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Knight Frank**



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Frank**

1ST EDITION

YOUR

SPACE

INSIGHTS FROM THE GLOBAL WORKPLACE

CLASH OF THE TITANS

Next wave technology
and the productive
workplace

MAKING THE RIGHT IMPACT

Lessons from
Bloomberg's new
European HQ

SPACE SUPPORTING STRATEGY

Findings from
Knight Frank's Global
Occupier Survey



Foreword



Image: Chris Agius-Burke

At Circus West Village, Battersea Power Station.

Your space has never been more important. If you are an occupier, real estate is now a strategic priority for your business and the workplace represents a further strategic lever available to business leaders in their pursuit of competitive advantage. In this respect, real estate decisions influence and reinforce an array of business priorities – from talent management, corporate and social responsibility, inclusion and diversity, to the transformation of corporate culture and brand or the restructuring of business models in light of rapid technological advances. Failing to put your space at the heart of your strategic agenda is, simply put, failing your business.

If you are a landlord, this strategic agenda raises the stakes and demands a fundamental rethink of your market proposition. As business-planning horizons shorten, greater occupational flexibility and lease terms are required. Your space must become, to a certain extent, a fluid and flexible business service not a fixed physical product. Although the provision of a high quality, well-designed physical environment remains important, providing excellent customer service and curating an unrivalled and productive customer experience will become more so. This will be the route to maintaining a base of income generating customers. Failing to put your space firmly in the hearts and minds of your customer is, in simple terms, to place income, return and asset performance at risk.

Against this changing dynamic, our space has become even more exciting.

Over the last three years, Knight Frank has made a significant investment in our Global Occupier Services & Commercial Agency service line. This investment will continue. Our space – advising leading occupiers and landlords around the world – coupled with the expertise of our transactional, consultancy and research teams puts us in an unrivalled position to shine a light upon global best practice in the changing global workplace. I am delighted to do so through this report.

We hope you enjoy the report as much as we enjoyed writing it. We very much welcome your feedback and engagement around the themes contained within it.

(1)

THEME 1*The Productivity Push***Five trends shaping (Y)OUR SPACE**

The factors creating a new occupational orthodoxy.

Page 4

The view from (Y)OUR SPACE

Key results from Knight Frank's Global Occupier Survey.

Page 6

(2)

THEME 2*Next Wave Technologies***Pushing for productivity**

Occupiers are using space to drive business productivity not reduce costs.

Page 8

Strike a pose?

How Condé Nast International transformed their business through their space.

Page 10

Trading spaces

How Li & Fung broke the corporate silo.

Page 12

**Clash of the titans**

How emerging technologies transform business and create new property demands.

Page 14

The Knight Frank**Tech City Index**

Identifying the world's top 15 tech cities.

Page 16

The view from the valley

What do tech occupiers want from their space?

Page 18

Transforming to win

Next wave technology, e-commerce and the significance of industrial real estate.

Page 20

(3)

THEME 3*Changing Corporate Constitutions***Changing corporate constitutions**

Key ways in which business structure and culture are transforming.

Page 22

With strategic intent

How the Senior Partner of an international law firm drives business change through property.

Page 24

Making the right impact

Bloomberg's incredible new European HQ and its role in driving collaboration and innovation.

Page 26

(4)

THEME 4*Space as a Service***Responding to a new reality**

Why real estate can no longer simply be regarded as a fixed, physical product.

Page 28

A tale of three providers

How space-as-a-service is rapidly evolving beyond co-working.

Page 30

Five future amenity provisions

Where next for building amenity?

Page 34

(5)

THEME 5*Mobility & Mergers***Making all the right moves**

The six factors driving occupier mobility.

Page 36

Where the good guys go

As occupier mobility increases, Melbourne's inner city fringe rises in popularity.

Page 40

A business world in union?

What is the outlook for global M&A volumes and what does this mean for real estate demand?

Page 42

**Around the world in 80 words**

A snapshot of conditions across 15 key global markets.

Page 44

About

Global Occupier Services at Knight Frank.

Page 48



Illustration: Aron Vellekoop León

FIVE THEMES SHAPING (Y)OUR SPACE

There are five themes that will shape future occupational demand across global real estate markets. Individually, each of these themes will be highly influential. In combination, they represent nothing short of a new occupational orthodoxy.

1

The productivity push

Real estate is a strategic device for business. Attitudes towards real estate costs are changing, as focus shifts towards effective rather than cheap real estate solutions. Real estate has a critical role to play in the push for increased corporate productivity. Yet, this is not about increasing the density of occupation with the ultimate aim of savings at all costs. This approach has ultimately proven counter-productive. Instead, the aim is now to increase productivity by strengthening the interaction between people and property via the creation of, and investment in, a positive, serviced and well-supported workplace experience.

2

Next wave technologies = new business models = new occupational demand

Next wave technologies such as Artificial Intelligence (AI), robotics and automation will create a period of rapid organisational and process re-engineering. This will change the future form, function and location of the workplace. It will reset the quantum and qualities of staff required by a business. It will bring about the closer interaction of humans and machines in support of greater corporate productivity. Critically, it will create new and different forms of occupational demand in global real estate markets.

3

Changing corporate constitutions

The seemingly constant revision of business models derives from more frequent technological change. As organisations refocus on their core competencies or seek skills that sit outside of their traditional orbit, corporate supply chains are becoming broader and deeper. At the same time, corporate diversity initiatives and the rise of multi-generational workforces serve to alter the company demographic. These trends have multiple implications for the workplace. For example, they can, strengthen the need for more flexible, collaborative workspace that improves interaction between staff.

4

'Space as a service' becomes the demand default

The workplace is becoming a flexible business service that can actively support growth, rather than a fixed and often (to the occupier) financially onerous physical product. This repositioning is alluring to the occupier and will become the demand default. Traditional Landlords have little choice but to adapt to this new dynamic and adopt the approach taken by the co-working 'upstarts'. They must extend their innovation beyond the design of the physical product and towards the provision of soft-services, community and well-being.

5

Mobility and mergers underpin occupier activity

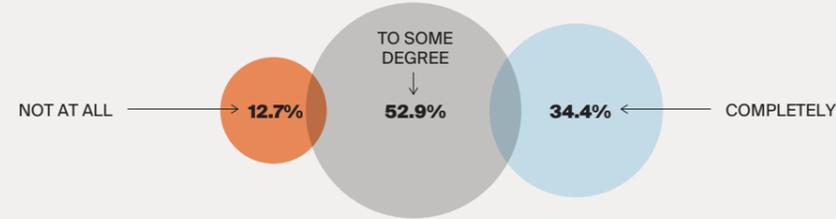
As we enter a boom period of M&A activity, and as the search for talent intensifies, occupier portfolios will incorporate markets and submarkets that were once *terra incognita*. There will be a conscious movement towards workspaces close to talent pools, but which also have the amenity, service and infrastructure to assist in the retention of that talent. We are in a new era of occupier mobility. It will not only bring greater complexity to the corporate real estate portfolio, it will also extend the pool of demand emerging within global real estate markets.

In summary, these five trends will determine the future what, where, how and why of the global workplace. They will shape your space. They demand your attention. Consequently, this report divides into five distinct sections that tackle each of the trends in turn and, through a series of high profile, global case studies and a comprehensive survey of global corporate real estate professionals, provides real insights into the changing global workplace.

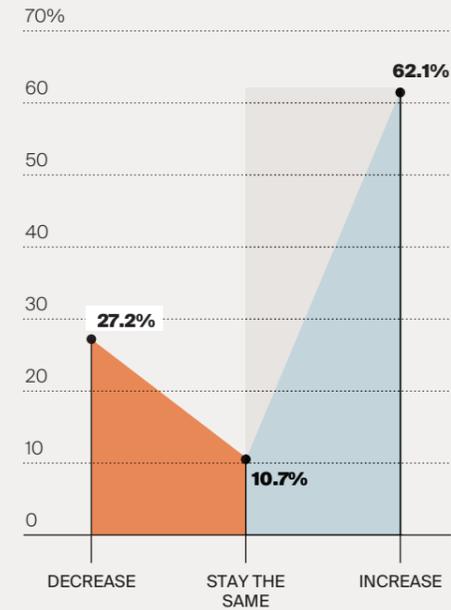
THE VIEW FROM (Y)OUR SPACE

A summary of the key results from the 2018 Knight Frank Global Occupier Survey. Collating the views of more than 100 global corporate real estate leaders, the survey highlights the key trends and perspectives shaping occupational strategies over the next three years.

Q: To what extent is real estate regarded as a strategic device within your organisation?



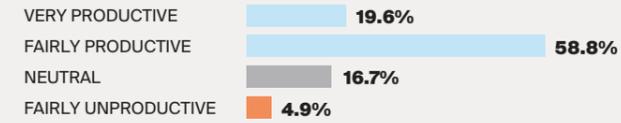
Q: Will the total space in your global portfolio increase, decrease or stay the same over the next three years?



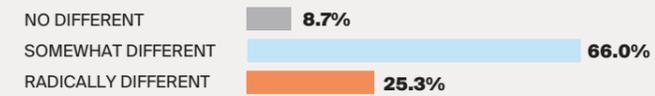
Q: What are your annual real estate cost saving targets?



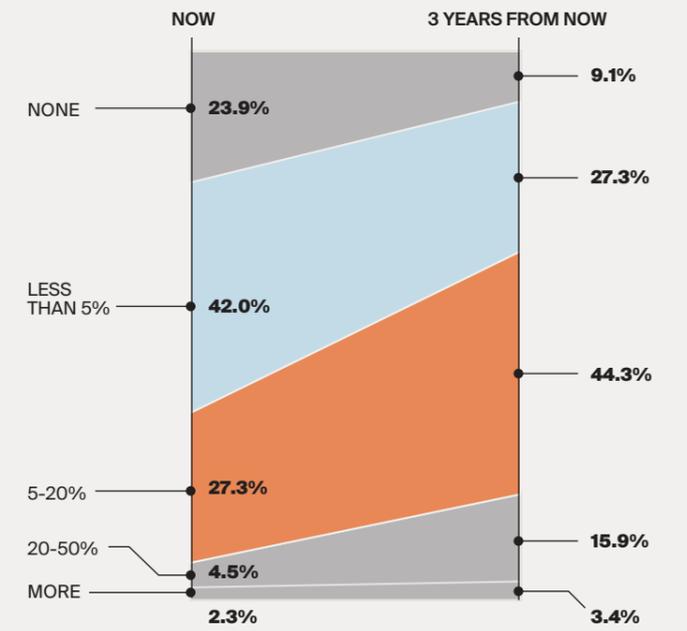
Q: How productive is your current portfolio?



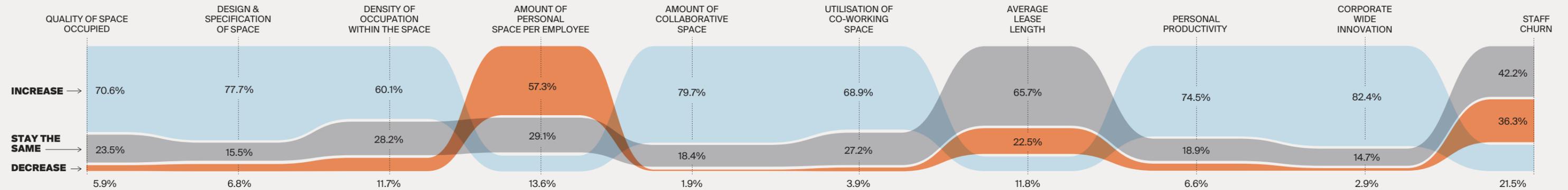
Q: How different will your portfolio be three years from now?



Q: What proportion of your portfolio is serviced / flexible / co-working now and three years from now?



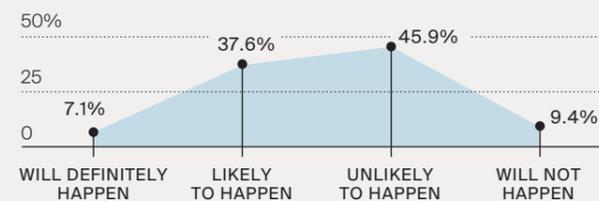
Q: Will the following portfolio and business features increase, decrease or stay the same over the next three years?



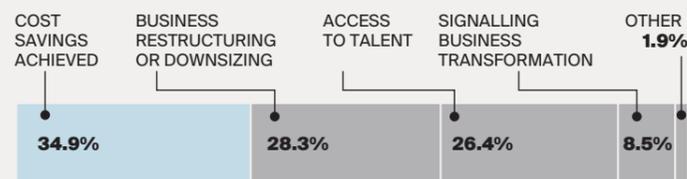
Q: What are the emerging technologies that will have the greatest impact on business over the next three years?



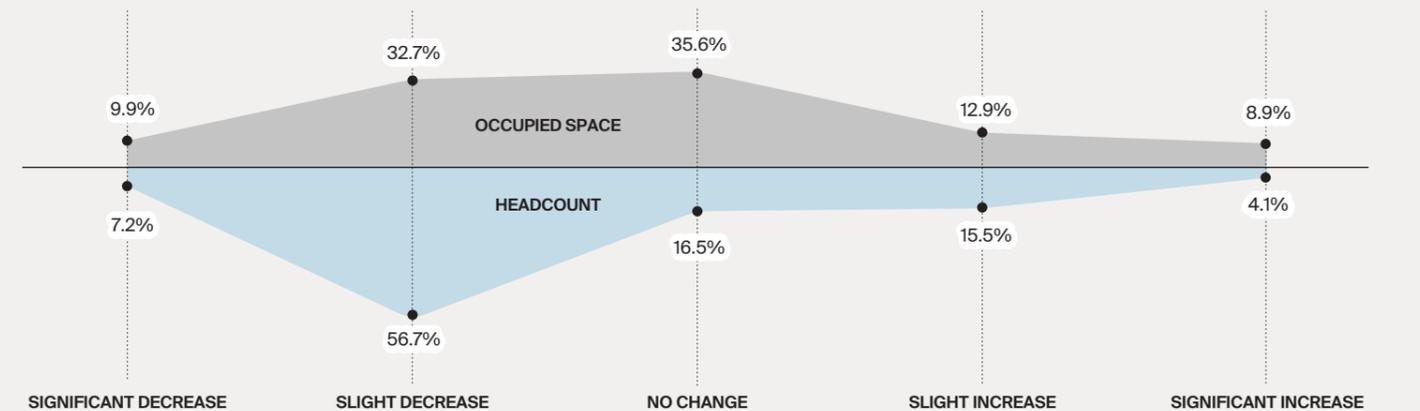
Q: How likely are you to move your core offices within the next three years?



Q: What will drive your mobility over the next three years?



Q: What impact will new technologies have on business headcount and floorspace over the next three years?



PUSHING FOR PRODUCTIVITY

Real estate is a strategic device for business. As this is more widely recognised, attitudes towards real estate costs change and focus shifts towards enhancing productivity through effective, not cheap, real estate solutions.

THE GROWING COMPLEXITY OF REAL ESTATE DECISION MAKING

The choice of a new location or premises for a business or business function is not a marginal decision. Real estate can no longer be dismissed as a simple and unavoidable factor of production. Instead, it actively supports the pursuit of a wide array of corporate strategic objectives, as noted by surveyed global corporate real estate leaders. There is a lot to gain from making the right real estate decision. As a result, there is a widening spectrum

TOP FIVE STRATEGIC AGENDA ITEMS BEST SUPPORTED BY REAL ESTATE

1	TALENT MANAGEMENT (ATTRACTION & RETENTION)
2	CORPORATE BRAND & IMAGE
3	COST REDUCTION
4	INCREASED COLLABORATION
5	EMPLOYEE WELLNESS

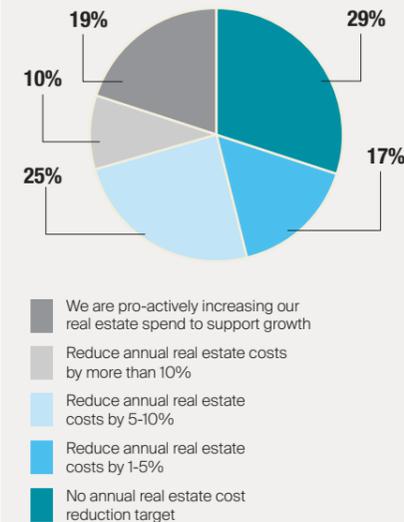
of senior figures actively investing in the real estate decision-making process. There is now more than one correct response to the age-old supply-side question of 'what does the occupier want?' The wants and needs of the CEO, CFO, the HR Director, the Corporate Real Estate Manager, and indeed the wider workforce, are divergent but each has validity and must be addressed through the property decision.

