APAC MARKET OUTLOOK

COMMERCIAL PROPERTY | FEBRUARY 2021

Colliers INTERNATIONAL

ASIA PACIFIC

PROPERTY MARKETS: THEMES FOR 2021

FORECASTS AND OUTLOOK

Office

For 2021, we expect aggregate leasing demand to rise 96% from last year's weak level, but see new supply at 1.6x demand. This should depress rents by 6.1%.

We expect rising vacancy to peak at about 15% by year-end 2023. High vacancy will be concentrated in China and India; vacancy will be lower in popular occupier locations like Singapore, Sydney and Melbourne. Most APAC office markets should favour tenants over the next year, though some are showing signs of recovery.

Offices remain popular with investors, who have ample unused capital to deploy. However, with demand and supply out of balance in many cities, office prices are unlikely to rise in the near term.

Logistics & industrial

The shift from physical to online retail has driven demand for logistics space, and COVID-19 has boosted e-commerce volumes. Expansion in cold chain, new warehouse designs and new infrastructure projects should fuel demand further.

Most APAC markets now favour landlords. Rents should pick up in the big Chinese cities in 2021, with 3.0% growth in Shanghai. Higher incentives had made Sydney and Melbourne favour tenants, but with firm demand effective rents should rise 1.0-2.5% this year.

The sector's popularity with investors should rise further. Cap rates for Chinese logistics assets could fall below office cap rates within a few years.

KEY THEMES

China Plus One. China and the US may drift further apart economically, but slowly. Most MNCs will stay in China, but seek new markets to cut costs and spread risk.

Technology. APAC technology occupiers led by expanding large Chinese groups will account for 20-25% of office leasing demand over 2020-2025, creating new benchmarks for space, talent and the workplace across the region.

Flexible workspace operators will seek off-CBD opportunities, as occupiers look outside traditional business districts. Many APAC centres, e.g. Beijing, Shanghai, Seoul, Sydney, Auckland and all Indian major cities have office districts on the fringes, which are increasingly viable as business locations.

Sustainability will start to drive property investment and leasing decisions, as most APAC nations adopt ambitious carbon neutrality goals, together with the US.

IMPLICATIONS OF THE KEY THEMES

	Implications for Occupiers	Implications for Owners
China Plus One Strategy	Demand from high-end occupiers for logistics & industrial space and to a lesser extent office space should persist in China, Japan (especially greater Tokyo), Taiwan, Vietnam and India.	Logistics & industrial asset prices should stay strong across APAC. However, with demand and supply out of balance in many cities, office capital values are unlikely to rise in the near term.
Technology Occupiers	Asian technology occupiers will lead demand for office space. As a result, they should dominate leasing markets, helping determine rents, incentives and deal structures.	We see a preference among investors for key technology locations such as Sydney, Melbourne, Singapore, Bengaluru and Hyderabad. We expect landlords to focus on technology occupiers.
Flexible Workspace	Occupiers are implementing hub-and-spoke models with space closer to residential areas; flexible workspace can help meet this need.	Occupiers will continue to demand shorter and more flexible leases; owners will have to follow suit. Prices of decentralised and business park office assets may stay firmer than prices of CBD office assets.
Sustainability and Climate Change	Large occupiers will conduct portfolio reviews to understand which buildings do not match carbon neutrality targets and to determine an action plan. All new sites for expansion will require sustainability certifications.	Environmental, social and governance (ESG) criteria will start spreading in property. New developments will focus on sustainability credentials.

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INTRODUCTION

Prospects for 2021 look brighter after the recessionary effects of COVID-19 in 2020: while Colliers' investor clients expect only a mild economic recovery in Asia Pacific (APAC) this year, many forecasters predict a sharper rebound. This report details prospects for the office and logistics & industrial sectors across the region in the light of likely recovery. We expect muted demand and heavy supply to continue to weigh on the office sector, though not in all cities. In contrast, the logistics & industrial sector remains in firm expansion mode.

In addition, the report outlines four of the key themes that Colliers expects to drive APAC property markets over 2021 – *China Plus One* strategy, technology occupiers, flexible workspace, and sustainability – and assesses their implications for property occupiers and owners. We expect to address these themes in greater detail later in the year.

Source: Oxford Economics, latest figures
All information of this report as of 8 February 2021

Economic Background

The COVID-19 recession caused sharp drops in GDP growth across APAC over 2020. However, China's economy has been recovering rapidly since Q2 2020, and there were signs of recovery in other markets in Q3 and Q4. While 62% of respondents to Colliers' recent APAC investor survey expect only a mild rebound in the global economy in 2021, other forecasters are more optimistic. Oxford Economics expects aggregate real GDP in the big APAC economies to shrink 0.9% in 2020, but to grow 6.9% in 2021.

China, the world's second biggest economy, should lead the recovery in APAC in 2021. Confidence in China is illustrated by the strength of the renminbi, which now stands at roughly a 30-month high against the US dollar of 6.47, and by the strength of the stock market, with the CSI 300 stock index standing at close to a 13-year high. However, other economies in the region should also swing upwards, notably India and Singapore.

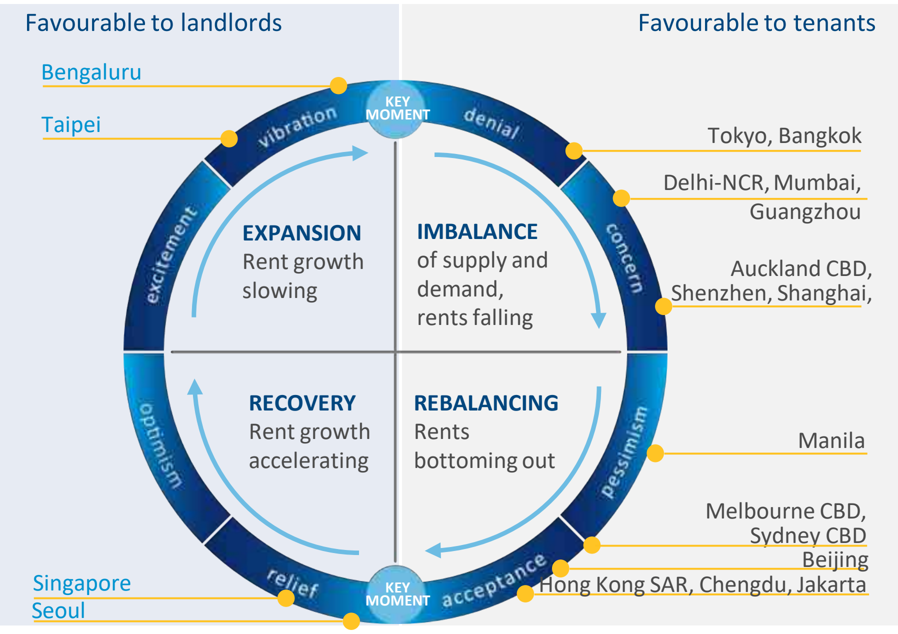
Real GDP growth forecasts by market (%)

