Asia Pacific: Industrial and logistics property

Where are the opportunities in manufacturing, last mile and cold chain?

April 2021

Introduction

Companies in Asia Pacific (APAC) adopt *China Plus One* strategies for risk mitigation, cost reduction, and access to new markets, while many governments have offered incentives for companies to shift supply chains. The emergence of **new or rejuvenated production locations outside China is driving demand for manufacturing facilities.** This shift has been reflected in high greenfield foreign direct investment (FDI) in 2019 into APAC manufacturing and high capital flows in 2020 in the combined industrial and logistics property sector, pointing to the growing importance of manufacturing property as an asset class. This report highlights the **most attractive cities in APAC** outside China for industrial occupiers; it is recommended for property owners to find investment and development opportunities in the same cities.

From 2019 to 2024, online retail sales in APAC is predicted to grow 1.7x to USD2.5 trillion, with the fastest-growing category, online grocery, rising by 30% p.a. This expansion is **driving demand for last mile delivery. The cold chain segment is growing particularly fast**, driven by storage and distribution needs for food, pharmaceuticals and other products. This report also explains **how occupiers and owners are recommended to participate in the last mile and cold chain segments of the logistics property market.**

Finally, the report discusses transaction volumes, rent growth and yields in the combined industrial and logistics property sector, and **summarises options and opportunities in manufacturing and logistics property for occupiers and owners** across individual markets.

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All information of this report as of 23 April 2021

Summary and Insights

China Plus One strategies:
New manufacturing locations appearing in developed and emerging markets

Manufacturing property as an asset class is rising in importance; since 2011, transactions of manufacturing assets have grown **19% p.a.**

We believe **Singapore, Tokyo, Taipei, Ho Chi Minh City** and **Bengaluru** are particularly likely to attract industrial occupiers, creating new opportunities for owners.

Most leading Chinese cities also remain strong manufacturing locations.

Most attractive high-tech manufacturing markets for industrial occupiers outside China

Singapore	3.4
Tokyo	3.4
Taipei	3.2

China/Developed

1.0 Least attractive → **5.0** Most attractive

Attractive emerging market cities for other manufacturing activities

Ho Chi Minh City	3.2
Jakarta	3.1
Bengaluru	3.1

Emerging

Logistics property:
Varied approaches necessary to participate in fast-growing last mile and cold chain

Over 2019-2024, online grocery sales in APAC should grow **30% p.a.**, driving demand for the last mile delivery facilities of logistics networks.

We advise investors to focus on logistics warehouses on **city fringes**, while occupiers can leverage the expertise of **third-party logistics (3PL) providers** to enter the sector.

Demand for cold chain facilities is surging. Occupiers can work with 3PLs to find the right solution to fit their needs, while investors can refit existing assets or build dedicated warehouses as a long-run option.

Yields on logistics assets are likely to fall further in **China, Australia, Japan, Korea** and **Taiwan. Japan** is notably underserved by quality logistics stock, while in **Korea** foreign investors can compete with domestic investors by focusing on logistics.

Summary of opportunities in selected industrial and logistics markets

India
(South)

- E-commerce majors and 3PLs drive demand in Bengaluru.
- Chennai is seeing growth in renewables and electronics.
- Investors should focus on e-commerce, 3PL and FCMG occupiers and industrial exporters.

China
(North, East, South)

- As a short-term option, owners may retrofit dry warehouses for cold storage together with a specialist restructurer or operator. In the long run, they should seek sites for dedicated cold chain warehouses on city edges.
- In North China, occupiers and owners are recommended to target Tianjin and Langfang.

Singapore

- Landlords are recommended to adopt Industry 4.0 guidelines and higher specifications while being flexible in lease negotiations.

South Korea
(Greater Seoul)

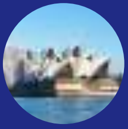
- Occupiers should target Incheon and Gyeonggi-do due to proximity to Seoul.
- Prices of prime logistics assets are likely to rise over 2021, with yields falling.
- Foreign investors may pursue value-add or opportunistic strategies in logistics.

Taiwan

- Northern Taiwan is currently the biggest logistics hub with Taichung and Tainan emerging.
- Occupiers are recommended to work with 3PLs to strengthen their cold-chain networks.
- Asset owners should adopt cloud data and AI to differentiate their services.

Japan
(Greater Tokyo, Greater Osaka)

- Tenants in Tokyo should seek last mile space out-side the central five wards, in mixed-use developments.
- Investors may apply value-add strategies to older stock. Sites closer to central areas of Tokyo command higher rents and are to be preferred.

