

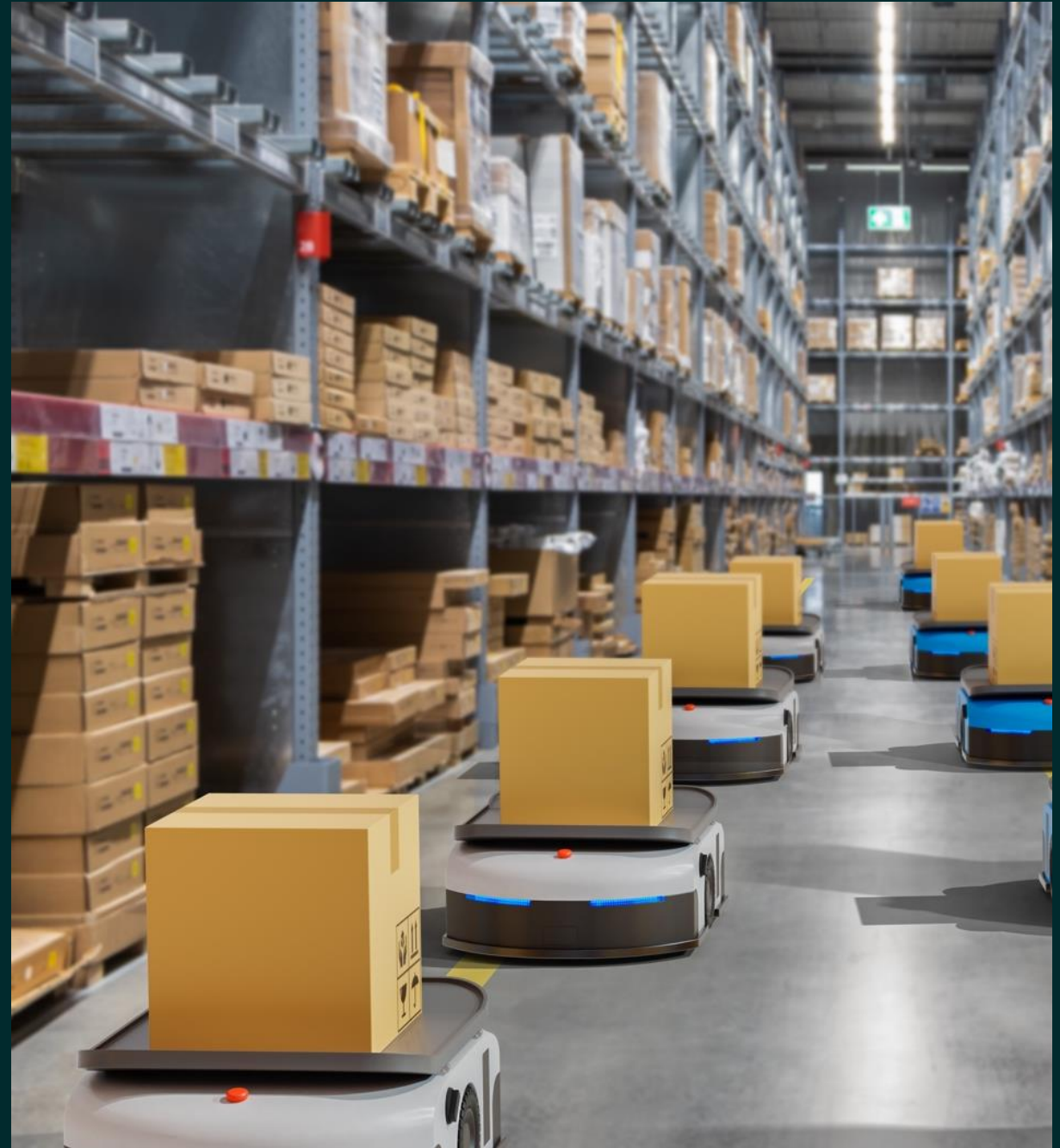
Adaptive Spaces

# 2023 Korea Third-Party Logistics Occupier Survey

REPORT

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CBRE RESEARCH  
DECEMBER 2023



# Highlights

The 2023 Asia Pacific Logistics Occupier Survey was conducted during Q2 2023. Among 120 responses received across Asia Pacific, 17 were 3PL tenants from Korea.



## 3PLs remain the largest source of demand in the logistics market

- 3PLs still account for the highest share, occupying about 40% of total stock.
- All respondents are confident about the outlook for their business for the next three years.
- Appetite to acquire more space remained solid with 90% of local respondents planning to maintain or expand the size of logistics centres.



## Features of assets preferred by 3PLs: Accessibility, flexibility, and automation

- With transportation accessibility and rent emerging as the most important factors in choosing where to locate logistics centres, the preference for leasing in the southern region of Greater Seoul is expected to continue.
- Occupiers wanted a flexible lease options regarding rent and lease terms.
- Meanwhile, tenants appear to be expanding their investments in logistics centre automation to improve efficiency and productivity.



## Cost and market competition identified as the biggest risk factors

- 3PL tenants were found to have the highest burden delivery costs, while concerns about real estate costs, including rent, were observed to be relatively low.
- As one-day delivery services expand, new players' continuous entry into the market is leading to overheating market competition and a decline in the market share of existing 3PL companies.

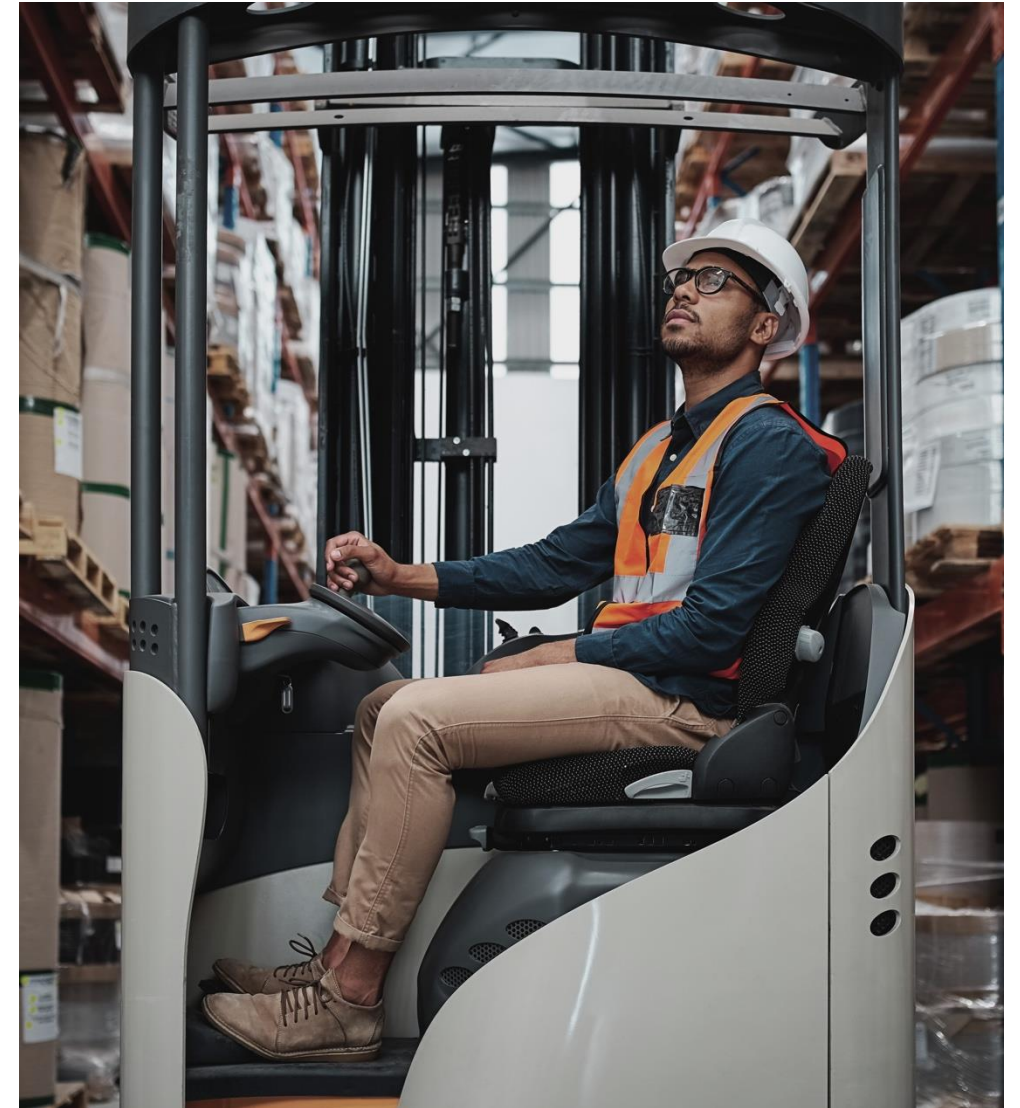


## ESG adoption gathers pace

- Although 3PL occupiers are interested in green logistics assets, it appears that there is no premium in making leasing decisions.
- As ESG is emphasized in the logistics industry, environmental factors such as introduction of electric vehicles and installation of solar panels.
- Grade A logistics assets that have received LEED certification in Greater Seoul account for approximately 14% of the total, and this proportion is expected to increase further in the future.

