

Creating Resilience

Omnichannel Retail and its Impact on Singapore Real Estate

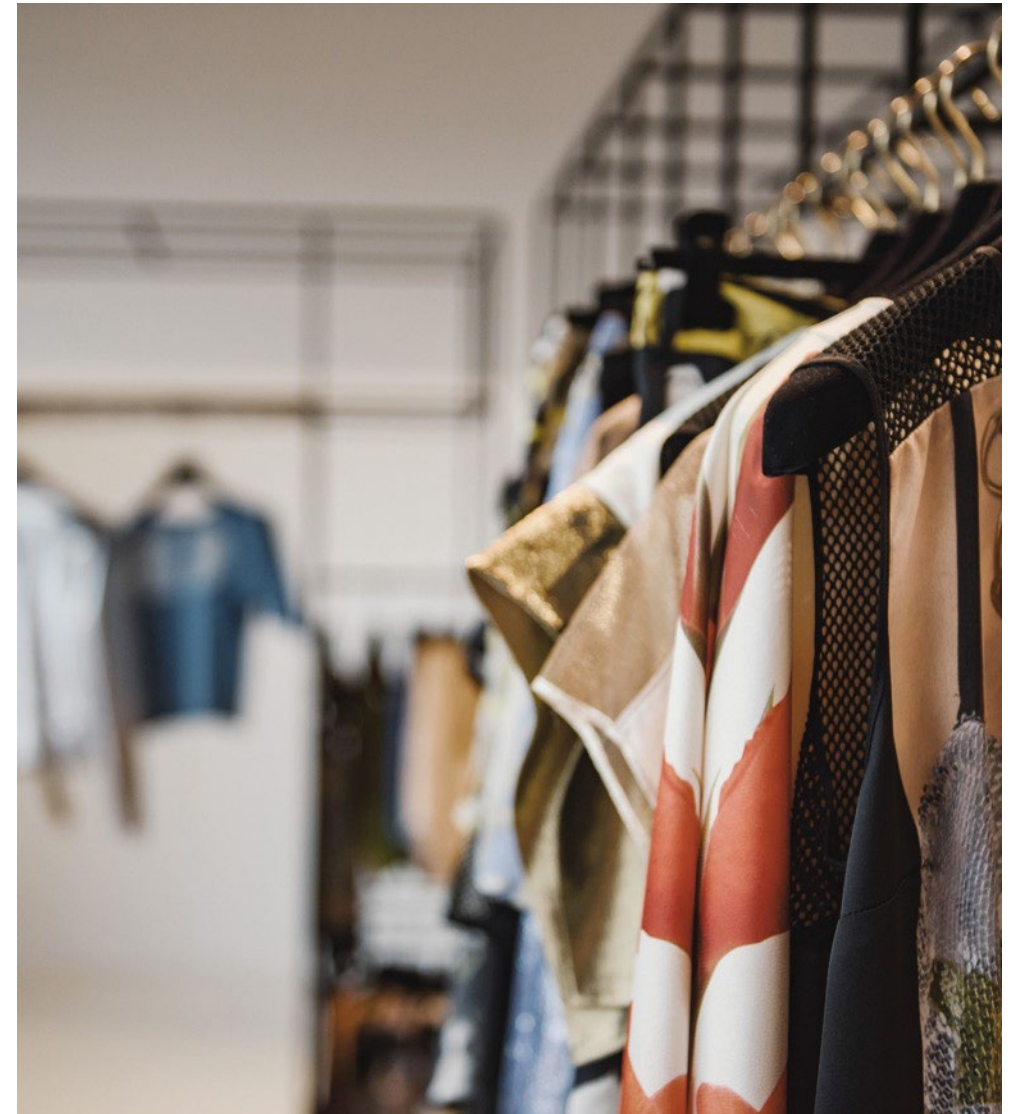
REPORT

CBRE RESEARCH
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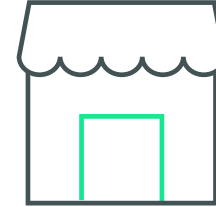
Executive Summary

Singapore e-commerce growth



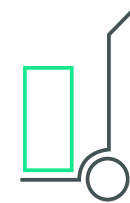
- From 2016 – 2021, Singapore e-commerce sales penetration grew from 5% in 2016 to around 16% in 2021, accelerated by the COVID-19 pandemic.
- CBRE Research forecasts online penetration rate to increase to 22% in 2026, driven by the increase in debit and credit card use/ adoption of digital wallets, and the vibrancy of the e-commerce ecosystem.

Impact on retail real estate



- Physical retail remains the dominant sales channel but stakeholders need to adapt to e-commerce trends.
- The retail store of the future is set to evolve from being a location where transactions are made, to a hub that provides a comprehensive customer experience.
- In Singapore, retail rents in most submarkets have declined over the pandemic, which makes it an opportune moment for online retailers to expand into brick-and-mortar stores and adopt omni-channel retail.
- With limited future supply, rents should improve gradually. Landlords should actively collaborate with tenants, adapt their tenant mix, and deepen customer engagement.

Impact on logistics real estate



- Growth in e-commerce, in addition to manufacturing and trade growth, should continue to drive demand for logistics real estate in Singapore.
- Known new logistics supply will average 2.3 million sq. ft. per year, or about 2% of existing stock and 40% below the 5-year historical average.
- Occupiers with large space requirements should plan their expansion two years in advance.
- CBRE Research advises occupiers and/or landlords to consider build-to-suit developments to secure quality space with desirable lease terms, and also adopt logistics technologies to improve productivity and operational efficiency.

01

E-commerce: Now and Future

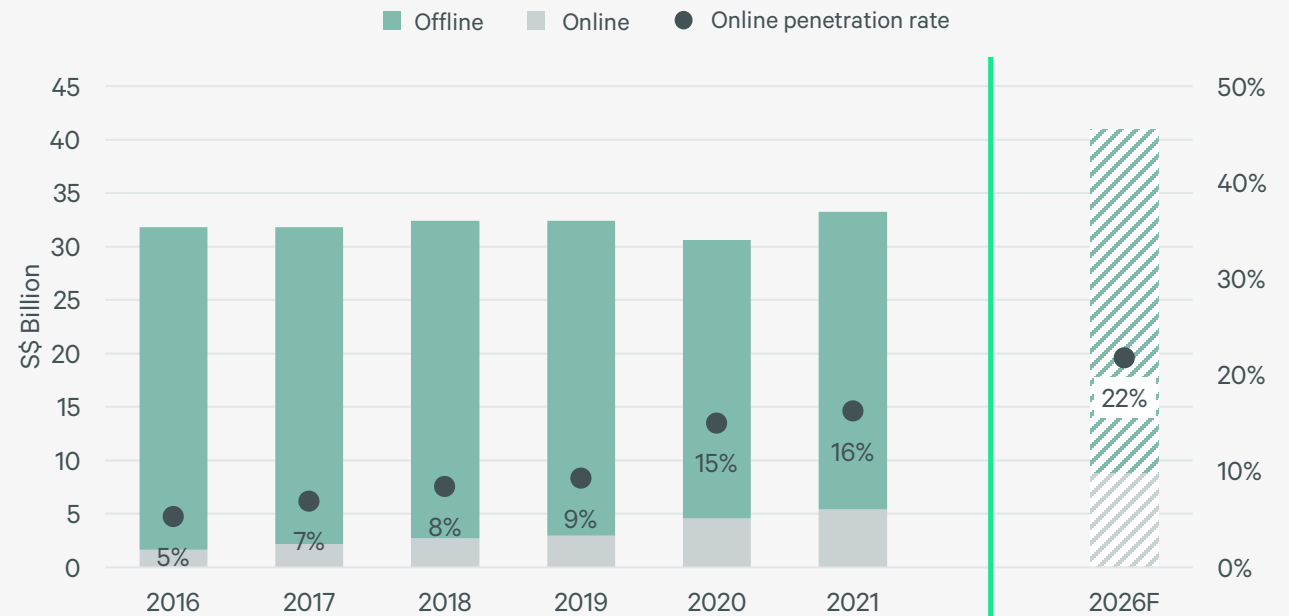
How big is the Singapore retail market?