Markets	2019	2020F	2021F	2022F	2023F	2024F
China	**6.0%**	**2.3%**	**8.9%**	**5.4%**	**4.8%**	**4.8%**
Japan	0.3%	-5.1%	2.4%	2.4%	1.4%	1.3%
India	4.9%	-7.4%	8.8%	5.8%	6.6%	7.6%
South Korea	2.0%	-1.1%	2.9%	3.2%	2.8%	2.6%
Australia	1.9%	-2.8%	3.1%	3.0%	2.9%	2.9%
Hong Kong SAR	-1.2%	-5.9%	4.7%	3.7%	2.3%	1.9%
Singapore	0.7%	-5.8%	5.6%	4.1%	3.5%	3.4%
New Zealand	3.0%	-1.3%	3.0%	1.9%	2.4%	2.3%
United States	2.2%	-3.5%	4.2%	3.4%	2.0%	1.8%

Source: Oxford Economics

KEY FORECASTS AND OUTLOOK: OFFICE MARKET

		Quarter-on-quarter	End of current year vs end of last year	Forecast 5-year avg vs end of last year
Demand	Aggregate net absorption across 19 key APAC cities fell 52% in 2020. While demand was lower in most markets, cities including Shanghai and Beijing picked up late in the year. Aggregate demand should rise 96% YOY in 2021 in line with economic recovery in the region, with the strongest pick-up in Beijing, Shanghai and other Chinese cities.	Q4 2020 0.64mn sq m	Full Year 2021 4.82mn sq m	2021–25 Annual Avg 5.09mn sq m
Supply	Aggregate APAC supply of 5.22 million sq metres in 2020 was 2.1x demand, with Beijing, Shanghai, Delhi-NCR, Tokyo, and Bengaluru all seeing big increases. We expect supply to grow 50% this year, and to equal 1.6x demand. Supply should stay high in 2022, but turn down in 2023 in most markets except Tokyo, Shenzhen and some Indian cities.	Q4 2020 1.79mn sq m	Full Year 2021 7.82mn sq m	2021–25 Annual Avg 5.85mn sq m
Rent	Given recession and the mismatch between demand and supply, weighted average net effective rents fell 5.4% in 2020. We now think aggregate rent will fall 1.6% p.a. on average over 2020-2025. However, rents in Singapore and Auckland should turn upwards in 2021, while those cities plus Bengaluru and Melbourne CBD should see average growth of more than 2% p.a. over five years.	QOQ / End Q4 -0.4% USD52.8/ sq m/month	YOY / End 2021 -6.1% USD49.5/ sq m/month	Annual Avg Growth 2020-25 / End 2025 -1.6% USD48.6/ sq m/month
Vacancy	Aggregate APAC vacancy rose 3.3pp to 12.9% in 2020, and should hit a peak of 15.0% at end-2023 before easing. Vacancy rates of over 13% will be concentrated in China and India, while rising supply will also lift vacancy in Tokyo, Asia's largest office market, notably in 2023. Popular occupier centres such as Singapore, Melbourne CBD and Sydney CBD should hold vacancy in a 5-10% range over most of the next five years.	QOQ / End Q4 0.5pp 12.9%	YOY / End 2021 1.1pp 14.0%	Annual Avg Growth 2020-25 / End 2025 0.1pp 13.3%



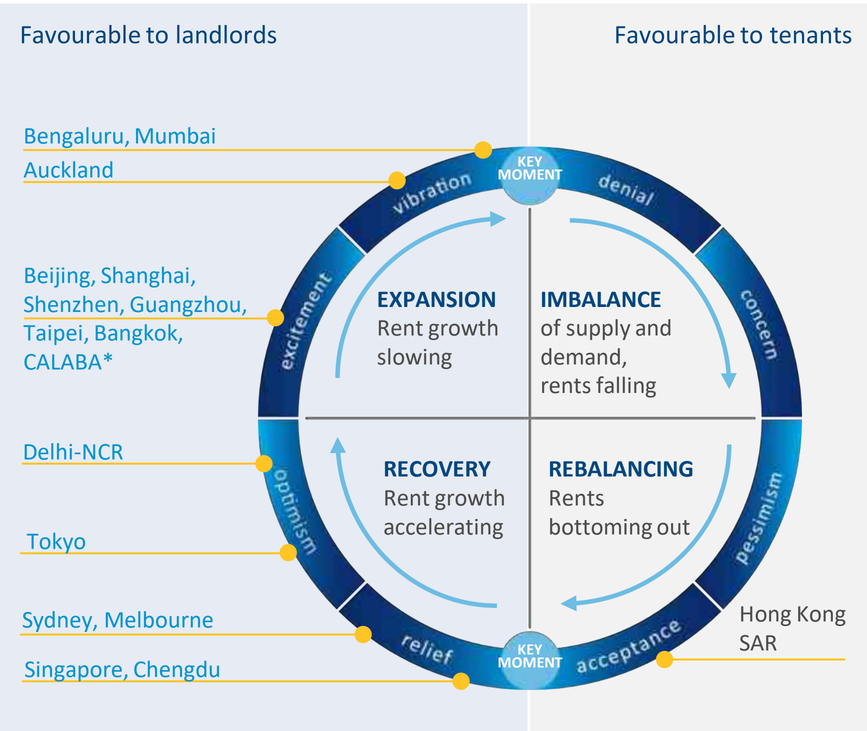
- We expect the majority of regional markets to continue to favour tenants over 2021.
- While this outlook facilitates long-term leasing deals, current economic uncertainty will have a major influence on long-term decisions.
- Especially in Asia, as occupiers adjust structure and headcount and adopt new work standards, we expect many to reduce their space needs. They may also promote decentralisation with hub-and-spoke models, although this will vary by city.
- The technology and life sciences sectors, which thrived in 2020, should expand further.
- With demand and supply out of balance in many markets, office asset prices are unlikely to rise in the near term despite evident appetite among investors to deploy unused capital.