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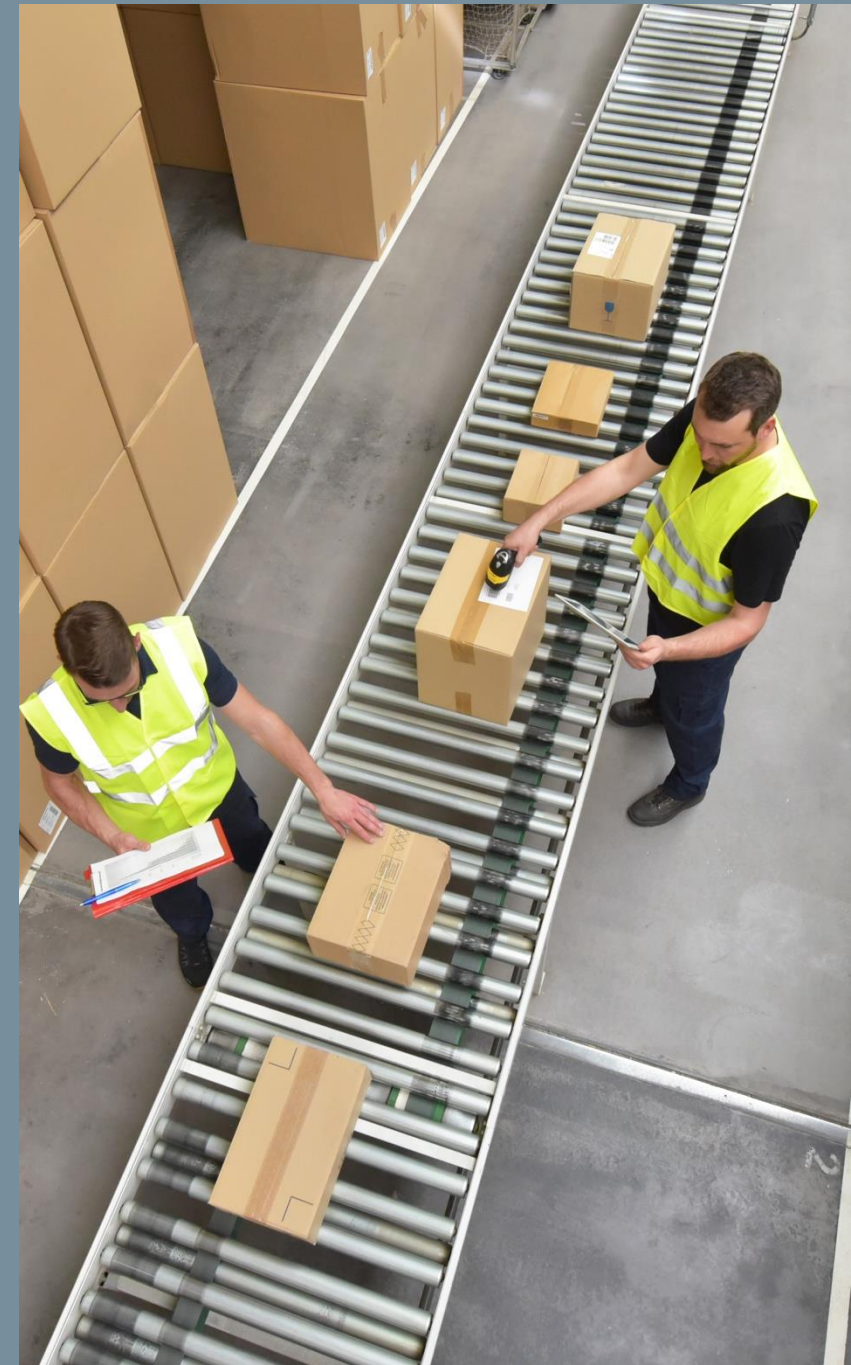
- 01** Current status of greater Seoul Grade A logistics market
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01

## Market Sentiment

Grade A logistics market  
in Greater Seoul



# Supply expected to peak this year

With average annual supply of about 2.1 million sq. m. of new Grade A logistics centres completed over the past five years (2018-2022), the size of the Grade A logistics market in Greater Seoul reached about 15 million sq. m. as of the end of 2022.

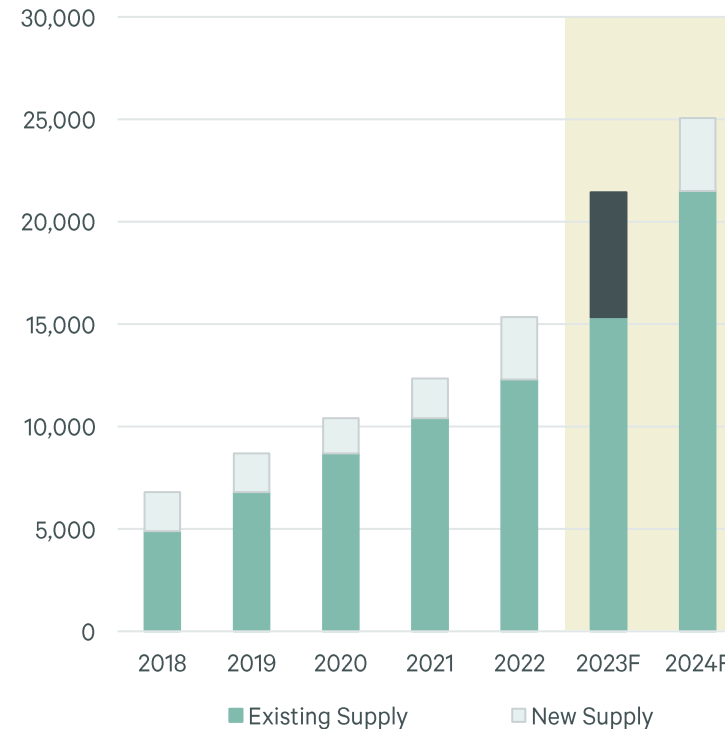
New supply in 2023 will reach 6.1 million sq. m., about 3x the average annual supply over the past five years. The size of the market will grow by about 40% by the end of 2023 compared to the end of last year (Figure 2).

While a steady supply of about 0.5 million sq.m. was observed in the southern region, including in cities such as Icheon and Yongin, Yongin witnessed only limited supply in 2023. Meanwhile, Icheon has grown into one of the largest markets with a significant increase in supply since 2021.

Following this year's supply peak, new supply is expected to decline in the coming years. However, with new supply of about 3.7 million sq. m. projected to be completed in 2024, there are concerns about short- to medium-term oversupply. Facilitated by the development of the 2nd Gyeongbu Expressway, about 25% of next year's stock is expected to be concentrated in Anseong, absorbing demand from the Icheon and Yongin markets.

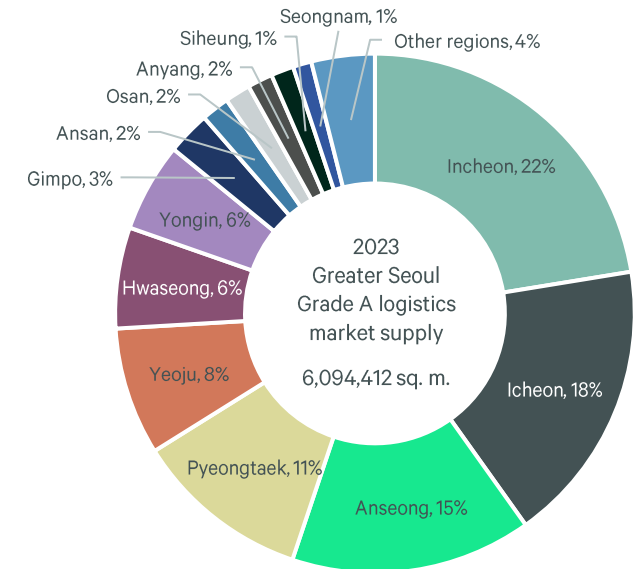
Figure 1: Historical supply in Greater Seoul Grade A logistics market

Unit: 1,000 sq.m.



Source: CBRE Research, December 2023

Figure 2: Regional supply share of Grade A logistics centres in 2023



\*Other regions include Gwangju, Namyangju, Bucheon, Pocheon and Goyang  
Source: CBRE Research, December 2023

# Solid net absorption observed

Grade A logistics net absorption in Greater Seoul averaged approximately 2 million sq. m. per year over the past four years (2019-2022), absorbing most of the new supply completed over the same period.

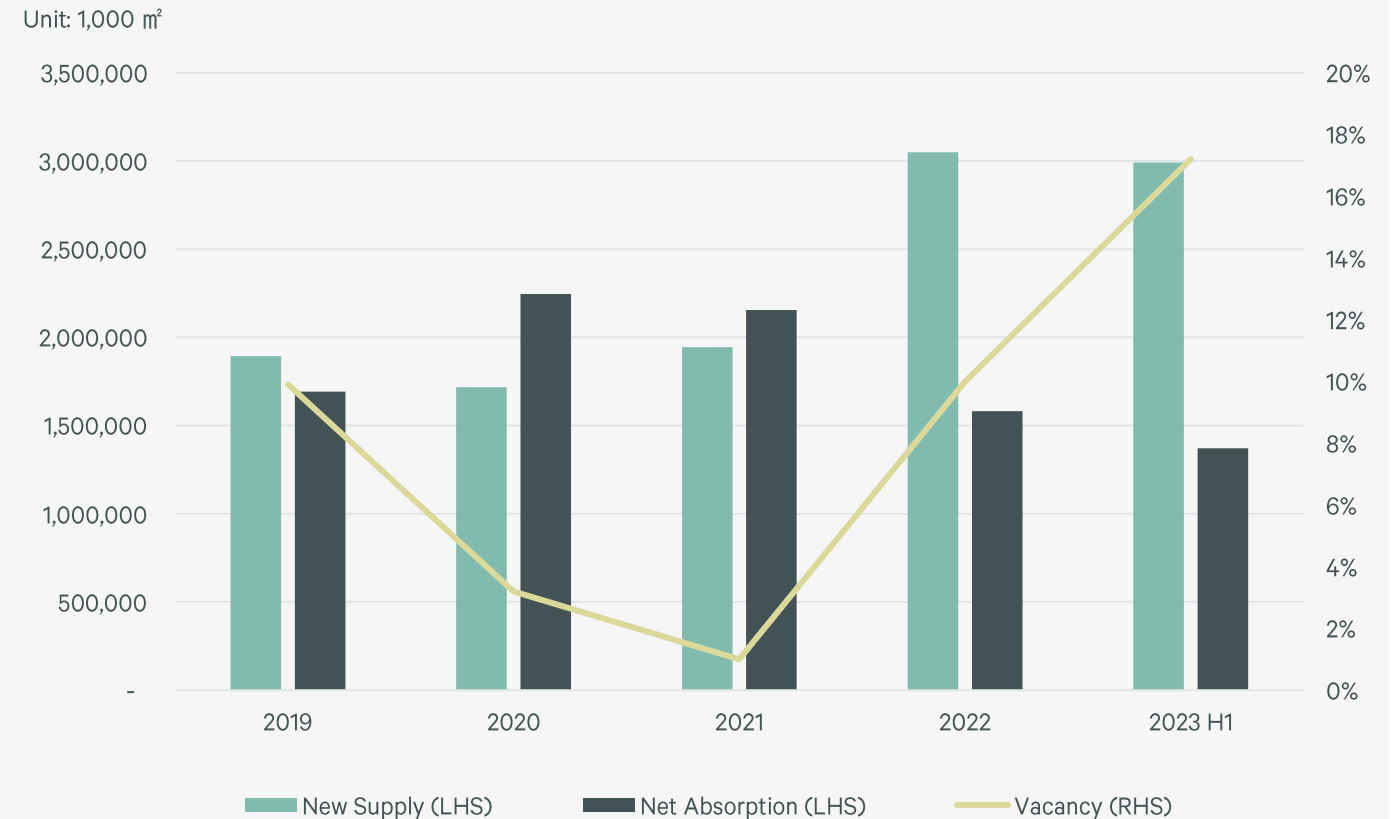
Annual net absorption exceeded new supply in 2020 and 2021, at the height of the COVID-19 pandemic, with the vacancy rate falling to the 1% range by the end of 2021.