Senior C-suite executives all recognise that occupancy decisions, once viewed as ancillary to the core business, can have a significant impact on a company's strategic and financial performance. Boards are becoming aware that if their company footprint is misaligned with its operating needs, harsh penalties may ensue through asset write-downs and space shortages that impede competitiveness. In constrained global labour markets, where talent is at a premium, it is now vital that the input and considerations of the HR director are taken into account. The impact of any location or property decision on existing staff, in combination with the potential of a new location to supply the right skills, in the right quantum and at an appropriate price-point, all need to be carefully assessed and satisfied. Given this, we have witnessed the growing involvement from HR directors in the procurement of space, and that involvement is occurring much earlier in the process. It is also testament to tight labour market conditions that there is a growing trend for existing staff to be immersed in the property decision-making processes. Human capital is fundamental to business, therefore it pays to ensure that key knowledge workers are included in, and accepting of, the process in order to mitigate operational disruption. People have the power over property – something that also shapes financial evaluations of the workspace.

PUTTING REAL ESTATE COSTS IN PERSPECTIVE

The more thoughtful and sophisticated approach to real estate has led to a marked change in the attitude of business leaders towards real estate costs. This has also served to challenge some of the myopic thinking within the property industry itself. The once commonly held belief that an occupier's only concern

Q: WHAT ARE YOUR ANNUAL REAL ESTATE COST SAVING TARGETS?



is to reduce costs is being challenged. Again, our survey of global corporate real estate leaders is illustrative. Less than 10% of our sample have cost saving targets in excess of 10% per annum. But half of the respondents have either no set cost reduction target or are actively increasing real estate costs to support the growth of their business. Real estate decisions are clearly not driven by an over-arching desire to reduce costs, for two principal reasons.

First, real estate costs are now assessed in relation to overall business operating costs. In reality, direct real estate costs – rent, service charges and property taxes – represent only a relatively small proportion. Indeed, a recent study by the British Council for Offices maintains that real estate costs represent no more than 15% of an organisations total operating costs.

Property costs are therefore almost four times less than the largest business cost area – staff. The most graphic illustration of these relativities is that the cost of losing a member of staff to a business is up to ten times greater than the cost of accommodating them. Those who understand this dynamic, appreciate that the true cost of real estate is in its indirect effect upon the attraction and retention of staff.

Second, the approach to managing real estate costs has also evolved. When the Global Financial Crisis

(GFC) struck a decade ago, there was great scrutiny by business leaders on property costs. Many corporate real estate teams were found wanting; unable to quantify the cost base or identify means by which to mitigate it. This prompted investment in lease management systems, which, in turn, supported lease renegotiations, exits, reduced run-costs and the limiting of capital expenditure as real estate teams played their part in repairing the corporate balance sheet. From the turn of the decade, as economic conditions settled and those balance sheets were indeed enhanced, occupied portfolios were re-set in response to business restructuring. A willingness to selectively invest in corporate real estate returned. Costs were increased but were also assessed on a broader 'return on investment' basis, whereby the relationship between real estate costs, overall people costs and wider strategic goals were more readily considered.

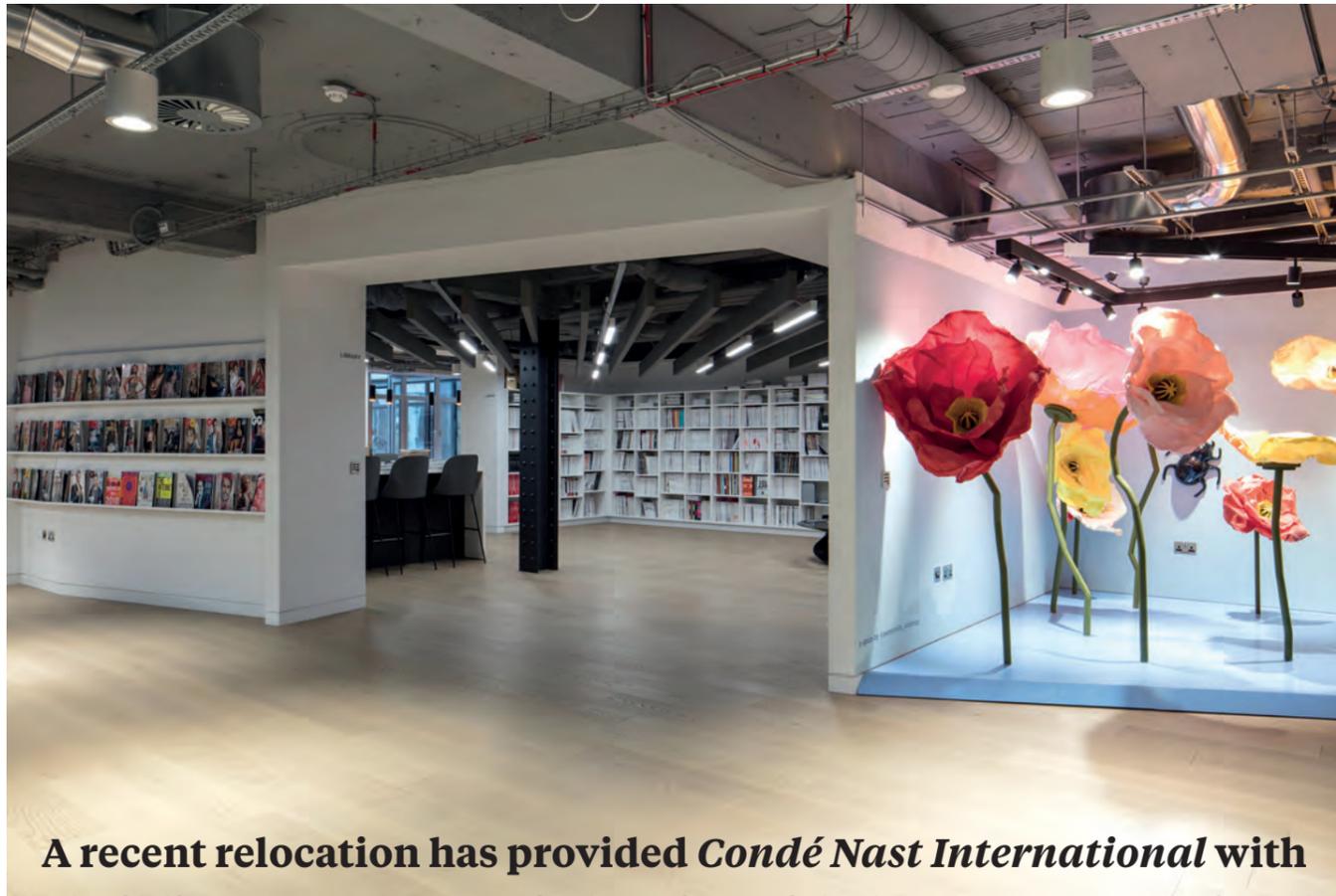
PRIORITISING PRODUCTIVITY

While some control of real estate costs will remain a reality, failure to invest adequately in new technologies, capabilities or staff is not a viable option in such a changeable and competitive operating environment. Property spend will increase to support some of these investment priorities. The result will be a refreshed focus on corporate productivity – what might be termed the Productivity Push V2.0. A push that fully implicates corporate real estate. Successful occupiers will seek to enhance productivity rather than simply attack real estate costs. The productivity narrative is not new to corporate real estate teams, having been part of the real estate lexicon in the post GFC period. Attention is now moving away from simply increasing the density of occupation and a flimsy, cosmetic approach to space design and fit-out. Those moves – characteristic of productivity push V1.0 – have actually proven to be counter-productive. They have created corporate real estate portfolios that actually limit personal productivity, stymie collective creativity and ultimately cost the business more in expensive staff churn than the savings achieved through a more frugal property spend.

In the push for productivity V2.0 the aim is to increase productivity via a strengthening of the interaction between people and property. Corporate real estate initiatives must seek to bolster productivity by increasing the attraction of the workplace and, via that attraction, raise the utilisation and occupancy of the space rather than simply taking space away. Productive work derives from the creation of a positive, well-served and well-supported workplace environment. The old adage of 'build it and they will come' has shifted to 'service it and they will work'. The approach is no longer one of providing the bare necessities of workplace, but instead about enhancing the experience of those working within the workplace. The simple rationale is that positive workplace experiences lead to happier workers; and

when workers are happy they typically tend to be more productive and effective. In the productivity push v2.0, the true value of human connection becomes recognised and better accommodated by making well-being, creativity, experience and productivity the cornerstones of workplace strategy. The workplace shifts from simply a place in which to house people to become an engagement tool; something to support leadership and management styles (or change); and a physical embodiment of wider corporate intent. The market consequences of this shift are multiple, but include more activity based working; a continued flight to high-quality workspaces within global markets; and the active use of space to drive increased circulation and collaboration to deliver greater innovation, creativity and productivity.

“In the push for productivity V2.0, the aim is to increase productivity via a strengthening of the interaction between people and property.”



A recent relocation has provided *Condé Nast International* with a building not only more in keeping with the glamour associated with its most famous title, *Vogue*, but also a workspace that fully supports the company's digital transformation.

STRIKE A POSE?

THERE'S MUCH MORE TO IT

In January 2018, Condé Nast International moved just under two miles from a building in London's Mayfair, to the art deco splendour of The Adelphi building, on the banks of the River Thames. Despite the small distance travelled, from a real estate and operational perspective the move has propelled the company forward by light years. Indeed, the relocation is a prime example of how corporate real estate decisions can pro-actively address strategic challenges.

At the heart of the project was a multi-disciplinary team of 11, including Knight Frank's Project Management and Cost Consultancy teams. From inception, the team gave careful consideration to Condé Nast International's rapidly changing operating environment, incorporating the likely organisational implications of those changes. Completed after 18 months, the project is now delivering tremendous strategic value to the business, in four key ways.

First, the relocation has increased the productivity of the organisation. The original Mayfair building was a drain on productivity due to its functional obsolescence. As Project Lead, Ali Hall notes, "The building created barriers and silos within the business. Circulation throughout the building was extremely difficult and constrained collaboration. Similarly, the senior leadership team were difficult to access from within the building, which is far from satisfactory when running, and indeed transforming, a business. To take Condé Nast International forwards, these constraints had to be removed." The new premises could not be more of a contrast. It provides large floor plates, featuring integrated floors within a strong and characterful building.

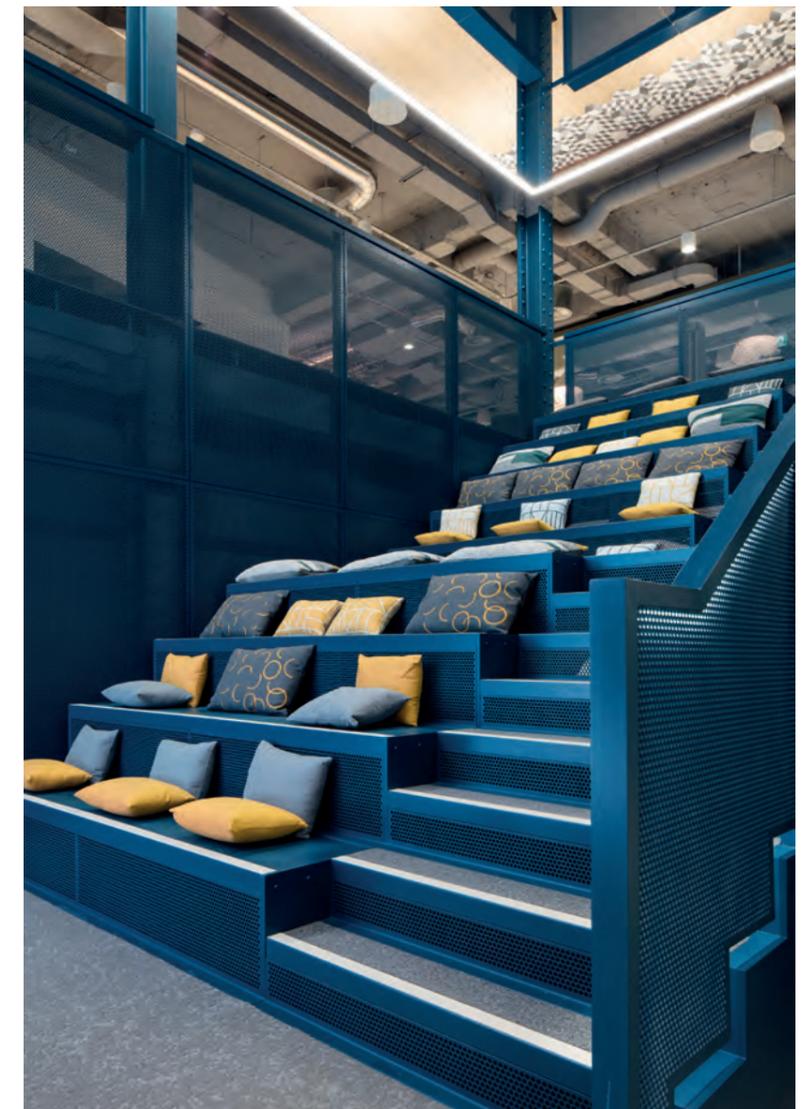
Second, the project has supported the re-engineering of the day-to-day functioning of the business. Ms Hall notes "An important principle for the project was a move away from my space towards our space, to support that much needed mobility and circulation throughout the building. There was also a desire to create multiple task-specific environments within the space, which challenged people to see the workspace as something other than a simple desk." As a result, the new space is replete with pod spaces, vibrant breakout zones and a café that sits in the middle of the 'H' shaped floor-plate and acts as a logical zone for informal 1-2-1 meetings. Ms Hall maintains 'We were keen to activate the building to get the business functioning differently. We paid particular attention to the provision of informal and formal meeting rooms and a design that allowed staff to change their scenery without leaving the building.' A masterstroke in this respect was the development of a large eighth floor quiet lounge, which provides employees with a mix of soft furnishings to support thinking and contemplation, alongside inspiring and spectacular panoramas of the Thames. Similarly, there is the space known as 'The Well' which sits around the central stair core of the space and provides bleacher-style seating for town-hall meetings or

social events, as well as further informal meeting space. Ms Hall has no doubt; "It is the social areas that make the building and are the key to driving its productivity."

Third, the relocation has supported the fundamental restructuring of the business in response to the challenges of digital technology. As building options were being considered, Condé Nast International decided to centre its global digital expertise in London, thus adding a further 100 seats to the requirement. This meant that a new demographic and skill profile was being brought into the building and one which, given its global remit, was required to collaborate with colleagues around the world. What was required was a building that blended those working for a traditional luxury brand with a fresh, digital, agile and disruptive workforce. In essence, the workplace needed to be a blend of 'luxury hotel vs

digital warehouse'. The Adelphi building was perfect in this respect with the combination of grandeur, large floorplates and distinctive pillars providing a canvas through which to provide an appropriate environment for all types of employee. Crucially, everyone in the building, including leadership, are visible thus bringing transparency to the transformation of the business and top-level support of the cultural and workstyle changes it requires.

Finally, for the publisher of *Vogue*, image is clearly everything. The company's previous building was hugely misaligned to its up-market brand image. The Adelphi building allowed Condé Nast to strike a pose through external façade and internal fit-out. But, make no mistake, this was no vanity project. Instead, it actively supports the business change required for Condé Nast's digital output to build on the strong standing of its traditional, physical products.



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How does a new approach to the workplace support the organisational and cultural transformation of the 112-year old trading company, Li & Fung?

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What would Li & Fung look like if we were to build it today? This was the question senior management were increasingly asking as rapid industry changes shifted the company from a sourcing model to that of an innovative supply chain. Those senior managers recognised that wider strategic objectives needed to be achieved through a new space, and the question of how to do it was front of mind.

The key driver towards a new approach to the company's workspace was the answer to that question: a need for an open office environment that could promote collaboration and innovation in response to the new requirements of the business.

In 2015, Li & Fung had the opportunity to experiment with their first open office concept, a learning experience, as well as the original blue-print for what came to be known as the 'Ways of Working' initiative, now known, simply and effectively, as WoW.

"WoW has given us the opportunity to develop a curious corporate mind-set and culture as it requires open communication at visual, verbal and digital levels," said Sandeep Chinthireddy from the Li & Fung WoW Program Office at the company's Hong Kong headquarters. "The original question sparked a series of changes that have enabled us to use the change of

core markets that included New Delhi, Singapore, Hong Kong and Seoul saw these facets being introduced, engendering a greater sense of pride in and ownership of the workspace. Although empirical evidence is hard to identify, Mr Chinthireddy says increased worker satisfaction has been observed, which is having a positive effect on the attraction and retention of talent.

