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Data Centre Barometer - March 2009

The Jones Lang LaSalle Data Centre Barometer

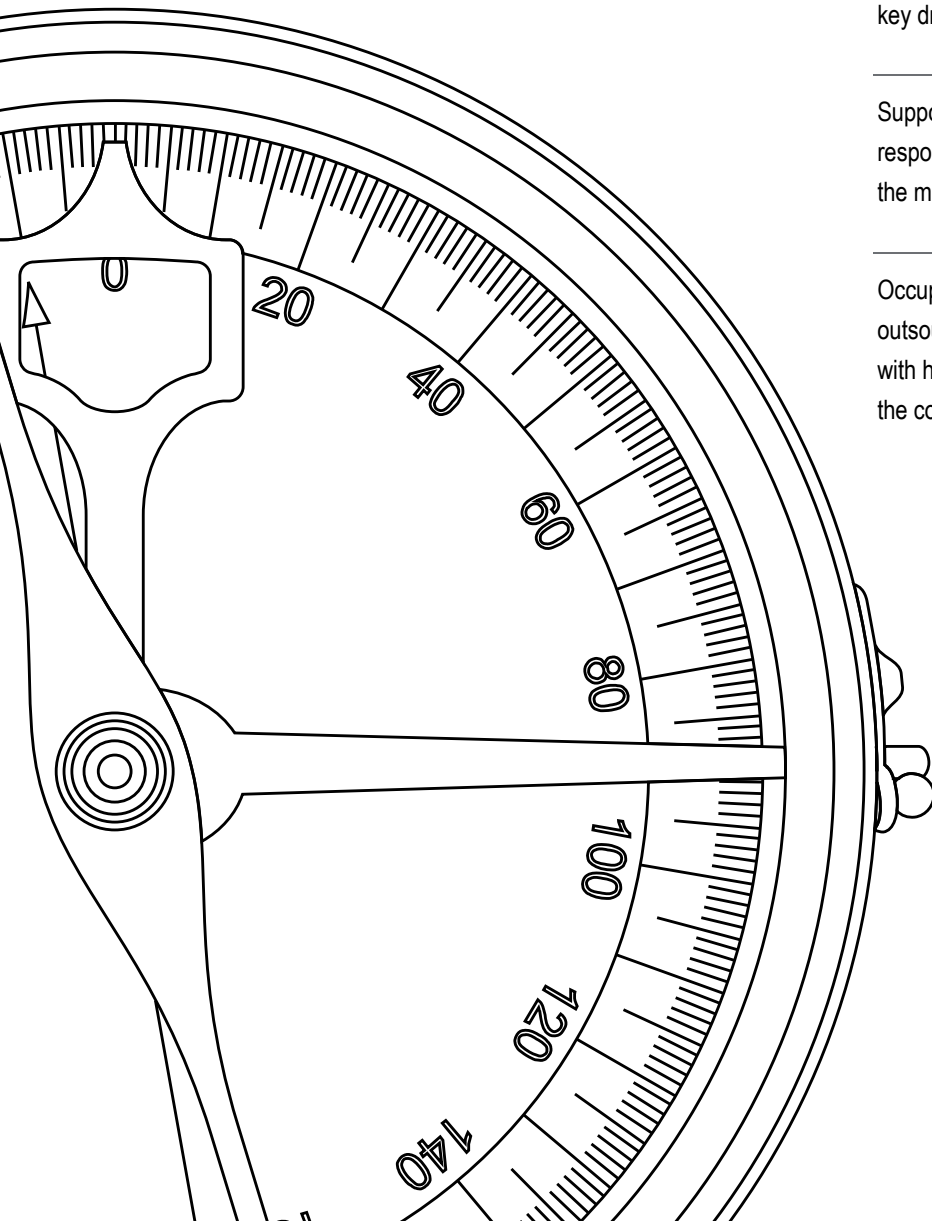
March 2009 – Issue 1

90% of all occupier, developer and investor respondents have increased their data centre footprint during 2008, two thirds by over 20%

General business expansion or contraction was thought to be a key driver for change to data centre occupation

Support for green issues within the industry continues, but our respondents agreed that the lack of power to run IT systems was the most important driver underpinning data centre strategies

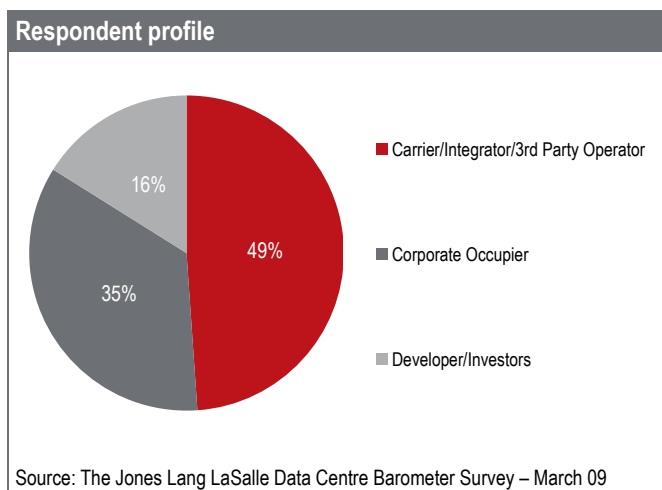
Occupier respondents appear more willing to embrace outsourced data centre solutions for their occupation strategy, with half indicating that this option would be more prevalent over the course of 2009



The Jones Lang LaSalle Data Centre Barometer

Welcome to the First Edition of the Jones Lang LaSalle Data Centre Barometer, our tri-annual publication focussed on the European data centre and mission-critical real estate markets.