Net absorption totalled 1.37 million sq. m. in H1 2023, with positive demand also observed in Q3 2023. As there is still solid rental demand in the logistics market, this year's net absorption is expected to increase compared to 2022.

The vacancy rate in the Greater Seoul Grade A logistics market reached 17% in H1 2023, a significant increase of 7%p compared to the end of last year. The rise was due to an imbalance in supply and demand, with unprecedented supply being completed within a short period of time, which lengthened the period for new properties to achieve stable occupancy.

Although vacancy rates and net absorption varied by region, regions including Icheon and Pyeongtaek showed relatively solid demand in 2023.

Figure 3: New supply, net absorption, and vacancy rate in Greater Seoul Grade A logistics market



Source: CBRE Research, December 2023

# Regional differences in rental growth observed

The average rent for Grade A dry logistics centres in Greater Seoul in the first half of 2023 increased by 1.6% compared to the end of 2022, and the increase was limited compared with the same period last year. Due to large supply scheduled by the end of 2023, it is expected that there will be only an additional increase of about 50bps in the second half of the year.

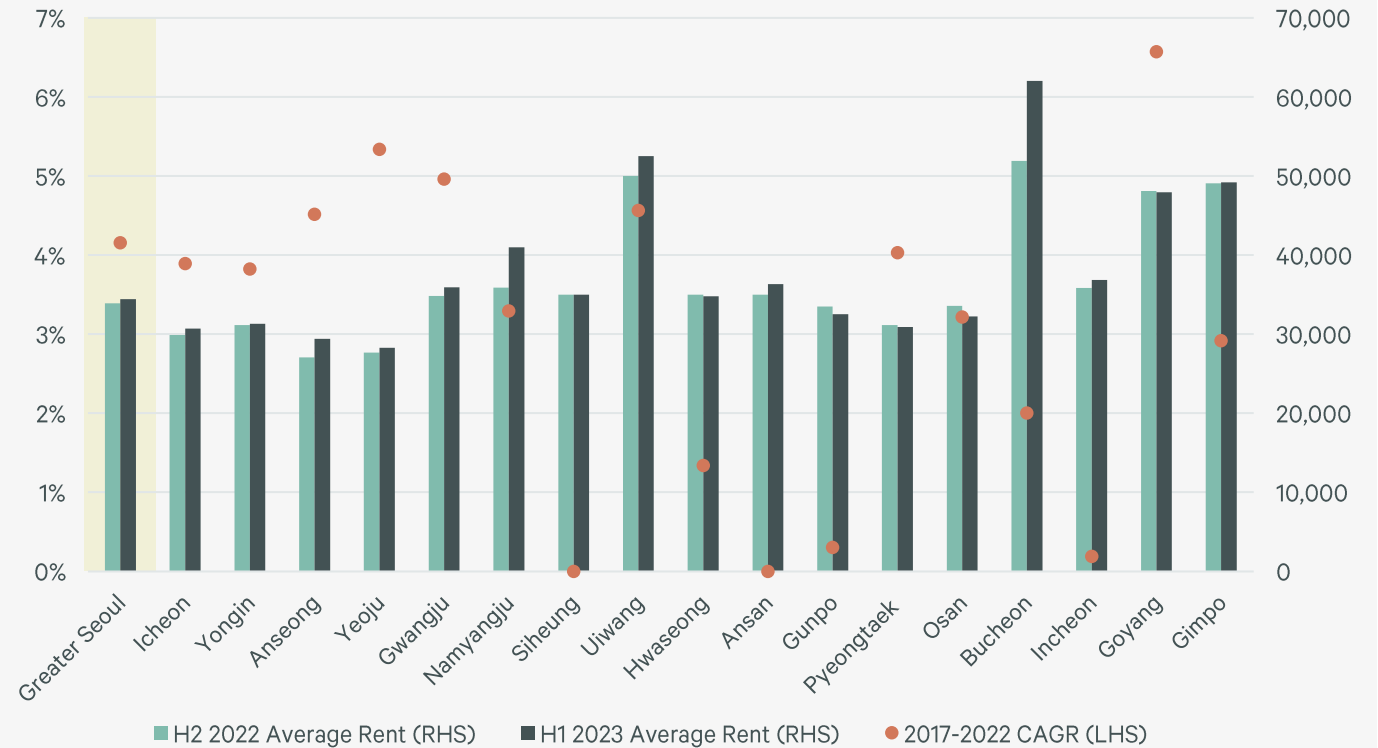
While the rate of increase was observed differently depending on submarket, a notable double-digit increase in rent was recorded in Namyangju and Bucheon, where there was no new supply, following last year. Anseong, which is rapidly growing market in size, also observed a large increase in rents, driven by the supply of new prime assets.

In case of Uiwang and Gunpo, growth in rent was found to be limited due to the absence of new supply and long-term contracts with existing tenants.

As of the first half of 2023, average rent-free period in Greater Seoul Grade A logistics market was 1-2 months and 3-4 months, respectively, depending on whether the asset is dry or cold. For cold assets, cases were witnessed where rent-free was provided up to 6 months due to limited demand.

Figure 4: Average rent in Greater Seoul Grade A logistics market

Unit: KRW/py/month



Source: CBRE Research, December 2023

# 3PLs remain major source of logistics leasing demand

CBRE data show 3PL and e-commerce platforms remained the largest sources of demand in Greater Seoul Grade A logistics market as of H1 2023.

Analysis of recent leasing transactions reveal that leasing activity has been most prominent around Icheon, Anseong and Yeosu. Particularly in the southern region, large areas have been absorbed by 3PLs and e-commerce platforms such as CJ Logistics, Tim Fresh, and Coupang.

Compared to 2020, the proportion of 3PL tenants in the Greater Seoul Grade A logistics market has fallen slightly in recent quarters. However, 3PLs still account for the highest share, occupying about 40% of total stock. E-commerce follows at 30%, with its share increasing partly because of accelerated expansion in recent years.

There has also been a noticeable increase in the proportion of wholesale and manufacturing occupiers, with expansionary demand observed from large domestic retail companies such as E-Mart and GS Retail. In the case of manufacturing occupiers, new leases have recently been signed by various companies including domestic and foreign semiconductor equipment companies and automobile firms such as Samsung Electronics.

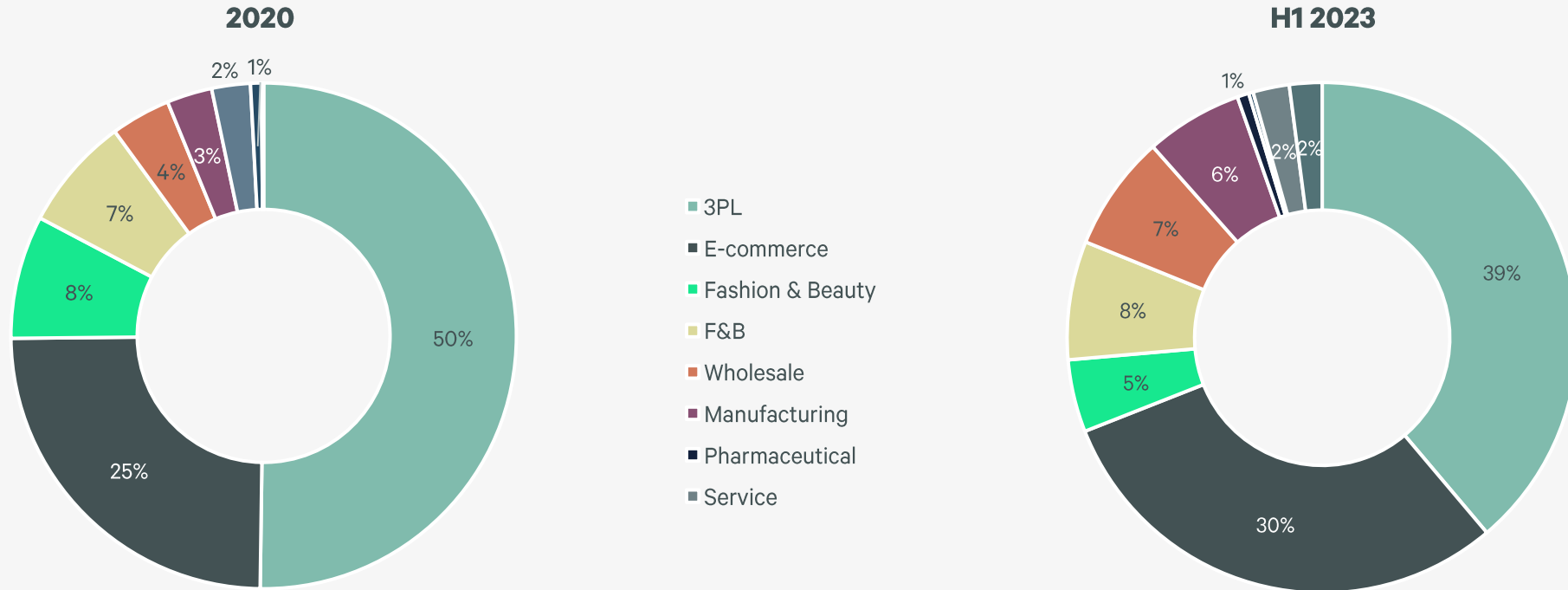
Figure 5: Major leasing transactions in Greater Seoul Grade A logistics market in 2023