However, transforming the culture of a 112-year-old company is not an overnight initiative. It takes time for people to adapt to a new working environment and the workstyles it encourages, and simple things such as terminology can slow progress. For instance, as Mr Chinthireddy notes, calling communal space 'break-out zones' rather than 'collaborative space' initially had a detrimental effect in some local offices. Employees, who were used to working in their own private spaces away from colleagues, viewed 'break-out zones' as non-working space. It took time for that semantic hurdle to be cleared, and the areas to be seen as integral to increased collaboration.

However, the hurdles have led to lessons in how to implement and manage change in a company that is no longer afraid of becoming obsolete. "Despite the initial natural discontent of losing personal space, the vast majority of our colleagues have welcomed the trade-up to an environment that is more conducive to their



space to simultaneously transform people and how they work within their new environment."

Three years on, the form and functionality of Li & Fung's global workspaces has changed radically. The two key principles that underpin WoW – no private offices, and all space being shared space – have re-set the link between worker and workspace. The workplace has transformed, but so too, importantly, has behaviour and working culture within the organisation.

Transforming workplace culture requires a large amount of cultural empathy in a company with some 17,000 staff in 230 offices across 40 markets. It requires not only being able to change the spaces themselves but also to express the local culture and determine how that expression will impact the day-to-day functionality of employees collaborating across offices that are often oceans apart.

According to Mr Chinthireddy, giving local workforces the opportunity to put their own 'local' stamp on their workspace took the edge off the necessary prescription laid out in two WoW Playbooks produced to fortify the initiative. The early implementation of WoW in

working-day," says Mr Chinthireddy, "and have noticed a rise in faster decision-making and productivity as a result of the increased collaboration."

And now that the spaces have had a chance to settle and breathe, it is evident that the new lighter, open and modern environments have also been an integral part of encouraging colleagues across Li & Fung to adapt to these new ways of working. Transparency and speed of communication across the organisation and teams, crucial in the management of an ever more complex supply chain has increased markedly.

A new way of working now characterises Li & Fung, facilitated by a transition from closed to open office designs. This is a source of great encouragement as the WoW initiative rolls-out beyond Asia-Pacific, with upcoming implementation in London, Manchester and New York. But it is a source of even greater strategic importance, as this notable company continues to adapt to evolving market conditions.

In trading spaces, and breaking down the silos, Li & Fung's workforce now has greater capacity to win the battle.



1 The Steve Jobs Theatre, Apple Campus, Cupertino, California

Twenty years ago, two PhD students from Stanford University, Larry Page and Sergey Brin, incorporated a new company in an unassuming garage in Menlo Park, California. What began as a research project nicknamed 'Backrub' is today worth more than US\$800 billion, employs almost 90,000 people, and is recognised as the backbone of the US\$11.5 trillion global digital economy.

On its own Google would be a remarkable story of innovation led growth, but it is just one of the tech titans that have flourished from the West Coast of the USA since the late 1990s. The rapid accumulation of financial muscle and scale by organisations such as Apple, Amazon, Facebook or Microsoft has influenced global real estate markets in three ways:

1. Direct demand across key global markets:

The titans have been actively acquiring space across the globe. Over this past year Facebook has, for example, committed to both 760,000 sq ft of space in San Francisco and more than 600,000 sq ft across three buildings in London's King's Cross District, where it will join Google as a key tenant. This follows on from Apple making a similar commitment at the iconic Battersea

CLASH OF THE TITANS

Innovative, next wave technology, driven largely by tech titans, will force further structural change within business and create new demand within global real estate markets.

Power Station and building-out its futuristic new HQ in Cupertino. The impact is not limited to office markets either. More than 70% of transactional activity in the UK industrial market during 2017 involved Amazon, and their industrial market dominance has been an almost global phenomenon.

2. Further raising the bar on the workplace:

The new 'spaceship' campus created by Apple follows in the footsteps of the famed (but often misunderstood) Googleplex in establishing a new benchmark for leading edge workspace. The tech titans have placed great value and investment in the workplace. They have raised the bar in how occupiers could, and should, think about the workplace. They have brought a new focus to internal and external building quality, which has a wider market resonance.

3. Fuelling disruption across all industries:

Collectively the titans have established the digital age for business. Accordingly, law firms, accountancy practices, retailers, banks, media companies and the like have been required to formulate new business models. The success of these new corporate structures is ultimately dependent upon attracting and retaining new, technology savvy talent. In order to entice that talent, companies have had to rethink their space and locational requirements. From an occupational market perspective, the equation has been simple: disruption = demand. This is the reason why, despite an often less than positive operating environment, leasing activity has sustained high levels since the turn of the decade.

ALL HAIL THE NEXT WAVE!

The growth of the tech titans supports the economic theories advanced by Joseph Schumpeter. He argued that economic change revolved around innovation, entrepreneurial activities and market power. Schumpeter also, tellingly, maintained that technological innovation creates temporary monopolies that are necessary to provide the incentive for firms to develop new products and processes.

This is prescient in the context of the next wave of digital technology presently emerging and impacting business and consumer alike. Although often originating in academia or entrepreneurial start-ups or spin-offs, the rise and adoption of automation, robotics, artificial intelligence, machine learning, augmented reality and virtual reality is being rapidly advanced by the tech titans. Take the example of Artificial Intelligence. Google have, according to tech sector analysts CB Insights, invested in 19 separate AI companies over the six year period 2012-17, acquired a further 13 specialist AI companies over the same period, and created six in-house programmes to extend their expertise and market dominance in the next wave.

Ultimately, next-wave technology serves to modify the dominant equation of global occupational markets. It now reads; more disruption = more demand.

Clearly, the market capitalisation and cash on balance sheet of the tech titans enables them to drive R&D further and faster. They can also pull at the M&A lever in order to dominate in any emerging area of technology. The next wave is the latest battleground for the titans but it is also an area posing some broader questions about the future of not only the workplace, but work itself.

JOBLESS GROWTH?

As next wave technologies become the latest weaponry in the battle for corporate competitive advantage, a great debate has ensued. The debate is an emotive one which has led to three principal schools of thought.

First, there are those who believe next wave technology will decimate global labour markets, leading to huge net job losses and significant societal challenges.

Secondly, some see next wave technology as bringing structural labour market change, eradicating many jobs but ultimately replacing them with a range of new jobs. This may generate a slight net increase in the quantum of jobs, and a marked uptick in the quality of jobs found within the global labour market.

Finally, some believe that next wave technology is adopted at varying speeds, meaning that the actual impact on global labour markets is often overstated. Furthermore, it serves to enhance rather than replace jobs. This enhanced productivity will generate growth that, in turn, also has a positive labour market impact.

Our view is that the first school of thought has Luddite tendencies and tends to overplay the speed at which technological change occurs, while underestimating the ability of companies and economies to adapt to change. In this sense, the second position of structural adjustment has more validity. Recent experiences in the digital economy clearly point to the creation of new digital jobs at the expense of traditional roles. This has placed greater emphasis on attracting particular skills-sets and brought a net positive impact on employment levels.

We believe that, the third position has the greatest probability of reflecting the corporate dynamic over the next five years. It has two compelling elements. First, it positions next wave technology as having a direct, and much needed, impact on corporate productivity. Second, rather than portraying a robotic labour force drawn from a sci-fi blockbuster it paints a more realistic picture of humans working in harmony with machines to bring the very best from both.

PROPERTY IN THE NEXT WAVE

Those adopting a more optimistic position in the debate, recognise the resilience and adaptability of corporates and the people they employ. They also acknowledge that change in the organisational structure of companies, the workforce they require, and hence the workplace, is inevitable. On this basis, and supported by the findings from our survey of global corporate real estate leaders, we believe that the commercial application of next wave technology will have five direct implications for global occupational markets:

1. No major negative impact on global occupational volumes:

Although corporate real estate leaders recognise that there will, in time, be some fluctuations in the headcount of their organisations, around half of those surveyed saw only a slight decrease in the size of their global portfolios, while more than one third foresee no impact on total floor-space at all.

2. Continued recognition of the role of real estate in attracting and retaining tech talent:

Fifty-five per cent of those corporate real estate leaders we surveyed saw next wave technology greatly increasing the talent requirements within their business. Across sectors, businesses will be competing for a small, specialist pool of talent *au fait* with the emerging technologies and capable of implementing them commercially. There will be no let-up in the use of high quality, highly serviced real estate to support in this competition.

3. Increased corporate mobility towards those locations with the talent:

Greater due diligence will be undertaken to identify where pools of appropriate technical talent are created or cluster, and more companies will move their technical and transformative functions towards these locations.

4. A more productive workplace:

Next wave technologies may well be the input that unlocks corporate productivity. While it is important to air caution, given the effect of current technology on productivity levels, 59% of our survey respondents maintain that next wave technology will have a positive impact on organisational productivity and 4 in 10 believe enhanced efficiency will derive.

5. The innovation imperative will be reflected in real estate:

Next wave technology forces business to rethink their business models. It places an innovation imperative at the heart of businesses. Accordingly, we will continue to see the rise of specialist teams, in specialist facilities, to drive corporate innovation. Our survey highlights that two-thirds of corporate real estate leaders are responding by either creating or having concrete plans to create such new facilities, with 47% pointing to the formation of innovation labs as a key development in the corporate armoury.

THE KNIGHT FRANK TECH CITY INDEX

The rapid onset of next wave technology will advance two key trends within global real estate markets. First, it will create new expansionary demand from both established and emergent tech companies, as they seek to

grow market share within these new niches. Tech sector demand will continue to dominate leasing activity within global markets.

Second, it will extend the innovation imperative felt by companies from across a broad spectrum of industry sectors who are seeking to secure competitive advantage through the application of next wave technology. Our long held belief that technological disruption creates market demand is as relevant to next wave technologies as it was to the digital revolution.

Given this, there will be a strong push from tech companies and those disrupted by tech, to secure the tech talent capable of driving growth, implementing technological transformation and future-proofing organisations. Companies must identify those global centres where innovative tech and creative talent clusters. They will increasingly aim to locate in proximity to it, in order to derive competitive advantage.

The Knight Frank Tech City Index supports this identification process. Through six distinct analytical categories, we have determined the world's top 15 tech cities, as shown in the chart opposite.

These cities will be high on the list of potential locations for those seeking to access the talent that advances and implements next wave technology. These cities are most likely to show strong profiles of demand from the tech sector over the next five years. These cities have the human capital best able to support business transformation. These cities will have great appeal to property occupiers and owners alike.

The Knight Frank Tech City Index ranks cities around the world on six key elements of a supportive tech sector infrastructure:

Educational infrastructure: *The concentration of world-renowned academic institutions, within 60 miles of the CBD, that have an international outlook, first class research and strong ties with business.*

Tech and creative talent: *The presence of technologically savvy talent, notably that with a strong R&D focus.*

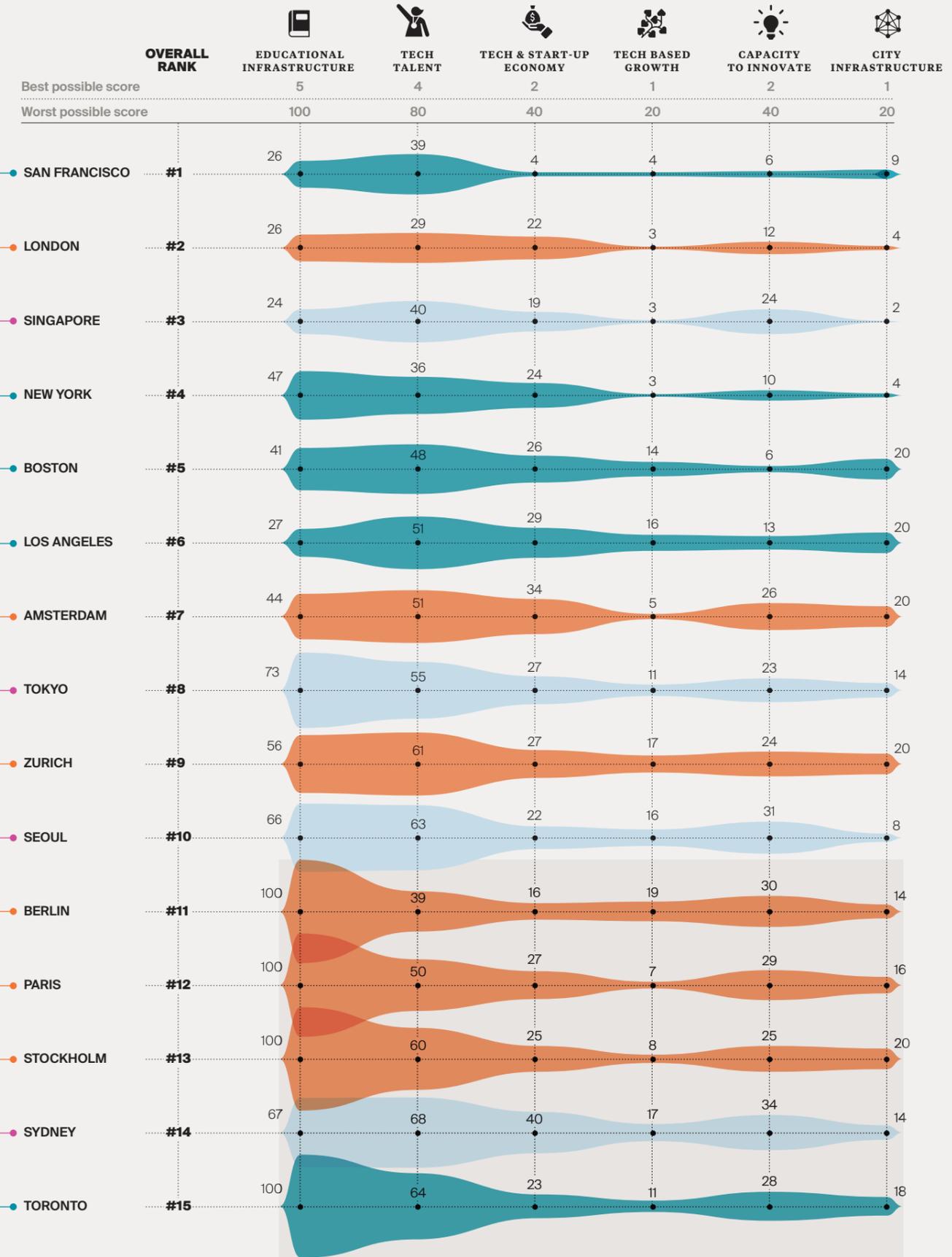
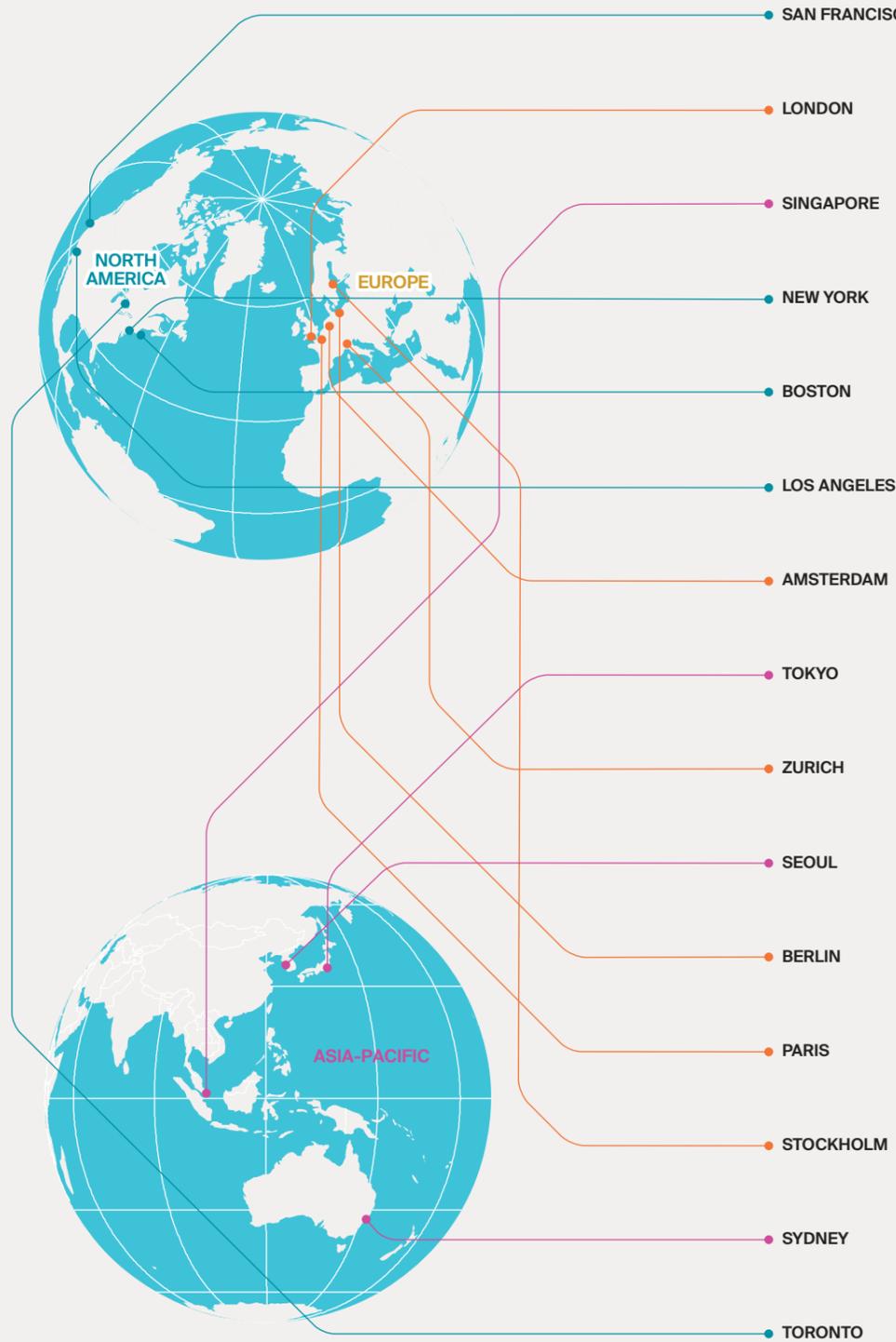
Next wave technologies & start-up culture: *The capacity of the city to continually advance and nurture new businesses, particularly within emerging new wave technologies.*

Tech based growth: *The influence of tech on future city level economic growth.*

Capacity to innovate: *The ability of a city to accommodate and advance innovation as part of its economic development.*

Smart City infrastructure: *The extent to which a city embraces and utilises technology to aid city management and effectiveness.*

Scores and rankings are calculated for each element and then are aggregated to create our overall Global Tech City ranking.