- The size of the Singapore retail market totalled S\$33.263 billion in 2021. Based on Euromonitor’s estimates, it is projected to grow at 4.2% CAGR to 2026, driven by Singapore’s population and disposable income growth.
- The pandemic has helped accelerate the growth of e-commerce – from a 8-9% penetration rate pre-COVID, to an average of 16% by 2021. With the removal of most mobility restrictions since April 2022, the pace of e-commerce growth should normalise.
- CBRE Research forecasts online penetration rate to increase to 21.7% by 2026, on continued growth in debit and credit card use/ adoption of digital wallets, and the vibrancy of the e-commerce ecosystem. Nonetheless, physical retail should remain the dominant sales channel.

10.6% projected CAGR between 2021 – 2026F for online sales

2.8% projected CAGR between 2021 – 2026F for offline sales

Figure 1: Singapore’s retail market size

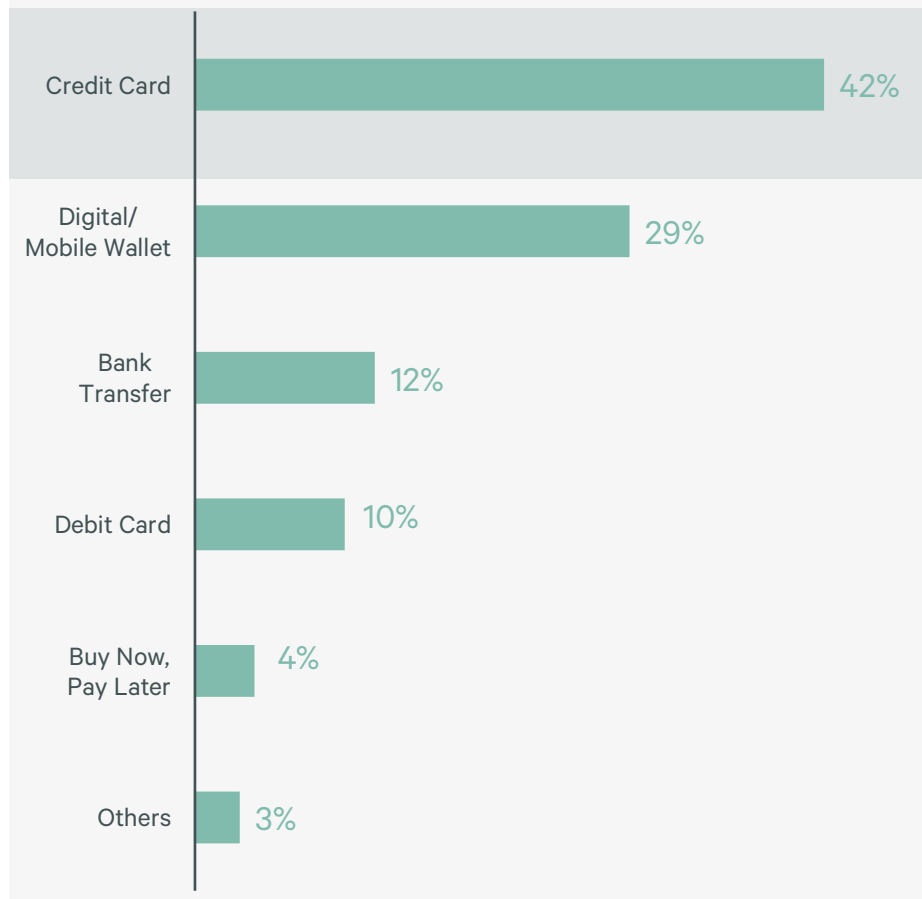


Source: Euromonitor, CBRE Research, October 2022

Rise of digital wallets, bank transfer and Buy Now, Pay Later in Singapore

- The availability of various cashless payment methods have enabled consumers to partake in e-commerce.
- In affluent Singapore, while credit cards retained their e-commerce market share lead of 42%, digital/ mobile wallets, bank transfer and Buy Now, Pay Later (BNPL) payment methods are growing rapidly. These are expected to continue growing their presence through 2025.
- Many e-commerce platforms have introduced their own digital wallets, and are increasingly partnering with BNPL providers.
- The ease of bank transfer via FAST (Fast and Secure Transfers) and the open API architecture of P2P service PayNow and PayNow Corporate is likely to result in continued growth in such payment methods.

Figure 2: Payment methods of e-commerce transactions in Singapore (2021)



Source: FIS, The Global Payments Report 2022

Examples of major digital payment solutions in Singapore



Digital/ Mobile Wallet

- GrabPay
- AliPay
- FavePay
- DBS PayLah



Buy Now, Pay Later

- Atome
- Pace
- PayLater by Grab

Singapore boasts a vibrant e-commerce ecosystem

- The Singapore e-commerce market is dominated by several large global, regional and local platforms. Collectively, the top 10 platforms account for almost 70% of market share in 2021.
- Most of the top players are platforms for third party merchants, which are popular with price-sensitive consumers due to their ability to provide price comparisons across various retailers as well as aggregate orders from different trades. Official stores on e-commerce third party platforms also ensure the authenticity of the brands, providing consumers with peace of mind when making purchases.
- Intense competition among e-commerce platforms has stimulated investment in consumer education, experience and infrastructure, which has facilitated growth of the e-commerce market.

Table 1: Top 10 e-commerce platforms in Singapore in 2021 (by market share)

E-commerce platform	Trade	Market Share (%)
• Shopee	• 3 rd party merchants	18.0
• Taobao	• 3 rd party merchants	9.1
• NTUC Fairprice	• Groceries	8.8
• Qoo10	• 3 rd party merchants	8.6
• Amazon	• General Trade	7.9
• Apple App Store	• Software	5.5
• RedMart	• Groceries	4.8
• Amazon	• 3 rd party merchants	4.2
• Lazada	• 3 rd party merchants	1.3
• Zalora	• Fashion	1.1