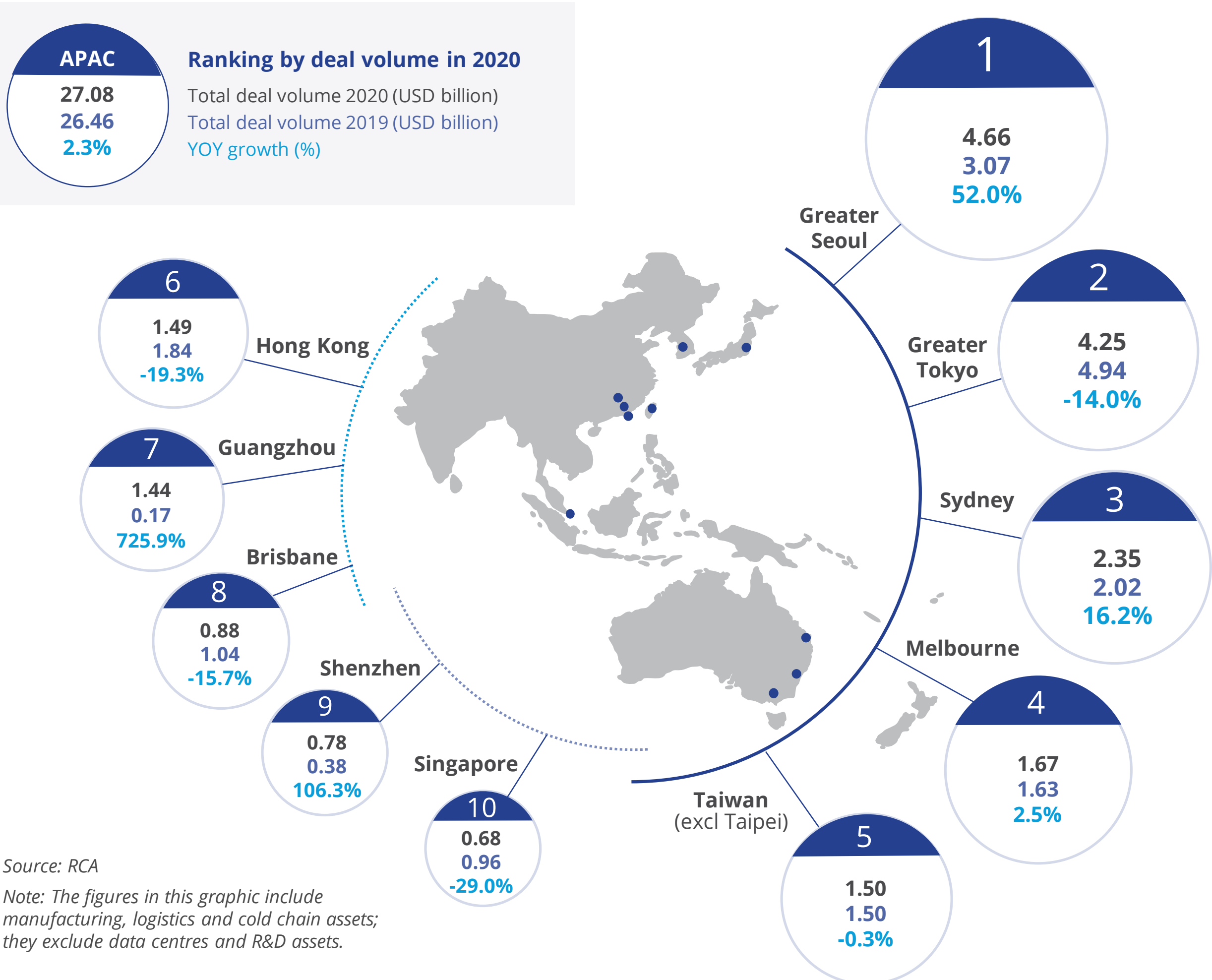


Australia

- Macro demand drivers remain favourable and we expect elevated leasing activity and rent growth to pick up in 2021.
- We expect yield compression over the next 12 months. Cold storage should attract high investor demand.

For more information, please refer to p.19-20

Top 10 industrial and logistics APAC cities in 2019 and 2020



Source: RCA

Note: The figures in this graphic include manufacturing, logistics and cold chain assets; they exclude data centres and R&D assets.

Strong demand is driving lower yields in the sector

01

Leasing activity in logistics should grow further in 2021, supported by demand from e-commerce and 3PLs. Supply in most cities is limited. Hence, we expect **demand to outstrip supply** in the short term, notably in the Grade A class. This market situation **favours landlords**.

02

Rents should rise across APAC in 2021, except in Hong Kong. In China, rents in the big cities should **pick up** as economic growth and new, more efficient ware-house designs fuel demand. Notably, in Shanghai, we see rents rising **3.0%** in 2021.

03

Sydney and Melbourne had favoured tenants. Looking ahead, however, prospects for demand seem bright, and we expect growth in effective rents of **1.0-2.5%** in 2021 after falls of 3.0-5.0% in 2020.

04

Initial yields for logistics assets range from **3.0%** to over **8.0%**. Given rising rents and the positive demand-supply balance, we believe yields will **decline further** over the next few years, notably in China. Logistics assets are quite scarce in Shenzhen and Beijing.

05

Due to lower deal volumes, prices and yields of manufacturing and cold chain assets are **hard to track**, though this should change as deals increase. In China, cap rates for cold chain assets are typically 0.5-1.0pp higher than for dry storage units.

All information of this report as of 16 April 2021

1 *China Plus One* Strategies – Significance for Industrial Property

China Plus One is a term referring to business strategies by which companies expand their operations to another location outside China, the economic powerhouse of Asia Pacific. Access to new markets, rising costs, risk diversification and tax incentives are some of the main reasons for companies based in China to adopt such strategies.

Companies usually consider wage levels, operating set-up costs, government incentives, land costs and real estate costs. These factors make emerging markets like **Vietnam, Thailand, Malaysia, the Philippines and Indonesia** in South East Asia and **Bangladesh and India** in South Asia attractive for companies seeking to expand beyond China. However, developed markets such as **Japan, Taiwan**, and **South Korea** are also trying to attract enterprises from China through incentives. For high-technology manufacturing, these markets make sense despite their higher cost base.

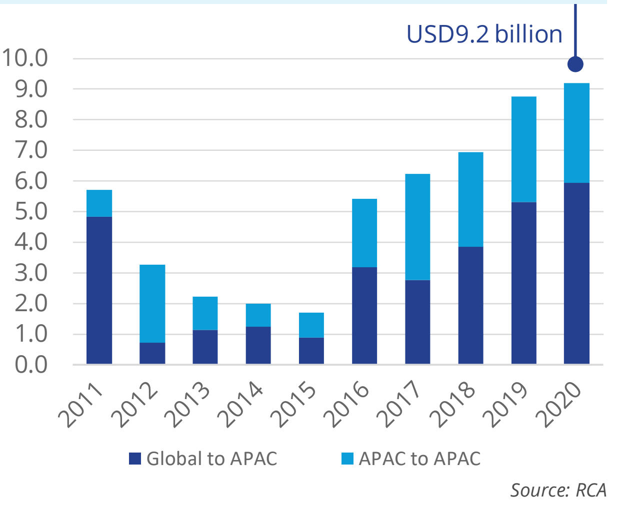
Capital flows in industrial

- In 2019, APAC received **31% of inward foreign direct investment** (FDI) according to the World Investment Report 2020 from UNCTAD (United Nations Conference on Trade and Development), highlighting the region's attractions to multinational enterprises.
- Within APAC, **the bulk of FDI inflows (80%) went to East Asian and South East Asian markets**.
- Manufacturing made up **over 50% of greenfield FDI inflows** in APAC with key beneficiaries including the oil refining, chemicals, IT and electronics, and automotive sectors.
- High FDI into APAC manufacturing and strong capital flows point to the **growing importance of industrial property as an asset class.**

APAC: Capital flows between markets in industrial and logistics property (in USD billions)

10 year high

Data from Real Capital Analytics (RCA) show that aggregate capital flows in APAC's **industrial and logistics property sector reached USD9.2 billion in 2020, up by 5% over 2019** to a ten-year high, despite the COVID-19 recession.



Source: RCA

Colliers manufacturing attractiveness index

Colliers has devised an index to determine the attractiveness of 31 cities across APAC for manufacturing occupiers. The index incorporates GDP, manufacturing gross value added and wages, logistics networks and rents, total and working population, consumer spending and disposable incomes, doing business, technology market capitalisation, and growth forecasts over 2020-2025. The chart below illustrates the cities and their ranking in the index for both China itself and developed and emerging *China Plus One* markets. Cities **scoring 3.0 and above** are highlighted.

"Industrial occupiers have the opportunity to locate high-technology manufacturing operations in centres such as Singapore, Tokyo and Taipei, as well as China. Vietnam (Ho Chi Minh City) and Indonesia (greater Jakarta) are attractive for other manufacturing operations."

Lynus Pook, Senior Director
Regional Industrial Advisory | Asia

Key manufacturing sectors

- **China** is the world's top manufacturing nation.
- **Taiwan** is known for its semiconductor industry. The key metropolitan area covers the cities of Taipei, New Taipei and Keelung.
- **South Korea** focuses on high-technology electronics and semiconductors.
- Within South East Asia, **Thailand** is known for its automotive sector.
- **India's** pharmaceuticals prowess has come to the forefront during COVID-19.
- **Singapore** focuses on high-tech manufacturing.
- **Indonesia's** automotive sector is second to Thailand in South East Asia.
- Whilst not *China Plus One* markets, **Australia** and **New Zealand** have strong food and beverage industries. Melbourne, the Australian city ranking highest in our index, has seen rising demand from the food and pharmaceutical sectors.

