

- ◆ How Covid-19 will impact real estate ◆ Sustainable buildings
- ◆ Global food security ◆ Investing in the life science sector
- ◆ Could Hyperloops speed up the supply chain? ◆ Repurposing retail



Issue 03. 2020

Impacts

THE FUTURE
OF GLOBAL
REAL ESTATE

An abstract graphic featuring two overlapping, semi-transparent blue geometric shapes that resemble a house or a stylized building. The shapes are composed of various planes and angles, creating a complex, crystalline structure. The background is a solid blue color, and the overall aesthetic is modern and architectural.

TIPPING POINTS

How climate, politics, demographics and technology are transforming real estate

- ◆ Is construction ready for new methods and materials? ◆ The economic impact of the US-China trade war
- ◆ The role of real estate in tackling climate change ◆ New thinking in workplace design ◆ Buildings that understand your preferences
- ◆ Water stress and development ◆ Global investment strategies

WELCOME



Mark Ridley
Group Chief Executive Officer, Savills

Welcome to the latest edition of *Impacts*, which is dedicated to the topic of tipping points. When we decided on this year's theme, we had no way of knowing that we were on the brink of probably the greatest tipping point of our lifetimes – Covid-19. Sadly, the pandemic continues to claim lives and disrupt all aspects of our society.

We know the world will not be the same after Covid-19, but the new normality has yet to be written. Our *Impacts* programme has always been focused on the longer term and our articles take this perspective,

hopefully to look through to the other side of our current circumstances.

Our global experiment of working from home will not make offices redundant, but they will change. A new flexibility will be embedded into many of our working lives with less time spent in offices. Occupiers may not take less space, but office design is likely to become less dense, better respecting our health and wellbeing as well as social distancing (see page 6).

As building owners have looked to incorporate technology into our building management, there may have been a sense of avoiding too much of a 'big brother' environment. Now, we think occupiers will be more open to technology, such as robotic cleaning, thermal monitoring on entry and remote sensors controlling lifts.

But probably the most important message for the longer term is that the pandemic has shown that we are capable of changing our behaviour dramatically in the face of crises. One major issue we address in this issue is climate change. As our columnist,

UN Sustainable Development Goals ambassador Ruud Veltenaar, points out (page 48), we need to respond to the climate emergency as though it is an immediate crisis, and take lessons on how we are learning to adapt through this pandemic.

We are sure you will find our report thought-provoking, and welcome any feedback. With many parts of the world still experiencing lockdown provisions in their communities, we hope you, your families and your colleagues remain safe.

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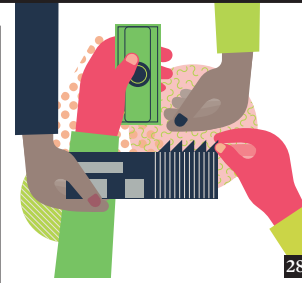
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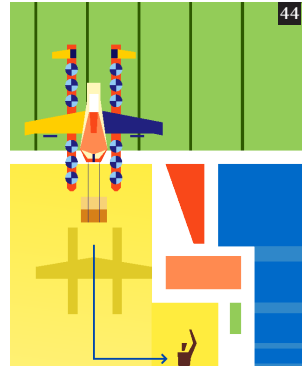
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UNITED ARAB EMIRATES:	21.3
SAUDI ARABIA:	18.4
KAZAKHSTAN:	17.6
AUSTRALIA:	16.9
USA:	16.6
CANADA:	15.3
TURKMENISTAN:	13.7
SOUTH KOREA:	12.9
RUSSIA:	11.7
CZECH REPUBLIC:	9.9
NETHERLANDS:	9.5
JAPAN:	9.1
GERMANY:	9.1
POLAND:	9.1
BELGIUM:	8.7
FINLAND:	8.5
NORWAY:	8.3
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LIBYA:	8.1
MALAYSIA:	8.1
AUSTRIA:	7.7
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Manhattan, New York
during stay-at-home
measures in April 2020

NEGOTIATING AN ANCIENT DISRUPTOR

ASSESSING THE LONG-TERM IMPACT OF COVID-19 ON REAL ESTATE

BY SAVILLS WORLD RESEARCH

When we decided on the theme ‘tipping points’ for our 2020 Impacts programme at the end of 2019, various topics were discussed: climate change, demographics, technology and many more. What we didn’t know is that we were about to be faced with a pandemic. Covid-19 changed the way we work and live almost overnight and is likely to have a long-term impact on real estate. A Black Swan event (or Grey Rhino for those who argue the warning signs were visible) tipping point.

The impact Covid-19 will have on the global economy is being fiercely debated. Most forecasters agree that there will be a global recession deeper than the global financial crisis (GFC) and many expect it to be the deepest since the Second World War. The debate is around the shape of the recovery. Will there be a V-shaped rebound? Or is a U, L or W shape more likely? We’re even hearing discussions about ‘a Nike swoosh-shaped’ recovery.

As countries come out of their strict lockdowns but social distancing is still encouraged, the long-term impact of Covid-19 is yet to be seen. Many believe the world will emerge as a different place. Here, we discuss the potential changes that may be seen across the different sectors.

1. OFFICES

Despite the success of home working, offices still provide a vital role in culture, community and connection
The Covid-19 pandemic has the potential to become one of the biggest tipping points for the future of offices, impacting corporate location strategies, office design and management as well as occupier practices.

Many corporates have allowed flexible working in some form for years. However, the large proportion of employees working away from the office in the wake of Covid-19 for an extended period may be the catalyst for accelerating flexible working patterns. According to the Savills Global Sentiment Survey of research heads in 31 countries around the world, 84% of respondents expected home working to somewhat

increase, the remaining 16% expect it to greatly increase. Over half expect the use of video conferencing to greatly increase after the pandemic.

But the office will still play a vital role. Katrina Kostic Samen, Head of Savills KKS Workplace Strategy & Design says: “Workplace change was inevitable. However, what we expected to evolve over time transformed almost overnight in response to the pandemic. These exceptional circumstances are akin to an elastic band being stretched to its limit; it will go back but not completely.

“It will be down to businesses to determine how this evolves but it must be with people at the heart. The role of the office long term is vital to provide what we crave – culture, community and connection, essential after the emotional and physical impact of the pandemic.”

We expect to see a shift towards diverse location strategies and the emergence of a hybrid model, a combination of home working, local office hubs and a head office. This is an opportunity to improve long-term employee wellbeing, organisational resilience, and sustainability. A reduction in the environmental footprint may arise from less travel, shorter supply chains and sustainable building design, to name a few examples.

If the home is to become more important as a workplace, consideration will need to be given to longer term work from home policies. Cyber security and confidentiality, health and good ergonomics for a home office will all need to be managed.

Communication and policies will be needed to develop ‘flexible people’ and not just focus on flexible workplaces. In some places, particularly the developing world, slow home internet connections or high-density households mean working from home is just not feasible.

An increase in home working isn’t the only trend that could change office space. Safety, hygiene and employee wellbeing are in the spotlight. Regular deep cleaning of the work premises has become a fundamental health and safety >

“WE CAN EXPECT THE GROWTH OF REGIONAL MANUFACTURING HUBS SUCH AS MOROCCO FOR WESTERN EUROPE, AND MEXICO FOR THE USA”

consideration for businesses and is one of the more visible ways in which a company can demonstrate its commitment to providing staff with a safe working environment. Occupiers may look again at building ratings schemes such as LEED and WELL that are focused on creating sustainable spaces and delivering occupant comfort, health and wellbeing.

Contactless design in buildings, for example in appliances, lifts and doors, is expected to increase according to 87% of Savills research heads across the globe.

Some 63% expect occupier density in offices to decrease. This could see occupiers taking the same amount, or potentially more, office space as before the pandemic, but using it differently.

Sarah Dreyer, Head of Research for Savills US says: “Going forward, health and safety will come first. How this plays out in office demand is yet to be seen and is not likely to be clear until more effective virus treatment and prevention measures are available. At one end, those organisations that have adapted well to having a remote workforce could re-evaluate future in-office functions and ultimately reduce office size requirements. The net impact on demand will be affected by changes to workplace design and a possible reversal of high occupancy densities and desk sharing



Companies may diversify their supply chains across global locations

to one of lower densities and more generous circulation and collaboration areas.”

Despite Savills researchers expecting a slight fall in occupier demand, they are less bearish on office investment activity.

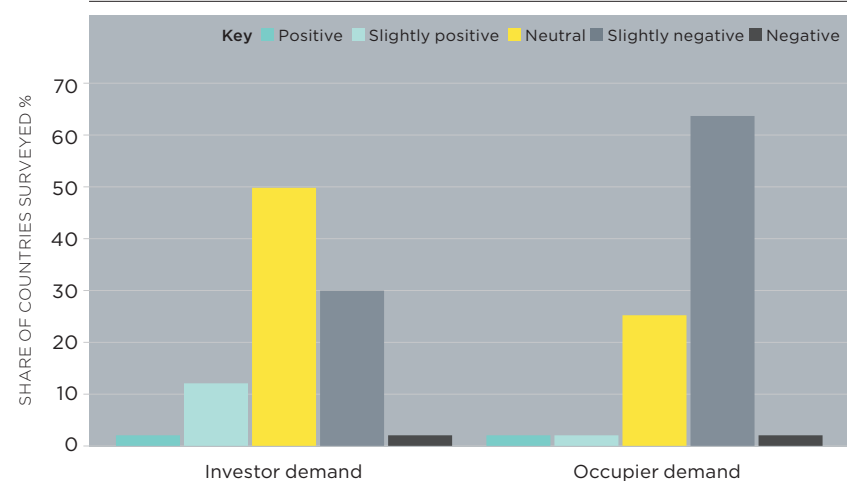
Half expect no change due to Covid-19, one-third forecast less activity and the remainder expect an increase. This reflects the ongoing demand for real estate from investors seeking long term secure income streams and the comparatively good returns the sector offers.

Flexible offices, in particular hot desks, could be impacted by the focus on hygiene in the short term. Many flexible offices are putting together plans for adjusting the use of their space while the pandemic is still ongoing, but we expect these design changes to be temporary.

Larger companies may find flexible space does not suit them in the shorter term as they prefer to retain control of the cleaning procedures and density. However, long term, companies of all sizes are expected to focus on flexibility in terms of overall costs and office space in particular, which will likely benefit flexible offices.

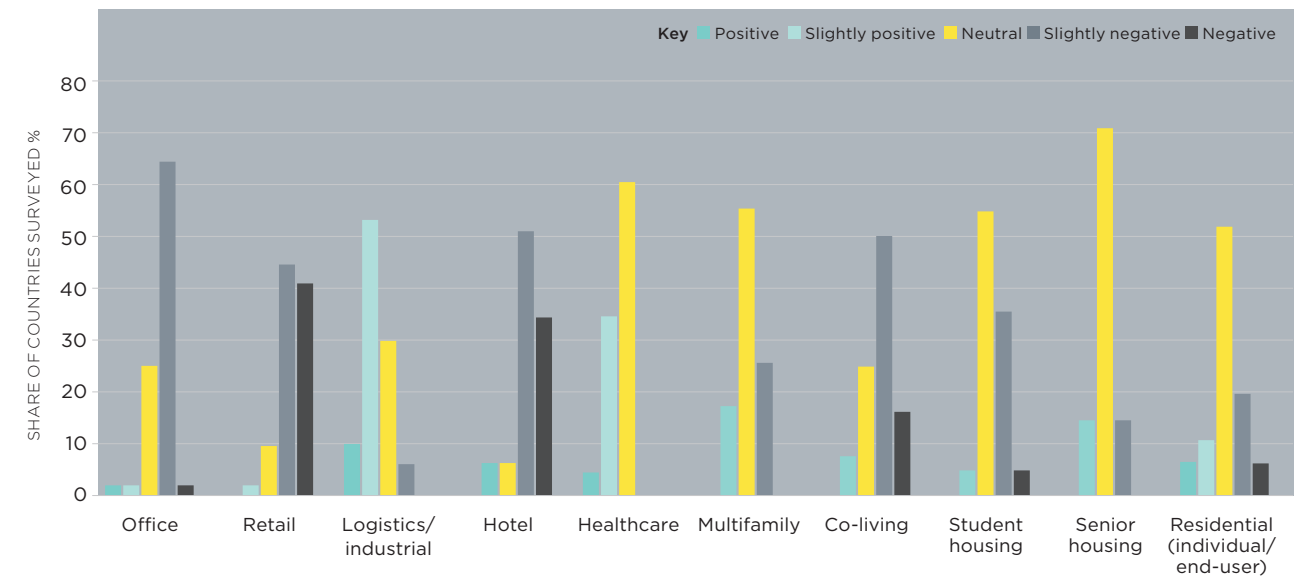
Jessica Alderson, Global Researcher, Workthere, adds: “Our data, collected from over 100 flexible offices, showed that 62% of flexible office providers are optimistic about the prospects for the sector over the next

IMPACT OF COVID-19 ON OFFICE DEMAND AFTER PANDEMIC HAS PASSED



Source Savills Research

IMPACT OF COVID-19 ON OCCUPIER DEMAND AFTER PANDEMIC HAS PASSED, BY SECTOR



Source Savills Research

12 months. In the short term, flexible offices will likely face challenges, with increased risk of contract cancellations as companies go into survival mode, albeit global contract occupancy levels are still above 70%.”

2. LOGISTICS

We expect to see supply chain diversification and the growth of regional manufacturing hubs

Thanks to the global growth in online retail, logistics was a sector already in vogue. The pandemic is expected to accelerate its ascension. Some online retailers, particularly supermarkets, struggled to keep pace with the surge in demand from consumers during lockdowns, pushing their supply networks to the limit.

With more people than ever before using online retail, the market is forecast to deepen longer term. Further investment in logistics space to service this demand and ensure resilience against future surges of demand will follow. Some 63% of country research heads expect to see some kind of positive impact on occupier demand in the logistics sector as a result of Covid-19.

Globally, one of the most widely felt impacts of the outbreak is in manufacturing and the supply chain. In 2003, at the time of SARS, China was less integrated into global supply chains and constituted approximately 4% of the world economy; it now stands at 16%, according to the IMF.

Domestic factory closures and the disruption of sending everything from car parts to clothing overseas effects companies from Boston to Berlin. Just-in-time inventories mean the cushion for even the slightest disruption is minimal, and this resulted in empty warehouses and shelves, and consumers unable to consume.

Companies may look to diversify their supply chains across several global locations to insulate against possible future incidents. This is a trend that had already started in Asia as manufacturers took advantage of lower-cost locations outside of China, leading to greater investment in Vietnam, Cambodia and India. The trend was further accelerated by the US-China trade war.

However, China dominates global manufacturing, and we expect to see

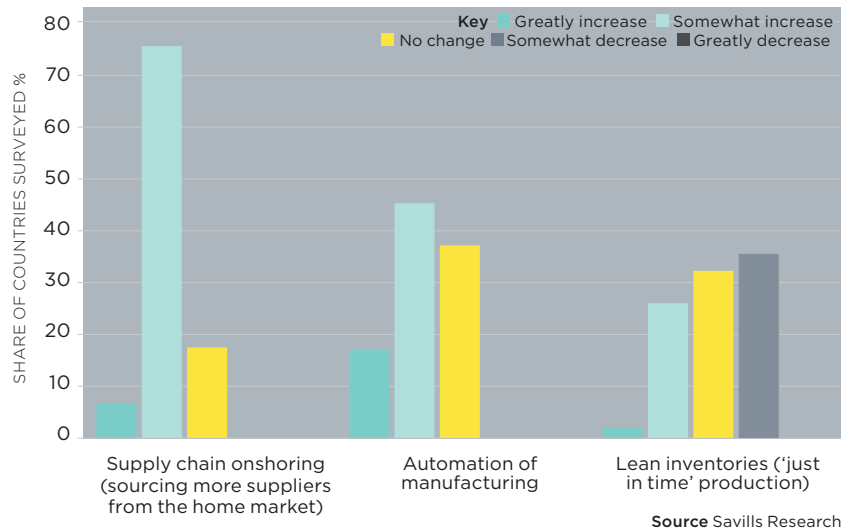
a gradual, not immediate, shift. Moving operations costs money. Increased automation may offset higher labour costs, but it requires huge capital investment.

Other factors must be taken into consideration. Kevin Mofid, Head of Savills UK Logistics and Industrial Research, says: “By bringing operations closer to their home markets, costs will likely increase. Will the post Covid-19 consumer be prepared to accept higher costs at a time when economic activity is set to be slower? Moreover, the perception that nearshoring increases the amount of inventory held in warehouses is not necessarily true. Shifting more manufacturing to the home market may in fact weaken demand for logistics as supply chains shorten.”

In reality, we’re likely to see future investment that would have gone solely to the lowest-cost destination be spread across many. In a trade-off between cost and distance, nearshoring is likely to outpace onshoring. We can expect to see the growth of regional manufacturing hubs such as Morocco for western Europe, and Mexico for the USA. >

“THE OUTLOOK FOR MULTIFAMILY REMAINS POSITIVE, WITH 55% OF COUNTRIES ANTICIPATING NO IMPACT ON INVESTOR DEMAND”

IMPACT OF COVID-19 ON SUPPLY CHAINS AND MANUFACTURING AFTER PANDEMIC HAS PASSED



This could change the dynamics of regional logistics networks. For example, Morocco, easily accessible to western Europe by ferry, could readily integrate into the existing logistics corridor that spans the ports of southern Spain, the Iberian Peninsula into France. This, in turn, may boost demand for logistics at strategic entry points, such as Algeciras, Valencia and Barcelona.