Qtr / Yr	City	Asset Name	Tenant	Industry	Leased area (sqm)
Q1 2023	Hwaseong	JW Hwaseong Logistics Centre	JW Pharmaceutical	Pharmaceutical	36,364
Q1 2023	Icheon	Icheon Gunryang Logistics Centre 2	LogiFocus	3PL	9,436
Q1 2023	Icheon	Icheon Gunryang Logistics Centre 2	Taeun Logistics	3PL	6,612
Q1 2023	Yeosu	A-1 Warehouse	Musinsa	Fashion	75,882
Q1 2023	Incheon	Kendall Square Geomdan Logistics Park	Swatch Korea	Fashion	16,529
Q1 2023	Incheon	Kendall Square Geomdan Logistics Park	DHL	3PL	6,612
Q1 2023	Incheon	Kendall Square Geomdan Logistics Park	BGF	Wholesale	16,529
Q1 2023	Yongin	Buk-ri Logistics Centre	CJ Logistics	3PL	132,002
Q1 2023	Icheon	Sinsung Logistics Centre	CJ Logistics	3PL	39,874
Q1 2023	Icheon	Icheon Songon-ri Centre 2	Maersk	3PL	16,529
Q2 2023	Anseong	Gongan Ceramic Logistics Centre	Zuellig Pharma	Pharmaceutical	18,047
Q2 2023	Yeosu	Ganam-eup Simseok-ri Logistics Centre	Pantos	3PL	33,927
Q2 2023	Anseong	Sunwoo Logistics Centre	Top Ten	Fashion	43,255
Q2 2023	Icheon	Daewol-myeon Bupil-ri Logistics Centre	Tim Fresh	E-commerce	64,041
Q2 2023	Pyeongtaek	Kendall Square Pyeongtaek Logistics Centre	Coupang	E-commerce	6,612
Q2 2023	Anseong	Gongan Ceramic Logistics Centre	Coupang	E-commerce	17,851
Q2 2023	Goyang	Goyang Samsung Logistics Centre	Lotte Chilsung	F&B	49,111
Q3 2023	Anseong	Daeduck Logistics Centre A	Daiso	Wholesale	112,397
Q3 2023	Anseong	Daeduck Logistics Centre A	Yongma Logis	3PL	40,331
Q3 2023	Anseong	Daeduck Logistics Centre A	Samsung Electronics	Manufacturing	181,818
Q4 2023	Hwaseong	Weolmun-ri Logistics Centre	Lotte Global Logistics	3PL	33,058
Q4 2023	Yeosu	Yeosu Logispoint	B.Cave	Fashion	33,058

Source: CBRE Research, December 2023

# 3PL, the largest demand driver in Greater Seoul Grade A logistics market

Figure 6: Tenant profile of Grade A logistics market (2020 vs. H1 2023)



Note: 2020 result is based on 75 Grade A assets with 4.8 million sq. m. in size, while H1 2023 result reflects 185 Grade A assets with 14 million sq. m. in size.

Source: CBRE Research, December 2023

02

## Demand Analysis

Status of 3PL industry and  
its impact on logistics market



# 3PL growth slows but outlook stays positive

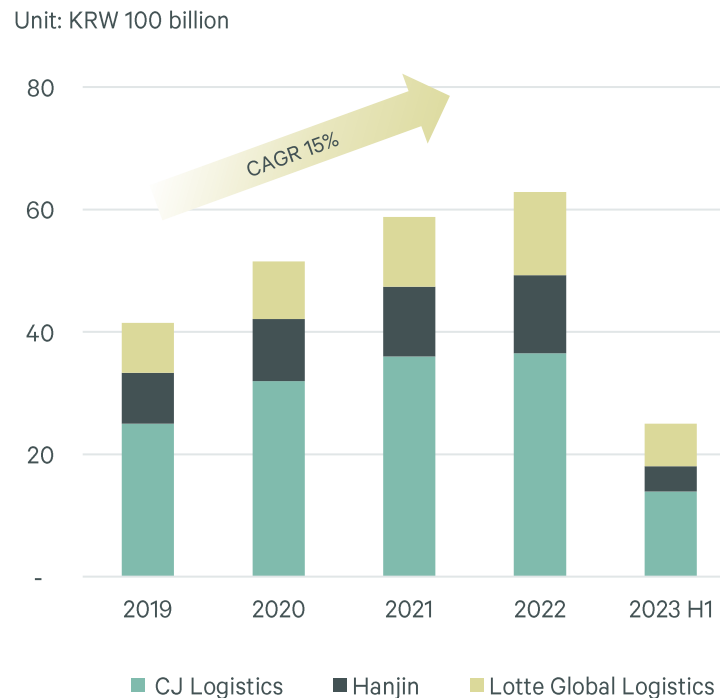
As of 2022, sales of delivery businesses of major domestic 3PL companies had been growing rapidly, recording an average annual growth rate of about 15% since 2019. However, due to the end of the pandemic and the onset of economic recession, average sales growth in H1 2023 was up by just 5% compared to the same period of last year.

Despite a slowdown in sales growth, all survey respondents anticipate the 3PL industry to continue growing in the coming years.

Many firms are pursuing growth through business expansion opportunities. These include CJ Logistics, which signed an exclusive contract with AliExpress to absorb demand from overseas direct purchase market. Elsewhere, Lotte Global Logistics strengthened logistics capabilities related to secondary batteries.

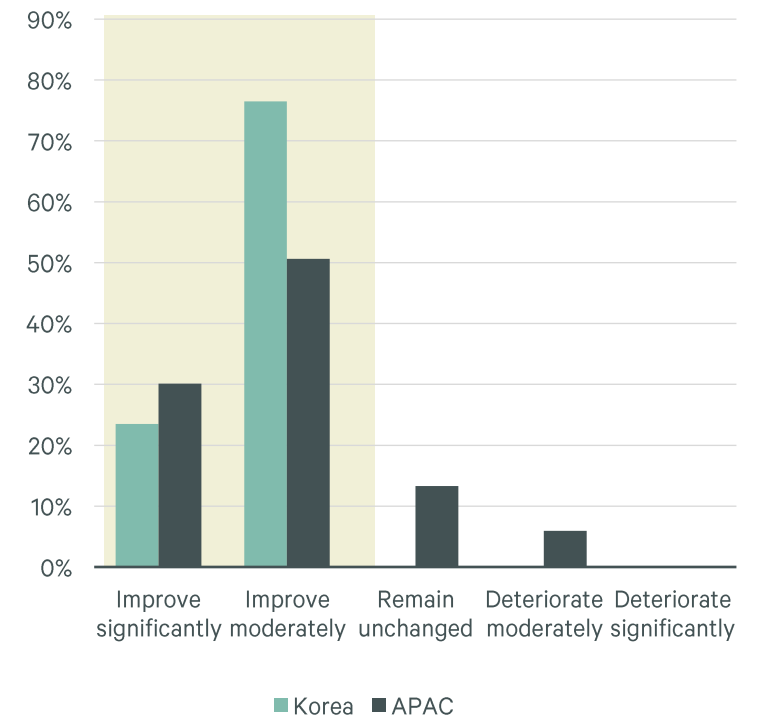
In Q3 2023, the operating profits of major domestic 3PL companies CJ Logistics and Hanjin increased by 16% and 37%, respectively, compared to the previous year.

Figure 7: Sales of major 3PLs' delivery business



Sources: National Logistics Information Center, Financial Supervisory Service

Figure 8: What are your expectations for business performance over the next three years?



Sources: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# 3PL demand drivers: operational efficiency and flexibility

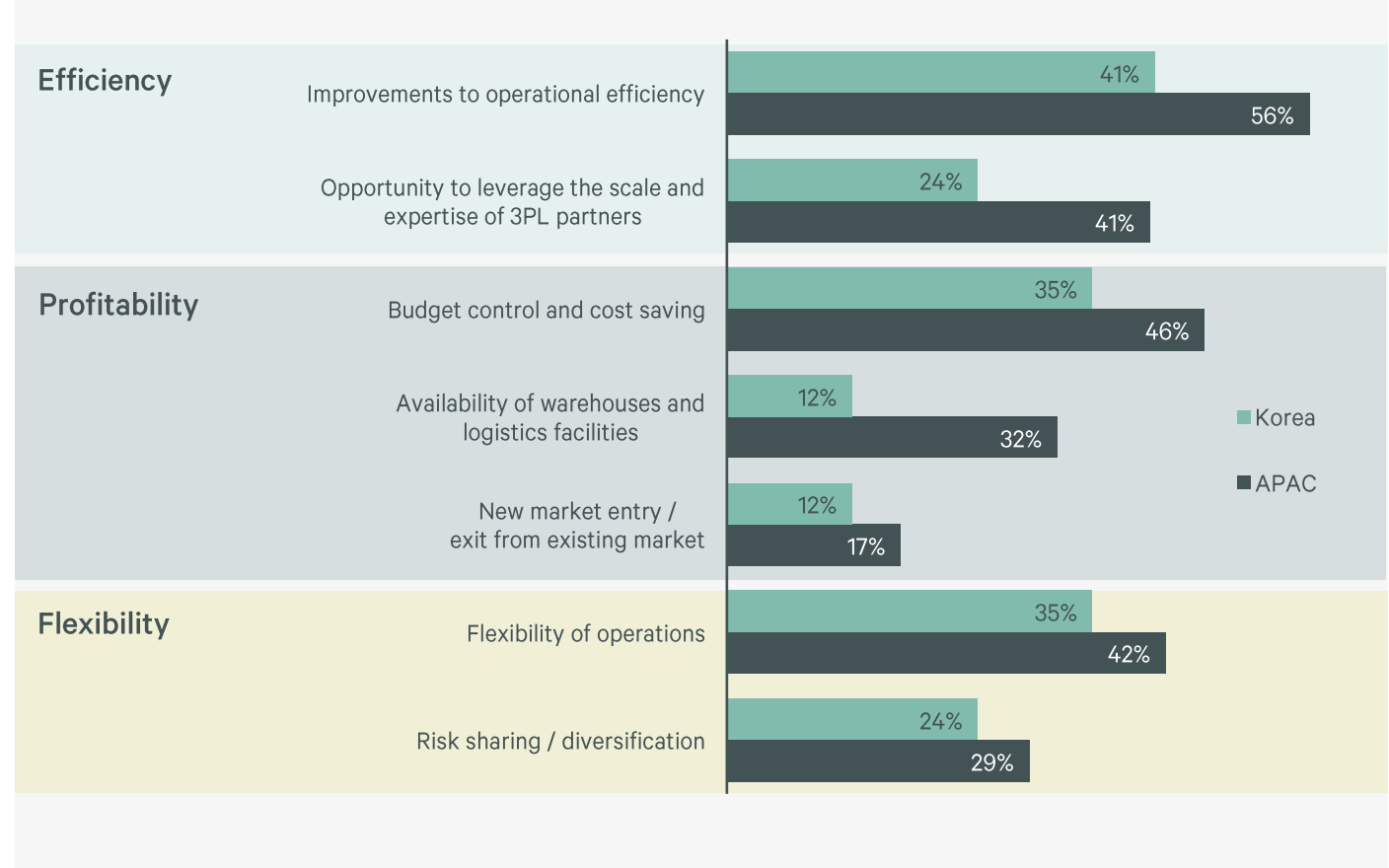
In the e-commerce market, where services such as accurate tracking and fast and safe delivery are essential, logistics plays an important role in strengthening competitiveness, which is directly related to the quality of a company's service.

