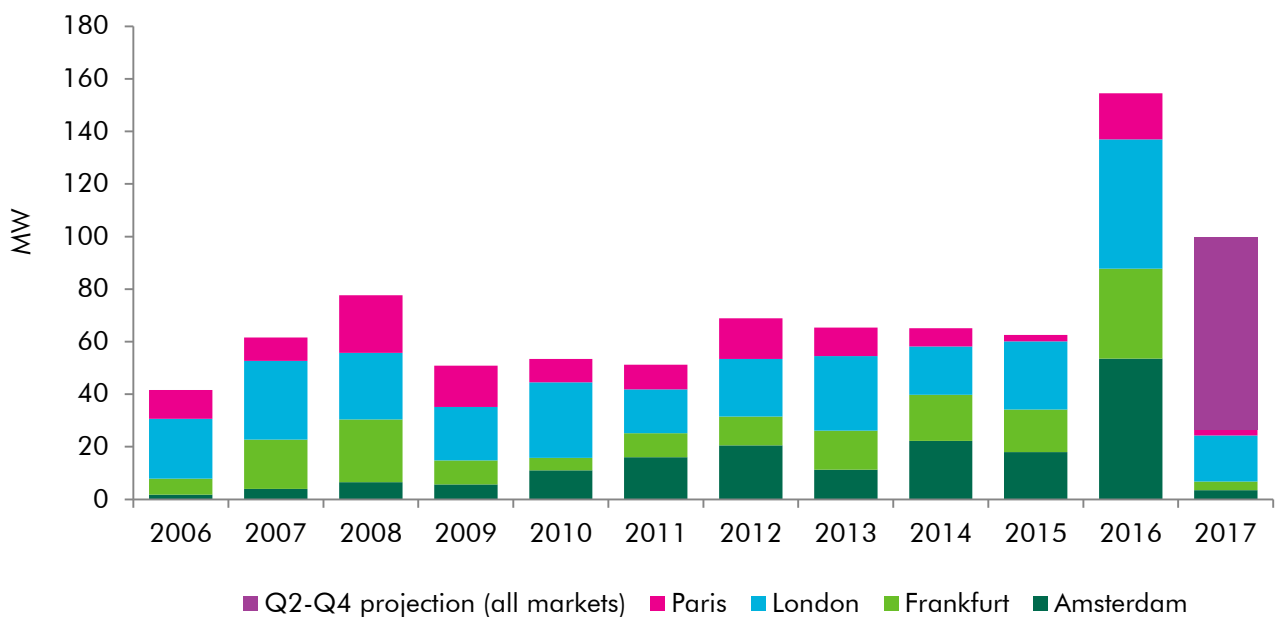
London was responsible for the majority of take-up activity with 17.5MW of IT power transacted in the UK capital during Q1. A significant portion of this was a continuation of the wave of demand that swept through Europe last year. We predict a strong year for the London market as it continues its good form and further strengthens its position as the premier market in Europe.

In total, Amsterdam, Frankfurt and Paris were responsible for 3.5MW, 3.3MW and 2.3MW of transacted IT power in Q1 respectively. These markets did, however, see some pre-let activity that will be included in Q2 and Q3 once these facilities become operational.

Out of this take-up, the majority of deals were signed by retailers, which is adverse to the trend of the past year.

Given the momentum built up in 2016 it was not surprising to see a strong start to this year. The key question is whether 2017 will surpass last year's record breaking 155MW. Our view is that we will have another really strong year of at least 100MW which is again substantial when you think that the record take up prior to 2016 was 78MW.

Figure 3: Europe Colocation Take-up as at Q1 2017



Source: CBRE Research, Q1 2017

MARKET ABSORPTION

Strong demand in the four FLAP markets has led to a decrease in absorption rates across all markets. Significant amounts of new supply coming to market in 2016 prevented these decreases from being more dramatic.

Amsterdam remains the market with the lowest absorption rate of 1.0, and Frankfurt also lies below 2 years, with a net absorption rate of 1.5. We consider these markets to be undersupplied. However, if Q1 is an indicator of take-up for the rest of 2017, both markets will be able to manage the balance of new take-up against available supply.