3. RETAIL

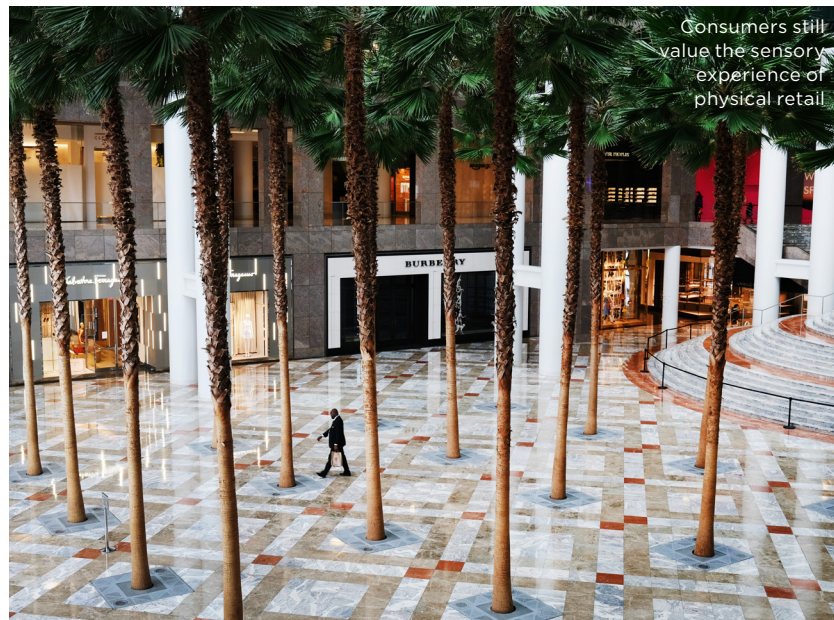
Online retail will accelerate, but the desire for physical retail will remain

Consumers were already looking for more from their retail experience prior to the pandemic. As Tom Whittington sets out on page 46, we can expect even greater consumer appetite for community and convenience-based retail, and a higher share of discretionary spending on leisure experiences rather than superfluous purchases. This will have a further knock-on effect to the way we shop and the amount of retail space we need. More repurposing and re-imagining of existing retail space will follow.

While the rise of online retail is expected to accelerate, shopping is a sensory experience and the desire for physical retail will remain. In emerging markets in particular, shopping is a recreational

activity and a hallmark of the burgeoning middle classes. Our researchers in India, Indonesia and Thailand all cited a more positive outlook for the sector once the pandemic has passed.

These countries have among the lowest e-commerce penetration rates in the world and for the majority of consumers physical retail is still the only retail.



4. HOTELS

Hit hard in the short term, but the longer-term fundamentals driving demand will stay unchanged

The hotel market was one of the hardest hit by the Covid-19 pandemic in terms of operational performance. International travel restrictions and national lockdowns saw many hotels close across the globe. Yet, the long-term demand fundamentals remain largely unchanged. Marie Hickey, Director, UK Commercial Research, Savills, says: “Once travel restrictions are lifted there will continue to be short-term challenges facing demand and operational recovery. However, the longer-term fundamentals driving demand remain, with many commentators forecasting that hotel performance will be back at pre-Covid-19 levels by 2022.”

For our research heads across the globe, the expectations of travel patterns once the pandemic has passed vary. Just over half believe personal domestic travel will increase, compared with 29% who think it will fall. However, 71% and 77% expect personal international travel and business travel to decrease respectively.

Business travel in many parts of the world was not back at pre-GFC levels when Covid-19 struck, some of which



was down to technology trends such as video conferencing. This trend is likely to be intensified post Covid-19.

International leisure travel may be impacted by some lingering nervousness to travel too far from home, at least in the short to medium term. Leisure destinations benefiting from good international rail and road connections are expected to see earlier demand recoveries than those more dependent on air connections. The pandemic may also see environmental concerns among travellers move higher up the agenda, shaping both mode of travel and hotel choices, to the initial benefit of locations with good rail connections.

5. INSTITUTIONAL RESIDENTIAL

The outlook for multifamily is positive, while the need for quality rental product remains

Institutional investment into residential asset classes has grown by almost 50% in the past five years. Once considered alternative, residential has entered the mainstream and the defensive benefits of investing in beds are set to continue, reflected in our survey. The outlook for multifamily, in particular, remains positive, with 55% of countries anticipating no impact on investor demand into the sector, and 27% expecting a positive impact.

Operation and design may see some long-lasting changes. Cleaning regimes will be upped. The nascent co-living sector, which is founded on the idea of smaller, denser individual units and larger communal areas, may see its model evolve with a rebalancing of private and communal space.

Some 67% of our researchers expect to see a slightly negative or negative impact on occupier demand for co-living as a result of the pandemic, although only 52% expect to see a negative impact on investor demand. This recognises that the underlying need for quality rental assets remains, particularly in major cities with high concentrations of young professional migrants.

Student housing is a sector that has grown rapidly as the number of international students has risen. After rapid development in the USA and the UK, the sector is building momentum in Australia, mainland Europe and in strategic regional hubs, such as the UAE.

The Covid-19 pandemic turned the higher education sector on its head overnight. Learning switched online, exams were postponed and student travel was halted. Students and on-campus instruction will return in time, likely with a greater emphasis on health and

safety, but many institutions face a loss of income and cost-cutting measures in the meantime.

The associated global economic downturn, affecting the ability of students to afford a higher education in more costly overseas markets will also have an effect. Marcus Roberts, Head of Europe, Operational Capital Markets, Savills, says: “Regional hubs, closer to the international student market may benefit, such as Malaysia and the UAE, together with some of the lower-cost European destinations. In Germany, for example, the cost of tuition is negligible, for international as well as domestic students.”

But the caché associated with studying at top-ranked institutions will not disappear. Students will be looking to maximise their investment and the most established university towns and cities in the USA, UK and Australia will continue to attract students from around the world, in turn supporting the market for student accommodation.

6. SENIOR HOUSING AND HEALTHCARE

The healthcare sector has specific real estate requirements. Housing with care is emerging as a major alternative sector. Health and wellbeing is now firmly at the top of government, corporate and personal agendas. This specialist asset class has particular real estate requirements.

As Steven Lang, Director, Savills UK Commercial Research, says on page 22, even before the pandemic, investment into vaccines was up 150% over five years, to give one example.

This kind of activity has fuelled the biotech sector and the core innovation markets in which it is concentrated; cities such as Boston in the USA and Cambridge in the UK where venture capital, universities and hospitals combine. According to our global researcher survey, 43% of countries expect to see a positive impact on investor appetite for the healthcare sector as a whole going forward.

One senior housing subsector in particular, the ‘housing with care’ sector (self-contained residential units with some shared amenities) proved resilient against the challenge of the pandemic. Relatively >

“IN THE SAME WAY THAT SECURITY CHECKS HAVE BECOME THE NORM, SO MIGHT BUILDING ENTRY HEALTH CHECKS”

well established in Australia, New Zealand and the USA, it is emerging as a major alternative sector for investors elsewhere.

Samantha Rowland, Savills Head of Senior Living, says: “The issue of social isolation among older people is a major challenge, brought into sharp relief during the pandemic. As life expectancy increases and people live healthier lives for longer, the question of where and how the elderly are going to live isn’t going to go away. Housing with care is one option, offering self-contained homes but with a resident community and care at hand when needed.”

Thanks to the demographic fundamentals, from an occupier and investor perspective, our survey shows future demand for senior housing to be unaffected by the pandemic – more than any other sector (see chart on page 9).

7. END-USER RESIDENTIAL

Properties with space to work and relax will be in greater demand, as will technology in the home-buying process

More home working has a direct impact on the residential market as households reassess their needs. The Savills sentiment

survey indicates that 90% of research heads expect demand for home offices to increase, while 86% expect an increase in demand for high-speed internet. The lockdowns have also highlighted the value of having access to a private outdoor space, and two-thirds of respondents expect demand for it to increase. These are factors that developers across the world will need to take into account when designing future homes.

Those without a private space will look for public outdoor green spaces, which may become a higher priority in deciding where to buy. Others may decide that as home working increases, they’d like to move to a more rural location. Nearly half of Savills research heads believe demand for rural/out of town locations will increase, while the rest expect it to stay unchanged. However, there were slightly more

European research heads who expect this trend to occur than those in Asia-Pacific where city living is more common.

Lucian Cook, Head of UK Residential Research, Savills, gives us his take on the situation in the UK: “Our survey of potential buyers and sellers suggests that Covid-19 has substantially increased the

Residential demand for rural locations is likely to increase



attractiveness of prime properties in village and country locations. This is partly driven by a desire to have better access to outside space, allied to the prospect of working from home more regularly.

“It comes at a time when country property is looking good value, given the shift towards prime urban living in the five to 10 years preceding the coronavirus.”

Covid-19 has also increased the use of technology in the home-buying process. During lockdown, potential buyers were unable to physically view properties, which led to an increase in virtual viewings. Digital signing of documents and e-conveyancing have been enabled following legal changes.

As the lockdowns end and we look forward to a time after the pandemic, it’s unlikely that these changes will be reversed. Jelena Cvjetkovic, Director, Savills Global Residential agrees: “The use of new technology-enabled tools for the home-buying process will be further cemented in the near future as some degree of social distancing looks set to continue, and we believe they are here to stay. E-conveyancing and digital signing will streamline the purchase process, with a beneficial impact on all, but particularly cross-border transactions, and a number of countries are looking at changes in law to enable these.”

CONCLUSION

Covid-19 has made the world take stock of how, despite increasing technological and social advancements, the way we live and work can be altered by the most ancient of forces: a medical pandemic.

The world was already undergoing many upheavals before the emergence of Covid-19. Living and working practices were evolving as new demographic groups entered the workforce at scale, retail was undergoing structural change, and real estate was being re-imagined as a service.

Forced to adopt technology en masse, employees have seen the advantages of remote working. Health and wellbeing has shot up the agenda. In the same way that security checks have become the norm, so might building entry health checks. All sectors will feel the effect in the long term of enhanced sanitising regimes.

As outlined in the rest of this publication, there are many tipping points impacting the industry. The pandemic means that some of these structural shifts in real estate may now have extra impetus. ■

LEARNING FROM CHINA: ADDRESSING THE NEAR-TERM CHALLENGE

As countries around the world continue their lockdowns, all eyes have been on China as an example of how to slowly and steadily lift lockdown rules to enable a return to ‘normal’ day-to-day life.

Initial response

China adopted a strict response to the Covid-19 pandemic within its borders, swiftly implementing social distancing measures and closing businesses across the entire country. During this time, sectors beyond essential services were mandated to sharply reduce or completely stop operations. Malls reduced hours, restaurants were limited to takeaway or delivery, offices were closed, and workers shifted to working from home. There were also stringent travel restrictions; permits were required to leave residential complexes and all non-essential travel was prohibited.

Resumption

The measures began to be eased in mid-to-late February, except for the epicentre of Wuhan. As residents started to venture out more, temperature checks, registering visitors, and no-contact deliveries were still required. These measures, intended to further minimise the spread of Covid-19, have

also been seen in similar forms in other sectors.

Restaurants have had to limit capacity to adhere to physical distancing regulations. A gradual reopening beyond food service has incrementally extended to retail and other services, such as banking.

Offices opened with increased social distancing measures in place. Teams worked in the office on a rotating basis and working hours were staggered to minimise potential for disease spread. Firms also were required to register their workers to prove that the workers had been resident in their cities for at least two weeks. External client meetings were postponed, and employees who were able, opted to use private transport rather than public to further minimise risk of exposure.

The new normal?

As at April, temperature checks, travel history, and other details are still frequently checked before individuals are allowed access to many buildings and public spaces. Mask-wearing, social distancing, and contact tracing through apps and QR codes are widespread, and regular disinfecting is carried out, particularly as secondary outbreaks remain a concern. The Government is also acting

swiftly to clamp down on disinformation in order to maintain public trust.

Many aspects of public life are still shuttered. Cinemas and children’s shops remain closed. Schools in some provinces are also shuttered, while other provinces have reopened. Those still closed will have a staggered reopening. Exam age pupils will return first, then older students, and younger children will be last back in the classroom.

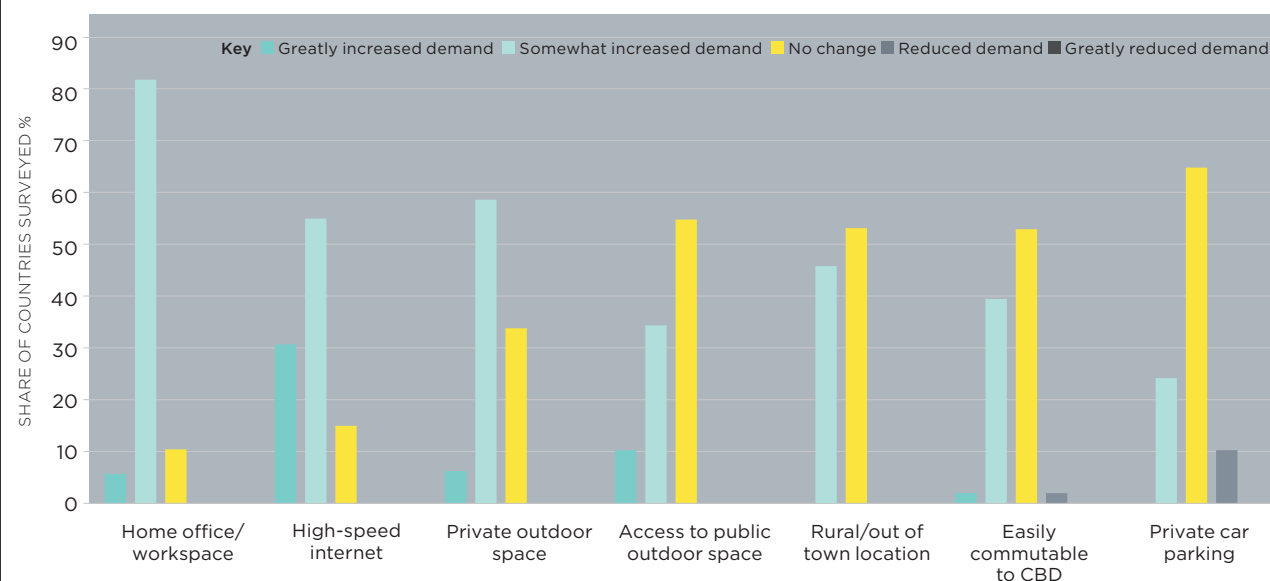
Discretionary spending patterns seem to have changed in the short run for sectors that have reopened. There are trends of a switch from international to domestic travel and a boost to domestic luxury consumption. The Government is trying to boost consumer spending by supporting sales promotions at retailers.

While no response to this unprecedented crisis is perfect, China offers an example to other states looking to ease lockdowns and encourage a return to normality. A slow lifting of restrictions, measured responses, and – most importantly – public compliance, are all critical to limiting the spread of Covid-19 while reopening economies and societies.

James Macdonald
Head of Research,
Savills China

IMPACT OF COVID-19 ON HOME FEATURES AFTER PANDEMIC HAS PASSED

Demand for home offices, high-speed internet and outdoor space is expected to increase



Source Savills Research



Banks offer 'green' money to fund projects to meet energy performance and other sustainability targets

BUILDING A GREENER FUTURE

The people have spoken. Now it's up to governments and industry to target net zero

Words: Sophie Chick, Head of Department, Savills World Research

For a topic with so much scientific evidence, the progress and consequences of climate change remain controversial. Instead, action has been left to the people. There's been a social tipping point as schoolchildren and environmental groups have led protests worldwide. Now, those people – and the scientists – are looking to government and industry to be bolder with the measures they are implementing.

With real estate responsible for almost 40% of energy and process-related emissions, a focus on the building and construction sector is inevitable. Tackling climate change should be at the top of every property owner's and occupier's agenda.

Evidence suggests the industry has a way to go. The Global Status Report for Buildings and Construction noted that final energy demand in buildings actually rose 1% from 2017 to 2018 and sector emissions increased by 2% globally.

There has been global action with 187 countries ratifying the commitments of the 2015 Paris Agreement to combat climate change. However, famed climate change-sceptic President Trump will potentially withdraw the USA from the agreement this year, despite the country being one of the highest contributors globally on a per capita basis (see panel, right).

For the Paris Agreement to succeed, the contribution from the real estate industry is crucial. Global building stock is set to double by 2050, according to the OECD, and more people across the globe are forecast to be living in cities. Urgent action by policymakers and investors is required to decarbonise and enhance energy efficiency in buildings. Increasing emissions and energy use are due to the expansion in floor space and rising demand for electricity, which is still primarily fossil fuel-generated, although this varies from country to country.

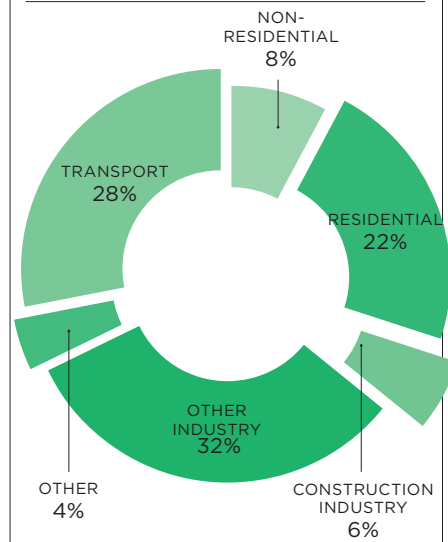
Forward-thinking developers and investors have been proactive in embracing key UN Sustainable Development Goals, creating portfolio-wide targets to become net zero and using design and technological advances in materials and monitoring systems to improve energy performance. Some have been led by market differentiation, remaining competitive and aligning with changing consumer and employee demands. However, all are also acutely aware that increasing regulation will come in this area.

REGULATIONS TO INFLUENCE CHANGE

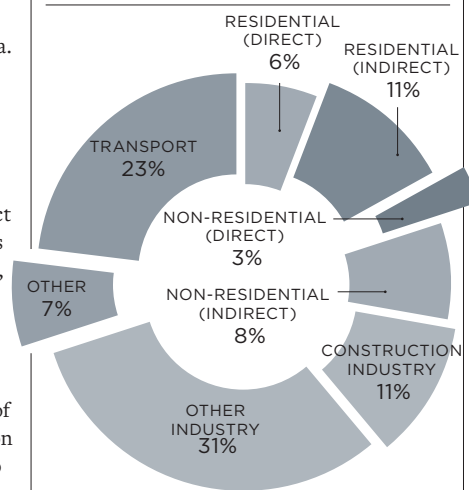
Policies regulating energy performance of new buildings are a powerful means to address future emissions growth. More countries are turning to regulation to effect change. India has introduced the country's first energy conservation code for housing, while Rwanda is addressing its residential sector through a new Green Building Minimum Compliance System.