5.0 Most attractive → **1.0** Least attractive

Markets scoring **3.0** and above

China	
Shanghai	**3.9**
Shenzhen	**3.8**
Guangzhou	**3.7**
Tianjin	**3.6**
Beijing	**3.4**
Chengdu	**3.4**

Japan	
Tokyo	**3.4**
Osaka	2.5
Nagoya	2.1
Yokohama	2.1

South Korea	
Seoul	2.7
Busan	2.4

Hong Kong SAR[1]	
Hong Kong	2.7

Taiwan	
Greater Taipei	**3.2**

Australia	
Melbourne	**3.0**
Perth	2.8
Sydney	2.6
Brisbane	2.5

New Zealand	
Auckland	2.4

India	
Bengaluru	**3.1**
Delhi	2.9
Hyderabad	2.8
Mumbai	2.8
Kolkata	2.8
Chennai	2.7

South East Asia (City)	
Singapore	**3.4**
Ho Chi Minh City	**3.2**
Jakarta	**3.1**
Kuala Lumpur	2.9
Manila	2.7
Bangkok	2.5

Source: Oxford Economics, Bloomberg, World Bank, Numbeo, and Colliers

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

Why emerging markets?

Emerging *China Plus One* markets (India, Vietnam, Indonesia, Thailand and the Philippines) present the following attractions for manufacturing occupiers:

1 Manufacturing represents **15-26% of GDP** in these markets, growing at about 6% p.a. in contrast to leading Chinese cities growing at under 4.5% p.a.

2 While aggregate industrial transaction volumes only reached USD250 million in 2020, they have been **growing 25%+** p.a.

3 Internet penetration rates are under 70%, versus over 85% in developed markets. This indicates better prospects for **e-commerce growth** and consequently manufacturing output.

Challenges remain, Thailand is the only emerging *China Plus One* market within the top 50 in the World Bank's Ease of Doing Business ranking. Besides economic incentives, these governments should create and foster a conducive business environment.

Opportunities for occupiers and owners

Occupiers

- Based on Colliers' manufacturing attractiveness index, **most leading Chinese cities** are strong manufacturing locations.
- Within the wider APAC region, the other cities ranking within the top 10 on the manufacturing attractiveness index are **Singapore**, **Tokyo** and **Greater Taipei**. These cities are primarily attractive for high-technology manufacturing, while **Melbourne** is seeing a resurgence in food and pharmaceutical manufacturing.
- Among emerging *China Plus One* markets, **Ho Chi Minh City** ranks within APAC's top 10 cities. **Jakarta, Bengaluru** and **Delhi NCR** also rank among the top 15. These cities are attractive for other manufacturing activities.

Owners

- Investors and developers are already active in the key APAC manufacturing markets. Deal volumes of manufacturing assets in APAC have grown at **19% p.a**. since 2011.
- We think **Singapore, Tokyo, Taipei, Ho Chi Minh City** and **Bengaluru** are especially likely to attract industrial occupiers, creating new opportunities for owners.
- Existing asset owners should be willing to invest in **upgrading** their facilities to attract international occupiers.
- For emerging *China Plus One* markets, investors may seek to partner with occupiers and invest in **built-to-suit facilities**.
- Investors may also consider **sale and leaseback** of manufacturing facilities in both the developed and emerging *China Plus One* markets with existing multinational occupiers.

"Over the course of the last 24 months, we have assisted many multinational manufacturing companies acquire land and establish built-to-suit operations in these specific emerging markets."

Rick Thomas, Managing Director
Emerging Markets | Singapore

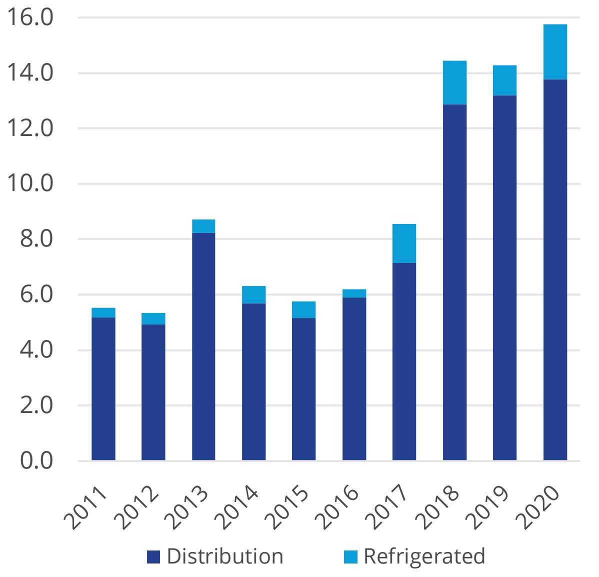
2 | Logistics Property: Last Mile and Cold Chain Segments

A recent report from Forrester predicts that online grocery shopping in APAC will grow at **30% p.a.** from 2019 to 2024, and suggests that it is one of the fastest growing e-commerce segments.

This surging growth in retail e-commerce has been the driving force behind greatly increased activity in the logistics market (i.e., distribution), and hence behind rapid growth in demand for space in logistics warehouses.

Improvements in the last mile delivery segment of the logistics market, (i.e., the part of distribution networks closest to customers), have fuelled growth in the sector overall. Another segment expanding quickly is **cold chain**, which is refrigerated or air-conditioned storage and distribution, reflecting rising demand for shipments of fresh food and pharmaceuticals products.

Growth in logistics and cold chain deal volumes (USD bn)



Source: RCA

Exceptional growth: Key facts and figures

Aggregate retail e-commerce to grow **1.7x** from USD1.5 trillion in 2019 to USD2.5 trillion by 2024. Online grocery is the fastest-growing category, and is predicted to expand by 30% p.a.[1]

APAC last mile delivery segment to grow **4.6x** from USD0.5 billion in 2018 to USD2.3 billion by 2027, implying average annual growth of **19%**.[2]

APAC cold chain segment to grow **2.3x** from USD111 billion in 2020 to USD255 billion by 2026, implying average annual growth of **15%**.[3]

Colliers' survey of professionals in the Philippines finds that **over 75%** are prepared to pay more for same day delivery.[4] Similarly, over 60% of Southeast Asian shoppers are ready to pay more for same day delivery.[5]

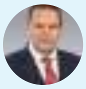
Logistics assets account for **over 60%** of combined industrial and logistics deals in APAC.[6]

Although transaction volumes for last mile assets are limited, the growth in online shopping and the rapid growth of cold chain logistics point towards **rising transactions** from now on.

Transaction volumes for cold chain storage facilities totaled **USD2.0 billion** in 2020 and have been growing at an average annual rate of 21% since 2011.[6]

[1] *Source: Forrester*
[2] *Source: Business Market Insights*
[3] *Source: IMARC Group*
[4] *Source: Colliers*
[5] *Source: PwC*
[6] *Source: RCA*

> *"The inner ring of Sydney is set to become Sydney's last mile logistics epicentre given the high population density and access to a large population base. Securing a site in this area maximises an occupier's last mile footprint by positioning the occupier closer to the end-user."*
>
> Gavin Bishop, Head of Industrial Capital Markets | Australia



Last mile property: key asset types

Last mile delivery is the transfer of goods from the warehouse or delivery hub to the end-user. The challenge for last mile facilities is that they must be very close to customers for fast delivery times. While urban warehouses are solutions, sometimes they may not be situated in the right location. Typically, last mile delivery facilities take the following formats:

Property Type	Characteristics	Location	Ownership	Occupiers
Urban warehouses	Full-specification logistics warehouses	Off-CBD and fringe CBD catering to the urban market	Local and international companies	Supermarket retailer, Coles, employs this strategy in Sydney and Melbourne
Retail outlets	Part of retailers' networks, typically the back-of-house of retail stores	Predominantly in residential neighbourhoods	Local and international companies	Fairprice in Singapore, Woolworths in Australia, Alibaba through Hema stores in China
Micro fulfilment centres or front distribution centres in China	Retail outlets, warehouses, repurposed commercial real estate	Predominantly in residential neighbourhoods	Individual or strata-titled	E-commerce majors as well as 3PL service providers
'Dark' stores	Retail outlets that do not allow customers to browse or purchase	Residential neighbourhoods and urban centres	Individual or strata-titled	Large retailers, e-commerce majors as well as 3PL service providers

Source: Colliers

Market perspective

In Australia, for centrally located prime last mile properties, annual rents range from USD100-124 per sq metre in Sydney and approximately USD77-93 per sq metre in Melbourne. Smaller facilities (<2,500 sq metres) have higher rents.