By using 3PLs, companies can improve operational efficiency by optimising inventory and transportation route management, and also maximise profitability by minimising costs related to warehouse leasing, facilities management, and labour, as well as other non-logistical functions such as manufacturing and marketing.

Some large suppliers have attempted to diversify risks by using multiple 3PL companies and boost flexibility by expanding logistics centres in response to growth in business and cargo volume.

With safety-related issues, such as a recent fire at a logistics centre, becoming more prominent, the need for logistics management through professional 3PL companies is increasing. This is expected to have a positive effect on demand for 3PL expansion in future.

Figure 9: What are the top three reasons influencing your decision to outsource your logistics operations to 3PLs?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Portfolio expansion based on positive outlook

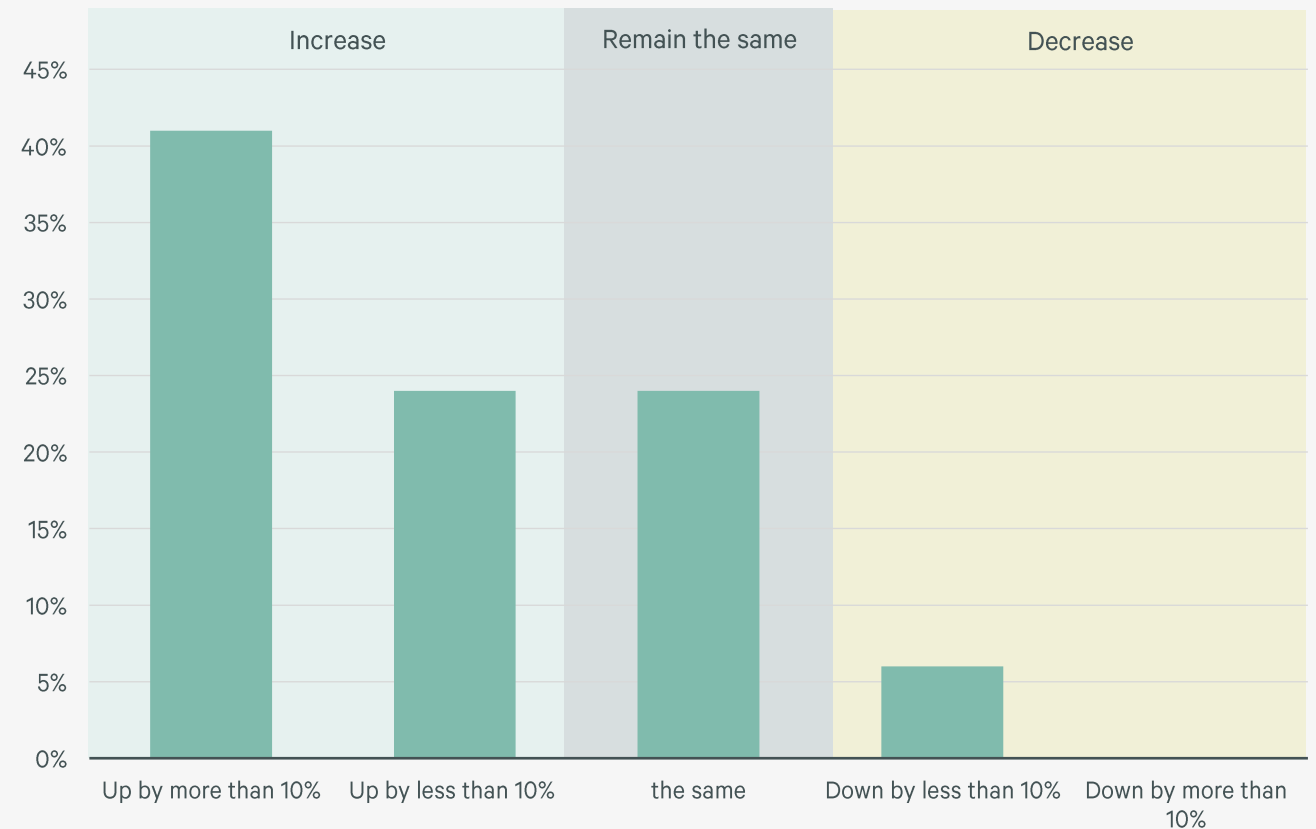
Survey respondents identified a range of strategies for future portfolio expansion, with approximately 90% of Korean 3PLs stating that they plan to maintain or further expand the size of their current logistics footprint.

Despite a slight slowdown in sales growth in the domestic 3PL industry, the positive outlook augers well for expansionary demand for logistics space.

As major 3PLs augment the provision of fulfillment services that manage everything from warehousing to shipping, this will have a positive effect on demand for medium to large-sized logistics facilities suited to strengthening service capabilities.

Recent examples include CJ Logistics' launch of its 'O-NE' delivery service brand in early 2023, which started operating two new Grade A fulfillment centres in Icheon in June. As of Q3 2023, the company's fulfillment volume had increased by about 21% compared to the same period of last year, while its number of customers had tripled.

Figure 10: How do you expect your overall warehouse portfolio size to change in the next three years?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Portfolio expansion to be driven through leasing

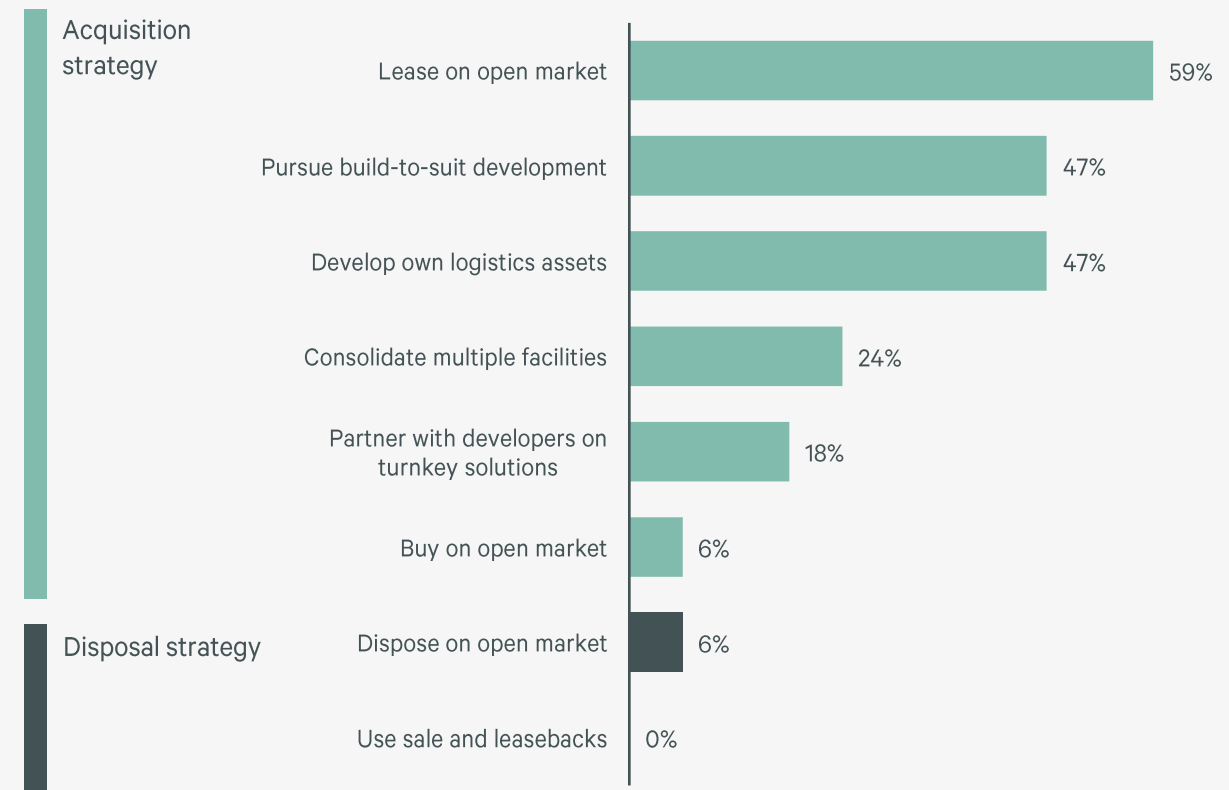
3PL respondents' preferred route to securing logistics space is signing a lease agreement, followed by build-to-suit or direct development.

Securing logistics space through leasing is the most common expansion strategy. With the Greater Seoul Grade A logistics market having shifted in favour of tenants following an increase in vacancy last year, the options available to tenants have expanded, with more advantageous options on offer through incentives such as rent-free periods. This appears to have boosted this strategy's appeal.

About half of respondents stated a preference for build-to-suit or direct development that can reflect the needs of suppliers and maximise operational productivity and efficiency. However, this strategy may be challenging to implement due to the recent increase in construction costs and difficulties in raising project financing.

The number of respondents indicating an interest in the purchase of assets for self-use was limited. This is because the types of assets that investors prefer to buy to maximise profitability and increase asset value do not always align with properties that occupiers are interested in leasing.