In addition, mayors of the world's leading cities have emerged as champions of climate change through city-level regulation and proactive global networks, such as C40 Cities. For example, Paris has a net zero carbon goal for 2050 and Amsterdam plans to be fully electric by 2050. Other countries are looking at how they can influence change within the construction process. The National Australian Built Environment Rating System (NABERS), widely regarded

GLOBAL SHARE OF BUILDINGS AND CONSTRUCTION ENERGY



GLOBAL SHARE OF BUILDINGS AND CONSTRUCTION EMISSIONS



Notes Construction Industry is the portion (estimated) of overall industry devoted to manufacturing building construction materials such as steel, cement, and glass. Indirect emissions are emissions from power generation for electricity and commercial heat.
Source Savills Research using the 2019 Global Status Report for Buildings and Construction

as world leading, has been compulsory since 2010 and created a marked change within real estate development. Japan and Canada want to use new policies to achieve net zero and net-zero-ready standards for buildings.

The network of World Building Councils has been promoting the development of new frameworks through its Net Zero Carbon Buildings Commitment. Technical innovation through modern methods of construction, such as modular building, can also save energy and costs through standardisation and use of materials (see page 36). However, it is unlikely to just be regulation that drives change, as the largest players in real estate make it a cornerstone of future strategy.

Larry Fink, founder and CEO of BlackRock, told shareholders that climate risk is investment risk in his influential annual letter. How companies respond to climate change will be a defining factor in their long-term prospects, he added.

At the World Economic Forum, UBS released a framework intended to help close the 'climate finance gap' to meet the goals of the Paris Climate Agreement. Banks are beginning to offer 'green' money to fund projects to meet energy performance and other sustainability targets.

CLIMATE-RELATED FINANCIAL RISK

For the largest investors in real estate, the impact of climate change is now also about the resilience of the location of assets, due to the physical risk of environmental incidents, as well as the buildings themselves. For example, PGGM Private Real Estate, which has €14 billion in assets under management, is working with insurance firm Munich Re to map the precise location and the exact climate risk metrics for these locations.

"We are increasingly taking climate-related financial risk into account for our existing assets and future investments," says Maarten Jennen, Strategist for Private Real Estate at PGGM. "Climate change-related factors could cause obsolescence

HOW PEOPLE AROUND THE WORLD VIEW CLIMATE CHANGE

President Trump leads a nation where fewer than 60% of people think global climate change is a major threat to their country and just 39% think human activity is mainly responsible. If the federal government is slow to take action, it has left states such as California in a leadership position with its target to be carbon neutral by 2045.

The USA is not the only place where attitudes to climate change differ.

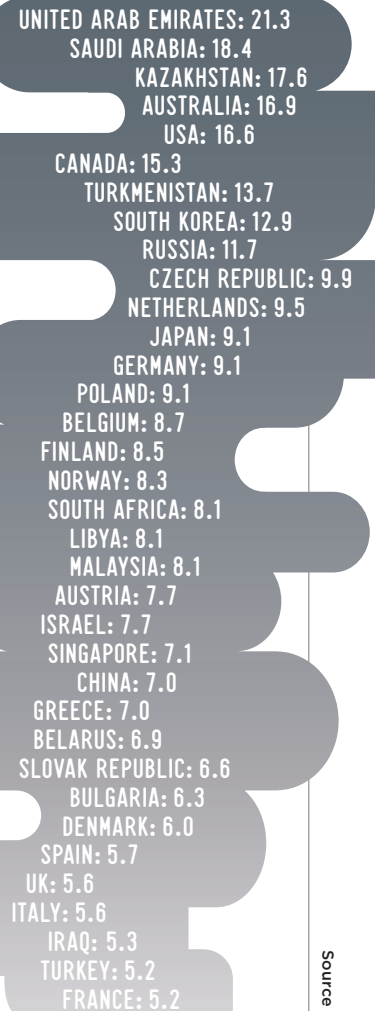
The two countries with a population over five million and the highest carbon emissions per capita are the United Arab Emirates (UAE) and Saudi Arabia. Just half of those living in UAE think the climate is changing and human activity is mainly responsible, and that number falls to 35% for Saudi Arabia. On the other hand, awareness is high in

many countries. In Greece, South Korea, France, Spain and Mexico, 80% or more of the population agree that climate change is a major threat to their country. This sentiment will encourage more change from both government and industry.

China, often viewed as one of the world's major polluters, does produce the most CO₂ globally. However, on a per capita basis, with more than 1.4 billion people, it is 24th of all countries with a population over five million.

in two ways: lack of adherence to location regulation, which forbids landlords to lease space, or absence of tenant demand for a location because of the physical risks."

As the industry faces these challenges, the forces for change will be varied. Investors will demand more action and consumer/tenant pressure is likely to increase. For building owners, looking at opportunities to mitigate climate risks through the lifecycle of their buildings will be a good starting point.



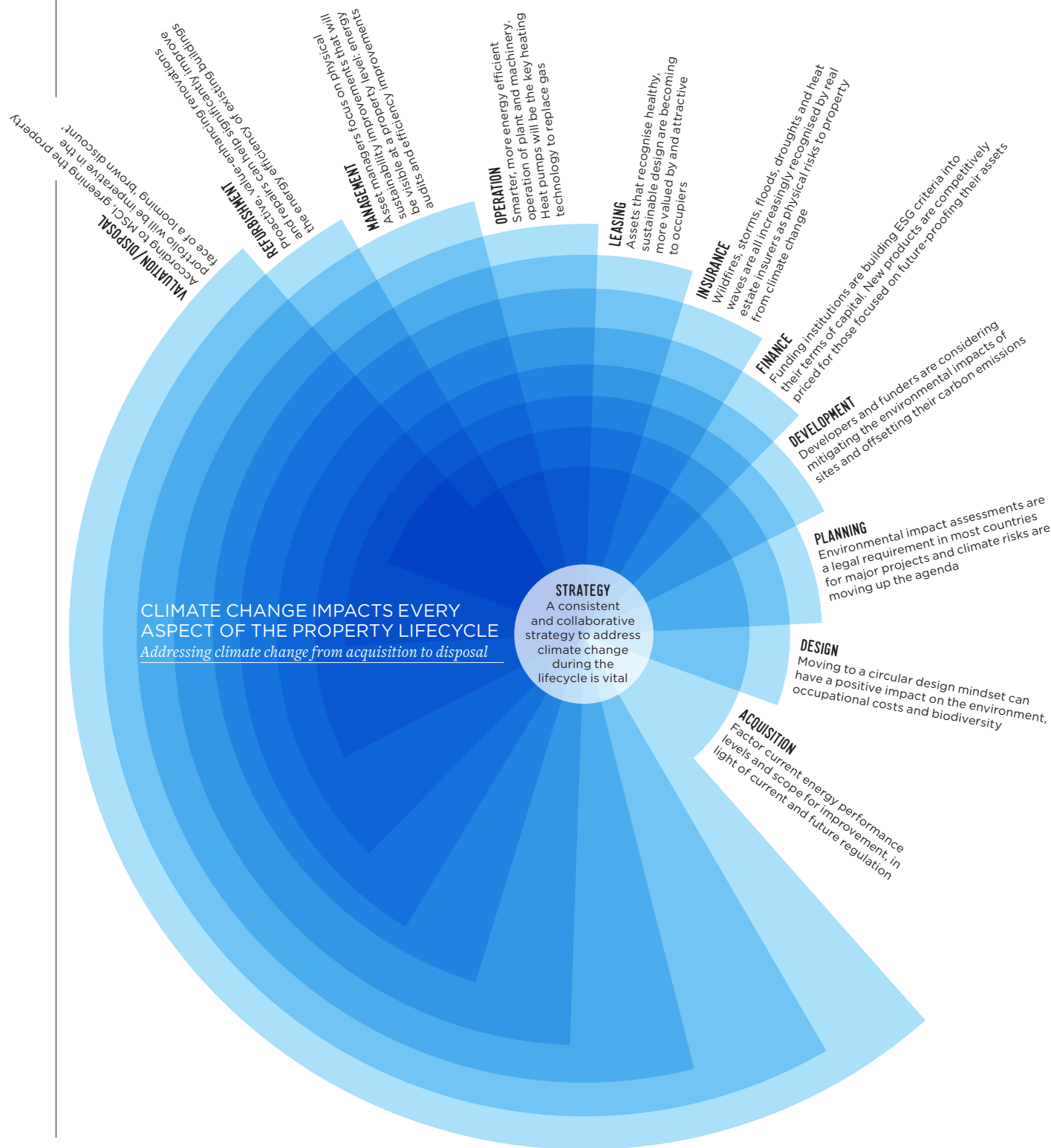
CO₂ EMISSIONS PER CAPITA 2018 (FOR POPULATIONS OVER 5M)

Source: Savills Research using Global Carbon Atlas

PERCENTAGE AGREEING THAT CLIMATE CHANGE IS A MAJOR THREAT TO THEIR COUNTRY



“DEVELOPERS ARE USING DESIGN AND ADVANCES IN MONITORING AND MATERIALS TO IMPROVE PERFORMANCE”



ADVANCING NET ZERO



Alan Somerville, Executive Director, Head of Building Performance Group at BRE

66 The real estate industry is at a crossroads with climate change and the global drive towards a zero carbon future. We're acutely aware of the issues that face us and now we need to move forward with a consensus on action. There is substantial pressure on owners, occupiers and funders of real estate to perform in a way that makes the lowest impact on our planet.

That's already affecting the sources of equity, with investor pressure driving investment managers to set and reach targets on energy performance of buildings, but it will also start to affect sources of debt.

Financial institutions, such as the Bank of England and the European Central Bank, are increasing the requirements of financial organisations to properly price climate risk, whether it is debt or bonds. Sustainable investing and the rise of green finance will be common threads across all our markets.

There is pressure from lenders to real estate to better understand the financial risk around carbon and the climate risks of buildings, and factor that into decisions about who they lend to. It's not just going to be about penalising borrowers and assets that have poor performance: it's also about rewarding good performance. There will be cheaper debt and better terms for properties with less climate risk, and for those that are considered more sustainable.

For the industry, the starting point is to work hard to transform buildings to be net zero, with the total amount of energy they use being roughly equal to the amount of renewable energy created on site or nearby.

The most important aspect for this is having robust data, and making sure that data is available to everyone. Owners and managers need to be able to respond to the fiduciary responsibilities through consistent and comparable statistics.

They need to be able to make smart decisions, set accurate targets and monitor the operational performance of buildings. The right information will help us put in place a series of actions that we are confident will have delivered the impact we

need in 10 or 20 years' time. We have seen great success with some of the existing measurements, such as the Global Real Estate Sustainability Benchmark (GRESB), which is the principal way of benchmarking fund-level environment, social and governance (ESG) and BREEAM, a global standard for asset level performance. However, if you look at the percentage of the overall market that is covered by some form of assurance-type validation or disclosures, it is pretty small. There's a huge part of the market to play for.

One of the other main issues will be new buildings versus old. A lot of emphasis for change goes into new buildings, but the reality is that the built environment of 2050 already exists. The majority of buildings that will be around in 30 years' time have already been constructed.

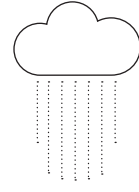
Focusing on new buildings is positive but, to make an impact, the mitigation has to be in refurbishing and retrofitting older buildings. It is more challenging for investors, owners and occupiers, but that's where data comes in again.

You need to understand how a building is actually performing to make informed decisions. An old building doesn't necessarily perform badly. Or, if you want to make a building that has a 70-year lifespan rather than 40, then there are significant upsides from a carbon perspective. But designing for that longevity will have cost implications.

Landlords' relationships with their tenants are also evolving as the move towards flexible space means they're in more of a partnership. The roles and responsibilities of both sides are blurring, but occupiers place greater expectations on landlords, and that will extend to being proactive about carbon and mitigating climate risks.



“FOR THE INDUSTRY, THE STARTING POINT IS TO WORK HARD TO TRANSFORM BUILDINGS TO BE NET ZERO”



Johnson Controls HQ reduces water use by 42% through recycling and recapture facilities

Setting the new standards

The scale of the climate change challenge can be daunting, but organisations are tackling it building by building. Here are some inspiring examples of environmental leadership from projects in the UK, the Netherlands, the USA, China and Australia

The magnitude of the climate emergency can be overwhelming, but organisations around the world are demonstrating environmental leadership on a building-by-building basis. The climate and weather risks may differ in each region, but initiatives focus on technology, new materials and new construction methods to reduce energy consumption and move to net zero. Many projects have been supported by regional certification such as BREEAM, LEED and NABERS. These have guided best practice and increasingly enable ideas to be transferable around the world.

UNITED KINGDOM

One Angel Square, Manchester

As the 500,000 sq ft [46,452 sq m] headquarters of The Cooperative Bank, One Angel Square has future-proofed itself for temperature rises. It features a double-skin façade, which helps reduce heat during summer and insulates the building during winter. Overall, the building's design and sustainable features help it achieve an 80% reduction in carbon emissions and a 40-60% reduction in energy consumption. The building is fitted with heat recovery from the IT systems, low-energy lighting, and greywater and rainwater recycling. It has 300,000 sq ft [27,971 sq m] of exposed concrete, which acts as a thermal sponge, reducing the heat in the building and the amount of energy needed to cool it. It was the first building in the UK to achieve a BREEAM outstanding rating.

Jonathan Jessop, Director, Property Management, Savills UK

THE NETHERLANDS

Huidekoper, Amsterdam

The Huidekoper building is being developed to meet the all-electric sustainability plans of the municipality of Amsterdam by 2050. The 60,278 sq ft [5,600 sq m] development by Bridges Real Estate, which was bought in 2019 by the BlackRock Eurozone Core Property Fund, stripped the building back to its concrete frame while adding two floors, a new roof and new façade. Huidekoper has a heat pump installation, a roof full of photovoltaic cell panels and high insulation values, making it all-electric with low energy consumption. **Jordy Kleemans, Head of Research & Consultancy, Savills Netherlands**

UNITED STATES

The Bullitt Center, Seattle

The 49,998 sq ft [4,645 sq m] Bullitt Center is arguably the world's greenest building. It is net zero energy, carbon and water, as well as having other sustainable features including toxic-free materials and composting toilets. The office building is estimated to have cost around 23% more than a typical class-A office building in Seattle. The owner attributes this to soft costs such as time spent for regulatory permission to incorporate features for the first time, as opposed to hard construction costs which were comparable with other buildings. The Center is fully let and designed to last 250 years, providing a favourable fixed income for many decades.

Eric Blohm, Senior Managing Director, Savills US



Clockwise from left: One Angel Square, UK; Johnson Controls HQ, China; The roof of The Bullitt Center, USA



CHINA

Johnson Controls HQ, Shanghai

The Asia-Pacific headquarters for Johnson Controls is setting new standards for green and smart buildings. Its central plant, renewable energy and intelligent lighting, as well as the firm's Metasys Building Automation System, which connects the commercial HVAC, lighting, security and protection systems, is expected to help generate 44% savings in overall energy use compared to the local market standard. The building reduces water use by 42% through greywater recycling and storm water recapture facilities, and reduces embodied energy in materials by 21% through the use of Forest Stewardship Council certified wood-based building. Employees are also able to reduce their carbon footprint by using the hybrid and electric vehicle charging stations. **Betty Mao, Director, Property Services, Savills Shanghai**

AUSTRALIA

Workplace6, Sydney

The GPT Group, the Australian REIT, owns the first two buildings in the country to achieve carbon neutral status under NABERS and Climate Active, the country's carbon neutral standard. Workplace6 is the city's first 6-star Green Star rating after becoming 25% more energy efficient since 2009. This dovetails with its anchor tenant Google's ambitions of achieving zero carbon footprints. Along with a second asset in Melbourne, the unified certification approach will now be implemented across the remainder of the GPT Wholesale Office Fund to work towards its target of carbon neutrality by the end of 2020, and for the whole AUD\$12 billion group portfolio by 2030. **Paul Craig, CEO, Savills Australia and New Zealand**

LEADING FROM THE FRONT

How are real estate investments and strategies evolving? Simon Hope, Head of Global Capital Markets, Savills, speaks to investors who are leading the charge

Global investors are at the forefront of change. They spearhead investments in emerging sectors and provide leadership for transformational issues, such as sustainability, climate risk and the move to more operational real estate models.



Simon Hope, Head of Global Capital Markets for Savills, speaks to Michael Neal, Nuveen, and Paul Brundage,

Oxford Properties, about their approach to these major shifts.



Michael Neal, Chief Investment Officer, Real Estate, Europe & Asia-Pacific, Nuveen.

Nuveen Real Estate is one of the largest investment managers in the world with \$130bn of assets under management.

Simon Hope: How do you differentiate your strategy to attract global investors?

Michael Neal: One way we are doing this is to provide a global solution based on investing in real estate in resilient cities. Our European Cities Fund resonated with investors and we did the same with Asia-Pacific. Both filter cities based on factors including demographic and technological change, sustainability, liquidity and transparency that will define how these cities perform. It is a unique strategy for long-term investment where we can be confident of investing through cycles. The assets that we invest into in these cities will have longevity, provide the income characteristics and the return profile that we need.

SH: Which cities stand out with this approach?

MN: In Asia-Pacific, there are 11 principal investment cities that have been selected, and six progressive cities. We made our first investment with that strategy in the liquid markets of Tokyo, Seoul and Sydney in the logistics, office and multifamily housing sectors.

SH: As real estate becomes more operational, how do you ensure you have the right expertise across the range of sectors?

MN: The operational aspects of changing sectors like retail or alternatives, such as housing can be challenging. Investment advisors like ourselves can't do it all. We need operating partners to be able to find solutions for our clients. One example is where we partnered with Milestone for a pan-European student accommodation strategy on behalf of a US client.

SH: Where does ESG fit in to your investment agenda?

MN: ESG considerations are incorporated into all the investment thinking that we undertake, and our sustainability team inputs into every investment decision. Climate change and the necessity for carbon emission reduction will lead to stranded assets in the future. We believe renovation to core strategies

will become more prevalent where the energy consumption that has gone into the construction of the slab and frame are preserved. We are currently working on a number of projects like this.

