VANTAGE™
DATA CENTERS

FOLLOWING THE HERD

Colocation choices UK

FOLLOWING THE HERD?

Twenty years ago, colocating as close as possible to communications hubs – like London – made sense. But today, you can get much more for less by moving to somewhere like Cardiff

The UK's 'M4 corridor' is well-known. At one end of the corridor sits London, of course, serviced by one of the world's busiest airports, and at the other, 140 miles west, lies the city of Cardiff, the capital of Wales. All the way along the M4 motorway can be found the global and regional offices of major multinationals, as well as technology companies of all kinds.

Furthermore, Cardiff itself is increasingly becoming a tech hub in its own right.

Despite this, when it comes to data center colocation, the first instinct typically remains London, while Slough, which is only 20 miles west of London and directly under planes' flight paths into and out of Heathrow, is also filling up and, as a location, is increasingly struggling to meet the power needs of every organization demanding increasingly limited data center space.
But the big question is, why the herd instinct?

Do data centers really need to be concentrated in particular locations, such as London? What benefits do big city colo users receive in return for their monthly bills? And are there better options out there that can, say, accommodate anything from an SME's enterprise servers to a university research department's high-performance computers (HPC)?

Once-upon-a-time in London

The popularity of London, says Simon Bearne, senior director, sales, at Vantage, is very much a historical accident – the result, he suggests, of the way in which communications in the UK developed in the early years of the internet.

"It all grew from where the communications were located. If you turn the clock back 15 or 20 years, there wasn't much by way of broadband communications out in 'the sticks'. What there was, was concentrated in London and, in particular, around the 'carrier hotels' of Telecity and Telehouse, which were among the early pioneers of the internet in the UK. If you wanted to interconnect easily, you needed to be in the city to do it," he says."

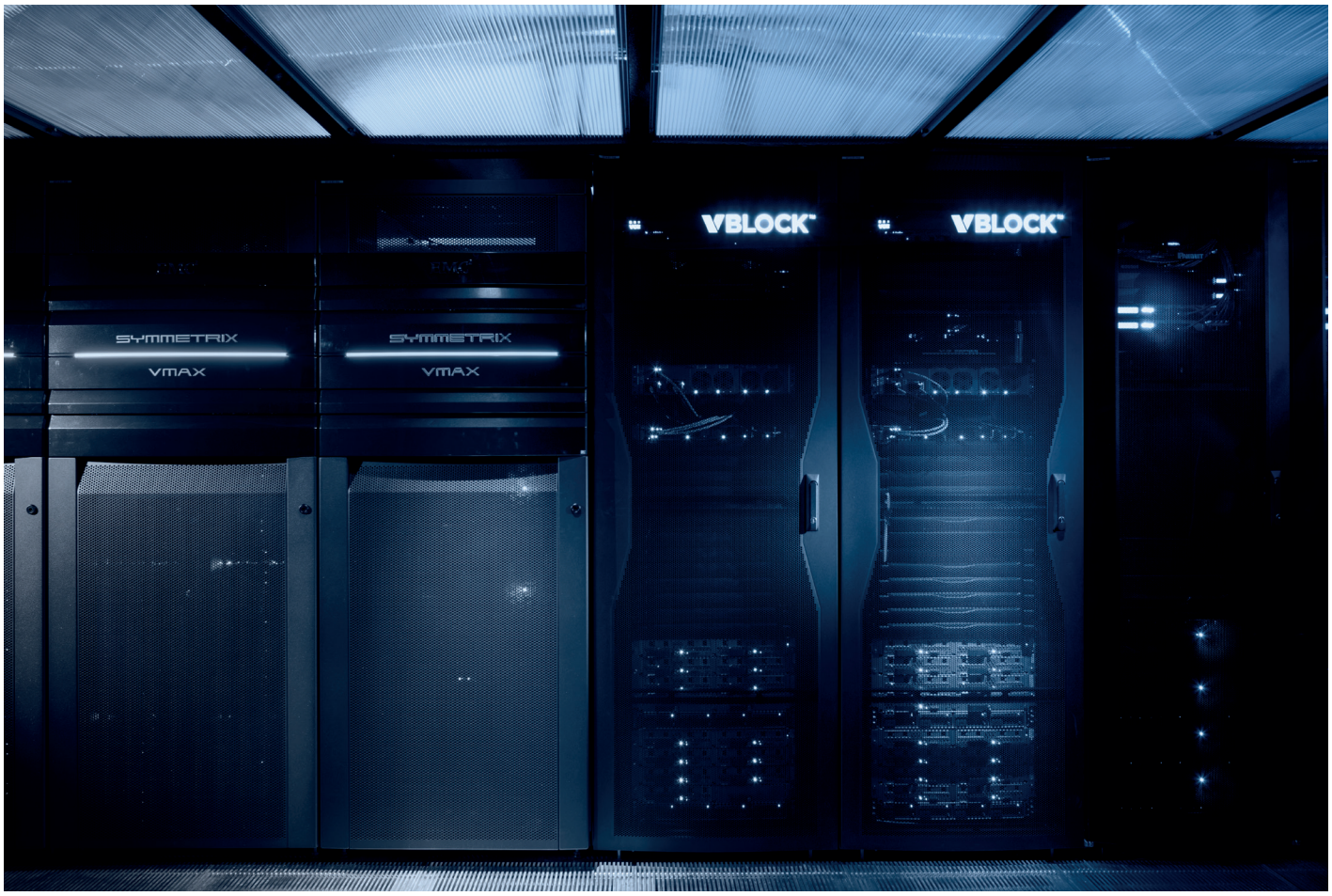
Telecity and Telehouse were go-to locations during the first dot-com boom in the UK due to the high-speed, carrier-neutral national and international communications connections they offered at their London Docklands' data centers.