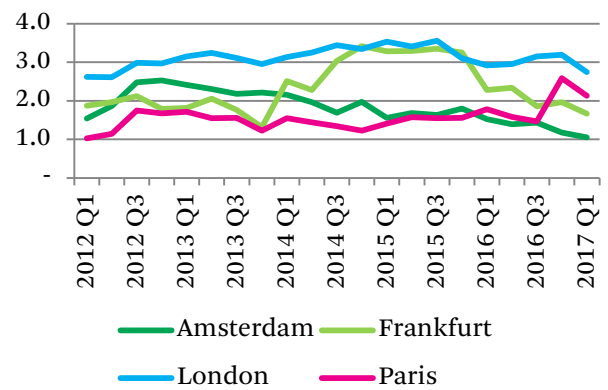
Paris has an absorption rate of 2.1 years, which is in equilibrium. The market seems well placed, with both fitted and shell vacancy, to manage the levels of demand we currently see.

It could be argued that with an absorption rate of 2.7 years, the London market is oversupplied, however strong demand continues to keep the market in equilibrium.

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).

Figure 4: Market Absorption Based on Average Take-up of Previous 5 Years



Source: CBRE Research, Q1 2017

Q1 2017 KEY STATISTICS

Figure 5: Key Statistics – year on year comparison (MW)

		Supply	Availability	Colocation take-up (quarterly)	Colocation take-up (year to date)
Amsterdam	Q1 2017	212	26	3.5	3.5
	Q1 2016	164	27	2.9	2.9
Frankfurt	Q1 2017	213	31	3.3	3.3
	Q1 2016	184	31	8.3	8.3
London	Q1 2017	423	79	17.5	17.5
	Q1 2016	354	65	5.9	5.9
Paris	Q1 2017	148	23	2.3	2.3
	Q1 2016	128	16	2.3	2.3
European Tier 1 Total	Q1 2017	996	159	26.6	26.6
	Q1 2016	830	139	19.4	19.4

Source: CBRE Research, Q1 2017

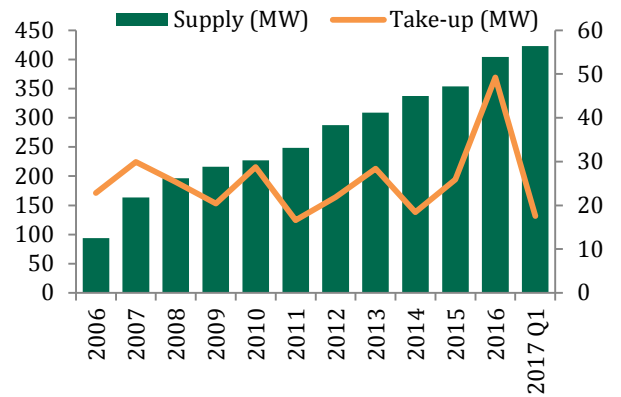
LONDON

London took its excellent form from 2016 into the first quarter of 2017; we saw momentum from cloud service providers increasing their footprint in the market. We predict that this will continue throughout 2017.

This strong demand gives providers the confidence to continue with build programs in the market.

Following the triggering of Article 50 in Q1, we have not seen a decrease in demand in London to date. We may get a clearer view of its impact on decision-making towards the end of this year as details of Brexit become clearer.

Figure 6: London Supply and Take-up 2006-2017 Q1



Source: CBRE Research, Q1 2017

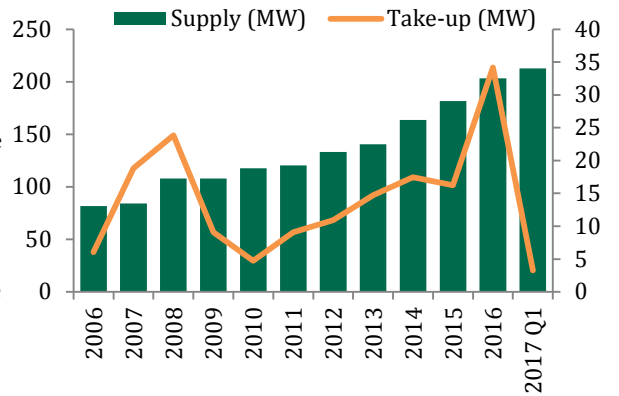
FRANKFURT

Frankfurt, like Amsterdam and Paris, had a relatively quiet Q1. We do not expect this to be the status quo for 2017 as we are aware of sizeable colocation requirements currently in the market that could close in the next quarter or two.

Keppel provided the first tranche of supply to the Frankfurt market in 2017 with its new wholesale colocation facility. We expect new schemes to be brought on by both established European operators and new providers during 2017.