The publication will include a guest feature on topical areas of the market, as well as the results of an independent market survey reflecting the views and expectations of key industry stakeholders. The responses considered encompass corporate occupiers, investors, developers and third party operators from across Europe. In total, respondents controlled data centre portfolios of circa 9.5 million sq ft of technical space. Their sentiments were collected, aggregated and analysed by leading independent data centre consultancy, iXConsulting. All of their analysis was undertaken within iXConsulting, with no individual response identifiable within this report.



Whilst the woes of the mainstream real estate market are very public, our first survey confirms that the data centre market can be quietly optimistic. Although not 'recession proof', its hybrid position somewhere between real estate and technology (with a degree of statutory compliance thrown in for good measure) goes some way towards insulating it from many of the factors which are dragging other sectors of the economy down.

In our experience, we are beginning to see banks treating data centre deals as infrastructure or power sector deals when they consider lending criteria, and not using mainstream real estate lending criteria. The next stage will be for the pension and investment funds to recognise this, and to adjust their market exposure accordingly.

The complex and opaque nature of data centre transactions has meant that the sector is rarely considered in general market commentaries, but as our survey indicates, the responses are guardedly positive for the near term future of the sector. In this market, supply closely aligns with demand; the development pipeline is not as astronomic as those who wish to decry the industry claim, and cannot all come on stream at one time. Thus the market looks set to continue on its path of healthy growth and sustained demand through the year.

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Respondent Analysis

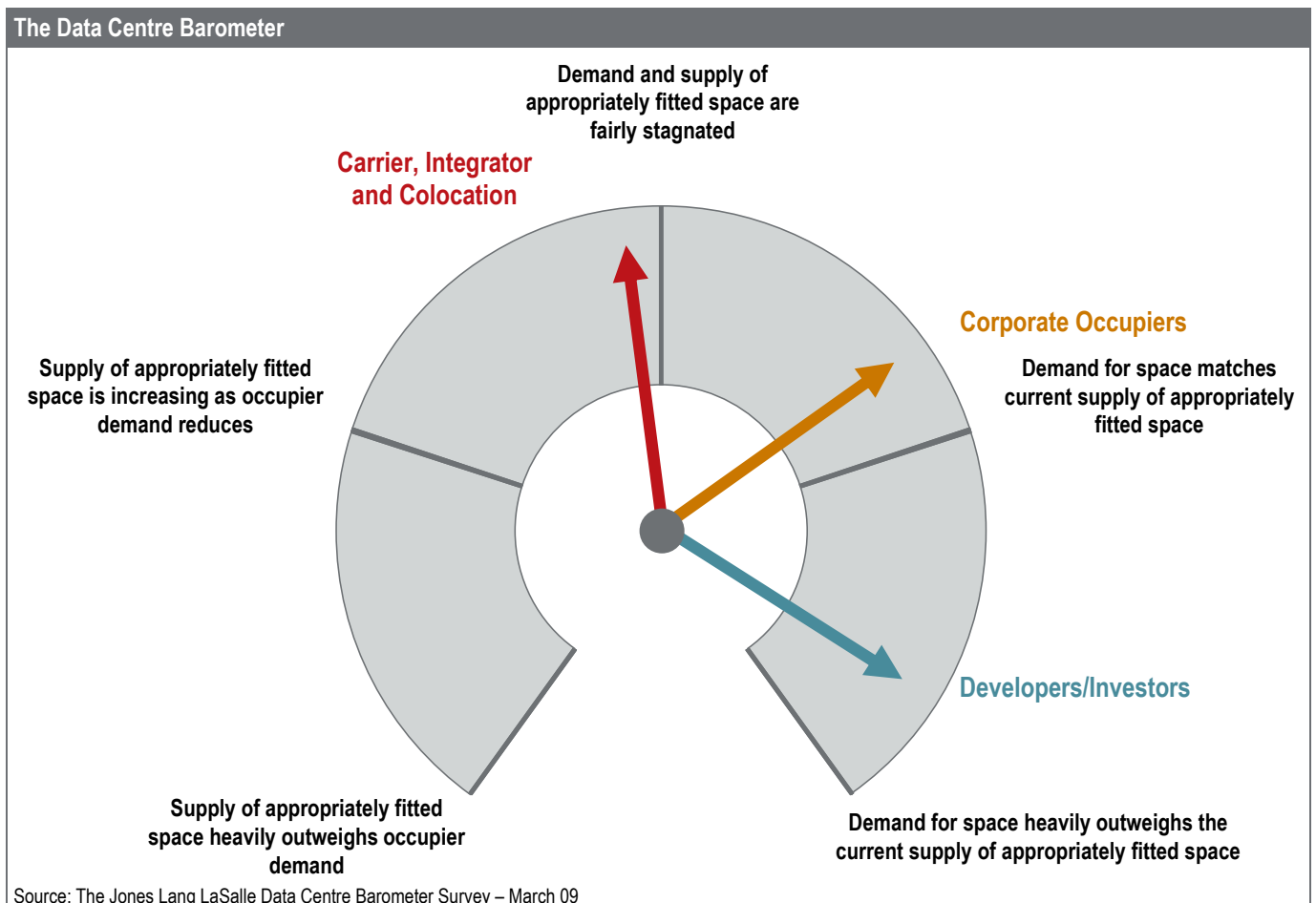
1. What best describes your view of the European market at present?

This question forms the heart of the Jones Lang LaSalle Barometer Survey. All occupier, operator, developer and investor respondents were asked what best described their current perception of the European data centre market.

As would be expected, there are differences between the views of the various stakeholders across the European data centre industry. Developers and investors all appear to be positive that a favourable balance of demand and supply remains, with over 70% reporting that they believed demand for space heavily outweighed the current supply of appropriately fitted space. From our corporate respondents, around four-fifths believed that demand was holding up and that it closely matched the supply of data centre space – a market that perhaps is not in their favour when negotiating contracts.