Bearne continues: "Then, of course, there's a lot of big businesses with head offices in London, including some of the world's biggest banks and other financial institutions. Their IT guys wanted to be able to walk to their data centers and colo facilities, and be able to get hands-on with their servers. After all,servers could be very temperamental, so they needed to be able to pile into the data center whenever they felt they needed to."

And, in the same way that, say, Hatton Garden attracts the best jewellers and, hence, that's where potential customers go for the finest jewellery, data center operators became concentrated in London: because it had historically offered the best connections, was most accessible to the biggest businesses in the UK and, therefore, that's also where potential customers expected them to be.

The same appears to be true the world over, adds Bearne, even if the

> *"The SuperGrid connection in South Wales also makes it easy to get near unlimited levels of power, so Vantage can support high power customer requirements, including high-density platforms" -* ***David Sandars, Vantage***



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logistical and business arguments for such data center concentrations no longer really stack up.

First, there are the well-aired difficulties of providing the energy capable of powering so many data centers in such tight concentrations of data centers. London has been subject to periodic electricity outages over the past couple of decades, including at least two that have even taken down rail services.

Second, while many data center operators increasingly focus on on sustainability, there are concerns that in parts of the capital it will be difficult to obtain renewable energy or support large-scale data center deployments. This feeds into a third and more immediate issue: the availability of appropriate real estate and supporting infrastructure in one of the world's most expensive cities.

In any case, adds Bearne, locating critical enterprise IT equipment close to head offices, with backup in another data center in the same city, has been deprecated by arguably the world's biggest financial regulator – the US Federal Reserve – on business continuity grounds.

"At an enterprise level there's an increasing best practice of separating assets. Indeed, a Federal Reserve paper recommends that organizations should pick up their major assets and separate them by at least 100 miles. That all points to 'out of town'. If you look at our facility in Cardiff, it's a hyperscale data center that's equivalent in size, space and power to some of the biggest American facilities.