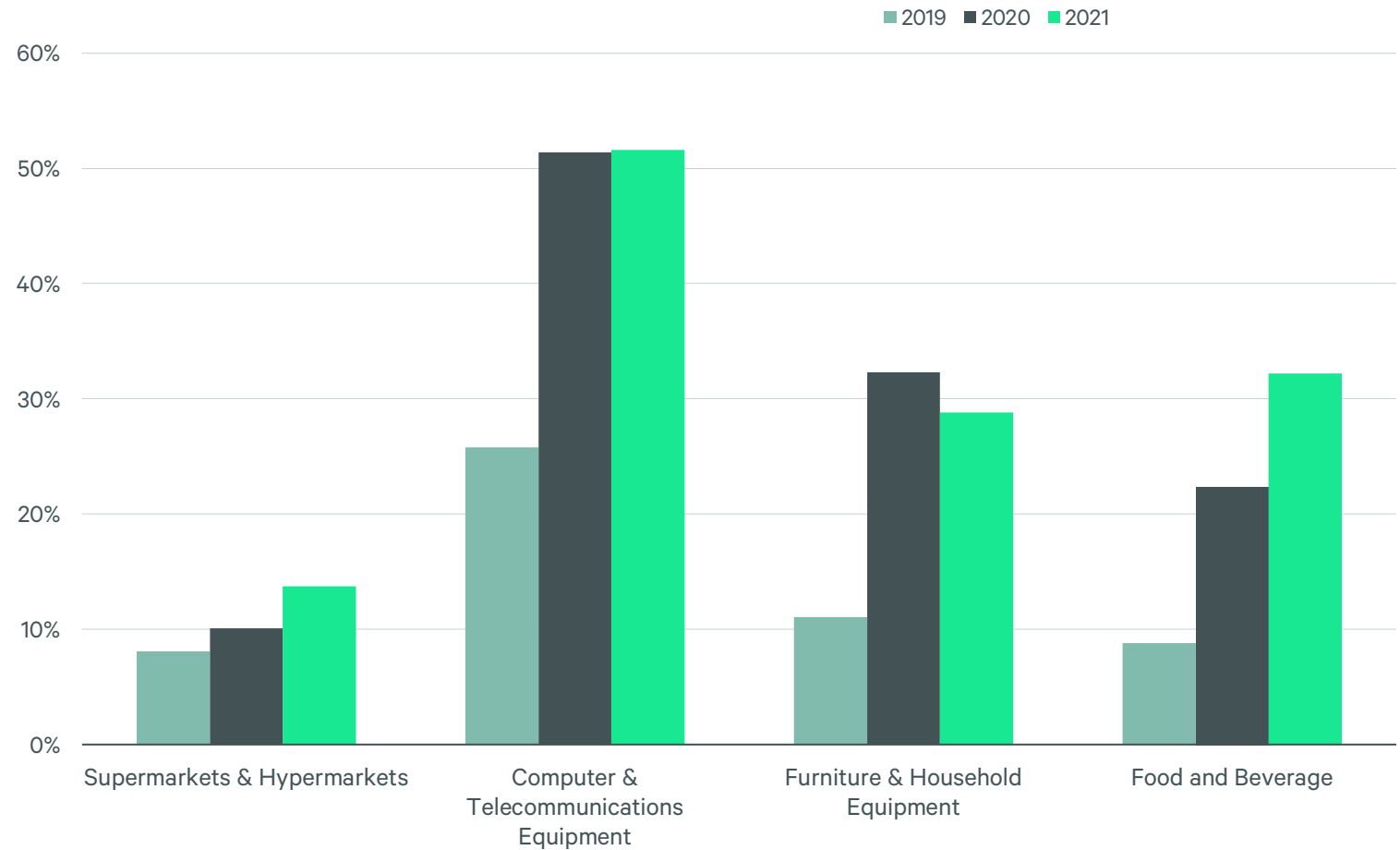
Source: Euromonitor, CBRE Research, October 2022.

Note: Ranking is based on retail value excluding sales tax.

E-commerce share rose in all product categories during pandemic

- While all product categories saw an increase in online penetration rates during the pandemic, the computer & telecommunications equipment and food and beverage sectors saw the largest increases. Online penetration rate for the former surged by 26 percentage-points from 2019 to 2021, reaching 52%, while the latter saw a rise of 23 percentage points in the same period, achieving 32%.
- While the computer & telecommunications equipment sector is set to remain the most penetrated industry, the food and beverage industry is likely to see a moderation in e-commerce share with the lifting of dine in restrictions on group sizes from April 2022.
- CBRE Research expects more retailers to set up their own direct-to-consumer e-commerce channels to reduce reliance on third-party marketplaces. This will also allow retailers to gain more and better customer data which can be leveraged to develop more targeted online sales and marketing strategies.

Figure 3: Singapore – Average online sales as a percentage of total retail sales in product categories



Source: Singstat, CBRE Research, October 2022.

Singapore’s online retail sales growth driven by consumers’ shift from offline to online

By forecasting e-commerce penetration rates and growth in online retail sales value, CBRE Research classified Asia Pacific e-commerce markets into three distinct groups.

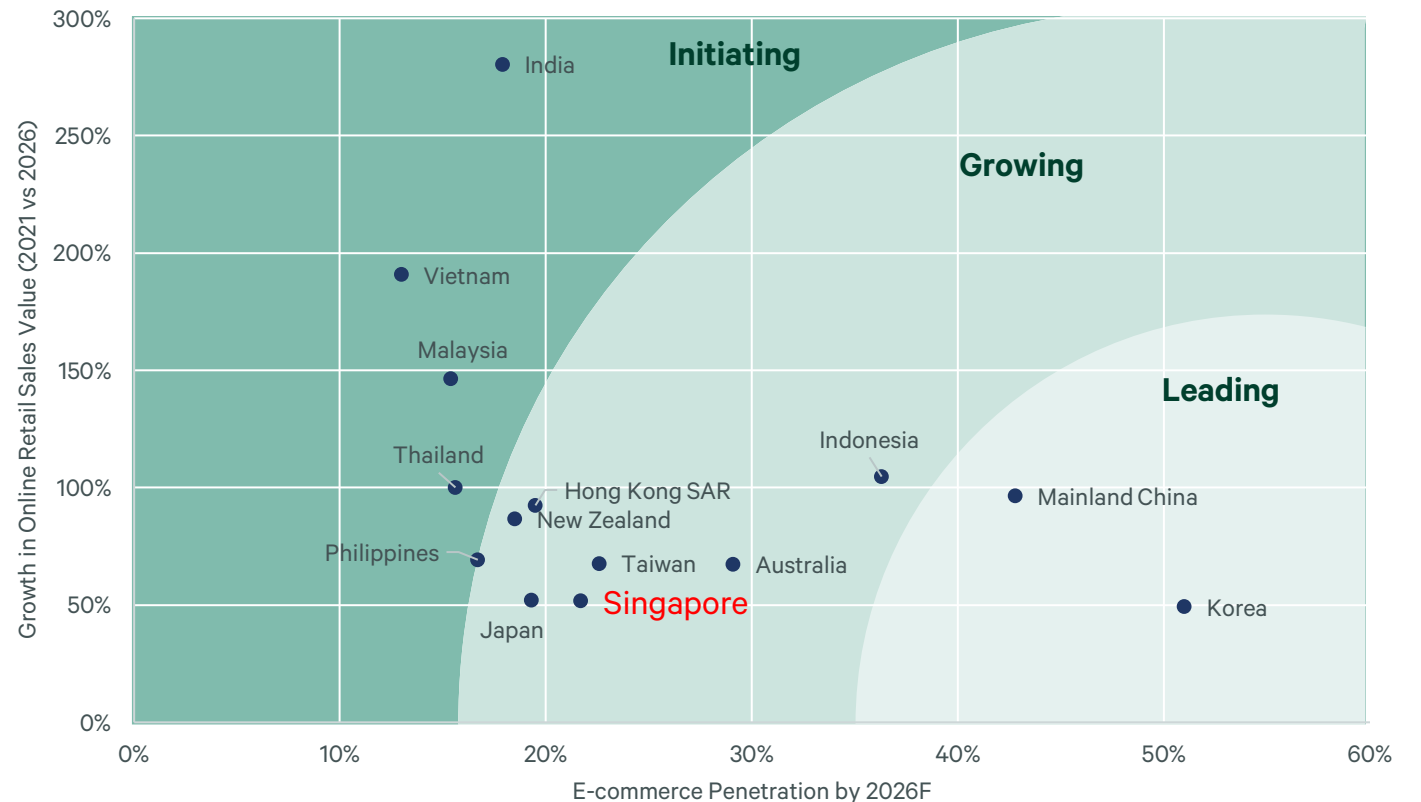
Initiating: Mostly consisting of emerging economies, online retail sales in these markets are being driven by organic growth in consumption as well as the shift to e-commerce. Many of these locations require new logistics infrastructure to meet potential omnichannel demand.

Growing: This group comprises several mature economies along with Indonesia, where online retail sales growth is being driven by consumers’ shift from offline to online.

Leading: Mainland China and Korea continue to lead e-commerce penetration globally.

- Singapore’s small size compared to larger markets such as Mainland China and Korea, coupled with its extensive public transport network, makes physical retail stores easily accessible to consumers. Thus, while Singapore’s e-commerce penetration rate is set to grow, physical retail should remain the dominant sales channel.