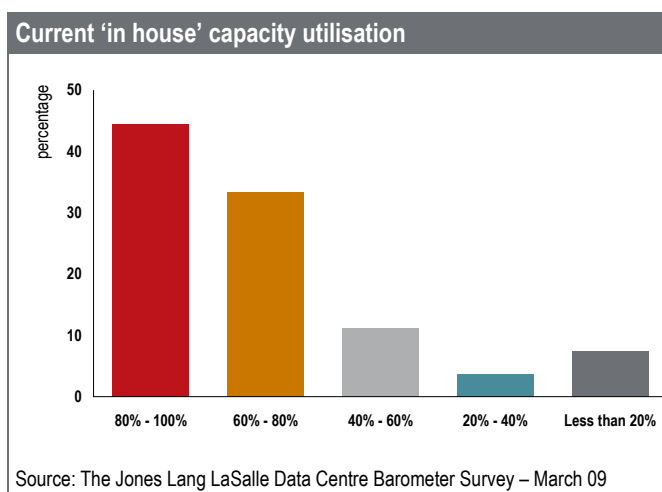
Whilst there was still around a third of carriers, integrators and colocation operators that believed demand for space heavily outweighed the current supply of appropriately fitted space, over half saw the market had either stagnated, or that occupier demand was starting to fall away as supply was increasing.

This barometer will be revisited in future surveys and will supply the key indicator as to how the perception of data centre industry is changing through its cycle.



3. How much of your current 'in house' data centre space are you actively using?

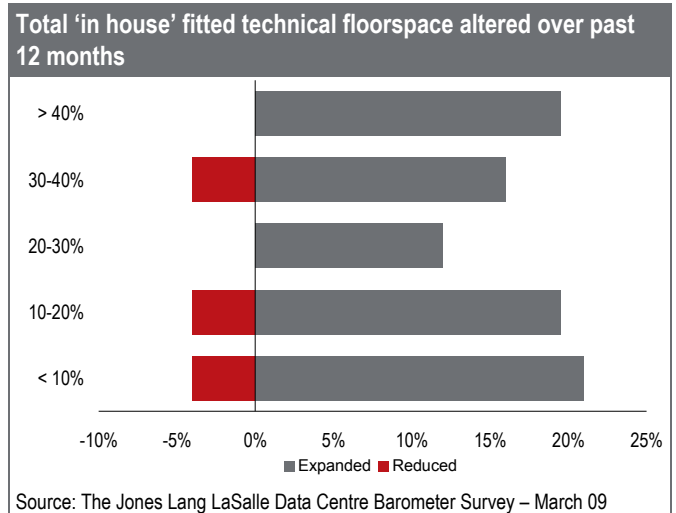
With regard to 'in house' managed space, two-fifths of respondents indicated that over 80% of their technical data centre space was being actively used. Further analysis revealed that these respondents accounted for a similar proportion (43%) of the floorspace covered by the survey, suggesting that there is similar availability characteristics amongst both larger and smaller occupiers of data centre space in our review.



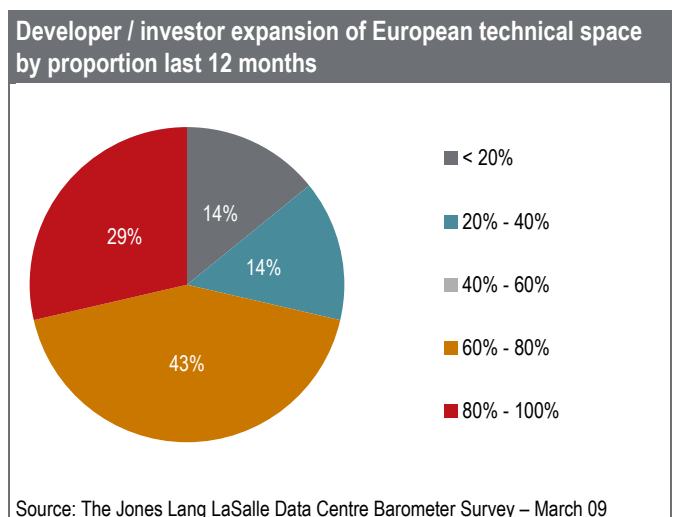
The peak seen in operators/managed service providers utilising less than 20% of their 'in house' technical data centre space may reflect the buoyant expansion this group of occupiers have experienced over the last few years, with new facilities recently coming online. It would be expected that this group of occupiers would run with a healthy availability of space in order to allow a swift deployment of their customer's IT infrastructure on request. Conversely, it would be expected that corporate occupiers would tend to actively occupy a larger proportion of available space, to ensure efficiency of their IT budgets, and it is therefore unsurprising that no corporate respondents to this survey indicated less than 60% capacity utilisation.

4. How has your total 'in house' fitted technical floor space altered over the last 12 months?

Reflecting what has been a buoyant year for European data centre development and expansion, as well as strong take-up amongst occupiers, nine out of ten of our entire occupier, operator, investor and developer respondents have increased their technical data centre footprint over the past 12 months.

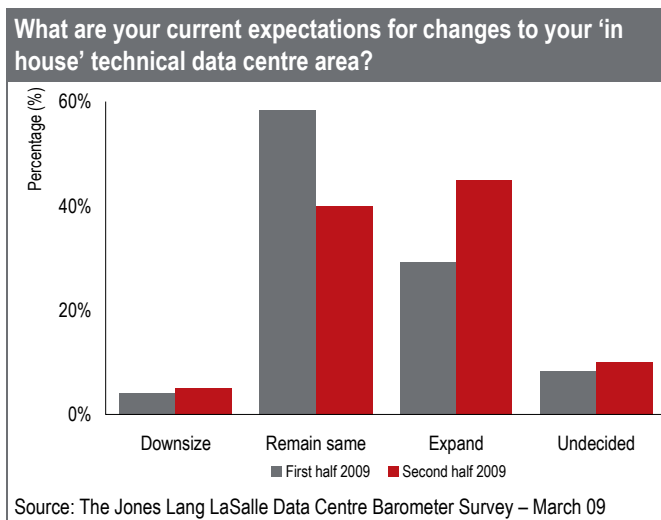


Of those who indicated that they had increased floorspace during the year, nearly half of our occupier and operator respondents have seen an increase in their capacity by 20% or more. Two-thirds of our investor and developer respondents expanded their portfolios by 60% or more, and of these the majority had done so through the building of new space rather than through the purchase of existing stock.