In the rest of APAC, rents depend on location and original use of the premises. For instance, in China, front distribution centres are often located in shopping malls, and so are subject to **retail rents** (much higher than typical logistics rents).

Last mile facilities by their very nature are smaller units, with most having sizes of **2,000 sq metres or below**. These assets are typically owned by individual entities or are located within strata-titled buildings.

Given the fragmented nature of these facilities and small holding sizes, **direct investment in last mile facilities is challenging.**

Characteristics of last mile assets

Location

Located in or near high-density residential areas or major roadways for fast delivery times.

Building quality

Facility must process large volumes of goods and allow efficient flow both in and out of the premises.

Good ceiling heights

Should accommodate vertical racking systems. Speed bays and wider column spacing also allow efficient racking systems.

Cross-docking

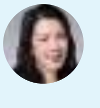
Minimising handling is critical for food and other perishable goods. Cross-docking facilities allow for efficient and smooth transfer of goods.

Energy efficiency

Operating cost is a major concern. Since 30-50% of delivery costs take place in the last mile, asset owners and investors should employ sustainable solutions to safeguard facilities against challenges in the future.

"China has one of the world's highest levels of retail e-commerce: 30% of China's retail sales were online in 2020.[1] Due to the growing emphasis on same day delivery, we expect usage of front distribution centres – the last stage of logistics distribution in China – to maintain rapid expansion over the next few years."

Tammy Tang,
Managing Director | China



[1] *Source: State Statistics Bureau*

Cold chain property: A rising asset class

Cold chain warehouses are used to store, pack, and distribute temperature-sensitive and perishable products in a controlled environment.

APAC's large population is a key demand driver in this sector. Forecasts from Oxford Economics suggest that domestic consumption expenditure will grow by **6.2% annually between 2021 and 2025**, with **China and India** leading the trend with forecast annual growth rates of **8.7% and 8.2%, respectively**.

Government support also plays a role. For example, the Indian government offers 100% tax deduction on profits earned in cold chain for the first five years, followed by a 25%-30% deduction for the next five. In addition, 100% FDI is allowed within the sector. Finally, the government grants financial assistance of 35%-50% of the admissible cost of cold chain projects[1]. With the current emphasis on vaccine distribution, we expect to see more government initiatives in the sector.

Four cold chain asset types

Frozen	Cold storage	Fresh produce	Air-conditioned
(-16℃ to -26℃)	(-1℃ to 4℃)	(0℃ to 8℃)	(17℃ to 22℃)

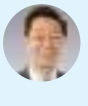
These facilities are used for food and perishable produce, pharmaceutical products, and other goods such as chemicals, wine or works of art. Typical occupiers include cold storage logistics specialists, 3PLs, supermarkets or other retailers, and end-users such as grocery, FMCG and pharmaceutical companies.

What are the cold chain challenges?

Transaction volumes of cold chain assets have been growing across APAC, reflecting rising demand and the rental premium (**up to 100% or even higher**) that dedicated cold chain assets command over dry warehouses. However, some of the development challenges in this sector include:

"Demand for cold chain facilities has been surging across APAC as shipments of food and perishable goods rise, and this will continue. Investors and developers should embrace the opportunity in the cold chain segment to achieve a premium rental outcome."

CK Lau, Managing Director |
Valuation & Advisory Services | Asia



Limited land supply

Securing a suitable site for new cold storage warehouses is a major challenge – perhaps the biggest overall for both developers and occupiers. In China, landlords and tenants are retrofitting existing warehouses to meet cold chain demand.

High investment needs

Design complexity and the use of high-quality materials such as insulation mean construction costs are up to three times higher than traditional warehouses. Construction duration is also appreciably longer.

High operating costs

Specialised cooling and air conditioning systems require higher power and greater maintenance than traditional warehouses. High technical design standards and specifications are key to reducing costs.

[1] *Source: Govt Incentives and Schemes for the Cold Chain Industry*

Value-add opportunities

As cold chain facilities have higher profit margins, conversions are popular in China. Typically, operators obtain long leases in Grade A dry warehouses at market rates. The facility is then retrofitted for cold storage and sublet to end-users at a 50-100% rent premium.

Traditionally, developers have acquired land to build dry warehouses, but they can **now partner with specialist restructurers to refit the assets for cold chain**. We believe property investors and private equity firms will consider investment in cold chain operating companies.

Despite **high investment needs and machinery maintenance costs**, this strategy should prove attractive to cold chain operators and investors alike. Investors should note, however, that the **rental premium is likely to narrow over time as more cold chain facilities are constructed**.

Typical Conversion Process

High standard warehouse → *10-20 years* — Leased at rents of RMB1.50-1.90 per day → **3rd party cold chain restructurer (operating company)** → *3+3 years* — Rent + renovation cost + profit (RMB3.0-3.5 per day, excluding electricity) → **End-user**

Source: Colliers

Opportunities for occupiers and owners

Occupiers

- Depending on the market, occupiers have a choice of urban warehouses, retail outlets, micro fulfilment centres (front distribution centres) and dark stores for last mile delivery.
- Urban warehouses are an organised sector and leasing deals can be facilitated through existing logistics service providers.
- Micro fulfilment centres are **usually owned by individual entities or located in strata-titled buildings**. For services offered via these centres, it is appropriate for occupiers to work with 3PL service providers.
- Cold chain is **more organised**. As a result, occupiers can shop around for the right solution to meet their requirements.

Owners

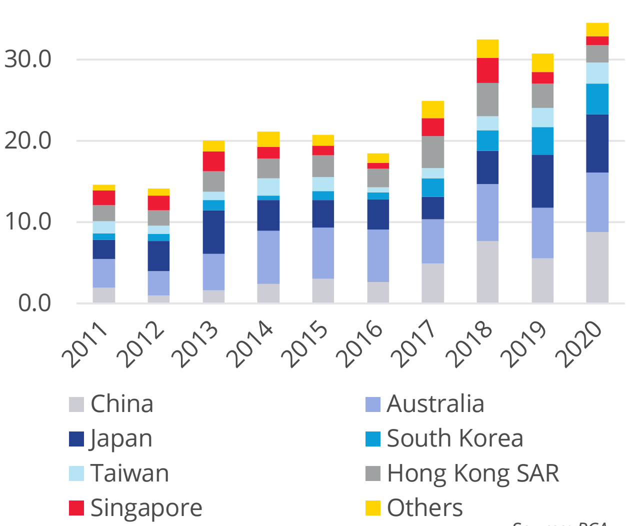
- Last mile facilities are mostly **fragmented**, and so direct investment is challenging. Investors should focus on **logistics warehouses on city fringes**, which act as hubs for the last mile.
- While cold chain is seeing surging growth, owners face **various challenges** in this segment, in particular limited land supply. The reward for investment in cold chain facilities is a **50-100%** rental premium, although this is likely to narrow over time.
- **Renovating and retrofitting** standard dry warehouses for cold storage is a short-term option for owners. In China, this may most easily be done in partnership with a specialist cold chain restructurer or operating company.
- In the long term, investors should look for viable locations to develop **dedicated cold chain warehouses** in the peripheries of urban areas.