Notes: *Best estimate as of end-Q4 2020.*
Rents are net effective on an NFA basis (USD per sq metre per month).
Indian markets report gross absorption for demand.

[1] Special Administrative Region of the People's Republic of China.

KEY FORECASTS AND OUTLOOK: LOGISTICS & INDUSTRIAL MARKET

- Across APAC, demand for logistics space has been supported by a long-run shift from physical to online retailing. COVID-19 has driven up e-commerce volumes sharply, while expansion in the cold chain sector and new infrastructure developments should boost demand further. Most investors and developers already see logistics warehouses as a core asset class.
- With firm demand and limited supply in China's Tier 1 cities, tenants and owners may have to seek space and opportunities in locations away from the main centres.
- Japan stands out as underserved by modern logistics stock, even though the small modern logistics clusters (e.g. Nagareyama/Kashiwa near Tokyo and Ibaraki City near Osaka) offer some of APAC's largest and most advanced warehouses. The low availability of modern units means investors and developers can apply value-add strategies to older stock. It is increasingly common to demolish and rebuild.
- Australia has ample Grade A logistics stock, but it is tightly held and vacancy rates are well below their long-run averages. Investors should be willing to buy a portfolio of assets to achieve scale.
- In India, Mumbai and Delhi NCR have vacancy rates of 10-11%, but the other logistics clusters have vacancy of 15-30%. New supply in 2020 is modest in all markets except Delhi NCR.
- Singapore is one of the best-served Asian logistics markets, with a per capita Grade A stock on a GFA basis of 0.8 sq metres (versus under 0.2 sq metres in Osaka or South China). As a result, vacancy is 11.7% and we expect modest average annual five-year rent growth of 0.8%.
- Demand for cold chain delivery is soaring. Looking ahead, we expect that big purpose-built cold chain warehouses will be built near ports and transport hubs, while renovated cold chain warehouses will be located nearer cities for easy distribution. Occupiers and owners will find opportunities in both types.



- Most APAC logistics & industrial markets favour landlords, including the big Chinese and Indian cities, Singapore, Auckland and Taipei.
- Aggregate warehouse occupancy across 33 Chinese cities tracked by Colliers fell from 93% at H1 2018 to 85% at H1 2020, reflecting growth in stock not weak demand. Average rent is down about 2% over the past year, since new facilities tend to be further from CBDs. Rent growth has been firmer in the top cities, notably central areas of Beijing and Shanghai.
- Rent growth in the big Chinese cities should now pick up as economic acceleration and new, more efficient warehouse designs fuel demand. In Shanghai, we see rents rising 3.0% in 2021.
- In Sydney and Melbourne, a rise in incentives had made the logistics market favourable to tenants. Looking ahead, however, prospects for demand seem bright, and we expect growth in effective rents of 1.0-2.5% depending on the market in 2021 after falls of 3.0-5.0% in 2020.

Notes: Best estimate as of end-Q4 2020.
*Cavite, Laguna, Batangas in the Philippines
[1] Special Administrative Region of the People's Republic of China.

Rents are net effective on an NFA basis (USD per sq metre per month).
Indian markets report gross absorption for demand.

"CHINA PLUS ONE" STRATEGY

ADOPTION WILL HELP CUT COSTS AND MITIGATE RISK

China-US Trade Relations

While China achieved positive economic growth in 2020 despite the COVID-19 recession, growth might have been stronger without the lingering effects of the US-China trade war set off in 2018-2019 by former US President Trump. Trade relations have improved slightly since the signing of the so-called Phase One agreement between the US and China in January 2020, but remain tense.

New President Joe Biden is likely to take a less confrontational approach to trade relations with China. Oxford Economics expects that Biden will lift tariffs on products like steel and aluminum imported from countries other than China early in his first term[1]. Most tariffs on Chinese goods may remain, but Biden has said he will quickly lift tariffs on agricultural products.

"China Plus One" Strategy

China's huge domestic market and high long-term growth prospects provide sufficient enticement for large multinational companies (MNCs) to continue to operate and expand within the country. Indeed, one outcome of the Phase One trade agreement has been the opportunity for US banks and financial institutions to operate more freely in China. Groups such as BlackRock, Vanguard, Citibank, JP Morgan Asset Management and Goldman Sachs have already established a 100% owned presence or are in the process of doing so. The willingness of these companies to court the Chinese market is an indication of the size and scope of the market opportunity.

Nevertheless, as a consequence of the trade war and the COVID-19 recession, many MNCs in APAC have realised that they cannot base their operations solely in China. We have seen big industrial groups "reshore" some production or adopt a supplementary presence in another country – a so-called "China Plus One" strategy.

[1] See report by Oxford Economics: How Trump and Biden Differ (or Don't) on Key Policies

The benefits of a ”China Plus One” strategy include the following:

Risk

Risk diversification should help prevent supply chain disruptions as seen during COVID-19, as well as currency fluctuations and tariff changes.

Lower Cost

Labour costs in many ASEAN and South Asian markets are lower than in China.

New Markets

Access to new markets: there are growing populations in ASEAN and South Asian markets.

Tax

Tax and other incentives: government-led tax breaks, nominal land rents, and other privileges for new operations.

We expect the “China Plus One” trend to boost demand for logistics & industrial and to a lesser extent office space in markets like Japan (especially greater Tokyo), Taiwan, Vietnam and India. Moreover, various governments are encouraging occupiers to adopt “China Plus One” strategies through new legislation, tax and production-based incentives, as described below.

> **We expect demand from large logistics & industrial occupiers in China, Japan, Taiwan, Vietnam and India to persist over 2021.**

Government Policies Facilitating China Plus One Strategies

India

Production-linked incentives of USD21.0 billion have been offered in the automotive, electronics, chemical, pharmaceutical, telecoms, textiles, food, solar, steel and white goods sectors.

Japan

Japan has allocated USD2.2 billion for local and overseas relocation: USD2 billion for Japanese manufacturers to move back home, and USD230 million for firms relocating from China to Southeast Asia[1].

South Korea

South Korea’s USD95.0 billion New Deal five-year plan will expand local manufacturing in high-technology equipment, clean energy and TMT to reduce these sectors’ reliance on external suppliers[1].