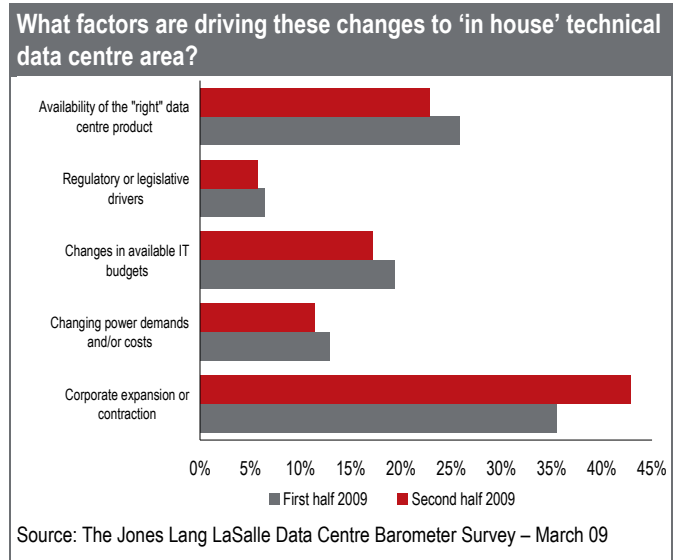


5. What are your current expectations for changes to your 'in house' technical data centre area?

The first half of the year can be viewed very much as a “wait and see” period amongst our respondents, with three-fifths expecting little change in the size of their data centre footprint in the first six months of 2009, and a further one-in-ten remaining undecided. The balance swings in favour of increasing data centre stock in the second half of the year, with nearly half of our respondents indicating they expect some expansion, although there is still a significant proportion (40%) of respondents who expect stock levels to remain the same.



Survey respondents were asked what factors were underpinning the responses they gave to this question. Corporate expansion or contraction was identified by over a third of respondents as the significant driver to their changes in floorspace during the first half of this year, whilst a quarter cited that the availability of the right product was a contributing factor. The second half of the year saw a clearer proportion of companies who indicated that their data centre occupation would be driven by their business demand.

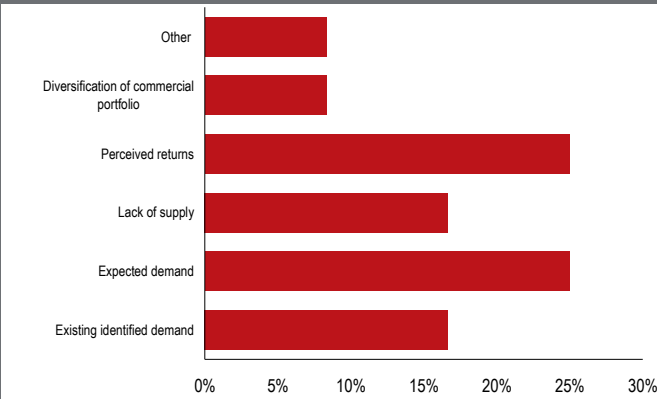


Amongst our developer respondents, there was an even split between those that were looking to keep their data centre portfolios constant and those that were looking to increase their stock. Notably, during the second half of the year all our developers were looking to expand their data centre presence.

Whilst sources of finance amongst developers differ, the difficult lending environment that is being experienced across Europe will undoubtedly have placed limits on developers and investors. Indeed, it is unsurprising that few respondents are prepared to build a scheme without securing either a full or partial pre-let over the course of 2009, although there was no clear trend as to what pre-let basis they would need, with a fairly well distributed proportion of responses ranging from 25% to 100%.

There appeared to be a fairly broad view of what will drive these development and investment strategies. Whilst over two fifths of our respondents supported the view that existing and expected demand was a significant, perceived returns was also highlighted as significant by a quarter of other respondents. Notably, nearly all respondents highlighted that the same drivers were responsible for their first half and second half of the year strategies.

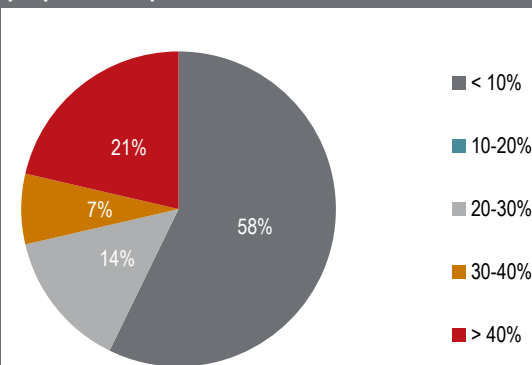
Factors influencing decision making for developers / investors re expansion in 2009



Source: The Jones Lang LaSalle Data Centre Barometer Survey – March 09

6. Has your total “third party” fitted technical floorspace altered over the last 12 months?

‘Third party’ fitted technical floorspace expansion by proportion in past 12 months