San Francisco tops the Knight Frank Tech Cities Index. What trends are emerging within the Bay Area? How can you attract tech occupiers to your space? Which occupier groups are the 'ones to watch'? Lee Elliott, Global Head of Occupier Research, spoke to Bill Benton from Newmark Knight Frank in Silicon Valley to find the answers.

THE VIEW FROM THE VALLEY

Bill Benton lives and breathes tech. Not only is he an accomplished producer of digital movies in his spare time, he also spends his working hours letting space to some of the household names in digital technology. Over a 20-year career, Bill has leased more than six million sq ft to tech companies in Silicon Valley. Who better, therefore, to provide insights on the art of attracting tech tenants?

LEE ELLIOTT Bill, you have been a market-leading broker within the undeniable hotbed of tech, Silicon Valley, where you have operated for more than 20 years. What changes have you seen over that time in tech occupiers and their real estate needs?

BILL BENTON I would say that the definition of what a large tech tenant actually is has significantly changed. Going into this cycle a 100,000 sq ft tenant was a big deal in San Francisco but today there might be 30 different 100,000 sq ft occupiers that are active in the market and looking for space. And now, all of a sudden, 300,000 sq ft and 400,000 sq ft occupiers are becoming somewhat normal.

“If I have learnt one thing to pass onto landlords who are trying to attract tech tenants, it is simply to spare no expense on the fit-out of the space, but be clear about what you need to provide and retain absolute control over the fit-out process.”

LE Let us turn to the art of attracting tech tenants. What influence does the physical design of the product have on the occupier's decision-making process?

BB High ceilings, side cores, phenomenal access to public transportation and local amenities are all of critical importance and high on the checklist of the tech occupier. The building also has to be on the side of town where the talent lives. The built-out office space also has to typically abide by the 80/20 rule. That is, 80% open space and 20% with hard walls. There is also a need to provide insanely cool break areas and drop down areas where people are able to collaborate and be productive without being chained to their desks. In that respect, if I have learnt one thing to pass onto landlords who are trying to attract tech tenants, it is simply spare no expense on the fit-out of the space, but be clear about what you need to provide and retain absolute control over the fit-out process.

LE That point about the side core, why is that so important?

BB The tech community is all about collaboration. They are all in benching style space and the whole idea behind benching is that everyone can see everyone else. So if you put in a large centre core to house elevators and services, you are removing the very thing that the tenant is most wanting to achieve – line of sight and the ability to collaborate fully across the floor. A side core building removes the problem. Obviously, it pushes all the elevator works and services to the side and means that when you come out of the elevator you can see the whole company, you can feel the buzz; you can feel the energy and you can drive through the space the collaboration necessary to support the growth and development of tech tenants.

LE I know that you often tour internationally with your tech clients in the hunt for space. What would you say is the greatest difference in the viewing process overseas when compared to your home market?

BB In the United States, we typically see second-generation space, reusable space or, in the heart of tech markets, new office space being speculatively built-out. When we tour internationally with our clients we are constantly being shown Cat A space which has a couple of problems. First, it makes all the space we view look the same. There is no differentiation and it is hard for the prospective tenant to visualise how the space is going to look, feel and work. It is very hard for the landlord's product to stand out because we are essentially viewing a range of identical cold boxes! Secondly, and crucially, these fast growing tech clients do not necessarily have

the real estate departments, the bandwidth or the time to be involved in massive build-outs on the other side of the planet. So the value of seeing something that is built-out is that it will stand-out above everything else and, so long as the space is in the right location, put it at the top of every list.

LE Where do you think landlords most often take a wrong turn when seeking tech occupiers?

BB In my experience, it is when landlords give over control of the fit-out to the tenant. What then happens is that you have space which is too bespoke to the occupier, has design features which do not typically transfer over to the next tenant and thus create both expense (for either occupier or landlord) and increase the risk of downtime and expensive voids (for the landlord). Retain control of the fit-out, make the fit-out of the very highest quality but keep it simple and focused on fundamental needs rather than flashy design statements that have no functional value.

LE We often hear concerns from landlords about the costs of delivering some of the things that you have noted as success factors. Are they justified?

BB Absolutely not! In fact, they are not even paying attention to the value that they could be generating! Anybody can run a model. It is not that complicated. The key component of the model is that you build-out great space. When you do, what you have to understand is that you won't have any downtime. In fact, you will have competition for the space, which means that you won't have to give away free rent because you will have at least two competing offers. That competition also means that you can certainly assume a higher rental rate. Finally, and more importantly, when that initial term is over – whether the tenant renews or moves out – you are right back

in the same boat again. No downtime. No free rent. So long as you buy into the fact that you must create a commodity that everybody wants then the model is self-explanatory and works! When we model a 20,000 sq ft office, the return on investment (ROI) when building it out with a high end build-out versus not building it out at all was 6% over 10 years and 18% over 15 years. So yes, investment is required to ensure success but it has significant payback.

LE Bill, thanks for your insight. In closing, you have had 20 years in such a tech-rich market. What do you see emerging out of Silicon Valley over the next five years that either excites or worries you?

BB In terms of exciting and emerging technologies, we see a tonne of activity. Some of the big movers right now are the driverless car companies. There must be 15 different driverless car companies in the Bay Area, and three or four of them in San Francisco are all occupying significant amounts of space. Cruze Automation, which is part of General Motors, just took out another 300,000 sq ft in a deal where Newmark Knight Frank represented the landlord. This company took over 150,000 sq ft in the market just last year! So the driverless car companies are taking a lot of space in our market. Bio-tech and life sciences are still growing significantly and we also have companies linked to the Internet of Things growing too. Big data is growing. The social media guys are still growing. Some of the challenges are that the big guys are buying out the little guys before the little guys have a chance to scale. This is a trend that stifles innovation and while enriching founders does not allow the rank and file of the company to participate in the upside. I remain optimistic. There is no sign of Silicon Valley losing its ability to create, nurture and grow new technologies. That has to be good, not just for the Valley, but for tech markets around the world.



TRANSFORMING TO WIN

Nothing better illustrates the disruptive and enabling influence of technology than the phenomenal growth of e-commerce. The creation of modern online giants such as Amazon, Alibaba or ASOS has led to the industrial workplace changing under the influence of next wave technology.

As digital technologies spawned the e-commerce revolution, unprecedented demand for 'sheds' has emerged.

The growth of e-commerce has been both rapid and remarkable. The five largest e-commerce companies in the world, all created in the closing years of the twentieth century, now employ more than 800,000 people around the world and annually turnover just a fraction short of US\$300 billion. The largest of those companies – Amazon – today accounts for 43% of all global on-line sales and three-quarters of all online book sales. Little wonder then that in 2017, Amazon was responsible for 70% of all take-up in the UK warehousing sector.

Relatively smaller, but no less significant, are the pure-play e-retailers such as ASOS (founded 2000) or Zalando (founded 2008) – who have generated market capitalisations of £4.9 billion and €8.8 billion, respectively, following their transformation of on-line fashion. As an occupier, ASOS, for example, is unrecognisable from ten years ago when occupying 160,000 sq ft of warehousing space in Hemel Hempstead. Today, its portfolio is around the one million sq ft mark in the UK, Europe and the USA, with further plans for global growth.

In the Digital Age, pure-play e-retailers or e-marketplaces, together with the more traditional, and hence challenged, bricks-and-mortar retailers, are busy trying to create competitive advantage in a fast changing operational landscape. To do so they increasingly look to real estate with the warehouse, both individually and collectively in the form of a distribution network or supply chain, being very much in focus.

The application of automation and mechanisation, now joined by robotics, augmented reality and the Internet of Things, in order to enhance supply chain efficiency, and with it e-retailer performance, has been significant but has generated mixed results. It has also led to a fundamental rethinking of business models, processes and, ultimately, real estate requirements.

CHANGING OPERATIONAL EMPHASIS

The most discernible influence of technology on the physical operation of warehousing facilities has been a shift from 'people moving to product' to a position of 'product moving towards people'. The days in which the fulfilment of an on-line order required warehouse pickers to traverse the warehouse individually picking items prior to distribution are rapidly disappearing. Instead, picking technologies, robotics and automation are used to locate the required products, retrieve them from dense (and hence highly efficient) storage systems and then take those products to a central hub within the warehouse, where a human operative collates and prepares the goods for despatch. In our experience, this has led to clients generating a three-fold increase in the throughput and fulfilment of orders, alongside a reduction in human errors, which in turn reduces the number, and hence, cost of enforced returns.

One such example is the development of Alibaba's Smart Warehouse at Huiyang in the Guangdong Province of China. The facility became operational in July 2017 and is a model that the logistics arm of Alibaba, Cainiao, plan to extend to other key global industrial markets including Dubai, Kuala Lumpur, Liege and Moscow. At the heart of the 3,000 sq m warehouse is a fleet of more than 100 automated guided vehicles (AGV) that are responsible for 70% of the work undertaken within the facility. According to Cainiao a human worker could historically sort through 1,500 products during a typical shift and would take 28,000 physical steps across the warehouse doing so. The introduction of AGVs that take products to the staff has served to double the number of products sorted by each staff member and has reduced the number of steps they are required to take to less than 3,000. This is a story of increased efficiency. It is also one that positions technology as a remedy to worker productivity, not as an eradicator of jobs.

The application of this automated technology is also key to overcoming some of the labour market constraints operating within many developed global markets. Technology is being applied to mitigate against the risks of there not being sufficient human skills available to be put to task in the future.



Warehouses will show a greater degree of design variance. Industrial space will be multi-user, multi-level and mixed-use as technology, land constraints and collaborative business models reflect in the physical product.



CHANGING PROPERTY REQUIREMENTS

As e-commerce companies, and indeed a broader array of industrial occupiers increase their investment in next wave technology, the type of real estate they seek, and the basis on which they occupy that space is liable to change.

Warehouses will show a greater degree of design variance. Industrial space will be urban, multi-user, multi-level and mixed-use as technology, land constraints and collaborative business models reflect in the physical product. Warehouse specification will also bring greater consideration to environmental issues and will become more self-sufficient via the greater use of solar panels and waste processing facilities – particularly as these technologies become less cost prohibitive.

Such is the extent of technological input into a warehouse that, in our estimation, the fit-out costs of a modern warehouse is between two and four times the construction costs of the base building. It is not uncommon for e-commerce companies to spend tens or hundreds of millions in fitting-out their space with the latest technology as they push for increased productivity. Given this, we believe that custom-made, built-to-suit warehousing will come to the fore in industrial markets. As real estate continues to be a source of strategic and competitive advantage, occupiers will be prepared to work with

landlords and make long-term commitments to product that suits their operational requirements, has the required levels of future proofing and protects their long-term capital investment in technology. For the same reasons, we anticipate a push towards longer leases or, at the very least, more regular re-gearing of leases.

The application of next wave technology to e-commerce supply chains is hugely complex and expensive. It will become more so as occupiers seek to apply multiple technologies to bring dramatic transformation. An example is the swarm robotics technology that has been developed by Ocado. Bringing together robotics, motion control, swarm-based orchestration, an array of AI and machine learning applications, sensing and simulation, Ocado's Chief Technology Officer, Paul Clarke, describes the platform as 'the culmination of a load of competencies we have acquired over the years.' Two things are striking. First, there is no time for standing still. The competitive advantage achieved through technology is only temporary, and necessitates continual innovation and the aggregation of technologies. Second, those, such as Ocado, who have been at the forefront of this innovation are likely to continue to lead. It is little wonder then that Ocado, which started life as a food distribution company, is now positioned firmly as a platform business that offers technology based solutions, derived from their own experience, to those desperate to transform in order to win.

CHANGING CORPORATE CONSTITUTIONS

In this disruptive digital age, the shape and focus of business is undergoing constant revision. As new sources of competitive advantage emerge, companies seek to mobilise and implement them quickly to get ahead of traditional competitors or enter into completely new markets. The corporate real estate portfolio needs to reflect and support three areas of change.

1

Business structure

The form that the organisation takes to provide the necessary focus, skills base and operational rigour to react to market opportunities while optimising efficiency and productivity.

2

Business culture

The essence of the organisation and the behaviours that shape its growth and evolution.

3

Business constituents

The human capital necessary to drive the business forward and allow it to react to market challenges and opportunities.

Business Structures

Teams of Teams

Retired General Stanley McChrystal, former commander of US and International forces in Afghanistan, coined the phrase 'team of teams' in a recent book. The principle is about combining the agility, adaptability and cohesion of a small team with the power and resources of a giant organisation. It is about transitioning business from a traditional command and control set-up, to a distributed and collaborative operational process.

Real Estate Implications

- A more dispersed corporate real estate portfolio
- Increased short-term, project specific teams and greater appetite for co-working or flexible space
- Formation of corporate shared-service hubs to service the dispersed teams
- Increased flexibility required across the entire portfolio

Elephants & Fleas

Charles Handy's 2001 book of the same name foresaw the emergence of symbiotic relationships between large (but hollowed-out) corporates and small and medium sized suppliers who provide tasks and services to the elephants. In this prescient vision, corporate supply chains become deeper and broader as corporates seek to access technical and creative skills on a 'call-down' basis while putting necessary but non-core functions under the management of others.

Real Estate Implications

- Reduced portfolio size for corporate occupiers as they become smaller in headcount terms
- Increased need for 'touch-down' space for suppliers coming into the business temporarily
- Mobility of corporates or suppliers towards one another to create proximity and synergy

Business Process Outsourcing (BPO)

Disaggregation is the process of dividing or breaking-up businesses or processes into their constituent parts. It has fuelled the rise of business process outsourcing – or the contracting of non-primary business activities and functions to a third party provider. BPO services include payroll management, human resources, accounting and customer/call centre relations. There will be a new wave of BPO operators as robotic process automation takes hold.

Real Estate Implications

- Dispersal of business functions globally to locations meeting required skills or cost profile
- Significant occupational demand from BPO companies
- Continued strengthening of global BPO hubs off-shore or near-shore
- Increased mobility of BPO operators towards markets that have the labour to support increased value-add functions



Business Cultures

Learning Organisation

There is no doubt that the attraction and retention of talent – which is in short supply across the globe – has become a crucial management challenge. There will be two new dynamics. First, mitigation will become less about trying to bring expensive external talent into the organisation and instead about being able to identify and have access to that talent as and when it is required.