SH: Do you see long-term implications on real estate from the Covid-19 epidemic?

MN: The most likely lasting impact on real estate is an acceleration of the structural changes that were already taking place as consumers and service providers have been forced to change behaviours. The clear example is the increasing use of online shopping leading to stronger logistics demand.

For industrial and logistics, 're-shoring' is also likely with manufacturers and suppliers realising that they cannot rely on one supplier in one region. They will look for new sources to shorten supply chains.

In Europe, this could create opportunities in lower-cost locations, such as Eastern Europe, Turkey and North Africa.

Consolidation is likely in the co-working segment of the office market and, more broadly, companies will demand higher-quality fit outs with a real focus on wellbeing and flexibility.

For real estate investment, we expect even greater focus on business resiliency and the business criticality of occupied assets. Fundamentally, real estate investment is about determining the resilience and growth potential of an income stream to determine the appropriate multiple. This pandemic has brought that simple equation under even great scrutiny.



Paul Brundage, EVP, Senior Managing Director, Europe & Asia Pacific, Oxford

Properties, the real estate investment arm of OMERS, one of Canada's largest pension plans.

Simon Hope: From a real estate perspective, what was your immediate response to the Covid-19 crisis?

Paul Brundage: On the investment side, we were able to conclude deals that we

“THE CRISIS HAS INCREASED OUR COMMITMENT TO INVESTING IN LOGISTICS, DATA CENTRES AND LIFE SCIENCES”

had in the pipeline to sell, but some acquisitions didn't get finalised unless they were at an advanced stage so we slowed down in that respect. The other thing we have been doing is trying to collect rent, which has not been an easy exercise by any means and, of course, we've been talking to our lenders.

SH: For the longer term, how do you think the pandemic changes your allocations?

PB: We've gone through all of our asset classes and geographies and our long-term capital allocations, and we've either reaffirmed them or adjusted them. The overall conclusion is probably that the crisis has just deepened our convictions on our sector and geography choices both ways.

SH: What does this mean for your sector and geography targets?

The crisis has increased our commitment to investing in logistics, data centres and life sciences. We like residential but we do have to see whether there is increased government intervention in this sector following the crisis. Offices, which was already facing some headwinds, is probably something we will do less of now, as well as retail. By geography, it is likely to play out as more investing in Asia and less in Europe.

SH: What challenges do you see in satisfying those allocations?

PB: One challenge will be to achieve the returns we are targeting in those sectors and geographies as many people will be shifting in the same direction as well. In the long term, it will also be about getting comfortable as to whether the returns we were targeting before Covid-19 will be the same. We're still trying to understand whether the market is truly ready to reflect what we believe are higher risks. Therefore, we're going to be going at a slower pace to hit those allocations.

SH: Are there other wider factors that will affect investments?

PB: I think the role governments have played in the crisis around the world

will become a factor. They've essentially become the employer of last resort, the public service provider and the lender of last resort in many countries. And, if there was ever a moment in time when you needed a government to do this, it was now. But at some point that has to be paid for, and we will see that in future growth rates. As we move into a post-Covid-19 world as government intervention relaxes, real estate needs to play a role. We need to work in partnership on employees, on taxes, on planning, on lending and finance and then on the future of the investment opportunity, and how can we bring our capital to support that.

SH: How is Oxford Properties approaching ESG?

PB: Our ESG team is investing across many different projects globally. It's a thoughtful, commercial approach, and we're aiming to be a leader around it. We're trying to be even more of a leader around climate change.

SH: Do you see a tipping point coming for real estate on climate change?

PB: We're past the tipping point. We're in it, and we have to deal with it. We have to deploy our capital in a manner that is consistent with that and to take a leadership role.

BRINGING REAL ESTATE TO LIFE

During the past five years, global funding for life sciences reached \$2.5 trillion. This investment will trigger high demand for real estate, which is only set to increase in the wake of Covid-19

Words: Steven Lang, Director, Savills UK Commercial Research

We've seen the growth of innovation districts in cities such as San Francisco, Boston and Cambridge in both the UK and USA. But now, the intersection of these technology-rich environments with the demand for advances in medicine and healthcare, means that the life science sector is truly reaching a tipping point.

Life science covers a wide range of medical fields, such as biotechnology, pharmaceuticals, biomedical technologies, life systems technologies, nutraceuticals, environmental and biomedical devices. Its funding levels are as deep as the sector is broad. During the past five years, more than \$2.5 trillion of capital has been raised globally, a 111% rise on the previous five-year period.

One major influencing factor is technology. Global funding for the digital health market reached \$22 billion in 2019, a pace that has essentially doubled every two years over the past decade. Potential for software and hardware tech offers new avenues to improve human health,

whether through artificial intelligence (AI) and machine learning, or data-driven approaches to health solutions.

The growth has not gone unnoticed by traditional technology companies. Google entered the health market five years ago with the acquisition of DeepMind, which uses AI in the development of new drugs.

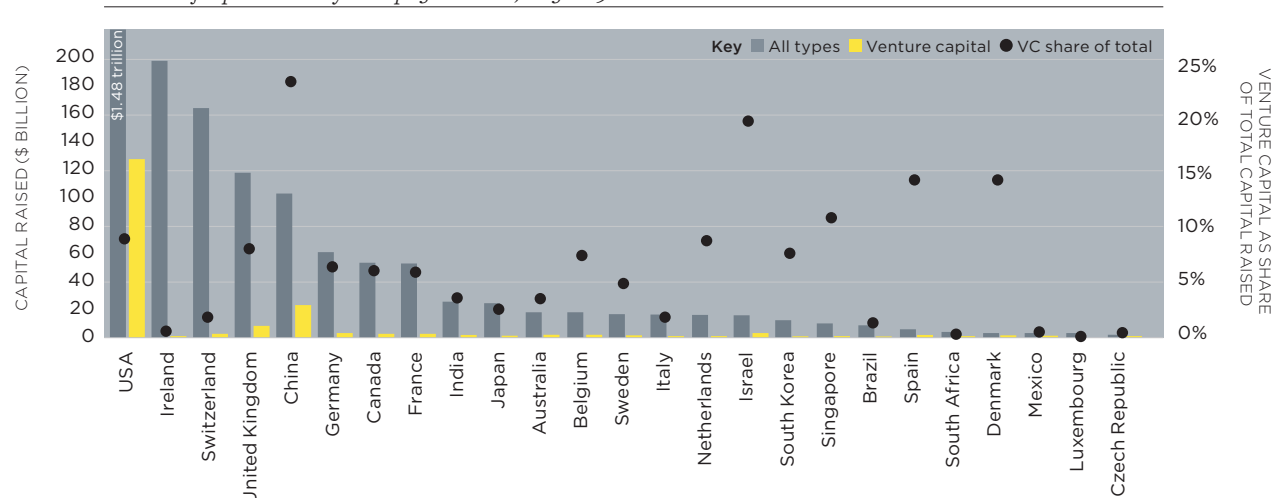
In a post-Covid-19 world, there will be a continued rise in the vaccines sector as well. The early money into this sector, being venture capital (VC), for the last five-year period (2015-2019), has seen around \$5 billion invested, globally. This is 150% higher than the preceding five-year period.

LIFE SCIENCE AS A REAL ESTATE SECTOR

The rise of the sector has ramifications for real estate, and life science is about to be recognised as a real estate sector in its own right. Life science gives investors a chance to build a portfolio around investments that benefit from clustering in innovation districts and the triple helix of government, universities and industry to deliver on a specific aim, which, among other global issues, will include dealing with coronaviruses. From startup incubators and R&D facilities to major headquarters, the sector can also offer diversity of investments.

GLOBAL LIFE SCIENCE SECTOR

The level of capital raised by the top 25 countries, 2015-2019



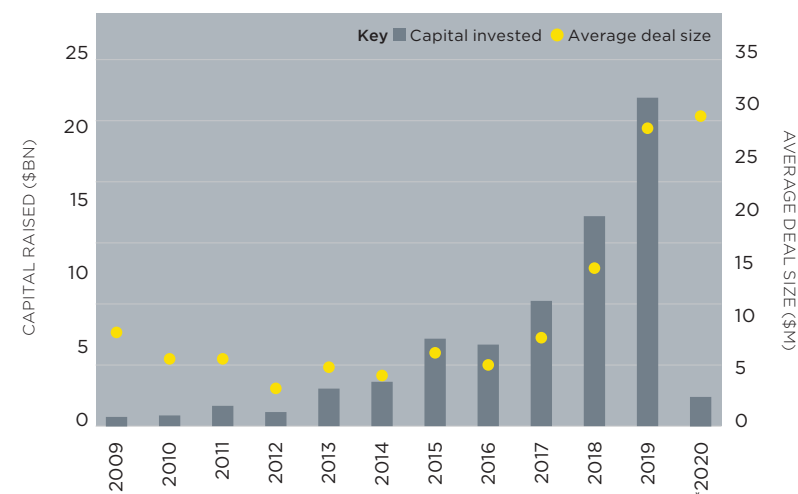
Source Savills Research using Pitchbook

61%

The USA dominates the field, taking a 61% share of the top 25 countries based on total raised in the last five years

CAPITAL RAISED IN GLOBAL DIGITAL HEALTH

Capital flow can help be a predictor of future real estate demand



Note *as at mid-February Source Savills Research using Pitchbook

Capital flowing into life science can help be a predictor of future real estate demand. When it comes to VC money, merger and acquisition activity and private equity investments, the USA dominates the field, taking a 61% share of countries that raised \$1 billion or more in the past five years. The global reputation of San Francisco, San Diego and Boston-Cambridge is essential to this appeal.

For early VC money, which is a good indicator of rising areas of innovation, the USA remains dominant with a 68% share (2015-2019 period).

However, China has emerged with a 12% share during the same period, compared with a 3% share in the preceding five years (2010-2014).

The growth of the VC market also highlights some interesting locations that may not yet be on the radar for real estate investors. Countries that sit within the top 25 global markets, but which also saw significant VC growth in 2019, include India, Spain, Australia and Austria. ■

BIOMED REALTY



Tim Schoen, President and CEO, BioMed Realty discusses investment in the life science sector

Simon Hope, Head of Global Capital Markets, Savills: How have you built up your portfolio?

Tim Schoen: We've focused on established core life science markets: San Francisco, Boston-Cambridge, San Diego, Seattle, New York and Cambridge in the UK. Our total portfolio represents 11 million square feet and a further 2.5 million square feet under development.

SH: Will you expand on those locations?

TS: Our strategy has been to go deeper into these markets but we would like to expand in the golden triangle in the UK (Cambridge, Oxford, and London), and we've looked to some extent at Western Europe (eg Switzerland and Germany).

SH: What are the important ingredients to these being successful ecosystems?

TS: Each location needs to have the three tribes: researchers, venture capitalists and entrepreneurs. They all speak their own language, but when they are located in one area it creates a pretty powerful ecosystem.

SH: What role do institutions other than universities play?

TS: The medical system, along with the university in that hub, is very important. The mix of universities and hospitals provides the 'bench to bedside' research that is so important for innovation.

SH: What can real estate do to support companies in life science?

TS: Companies are starting to use real estate to attract and retain talent. They need places where researchers feel they are part of a community. A good example is our Canal District complex in Kendall Square, Cambridge, where it's easy to meet with other researchers.

SH: How important is sustainability?

TS: We want to be a good steward of the capital we invest. One quarter of our portfolio is LEED certified and we look at reducing energy in all of our buildings.

SH: Do you see long-term implications on real estate from the Covid-19 epidemic?

TS: The magnitude of long-term implications to real estate will be sector specific and correlated to the ability to widely test and develop an effective therapy/vaccine for the virus. Resumption of tenant and consumer demand are dependent upon it.

In the life science sector, scientists and researchers collaborate more extensively to accelerate R&D solutions, a trend that will likely increase in the core innovation markets. Also, I would expect biotech companies and research institutions to seek out experienced, well-capitalised owners with full-service, integrated platforms to ensure their mission critical facilities operate without interruption.

LOW INTEREST HIGH DEMAND

With interest rates at record lows, investors have been increasing allocations to real estate across all regions. We profile the strategies, key markets and structural opportunities

Words: Eri Mitsostergiou, Director, European Research, Savills



“DURING TIMES OF
UNCERTAINTY, PROPERTY
HAS ALWAYS BEEN SEEN
AS A SAFE HAVEN”

Left:
La Défense, Paris

The year 2020 will be most likely remembered as a tipping point in many ways. The world has experienced a synchronised shock and will come out of it traumatised, but also wiser, stronger and more prepared.

During times of uncertainty, property has always been seen as a safe haven. Despite the complexity of the economic and political landscape and the short-medium and long-term implications of the pandemic, which are yet to be identified, there is still value to be found in the markets.

Interest rates are at record lows, and have been for a long time. That already makes real estate attractive.

Then there’s property’s long-term appeal. Developed countries face increasing levels of retired people, and real estate offers a good annuity match.

Of course, economic, political and cyclical risks always exist. So, what is interesting to look at is how investors are working around these through pricing and diversification. An investor’s domestic outlook is often a driver. Asian institutional investors, for example, such as sovereign wealth funds, pension funds and insurance companies, need to diversify globally, as their rising allocations to real estate cannot be absorbed locally.

On the ground, different strategies help investors find the risk/return values they need from the market. Core investors value transparency and liquidity, with demand and supply fundamentals of paramount importance to reduce risk. In 2020, ‘flight to quality’ will prevail. This means that prime offices and logistics in key global markets, such as New York, Paris, Los Angeles, German cities, Tokyo and Sydney will remain in demand. In 2019, New York, Los Angeles, San Francisco, Paris and London were the most active markets, according to Real Capital Analytics. Domestic investors, who know their local markets well, might also consider prime opportunities in secondary cities, especially with good quality tenants and long lease terms in place.

However, core investors also seek resilient, innovative cities that attract talent and will be more defensive to long-term risks. These include mature cities such as New York, Tokyo, London, Singapore and Los Angeles, smaller cities, such as Stockholm and Barcelona, and also developing ones such as Shanghai, Beijing and Shenzhen. In 2019, Seattle, Beijing and Munich showed the highest year-on-year increase in activity at 59%, 56% and 54% respectively (see chart on page 27).

Other investors feel comfortable riding the economic cycles with value-add strategies. These include developing and emerging markets with better rental growth prospects – logistics, in particular – in the Netherlands, Central and Eastern Europe or Vietnam. According to MSCI, the average net operating income yield for industrial property globally in 2019 was 4.6% compared to 4.1% for offices.

Some investors favour structural opportunities: retirement homes for ageing populations, multifamily in cities with high urbanisation rates. Underscoring this is a more operational approach with active asset management to create value through redevelopment and refurbishment in this low-growth environment.

TACTICAL BUYING OF RETAIL

Finally, there is a role for opportunistic strategies to capitalise on structural disruption, such as we see in retail. As the sector reconfigures to accommodate an omnichannel approach and additional uses, tactical buying of retail in markets such as the UK and the USA will give investors potential for higher returns. There will be good schemes where rents have already rebased, or where buying cheap provides the flexibility to rebase them.

Looking ahead, there will also be opportunities for re-purposing by adding new uses and creating relevant and attractive mixed-use environments.

In the long term, investors may be challenged by changing occupational requirements towards flexibility, which

will lead to shorter leases, just as the world’s pension funds need more long income. To mitigate this, investors need to become operational.

There are also pending regulatory risks, especially in multifamily, where rent controls are being phased in to protect tenants in cities such as Berlin and New York. This could lead to limited prospects for high rental growth.

One of the greatest changes in investment will be what’s required to tackle climate risks. Meeting carbon-neutral targets and regulatory interventions could negatively affect capital expenditure and operating income for investors. Extreme climate conditions could also affect long-term asset value (see pages 14 and 20).

At a broader level, the environmental, social and governance (ESG) movement, driven by younger generations, is now essential in corporate and institutional investment strategies, health and safety and sustainability do offer a downside protection and should lead to improved risk-adjusted returns as it considers long-term risks.

There is a debate about the shape of the economic recovery in 2021 and beyond. However, with low interest rates, real estate will remain attractive. A mismatch between the availability of ‘dry powder’ and the supply of good quality stock will keep competition high and yields low. During this phase of uncertainty, rental growth prospects are also limited and some sectors will suffer as long as the downturn lasts, while others will recover faster.

Investors will need to continue to adapt to uncertainty and risk. Careful asset selection, diversification and the right pricing of long-term risk will characterise those which are successful.

With opportunities emerging from structural changes, it is about meeting the need for new products and repricing those that are not fit for purpose. The route to high returns in this part of the market is repositioning, redevelopment and active asset management. >

“WE EXPECT THE STRONG FLOWS FROM SOUTH KOREA INTO EUROPE TO CONTINUE”

GLOBAL INVESTMENT STRATEGIES



Alex Jeffrey,
Global Chief
Executive,
Savills

Investment Management

Investors have been increasing allocations to real estate across all regions, both structurally, as they see that real estate plays a key role in diversifying a multi-asset portfolio, but also because the fixed income market is generating very low returns.

This is a particular driver for investors with lower domestic yields. In Japan, where government bond yields are typically negative, there is strong motivation for investors to look overseas.

We have also seen US investors looking at Europe and Asia-Pacific, and they tend to view further up the risk spectrum than regional counterparts. Some are looking at core funds, but they are in the minority.

At the same time, more Europeans have been heading to Asia, attracted by exposure to the structural growth characteristics and the region's demographics.

Having said this, the synchronised economic shock from the Covid-19 pandemic has churned the real estate markets and is likely to have short-term implications for real estate strategies and capital flows. The investment market saw a meaningful fall off in transaction volumes globally since the beginning of March. This is due to weaker activity on both the supply side, measured by deals coming to the market,

and the demand side, measured by confidentiality agreements signed.

Until the spread of Covid-19 is contained and restrictions on movements are relaxed, investment activity in global real estate is likely to remain very subdued. Domestic capital flows are likely to benefit first from the easing of restrictions.

The large falls in equity markets may see allocations to real estate exceed specified thresholds, thereby constraining further capital deployment. Although forced sales have so far been limited, investors tend to divest abroad first and return their focus to their domestic markets.