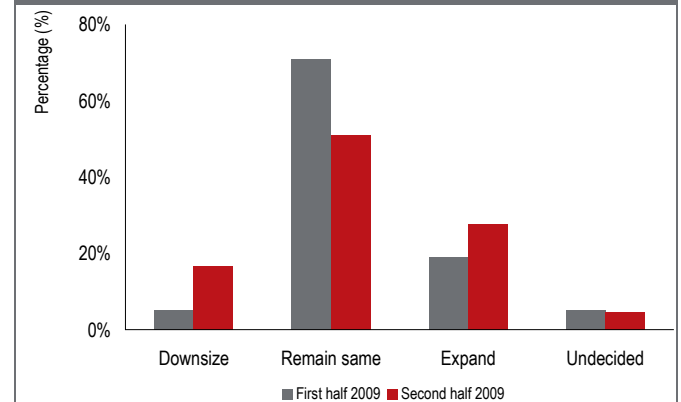
Source: The Jones Lang LaSalle Data Centre Barometer Survey – March 09

In the last 12 months, nearly three-quarters of our respondents reported an expansion of their floorspace within a third-party managed facility, although around 60% of these expansions had only been by 10% or less. Similarly, of the one-in-five who had decreased their third-party managed data centre space, the majority had only reduced their exposure by 10% or less.

These results provide strong evidence that occupiers are benefiting from the flexibility to change data centre occupation that third-party service providers offer, where short term contracts allow enterprise to actively manage their IT infrastructure without the high capital costs of building out their own space.

7. What are your current expectations for changes to your ‘third party’ technical data centre floorspace?

What are your current expectations for changes to your third party technical data centre floorspace?



Source: The Jones Lang LaSalle Data Centre Barometer Survey – March 09

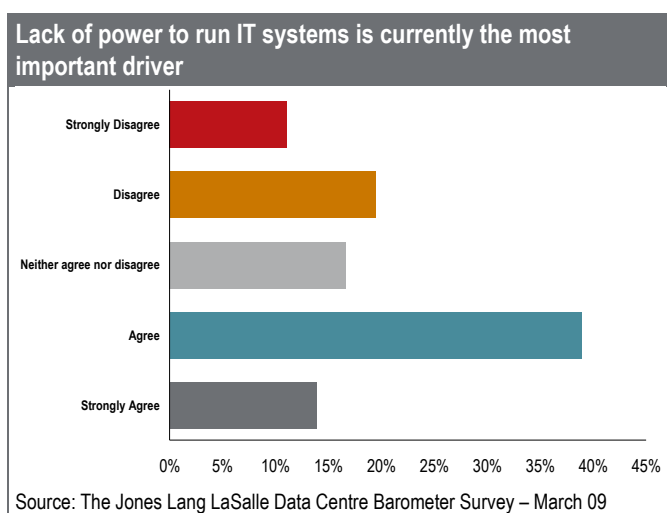
As with responses to the expansion of their in-house facilities, the first half of this year is likely to see data centre occupiers of third-party managed space take stock, with around 70% of respondents to our survey indicating that they would keep their occupation profile at the same level. The latter half of this year still indicates that over half of our respondents are expecting to keep their outsourced data centre footprints at the same level, whilst over a quarter would be looking to take on more space.

Popular factors driving these strategies again included corporate contraction or expansion (particularly in the second half of the year) and the availability of the right data centre product to take. Interestingly, only one-in-twenty of our occupational respondents indicated that drivers to its third-party occupational profile would be “changing power demands and/or costs”, which may prove surprising given the attention that the subject of power – its production, costs and availability - has been given over the course of the year.

Data Centre Opinions

The survey addressed a number of topical issues on technology adoption and related themes.

8. Lack of power to run IT systems are currently the most important driver in underpinning our data centre decisions

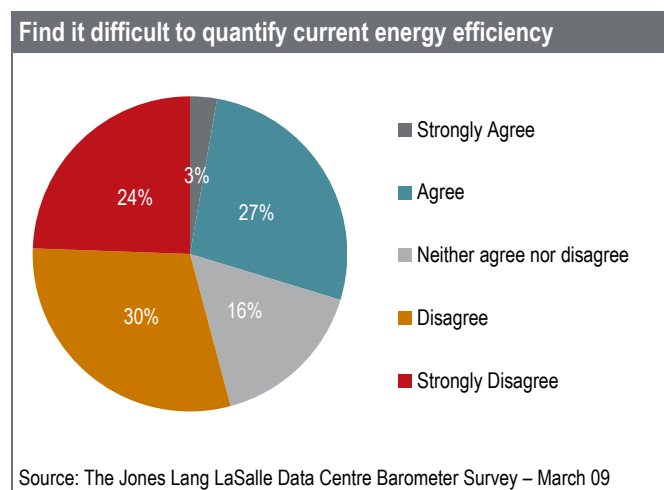


The issue of power, specifically its availability and cost, has been noted by many industry observers as crucial in the decision making process with regard to data centres. Responses to our survey suggest that although power is seen as an important factor in determining data centre decisions, it does not appear to be as a significant a driver as may be perceived. Whilst over half of all our respondents agreed, nearly a third of them disagreed that power was the most important driver of their data centre decisions.

9. We find it difficult to quantify the current energy efficiency of our data centre holdings

The past few years have seen the introduction of a series of new metrics designed to help the data centre industry specifically in the area of constraining growth in IT energy costs. The European Union, for example, has recently introduced a Code of Conduct for data centre operators, which is designed, albeit on a voluntary basis to address the power consumption issue. Other metrics such as Power Usage Effectiveness (PUE) and the Data Centre Infrastructure Efficiency (DCIE) also have significant industry backing including amongst others from members of the Green Grid.

The survey provides some evidence that these measurement metrics, designed to help companies' quantify energy efficiency within data centres, may well be starting to work.