Second, companies will seek to nurture and develop their own talent. They will increasingly commit to life-long learning programmes for their staff, recognising the skills of today will not be appropriate for the business of tomorrow.

Real Estate Implications

- Education facilities to become a core part of the amenity mix within core office markets
- Provision of learning facilities within the corporate real estate portfolio
- Spaces to support events programmes and town-hall style meetings aimed at developing the workforce will be in demand
- Increased flexibility within the workforce - as staff increasingly combine work with learning – will enable advancement of hot-desking arrangements
- Increased utilisation of real estate assets as the workplace becomes an educational facility outside of core working hours

The Innovation imperative

There is an innovation imperative facing modern business. In a world where ideas can be developed and perpetuated quickly through technology, competitive advantage is often short-lived. As a result, businesses are on a continual mission to find the next big idea – be it a new service offering, a new product or a better working process. These ideas are not typically generated through narrow corporate silos. They must be crowd-sourced.

Real Estate Implications

- The further rise of corporate innovation labs as part of the real estate portfolio
- Creation and corporate operation of incubator and accelerator space as a means of harnessing innovation from outside the organisation
- Creation of R&D centres that are financed or supported by a coalition of companies
- Activity based workplaces that encourage collaboration within and between business functions
- Increased use of stairs to join previously disparate floors within a company building to encourage the free-flow of staff and ideas



Business Constituents

Diversity

A further dynamic, rightfully challenging the corporate constitution, is the need to broaden diversity. Teams of mixed gender, ethnicity, physical ability, age and sexual orientation are more representative of customers. They offer a range of viewpoints and broad-based experience that supports innovation, problem-solving and decision-making. Diversity policies make absolute sense commercially.

One aspect of diversity frequently overlooked is that of generational diversity. Generational diversity will become a particularly hot-topic over the medium term and workspaces will need to have wide generational appeal.

Real Estate Implications

- Spaces that provide amenities for all rather than for the few
- Greater variety of work-settings more in keeping with working preferences of the various generations at work
- Increased communal space to bring a diverse workforce together

The Freelance/Gig Economy

Charles Handy also raised the idea of the portfolio worker – someone whose employment is spread across a range of organisations and is often combined with other non-commercial activities. This again seems prescient, as freelancing has become a rising and now significant component of the labour market. In the USA, freelancers are forecast to represent 40% of the labour market – or 60 million people – by 2020.

Linked to the rise of freelancing, the gig economy is a term which describes an environment in which temporary positions are common and organisations contract with independent workers for short-term engagements. It is estimated that the London gig economy has grown by 70% since 2010. It is, however, a labour market model that is coming under increased political scrutiny.

Real Estate Implications

- Increased need for 'touch-down' space for suppliers coming into the business temporarily
- Provision of flexible space within the corporate real estate envelope to accommodate transient workforce
- Strong technology platform to allow connection of workers across sites



Lee Elliott, Global Head of Occupier Research at Knight Frank, asked Virginia Clegg, Senior Partner of DAC Beachcroft, how real estate is used to support structural and cultural change in her business.

WITH STRATEGIC INTENT



LEE ELLIOTT Virginia, what strategic issues are you trying to address as the Senior Partner of a leading international law firm?

VIRGINIA CLEGG Our market is moving very fast and there are many new entrants coming into the market. This leads us into what is described as the 'war for talent' and our ability to attract, retain and develop really talented people to serve our clients is absolutely key for us, and does help to frame our thinking in relation to real estate. Clients want high quality, value-added services. Therefore, they want us to look at the use of technology and, of course, provide a cost efficient solution. The other strategic drive is to grow our international business, which of course has real estate implications.

of different workplace settings. Work will not be limited to individual desks. We will have quiet areas, quiet meeting rooms and project rooms. There are also areas where people can collaborate, where they can talk together, where they can work on files in a truly collaborative way. I think if you are able to express all of that, alongside strong IT support, then you are starting to look like a more forward looking, more interesting place to work. We should not forget that the professions are all competing for the same group of people all coming through. To my mind, you cannot have the provision of legal services going through a very old-fashioned route because looking and feeling old-fashioned does not help us compete against others.

to engender a cultural shift that encourages people to bring forward their ideas so that we can build on them. Open, collaborative and respectful working environments are fundamental to innovation.

LE There is growing concern over employee well-being. How does this all translate into your real estate portfolio and the environment it creates for your people?

VC Well-being is a really interesting area for us and it is, as it is with every responsible business, an important part of the work that we do. We very much recognise that concept of 'together alone' and we are very, very mindful of it. In our workspace design we build in a 'nudge'. We may position the printers



Virginia Clegg

LE How can real estate support those strategic priorities?

VC We have guiding principles that sit within our real estate strategy which ensure that our presence in a location aligns to clients, colleagues and to the availability of talent. If you look at our UK footprint, for example, we are in the main centres of excellence for the provision of legal services. I think the key is to enable people to work in the way that they are increasingly wishing to work, set against the maxim that work is something you do, not necessarily somewhere that you go. We have real estate that is affordable, that is appropriate for us, and reflects our brand and ambition. We also locate work where it can best be delivered. So for example, Birmingham is an important location for our Claims Solutions Group from which we deliver a cost efficient, effective solution for our clients.

LE How does real estate help you in that war for talent, if at all?

VC It absolutely does because it reflects our brand and culture. I have always said that unless your real estate actually fits within your asset class you shouldn't be in it. Unless you can explain why you happen to be in a location, in a building, with the fit-out you have, then I think you are missing something in terms of your ability to attract and retain talented people. So our new London office will have a variety

LE Can the workspace support cultural and behavioural change too?

VC Yes, and you do very definitely change behaviours. The generations that will come after me do not want to sit at a desk in a corner office all day long. They want to be able to communicate with their colleagues both at their own level but also with those more senior. They want to learn, and a key way to learn is to be close to those who are more senior and more experienced. Collaboration is so important. That is why we look for large floor-plates – our largest will be the building we will shortly move to in London. We know that increasingly our clients want us to deliver a service that pulls in various different disciplines and in a very consistent way. By working open-plan, by working on large floor-plates, it is easier to find your colleague and collaborate to create client solutions. That is what our clients are expecting from us.

LE An important business culture is one of innovation. How do you support innovation through workspace?

VC We spend a lot of time thinking about innovation and have a dedicated Innovation Lab in our Birmingham office. Innovation is not just about technology; it is as much about culture. It is about being open to ideas, encouraging ideas, having a culture that is prepared to develop ideas and progress them. We do it all of the time, creating solutions for our clients. We need

“... innovation is not just about technology. It is as much about culture.”

in a slightly inconvenient place, meaning that people might have to get away from their desks and go for a little walk. We provide focal points through coffee-machines and the water-coolers to, once again, ensure that people are getting up and are having social interaction. But they are gentle things. We are not making requirements of people. We are just nudging to support their well-being.

LE What do you think the fundamental change will be within your real estate portfolio over the next three years?

VC The cost of real estate is so high that we have to be able to have efficient space that enables us to work it very hard and future proof it. Strategically, we will ensure that we stay light on our feet because the world is changing very quickly and real estate, by its nature, has involved long-term commitments. We will look for flexibility. We like multi-let buildings, because they enable us to take on a bit more space or drop a bit of space. The flexibility delivered by a multi-let building is something we would take over having our own front door.

MAKING THE RIGHT IMPACT

The new European headquarters of financial, tech and media giant Bloomberg, is having a hugely positive effect on business collaboration and innovation while reducing environmental impact. Bloomberg's Global Head of Facilities, Heather Walker, explains how.

THE ORIGINS OF THE PROJECT

In 2010, Bloomberg acquired a 3.2 acre site in the heart of the City of London in order to build a new European headquarters that would accommodate our growing employee population and meet the unique needs of our business.

Working in close collaboration with renowned architect Norman Foster, our founder, Mike Bloomberg, set out to create a building that would push the boundaries of sustainable office design, give something back to the City and inspire our employees to collaborate and innovate.

The result is a building that brings our 4,000 London-based employees under one roof for the first time. Two buildings, connected by bridges, provide 1.1 million square feet of office, retail and ancillary space on a site that incorporates three new public plazas, a dining arcade and a new free cultural space displaying the restored Roman Temple of Mithras.

THE BUSINESS DRIVERS UNDERPINNING THE PROJECT

Bloomberg has had a presence in London since 1987 and by 2010 – when the new site was acquired – we had expanded across four sites in the city. The decision to build a new European headquarters was not only driven by the fact we had outgrown our previous space, but by our founder Mike Bloomberg's vision to create an inspirational, sustainable workplace, with all our London-based employees under one roof, that would inspire collaboration and fuel innovation.

After 30 years in the City, the new building represents a 'coming of age' for Bloomberg in London and an enduring desire for our working environments to reflect our values as a business.

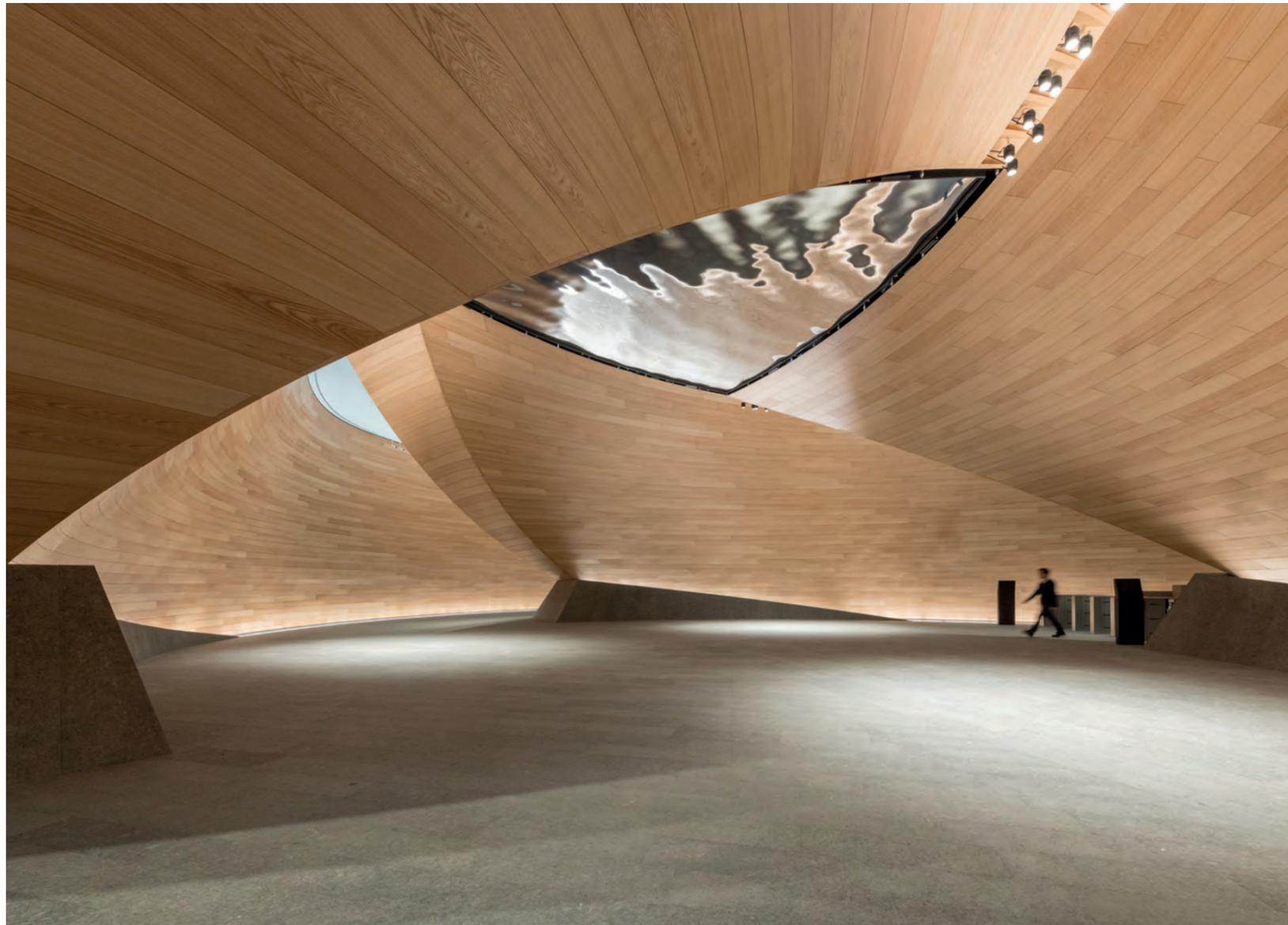
THE CORE PRINCIPLES INFLUENCING THE WORKSPACE CREATED

All of Bloomberg's 192 offices around the globe are shaped by the principle that transparency, openness and collaboration fuel innovation but as the company's first wholly owned and designed building, our new European headquarters takes this to a new level.

The desire to foster cooperation and communication, inspire creativity and to radiate excitement and energy was a fundamental starting point for the interiors. The building's cores have been pushed to the edges to visually open the floors and reveal a spiralling ramp that brings people together and encourages chance interactions as employees travel through the building. There is also an emphasis

on flexible, informal meeting spaces, including the sixth floor 'pantry', the social heart of the building and a space that's always buzzing with activity.

Another core principle that has defined the building since day one is its commitment to sustainability – from site selection to construction practices and from engineering to waste management in occupation. The building achieved an 'Outstanding' rating against the BREEAM sustainability assessment method with a 98.5% score; the highest achieved by any major office development in the world. Thanks to its innovative power, lighting, water and ventilation systems, it is 70% more water efficient and 40% more energy efficient than a typical office building. That's something our employees are really proud of.



The Vortex is a literal and metaphorical 'twist' on the classic timber-paneled lobbies that define many London buildings. Olafur Eliasson's 'No future is possible without a past' sits above.

Image: Nigel Young/Foster + Partners



Bespoke desks are configured in a circular formation.

LESSONS LEARNT

Many of the systems in the building are completely new or bespoke to the project, including the distinctive ceiling, magnetic hard wood floors, the all-glass lift cars and more. This has challenged us to rethink the way our Facilities department operates to manage and maintain the building effectively in occupation.

Another key learning has been around behavioural change. We spent a lot of time second guessing how employees might react to major changes around things like the reduction in formal meeting rooms in favour of more informal spaces but when a design is intuitive, humans adapt very quickly and we've found our employees have largely embraced this more dynamic way of working.

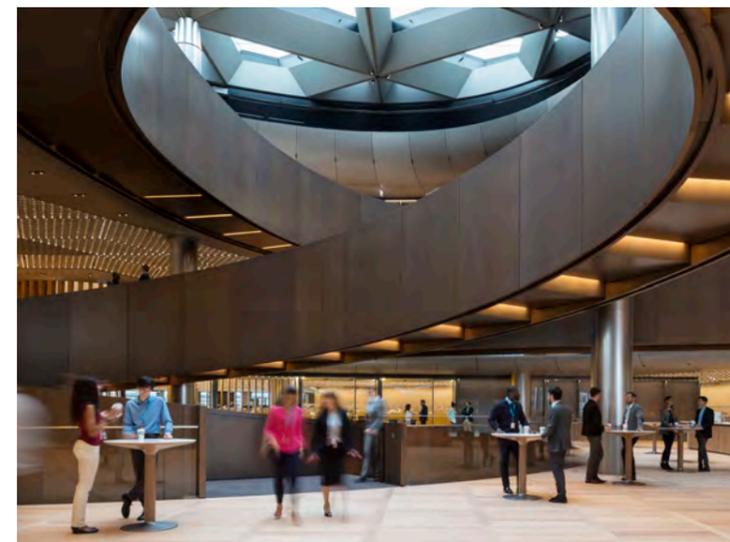
Above all, this project has really demonstrated the value of collaborating across industries and disciplines to challenge accepted conventions, systems and processes. Creating something truly innovative takes risk, investment and a huge amount of teamwork. Our hope is that we've created solutions that can be adopted elsewhere.

BUSINESS AND STAFF IMPACT TO DATE

We have had great feedback from employees and have seen a real improvement in collaboration within teams and across departments. People are opting for spontaneous meetings and quick, regular interactions over long, weekly meetings meaning decisions are made quicker and teams operate more fluidly.

The focus on well-being within the office through design features such as natural ventilation, adjustable desks and natural materials not only allows for a kinder working environment but has improved individual efficiency.

Ultimately, employees are also proud to come to work in the building and to host their clients and guests in the space. That's invaluable. After all, as our founder says, our employees are our most important asset.



The vibrant pantry is lit with natural light from the atrium above.