Of course, real estate markets will be dictated by the size and the duration of economic disruption, which itself will also be influenced by the quantum of defaults (both tenant and banking covenants) and the impact on employment. Short-term concerns about the global economy may also affect capital raising activities.

ROADMAP TO RECOVERY

Risk aversion is likely to drive some short-term tightening in the credit market, which highlights the importance of secure income streams and reducing exposure to over-leveraged strategies. An analysis of global office markets by RCA indicates that, on average, markets with higher average liquidity tended to be the first to recover their pre-crisis pricing. To investors in

these markets, this should provide some comfort and also justify the potentially higher prices paid for assets in the most liquid markets.

Despite this, real estate has not lost its attraction compared with other asset classes. Volatility in equity markets has increased due to the global turmoil and bond yields seem set to remain lower for even longer in the context of lowered policy rates and resumed quantitative easing (QE) programmes by the major central banks globally.

While there will be some near-term challenges in deploying capital, there is, nonetheless, a huge amount of dry powder. According to INREV, the amount of capital raised last year for new investments into real estate reached more than €200 billion, the highest level on record, of which 39% was not deployed at the end of 2019.

The risk-off sentiment and tighter credit environment also presents other opportunities, such as for alternative lenders or debt funds given the lack of such products in Asia at the moment.

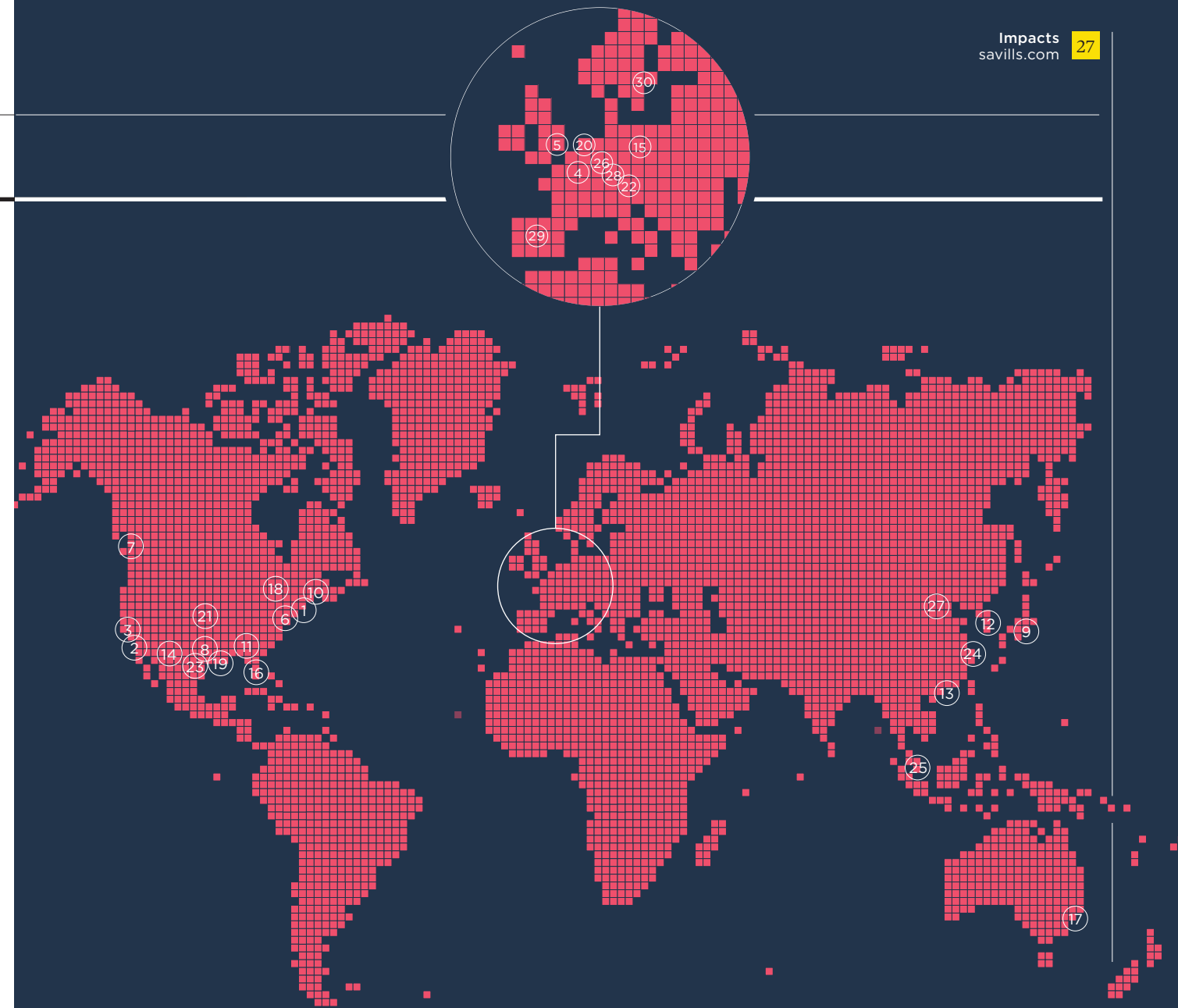
As economies and real estate markets begin to return to some degree of stability, we expect the strong flows from South Korea into Europe to continue. The size of their savings pools are large and growing quickly, and have outgrown the ability of their domestic real estate market to absorb them. It is key for them to look overseas. ■

There will likely to be significant competition for good assets at that point. Investors are increasingly relying on third parties with a strong local presence to help them access deals. They are also controlling risk by diversification through region and sub-region, by having good teams on the ground to help them invest and manage the assets, and by a judicious approach to leverage. In the past, cycles have been exacerbated by the magnetic effect that real estate seems to have towards leverage. These days, investors are more conservative in approach.

ALTERNATIVE APPROACH

With real estate moving towards more operational business models, levels of international experience are also dictating what risk investors are taking in newer alternative sectors, such as private rented residential and student housing.

Investors who have not invested in European real estate before, for example, will still take a more traditional approach to building up an exposure to the established sectors first. Those who have a substantial invested portfolio overseas will be looking to counter the lower yields for office and logistics by investing in alternative sectors that could potentially achieve higher yields. Many of these newer sectors are driven by structural factors other than the cyclical health of the economy. ■



MOST ACTIVE METRO AREAS

Volume of investment (\$) in 2019

Key
■ Investment volume
■ Year-on-year change

- 1. New York
■ \$47 billion
■ -22.2%
- 2. Los Angeles
■ \$39 billion
■ 1.5%
- 3. San Francisco
■ \$35 billion
■ 23.3%
- 4. Paris
■ \$31 billion
■ 4.7%
- 5. London
■ \$26 billion
■ -28.0%

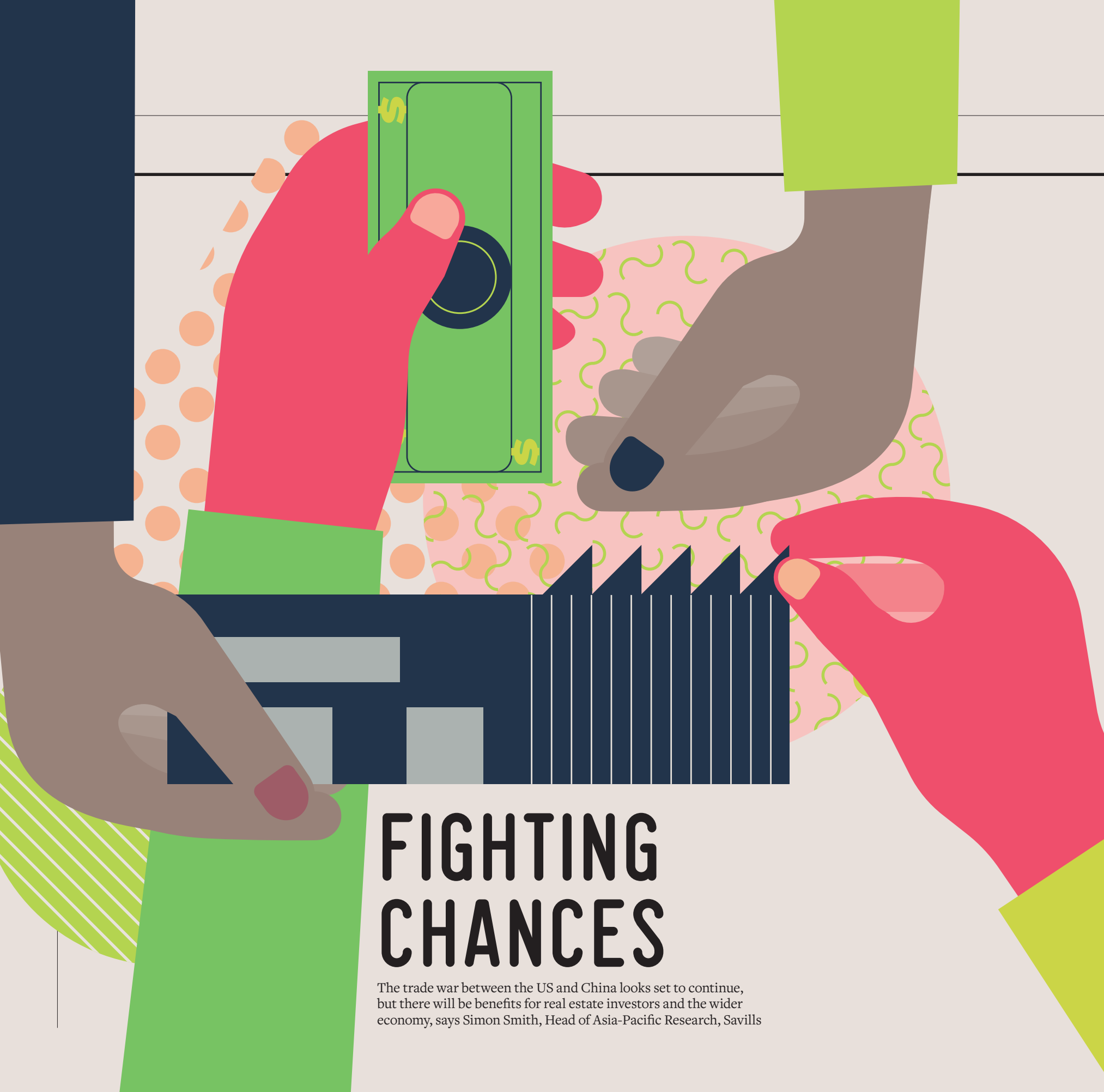
- 6. Washington
■ \$23 billion
■ -0.5%
- 7. Seattle
■ \$23 billion
■ 59%
- 8. Dallas
■ \$22 billion
■ 2.9%
- 9. Tokyo
■ \$20 billion
■ -2.7%
- 10. Boston
■ \$18 billion
■ 33.5%

- 11. Atlanta
■ \$17 billion
■ 1.3%
- 12. Seoul
■ \$16 billion
■ -5.1%
- 13. Hong Kong
■ \$15 billion
■ -42.2%
- 14. Phoenix
■ \$15 billion
■ 10.7%
- 15. Berlin
■ \$15 billion
■ 22.5%

- 16. Miami
■ \$14 billion
■ 13.9%
- 17. Sydney
■ \$14 billion
■ 1.6%
- 18. Chicago
■ \$14 billion
■ -33.5%
- 19. Houston
■ \$14 billion
■ -14.8%
- 20. Amsterdam
■ \$13 billion
■ -14.0%

- 21. Denver
■ \$11 billion
■ 0.8%
- 22. Munich
■ \$11 billion
■ 53.6%
- 23. Austin
■ \$10 billion
■ 38.5%
- 24. Shanghai
■ \$10 billion
■ -14.4%
- 25. Singapore
■ \$10 billion
■ 26.4%

- 26. Ruhr
■ \$10 billion
■ -22.4%
- 27. Beijing
■ \$10 billion
■ 55.9%
- 28. Frankfurt
■ \$10 billion
■ -27.2%
- 29. Madrid
■ \$9 billion
■ -2.0%
- 30. Stockholm
■ \$8 billion
■ 52.5%



FIGHTING CHANCES

The trade war between the US and China looks set to continue, but there will be benefits for real estate investors and the wider economy, says Simon Smith, Head of Asia-Pacific Research, Savills

The conventional wisdom about trade wars is that they are a Bad Thing. And, to be fair to the conventionally wise, this is generally true. However, the trade war between the US and China has led to some changes that are proving positive for the world economy and for real estate. The Covid-19 outbreak has severely disrupted world trade and has shattered everyone’s predictions for 2020. It is also likely to affect trade patterns in the future. However, it is unlikely to alter structural changes linked to the trade conflict. The trade war has been brewing for some time. US president Donald Trump has been a critic of the US trade deficit for decades, while the previous Obama administration raised concerns about China’s use of non-tariff barriers and its failure to respect intellectual property (IP) rights. Meanwhile, China has argued that the US is using complaints about trade and currency manipulation as a means of constraining the growth of a rival.

HERE TO STAY?

There are two important things to grasp about the US-China trade war. First, it is going to last for a while. Tariffs tend to hang around once imposed. The US Government is committed to fighting China on trade and IP rights, and a change of US administration will only alter the language, not the stance. Meanwhile, China is committed to consolidating its position as a world economic power. Second, the trade war is accelerating trends that have already begun, such as the growth of China’s consumption economy, financial liberalisation and its rise up the manufacturing value chain. These trends and others are significant for real estate investors in Asia-Pacific. In January 2018, the US announced the first tariffs, on solar panels and washing machines. A raft of others followed, with China responding in kind. In 2019, the

“IN VIETNAM, EXPORTS TO THE US ROSE 35.6% IN 2019 AS CHINESE MANUFACTURERS RELOCATED THEIR OPERATIONS”

US imposed tariffs on \$360 billion worth of Chinese products; China, in turn, imposed tariffs on \$110 billion worth of US goods. However, in January this year, the warring parties signed a ‘phase one’ trade deal, in which China agreed to strengthen IP protections and increase purchases of US goods by \$200 billion in 2020-2021 (the increase based on 2017 numbers) in return for a slight easing of tariffs. Some observers believe this first phase deal is an important step, however there is also widespread agreement that a second phase is unlikely to happen. The reason for this lack of optimism is because of the difficulty China will have in moving further in the direction the US requires. The phase one deal does not cover non-tariff barriers to trade, such as subsidies to Chinese companies and procurement rules. Nor does it address a fundamental US bugbear, that of the lack of a meaningful separation of state and business in China. And, it is highly unlikely that China’s rulers will abandon the state capitalism model that has served them so well.

CROSSING BORDERS

The first bit of good news, or at least not too bad news, is that the trade war has not had a significant impact on GDP. Oxford Economics estimates US 2019 GDP might have been cut by 0.1-0.2% and China GDP by 0.3-0.5%. This year, the Covid-19 outbreak will have a far more dramatic effect on GDP in both nations. From inception to the end of 2019, the tariffs reduced US-China bilateral trade by around 15% and the trade deficit with China has fallen sharply. However, the overall US trade deficit has not fallen significantly, because trade has shifted rather than disappeared.>

The prime beneficiary of this shift has been Vietnam where exports to the US rose 35.6% in 2019 as Chinese manufacturers relocated their operations overseas to avoid tariffs. Malaysia, Thailand and South Korea have also benefited. In September, Thailand announced a package of new measures to attract manufacturers affected by the trade war.

The current environment, however, has merely accelerated a trend of Chinese manufacturers moving some operations overseas in order to find cheaper land and labour – manufacturing wages in Vietnam are a third of those in China. In turn, China is moving up the value chain. This trend, accelerated by the trade war, is positive for both Vietnam and China.

There are advantages for real estate too. Vietnam industrial real estate is booming, with land prices and rents rising sharply as the nation becomes a major manufacturer. Industrial rents in Binh Duong, a district to the north of Ho Chi Minh City, rose 54.4% in the year to June 2019. Meanwhile, China's move up the value chain will free up former industrial land outside cities for more profitable and less polluting uses. Millions of people are still moving to China's cities, and there is a lot of money to be made in transforming industrial land to residential and commercial use.

INVESTMENT IN INDIA

A less widely known beneficiary of the trade war is India. Industrial landlords in India are reporting an uptick in light industrial occupation in their parks, particularly in ancillary automobile industries. Manufacturers diversifying from China add weight to India's resurgence in the past few years,

“CHINA'S MOVE UP THE VALUE CHAIN WILL FREE UP FORMER INDUSTRIAL LAND OUTSIDE CITIES FOR MORE PROFITABLE AND LESS POLLUTING USES”

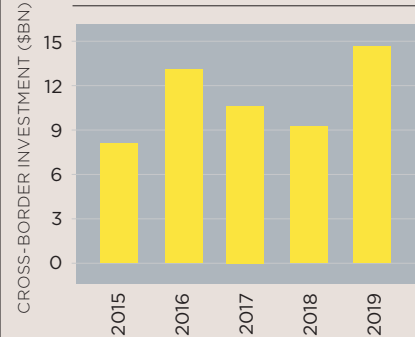
as it benefits from the pro-business government of Narendra Modi. Global real estate investors such as the Canada Pension Plan Investment Board, Brookfield and Blackstone have noted this resurgence and invested billions in Indian real estate.

China has begun to adapt its supply chains. Overall world trade was stagnant last year, however China managed to increase exports to the rest of the world by 4%. Furthermore, falling exports galvanised Beijing to work harder in order to encourage domestic consumption: in August 2019 it announced 20 measures to help boost spending, from improving commercial pedestrian streets to encouraging night markets.

Real estate investors have already been moving to acquire assets where performance is driven by domestic consumption in the logistics sector and the retail sector. Retail was hit hard when China shut down its cities to fight the virus, however the early signs suggest it is bouncing back since shopping malls have been re-opened. Nonetheless, malls with weaker tenants are vulnerable. Prior to Covid-19, luxury retail was performing fairly well because the government has cut VAT and import taxes on high-end goods. Not that long ago, 75% of Chinese luxury sales happened overseas; that figure is now closer to 50%.