3 | **Investment Perspectives:** Sector Growth Creates Bright Opportunities for Owners

Transactions up 10% p.a. since 2011; high growth to persist

- Aggregate transactions of industrial and logistics property reached USD34.5 billion in 2020 (see chart below). This was **2.4x** the 2011 total of USD14.5 billion, implying average annual growth of **10%** over the last decade.
- The appearance of **new manufacturing hubs** (see pages 6-8 of this report) should drive further growth in manufacturing property deals, while **expansion in the last mile and cold chain** market segments (see pages 9-13) should drive further growth in logistics property deals.
- Australia, Japan, Hong Kong and Singapore are often perceived as the mature markets in the sector. However, some of these markets are still **growing strongly**. Notably, Australia posted an **18%** increase in deal volumes in 2020.
- Transactions in China and South Korea have grown at average annual rates of **18%-19%** over the past decade. However, **both markets saw further growth in 2020:** 58% for China and 12% for South Korea. We believe that this high growth can continue.
- The “others” category in the chart below includes India, Thailand, Indonesia, Vietnam and New Zealand. Deal volumes in these markets are still small, at USD1.7 billion in 2020. However, these markets may well have the **greatest growth potential** looking forward.

APAC Industrial and Logistics Transaction Volumes (2011 – 2020) in USD billions

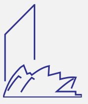


Source: RCA

Korea Shines in 2020; Australia also strong

As the chart overleaf illustrates, by city, **Greater Seoul (Seoul, Incheon and the surrounding cities)** in South Korea led investment activity in the industrial and logistics sector in APAC in 2020. This area posted **52%** growth in deal volumes to USD4.66 billion.

Ranking second in APAC in 2020 was **greater Tokyo**, albeit with a 14% YOY drop in deal volumes to USD4.25 billion.



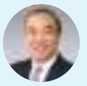
Sydney and Melbourne ranked third and fourth place among APAC cities, with growth in deal volumes of **16%** and **3%,** respectively.

Also noteworthy is **strong activity in South China**. Shenzhen and Guangzhou reported growth in transactions of 106% and 726%, respectively (in the latter case, from a low base).

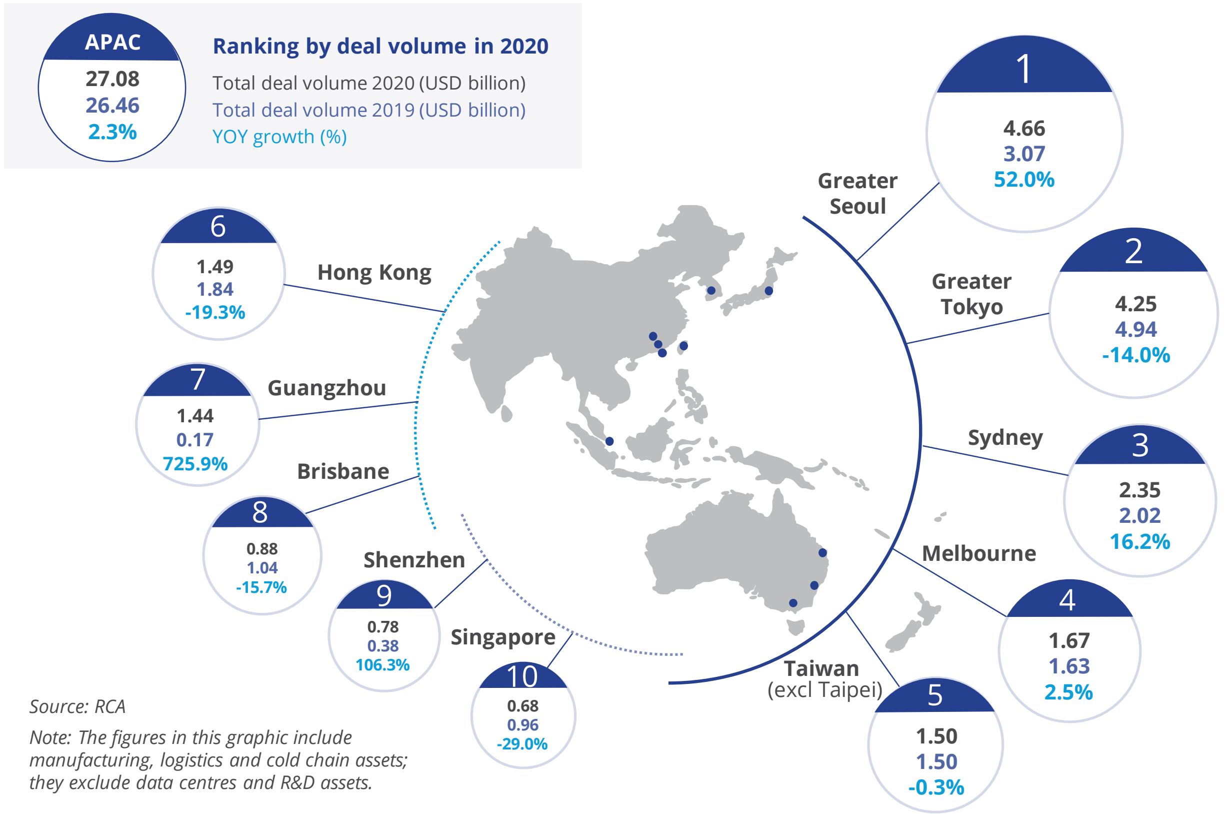
“The long-term outlook for the industrial and logistics market in the region is incredibly positive. Investor appetite and demand is expected to remain robust as they continue to search for yield amidst an economic backdrop of low interest rates and much dry powder to deploy.

Singapore, Tokyo, Taipei, Melbourne and Bengaluru present investors with interesting opportunities in manufacturing assets, while the refitting of dry warehouses for cold chain in China and the upgrading of old stock in Japan should reap rewards for logistics assets.”

Terence Tang, Managing Director
Capital Markets & Investment Services | Asia



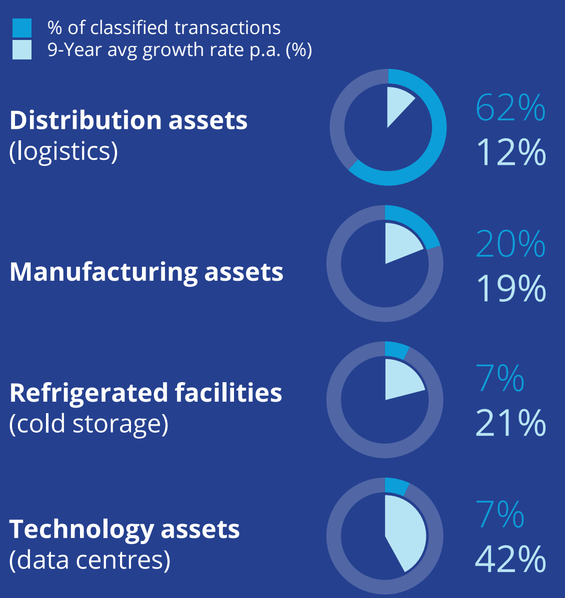
Top 10 APAC industrial and logistics cities in 2019 and 2020



Source: RCA

Note: The figures in this graphic include manufacturing, logistics and cold chain assets; they exclude data centres and R&D assets.