Image: James Newton

Data. Big data. Curation. Customisation. Customer experience. Customer journey. The digital age is bringing a new language, and new practices, to business. It places greater emphasis on understanding and engaging with customers through the analysis and application of data. It recognises that the needs of the customer are both varied and changeable, and responds accordingly. Business success in the digital age is about creating customer-centric services and flexible solutions, not the simple provision of fixed and standard products.

Evidence of this shift is all around us and is represented in disruptive companies such as Spotify, Netflix, Zipcar and Uber.

Commercial real estate is not immune to this digital transformation. The emergence of the space-as-a-service model is rapidly becoming the new reality, as best exemplified by the recent explosion in co-working spaces.

RESPONDING TO A NEW REALITY

The transition of real estate from a hard, fixed, physical product towards a soft, flexible and customised service is still in its infancy but is here to stay.



Although, serviced and flexible office space has featured in global office markets since the early 1990s, 2017 was the year in which space-as-a-service really started to capture both headlines and attention within global property. Recent estimates suggest that there are now almost 18,000 co-working spaces around the world, accommodating almost 1.7 million workers – representing growth of 3,500% and 8,000%, respectively, since the start of this decade. Indeed, the growth has been so startling that lettings to co-working operators have become the mainstay of many global leasing markets. As if to underline the point, perhaps the most widely known co-working operator, WeWork, has become, within just eight years of its formation, the largest private occupier of office space in both the London and Manhattan.

Yet despite this astonishing growth, co-working space still represents less than 10% of office stock in all major global markets. This raises a fair degree of scepticism within property circles together with some fundamental questions: Why is co-working attracting so much attention? How does the space-as-a-service model evolve and why?

THE ALLURE OF SPACE-AS-A-SERVICE

Space-as-a-service models have at their very core, a key point of distinction from the traditional supply of commercial real estate – a clear and actioned understanding of the requirements of the customer A.K.A the occupier. There are six specific elements of this customer-centric model that appeal to the occupier:

1. Flexibility: 55% of the global corporate real estate leaders we surveyed regard the flexibility of co-working as its primary appeal. As digital disruption challenges and shortens business planning horizons; creates short-lived market opportunities that demand rapid, agile business responses; and fundamentally restructures business processes and hence the structure and headcount of organisations, there is a need for real estate that is flexible in both quantum and lease terms. Although lease lengths for conventional office product in London have shortened to an average of seven years, this still requires a business to commit to a term that is at least two business-planning cycles. That presents great risk to an occupier. The fixity of the lease is also problematic as businesses grow and decline rapidly in highly changeable and disruptive business conditions. Space-as-a-service, which gives the tenant greater control over the duration of their occupation, hits the spot for the modern occupier.

2. Aligning space to need: Space-as-a-service models also enable the occupier to align the amount of space they take from the operator with their precise business needs down to a workstation level. This negates the need to hold expensive, under-

utilised space to support future expansion, and enables efficiency through the ability to scale-up and scale-down space rapidly. This is in marked contrast to conventional space procurement where the give back of space incurs significant financial penalties.

3. Community & collaboration: Co-working models, by their very nature, bring people working for different organisations into closer proximity. The design of the spaces supports collaboration and a sense of community. Although co-working models now extend beyond the servicing of numerous SMEs within a single floor, emerging spaces managed by operators for single occupiers continue to use design and fit-out to promote the cross-company collaboration that is so central to corporate creativity and innovation.

4. Customer service & engagement: Customer-centricity is at the heart of co-working appeal but this extends beyond a simple recognition of who the customer is. Co-working operators flourish or flounder on the quality of the service and engagement they offer to their occupiers. At the heart of this engagement is a mission to provide experiential spaces that stimulate workplace satisfaction, happiness and hence productivity. Taking learnings from the hotels and hospitality sector, there is a strong focus on retaining customers by providing seamless, high quality service.

5. Well-being & amenity: Linked to the provision of high-quality customer experiences has been a strong focus by operators on the provision of amenities and support of worker well-being. This can range from concierge services, the provision of on-site food and beverage, educational events programmes to gym facilities. These amenities underpin the sense of community generated within the workspace and bolster the experience in support of productivity.

6. Data-driven optimisation: Data is the life-blood of digital business. Space-as-a-service operators utilise data from their buildings to enhance the day-to-day experiences of their customers, whether it is by activating areas of the building that have low utilisation rates or increasing resources associated with in-demand services or amenities. Tellingly, the operators also use the weight of this data to inform future site selection and building configurations.

The growing appeal of space-as-a-service models is supported by findings from our survey of global corporate real estate leaders, which found that the proportion of those occupiers who have between a fifth and half of their occupied portfolio in co-working, serviced or flexible space is set to increase from 27% today to 44% within the next three years. Space-as-a-service meets occupier needs.

THE EVOLUTION OF SPACE-AS-A-SERVICE

One of the often-heard critiques of the space-as-a-service model is that it has yet to be exposed to recessionary market conditions. Cynics point to the troubled experiences of the serviced-office sector in the late 1990s and the buy-long, sell-short characteristics associated with early co-working activity. There are three key points in response to such concerns.

First, given the rapid proliferation of co-working operators over recent years, it is inevitable that some will fly too close to the sun and fail, particularly in more challenging economic circumstances. Yet operational failures do not equate to the failings of those principles that underpin space-as-a-service.

Second, drawing direct comparison between traditional serviced-office models and co-working points to an ignorance of the clear distinctions between

#1 appeal of co-working



the two. As noted, space-as-a-service is far broader than the provision of workstations on a flexible basis.

Finally, the critique typically paints space-as-a-service as a static phenomenon when, in fact, it is evolving rapidly and in ways that may well serve to offer some protection in the event of a market downturn. Some of the most notable features of this evolutionary path are:

1. Operators shifting to ownership: Well capitalised operators are increasingly competing with conventional investors for prime assets within key cities in order to build global platforms.

2. Market consolidation through acquisition: The proliferation of space-as-a-service operators, combined with strong capitalisation and desire for scale will bring consolidation within the market, as exemplified by WeWork's recent acquisition of NakedHub.

3. Scale-up and repositioning of traditional brands: Some traditional brands that have strong market presence will undergo a brand and service refresh. One example is IWG, owner of Regus, who are rolling out their Spaces brand and have recently acquired The Engine Room in Battersea Power Station for their new concept, No18.

4. Differentiation through specialisation: As the space-as-a-service market matures, it is inevitable that operators will seek to specialise and appeal to niche markets defined by industry sector or business function, or differentiate through a particular service offering or member experience.

5. Enterprise and managed solutions evolve: Operators are targeting larger corporate occupiers either to house special project teams within co-working environments or by offering fully-serviced, managed solutions to corporates on a floor or building level. The former approach seeks to position flexible space alongside core corporate real estate, providing the occupier with a mix of longer-term and flexible accommodation that better suits changing business circumstances. The latter approach provides an end-to-end solution to occupiers and creates more secure but innovative environments.

6. The rise of alternative spaces: Space-as-a-service is not narrowly restricted to office space. There are growing examples of retailers, leisure operators and hoteliers all utilising their spaces to create touchdown spaces for transient workers.

Space-as-a-service models are very much in their infancy and there is a long process of evolution ahead. While there may be false-starts and dead-ends for some operators, the principles of the model will hold firm and will become an essential component of the supply side of global real estate markets.

A TALE OF THREE PROVIDERS



The transition of space from a physical product towards a flexible service is creating new models of provision within global real estate markets. We asked three operators, drawn from Asia-Pacific, North America and Europe respectively, about the market opportunity and challenges shaping their growth path.

KNOTEL

Eugene Lee

The service offering

Knotel is the premier provider of flexible office space to companies of 50 people or more. We provide full floors of anywhere from 3,000 to 50,000 sq ft, which can be fitted-out in a client's brand style. Space is provided for as long as the company requires, although clients tend to commit to 2-4 year terms. Key to the offer is our ability to expand or decrease the space provided to customers within their portfolio. Current customers range from Fortune 100 to high growth companies.

The growth trajectory

Knotel has witnessed significant demand for the 'invisible service layer' we provide to corporate occupiers. We are currently in control of 1.5 million sq ft of office space across four cities – New York, London, San Francisco and Berlin. This represents rapid growth given that we operated less

than 150,000 sq ft at the beginning of 2017. Knotel is continuing on its exponential growth trajectory, surpassing 2 million sq ft by year end with plans to open in multiple countries within the next year.

Market challenges & opportunities

The key challenge facing our business model – which stands in stark contrast to the capital intensive, high sales volume model of the co-working operators – is keeping up with insatiable client demand. In providing

a flexible offer aimed squarely at large corporate occupiers, there is a clear opportunity for us to develop more partnership relationships with brokers, occupiers and owners. Market opportunity also derives from changing corporate structures, with more emphasis on distributed teams, and the development of flexible approaches to both headcount and space.

Response

An increasing share (approximately 25% today) of the Knotel portfolio is delivered in partnership with property owners who recognise the need to offer flexible space within their development schemes and the enhanced services that we can provide. The provision of space that can assume the branding of the client is also providing extremely popular with corporate customers who wish to protect their brand identities, their infrastructure and, although seeking flexibility, have no desire to co-exist in a space alongside other corporate entities.



THE OFFICE GROUP

Charlie Green

Service offering

We started TOG around 15 years ago to challenge the serviced office offer, by creating an office that was flexible, but one that was far more considered in terms of design. That was the driver, and then we layered over a real focus on service but we were challenging both serviced offices and traditional offices. To do that and attract more mainstream occupiers, we had to deliver value. Part of that is price and part is understanding what people want from their space and what they don't want. In essence, we have simplified the offer, focused on hospitality and looking after the people in our buildings and we aim to generate long term income from a short term platform.

Growth trajectory

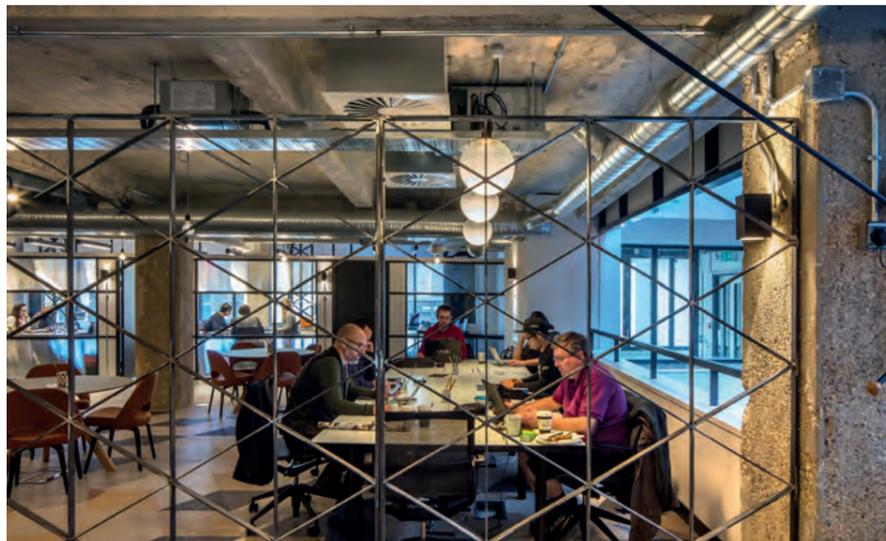
The sector has grown enormously over the last three years, both in terms of supply and demand. Flexible workspace is a much more widely accepted form of tenure from smaller businesses and increasingly from corporate occupiers who see it as a bolt on to their core space needs. We have grown to meet that increasing demand, buying and leasing buildings, having added around 16 buildings and 700,000 sq ft in the last three years. The next three should see a similar growth rate, but with increasing competition we have to make sure that we take only brilliant buildings in brilliant locations. If we do that, we will ensure we have a robust business model in any economic climate. We are also exploring expansion internationally for the first time, with the focus on Germany and New York as the first locations.

Market challenges & opportunities

Technology has been the biggest influencer in the last three years and is likely to have the same impact moving forward through the next three. The pace of technological advancement is increasing all the time, so it is difficult to predict the impact, but we will be seeing huge data capture that will lead to more intelligent building design, from use of space, to access to sustainability. With technology comes an increased awareness across all industries that the flexible, co-working offer is a dynamic and viable option, so hopefully, demand will continue to increase.

Future response

We are investing heavily in technology, rebuilding our software platforms, capturing data, improving our digital experience on the website and app and understanding how we can improve the delivery of the construction process. But we have to layer that with an even more acute understanding of the human element to what people want from a workspace and that will always be our priority when creating our product. We design every building individually and that gives us a unique perspective, allowing us to stay current and address the changes in work behaviour that are evolving at such a furious pace.



JUSTCO

Wan Sing Kong

The service offering

JustCo has established itself as one of the leading co-working space providers in South East Asia, with centres located in Singapore, Bangkok, Jakarta and Shanghai. We aim to 'make work better' for our members and go beyond being simply an aesthetically pleasing place. We provide a large platform that houses a diverse community of talented and like-minded individuals, SMEs and Fortune 500 companies. Individuals and companies alike are provided with ample opportunities to network, collaborate, exchange knowledge, insights and help drive success to their business and professional journeys.

The growth trajectory

JustCo has enjoyed tremendous success in a short span of time. One of our latest milestones is the fundraising round with Singapore's sovereign wealth fund, GIC, and multi-national property company, Fraser Property Limited, on a joint investment of US\$177

million. By 2020, we aim to operate 100 centres across Asia. This joint investment will enable us to build presence in South East Asia and strategically enter key Asian markets.

An entrepreneurial mindset is part of our DNA and we are constantly striving to offer creative solutions to our members' workspace needs. One example is the launch, in May 2018, of the Verizon Innovation Community, managed by JustCo. The partnership with the telecommunications giant is a first-in-Asia initiative, connecting a vibrant technology community in an innovation space. Another example is Singapore's first co-working centre in a shopping mall at Marina Square, which features a very different experience to attract clients from the retail and lifestyle industries.

Market opportunities & challenges

In addition to being a thriving ground for start-ups, freelancers and entrepreneurs, we foresee more enterprises and multi-national corporations adopting the concept of co-working. These businesses are starting to see the value of co-working environments where they can connect to different communities and talents, stay

abreast of technological innovation and disruption, get access to members' exclusive networking and knowledge sharing opportunities, while at the same time reducing their real estate costs.

Predictably, consolidation has also started to occur as today's co-working industry is becoming more mature and scale is required to cater to larger workspace needs, with each operator offering differentiated pricing, locations, designs and more to cater to specific target audiences.

Response

Scale is crucial to JustCo as we seek customers of all shapes and sizes to harness the full benefits of co-working. Accordingly, we have been constantly focused on ramping-up technology solutions and enhancing service offerings to facilitate collaboration and networking opportunities amongst the growing base of community members. The way professionals and larger enterprises think about working environments has been reshaped and we will continue to disrupt the conventional real estate market and make changes in the co-working landscape.



Illustration: Stephan Schmitz at Folio Art

FIVE FUTURE AMENITY PROVISIONS FOR BEST IN CLASS WORKPLACES

Workplace amenities have improved markedly over the last five years. As the attraction and retention of talent becomes critical, office occupiers now actively seek, rather than shun, buildings with ground floor retail and vibrancy. High-end coffee shops together with an eclectic and exciting mix of, often independent, food and beverage facilities have particular appeal and double as informal workspaces for many.

Meanwhile, the rise of wellness as an employee concern has seen access to gyms, cycle storage and well-serviced 'end of trip' facilities become *de rigueur* for a truly best-in-class workplace. Yet the appetite and speed of adoption of such amenities has been so widespread, that they no longer represent a point of difference for either building owner or occupier. New amenity requirements will surface, further compounded by the continual redefinition of work, workers, and the workplace.