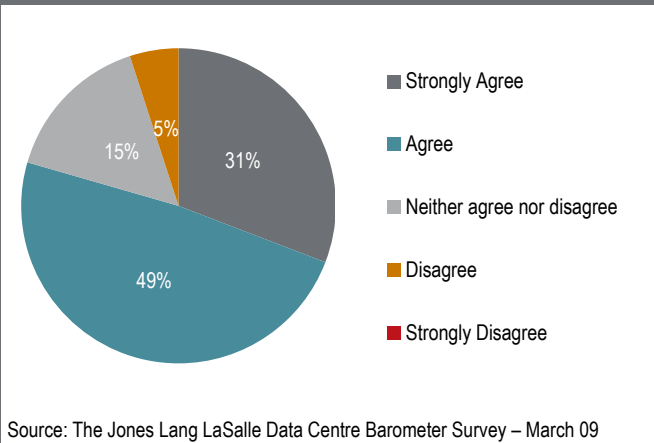
Over half of all respondents indicate that they disagree or strongly disagree that they are finding...whilst around a third of respondents agree or strongly agree with the statement. Analysis of respondents by category shows that over 80% of our developer/investor respondents were more vociferous in voicing their disagreement with our statement, with our occupier respondents making up the majority of that is still finding it difficult to quantify energy efficiency.

10. The implementation of virtualisation technologies to increase data centre space efficiency is likely to increase significantly over the next year

Virtualisation has long been trumpeted as a important dynamic in the data centre market allowing savings in space and energy and ultimately cost. This view holds sway amongst those who took part in our survey. There was a strong consensus amongst respondents that virtualisation is set to increase data centre efficiency over the coming 12 months.

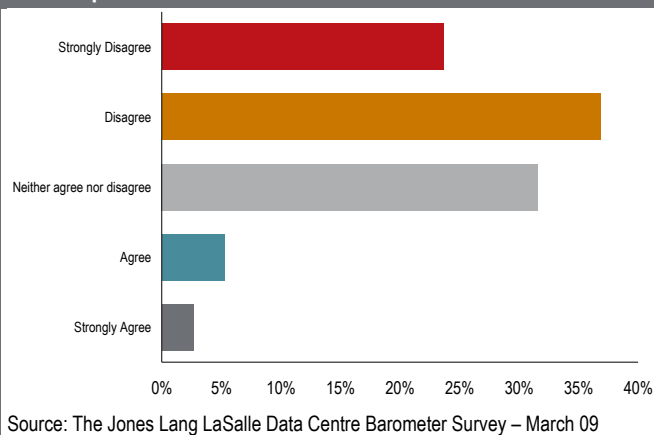
Around 80% of all respondents agree or strongly agree that the implementation of virtualisation technologies to increase data centre space efficiency is likely to increase significantly over the next year. Less than a quarter of those who responded disagreed, and significantly no respondent strongly disagreed.

Virtualisation to increase significantly



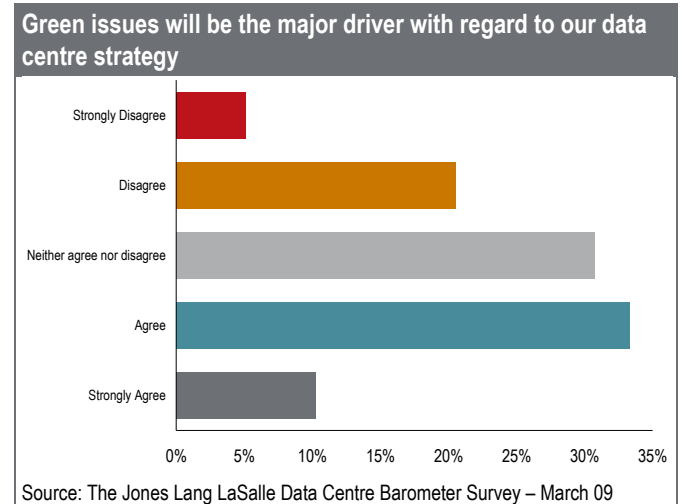
11. Cloud computing will reduce the need for more data centre space over the next 12 months

Cloud computing will reduce occupiers need for more data centre space



There has been a lot of recent debate within the industry regarding cloud computing, largely centred on the outsourcing of IT needs to cloud services available over the Internet. Amongst our respondents, survey results would suggest nearly two thirds disagree or strongly disagree with our statement that the implementation of cloud computing would lead to a reduction in the need for data centre space. A significant minority – around a third – appear to be undecided holding no strong opinion on the matter.

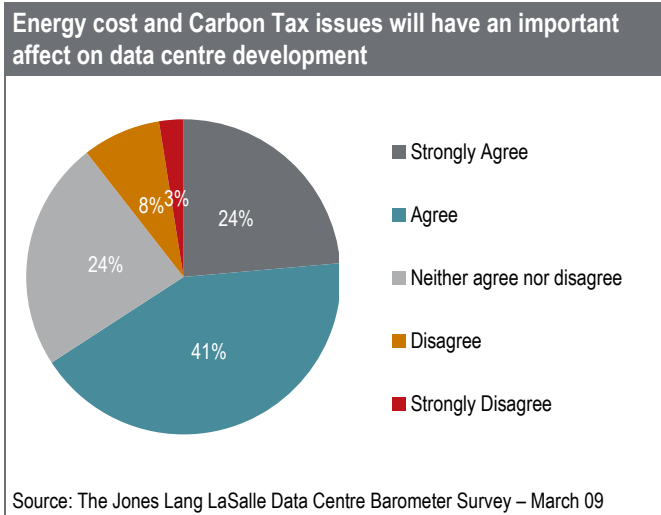
12. Green issues will be the major driver with regard to our data centre strategy over the next 12 months



Green issues continue to dominate global political agendas, and the nature of the data centre industry means that its “green” credentials have been examined closely over the last few years. This green agenda covers a multitude of issues and the continued expansion of groups such as the Green Grid reflects this ongoing importance to the industry.