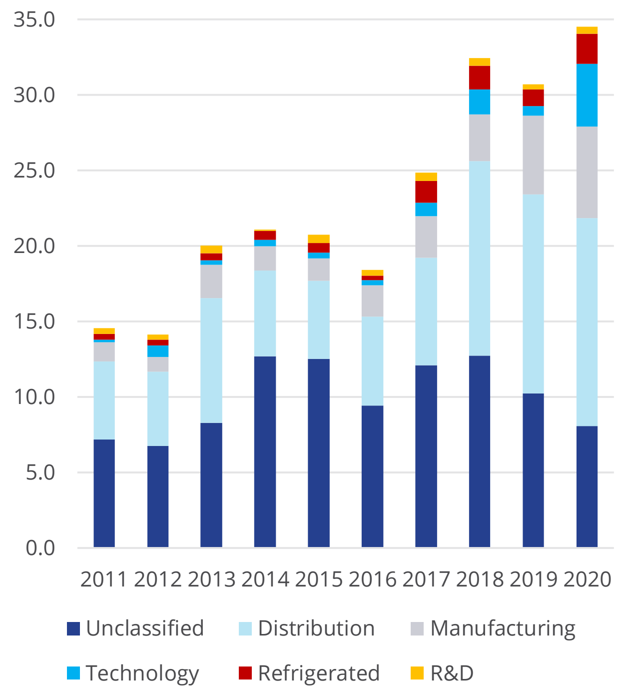
Key market segments 2011-2020



Growth in data centres is itself a sign of **fast growth in e-commerce**, and adoption of 5G, the Internet of Things, video streaming and gaming. This growth should indirectly boost demand for manufacturing and distribution facilities, given the need to fabricate and store end-products.

Source: RCA

APAC industrial and logistics transaction volumes (2011 – 2020) in USD billions by category



Source: RCA

Notes: "Unclassified" refers to industrial assets whose use has not been specified, "Distribution" refers to logistics assets, "Technology" refers to data centres, "Refrigerated" refers to properties with cold storage facilities, and "R&D" refers to assets occupied by medical, lab, and scientific research purposes

APAC Logistics: forecasts and trends for occupiers and investors

		YE 2020	2021	2022	2023
Delhi-NCR	Rent	2.9	◀▶	◀▶	▲
Delhi-NCR	Capital Value	435	◀▶	◀▶	▲
Delhi-NCR	Initial Yield	7.5%–8.5%	◀▶	◀▶	▼
Mumbai	Rent	3.0	◀▶	▲	▲
Mumbai	Capital Value	424	◀▶	▲	▲
Mumbai	Initial Yield	8%–9%	◀▶	◀▶	▼
Bengaluru	Rent	2.4	◀▶	◀▶	▲
Bengaluru	Capital Value	339	◀▶	◀▶	▲
Bengaluru	Initial Yield	8%–9%	◀▶	◀▶	▼
Ho Chi Minh City	Rent	5.0	▲	▲	▲
Ho Chi Minh City	Capital Value	750	▲	▲	▲
Ho Chi Minh City	Initial Yield	8.0%	▼	▼	▼
Singapore	Rent	8.2	▲	▲	▲
Singapore	Capital Value	4,100	▲	▲	▲
Singapore	Initial Yield	6.0%	◀▶	◀▶	◀▶
Jakarta	Rent	4.9	◀▶	▲	▲
Jakarta	Capital Value	563	◀▶	▲	▲
Jakarta	Initial Yield	7.8%	◀▶	◀▶	▲
Greater Tokyo	Rent	12.3	▲	◀▶	◀▶
Greater Tokyo	Capital Value	3,950	▲	▲	◀▶
Greater Tokyo	Initial Yield	3.5-4.0%	▼	▼	◀▶
Beijing	Rent	8.1	▲	▲	▲
Beijing	Capital Value	1,890	▲	▲	▲
Beijing	Initial Yield	5.1%	▼	▼	▼
Shanghai	Rent	7.0	▲	▲	▲
Shanghai	Capital Value	1,580	▲	▲	▲
Shanghai	Initial Yield	5.3%	▼	▼	▼
Greater Seoul	Rent	8.0	▲	▲	▲
Greater Seoul	Capital Value	1,600	▲	▲	▲
Greater Seoul	Initial Yield	4.5%	▼	◀▶	◀▶
Taipei	Rent	13.1	▲	▲	◀▶
Taipei	Capital Value	2,720	▲	▲	◀▶
Taipei	Initial Yield	3.4%	▼	◀▶	◀▶
Hong Kong SAR	Rent	17.1	▼	▲	▲
Hong Kong SAR	Capital Value	6,290	▼	▲	▲
Hong Kong SAR	Initial Yield	3.3%	▲	▲	▲
Melbourne	Rent	6.5	▲	▲	▲
Melbourne	Capital Value	1,540	▲	▲	▲
Melbourne	Initial Yield	5.1%	▼	◀▶	◀▶
Sydney	Rent	9.9	▲	▲	▲
Sydney	Capital Value	2,640	▲	▲	▲
Sydney	Initial Yield	4.5%	▼	◀▶	◀▶
Auckland	Rent	7.3	▲	▲	▲
Auckland	Capital Value	2,300	▲	◀▶	◀▶
Auckland	Initial Yield	4.5%	▼	◀▶	◀▶
Shenzhen	Rent	7.6	◀▶	▲	▲
Shenzhen	Capital Value	1,600	▲	▲	▲
Shenzhen	Initial Yield	5.0%	▼	▼	▼
Guangzhou	Rent	6.3	◀▶	◀▶	▲
Guangzhou	Capital Value	1,400	▲	▲	▲
Guangzhou	Initial Yield	5.4%	▼	▼	◀▶

Note:
1. *Rent refers to Grade A and/or more premium grade warehouse net effective rent on a GFA basis, except for Taipei which is reporting industrial park rent. Singapore rent refers to average rents for the overall warehouse market.*
2. *Capital values are based on Grade A and/or premium grade warehouse lettable area on a GFA basis.*
3. *Yields shown are initial yields, i.e net effective rent over price. Cap rates based on net operating income including operating costs will be slightly lower.*

Rent	**USD/sq m/month** YE 2020	2021	2022	2023
Capital Value	**USD/sq m** YE 2020	2021	2022	2023
Initial Yield	**%** YE 2020	2021	2022	2023

Source: RCA, Colliers

Strong demand is driving lower yields in the sector

01

Leasing activity in logistics should grow further in 2021, supported by demand from e-commerce and 3PLs. Supply in most cities is limited. Hence, we expect **demand to outstrip supply** in the short term, notably in the Grade A class. This market situation **favours landlords**.

02

Rents should rise across APAC in 2021 except in Hong Kong. In China, rents in the big cities should **pick up** as economic growth and new, more efficient warehouse designs fuel demand. Notably, in Shanghai, we see rents rising **3.0%** in 2021.

03

Sydney and Melbourne had favoured tenants. Looking ahead, however, prospects for demand seem bright, and we expect growth in effective rents of **1.0-2.5%** in 2021 after falls of 3.0-5.0% in 2020.