Data from Real Capital Analytics (RCA) shows cross-border investment in Chinese real estate rose 61% to \$14.8 billion in 2019. This was partly driven by domestic groups deleveraging, but also by China opening up its capital markets to the world. As in all these examples, this was starting to happen before the trade war, but the current environment has forced China to liberalise somewhat faster than expected. For real estate investors, and indeed the wider economy, this can only be a good thing. There is speculation, for example, that China will accelerate the introduction of real estate investment trust (REIT) legislation. A working REIT structure will be a major step towards institutionalising the nation's real estate market and will bring more capital into the sector.

INTERNATIONAL REAL ESTATE INVESTMENT INTO CHINA



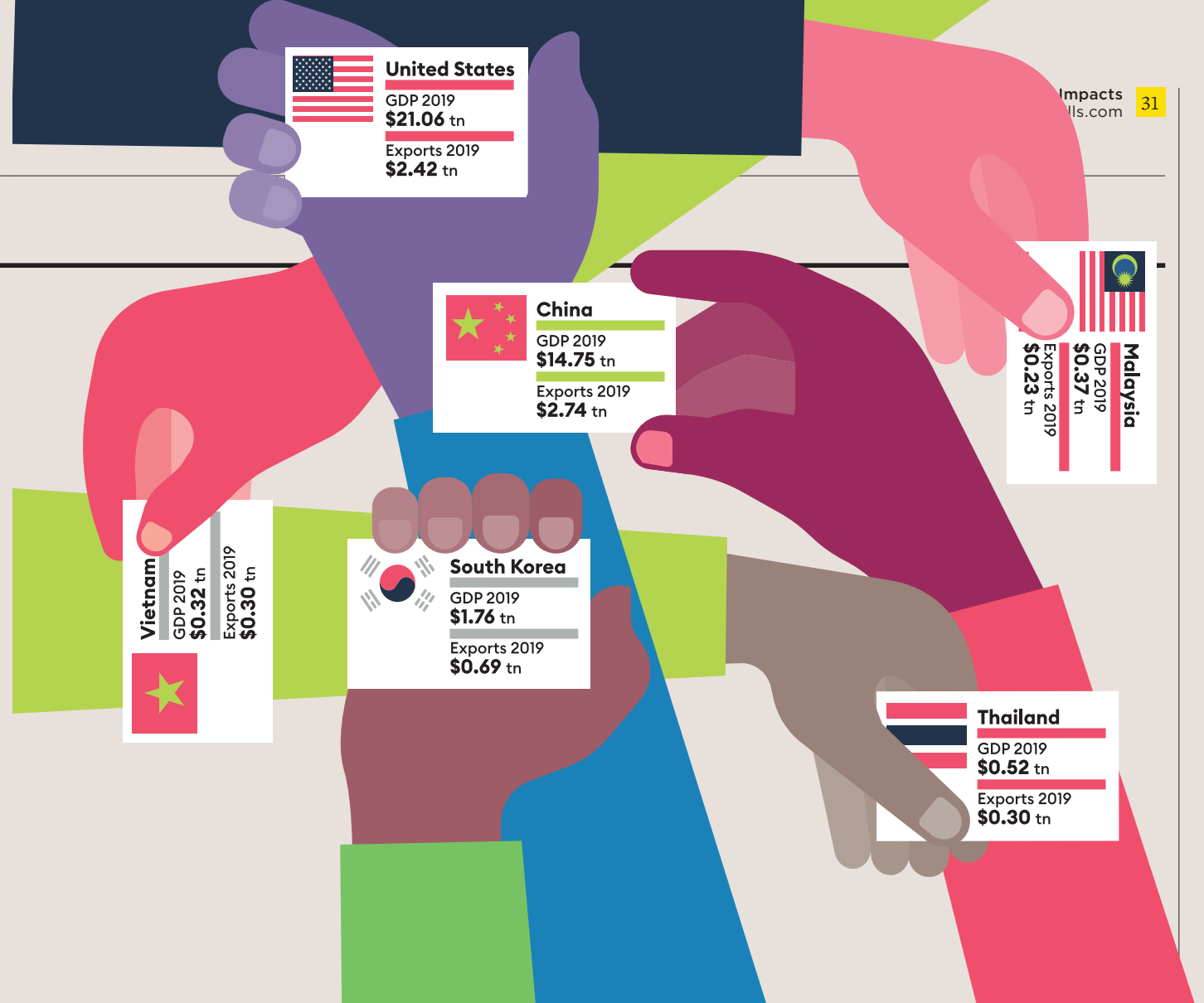
Source Savills Research using RCA

One area where the trade war has hit China is the office occupier market, which is vulnerable to weaker sentiment caused by the conflict, and was already being impacted by domestic issues such as financial de-risking and greater regulation. Savills data shows net office take-up in Shanghai fell 41% last year, although Grade A rents were fairly resilient (down 0.9%). This year, the impact of the Covid-19 pandemic will be far more significant than the trade war, however the latter will persist. Office markets will be somewhat subdued this year, although the phase one trade deal might encourage occupiers to make decisions they had previously postponed.

LOOKING FORWARD

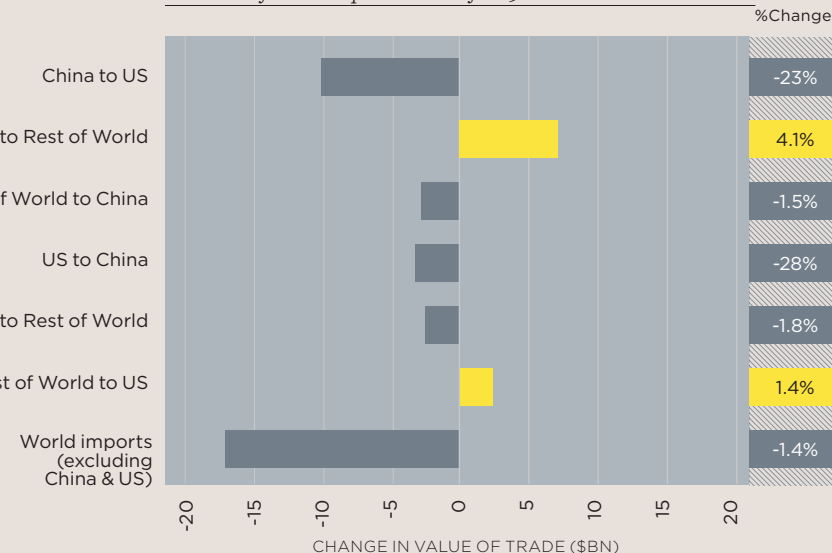
So what does the future hold? The trade war isn't going to go away, and US-China relations are looking increasingly frosty. Economic news will be dominated by the still-unfolding coronavirus pandemic. Meanwhile, the longer-term trends outlined above – all of which are part of the story of China's and Asia's economic progress and development – will continue to gather pace.

Trade will continue to find ways around the tariffs, meaning that manufacturing and industrial real estate will be boosted in a number of nations, not just Asian ones. While Vietnam was the fastest-growing



CHANGE IN VALUE OF TRADE (\$BN)

Calculated from 2018 peaks to end of 2019



Source Savills Research using Oxford Economics

trade partner with the US last year, Austria, France, Belgium and the Netherlands were also in the top 10.

Here in Asia, trade difficulties with the US may well bring China into a regional free trade bloc. Last November, the 10 ASEAN member states, along with China, Japan, South Korea, Australia and New Zealand, reached initial agreement on a Regional Comprehensive Economic Partnership, and a deal could be signed as early as this year, creating – somewhat ironically – the world's largest free trade bloc. This would be a major step forward for the region, not least because it points to a future where trade means more than just selling goods to the US.

The long-term benefits of this will be enormous. Free trade within Asia-Pacific will boost wealth and stability, both crucial elements for real estate investors, and the region will no longer be dependent on the actions of a single trading partner. ■

Words: Steven Lang,
Director, UK Commercial Research, Savills

PERSONAL SETTING

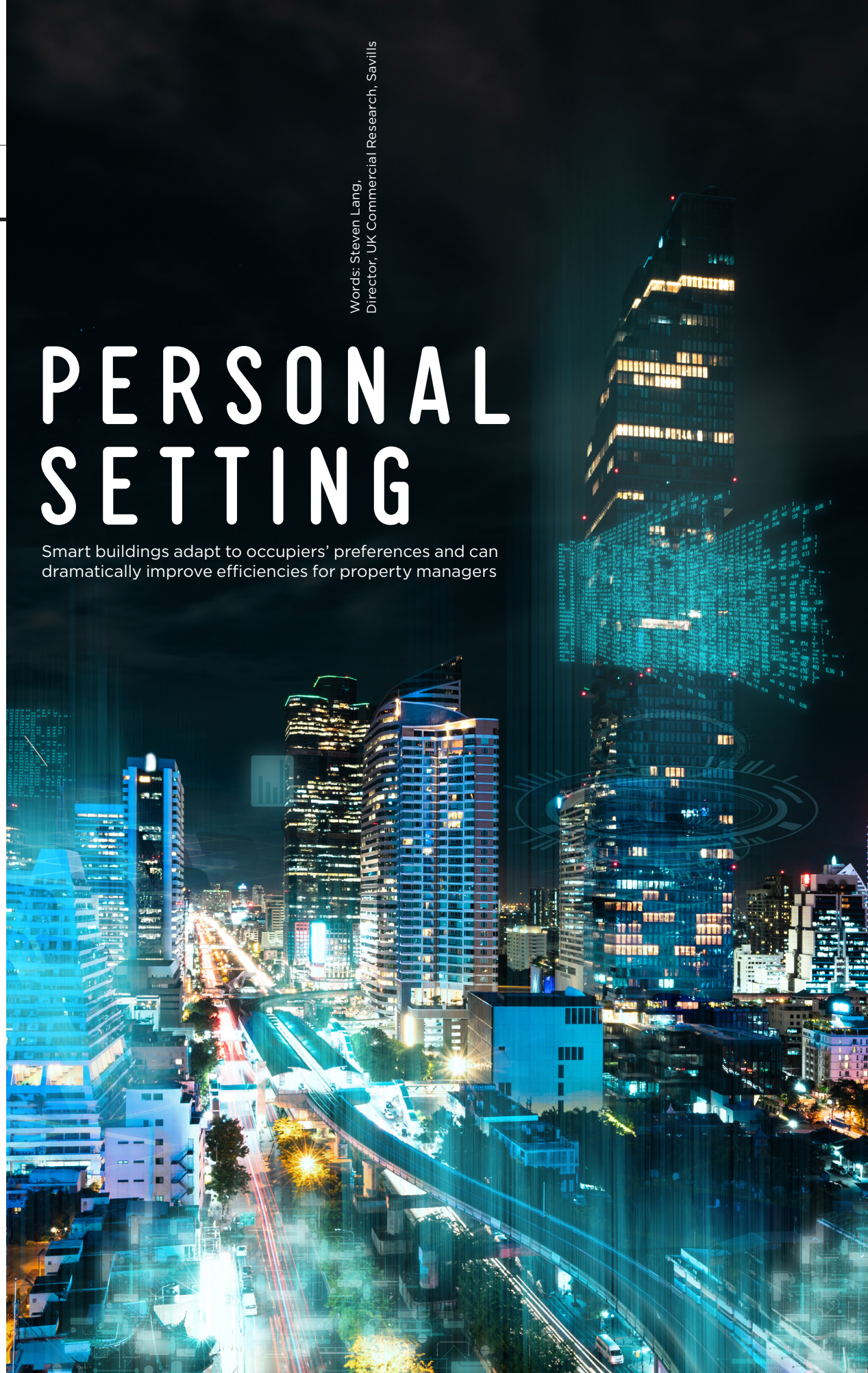
Smart buildings adapt to occupiers' preferences and can dramatically improve efficiencies for property managers

Money, cookies, TVs and, in more recent years, buildings. All can be smart. Although the residential sector has the potential to be the largest market for smart buildings, the continued rise of the wellbeing and environmental, social and governance (ESG) agendas in commercial real estate means that the adoption and implementation of new ideas in the workplace are more important than ever. Initially, smarter buildings will be a differentiating factor for occupiers choosing a building. But we are approaching a tipping point where they will be the norm. For employees, desk management, wayfinding, environmental and comfort management, initially integrating with city-level mobility options, will be part of the front door to desk commute. In other words, your building will know your schedule, assign your workspace and set your preferences for light and temperature. And that's just the start.

MONITORING BUILDING PERFORMANCE

"We are now able to access live data streams through the installation of monitors and sensors, often known as the Internet of Things (IoT)," says Chris Marriott, CEO of Savills South East Asia, who has been active in the sourcing and integration of platforms into Savills own Property Management business.

"This real-time data is captured in building management systems (BMS), through which we can learn more about the use, consumption and performance within the building. This enables us to completely change the way in which we manage our properties."



"A 'DIGITAL TWIN' ALLOWS MONITORING OF SYSTEMS IN A VIRTUAL ENVIRONMENT"

It is from here that the notion of a 'digital twin' for assets has emerged. This would allow proactive maintenance alerting property managers about potential or pending issues as well as the real-time monitoring of all systems in a virtual environment. Property managers will become more efficient, and also reduce their redundant workloads by relying heavily on artificial intelligence and machine-learning technologies.

"Smart buildings open a new field of exciting opportunities for improving building performance but also on enhancing customer experience," says Sylvain Thouzeau, UK Building Performance Manager, Savills.

"Property managers learn more about their customers and have access to an invaluable set of data about how people feel in the building and how they use the space and services. This helps us to improve the services and tailor them to people's expectations for a better experience and satisfaction."

Meeting high standards of satisfaction in a post-Covid-19 world will require even smarter systems within buildings. We will see a rise of haptics. This enables user control without the need to touch a surface and is increasingly being adopted by the automotive sector. Haptics uses technology to stimulate the senses of touch and motion, and will assist with all types of office 'interactions' including toilets, food preparation appliances, printers, lifts and doors.

Start-ups in the real estate tech sector attracted \$44 billion of capital in 2019, compared with \$10 billion in 2016. They are delivering tech solutions to buildings from their foundations to the roof, innovations that will provide the analytics necessary to monitor and achieve efficiencies and reduce emissions, while delivering the enhanced experience and financial benefits that drive future commitment from investors. ■

SMART WAYS TO SHAPE THE BUILT ENVIRONMENT



NCG Spaceti

This smart workplace partnership provides an 'at scale' IoT device-based data platform about offices and their environs. NCG Spaceti provides occupancy, booking, issue reporting, wayfinding, data analysis and environmental metrics all supplemented by an office community app.



Situm

Situm is an indoor wayfinding and tracking solution designed for airports, shopping centres and hospitals. It merges signals such as WiFi, Bluetooth and information from the sensors in smartphones to help guide people without the need for additional hardware.



iCondo

The iCondo management app connects property managers, residents, local businesses and communities on a single platform. As well as offering a social platform for residents, it enables them to find information, forms and facility bookings, as well as have any maintenance issues dealt with promptly.



Nantum OS

Uses artificial intelligence to analyse building data from disparate systems, such as BMS, utility meters and access control, combining it with third-party sources, such as weather and IoT sensors to optimise building performance and tenant comfort in real time.



BuildingIQ

This platform is built on five pillars: data capture and analysis, advanced modelling, measurement and verification, predictive control and expert human analysis. It promises to deliver energy savings, improved operational efficiency and increased tenant comfort.



Iviva

A platform that brings applications, systems and end-user devices together. Iviva covers Building Information Modelling (BIM) to real-time performance monitoring and is designed to integrate the physical and digital spaces, and improve productivity, cost and efficiency over the building lifecycle.



The deficit between retirees' needs and pension provision is growing by \$28bn every 24 hours

GLOBAL
AVERAGE LIFE
EXPECTANCY
AT BIRTH,
2019

72.6

As the age of the world's population increases, so does the global pension deficit. Could diverse land and property segments be the long-income assets needed by pension fund investors?

Words: Mat Oakley, Head of Savills UK and European Commercial Research

Every year, the Royal Statistics Society selects a figure that reflects a key issue of the past 12 months. Its international statistic of 2019 was 72.6 years: the estimated global average for life expectancy at birth in 2019. This is the highest ever level, and a dramatic rise from 45.7 years in 1950. Undoubtedly, it's a cause for celebration, but it also raises opportunities for investors in real estate.

While the most obvious opportunity to capitalise on the world's ageing population is through the provision of senior housing and other care facilities, a worrying concern is the global pension deficit and how this will lead to greater demand for long-term secure income streams, such as property.

The challenge is huge. Over-65s account for 19% of the UK population. In Germany, they make up 22%, while in Japan, 28% of the population is aged 65 and over.

Globally, the population of retirees is forecast to grow from 1.5 billion to

2.1 billion between 2017 and 2050.

The problem for policy makers is that during the same period the number of workers for each retiree is expected to halve from eight to four, according to the World Economic Forum (WEF).

A combination of factors, such as financial illiteracy, the size of different generations, and declining fertility rates will, the WEF suggests, lead to a global pension time bomb of \$400 trillion by 2050 in just eight countries with some of the largest pension markets or biggest populations (Australia, Canada, China, India, Japan, the Netherlands, the UK and the USA). The deficit between retirees' needs and pension provision is growing by \$28 billion every 24 hours in those same eight countries, and will be five times the size of the global economy by 2050.

"The anticipated increase in longevity and resulting ageing populations is the financial equivalent of climate change,"

says Michael Drexler, Head of Financial and Infrastructure Systems, WEF.

However, the potential deficit may not be as large as some suggest. Much of the modelling around 'pension time bombs' is based around measures similar to the old-age dependency ratio. This measures the number of those aged 65+ as a share of those aged 15 to 64. This kind of analysis is worrying for countries such as Germany where the ratio will have tripled by 2060. However, these assume that over-65s are economically inactive. Yet, the statutory and effective retirement ages in many countries have been rising since the late 1990s.

People are working longer for many reasons. There is the pension deficit, where people work because they cannot afford not to. There is also the decline in manual labour and improved mental and physical health in seniors in the developed and developing worlds. For example, philanthropist and investor, Warren Buffett, is 90 this year.

PENSION FUND INVESTMENT INTO LAND AND PROPERTY, BY COUNTRY

While this is interesting for economists, and challenging for policy makers, why should property investors be thinking about these themes? The main reason is that pension funds have always been significant investors in land and property, and rising needs for more pension provision will mean that more pension and annuity fund money will be targeted at the sector.