AMENITY TYPE ↓	DRIVERS	PHYSICAL FORM
 Education	<ul style="list-style-type: none"> • Acute skills shortages across the global labour market • Retraining requirements as technology usurps particular roles and tasks • Reskilling requirements as workforce skills focus on softer Emotional Intelligence (EI) based skills in a world of Artificial Intelligence (AI) • 'Grow your own' approach to talent gaining favour amongst business leaders • Strong employee demand for 'life-long' and 'on-the-job' learning and development opportunities 	<ul style="list-style-type: none"> • Town-hall spaces to support company-wide learning initiatives and educational programmes • Branded spaces within buildings or schemes aligned to emerging corporate universities • Educational institutions with an increased presence in CBD markets • Tech-spaces dedicated to online learning • Lunchtime seminar & events programmes to develop skills and awareness
 Healthcare & Life-style support	<ul style="list-style-type: none"> • An ageing workforce that is working for longer (and will need to do so) • Severe pressure on public health service provision • Growing expectations for on-demand, next-hour services • Acceptance of the blurring boundaries between professional and personal life • Growing corporate well-being agenda • Healthcare services represent a tangible benefit within talent management strategies 	<ul style="list-style-type: none"> • Walk-in or next-hour surgeries • Physiotherapy • Preventative health facilities • Dental surgeries • Provision of on-line, tech based, diagnostic facilities • Health guidance centres using wearable tech • Creche / nursery facilities
 Sanctuary Spaces	<ul style="list-style-type: none"> • Growing mental well-being agenda within the workplace • Increasing levels of work related stress • Workers suffering from 'info-toxication' or 'too-much information to action' • Desire for focus in a world of disruptive tech • As human work tasks move up the value chain, complexity will need to be met with clarity of thought • Increasing evidence that quiet spaces aid personal productivity 	<ul style="list-style-type: none"> • Truly quiet rooms • Quiet zones or suites that are actively managed • Provision of dedicated floors without connectivity to enable thinking and creativity without disruption • Zen rooms that allow workers to rediscover their 'centre' • Relaxation pods & nap spaces • The emergence of the corporate spa
 Pop-up Spaces / Meanwhile Uses	<ul style="list-style-type: none"> • The power of building / location buzz and vibrancy • Ability to support CSR initiatives through local community uses and connections • Curating spaces that truly appeal to the community within the building (acting on data and feedback) • Allows the building to capture the latest 'big thing', fashion or fad 	<ul style="list-style-type: none"> • Surplus or un-let ground floor space • Atria space to increase vibrancy and building 'buzz' • Building owner sponsorship of themed events or exhibits within public space • Spaces that support new product / service launches • Public art installations / exhibitions
 Public touch-down space	<ul style="list-style-type: none"> • Corporate supply chains are broadening and greater dependence on external providers • Allows the public to experience or, be immersed in, the brand • Growing need for informal meeting space that does not require security clearance • Visible vibrancy is an important optic to the wider market and potential recruits • Business culture increasingly more open and collaborative rather than closed and secretive 	<ul style="list-style-type: none"> • Much larger, high quality atria with range of workspaces • Concierge management of space without a formal reception desk of scale • Increased envelope of space before security access • Greater integration with external amenities

MAKING ALL THE RIGHT MOVES

Businesses are increasingly mobile. This mobility will intensify and bring new risks and opportunities to global real estate markets.

A quarter of the FTSE 350 have moved headquarters in the past three years. In the Central London market, two thirds of occupiers who have taken space of 20,000 sq ft or more during the last two years have moved their business across submarket boundaries. In New York, there has been a discernible movement of occupiers across Manhattan, and notably towards the emerging Hudson Yards district. Occupiers are increasingly active and ready to move. We have identified six dominant forces that will drive occupier mobility within and between global real estate markets. They will determine future global hotspots.



1

Tapping Into Talent

Occupiers across all industry sectors are gravitating to markets or submarkets that were once *terra incognita*, as they search for the human capital needed to change focus and thrive in an operating environment disrupted by digital and new wave technologies. Critically, the skills almost all companies are seeking, namely creative and Science, Technology, Engineering & Mathematics (STEM) expertise, are in short supply globally. The historical movement of skills to jobs has reversed. Occupiers are pro-actively identifying distinct pools of talent around the world and moving towards them. Corporates are settling in those locations where the talent concentrates rather than in those locations that simply provide financial incentives, have a historical connection with the company or meet with the locational preferences of the company's leadership. Skilled staff determine the modern corporate location decision. As tech and creative talent gravitates towards locations that are urban, amenity rich, relatively affordable, and highly accessible with a solid transport infrastructure, companies follow.



2

Function Dictating Location

Rarely does a company relocation comprise the entire organisation. Instead, mobility is typically the consequence of changing business structures and the need to drive greater specialisation or efficiency into distinct business functions. These business functions move across the world as companies seek the cost and skills profile most appropriate to that function. This process of 'shoring' extends the geographical coverage of the organisation, although the dynamic is one of 'right-shoring' rather than simply 'off-shoring' to secure cost arbitrage or 'near-shoring' in order to secure efficiency gains. As corporate functions become ever more specialised, relocating activity, either directly or through third party outsourcing companies, will evolve and intensify. For example, the nearshore centres initially created by law firms to undertake processing and administrative functions, are now expanding their headcount to support higher value functions and digital innovation teams. Finally, a new wave of shoring centres are emerging, adding complexity to the decision making process. As automation and AI becomes more ubiquitous companies will need to revisit their portfolios. This will create new property requirements in those markets that have skills, competencies and experience around next wave technologies.



3

Building New Companies From Old

What do GE, Siemens, Daimler, Philips, DowDuPont and Hewlett Packard all have in common? Each are spinning-off or de-merging key assets, business units or divisions to create standalone businesses. This 'corporate vision' is undertaken either to bring renewed focus to companies that have bloated from their origins; to ensure that the financial performance of the organisation is uncompromised by poorer performing components; or by creating the business agility that enables the newly formed entities are locating to compete with disruptive start-ups and new market entrants. As a result, newly formed entities are located away from the traditional HQ of the parent group and into new locations and premises that reflect a new brand and culture. For example, Hewlett Packard split into HP Inc. and Hewlett Packard Enterprise, with both companies retaining their HQs in Palo Alto, but in separate buildings. Historic powerhouse conglomerate Siemens, has recently restructured into six autonomous divisions and three strategic units, with the CEO comparing the organisation to a fleet of ships that is better able to adapt to the challenges of the digital age. It would be surprising if such agility did not lead to some mobility of business functions.



4

The Power Of Politics

Ten years on from the Global Financial Crisis, the world presents companies with a very different political and regulatory environment. As populist politicians take the ascendency, protectionism is a new reality in many markets. This will force companies to assess their current and future footprint. This is most evident following the Brexit decision in the UK. There is no doubt that, at the time of writing, many companies are making plans to rebalance their footprint between the UK and the EU27 countries. The full extent to which those plans will become a reality remains unclear, but there have already been notable relocations of European Institutions, such as The European Medicines Agency into Amsterdam, while banks have started to redeploy, albeit relatively small numbers of staff into markets such as Frankfurt, Paris and Dublin. Yet there is another political pressure influencing corporate location decision making. Some companies are using their economic dominance to exert great influence on local economic development policies to their own advantage. Amazon's search for its second North American HQ through a formal competitive process, has led to more than 200 cities pitching their qualities against an Amazon defined list of requirements. Promises of tax breaks and incentives abound as the competition intensifies, with the winning location likely to be public before the end of 2018. There is, of course a long history of cities courting footloose companies within the US, and the level of incentives offered are eye watering. However, Amazon HQ2 represents an intensification of this process. There is also growing evidence of such formal competitions for activity featuring outside the US, as shown with the process for the relocation of TV station Channel 4, instigated by the UK Government.



5

Movement Through Merger

The infiltration of disruptors into traditional sectors will also occur through merger and acquisition (M&A) activity. As shown elsewhere in this report, there is a strong upward trend in global M&A volumes presently, as companies seek to utilise strong cash positions to build influence within new sectors (so called, horizontal M&A) or bolster positions within their existing sectors (vertical M&A). Although M&A activity rarely leads to the instant restructuring and relocation of companies, there is strong evidence that mergers occurring now are likely to be significant contributors to occupier mobility over the next five years.

6

Clustering Continues

The recognition of companies from the same industry clustering in specific locations dates back to the work of Alfred Marshall in 1890, and was further popularised and developed by Harvard academic Michael Porter one hundred years later. The synergies developed within these clusters have been found to increase corporate productivity, competitiveness, growth and, crucially, innovation. As modern business is challenged by next wave technology and seeks innovation, clustering has a growing influence on the mobility of occupiers. An example is the life sciences sector, where innovation and R&D is hugely expensive and increasingly achieved only through the collaboration. As a result locations like Boston and Cambridge develop a global reputation and dominance. The same clustering is evident in Silicon Valley and Bangalore for technology, or the EC3 postcode in the City of London for insurance companies. Such clusters are also increasingly attractive to those disruptors seeking to challenge traditional sector specialists through the application of new technology. So, look out for Medtech occupiers taking space within the world's life science clusters, or Fintech companies scaling-up within those global financial centres that, historically, have been the almost exclusive preserve of the big banks.



ON THE MOVE

Here are six examples of relocations announced and / or implemented during 2018 that illustrate the six dominant forces underpinning occupier mobility.



WHERE THE GOOD GUYS GO

Be it to centralise business operations, be closer to clients, achieve a flight to quality, improve access to public transport, or be closer to retail and cultural amenities, increasingly in Melbourne we are seeing more and more business tenants relocating offices to be closer to the heart of the city. This trend marks a watershed in the evolution of the Melbourne office property market, as the dynamics that affect the demand for office space have pivoted 180 degrees to now reflect the needs of the end user, the employee.

With the local economy booming at a point in time when less people are choosing to work full time, the ability to lure and retain quality staff has become more important than ever, and employers are responding by being more in-tune to staff needs and seeking out office locations that provide outstanding amenities and convenience. In an increasingly competitive business world, tenants who undertake this corporate flight to amenity-rich inner city fringe areas are not just addressing an immediate commercial need; they are also future-proofing their organisations.

As an illustration of this, Australia's largest home entertainment retailer – the JB Hi-Fi Group – recently committed to 9,500 square meters of office space at IBM Tower within the landmark Southgate Complex in Southbank. The relocation, which is due to be completed in the first half of 2019, is a result of JB Hi-Fi's recent acquisition of consumer electronics retailer The Good Guys and reflects the parent company's desire to centrally locate both businesses in a new headquarters in Melbourne's city fringe in order to capitalise on the location's strong inner city amenities and public transport. Currently JB Hi-Fi is located in the outer eastern suburb of Chadstone, their head office strategically located

within Chadstone shopping center which is one of the five largest shopping centres in the world. The Good Guys are currently based in the middle northern suburb of Essendon Fields, a reflection of the business' origins having initially set-up shop in Essendon in 1952. The relocations then mark a quantum shift in priorities for the JB Hi-Fi Group, one that shows the company has staff's needs in mind.

Occupier mobility is on the increase in Melbourne, with the fringe areas of the inner city proving particularly popular

The JB Hi-Fi and Good Guys deal is just one example of the current trend of suburban occupiers moving to more amenity-rich locations, typically in the inner city fringe or CBD.

Along with the aforementioned Southbank area, in the last few years the city fringe suburb of Cremorne has transformed into a tech hot-spot. These days referred to as Melbourne's 'Silicon Yarra', big name tech brands such as Seek, MYOB and Carsales have all shifted or are in the midst of shifting to Cremorne, and as a result land values in the suburb have more than doubled in the past three to five years with A grade rents now pushing upwards of \$500/sq m. Cremorne's amenities, public transport and 'eclectic edge' are seen as major drawcards for young workers, and employers are clearly taking note.

The demand for inner city fringe office space is now seeing suburbs beyond Southbank and Cremorne becoming increasingly sought after. With office vacancy hitting a record low in Melbourne's CBD, and rents on the rise in Southbank and Cremorne, tenants are finding they cannot afford the asking rents in these areas, and as a result are being pushed to up-and-coming fringe areas such as Abbotsford (inner east) and West Melbourne (inner west). With Melbourne's population tipped to surpass Sydney's in the not too distant future, it is likely we will see more and more inner fringe suburbs transformed into viable commercial precincts, as developers and planning authorities respond to the shifting pattern of demand.



A BUSINESS WORLD IN UNION?

A recent M&A boom has created activity in real estate markets. Deirdre Hipwell, Retail and M&A Editor at *The Times*, takes a closer look at the future market dynamic.



There can be no doubt that it has been a golden period for corporate mergers and acquisitions (M&A) worldwide during the past five years.

Data from Dealogic, a financial analytics firm, shows that more than \$18 trillion worth of corporate transactions have taken place since 2013. In fact, dealmaking during 2016 and 2017 was so high they now rank among the top five most active years on record in terms of M&A volumes.

There is no sign of a let up in activity yet either. Thomson Reuters, the information group, reports that \$2.5 trillion of corporate deals have been announced in the first six months of 2018 alone, in the strongest first half for M&A since its records began in 1980. It added that an all-time high of 81 'mega deals', those with a value greater than \$5 billion, had been agreed during the first half, accounting for half of the total M&A during the period.

It is heady stuff. As Ben Collins, a Strategy Director from Intralinks, a provider of virtual M&A data rooms, says: "The ongoing boom in global M&A activity coupled with valuations reaching such multi-decade highs means that it's a seller's market: almost anything can be sold and usually for very good money."

However, the question on everyone's lips is whether this appetite for corporate deal making is here to stay or could a cyclical downturn be looming on the horizon?

Harry Hampson, Chairman of JP Morgan's EMEA

industries coverage group, says a number of factors have been driving the recent M&A boom, including very low interest rates and ready availability of capital. "The relatively cheap finance has made the maths work in many cases. Investors in publicly-listed companies have, on the whole, also been quite supportive of management teams doing M&A transactions, which has resulted in more confidence in boardrooms when making strategic investment decisions," he explains. "Whether that will continue in the coming years is the question everyone is asking and, for the time being, I think it will. Interest rates will steadily rise for the next five years, but from a very low base, and even in a rising interest rate environment there will be capital available for deals, which makes a difference. I think the ingredients are still in place for continued activity."

Sectors that are expected to attract the most corporate activity in the next three to five years include technology, media and telecoms and healthcare. These two industries have already collectively attracted nearly \$4 trillion worth of deals since 2013 to the year to date and Michal Berkner, an M&A Partner at Cooley, the law firm, expects this to continue: "These two sectors have been at the top of the M&A billboards for several years and will likely hold onto their pole positions as companies in these sectors consolidate, keep pace of technological and clinical developments, seek to remain relevant and look to buy growth at levels that are difficult to achieve organically."

Financial services – the only sector not to have fully rebounded to pre-crisis M&A levels because of tough restrictions by regulators, according to Andrea Putaturo, Head of Research for EMEA at Mergermarket – is also likely to pick up in the coming years. Unlike their American counterparts, European banks still have to solve their capital constraints which could trigger consolidation both domestically and cross-border.

Rising oil and commodity prices, following a tough few years where the oil price languished, is also likely to lead to greater confidence and deal-making among large global oil and gas companies. Philip Whitchelo, Vice President of Strategic Business Development at Intralinks, says its data insight shows that the strongest growth in corporate transactions during the next six months and beyond could come from the real estate, TMT and industrials sectors. Intralinks provides virtual data rooms for companies that are preparing a sale, enabling data teams on both sides of a transaction to exchange information securely. The data rooms are often set up at least six months in advance of a deal taking place, which means Intralinks can track early stage M&A and accurately forecast increases in activity.

However, while it may be easy to pick out some industries that are obviously ripe for further consolidation, bankers and M&A advisers as a whole say they expect activity across the board, particularly in sectors experiencing technological disruption. Angus Hodgson, an M&A Partner at AT Kearney, a global

management consultancy, says "digital transformation journeys" will be one of the key trends driving M&A of the future: "The relentless rise of digital is rapidly reshaping the traditional M&A landscape with blue chip players now vying for tech targets to shore up their digital capabilities."

Ms Berkner at Cooley agrees with Mr Hodgson but says digital transformation is not the only driver. She says there are a host of dominant trends motivating board directors worldwide, including "unprecedented levels of liquidity in corporations and private equity 'dry powder', industry consolidations, high growth and diversification opportunities that are difficult to achieve organically, bolt-on acquisitions, economies of scale and financings on favourable terms."