Figure 4: E-commerce penetration vs growth in online retail sales in Asia Pacific



Notes: The sales value of 2021 is based on Euromonitor’s estimates

Source: Euromonitor, CBRE Research, September 2022.

02

Impact on Retail Real Estate

Brick-and-mortar retail continues to dominate

- While online retail is forecasted to grow further and constitute a greater market share, offline sales is expected to remain the dominant retail sales channel through 2026.
- Customer acquisition costs for online retail, including platforms for third party merchants, have risen steadily in recent years.
- At the same time, retail rents in most submarkets have been flat or fallen sharply since the onset of the pandemic.
- It is therefore an opportune moment for online retailers to expand into brick-and-mortar stores.

Physical retail is expected to remain the major sales channel through 2026

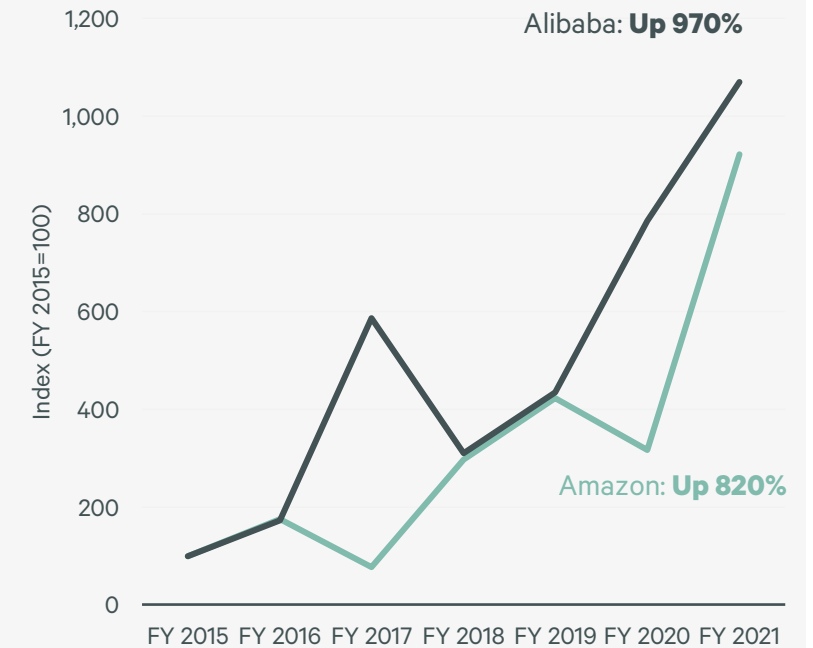
Figure 5: 2026F Singapore retail sales: online vs offline



Source: CBRE Research, October 2022.

Online retail becomes more expensive as customer acquisition costs² have skyrocketed

Figure 6: Customer acquisition cost index (base at FY 2015)



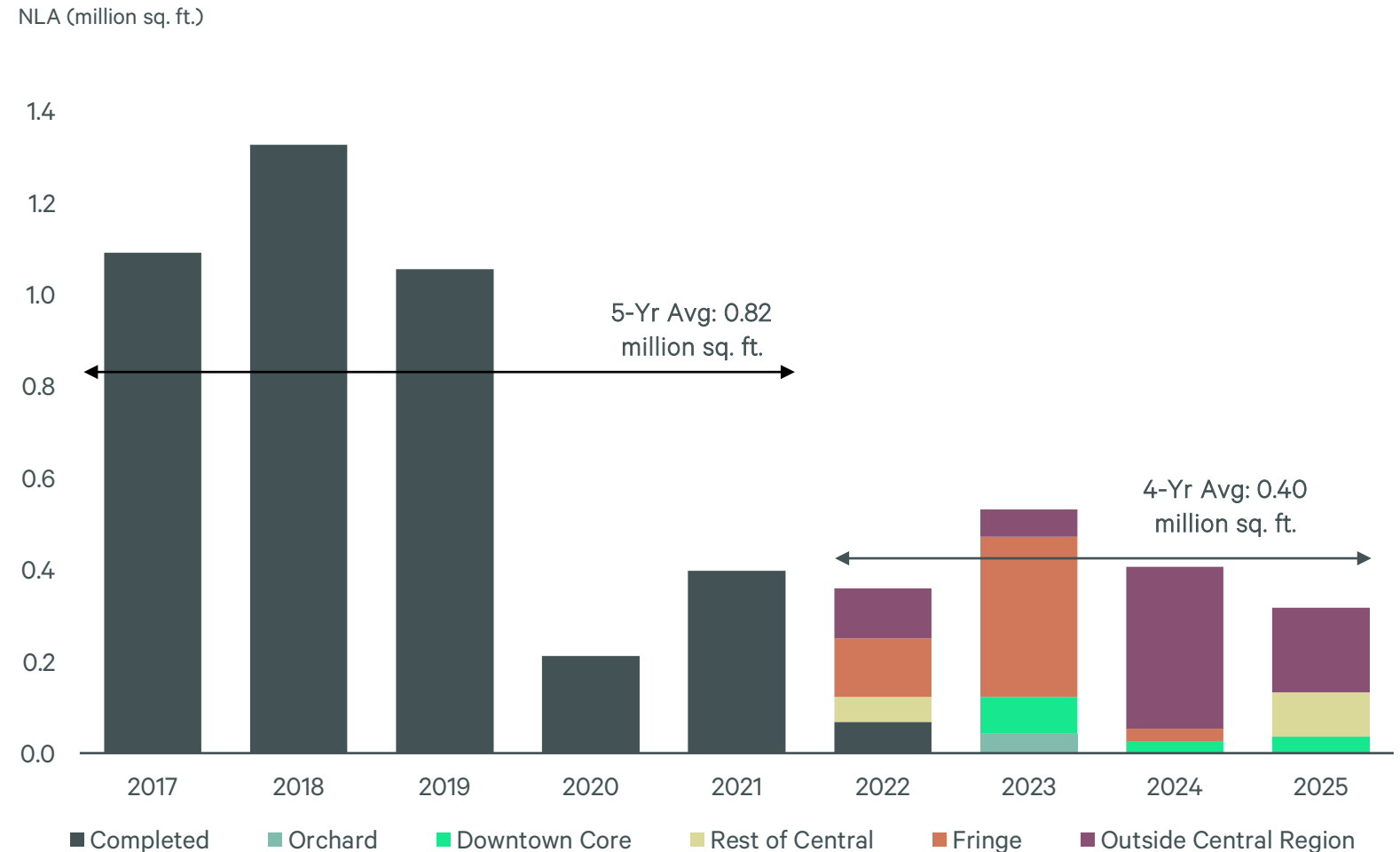
² Customer acquisition cost = sales and marketing expenses divided by the growth of number of active users

Source: Capital IQ, CBRE Research, September 2022.

Limited future supply compared to historical averages

- Collectively, the market will be expecting about 1.55 million sq. ft. of retail space from Q4 2022 to 2025, equivalent to about 0.40 million sq. ft. of retail space per annum for the next four years, which translates to 0.8% of total retail stock in Singapore. In comparison, completions for the past five years (2017 – 2021) averaged at 0.82 million sq. ft. of retail space per year.
- When categorised by submarkets, the bulk of future supply will be in the Outside Central Region and Fringe areas, which account for 45.7% and 32.7% respectively. These areas also have large residential catchments or have not seen new supply in recent years.
- As physical retail is set to remain the dominant sales channel, e-commerce retailers could augment their online capacity by leveraging physical store networks to support last mile delivery and store pick-up.