Given the continued importance of Frankfurt as a major European hub, we expect market activity in Q2 to provide a substantial increase on the deals signed in Q1.

Figure 7: Frankfurt Supply and Take-up 2006-2017 Q1



Source: CBRE Research, Q1 2017

AMSTERDAM

Amsterdam saw what may be considered an underwhelming 3.5MW of take-up in Q1. However, in context, the market saw an average of 3.2MW of take-up per quarter in the first three quarters of 2016, before a huge Q4 saw the market finish with 54MW transacted in the year.

Amsterdam will be another market seeing new entrants during 2017 as well new schemes from established operators. We are aware of three new operators who will be entering the Amsterdam market in 2017.

Amsterdam's vacancy rate of 12.4% and its absorption rate of 1.0 years is the lowest of the FLAP markets and if we do see substantial new demand in the next two quarters, supply in the Dutch capital could come under considerable threat before new schemes bear fruition.

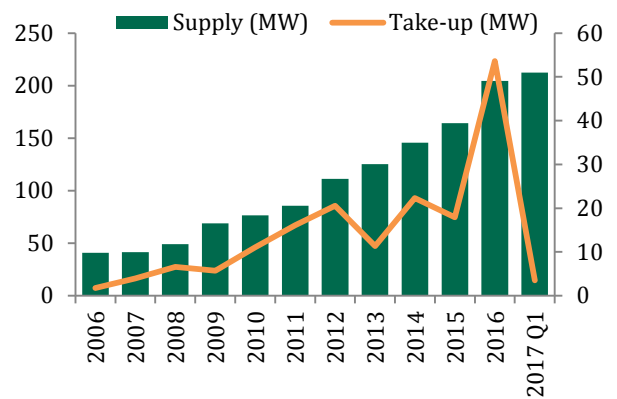
PARIS

After its strongest performance in seven years during 2016, Paris saw 2.3MW of take-up in Q1 2017 - almost equal to its entire total for 2015. We predict that the cloud service providers are not finished with the market yet and that we may see a new wave of demand from this client base during the year, as well as increased enterprise demand.

Political and European concerns have been somewhat calmed with the election of Emmanuel Macron, so there may be increased confidence from occupiers to deploy IT infrastructure in Paris.

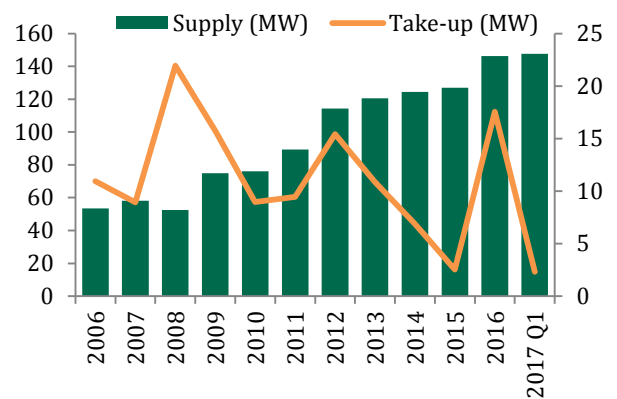
Given the expectation of increased demand in the French market and the shell space available, we expect to see a stronger level of build-to-suit or pre-let activity in Paris during this year.

Figure 8: Amsterdam Supply and Take-up 2006-2017 Q1



Source: CBRE Research, Q1 2017

Figure 9: Paris Supply and Take-up 2006-2017 Q1



Source: CBRE Research, 2017 Q1

DEFINITIONS**SUPPLY**

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

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

AVAILABILITY

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

Wholesale availability is based on all vacant space.

VACANCY RATE

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

COLOCATION TAKE-UP

This comprises data centre space sold at Retail and Wholesale colocation facilities in the relevant quarter.

EUROPEAN DATA CENTRES

We use the four largest markets in Europe: Frankfurt, London, Amsterdam and Paris (FLAP Markets) to represent the European market.

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 make 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.

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).

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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
- Consultancy – consolidation strategies, mergers & acquisitions
- Asset Valuation – bank, corporate
- Project management, development monitoring, due diligence, building and M&E surveys
- Research – market reports, statistics, take-up forecasting

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: http://www.cbre.co.uk/uk-en/services/global_corporate_services/data_centre_solutions. To access additional research reports, please visit the Global Research Gateway at: www.cbre.com/researchgateway.