Nearly half of our survey respondents also believe that these issues will be major drivers for their data centre strategy over the coming year. Interestingly only a third of developers and investors respondents also shared this view. Whilst it may be surprising that this proportion is not higher - given the coverage that this subject has received over the last few years - this could reflect the affect that the global economic downturn has had on where the “green agenda” sits in the hierarchy of priorities amongst data centre respondents.

13. Energy cost and carbon tax issues will have an important affect on data centre occupation over the next 12 months



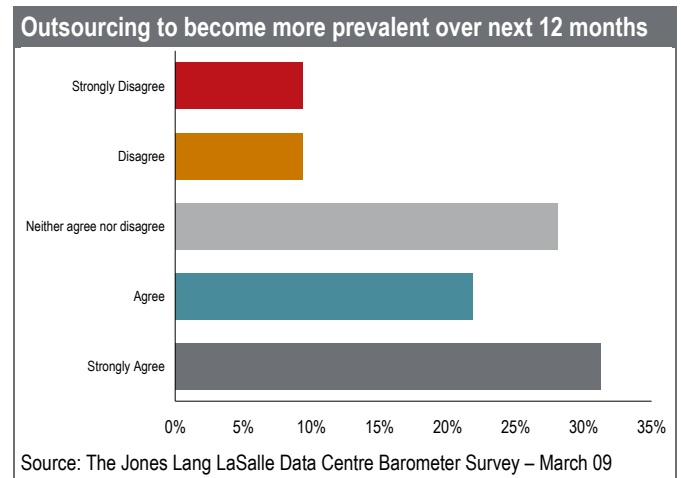
Energy costs and the carbon tax issues associated with them are an important factor according to those market practitioners who have participated in the survey. Around two-thirds of respondents believe that energy cost and carbon tax issues will have an important affect on data centre occupation over the coming 12 months. Perhaps more interestingly, this proportion rises to 86% amongst developers and investors.

The issue of Carbon Credits Trading is addressed in our guest feature by Chris Leeds of Barclays Capital.

14. Outsourcing is going to become more prevalent as a data centre solution for my company over the next 12 months

With the overall decline in the global economy, industry commentators have suggested that businesses are increasingly choosing outsourcing as a potential solution for their data centre requirements, as it spares capital outlay on IT infrastructure and offers flexibility to enterprise to upsize and downsize more efficiently.

Responses to our survey appear to underpin this theory with over half of respondents agreeing that outsourcing will become more prevalent as a data centre solution over the next 12 months. The relatively high proportion of respondents that neither agreed or disagreed potentially reflects the uncertainty with regard to local economies, and therefore uncertainty with regard to demand for increased data centre space.



Guest Feature

The Carbon Market and the Data Centre Industry

The Carbon Market

The carbon emissions market has grown out of international agreements to combat climate change and has established itself as a growing and dynamic market. The market is made up of a combination of allowance based markets (cap and trade schemes) and project based markets (baseline and crediting schemes). Under cap and trade schemes, emission limits are set (the “cap”) and allocated to those parties with emissions covered under the scheme – either for free or through a price auction. The parties are allowed to trade emission rights among themselves, with companies with a higher marginal abatement cost buying credits from companies with lower abatement costs. Under baseline and crediting schemes, a participant establishes an emissions baseline and then receives credits for any reductions in emissions below that level. The baseline and credit schemes are generally used as carbon off-sets that are traded into cap and trade schemes.

The cornerstone international agreement to combat climate change is the Kyoto Protocol that established binding emissions reductions on most developed countries to reduce the level of emissions of green house gases against 1990 levels. The Kyoto Protocol is a global cap and trade scheme for sovereign states that set a cap at an average reduction of 5.2% below 1990 emissions from those countries with binding targets over the period 2008-2012. Different countries accepted different caps and the Protocol allows states to trade their Assigned Amount Units (AAU) with each other to establish compliance. As this trade in AAU is predominantly between sovereign states, it lacks transparency and liquidity.

Governments are increasingly looking to involve the private sector in their emission reduction efforts through the use of cap and trade schemes. The most widely traded carbon contracts are the emission allowances (European Union Allowance (EUA)) traded under the European Union Emission Trading Scheme (EU ETS). Trade in EUAs accounted for 99% of the value of private sector ETS

in 2007. We are also seeing the emergence of a large number of ETS that are being introduced either at regional or at national level (such as the CPRS in Australia, and RGGI, Western Climate Initiative (in the US)) but these remain markets that are just emerging.

The Kyoto Protocol also introduced two project based baseline and credit schemes, the Clean Development Mechanism (CDM) and Joint Implementation (JI), that allows emission reduction projects to be undertaken in third countries and exported back to the home country. The difference between the CDM and JI is that under the former, projects are undertaken in countries that do not have an emissions reduction target under the Kyoto Protocol while JI is undertaken in countries with a target. The tradeable credits that are derived under these mechanisms are Certified Emissions Reductions (CER) under the CDM and Emission Reduction Units (ERUs) under the JI. To date, there has been much more activity in the CDM than under the JI.

Carbon credits trade both on an ‘over the counter’ OTC basis and on a number of exchanges. In Europe, the dominant exchange has emerged as the European Carbon Exchange (ECX), while in the US, the dominant carbon exchange is the Chicago Climate Futures Exchange (CCFE). As with other trading exchanges, the role of the carbon exchange is to take counterparty risk for participants and ensure that any trades that are made are completed.

The Carbon Market and the Data Centre Industry

Industries that are directly affected by the carbon market, in terms of having compliance requirements under which their emissions are capped, are those that are large emitters. Under the EU ETS, this means covering sectors that have large combustion equipment, such as the power sector, metals (such as steel), refining of oil and gas and industrial processes that are energy intensive. Such direct impacts, and the need to have in place systems to manage

compliance requirements, are unlikely to involve industries such as data centres which are not primary emitters. However, industries that have a large power demand, such as data centres, will see a considerable impact on their power prices once the power sector is covered by a cap and trade system. The strongest evidence of this happening comes from the EU ETS, where in the period since it has been introduced (2005) has been associated with a high level of free allocation of EUA's to the power sector. Despite the power sector only having to buy marginal volumes of EUA's for compliance, power prices very quickly reflected the full carbon price associated with generation. The reason for this is that power generators in liberalised markets price on the opportunity costs of their inputs.