Figure 11: Which of the following approaches will you utilise to acquire or dispose of your warehouse portfolio over the next three years?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Occupier attempts to secure physical space continue

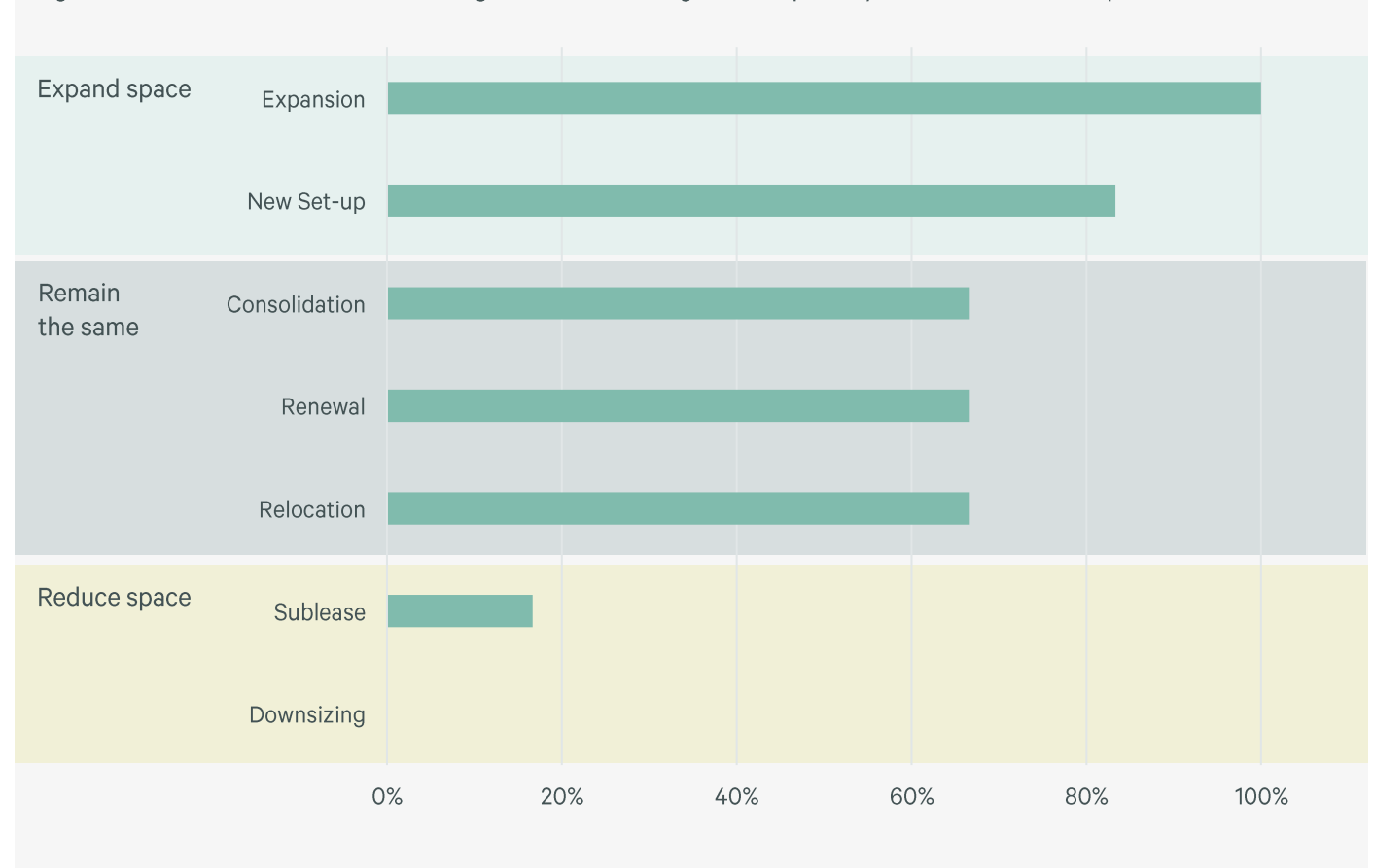
Mirroring the survey findings that 3PLs preferred route to securing logistics space is signing a lease agreement, 2023 witnessed the signing of several new leases by major 3PLs.

These included LX Pantos, which secured a new space of about 10,000 pyeong in Simseok-ri, Yeosu. Elsewhere, Hyundai Home Shopping, the shipping company of Lotte Global Logistics, added 10,000 pyeong to its existing logistics space in Hwaseong.

In addition to expansion, integrating logistics facilities to improve efficiency, renewal, and relocation accounted for a large portion of enquiries. In particular, it was witnessed that there was a demand to review various options based on expert analysis before making decisions, displaying a more flexible response to future uncertainties.

The risk of overcommitment by 3PLs appears to be minimal, with only a limited number of instances observed in which 3PLs are seeking to reduce or relocate used space or sublease unused space.

Figure 12: What was the nature of the largest industrial & logistics enquiries you received over the past month?



Sources: CBRE Research, December 2023

03

## Requirements

Features of assets  
preferred by 3PL tenants



# Features of Grade A assets that attract 3PLs

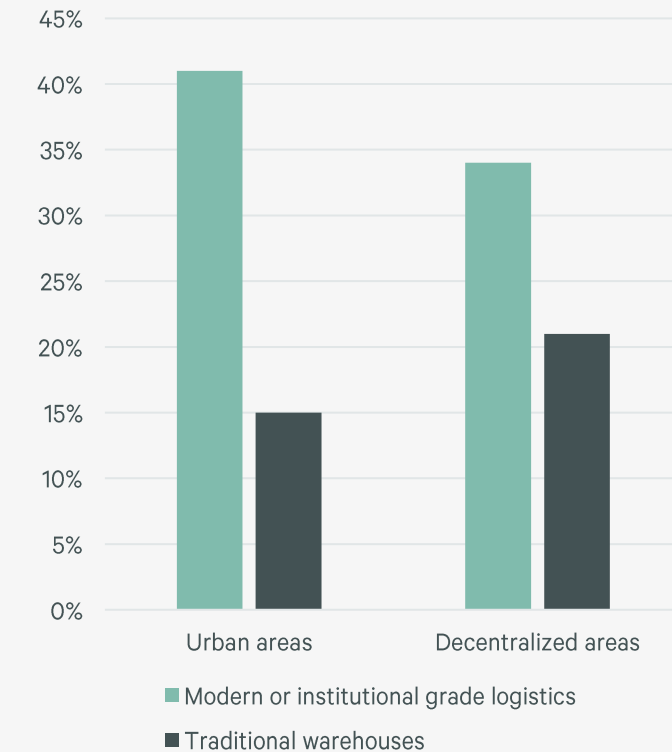
Demand for Grade A assets in Greater Seoul is expected to remain strong on the back of 3PLs' continued preference for larger distribution centres.

3PL companies require different facility features depending on product type. For lightweight items such as clothing and cosmetics, 3PLs prefer high floor ceilings with two-level (mezzanine) storage to increase space efficiency. For heavy items such as large furniture, facilities with a floor loading of 1.2 tons per sq. m. were required. While requirements vary across companies, features of Grade A assets are known to align with the demand.

The expansion of fulfillment services is set to drive requirements for facilities with larger floor areas, similar to the space used by e-commerce companies.

Meanwhile, as the 3PL logistics network built around large cities in Greater Seoul gradually expands to the outskirts, demand for new centers is also expected to increase.

Figure 13: Which of the following types of logistics facilities do you expect to use more of over the next three years?



Sources: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

Figure 14: Key Features of Grade A Logistics Facilities



### Completion Year

Newly built logistics centre completed within the last 10 years. As of Q3 2023, the average completion year of Greater Seoul Grade A logistics assets is 2018.



### Ceiling Height

A height of 9.5-10m is preferred, which accommodates 4-storey racking system for vertical storage



### Floor Loading

For typical grade A assets, 1.2 tons per sq.m. can be loaded. As certain warehouses store heavy machinery and goods, floor loading is crucial.



### Dock Doors

Dockage facilities on 3-4 sides of the asset is preferred. Warehouses that handle a high turnover of goods require more dock doors.



### Berth Facility

Berthing on all floors via ramps rather than freight elevators.

# Accessibility and rent named most important leasing criteria

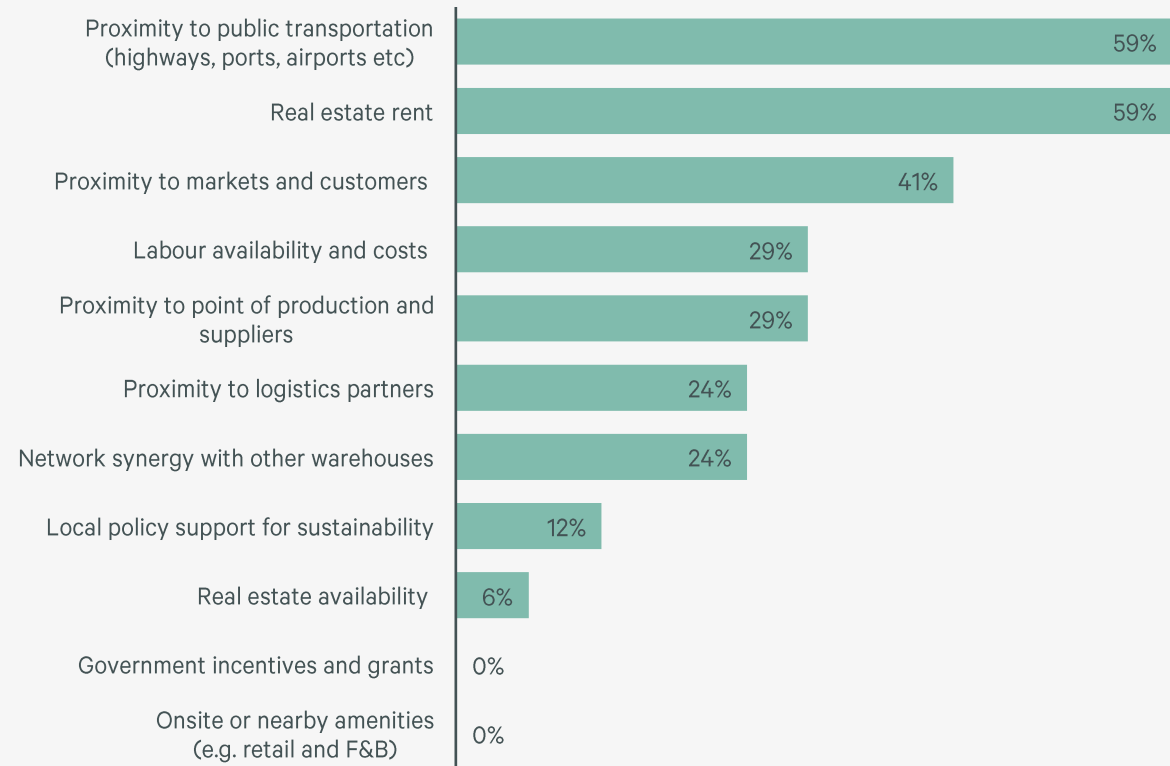
3PL respondents selected transportation accessibility and rent as the most important factors to consider when selecting a logistics facility. Due to 3PLs business structure, which is more cost sensitive compared to that for e-commerce companies, cost-related features play a more prominent role in decisions to lease logistics facilities.

The survey uncovered a strong preference for logistics centres located close to highway interchanges with excellent accessibility to consumers and producers. Grade A logistics centres in Greater Seoul are located an average distance of 6.5-7km from highway interchanges.

Rent is the other key consideration. While the average rent level varies by submarket, accessibility of assets is a major determinant of rents within the same submarket. Average rents for assets less than 6km from a highway interchange are about 5-7% higher than those located more than 6km away.