Figure 7: Singapore retail historical and future supply - Islandwide

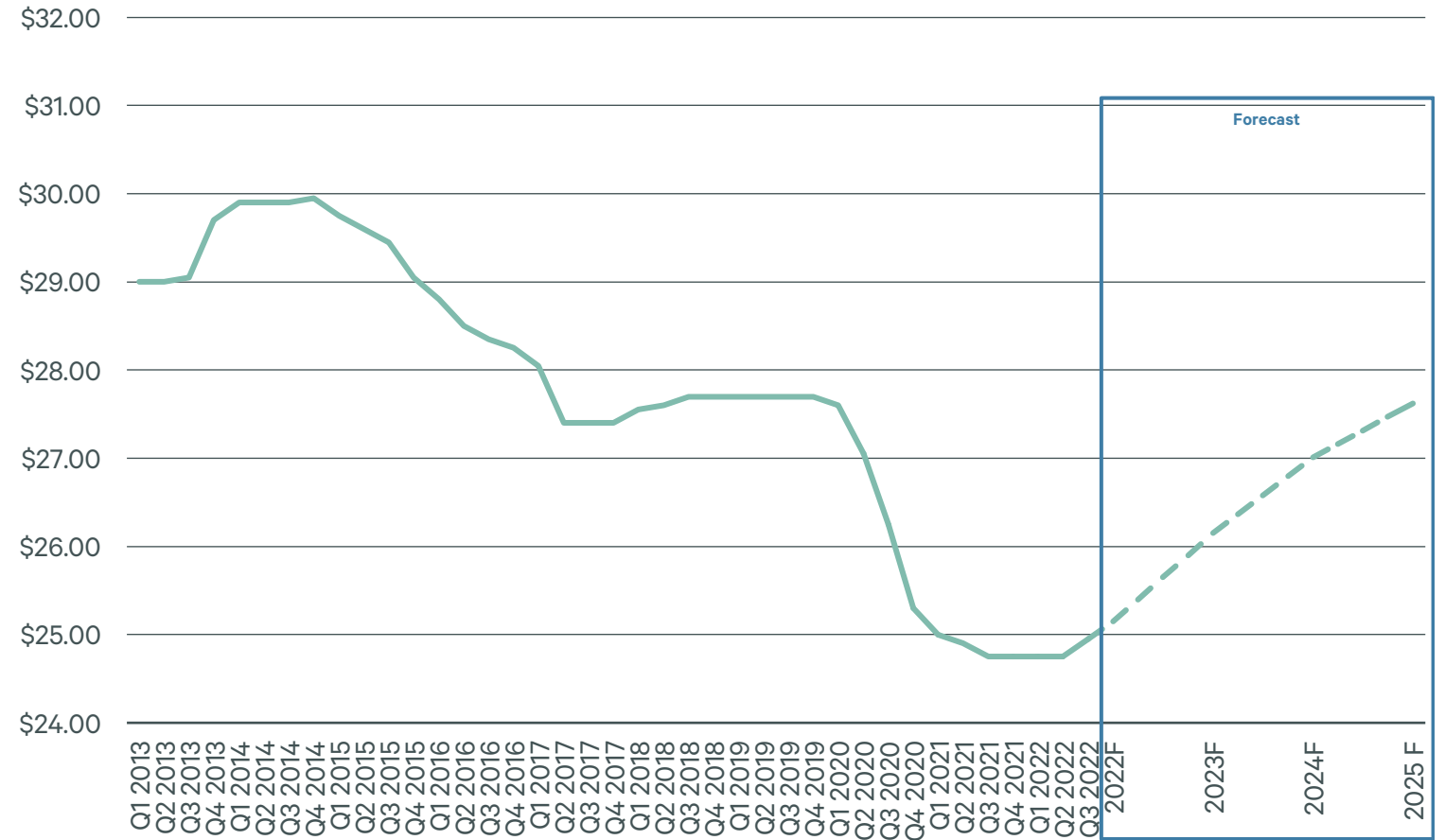


Note: Numbers include additional space carved out during AEI and if the development is closed entirely the total new NLA of enhanced asset is included.
 Future supply tracks projects with NLA of 20,000 sf and more.
 Source: URA, CBRE Research, October 2022.

Islandwide prime retail rents are 9.9% below pre-pandemic levels

- Islandwide prime retail rents embarked on a nascent recovery in Q3 2022, rising for the first time in four years. This can be attributed to a recovery in the Orchard Road, City Hall/Marina Centre and Fringe areas with increased return-to-office and recovering visitor arrivals. Meanwhile, the suburban market continued to outperform due to its resilient local catchment, coupled with extremely limited availability.
- In the near term, retailers may continue to face challenges such as manpower shortage, higher operating costs, a potential economic slowdown and an impending GST hike in 2023. Nonetheless, with improved mobility and a below-historical average new retail supply in the next few years, CBRE Research expects overall retail rents to continue recovering for the rest of 2022 and into 2023.
- Online retailers could expand into brick-and-mortar stores and adopt omni-channel retail now to capitalise on Singapore's economic recovery and the reopening of borders.

Figure 8: Singapore prime retail rental projection - Islandwide



Source: CBRE Research, October 2022.

Physical stores remain essential, but their role will evolve

- CBRE’s discussions with retailers revealed that most firms continue to regard brick-and-mortar stores as their key sales channels.
- Physical stores are also seen as more effective in engaging consumers and cross selling.
- The retail store of the future is set to evolve from being a location where transactions are made, to a hub that provides a comprehensive customer experience.

Table 2: Evolving functions of brick-and-mortar stores

Transactions



While most retailers no longer view brick-and-mortar stores as their sole sales channel, shops must be designed and equipped to better facilitate sales transactions. Measures include hiring more sales associates to assist consumers, putting more goods on display, and setting up dedicated areas for shoppers to try out products.

Experiences



Brick-and-mortar stores will be re-designed as places for storytelling and centres to showcase brand experiences. Retailers are advised to enhance in-store experiences in flagship stores by providing F&B offers, installing unique designs, and hosting in-store events. Luxury brands are currently leading in this area, with other retailers in categories such as athletic apparel now embracing the approach.

Fulfillment



More retailers will introduce click and collect services to improve the consumer experience. This can also attract more foot traffic to stores and facilitate easier returns. Some retailers may also fulfil small batch online orders using in-store inventory.

This model has been widely adopted by F&B operators along with the uptake of online order platforms and on-demand delivery apps. An increase in online grocery shopping during the pandemic has prompted several large supermarkets to follow suit.

Source: CBRE Research, September 2022.

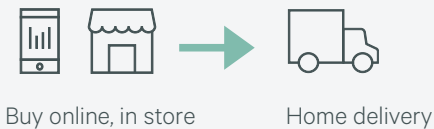
Omnichannel stores facilitate online spending and reduce logistics costs

Click-and-collect



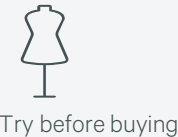
- This model has been widely adopted by major offline-based retailers as it encourages consumers to visit stores and potentially spend more.
- Opportunities to considerably reduce last mile delivery costs have prompted a growing number of e-commerce companies to partner with brick-and-mortar retailers for in-store pick-up services.

In-store online purchases



- Electrical and furniture retailers have traditionally led adoption of this model.
- More general retailers are assisting consumers to perform online orders in-store and arrange direct shipments.
- This approach can reduce in-store inventory while enabling consumers to enjoy hands-free shopping.

Showrooming



- Many retailers now place a small volume of online-only goods in brick-and-mortar stores to let consumers touch and test products before ordering.
- While in-store inventory for such purposes is limited, this model helps to reduce returns of online purchases. In the U.S., data show that that online orders have a higher return rate, reaching 20% in 2021.

In-store returns



- While many consumers view free returns as essential for online orders, the cost to retailers is considerable. A recent study in the U.S. found that reverse logistics costs amount to 66% of the original sales price of the item.
- Offering in-store returns can entice consumers to spend more in-store while helping to reduce re-stocking periods and lower costs for reverse logistics.

Source: Consumer Returns in the Retail Industry 2021, National Retail Federation and Apriss Retail, January 2022 ([Link](#))

*Tis the Stressful Season for Holiday Gift Returns, CBRE Research, December 2021 ([Link](#)).