In the UK, Brexit is expected to be a catalyst for deal activity while JP Morgan's Mr Hampson points out the growing desire to create "regional champions" in specific industries, particularly in the telecoms and consumer space. "It is important to remember too that a lot of companies are trading at relatively high multiples and in order to continue to support those valuations they need to generate growth, which can be easier to achieve through M&A than organically," adds

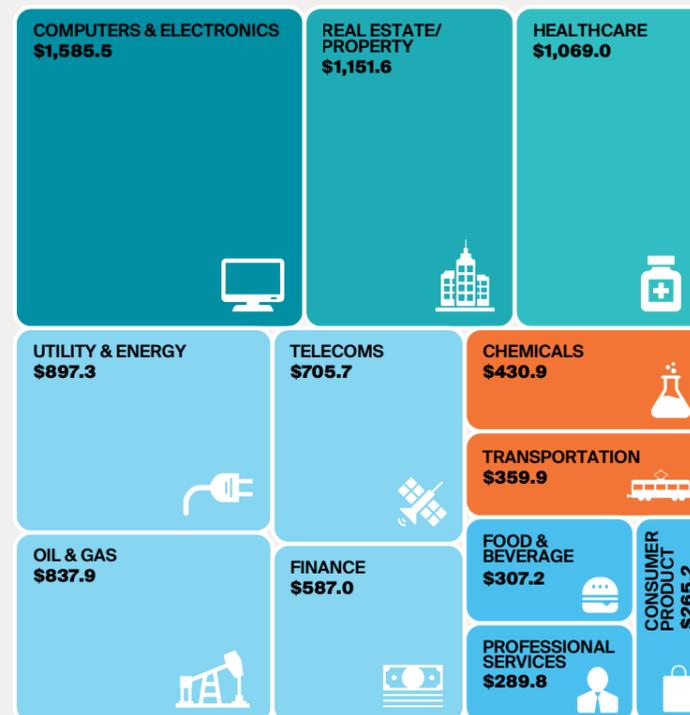
Mr Hampson. "There is a certain desire to continue to deliver growth to investors and whether that is through horizontal or vertical M&A there are synergies that can help create a strong market position."

Regulators worldwide are also flexing their muscles, changing how they look at market definitions, and all eyes are currently on the European competition watchdog's treatment of Vodafone's €18 billion swoop on Liberty Global's cable networks business.

However, while most M&A experts are forecasting relatively benign conditions some are concerned the corporate M&A market is overheating. Intralinks' Mr Whitchelo says he believes the market is already nearing a cyclical peak as valuations hit record levels, global equity markets remain below their January 2018 high, and amid the growing threat of a full-blown international trade war between the US, China and the EU, increasing protectionism around the world, and the growing probability of a disorderly Brexit.

JP Morgan's Mr Hampson says that market corrections can never be ruled out but concludes: "We are optimistic that we should have a busy few years ahead of us; I am slightly fearful for the UK because of Brexit, but hopefully we will continue to see activity."

TOP 12 SECTORS EXPERIENCING M&A ACTIVITY, IN \$ BILLION, 2016-2018



NOTE: JAN. 1, 2016 TO SEPT. 5TH, 2018

STRIKING THE BALANCE

A five step guide to managing the real estate implications of M&A

Global M&A activity is rife. Mergers will generate future demand and disposals within global real estate markets as the new entity ultimately reshapes its real estate holdings. For corporate real estate teams this represents a difficult balancing act. They are required to generate post-merger efficiencies but at the same time ensure that the new enlarged business is fully integrated, functional and productive throughout that crucial post-merger period when market scrutiny is at its highest. As M&A activity affects your business and your space, follow these five simple steps to ensure that the balance is struck and value is generated for the new organisation.

1. INITIATE Ensure that the real estate discussion is occurring as early as possible in the pre-deal process. As data rooms are established, be pro-active in assessing the potential size and shape of the future portfolio in order to raise business awareness of opportunities and risks early on.

2. COLLECT Bring structure and order to the future real estate process by collecting and storing accurate portfolio data and utilise the right tools to prepare for robust portfolio analysis.

3. ANALYSE In undertaking analysis, follow a transparent set of criteria for evaluating the portfolio and prioritising future action. Actions that identify opportunities for consolidation, co-location or divestment will be sensitive and emotive within the business. Clarity, order and rigour will nullify the impact of emotions. Key metrics to analyse include, total Opex, upcoming lease events and locations where portfolio opportunities exist.

4. ALIGN Ensure that the revised real estate strategy emerging from the analysis phase aligns to the agreed goals and objectives of the new, integrated entity. Note that these goals and objectives are likely to be different from those that shaped previous real estate strategies.

5. IMPLEMENT Deliver the agreed strategy with energy and clear communication to all stakeholders. Develop a clear roadmap for integration and have the right team, both internal and external, on-board. Minimise business disruption and ensure business continuity. Understand the people issues when planning. Ensure senior business leadership champion the strategy, and recognise the powerful role that real estate can have in furnishing a new corporate identity, driving cultural change, integrating teams, and implementing new workplace strategies and working practices.

AROUND THE WORLD IN 80 WORDS

Insights and outlook from our market leading teams in 15 key global office markets

Key:
 ● Landlord favourable
 ● Balanced
 ● Tenant favourable
 ● Total occupancy costs (US\$ per sq ft per annum)
 Costs relate to prime office space in CBD locations

BANGALORE

Viral Desai

As the ownership of Indian Commercial Real Estate transitions from traditional owners/landlords/developers towards domestic and international institutional owners, the dynamics of occupation in cities such as Bangalore will alter. On the one hand, occupiers will benefit from improved services, management and compliance of the office asset. On the other, they will face an inevitable escalation in overall occupational costs. In this sense, the future strength of the market will be determined by the value occupiers attach to the business benefits accruing from better serviced, more flexible but more expensive real estate solutions.

● 2019
 ● 2020
 ● \$25.00

SHANGHAI

Peter Zhang

An explosion of co-working activity has supplemented tech sector demand within the market as operators seek to build market share. Large-scale transactions have been in evidence with WeWork taking more than 30,000 sq m across two deals at the end of 2017, and Naked Hub (subsequently acquired by WeWork) taking a further 10,000 sq m in March 2018. Typically underpinned by venture capital, the rent insensitivity and large-scale requirements of co-working operators make them an attractive proposition to traditional landlords with vacant or pending office space.

● 2019
 ● 2020
 ● \$82.95

NEW YORK

Joey Vlasto

The recent 680,000 sq ft relocation of Ernst & Young from 5 Times Square to a new, state of the art development located at 1 Manhattan West illustrates increasing occupier mobility in the New York market. Such relocations are raising the quality of the workplace whilst enhancing the efficiency of occupation. We anticipate increased mobility, particularly as firms re-engineer their business models and re-think the location of certain business functions. One example is Alliance Bernstein. They are relocating 1,200 jobs from New York to Nashville to deliver financial and strategic advantage, while simultaneously working with NKF to complete on a new, high quality, front-office space at Hudson Yards.

● 2019
 ● 2020
 ● \$158.35



HONG KONG

Ross Criddle

There has been increased mobility within the Hong Kong market, with occupiers relocating to Island East and across the harbour to Kowloon. Those companies traditionally fixed to the tight and expensive Central sub-market are considering relocation as the availability of large floor-plates in high quality buildings at lower rental profiles in decentralised areas gain further appeal. Momentum is building in these areas as occupiers commit and enhance the wider environment by their very presence. We expect this trend to continue as more development and infrastructure emerges in the decentralised areas.

● 2019
 ● 2020
 ● \$256.92

DUBAI

Matthew Dadd

While Dubai remains centred on firms consolidating regional operations, many are taking advantage of softer market conditions to secure fixed or flexible office space that offers best in class working environments that support increased productivity. One example is Marriott International, who took 85,000 sq ft within the Dubai International Financial Centre (DIFC) for their Middle East and Africa headquarters. They were able to also acquire quality offices in a prestigious mixed-use location and also attained a dual-license permitting trading within both the DIFC Free Zone (DIFC) and onshore.

● 2019
 ● 2020
 ● \$81.96



SINGAPORE

Calvin Yeo

The market remains dominated by traditional leases, despite the clear growth in co-working provision. However, dynamics in the occupational market are changing. Going forward, net take-up per occupier will typically be lower as companies migrate to new buildings with more efficient floor-plates and as many start to implement the principles of Activity Based Working (ABW). In addition, the use of flexible, serviced space to complement core corporate functions will increase and will lead to co-working space representing a larger proportion of overall leasing volumes.

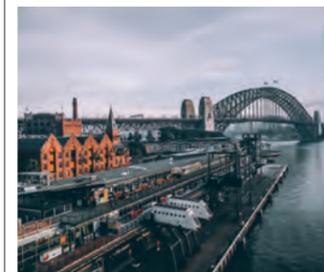
● 2019
 ● 2020
 ● \$89.04

MUMBAI

Viral Desai

The Mumbai market has been characterised by large transactions that seek to consolidate corporate portfolios. At first glance, this appears to be cost motivated. However, Knight Frank's role in the markets largest consolidation project - which saw 25 separate offices consolidating into a single 15 acre campus with 3.5 million sq ft of office space - points to some far deeper business drivers. These include the integration of staff obtained through merger; staff attraction, retention and engagement; the elevation of brand; and compliance with safe and modern working practices.

● 2019
 ● 2020
 ● \$55.00



SYDNEY

David Howson

There has been increased market activity from the education sector over the last 12 months with several large deals completing. One example is Central Queensland University who have recently let more than 10,000 sq m at 400 Kent Street. Although traditionally choosing to locate outside core CBD locations, educational establishments are increasingly prepared to pay higher rents for better quality space in order to secure access to a wider base of prospective students and enhance their appeal to commercial partners. This supports the enrichment of the city's amenity base.

● 2019
 ● 2020
 ● \$79.80

DUBLIN

Jim O'Reilley

Having entered the market a decade or more ago, the 'tech titans' have been building their operations year on year to become some of the most dominant occupiers in the Dublin market. There has been a discernible uptick in their growth trajectory over the last 18 months, fuelling further market activity. Google, as just one example, have let 100,000 sq ft in Sandyford; 60,000 sq ft in One Grand Canal Quay; and purchased Bolands Quay, which extends to 200,000 sq ft over the last year. Despite this rapid growth, we do not see any "let up" in demand with active requirements totalling 1.2 million sq ft from Facebook, Salesforce and Amazon alone in the market presently.

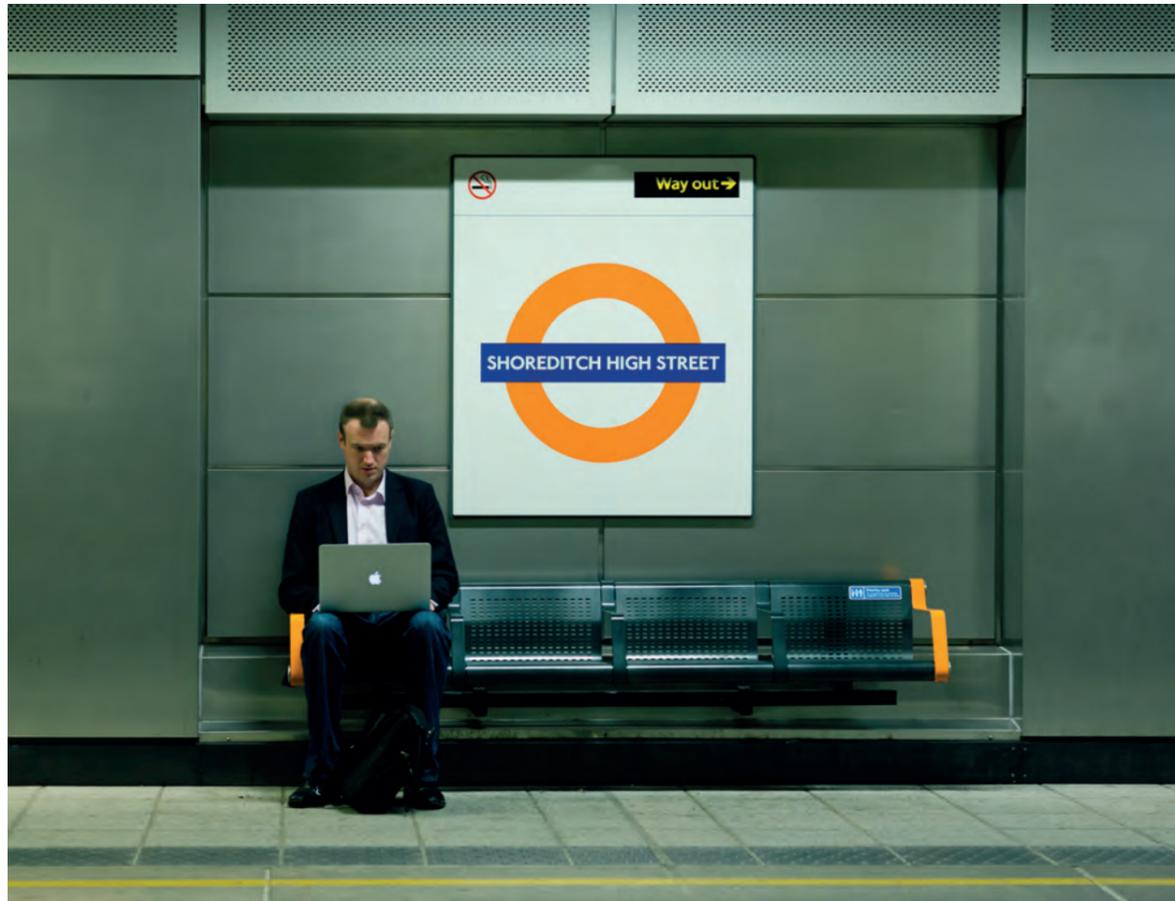
- 2019
- 2020
- \$88.22

PARIS

Priscilla Charrey

Despite the typical 3-6-9 lease structure, we see increased occupier demand for greater flexibility in both the design and configuration of the workspace but also in the structure of the lease itself. This flight to flexibility has led co-working operators to be the lessee in 32% of all CBD leasing transactions in excess of 5,000 sq m since the start of 2018. We believe that the prevalence of co-working within the market will have broader influence upon workplace design, strategy and experience for all office occupiers as they seek to balance space optimisation with maximising productivity.

- 2019
- 2020
- \$98.65



SAN FRANCISCO

Mark Sullivan

Emerging and established tech titans are tightening their grip on the CBD market. Mammoth deals over the last nine months from Dropbox (750,000 sq ft) and Facebook (763,000 sq ft) together with increasing demand from emerging sub-sectors of tech, such as autonomous vehicles, is further limiting choice in a market that has had sub-3% vacancy rates for some time. More traditional CBD occupiers are being forced to either pay escalating rental levels, given the apparent insensitivity to rental pricing from tech occupiers, or relocate away from the core CBD market altogether.

- 2019
- 2020
- \$88.98



FRANKFURT

Elvin Durakovic

As home to regulatory authorities such as the ECB, German Federal Bank and the ESMA, Frankfurt will remain high on the target list for investment banks as they adapt to a post-Brexit operating environment. Morgan Stanley and Goldman Sachs have already strengthened their commitment to the city taking a total of 25,000 sq m of new office space in the core CBD market. The positive news for those considering market entry is that some new space will come to the market from 2020 onwards, reducing the lag in supply in the CBD.

- 2019
- 2020
- \$67.08

LONDON

Richard Proctor

Occupiers' requirements remain focused on maximising flexibility and agility against the backdrop of an uncertain political and economic outlook. Landlords who are able to provide this flexibility in terms, not just lease length but also ease, speed and restricted cost of occupation and exit, are in pole position to attract and retain tenants. The most successful landlords will be striving to work closely with their clients - their occupiers - to provide flexibility, service and a high quality workplace experience to the staff using the office space.

- 2019
- 2020
- \$224.08 (West End)
- \$145.02 (City of London)

MANILLA

Joey Radovan

A leading US financial institution has recently concluded the biggest build-to-suit office building, to be completed and occupied in 2022, to consolidate their offices and account for needed expansion. The project is the largest ever leasing commitment by a single company in the Manilla market. As well as illustrating the markets growing maturity, the transaction also shows the growing strategic intent of Fortune 500 companies, who have established roots in the market during the last two decades and regard Manilla as a key location for business functions of increasing strategic value.

- 2019
- 2020
- \$22.93

NAIROBI

Winnie Gachagua

Occupiers are clearing becoming more cost sensitive, leading to transactions that either aim to consolidate space, sub-let surplus space or move companies into more productive and efficient space. For example, following an initial stay-vs-go analysis, a major global corporation is relocating from their ten-year old, purpose built but under-utilised and costly HQ, to a multi-let building with no branding privileges. Their cost-sensitivity and appetite for more progressive real estate solutions is a trend that will develop within the market.

- 2019
- 2020
- \$23.76

ABOUT

Knight Frank Global Occupier Services

The Americas

United Kingdom

Continental Europe

Africa

Middle East

Asia Pacific



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Our mission at Knight Frank is to 'Connect people & property, perfectly'. The Global Occupier Services teams facilitate this for our business clients, offering a broad menu of consulting and transactional services. The integration of these services enable us to understand the critical success factors for your business.

523
OFFICES

HOW WE CAN HELP YOU

Our teams are locally expert, yet globally connected. Our multi-market clients are managed centrally from our various hubs across the world. We can help you gain access and entry to new markets, create a working environment which enhances productivity, attracts and retains talent, whilst also managing your portfolio costs effectively.

60
TERRITORIES

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Bloomberg European Headquarters:
The sculptural ramp seen from the
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