Other factors considered by occupiers include labour supply, synergy with other facilities, and sustainability. Due to increase in supply, respondents displayed limited concerns about availability of logistics facilities for lease.

Figure 15: What are the top three factors you consider when deciding where to locate your logistics facilities?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Southern region named as most popular location

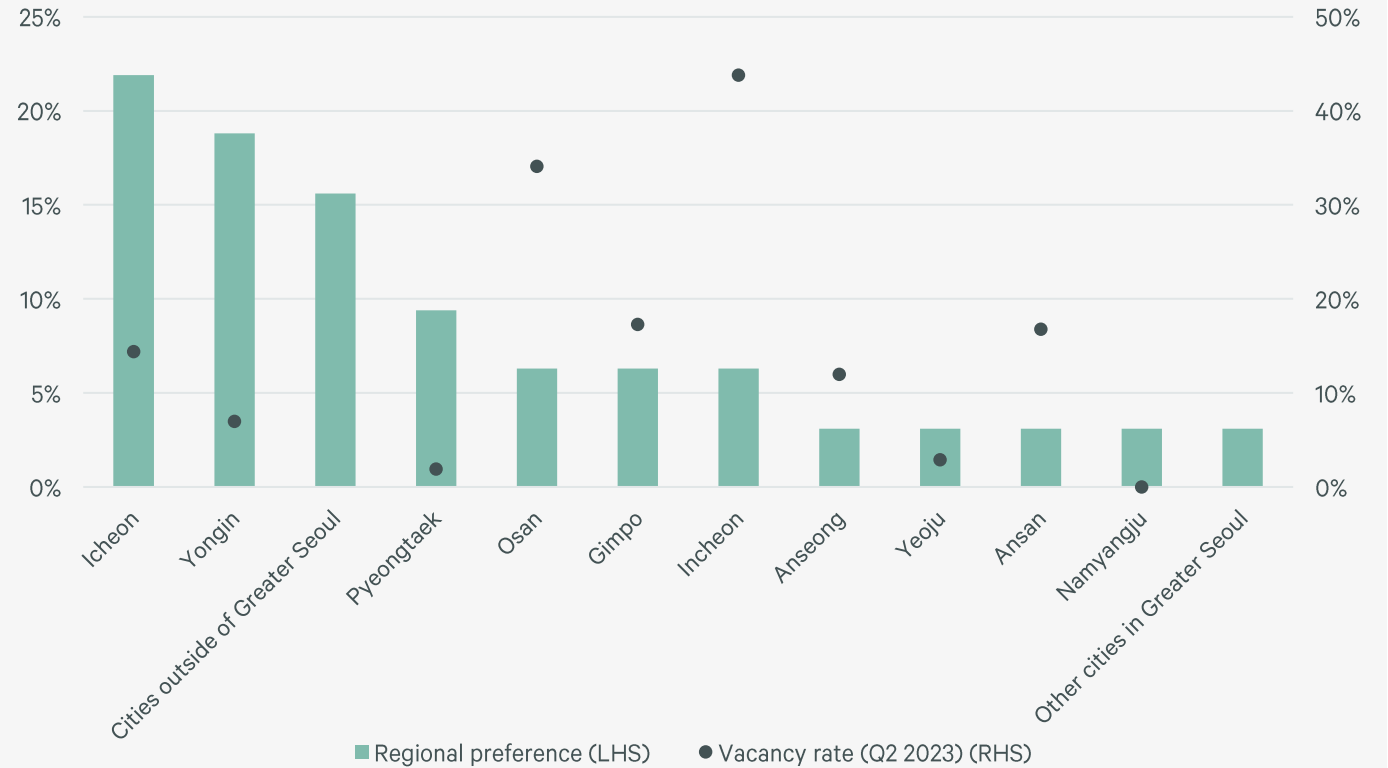
The survey found that nearly 40% of 3PLs said they would prioritise further expansion in Icheon and Yongin. These regions are already home to a high proportion of 3PLs due to their excellent transportation accessibility and affordable rental levels. As of H1 2023, about half of all 3PL occupiers of Grade A logistics facilities in Greater Seoul were located in these two areas.

Large-scale new supply is due to come on stream in Icheon this year and next, with survey results indicating that demand is set to keep up with the addition of new stock. As of H1 2023, the area accounted for about 30% of total net absorption in Greater Seoul, reflecting robust demand.

Several new projects in Yongin have been delayed, with this year's supply recording 330,000 sq. m. In addition, the revision of a municipal bylaw since 2020, which tightened development permit requirements, resulted in only about 100,000 sq. m. of new Grade A logistics developments being approved this year.

The survey also uncovered some demand for expansion outside of Greater Seoul and in western regions, such as Gimpo and Incheon to be 15% and 13%, respectively.

Figure 16: What are the cities and area size that your company is planning to review expansion to locate your logistics facilities?



Sources: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# More flexibility required in lease management

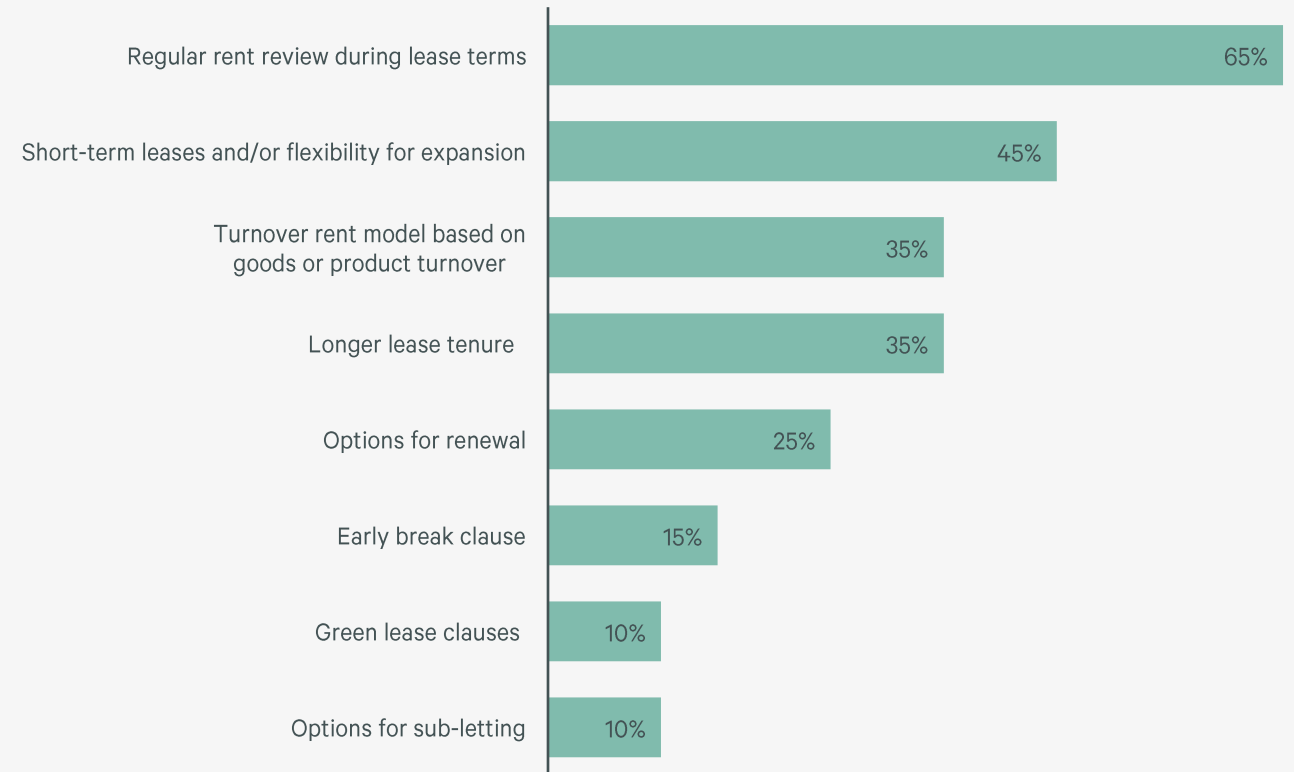
The survey results indicate that tenants are seeking lease terms that allow for regular rent negotiations and reviews to ensure they can be flexible in responding to market changes and risks.

Tenants also want flexibility of lease term and size of space along with a rent structure based on a commission on sales. 3PLs, which must bear the risk of shipper volume and revenue fluctuations, also require flexible contractual provisions such as lease space adjustments and revenue-linked rents to minimise risk.

Despite these expectations, terms such as rent escalation and rent-free incentives are rarely renegotiated during lease terms. CBRE has observed no instances of revenue-based rent being offered while there still seems to be a significant gap between landlord and tenant needs.

Proactive reviews of the requirements and acceptable options for 3PLs will enable landlords to be more competitive in the tenant-favoured market.

Figure 17: What do you expect to be the top three most important elements of leases you commit to in future?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