How can retailers re-invent themselves for omnichannel?

Adopt new store formats

Case Study: IKEA



Photo sourced from ikea.com

- IKEA's new stores enable consumers to use mobile apps or in-store computers to search and order products for home delivery.
- The retailer has launched its first smaller scale store in Southeast Asia in Jem. The 70,000 sq. ft. three-storey space in the mall allows IKEA to be closer to customers.

Respond to community needs

Case Study: PAZZION



Photo sourced from pazzion.com

- Local fashion retailer PAZZION has integrated a café with some of its retail stores, including its flagship store in Takashimaya Shopping Centre.
- The retailer aims to create a lifestyle concept to meet the needs of its customers.

From Online to Offline

Case Study: Love, Bonito



Photo sourced from lovebonito.com

- Love, Bonito began as an online fashion retailer in Singapore and has since gradually expanded into brick-and-mortar retailing.
- After opening its first flagship store in Singapore in 2017, the retailer has since expanded its regional presence to neighbouring countries such as Malaysia, Indonesia and Cambodia.
- It also tested the market with a pop-up store in 2019 and opened its first permanent store in Hong Kong SAR this year.
- Love, Bonito is targeting to open its first physical store in the US in 2023.

How can landlords re-invent themselves for omnichannel?

Review performance metrics



- Store productivity metrics are set to expand beyond in-store sales activity to include omnichannel sales.
- While some landlords are now including online sales into store turnover, there remains some debate over which e-commerce transactions are relevant, such as whether in-store online orders should be included.
- Landlords should take a collaborative approach to reviewing performance metrics with tenants and explore how to tailor rental formats according to the nature of their tenants' business.

Boost retailtainment offering



- Consumers are increasingly demanding greater convenience and experience when shopping in physical retail environments.
- Landlords are recommended to adjust their tenant mix in response to changes in consumer demand. Measures may include introducing more retailers in service trades such as healthcare and beauty. Retailtainment such as arts studios and specialist fitness centres, many of which tend to have smaller size requirements, are also popular options.
- Landlords can also adjust their service offering to accommodate omnichannel retail such as by introducing curbside delivery and hands-free shopping.

Deepen customer engagement



- Landlords can leverage mobile apps to create stronger touch points with consumers. Specific initiatives may include extending exclusive offers to premium customers to encourage repeat shopping and tailored marketing based on users' search terms and interests.
- Other steps can include incorporating data from membership apps and social media into evaluations of store performance so as to better measure the impact of their tenants.

03

Impact on Logistics Real Estate

Structural demand for logistics space

- E-commerce supply chain operations require three times more warehouse and logistics space than a traditional brick-and-mortar supply chain¹.
- As e-commerce continues to grow, competition among distributors and retailers for modern high quality logistics space in Singapore will intensify.
- CBRE Research’s analysis suggests that **every US\$1 billion of additional e-commerce sales requires an additional 1 million sq. ft. or 92,903 sq. m. of logistics space**. Based on this calculation, a further 2.3 to 2.9 million sq. ft. of e-commerce-dedicated logistics space could be required in Singapore between 2021 to 2026.
- Given Singapore’s small population, the e-commerce quantum will be relatively much smaller. We estimate that e-commerce sector takes up 4-5% of the logistics space in Singapore. Nonetheless the demand for logistics space stems from not just local e-commerce, but also from the growth in manufacturing activities, exports and trade around the region.

¹ CBRE Research

Figure 9:
Estimated logistics space requirements due to the growth of e-commerce between 2021 - 2026



Increase in e-commerce sales

<p>US\$1.4 trillion</p> <p>ASIA PACIFIC</p>	<p>US\$2.9 billion</p> <p>SINGAPORE</p>
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Additional logistics space needed to support e-commerce growth over five years

<p>100 to 130</p> <p>million sq. m.</p> <p>ASIA PACIFIC</p>	<p>0.21 to 0.27</p> <p>million sq. m. or 2.3 to 2.9 million sq. ft.</p> <p>SINGAPORE</p>
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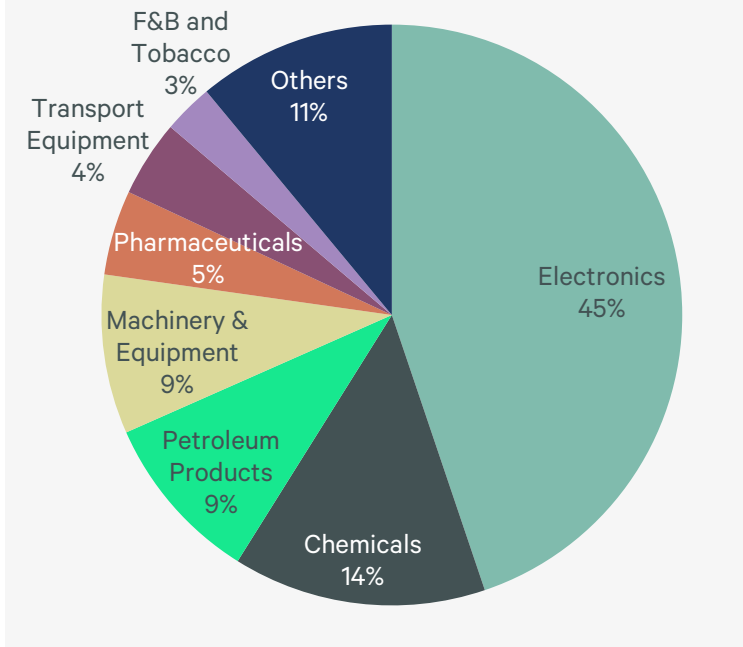


Logistics demand boosted by exports and manufacturing

- In 2021, Singapore's container throughput reached a record high of 37.5 million 20-foot equivalent units (TEUs), retaining its status as the world's busiest transshipment port. When the upcoming Tuas Mega Port is completed in 2040, it will have a handling capacity of 65 million TEUs, almost double the volume handled in 2021.
- Singapore's manufacturing sector makes up 20-23% of Singapore's GDP. In March 2022, the government announced plans to raise Singapore's export value from S\$805 billion in 2020 to at least S\$1 trillion by 2030, and double offshore trade value to US\$2 trillion. It also plans to capture more re-exports and transshipment flows, and to expand trade with more economies with deeper connections in global supply chains.
- As logistics is an integral part of supply chain management, there will be competition among manufacturers, e-commerce operators and distributors for modern high quality logistics space.

Key manufacturing clusters are electronics, chemicals, transport engineering and pharmaceuticals

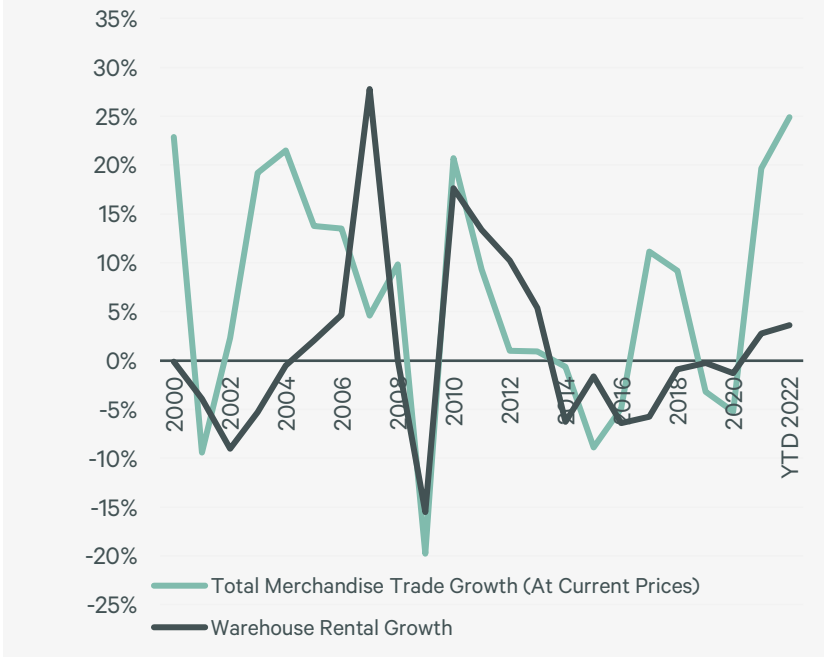
Figure 10: Manufacturing sectors in Singapore, 2021



Source: Singstat, CBRE Research.