04

Initial yields for logistics assets range from **3.0%** to over **8.0%**. Given rising rents and the positive demand-supply balance, we think yields will decline further over the next few years, notably in China. Logistics assets are quite scarce in Shenzhen and Beijing.

05

Due to lower deal volumes, prices and yields of manufacturing and cold chain assets are hard to track, though this should change as deals increase. In China, cap rates for cold chain assets are typically 0.5-1.0pp higher than for dry storage units.

Opportunities for asset owners and investors

China Plus One strategies

- Companies adopt *China Plus One* strategies for risk mitigation, cost reduction, and access to new markets.
- Based on the Colliers Manufacturing Attractiveness Index, good locations for advanced manufacturing include **most leading Chinese cities plus Singapore, Tokyo** and **Greater Taipei**. Also ranking among the top 15 in APAC is **Melbourne.**
- Manufacturing hubs in emerging markets include **Ho Chi Minh City, Jakarta, Bengaluru** and **Delhi NCR.** These cities are attractive sites for other manufacturing operations.

Investors

Opportunities for asset owners and investors

- High capital flows and deal volumes in the industrial and logistics sector show the **rising importance of manufacturing property** as an asset class. Transactions of industrial assets in APAC have grown at 19% p.a. since 2011.
- New manufacturing hubs **(Singapore, Tokyo, Taipei, Melbourne, Bengaluru)** should attract high-quality industrial occupiers, creating new **investment and development opportunities** for owners.
- Industrial deal volumes remain well below logistics deal volumes, so yields and prices in this sub-sector are hard to track.

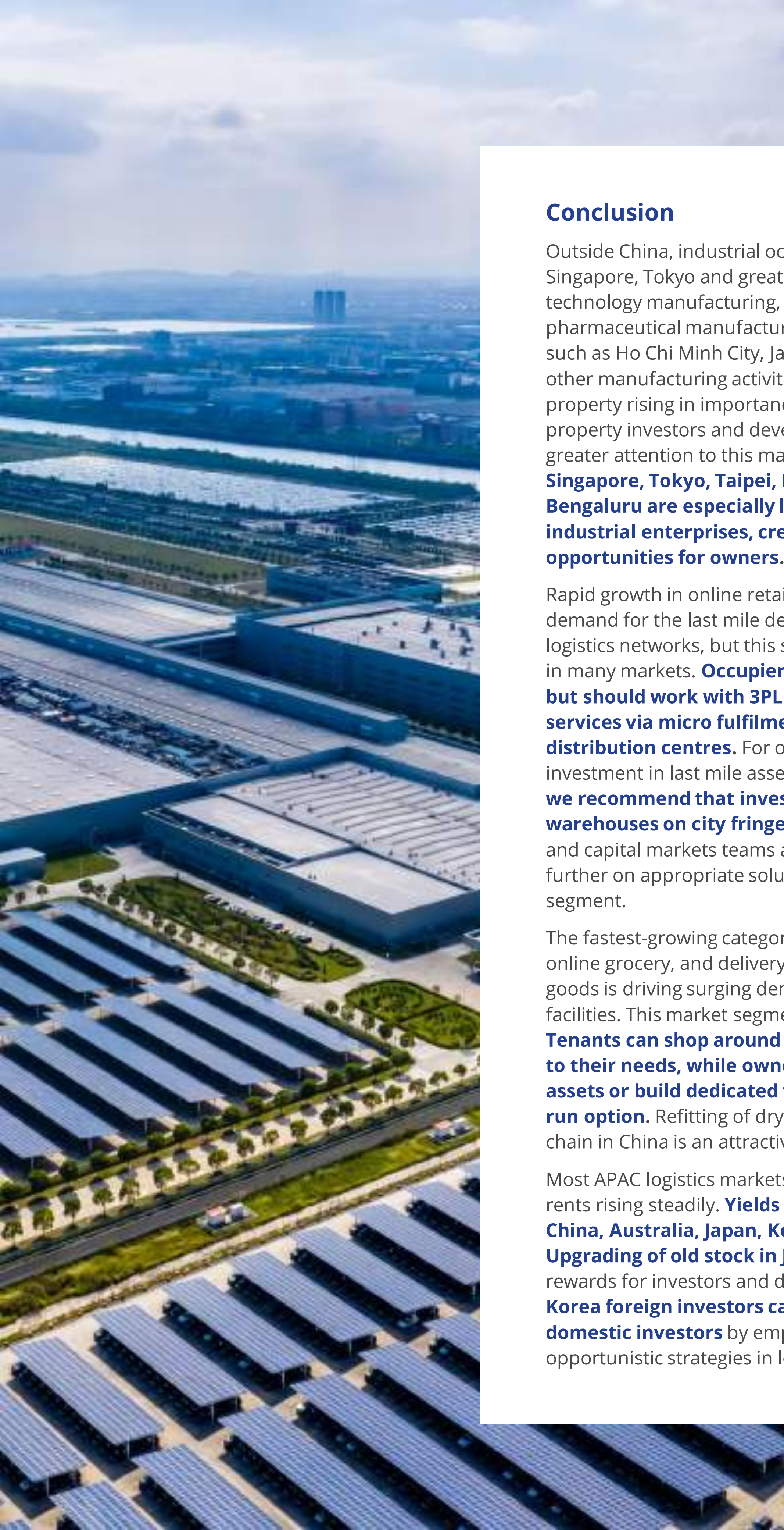
Logistics property: Last mile and cold chain segments

- Over 2019-2024, online grocery shopping in APAC should grow by **30% p.a.**, driving demand for last mile delivery facilities.
- The cold chain segment is **growing fast**, driven by storage and distribution needs for food and perishable goods.
- Urban warehouses are an organised market. Most other last mile facilities are small and **fragmented**.
- Most logistics markets **favour landlords**, with high demand and limited supply.

Investors

Opportunities for asset owners and investors

- Direct investment in last mile assets is difficult. We advise investors to **focus on logistics warehouses on city fringes**.
- Despite ample challenges (see page 12), the reward for investment in cold chain assets is a **50-100%** rent premium, though this should narrow over time.
- **Retrofitting** standard dry warehouses for cold storage is a short-term option for owners. In China, this may be done in partnership with a specialist cold chain restructurer (see page 13).
- In the long run, investors should seek sites to develop **dedicated cold chain warehouses** on the edges of cities.
- Logistics rents are generally rising. Yields look set to **fall further** in China, Australia, Japan, Korea and Taiwan.
- **Japan** is notably underserved by logistics stock. In **Korea**, foreign firms can compete with domestic investors by focusing on logistics.



Conclusion

Outside China, industrial occupiers should target Singapore, Tokyo and greater Taipei for high-technology manufacturing, Melbourne for food and pharmaceutical manufacturing, and emerging cities such as Ho Chi Minh City, Jakarta and Bengaluru for other manufacturing activities. With manufacturing property rising in importance as an asset class, property investors and developers should pay greater attention to this market. **We think Singapore, Tokyo, Taipei, Ho Chi Minh City and Bengaluru are especially likely to attract industrial enterprises, creating new opportunities for owners.**

Rapid growth in online retail sales is driving demand for the last mile delivery facilities of logistics networks, but this segment is fragmented in many markets. **Occupiers have various options but should work with 3PL providers to offer services via micro fulfilment or front distribution centres.** For owners, direct investment in last mile assets is challenging, and so **we recommend that investors focus on logistics warehouses on city fringes**. Colliers' industrial and capital markets teams are available to advise further on appropriate solutions for entry to this segment.