Basically, the generator is saying to the market, if you do not pay me for the value of my inputs, the fuel and the carbon credits I need to use to cover my generation, then I will not generate but I will sell my fuel and carbon allowance back into the market. In this way, I maximise the profits that will accrue to me and I will reflect the signals provided to me by the carbon market. While this behaviour is efficient for the generator and needed if the carbon market is to get short-term abatement, it does mean that as soon as carbon pricing is introduced, power prices start reflecting those market prices. In turn, this means that any industry that has a large demand for power is likely to bear a very large share of the compliance costs of generation.

With carbon prices in Europe having added at various times in 2008 added between 12 to 30 €/MWh to forward power prices, these are very real meaningful costs that power-intensive industry has to bear. The question for such an industry, such as data centres, is how to hedge against such future costs. The most obvious way is to lock in power prices today for the longer-term, which would at least guard against future price increases in locations already covered by cap and trade (such as Europe) or against price impacts from the introduction of the scheme in others. While this is one direct hedge, carbon exposure can be hedged by a simple long only strategy in the carbon commodity against which you have exposure. While this can be done by buying the commodity and holding it, it can also be done by investing in a carbon index or on a product that is designed to track the index. There have been a number of carbon indices that have been introduced in the market designed to track EUA's and CER's and these do offer greater simplicity to an investor than buying the underlying commodities.

While it is up to each company to decide on their own hedging strategy, what is clear is that the large power demand of data centres means that this is one industry that is carrying a large, but indirect, exposure to the carbon market. Understanding this exposure and how best to deal should be a priority for all companies in this sector.

Chris Leeds

Head of Environmental Market Sales



Rating

Business Rates for Data Centres

The methodology behind business rates is based upon the hypothetical building rent at a specific date; for the 2005 Rating list the valuation date is 1 April 2003.

Most data centre buildings were originally constructed as Warehouses or Offices, and are initially assessed for Rating purposes assuming this use. What most data centre operators forget is that every time a significant change to a building occurs, the Valuation Officer has a right to review the level of assessment. This is not just limited to extensions and physical changes, but includes adding plant and machinery, including generators, CRAC units and other M&E equipment (or even fences and security barriers for that matter!).

Valuation Officers have not yet caught up with revaluing newly converted data centres, and even where they have, there have been huge discrepancies in their approaches. Unfortunately, any changes can be backdated (currently to April 2005) and recovered retrospectively, so data centre occupiers need to accurately accrue for these increases, so there are no nasty shocks in the pipeline.

Jones Lang LaSalle are currently advising a number of data centre occupiers on their rate liabilities, not only in setting budgets, but also in establishing precedents and creating opportunities to minimise rate liabilities. What we manage to establish in one part of the country, we can use to our advantage in another.

Whether it is existing data centres, future changes, empty rates advice, or simply a portfolio health check, don't forget that the whole country is going to be revalued again in 2010, and we would be delighted to speak to you.

James Carson
Associate Director
Rating, Jones Lang LaSalle



Data Centre Opportunities To Let

		
<p>Crown Road Enfield</p> <ul style="list-style-type: none"> • 24,462 sq ft net technical area • 6 x 4,077 sq ft self contained data halls • 24/7/365 onsite security team • 8MVA incoming power supply • Power density 1.72kW/m2 in technical area • Diverse fibre connectivity 	<p>Loughton T11 Loughton</p> <ul style="list-style-type: none"> • Secure 2.6 Acre Site • 9.7 MVA of power • 30,000 sq.ft of net tech space • Planning Consent for data centre use • Multiple Fibre Providers 	<p>Hall B, Southern Technology Centre Reading</p> <ul style="list-style-type: none"> • Self contained Hosting / Colocation Facility • Approx. 3,546 sq ft of net technical space available as a whole or in part • 2.5 MVA of incoming power
		
<p>Clayton Road Hayes</p> <ul style="list-style-type: none"> • Potential to provide approximately 25,000 sq ft (2,323 sq m) of net technical space • 7 MVA of incoming power available • Fibre potentially available from BT, Cable & Wireless, Colt, Easynet, Global Crossing, Verizon and Virgin 	<p>Goldtone House Loughton</p> <ul style="list-style-type: none"> • Secure 1.2 Acre Site • 1.94 MVA of power • Up to 10,000 sq.ft of net tech space • Multiple Fibre Providers • Planning Consent Granted 	<p>Communications House Rochester</p> <ul style="list-style-type: none"> • Up to 37,675 sq ft (3,500 sq m) of net technical space • 4 data halls plus 25,000 sq ft of ancillary office space • Outside flood plain and local flight paths • 14.5 MVA of incoming power • Planning for data centre use
		
<p>Loughton Exchange Loughton</p> <ul style="list-style-type: none"> • Secure 3.6 Acre Site • 9.7 MVA of power • 2 Data Centres, each offering 14,250 sq.ft of net tech space. • Planning consent for data centre use • Multiple Fibre Providers 	<p>NGD Europe 1 Newport</p> <ul style="list-style-type: none"> • Up to 90 MVA of power • 375,000 sq ft of technical space capable of accommodating over 17,000 racks • Dedicated data halls from 5,000 sq ft • Multi fibre connectivity 	<p>Harlow Parkway Harlow</p> <ul style="list-style-type: none"> • Secure 12 acre site • Two data centres each offering 43,400 sq ft of technical space • 15.5 MVA of power



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Data Centre Barometer – March 2009 Volume Issue 1

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