Warehouse rents appear to correlate with merchandise trade volumes, tempered by supply

Figure 11: Merchandise trade y-o-y growth vs warehouse rental y-o-y growth

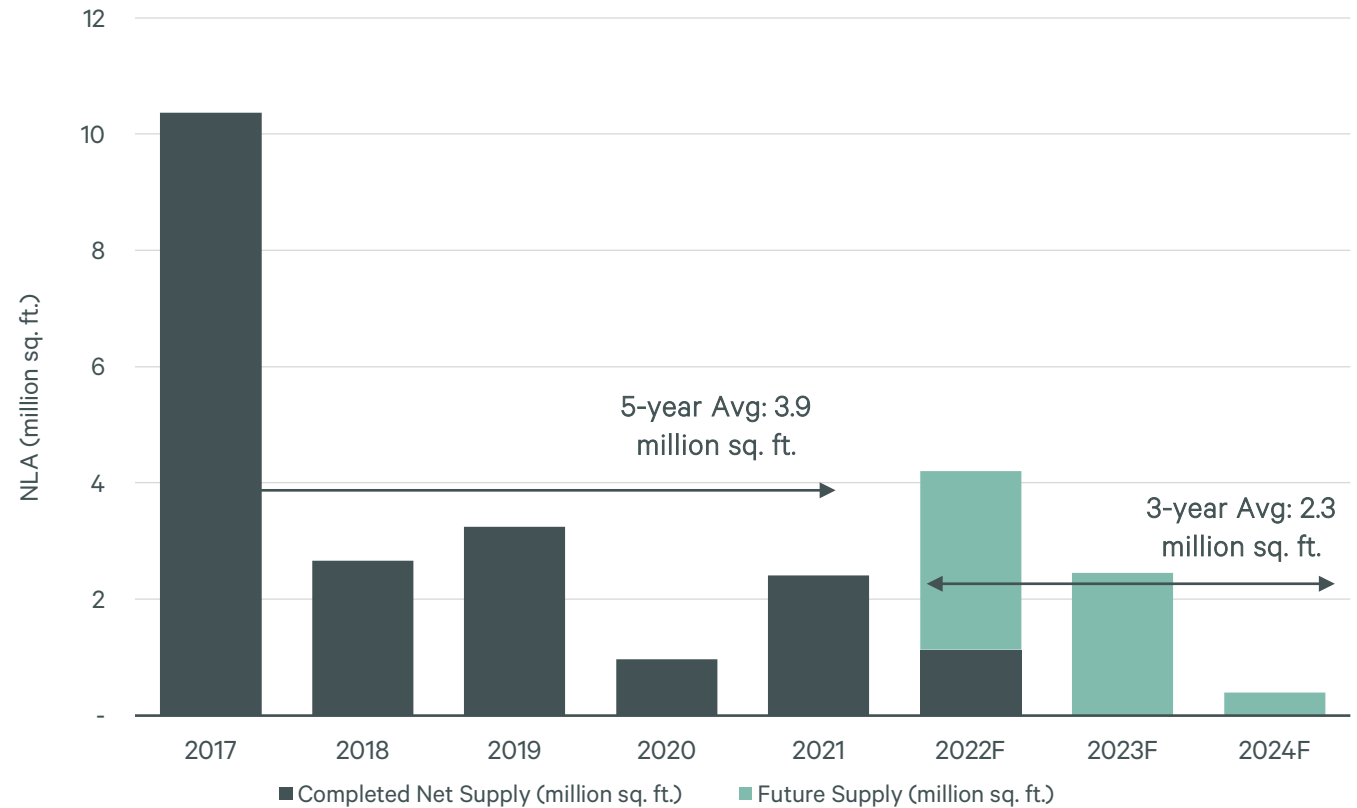


Source: Singstat, JTC, CBRE Research, September 2022.

Supply pipeline does not look excessive

- Since the onset of the pandemic, e-commerce penetration has accelerated, driving demand for logistics space. In Singapore, manufacturing activities continued to grow through 2020 and 2021. Stock piling for medical and food supplies has also shored up demand for warehouse space. As a result, availability for the prime logistics segment has tightened considerably, with the vacancy rate under 1% as of September 2022. For the larger warehouse segment, the vacancy has also trended down to below 10%, last seen in 2016.
- Future logistics supply pipeline remains tight, given construction delays and limited new land sites available. Known new supply will average 2.3 million sq. ft. per year, or about 2% of existing stock, and 40% below the 5-year historical supply. With strong e-commerce-related growth as well as manufacturing growth, demand is likely to outstrip supply in the next three years.

Figure 12: Singapore logistics warehouse historical and future supply

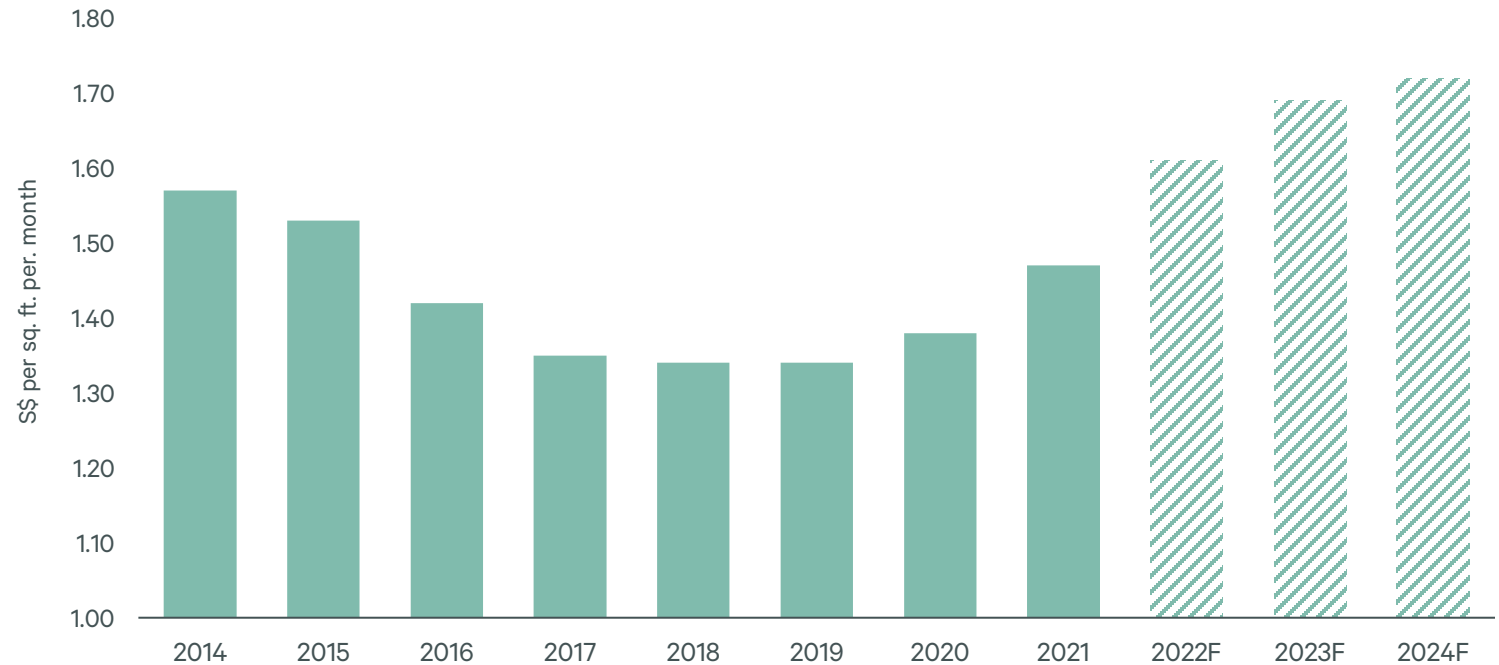


Source: JTC, CBRE Research, June 2022.