The fastest-growing category of online retail is online grocery, and delivery of food and perishable goods is driving surging demand for cold chain facilities. This market segment is more organised. **Tenants can shop around for the right solution to their needs, while owners can refit existing assets or build dedicated warehouses as a long-run option.** Refitting of dry warehouses for cold chain in China is an attractive option for investors.

Most APAC logistics markets favour landlords, with rents rising steadily. **Yields should fall further in China, Australia, Japan, Korea and Taiwan. Upgrading of old stock in Japan** should also reap rewards for investors and developers, while in **Korea foreign investors can compete with domestic investors** by employing value-add or opportunistic strategies in logistics.

Appendix: Trends and opportunities across APAC markets

	Status	Prospects and options
Australia 	• After stagnating in 2020, rent growth should pick up in 2021 in most cities. Similarly, high leasing demand should help depress incentives. • Given the shift towards consumer staples, investors are seeking strong F&B occupiers. Assets including cold storage will continue to attract high investor demand.	• Macro drivers for industrial and logistics tenancy demand remain favourable for 2021 and we expect elevated leasing activity. • There exists a significant level of capital looking to expand or enter the market which will drive further yield compression over the next 12 months.
North China 	• Due to logistics land development restrictions in Beijing, we expect supply to remain limited, allowing further rent increases.	• Occupiers looking for space should focus on markets surrounding Beijing, such as Tianjin and Langfang. Investors and developers should follow suit.
East China 	• Demand remains strong across all logistics and industrial facilities types. • Cold chain facilities are in short supply. • Some of the logistics hubs serving central Shanghai are up to 60km away.	• Occupiers should retrofit warehouses with cold chain capacity if possible. • Asset owners should invest in greater automation to meet e-commerce demand.
South China 	• Logistics assets in Shenzhen are very scarce, because the local government has added no land supply. Demand is very firm, but there are very few transactions. • Export e-commerce platforms are now a key demand driver in South China (especially Guangzhou).	• Due to growth in cold chain, developers can retrofit portions of logistics warehouses into cold storage. • We recommend logistics landlords in the emerging submarkets near the transport hubs target the export e-commerce companies.
Hong Kong SAR 	• Investment demand improved over Q4 2020, and this should continue in 2021. • Institutional investors are becoming more active.	• The market is focusing on rising cold storage demand from supermarket retailers and logistics facilities for e-commerce operators.
Japan (Greater Tokyo, Greater Osaka) 	• Japan is underserved by quality logistics stock: modern assets make up under 10% of the total. However, the small Grade A clusters (e.g. Nagareyama/Kashiwa near Tokyo and Ibaraki City near Osaka) house advanced facilities. • Despite high new supply in 2020, Greater Tokyo vacancy has fallen to a record low of 0.2%. Greater Osaka vacancy is now below 3.0% and rents are rising at 7.5% YOY. • Last mile facilities are in short supply, with some e-commerce majors in Tokyo adopting makeshift solutions such as parking lots.	• The supply-demand balance should remain favourable in 2021/22, though with some pick-up in supply as large multi-tenant facilities are completed. • Tenants in Tokyo should seek space outside the central five wards for last mile facilities, notably in mixed-use developments. • Given low availability of logistics warehouses, investors may apply value-add strategies to older stock. It is common to demolish and rebuild. • For investors, sites closer to central areas of Tokyo command higher rents and are to be preferred.
Singapore 	• Economic rebound points to growth prospects in 2021. • Logistics warehouse rents should rise 1.3%, while factory rents should stay flat.	• Landlords should adopt Industry 4.0 guidelines and remodel to higher specifications while being flexible in lease negotiations.
South Korea (Greater Seoul) 	• New supply is concentrated in Incheon and Gyeonggi-do, due to proximity to Seoul. • Both domestic and foreign investors are showing rising interest in logistics. • Singapore and Hong Kong-based investors alone currently own 26 logistics properties in Korea.	• These markets offer occupiers options for manufacturing, logistics and cold chain. • Prices of prime logistics assets should rise over 2021, with yields falling. • Foreign investors may pursue value-add or opportunistic strategies in logistics to avoid competing with Korean institutions and for higher returns.

	Status	Prospects and options
Taiwan 	• Taiwan is an attractive location for advanced manufacturing, while technology and online shopping will transform the logistics market. • Northern Taiwan (Keelung, New Taipei City, Taipei, Taoyuan and Hsinchu) is the biggest logistics hub at present. • New clusters are emerging in the centre (Taichung) and south (Tainan).	• Retail and distribution groups should cooperate with 3PLs to strength their cold-chain networks. • Asset owners should adopt cloud data and AI to differentiate their services. • The demand for express delivery should drive city-level demand for micro fulfilment centres.
New Zealand 	• Demand for logistics facilities is driven by online retailing and requirements for supermarket groups. • Industrial investment assets have attracted high levels of investor interest resulting in yield compression.	• New hubs are being developed, where occupiers have design-build options. • Tight market conditions provide value-add or redevelopment opportunities. • We expect an increase in overseas investment activity as border restrictions are relaxed.
India (West) 	• Mumbai and Pune are key industrial hubs. Pune is seeing expansion by automotive groups, engineering, FMCG, 3PL and e-commerce. • Anticipating high growth, developers are acquiring land parcels to develop industrial parks in Pune.	• Relocation and new demand in Pune is taking a "flight to quality" approach due to limited good stock. Investors should focus on Grade A space in this market. • In Mumbai, we expect new logistics clusters along the Mumbai-Nasik highway, and Thane-Belapur Road.
India (South 	• Chennai is a key hub due to its port and the presence of global auto majors, while Bengaluru is the commercial centre of the south. • Big industrial and logistics developers like Indospace, Ascendas-Singbridge and Logos are boosting their presence in Chennai. Meanwhile Bengaluru is seeing new warehousing demand.	• Growth sectors in Chennai include renewables and electronics manufacturing. In Bengaluru, e-commerce majors and 3PLs drive demand. • We recommend investors to focus on e-commerce, 3PL, and FMCG occupiers due to growing domestic consumption in addition to export-driven industrials.
India (North) 	• Delhi National Capital Region is the north's industrial and logistics gateway. • Large developers like Allcargo Logistics, Capitaland, ESR and Indospace already have a presence and continue to expand due to resilient demand.	• Infrastructure initiatives like the new international airport at Jewar, Greater Noida and the proposed 700-acre transport hub in the vicinity, plus the Delhi-Mumbai Industrial Corridor, are set to transform supply chains in the region over the next five to six years.
Vietnam 	• Tangible demand is evident from international logistics service providers, which are creating greenfield development in collaboration with government authorities.	• As newer Grade A facilities become available, we expect overall rents to increase.
Indonesia 	• Led by automotive and logistics service providers, demand fell 46% in 2020. • Occupiers typically acquire land and build facilities to suit their operations. • Prices for industrial land fell 4.1% in 2020. With demand from the electrical vehicles and food sectors rising, we expect prices to rebound in 2021.	• Bekasi and Karawang should see increased demand. • Asset owners should focus on large occupiers by offering flexibility in price and deal terms. • E-commerce, logistics and consumer goods should also help drive demand.

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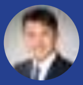

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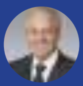

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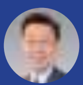

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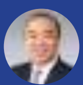

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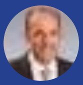

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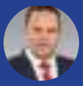

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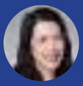

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