Indonesia

Tax breaks will be available on 60% of investment value including land on labour-intensive industries, training programmes, or research and development activities.

A 100% tax holiday on investments of over USD2.9 billion for 20 years.

Vietnam

Industrial zones offer lower or no corporate income tax and VAT, as well as tariff rebates and discounted land costs.

Vietnam also has double taxation agreements with over 80 countries globally.

Thailand

The Thailand Plus plan (2019) facilitates the supply chain relocation through income tax exemptions and reductions, and approved STEM (science, technology, engineering, mathematics) training cost exemptions subject to conditions. Further, Thailand has a one-stop shop for all licensing and visa purposes.

Australia

The Australian government has set aside AUD107.2 million to address any supply chain challenges through a Supply Chain Resilience Initiative (SCRI). The focus is on identifying essential goods and services, mapping, and stress-testing existing networks.

[1] See article from Supply Management:
[Why 'China Plus One' could be the answer for global supply chains]

Occupiers Adopting a China Plus One Strategy

India	• Salcomp, Wistron, Foxconn and Pegatron (Apple manufacturers) • Zoom setting up R&D centres in India • Hasbro moving production to India • Procon Pacific
Vietnam	• Apple (Vietnam will handle 30% of production of its high-selling Airpod accessory) Foxconn, Samsung, Nintendo, Goretek, Google and Microsoft • Adidas, Puma, Skechers • Hasbro
Thailand	• Delta Electronics (Apple contract manufacturer) and Merry Electronics (contract manufacturers for many global brands) • Google smart home production lines • Harley Davidson
Indonesia	• Pegatron, Samsung, LG • Under Armour • Meiloon, Sagami, Denso, Alpan
Malaysia	• Kayamatics, Panasonic and Google.
South Korea	• LG is relocating parts of its manufacturing back to South Korea
Cambodia	• Steve Madden
Taiwan	• Compal Electronics, Innolux Corp, Acton Technology Corp, Quanta Computer Inc, Wistron NeWeb Corp

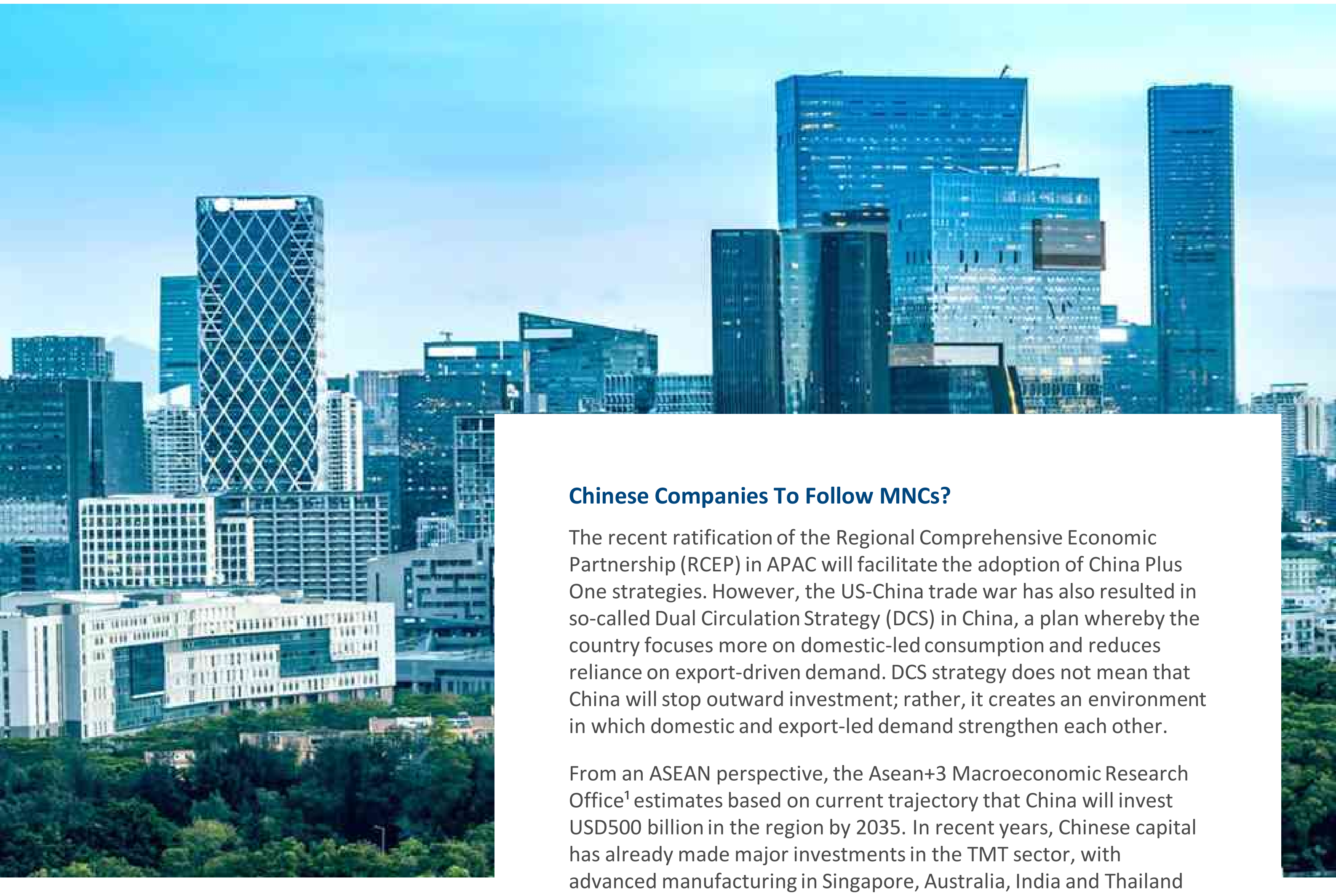
Source: Colliers International, various

The table above lists MNCs that are either planning to shift production, or are in the process of moving or adding new supply chains.

While these are some examples of supply chain diversification strategy, we do not expect full relocation from China. The challenges of full relocation include:

- Moving all or parts of a production facility represents different challenges; for instance, an assembly unit will add an additional step to the supply chain, while for an entirely new production line everything needs to be built from the ground up.
- Partner networks, i.e. finding the right supplier partners in the new market.
- Supply chain management, i.e. ensuring adequate supply of the materials needed for production.
- Adaptation of existing operations and processes to the new market in terms of language and local preferences.
- Replication of a skilled workforce in the new location and creation of the right infrastructure for staff to live and work.
- Quality control; new people and processes may have an adverse impact on product quality.
- Higher costs; adoption of two or more production operations across different markets may result in higher per unit cost, reducing overall profitability.