"Someone can come here, and take up as much space as they need in the knowledge that they can come back and speak to us in three, five or seven years and take more. One of the problems of big city data centers, like London, is that clients put their workloads into them, but when they need more they say, 'sorry, we're full'," says Bearne.

"Slough is struggling with limits on power and land in terms of master planning," he adds, pointing out that the demand for data centers over the next five years in terms of megawatts alone – let alone land – almost certainly can't be delivered.

Finally, there's the sheer cost of running a data center in London or, indeed, many capital cities around the world; costs that are inevitably added-on to monthly bills. For example, there's insufficient land available that's suitable for light industrial use in and around central London, and what there is will come at a premium rate, pushing up rents for data center customers. In good locations outside of London, this is much less of an issue.

This strategy can even offer advantages in terms of infrastructure, not just cost.

Vantage's CWL1 data center in Cardiff, for instance, plugs right in to the UK's power grid – no substation required.

Besides, adds Bearne, the latency arguments for siting everyday enterprise IT close to the point of use are no longer relevant, unless it's a financial institution engaged in high-frequency trading, or a similar niche, where every hundredth of a microsecond in response times is important.

Forrester principal analyst Paul Miller agrees: "For use cases where network latency is not the most important factor determining location, other considerations should come into play. Easy access to cheap and abundant power is important, and there's growing interest in being able to guarantee that the power is from renewable sources like wind, sun or hydro. Cheap land might also be a factor. So, too, might be proximity to an educated workforce that isn't already over-provided with well-paid jobs."

Location, location, location

Given the costs and other disadvantages of locations in the world's biggest cities, new options are opening up in the provinces, with Vantage's Cardiff data center offering one of the biggest, most fully featured sites in Europe.

Its Cardiff CWL1 data center campus currently runs one 72MW facility. When completed, it will combine three data centers on a campus of more than 20 hectares and 148MW of critical IT load, designed and built to the highest industry standards, including UK government and military specifications.

What is more, says David Sandars, business development manager at Vantage Data Centers UK, Cardiff as a colocation center offers a range of other benefits. In addition to the city of Cardiff, it is within commuting range of the tech hubs of Bristol and Bath, and also therefore of three highly rated universities with their supply of technically competent graduates.

Cardiff University also has its own technology hubs of biocomputing, genomics research, bio-imaging research and much more.

The Welsh government, perhaps not surprisingly, is keen to attract tech businesses to Wales and, in terms of environmental factors, Wales' rugged landscape is future-proofed against potential climate change events.

Perhaps best of all, in the current energy constrained environment, is the unique direct connection to the 400kV 'SuperGrid', bypassing all the potential faults that data centers can be subjected to via the distribution network.

"The SuperGrid direct connection in South Wales also makes it easy to get almost unlimited levels of power, so Vantage can support high power customer requirements, including high-density platforms," says Sandars.

Some of these benefits are already being sniffed out by ambitious tech start-ups, as well as much larger businesses, says Justin Leese, chief technology officer of Ogi Wales, although the promotion effort to attract tech businesses to Cardiff has, until now, left much to be desired, he admits.

"Cardiff is already a top-tier data center location. Unfortunately, it has been a closely guarded secret as we've collectively failed to promote it as such. This is in contrast to places like Dublin, Ireland, which has been heavily promoted as a prime tech destination. But other facilities are now springing up in the Cardiff area, such as the CGI data center in Bridgend and hosting facilities at Cardiff University's Advanced Research Computer site," he says.

As a result, competition in Cardiff among data center providers is starting to rev up, and companies like Ogi Wales are able to put back-up and other services into third-party facilities close by, while using Vantage's CWL1 facility as their primary data center (along with a number of big-name users). And more competition between providers can only be good for customers and the market in general.

So, just as the Covid pandemic has led to a surge in working from home, with many people questioning whether the daily commute into the big city is really necessary, it makes sense to ask the question of whether major IT assets really need to be located in London.