According to the OECD, an average of 2.7% of global pension fund assets at the end of 2018 were in land and buildings – a relatively modest allocation, but a significant sum in a total of \$44.1 trillion at the end of 2018. This reflects the long-held investor view that land and property are good long-term holds. This leads to why I think an ageing population will be good for property investors.

The challenge for the world's pension fund investors over the next decade is going to be a scarcity of long-income opportunities. The disruption of traditional retail and office models by companies such as Amazon and WeWork has driven a steady decline in the average lease length attached to a typical property investment. I expect that this will continue to shorten, which will mean that the largest and most liquid parts of the market will no longer offer the level of annuity-matching that they used to.

As interest in the old core sectors has declined, so it has risen in new alternatives. According to Real Capital Analytics, total global investment into offices increased by 10% during the past three years, while investment into residential grew by 17%, and senior housing and care by 22% during the same period. The challenge for investors is that many of these sectors are small, specialist or illiquid. While there might be a desire to buy these segments, the reality of getting invested is challenging.

Rising demand for longer-income assets will, I believe, meet a falling supply and a rise in prices. This means it will not only be senior housing that benefits from an ageing population, but segments as diverse as pubs, logistics, data centres and offices. ■



Source Savills
Research using OECD

Below: Facility using prefabricated materials created offsite by Kier

F A C T O R Y



F I N I S H

The construction sector has been slow to adopt new methods. But that is set to change as labour shortages and a need to increase housing supply will create a tipping point for new techniques

Words: Richard Valentine-Selsey, Associate Director, UK Residential Research, Savills

In many parts of the world, homes are built the same way today as they were 100 years ago. But change is happening in the shape of modern methods of construction (MMC).

MMC is a broad term that covers a range of offsite manufacturing and onsite techniques that provide alternatives to traditional construction and aim to build homes more quickly and efficiently. Techniques include timber and steel frames, wall panels, volumetric modules or lean construction.

Global leaders for MMC

The use of MMC varies significantly from country to country, but the global leaders historically have been Sweden and Japan.

Sweden has the highest penetration rate of MMC, with around 45% of all new homes utilising offsite construction. For single-family homes, it's close to 80%.

Japan produces the highest number of homes using MMC. Even though only 15-20% of new homes are built using these new methods, it still equates to 150-180,000 homes per annum.

TWO HOSPITALS IN JUST 12 DAYS

MMC has helped countries deal with the strain of the Covid-19 pandemic has put on their healthcare systems. Speed of construction makes MMC a perfect solution for the delivery of temporary hospitals. This was exemplified by the delivery of 2,400 beds across two field hospitals in Wuhan, China (below), in just 12 days.



In recent years, Singapore has rapidly expanded the use of MMC and it is estimated that 20-33% of all new homes use offsite techniques.

The case for MMC

Many factors impact the adoption of MMC, but there are three main drivers: the cost and availability of labour, supply shortages and regulatory or governmental intervention.

In many global markets, the cost of adopting MMC is, or at least has been, higher than traditional construction, which reduces the incentive to change. However, labour shortages are driving up construction costs. Adoption of MMC, which improves productivity and reduces onsite labour, offers a potential solution.

The imbalance of supply and demand is a recurring theme globally, despite rising housing delivery in recent years. Increasing MMC, alongside traditional techniques, is one of the ways that this can be tackled.

The need to improve energy efficiency and reduce the environmental impact of housing and housebuilding are further drivers of change. With traditional

techniques, it is difficult to achieve high levels of energy efficiency, and studies show substantial material wastage. However, building homes under factory-controlled conditions allows much tighter tolerances to be met, improving energy efficiency and generating significantly less wastage of materials. All of these were contributors to growth in MMC in Sweden and Japan.

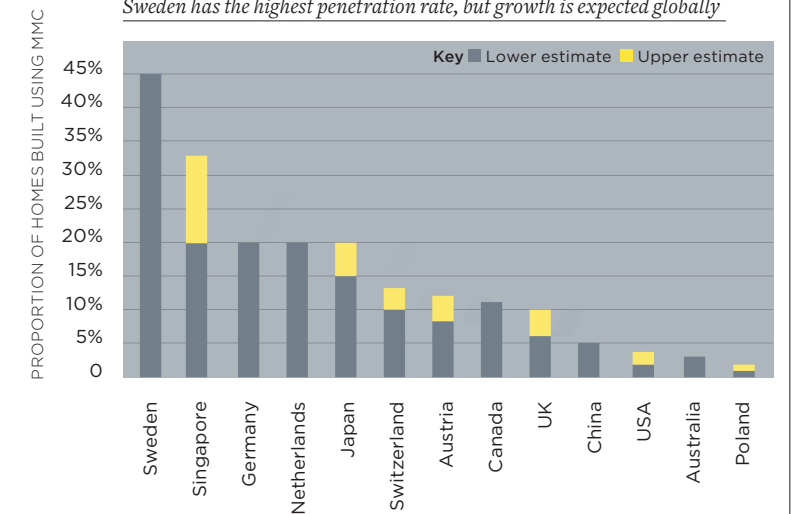
Growth markets for MMC

There are a number of countries where the drivers for change are in place to support rapid increase in MMC use. In Europe, we expect the UK to see the strongest growth. The country's construction workforce is ageing (a quarter are expected to retire in the next decade), annual housing delivery needs to increase by 2.4% per annum to meet need, and regulatory changes around energy efficiency are on the horizon. These will lead to increased adoption over the next decade and we expect that the proportion of housing built using MMC will rise from around 10% today to closer to 20% by 2030.

We also expect to see strong growth of MMC in the USA, especially on the West Coast. California needs to build 3.5 million

"IN SWEDEN, 45% OF NEW HOMES UTILISE OFFSITE CONSTRUCTION. FOR SINGLE-FAMILY HOMES, IT'S CLOSE TO 80%"

HOMES BUILT PER YEAR USING MMC
Sweden has the highest penetration rate, but growth is expected globally



Source Savills Research using CITB, UC Berkeley Turner Center for Housing Innovation, RICS, Association of German Prefabricated Building Manufacturers, Roland Berger, US Census Bureau, Canadian Manufactured Housing Institute, US Modular Building Institute, Boston Consulting Group, Chinese Department of Energy Conservation, Science & Technology, Singapore Housing & Development Board, McKinsey

homes by 2025, yet the industry is suffering from labour shortages, with more than 400,000 vacant construction jobs. This will result in an explosion of MMC in certain markets, with overall usage likely to increase to close to 10% by 2030.

The Middle East, especially Saudi Arabia and Dubai, is also set for major innovation. Saudi Arabia needs to build 1.5 million homes over the next five to seven years and has signed an agreement with US MMC start-up Kattera to deliver 4,000 homes.

Dubai has introduced regulations that will require 25% of components of all new buildings to be 3D-printed by 2025. This is an ambitious undertaking, with limited existing construction being delivered this way. But Dubai is aiming to be a world leader in 3D-printed construction.

In the short term, the confluence of labour shortages and the need to increase housing supply will be the main drivers for increased adoption of MMC in certain markets, such as the UK and the USA. However, over the medium to long term, the need to tackle construction's environmental impact will force MMC's adoption globally. ■

FOOD

Everybody needs sufficient, safe and nutritious food. Not every country can deliver it. Here, we examine key territories in Savills Global Food Security Index, which uses four integrated pillars of food security. But while availability, access, utilisation and stability vary across countries, one factor that affects them all is water: a tipping point issue we examine over the page

Words Emily Norton, Head of UK Rural Research, Savills

AND

Left: crop fields in South Africa

Understanding food security has never been more critical. Climate change and extreme weather were testing food systems to their limits even before Covid-19 closed borders and shook labour availability. To give investors global context, Savills Food Security Index ranks 38 countries based on four pillars of food security (see panel, right).

AFRICA

South Africa (29)	249.2
Tunisia (34)	229.7
Senegal (36)	207.9
Kenya (37)	203.8
Cameroon (38)	177.2
Region average	213.6

Considering they are both major food exporters to Europe, Kenya and Senegal are surprise laggards in the index. Cameroon and Tunisia also hold one or more of the bottom places in each pillar. Food access is less of an issue in these countries than utilisation, where food safety, food quality and general health all contribute to a heightened risk of malnutrition.

ASIA-PACIFIC

New Zealand (1)	354.7
Australia (5)	330.8
Japan (10)	315.9
Singapore (13)	301.8
South Korea (16)	278.4
China (18)	277.6
Thailand (28)	250.5
Indonesia (32)	242.9
India (33)	238.8
Region average	287.9

Across Asia, once food is available, access to it is not a concern, but mediocre utilisation and stability drag on average weightings. Export economies New Zealand and Australia top and tail the top five spots in the overall index due to strong performance in availability and stability. In contrast, developing Thailand and Indonesia rank poorly due to low food quality in respect of calorific and nutritional adequacy. Japan is the most stable nation, and second in our rankings for accessibility. India is in the bottom 10 overall and never outside of the lower half of the table for any category.

EUROPE

Denmark (2)	353.4
Netherlands (3)	343.1
Ireland (6)	329.9
Germany (7)	328.8
France (9)	316.4
Finland (11)	304.1
Spain (12)	302.4
UK (14)	299.8
Poland (15)	299.8
Hungary (17)	277.6
Romania (21)	269.2
Turkey (35)	227.5
Region average	304.3

Western Europe ranks as the most food secure area in the world, led by Denmark, the Netherlands and Ireland. The emerging economies of Eastern Europe are all within the top 10 for domestic food production, leading to a good performance in food availability, but performance in other categories is highly variable.

MIDDLE EAST

UAE (19)	277.3
Kuwait (20)	273.6
Qatar (23)	264.7
Israel (24)	262.5
Saudi Arabia (27)	250.9
Region average	265.8

Stability, with its consideration of politics, economics and business climate, affects all aspects of food security and is an ongoing concern for the Middle East. Despite this, good utilisation and reasonable access means the Middle East as a whole scores only slightly below the global average.

NORTH AMERICA

Canada (4)	337.5
USA (8)	320.0
Mexico (26)	260.0
Region average	305.8

The highly developed economies of the United States and Canada score well above the global average with consistently high performance. However, Mexico's instability affects its own ranking and that of its neighbour, the USA.

SOUTH AMERICA

Uruguay (22)	267.3
Argentina (25)	262.1
Brazil (30)	247.8
Colombia (31)	243.3
Region average	255.1

South America is severely hampered by the accessibility of its food, particularly in terms of physical infrastructure. Affordability is almost equally poor. South America is below the global average overall.

WORLD

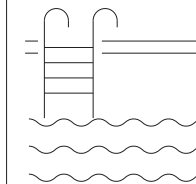
Average	278.4
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KEY: 4 PILLARS OF FOOD SECURITY

() Overall ranking out of 38 countries measured
000.0 Total score

<p>Availability Ensuring an adequate supply of food. Greater weighting is given to domestic production due to reduced exposure to disruptive international influences.</p>	<p>Utilisation Does the consumption of available food result in reduced malnutrition? Food of poor safety and quality may actually compromise food security.</p>
<p>Access Infrastructure must be developed to allow distribution of food from source. Food must also be affordable, which consists of a combination of factors including personal wealth and food prices.</p>	<p>Stability Nations with high climatic, economic or political insecurity have higher risk of supply chain disruption and so lower food security. A lack of stability can seriously impact all other pillars of food security.</p>

WATER



The annual deficit of water in Almeria is equivalent to 68,000 Olympic-sized swimming pools

Surface water irrigation regulation has existed in California for over 100 years, but extraction of underground water reserves remained at the discretion of landowners and their wallets. By drilling more wells and lowering existing wells, irrigators extracted water volumes far in excess of replenishment, causing land subsidence and contaminated drinking water for close to one million Californians.

Aquifer regulation is now being implemented as the state reached breaking point following its latest prolonged drought. The Sustainable Groundwater Management Act of 2014 reaches a key deadline in 2020 as agencies complete initial plans to overhaul regulation of water resources. The act aims to ensure California's water basins are sustainable, but it does so by drastically reducing extraction rates, leaving crucial food production and related land-based assets in a precarious position.

SPAIN: WATER DEFICIT IN ALMERÍA

Almería has more than 30,000 hectares of greenhouses producing three million tonnes of fresh produce each year, 76% of which is exported. This expanse of plastic greenhouses is so huge it is visible from space and has changed the local climate.

But Almería finds itself in a grey zone with water consumption. Controlled environment agriculture (CEA) is known to be more water efficient than open-field methods. But production is so intense that each hectare still consumes 5,000 cubic metres of water – 80% of which comes from the subsoil. The annual deficit is equivalent to 68,000 Olympic-sized swimming pools.

Despite efforts to recycle water, there is simply not enough to quench Almería's thirst. The province is therefore looking to alternative sources, including energy intensive desalination.

INDIA: RESTORING LEVELS IN CHENNAI

Chennai's 11 million people get their water from four main reservoirs. In 2019, they ran dry. Citizens had to draw water from wells, further straining groundwater resources. Trains carried millions of litres of water in from surrounding areas to help the city survive, despite devastating floods less than four years earlier.

WHAT WATER STRESS MEANS FOR DEVELOPMENT

Water availability holds influence over food security. Its impact on the development sector is equally significant though perhaps less plain to see.

Secure water supply may no longer be assumed by developers. Volatile climate patterns are proving to be highly disruptive, a factor worsened by increasing demand and unsustainable withdrawal. Cities, such as Chennai, Harare, Cape Town and São Paulo, have seen taps run dry. Securing water supply is rising up the agenda of almost all settlements around the world, bringing stricter regulations around consumption.

Responsibility for the downstream consequences of

developments are being placed firmly in the lap of those that created them. Settlements result in nutrient input (principally nitrogen and phosphates) into the water supply. This pollution and eutrophication reduces water quality, causing environmental concerns. Authorities are responding with regulation to enforce nitrate neutrality, impeding future developments.

Settlements are at the precipice, where water supply must be secured. It is possible to step back from this tipping point but it must be done in an urgent yet holistic manner.

Joe Lloyd,
Research Analyst,
UK Rural Research,
Savills

Chennai's water supply management has been severely criticised. Much of the flood water from 2015 flowed into the sea and failed to replenish groundwater levels. Those levels have fallen by 85% in the last decade and Chennai is expected to run out of groundwater as soon as 2021.

Key to Chennai's fate is developing its water infrastructure, including restoring more than 210 lakes, enforcement of compulsory rainwater harvesting, and investing in improvements to localised water-processing systems through new financial models. ■

Guided by diverse regulation and ever more divisive competition, water availability is at a tipping point. These four cases show how water, or lack thereof, impacts on property investment

AUSTRALIA: THE MURRAY-DARLING BASIN

Australia's Murray-Darling Basin covers an area twice that of Spain and supports a A\$24 billion agricultural industry. Over 9,000 irrigated farm businesses depend on the basin's water resources, but as the cumulative effects of one of the worst droughts in history reveal deep issues in the management of the Murray-Darling Basin Plan (MDBP), calls for significant reform are mounting.

Demand for water has increased as the Government's required environmental water flows compete with an expansion

of corporate institutions investing in high-value irrigated crops, such as nuts, fruits and cotton. This gradual structural change has collided with severe water shortages and reducing allocations, driving spot market water prices beyond productive and affordable values for the majority.

Arguably, the market is functioning as it was intended, with water flowing to its highest-value use and it is likely many supply issues will be washed away by decent rainfall until the next prolonged drought. But MDBP management

must ensure long-term protection for one of Australia's greatest assets and the millions of people that depend on it.

USA: SUSTAINABILITY IN CALIFORNIA

California produces more than one-third of US vegetables and two-thirds of its fruits and nuts. It contributes 13% of total US agricultural value from 16.7 million acres, half of which are irrigated.

Over the past few decades, agricultural production has shifted from traditional field crops to higher-value but water-demanding crops, such as dairy, fruit and nuts.

The Murray-Darling Basin, Australia

Diversity and design: workplace wellbeing

To attract and retain the best people, organisations should create work environments that adapt to individuals and embed diversity into their culture

Words Yetta Reardon Smith, Senior Workplace Strategist, KKS Savills

For companies to attract and keep the best people, they need to position themselves as an employer of choice. Workforce expectations are changing. Demand for variety, autonomy and flexibility is on the rise. Consideration of physical and mental wellbeing is an influence too, as is the desire to work for a business that has a social and environmental conscience.

The diversity mosaic

Organisations that embed diversity into their culture bring together people with different backgrounds, experience and skills to optimise their workforce. The result? Engaged and productive employees who support the company vision, contribute to its commercial success, value corporate responsibility and provide greater service value to clients.

As well as diversities such as gender, race, age, religion and disability, attention is also being given to neurodiverse individuals. These people bring skills such as entrepreneurialism, hyper-focus, visual-spatial skills, innovative thinking and detailed observation. It is thought that these creative people make up more than 10% of the population, but only one in 10 are in full-time

employment. However, it is usually HR procedures or the workplace itself which raise unnecessary barriers.

Creating accessible, adaptable communities

Adjustments to the workplace are relatively simple to put in place, but they need to be monitored, maintained, and adapted when necessary. It is not only neurodivergent people who respond to a secure, easily navigable space – we all do. The three main challenges are lighting, wayfinding and noise. Additionally, quiet spaces to regroup, access to a choice of workspaces and seat locations, equipment and technology adjustments, and a conscious approach to comfort are needed.