Source: Colliers International, various media sources



Chinese Companies To Follow MNCs?

The recent ratification of the Regional Comprehensive Economic Partnership (RCEP) in APAC will facilitate the adoption of China Plus One strategies. However, the US-China trade war has also resulted in so-called Dual Circulation Strategy (DCS) in China, a plan whereby the country focuses more on domestic-led consumption and reduces reliance on export-driven demand. DCS strategy does not mean that China will stop outward investment; rather, it creates an environment in which domestic and export-led demand strengthen each other.

From an ASEAN perspective, the Asean+3 Macroeconomic Research Office[1] estimates based on current trajectory that China will invest USD500 billion in the region by 2035. In recent years, Chinese capital has already made major investments in the TMT sector, with advanced manufacturing in Singapore, Australia, India and Thailand the key destinations in APAC for foreign direct investment by Chinese enterprises in 2019.

Implications for Occupiers and Owners

Occupiers

- Demand from high-end occupiers for industrial & logistics and to some extent office space in China, Japan (especially greater Tokyo), Taiwan, Vietnam and India should persist.
- From a China Plus One perspective, office space will predominantly be derived demand, reflecting the underlying demand for industrial space.
- Large Chinese technology groups are growing by outward investment and M&A. They will start to compete with MNCs for labour and space. See also the section on technology occupiers.

Owners

- Demand for space from tenants following “China Plus One” strategies should be another factor supporting logistics & industrial asset prices across APAC.
- Related demand for office space may support office prices in certain markets, e.g. Taipei. However, this factor is unlikely to be sufficient to push up office capital values overall, given muted demand and oversupply in many urban markets.

[1] See: ASEAN+3 Regional Economic Outlook 2020

ASIAN TECHNOLOGY OCCUPIERS

Chinese groups will dominate office leasing demand

> We expect regional technology occupiers to account for 20-25% of office leasing demand across APAC over 2020-2025, creating new benchmarks for space, talent and the workplace across the region

Technology Sector: Why It Is Important

The technology sector has been a major demand driver for Grade A office in the APAC region over the past five years. Consistently responsible for a high proportion of new demand across most markets in the region, today the technology sector accounts for about 20% of aggregate Grade A CBD office stock across the key markets that we track in the region.

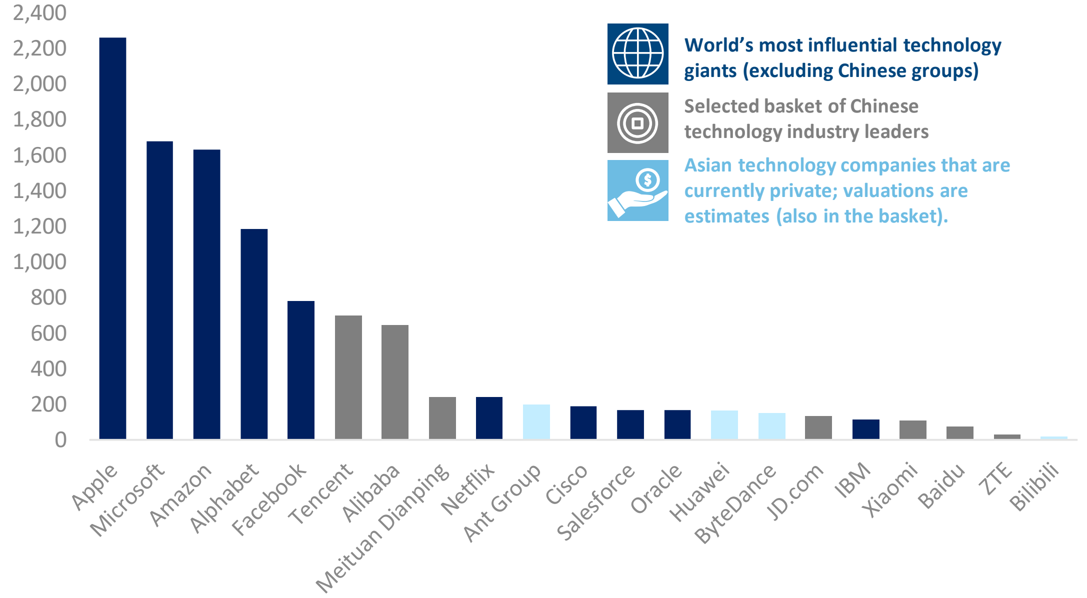
In November 2020, the Wall Street Journal reported that the technology sector contributed 75% of the returns of the S&P 500 up to that time in the year[1]. While the global sector is dominated by Apple, Amazon, Microsoft, Facebook, Google and Netflix, within APAC, local and regional companies are achieving rapid growth. Despite the threat of delisting from US stock exchanges, Alibaba, Tencent, Huawei, Meituan, JD.com, Baidu, and Xiaomi are some of APAC's fastest expanding groups.

In 2020, Singapore found itself to be a focal point of this outward movement. During the year, multiple announcements from major Chinese technology companies showed their ambitions towards both the city state and the wider ASEAN region:

- Tencent, Alibaba and ByteDance announced plans to set up and expand their regional headquarters in the city.
- Alibaba, which owns Lazada, a Singaporean e-commerce firm, also invested in the AXA Tower, which is expected to be the site of its new headquarters in the city.
- Bigo Live planned to move its servers from Hong Kong to Singapore.
- The MAS (Monetary Authority of Singapore) granted two digital wholesale banking licences, one to the Ant Group (Alibaba's financial services arm) and the other to a Chinese-led consortium comprising Greenland Financial Holdings, Beijing Co-operative Equity Investment Fund Management and Linklogis Hong Kong.
- In addition, there was interest from Haitong Securities in expanding operations, while Huawei's cloud division was planning to establish new operations.