Positive impact on prime logistics rents

- As at Q3 2022, prime logistics rents have grown by 6.8% year-to-date, driven by strong leasing momentum and an acute shortage of quality space.
- Due to strong take-up for remaining spaces in recently completed projects, occupancy for CBRE Research’s prime logistics basket was close to full.
- For the full year, rents are projected to reach 9% - 10%, exceeding the rental growth of 6.5% in 2021. Although a few prime logistics projects are expected to complete by 2023, most of the space has already been pre-committed.
- In view of the limited new supply in the next three years, rental growth should stay positive albeit likely to slow into 2023 and 2024 from a higher base and economic uncertainties.

Figure 13: Prime logistics rental forecast



Source: CBRE Research, September 2022.

Solution #1 Build-to-suit (BTS)

- As Singapore’s e-commerce market is in its growth phase, logistics facilities with high specifications remain sought after by occupiers.
- In order to meet the requirements of Third-Party Logistics (3PLs), particularly the type of large facilities needed to perform fulfilment and distribution, BTS remains an attractive strategy for developers and REITs.
- With the tight availability in prime logistics, occupiers with large space requirements are advised to plan their portfolio expansion at least two years in advance. BTS will enable occupiers to secure quality space with desirable lease terms.
- Apart from high specifications, occupiers are also keen on reliability of power supply, and sustainability features to reduce their carbon footprint.

Case Study: POKKA Singapore, 4 Benoi Crescent



Photo is sourced from POKKA

- Size: approximately 694,200 sq. ft.
- Location: 4 Benoi Crescent, Singapore 629970
- Developer: Joint Venture between ESR Cayman and PGIM Real Estate
- Development of a best-in-class five-storey logistics facility with expected completion in Q1 2024.
- ESG Targets: BCA Green Mark Platinum; solar power rooftop and solar power plant to achieve a zero carbon footprint

Case Study: NTS Components, 21B Senoko Loop



Photo is sourced from ESR-LOGOS REIT

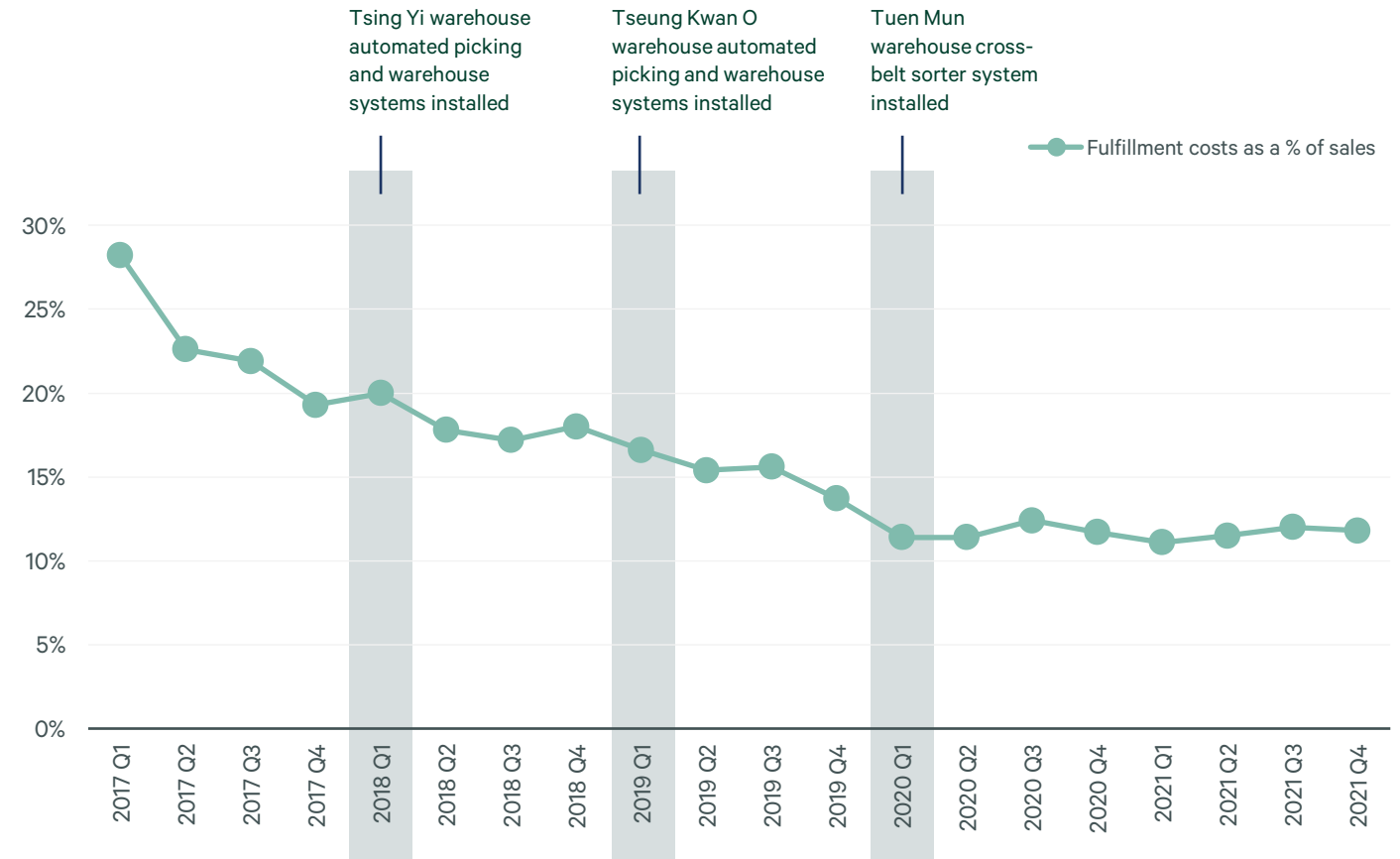
- Size: approximately 195,800 sq. ft.
- Location: 21B Senoko Loop, Singapore 758171
- Developer: ESR-LOGOS REIT
- Redevelopment of a general industrial building to a high-specs asset in two phases (expected completion of phase one in H1 2023 and phase two in Q1 2024).
- ESG Target: BCA Green Mark Gold

Solution #2

Invest in logistics technologies

- With an increasing focus on operational efficiency, occupiers are advised to adopt logistics technologies to improve productivity. Automated Storage/Retrieval Systems (AS/RS) and Automated Guided Vehicles (AGVs) are the two logistics technologies that occupiers are most keen to adopt in the near future⁴.
- According to Mapletree, AS/RS has rapidly advanced over the years to enable better use of floor space, reduced labour costs and increased order picking accuracy.
- The upcoming *Tee Yih Jia Food Hub* in Senoko, which is expected to complete in 2022, features AS/RS which allows the automated placement and retrieval of high-volume loads from Tee Yih Jia’s storage locations.
- Sabana Industrial REIT announced enhancement plans for its asset at *1 Tuas Avenue 4*, where the proposed conversion to a high-specification logistics facility can incorporate AS/RS.

Case Study: HKTVMall in Hong Kong SAR



⁴ Asia Pacific Logistics Occupier Survey 2021, CBRE Research, 2021

Source: HKTVMall Annual Report, 2022.

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