Looking ahead, it is critical to create environments that adapt to occupiers and deliver benefits across the entire workforce. Technology will develop assistive solutions. However, building owners and designers should consider appropriate infrastructure solutions from inception. ■



BEST PRACTICE DESIGN

Lighting

- Provide variety of light levels
- Use circadian lighting to mimic nature
- Plan workspace with proximity to natural daylight, access and views
- Enable user control of the environment

Acoustics

- Minimise disturbance with acoustic applications
- Assign seat location based on individual needs
- Mitigate sound and equipment disruption

Wayfinding

- Design clear, concise wayfinding
- Enable independent navigation
- Utilise technology
- Provide landmarks for orientation

Choice

- Offer task-defined settings to assist with individual needs
- Give choice of level of social interaction
- Autonomy to choose where to work

- Quiet rooms for hyper focus, concentration or recharge
- Plan range of areas, from small to large, to support collaboration and socialising
- Provide open and enclosed, formal and informal space

Equipment

- Provide assistive technologies for specific needs
- Adjust physical equipment (furniture and technology)
- Clear user instructions
- Meeting and collaboration tools

Finishes, materials, art

- Avoid reflective material and intense colour
- Consistent spatial cues to assist navigation
- Provide comfort in repeating patterns
- Position art as landmarks, to assist with wayfinding
- Allow people to influence choice of artwork
- Design zones to dial up or down the degree of stimulation

through pattern, colour and materials

Terraces/biophilia

- Access to outdoor space and fresh air
- Provide areas for respite and relaxation
- Planting and natural materials through the design

Base building

- Design WCs and cubicle doors for visual and physical access
- Provide lift progress panel on each floor for orientation

Workspace

- Clear sightlines for orientation and circulation
- Adaptable and comfortable work spaces
- Individual control of thermal comfort
- Encourage easy movement through different work settings
- Enable logical access to amenity spaces

Interconnectivity

- Circulation stair to promote movement, connectivity and sight lines

Building for last mile deliveries

As new transport technologies promise faster, closer-to-destination deliveries, Kevin Mofid, Head of UK Logistics and Industrial Research, Savills, assesses the future impact on real estate

The question of where to locate a warehouse has historically been a trade-off between local road transport networks, where product comes into a country, the retail and manufacturing final destinations and the availability of land. However, as technology begins to transform how goods are distributed, operators' locational decisions may change. The onset of Covid-19 has the potential to accelerate some of these locational decisions as online shopping rates increase around the world, and retailers and manufacturers realise their supply chains have been too lean and therefore need to move inventory closer to its final destinations.

The prospect of vehicle automation, high-speed Hyperloop capsule delivery and airborne drone transport means that logistics companies and their partners must reconsider where to locate

distribution centres and how to build them.

"If the future of last mile logistics is drone delivery and autonomous vehicles, then the future is almost here," says Michael Fenton, National Head of Industrial and Logistics, Savills Australia and New Zealand. The likely impact on the real estate market is beginning to come into view.

1 Truck platooning

Platooning vehicles move in a group or platoon with the trucks driven autonomously by smart technology and continuously communicating with one another. By synchronising vehicle control, trucks are able to drive in close formation and at constant speed. This uses less fuel, creates fewer emissions and improves traffic flow.

The impact on property

Autonomous truck platooning will reduce demand for space in inland distribution parks, which are traditionally located 4.5 hours' drive from ports, the longest time a truck driver can drive before they are obliged to break.

For delivery hubs on urban fringes, however, the impact on real estate location and design will initially be limited. Trials in the Netherlands and the UK are demonstrating that platoons do not solve the problem of last mile delivery through narrow, winding and congested roads. To start with, therefore, platooning will focus on ferrying goods between existing focal locations, such as ports and logistics hubs.

This means the emphasis for real estate users will be on retrofitting existing infrastructure. Ports and logistics hubs will add truck-platooning terminals to existing parks alongside dedicated rail freight terminals. But within these parks, two tiers of logistics space are likely to emerge, with users willing to pay a premium for sites immediately adjacent to major platooning points that can facilitate the fastest onward delivery.

"In China, you are already starting to see investment in terminal infrastructure that will support autonomous trucks," says James Macdonald, Head of Research, Savills China.

2 Hyperloop tunnel travel

Pioneered by Elon Musk through his SpaceX companies, Hyperloops could see passengers and freight travelling at more than 700 miles an hour in floating pods speeding along giant low-pressure tubes above or below ground. Networks will connect urban

areas and link manufacturing centres. Advocates say infrastructure costs are comparable with high-speed rail, should be less expensive and less polluting than air travel and should be cheaper for low-volume users.

The impact on property

With the technology still at an early stage, judging how Hyperloop stations would look and function – including how much space would be required to load containers on pods – is hard to predict.

However, they are likely to increase pressure on existing logistics sites spurring the development of a two-tier rental market, with premiums paid for locations close to the Hyperloop infrastructure. This would mirror existing arrangements at many of the world's leading airports where logistics companies pay a premium to locate 'airside' due to the time and productivity efficiencies gained.

"PREMIUMS MAY BE PAID FOR LOCATIONS CLOSE TO THE HYPERLOOP INFRASTRUCTURE"

3 Drones

Proponents believe that large-scale commercial drones will soon carry parcels weighing less than 2.5kg up to 15 miles, easing road congestion and slashing vehicle emissions and – it is hoped – delivery costs.

The impact on property

On the face of it, drones look set to make major real estate demands since they require new types of buildings to launch, store and service them. In Australia, Wing, run by Google's Alphabet, has been trialling drone deliveries of burritos, coffee and medication in a Canberra suburb since 2018, and launched a commercial air delivery business in the city last year.

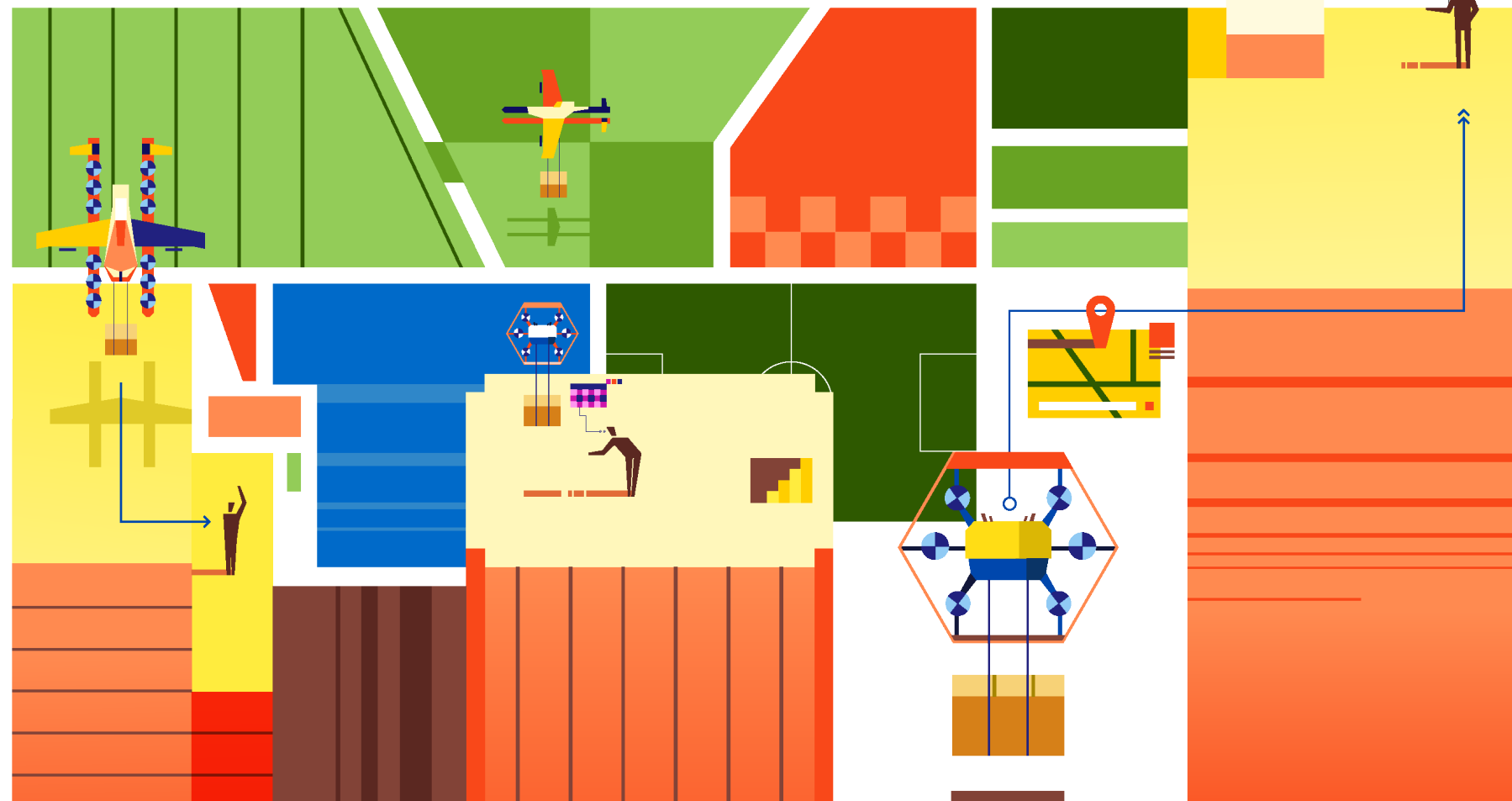
"A crucial obstacle to wider adoption is the design of homes," says Fenton. "Not all residents can provide safe landing areas."

"Drone delivery will also introduce a new dimension of value for all eligible buildings in their roof surface,"

says Marcus de Minckwitz, Director, Omnichannel Group, Savills. "Companies are already looking to intermediate building owners and future drone operators by buying options to licence roof space."

Conclusion

"With new transport technologies serving demand for last minute, last mile delivery, logistics companies will continue to make up a greater share of users of higher-value land," says de Minckwitz. Initially, what land is used is not set to shift dramatically. Truck platooning and Hyperloops are likely to require depots in existing transport hubs, with operators having to find additional land – an already scarce resource. In return, tenants, who rely on these more dominant transport networks, will be willing to pay higher rents. ■



“THE MOST EXCITING DEVELOPMENTS
APPEAR FROM THOSE WHO ARE
WILLING TO ADAPT TO MIXED-USE”

What should be done with the increasing amount of empty retail space around the world? Innovative developers are adopting a whole-place perspective that includes social spaces and leisure offerings to redefine the town centre

R E P U R P O S I N G R E D U N D A N T R E T A I L

Words: Tom Whittington, Director, UK Commercial Research, Savills

There is too much retail space in the world. The USA has twice as much square footage in shopping centres per capita than the rest of the world, and six times as much as countries in Europe. More than a third of malls in the USA are expected to close and Savills Research shows that the UK may be ‘over spaced’ for retail by as much as 40%.

The challenge of too much retail space in the USA and UK is increasingly relevant to other countries. Australia has the third highest shop density per capita and is seeing an increase in vacancy rates that mirrors the rise in internet retailing. Yet, at 11% of retail sales, e-commerce in Australia lags behind China (27% of retail sales), South Korea (24%), the UK (19%) and the USA (16%), which suggests that the issue of redundant retail space is likely to get worse and could become an issue in any location where the internet is taking an increasing share of consumer spend.

THE IMPACT OF COVID-19

The impact on retail space following the Covid-19 pandemic is likely to result in an acceleration in the trends across the globe that many markets have been witnessing since the global financial crisis. These are more consumer appetite for community and convenience-based retail, further increases in e-commerce, and a higher proportion of discretionary spend on leisure experiences rather than superfluous purchases. These will have a knock-on effect to the way we shop and the amount of retail space we need.

The good news is there are many ways we can redress the balance. For example, repurposing can be effective in turning



Far left: The new suburb CityCenter, Englewood, USA. Left and main image: A former department store in Sheffield, UK, has been revitalised. Uses include food hall Kommune

around decline and increasing consumer footfall. Converting space into an engaging leisure offer is one option, rebuilding malls as residential or office space (or both) is another.

The most successful projects, however, are those that emphasise social value, taking a whole-place perspective that includes social spaces, ‘blended living’ and offer convenience for people keen to minimise travel. Although this approach can be at odds with the notion of single property asset classes, the most exciting developments appear from those landlords who are most willing to adapt their financial and asset models to mixed-use, while embracing long-term sustainable development, which can reap financial rewards too.

INVESTORS TAKE NOTE

An increase in the number of repurposing projects shows that the problems and solutions to dealing with redundant retail space is becoming a global issue. In the UK, prime shopping centre yields have risen by 125bps in the last two years, and over the last 12 months, average net effective rents have fallen by 27%. As such, 2020 is likely to be the year we see retail pricing bottom out.

“We are seeing an increasing amount of global investors and developers focusing on UK retail assets for this reason, a trend that will only increase over time,” says Mark Garmon-Jones, Head of Shopping Centre Investment and Repurposing, Savills. “There are lessons to be learnt from around the world on what good, mixed-use regeneration looks like.”

One example is that of GGP, the second largest mall owner in the US (bought by Brookfield in 2018), which has a track record of redeveloping struggling retail malls into mixed-use town centres. It has reported higher sales per square foot as a result. In the case of Willingboro, New Jersey, homes constructed as part of the town centre renewal have sold for twice the town’s average house price. ■

RESTORED AND REVITALISED

UNITED KINGDOM

Revitalising a landmark building to regenerate marginalised retail space
Sheffield’s Grade II listed Co-op department store was once at the centre of the city’s retail offer. After falling into decline, the 80,000 sq ft (7,430 sq m) building closed its doors in 2008. A decade later, following a £3m funding deal between the city council and regeneration company U+I, this once dilapidated but iconic building has a new lease of life.

At the heart of the developer’s ethos was the need to provide a catalyst for regeneration in the wider locality. Food hall Kommune attracts 7,000 visitors per week, while the Kollider Incubator, powered by Barclays Eagle Lab, is a flexible workspace designed to help businesses scale up quickly. New operators have since moved into the area, and neighbouring buildings are now being refurbished for a variety of uses.

AUSTRALIA

Repositioning a mall as a mixed-use scheme

Mall owners such as Vicinity and Scentre in Australia are converting their malls to offer more than just shopping. They are incorporating office, hotel, apartments, transport hubs and social services such as childcare, senior care, medical, tertiary education and government services, as part of an ‘all of life lifestyle destination’. Scentre Group, for example, is investing A\$500m in the redevelopment of Melbourne’s Westfield Doncaster, incorporating 43,000 sq m of additional retail, 18,000 sq m of office space plus a health and wellness offering. Meanwhile, Vicinity is enhancing The Glen, another Melbourne shopping centre, in a joint

venture with Golden Age Group to fuse living, working, dining and shopping experiences in a development project worth A\$500m. This includes creating 13,500 sq m of additional mall space, an enhanced leisure offer, 500 homes and offices, and a 4,000 sq m rooftop public realm project called Garden in the Sky.

UNITED STATES

Rebuilding a large shopping mall into a new town centre

Denver, Colorado has seen the number of malls in the city reduce by 50% since 2005. One of those, the failed Cinderella Mall, has successfully been turned into the suburb CityCenter Englewood, the outcome of a long-term strategic urban renewal development. It now includes a city hall, 44,600 sq m of office and retail space, 440 apartments, medical centres, education facilities and a light-rail station. The new downtown has been a catalyst for growth and supports a local workforce of more than 25,000 people.

The USA is leading the way with repurposing dead retail space. More than 200 malls across the USA are being retrofitted or redeveloped, including into hospital or university campuses. Yet it is the conversion to large-scale strategic mixed-use sites that provides greatest insight into what the future may look like. For developers and local government it is an opportunity to rewrite the rule book on developing town centres. Several of these large mixed-use schemes are into their second decade.

WHY REAL ESTATE MUST EMBRACE SUSTAINABILITY NOW

We are at a crucial moment in the evolution of sustainable businesses, says Ruud Veltenaar, UN Sustainable Development Goals ambassador



The coronavirus pandemic has shown us how small and vulnerable we are as people. It reminds us that we are not the caretaker of nature: we are nature, and attempts to exploit that economically is us destroying ourselves. We must see Covid-19 as a tipping point – it's a chance to reset our mindset and see that wellbeing must be the priority (and remain a lasting legacy).

The overall impact of coronavirus on how we live and work will be immediate because of human nature. Our brains are programmed to react to huge and fast-appearing crises such as Covid-19. In contrast, we are not wired to react to a crisis – however large – that is accumulating very slowly and beneath the surface.

We will react to the coronavirus because our health is threatened but this crisis also needs to make us more conscious of the slower, more hidden, accumulating crises, such as climate change, loss of biodiversity, water shortage and the overuse of natural resources.

To respond to these challenges, it will be more important than ever for all businesses to be fully focused on being sustainable. Those that resist will struggle because stakeholders – whether customers, partners or suppliers – will turn their backs on them. The younger generation is already making decisions as to who they want to work for based on these criteria. There will be little future for companies which destroy overall more value than they create.

For real estate, Covid-19 has shown us that this industry is not in the business of buildings. These might be the assets you use to achieve your goals, but real estate is in the business of facilitating the evolution of both the workplace and home in people's lives.

“WE STILL FACE THE GREATER CRISIS OF CLIMATE CHANGE AND THIS NEEDS LEADERSHIP FOR THE LONG TERM”

Success cannot be reduced to short-term goals measured by key performance indicators; real estate is creating places for families to live, socialise and work sustainably, and, therefore, totally linked to their health and wellbeing, not enough players recognise or are aware of that.

Like other sectors, real estate companies need to align with the 17 Sustainable Development Goals of the United Nations. These help to create transparency and accountability to ensure we are all playing our part in addressing the major global challenges from affordable and clean energy to high quality education, and sustainable cities and communities.

The goals help companies measure their own impact and contribution between the walls of their own company, but also in the supply chain to understand the social, ecological and financial impact on all stakeholders, including society and our planet.

This is a crucial moment for the evolution of sustainable businesses, and we must use it wisely. As we emerge from the pandemic, we are still facing the greater crisis of climate change and this needs leadership for the long term from sustainable companies that address the interests of all stakeholders for the next generation. For this reason, every stakeholder in the real estate industry should be familiar with the Global Risk Report 2020 from the World Economic Forum, which shows that eight out of the 10 global risks with a draconic impact are ecology-based: problems caused by people and companies.

Sadly, if we look back in history to major crises such as we are experiencing now, any new partnerships and shifts in behaviour often disappear when the situation comes back under control. Going back to business as usual would be a tragedy, and the price of the next crisis from Mother Nature will be higher. ■

As a speaker, future thinker and author, **Ruud Veltenaar** works on a more sustainable world and fair society

Savills plc is a global real estate services provider listed on the London Stock Exchange. We have an international network of more than 600 offices and associates throughout the Americas, the UK, continental Europe, Asia-Pacific, Africa and the Middle East, offering a broad range of specialist advisory, management and transactional services to clients all over the world.

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