[1] See: The Stock Market's Rally Is Finally Widening

Stock Market Capitalisation or Estimated Valuation of Leading US and Chinese Technology Groups as of December 2020 (in USD billions)



Source: Bloomberg

The above illustration indicates the size of Chinese technology companies in relation to some of the largest US technology players. We have focused our research on the basket of the Chinese technology companies (highlighted in grey and light blue in the above chart) in order to understand the impact of APAC technology giants on the real estate landscape in the region. These companies have had the following impact on their key urban markets so far:

Importance of our Basket of Leading Chinese Technology Groups

They occupy in total	A total of	Their HQ office space represents
2.0mn sq metres	>300,000 staff	10% of Grade A office stock
of office space for company HQ purposes	working in the HQ offices	in key markets such as Beijing, Shanghai, Shenzhen and Hangzhou

Source: Colliers International

While some of the big Chinese technology companies have been around since the late 1980s, their average age is less than 20 years, meaning that they have reached their current sizes more quickly than their US counterparts.

Using revenue growth projections and employee sales productivity from Bloomberg as a measure of headcount growth in the future, we expect large Chinese technology enterprises to account for more than 4.0 million sq metres of new office leasing across APAC over 2020-2025. Since Chinese technology companies represent 70% of the market capitalisation of Asian technology companies, we estimate leasing demand from Asian technology occupiers to be over 5.5 million sq metres, representing over 20% of the aggregate demand during this period.

For some markets, the increasing dominance of the technology sector will be a new phenomenon. However, one market which is already heavily dominated by technology is India, where global and local technology companies in combination will continue to drive the bulk of office leasing demand, representing about 45% of the total.

Cumulative Regional Grade A Office Leasing Demand (sq metres)

2020	2021	2022	2023	2024	2025
2.3mn	6.5mn	11.4mn	16.6mn	21.6mn	26.4mn

15-18%
Chinese Technology Occupiers

20-25%
Asian Technology Occupiers

Source: Colliers International

Implications for Occupiers and Investors

Occupiers

Based on our research, we expect Asian technology occupiers to continue to lead office space demand within APAC. While this implies competition for space, it may also lead to challenges for resources such as labour, tools and capital. We therefore believe:

- Asian technology occupiers will dominate markets, helping determine rents, incentives and deal structures, in effect becoming benchmarks for other occupiers in the region. While Western MNCs have traditionally been the source of occupier benchmarks across APAC, we have seen interest from occupiers in measuring themselves against Asian technology groups recently and expect this trend to accelerate.
- As competition for talent increases in the technology sector, occupiers will need to focus on workplace strategy for talent attraction and retention. Indeed, the results of Colliers' recent Global Workplace Survey and a recent report from Forbes[1] indicate that staff experience, wellness, workplace flexibility, company culture, a sense of belonging as well as companies seeking and acting on employee feedback are paramount in employee retention.

Owners

We expect that the continued growth trajectories of Asian technology occupiers will make them attractive to building owners. Similarly, from an investment perspective, we expect increasing interest in leading technology submarkets such as Zhongguancun and Wangjing (Beijing); Caohejing and Zhangjiang (Shanghai); ORR and Whitefield (Bengaluru); Shenton Way and Tanjong Pagar (Singapore); and Hi-technology Park Middle and South Zones (Shenzhen).

[1] 2020 Changed The Employee Experience Forever – These Trends Will Matter in 2021

FLEXIBLE WORKSPACE AND EMERGING DISTRICTS

Flexible workspace shift outside CBDs likely to continue

Current Situation

Flexible workspace has been a key demand driver in the APAC Grade A (prime) office sector over the past five years, accounting for 15-20% of new demand. Today, the sector represents about 4% of aggregate Grade A (prime) office stock in the major CBD markets that we cover in the region.

Aggregate demand from flexible workspace operators in 2020 was 50% below actual 2019 demand across 17 markets we cover in the region. While this indicates a steep decline in demand from operators, we expect the demand for flexible workspace from occupiers (i.e. end-users) to rebound as markets reopen within the region.

At the start of 2020, we highlighted the following trends within the flexible workspace sector:

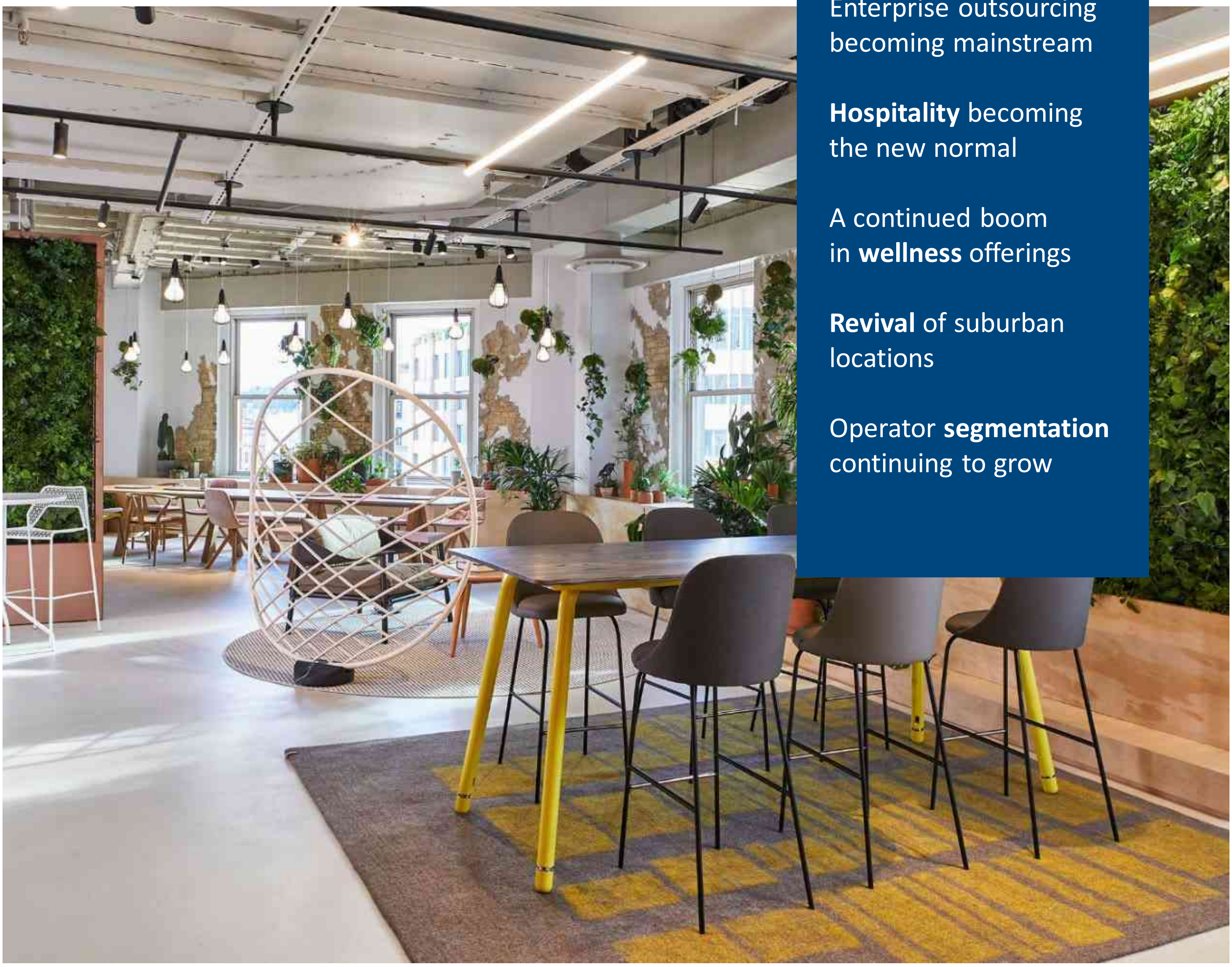
Enterprise outsourcing becoming mainstream

Hospitality becoming the new normal

A continued boom in **wellness** offerings

Revival of suburban locations

Operator **segmentation** continuing to grow



Occupier Perspectives

COVID-19 accelerated some of the trends that we identified at the start of 2020, e.g. enterprise outsourcing and the revival of suburban locations, as flexibility in the pace, space and place of work became *de rigueur* over the course of the year.

Looking ahead, with secondary space (sublease space) set to increase by 20-25% across some of the major markets in the region, we think that occupiers will start reducing their footprints by jettisoning surplus space from their portfolios. In this scenario, flexible workspace strategies such as reverse flex, in which an operator takes leasehold space from an occupier and then repurposes it as flexible workspace, will become more prominent.

Real Estate Strategies

Occupiers

- We expect occupiers to use flexible workspace for short-term leases and expansion opportunities in 2021 as they seek to avoid capital expenditure.
- We expect occupiers to seek non-CBD locations for staff, notably in Asian markets with long commuting times such as China, India, Japan, Indonesia, Thailand and the Philippines, as they adopt hub-and-spoke operations.
- We also expect to see partnerships between occupiers and operators as the former begin to reduce excess space from their portfolios.

Owners

- We expect hybrid leases between asset owners and operators to become more common.
- As occupiers seek to reduce capital expenditure and focus on short-term leases, we expect to see an increase in management agreements in which the operator provides a choice of accommodation within an asset, thereby increasing the value of offerings.
- Since interest in suburban locations should increase due to hub-and-spoke models and greater demand from occupiers, we think the capital values of office properties in these locations may stay firmer than those in CBDs.

Top Trends for 2021

1 Work From Anywhere

As people are increasingly able to work from anywhere, we believe flexible workspace aggregators such as NeoNomad, Liquid Space, DeskPass, Desana, WorkBuddy, FlySpaces Passport and Switch will become significant as they enable occupiers to access workspace on demand. Similarly, Colliers has partnered with Upflex to create the Colliers Mobility Pass platform.

2 Partnerships and Acquisitions

We expect deeper partnerships between asset owners and operators and in some cases acquisitions to address occupiers' needs for flexibility. Traditional real estate service providers with facilities management teams could also look to bolster their own offerings via acquisition. CBRE (Hana), JLL (Civis) and Cushman & Wakefield (Indego) could bring forward their growth strategies by acquiring established operators.

3 Valuation Consensus

As the demand for flexible workspace grows, we expect lenders and valuers to establish robust valuation guidelines that will enable asset owners to deliver the right flexible workspace products to the market.

4 Employee Safety and Engagement

As the office enables collaboration and innovation, employee experience and wellness are at the heart of real estate decision making now. We believe that flexible operators which do not embrace this trend will be left behind.

5 Non-CBD Office Supply

The depth and quality of flexible workspace supply outside downtown locations is already causing a supply pinch in certain markets. 2021 should be the year in which non-CBD flexible workspace supply increases sharply. We forecast this supply will come from both existing operators and new entrants. In addition, a portion of new supply may be delivered by repositioned retail and hotel assets.

SUSTAINABILITY AND CLIMATE CHANGE

Sustainability will be a key consideration for occupiers and owners going forward

Carbon Neutrality

Climate change is an undeniable reality in the world today. Rejoining the Paris climate change accord was one of President Biden's rallying cries during the 2020 US presidential election. Under Biden, as the US targets carbon neutrality by 2050, we expect that governmental regulations around environmental standards will gradually be tightened. New buildings will seek to incorporate these standards, thereby increasing construction costs. Owners of existing buildings may also start to experience substantial retrofitting costs.

China under President Xi Jinping also aims to be carbon neutral by 2060. We believe that this shared policy agenda could lead to greater cooperation between the US and China. Other APAC countries including Japan, South Korea and New Zealand have also pledged to achieve carbon neutrality, over the coming decades, while in India Prime Minister Modi has set a target of a 30-35% reduction in the country's carbon footprint by 2030.

Timing of Countries' Net Zero Emissions Targets

Source: World Resources Institute

In its seminal report, The Special Report on Global Warming of 1.5˚C[1], the International Panel on Climate Change (IPCC) recommended cutting worldwide emissions to 45% of 2010 levels by 2030 to limit the average global temperature increase to 1.5˚C. Thereafter, the report recommended net zero emissions by 2050. Correspondingly, 23% of Fortune 500 companies globally have made a public commitment that by 2030 they will be carbon neutral, using 100% renewable power, or meeting a science-based target (SBT) for emission reduction. This represents a nearly fourfold increase since the Paris Agreement was signed in 2015.

Within APAC, however, there is scope for improvement, since only 26 out of the 220 (12%) Fortune 500 companies in the region have made carbon neutrality commitments, compared to over 30% for the rest of the world. As of 2019, around 2.3 billion people were living in urban areas within APAC, i.e. more than one-half of the region's population. However, by 2030, APAC will be home to 50% of the world's urban population[2].

The built environment, encompassing man-made cities, buildings and infrastructure, contributes to nearly 40% of emissions today, and in APAC, with a rapidly urbanising population, this situation is set to accelerate. As a result, sustainability of the built environment is likely to be one of the key issues driving commercial real estate in the future.

1 See: https://www.ipcc.ch/sr15/download/
2 See: Green Buildings, IFC, World Bank

Green Building Regulations

The APAC region is home to more than 50% of the world's total population and subsequently more than one-half of global energy consumption. More than 85% of the region's energy is generated from fossil fuels. Most cities in the region are densely populated, and the major markets in the region have either predominantly warm climates or continental climates with warm summers and cold winters, exacerbating energy requirements.

Moreover, with a high portion of the world's manufacturing concentrated in APAC, high energy consumption is a fact of life in the region. While renewable energy and efficiency is increasing in importance, many governments in the region have provided guidelines relating to the built environment, which we summarise in the table below.

Sustainability Guidelines

Australia	• Nationally targeting buildings with net zero emissions by 2050. • Commercial Building Disclosure (CBD) programme requires office building owners to provide energy efficiency information to prospective buyers and tenants. • The National Green Leasing Policy encourages government organisations to adopt green leases.
China	• China's Energy Conservation Law came into effect in 2018. • Real estate-related regulations include compliance with energy efficiency standards during design and construction as well as the disclosure of energy conservation measures and thermal insulation warranty in property purchase contracts, quality guarantees and instruction manuals.
New Zealand	• New Zealand Green Building Council (NZGBC) is targeting net zero carbon buildings by 2030. • Building owners must disclose and improve the energy efficiency of their buildings. • New buildings must target 20% less embodied carbon by 2025. • Occupiers should inform landlords that the buildings they occupy should be net zero carbon by 2025. • All new government leases of over 2,000 sq metres must be in buildings with a minimum 4-star green rating.
Singapore	• Singapore's Building and Construction Authority (BCA) targets at least 80% of buildings (by floor area) in Singapore to be green by 2030. • Building owners must submit energy audits annually and those with GFA of over 15,000 sq metres must adhere to minimum standards.
India	• The Energy Conservation Act (ECA) 2001 recommends the installation of energy conservation equipment. It also provides energy savings certificates where conservation measures are more than the minimum prescribed thresholds.
Japan	• Building owners in Tokyo may be required to submit regular reports on greenhouse gas emission amounts to the metropolitan government, depending on the amount of energy the building uses. • Buildings with floor areas in excess of 2,000 sq metres but under 5,000 sq metres can provide their environmental plans on a voluntary basis, while those above this threshold must provide these plans on a mandatory basis.
South Korea	• Newly constructed and existing buildings are subject to a greenhouse emission evaluation. If a building is certified to meet the "Green Standards" criteria covering energy efficiency, greenhouse gas emissions, waste minimisation and water saving, it may enjoy reduced local taxes, reduced environment improvement expenses, and easier building permits.
Indonesia	• The Green Building regulation from 2015 states that any building that meets environmentally friendly criteria will benefit from government incentives around licensing.

Within the built environment, besides urbanisation and industrial expansion, another factor that has an impact on APAC's energy consumption is internet connectivity. The region accounts more than one-half of the world's population that is connected to the internet, while at the same time accommodating the largest unconnected population.

While e-commerce is rapidly rising in the region, COVID-19 has also increased the acceptance of remote working. One outcome of this intense connectivity is the rise in data centres, making the region one of the fastest developing data centre markets in the world. According to a recent report[1], China has the largest data centre space in APAC (second in the world after the US), followed by Australia, Japan and Singapore. The report goes on to say that APAC has one square metre of data centre space for every 522 people, with some markets such as Australia, Hong Kong and Singapore having higher per capita space.

Data centres are the nodes of the internet, collecting, storing, processing, distributing, and recovering data using electricity. Data centres generate great heat, which is why cooling systems are one of their most critical components. Most of the energy in data centres is used for servers (43%) and cooling (43%)[2].

Given the very high energy consumption of data centres, the Singapore government has placed a moratorium on new construction until sustainability can be incorporated into their development in the country.

What do the numbers say?

The International Finance Corporation (IFC) estimates that green office and industrial properties represent an investment opportunity of USD2.7 trillion in APAC over the next 10 years. If all commercial properties such as hotels, retail, healthcare, education, transportation and institutional space are considered, this increases to just over USD10 trillion. The report also goes on to highlight some of the economic benefits of green buildings shown in the column on the right.

Green Building Advantages[3]

Construction cost savings range between
0.5-12%

Operational cost savings up to
37%

Price premium of up to
37%
and faster time to sale

High occupancy up to
23%

Annual rental incomes that are up by
8%

[1] See: Cloud and Data Centres Markets in the APAC
[2] See: How Much Energy Do Data Centres Really Use?
[3] See: Green Buildings, IFC, World Bank

The 2020 Global Real Estate Sustainability Benchmark (GRESB) survey of nearly USD5 trillion in real estate assets indicates that owners in Australia and New Zealand are global leaders when it comes to Environmental, Social and Governance (ESG) performance of their real estate assets.

According to the PwC and ULI1, certified green buildings in some of the APAC markets include:

Japan
1,000

Singapore
3,000
(40% of current stock, with a target of 80% by 2030)

India
1,578

Australia
1,800

South Korea
15,000

The other factor that will play a major role in the future of sustainable development goals is the rise of green financing in the region. Within ASEAN, green financing is currently around USD40 billion; however, annual demand within the wider APAC region is expected to touch USD200 billion due to the increasing importance of sustainable development[2].

Following on from the pandemic, we have observed an increase in the preference for wellness certified buildings that optimise indoor air quality, provide acoustic and thermal comfort, maximise natural lighting, and provide high water quality. The World Green Building Council[2] has found that green buildings with wellness features reduce employee absenteeism, with employees feeling more productive and healthier.

Over the near term, we expect the increasing importance of sustainability to have the following implications for investors and owners.

Real Estate Strategies

Occupiers

- We expect large occupiers to conduct sustainability audits of their existing property portfolios and develop action plans to attain carbon targets in the premises that they currently occupy.
- Green certifications by governments and regulatory bodies will be critical criteria for selection of new leased premises as occupiers start to help achieve local and global carbon targets.

Owners

- As part of occupier retention as well as attraction strategies, existing landlords and developers will focus not only on wellness attributes, but also on green retrofitting activities.
- We expect to see an increased focus on ESG criteria for real estate investment decisions as well as green credentials for new developments.

[1] See: 2021 Asia Pacific Emerging Trends in Real Estate
[2] See: Green Finance in Emerging Asia

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