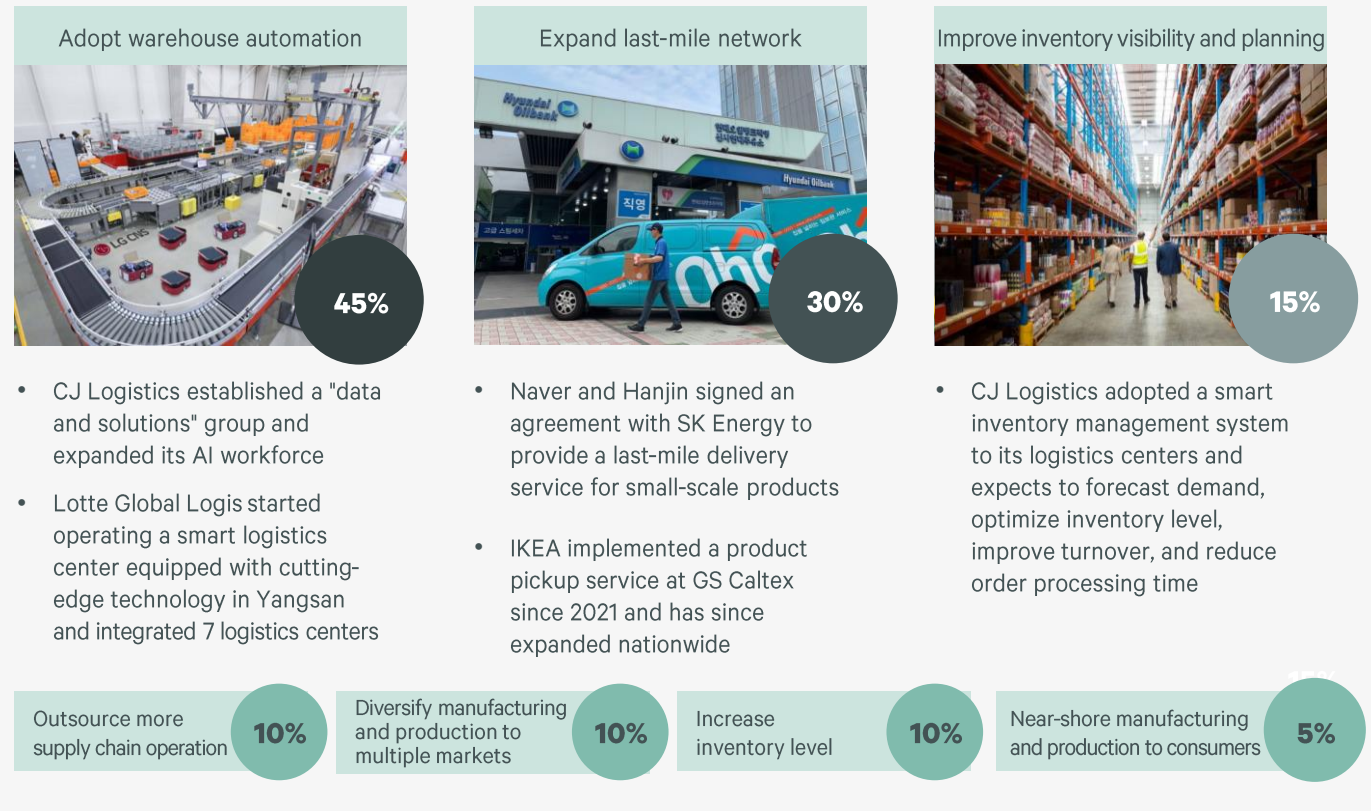
# Warehouse automation to improve supply chain

Investment in smart logistics centres can improve accuracy and productivity while reducing labour costs. About 45% of 3PLs are considering logistics automation strategies that apply advanced systems and facilities, such as artificial intelligence (AI) and robots, to create efficient supply chains.

Recent initiatives include CJ Logistics establishing a "data and solutions" group and expanding its AI workforce to transform its existing infrastructure-focused business structure into a more technology-focused format. Elsewhere, Lotte Global Logis announced plans to collaborate with several startups to upgrade its micro fulfillment centre operations by utilising autonomous delivery robots and automated dispatching solutions.

In addition to logistics automation, other priorities include improving logistics supply chains by expanding last-mile networks. Last-mile delivery, which refers to the last leg of a product's journey to the end-user, is considered a key priority to ensure rapid delivery. 3PLs such as CJ Logistics and Hanjin are utilising gas stations as micro fulfillment centres or acquiring and investing in logistics startups to build efficient urban logistics networks and expand their services.

Figure 18: Which of the following measures are you considering utilising to enhance your supply chain?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Increase productivity through investment in technology

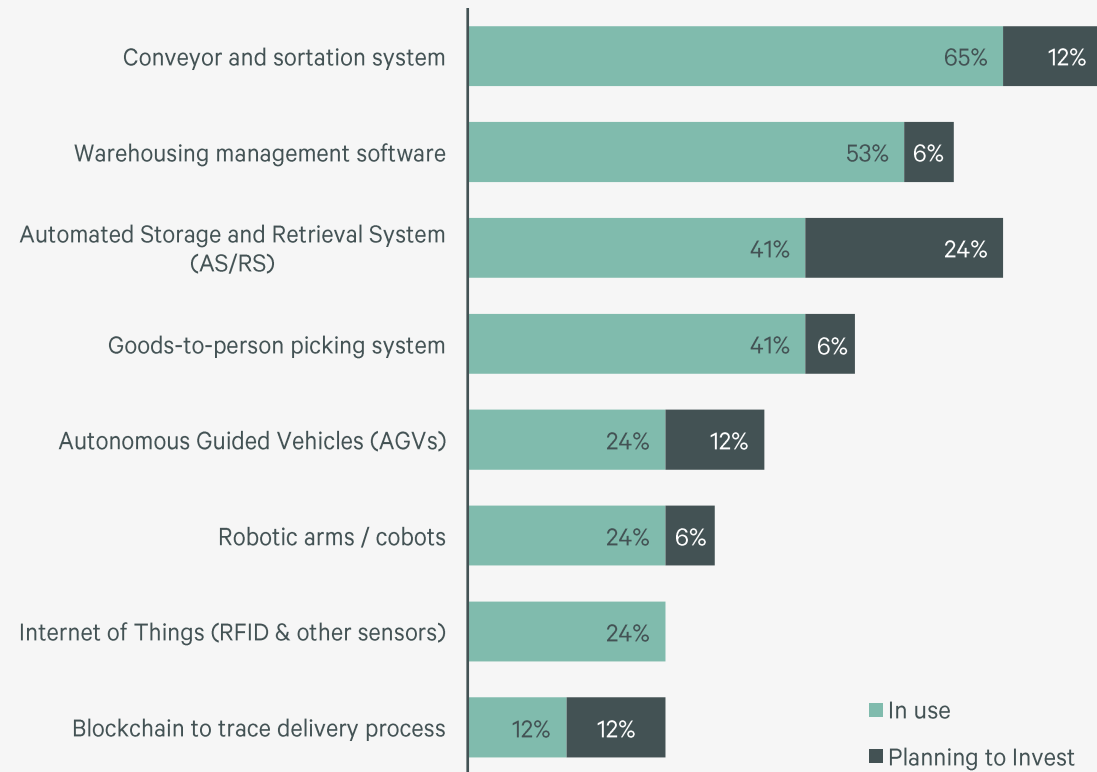
Specific initiatives to improve logistics automation include conveyors and sorting systems that automatically classify products by delivery by recognising barcodes. This maximises throughput and limits risk of mis-delivery.

Warehouse management software – which efficiently manages transportation, storage space, and inventory throughout the logistics process - was the second most used digital technology, with more than half of survey respondents already using it.

Other popular technologies include Automatic Storage and Retrieval Systems (AS/RS), which automatically place and retrieve cargo from designated locations. This can help 3PLs achieve more efficient inventory management by increasing the storage density of products in a logistics centre and reducing space used for storage.

3PLs are also expected to reduce costs and improve productivity through the use of robots, such as the Goods-to-Person (GTP) picking system, an automated solution in which robots bring products to workers. CJ Logistics is currently testing the system while it expands its Global Distribution Center (GDC) in Incheon. When fully operational, the facility's shipment volume is expected to increase by about 1.5x.

Figure 19: Has your company already adopted or does it plan to adopt the following technological innovations in its industrial and logistics facilities over the next three years?

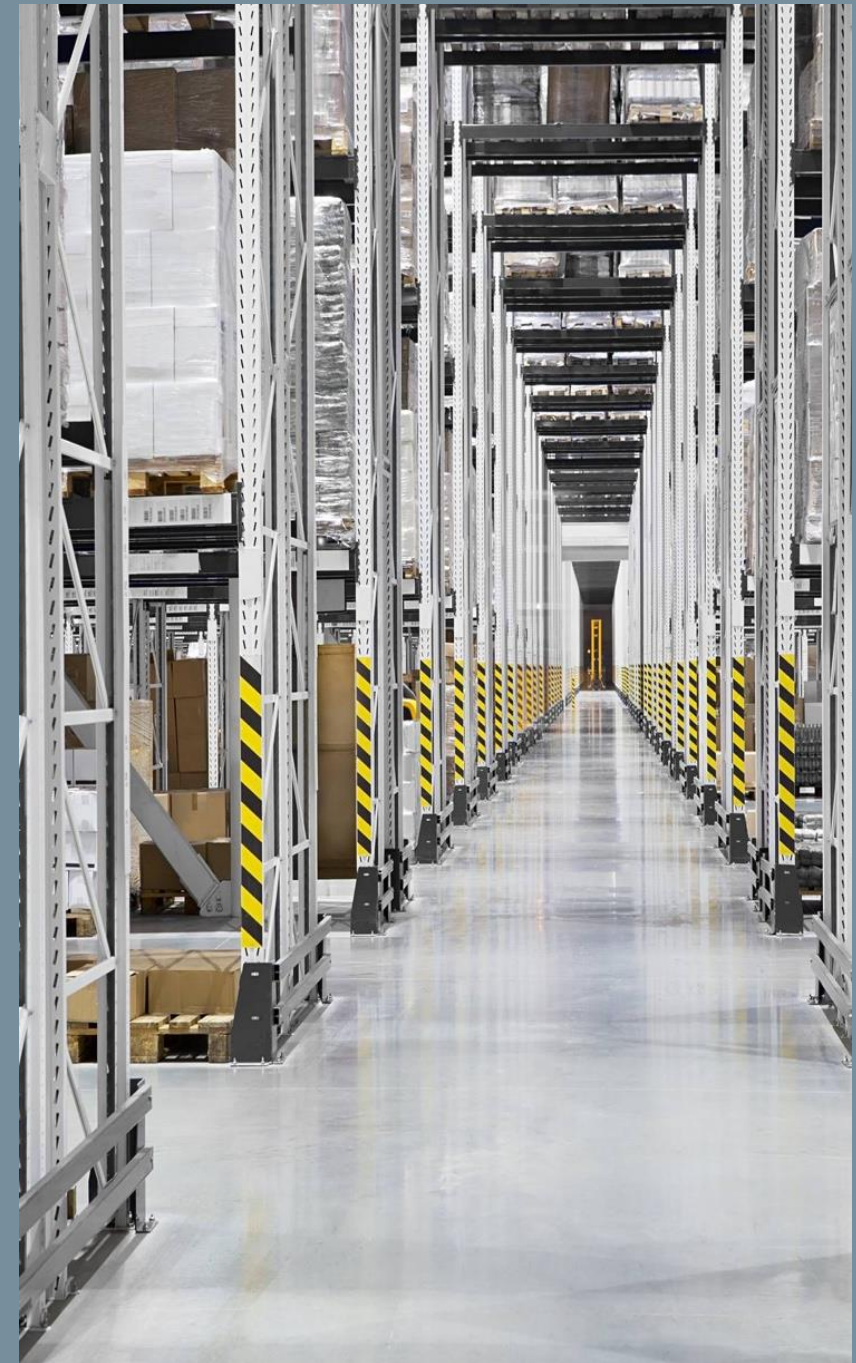


Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

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## Challenges

Major difficulties faced  
by occupiers



# Increasing costs and market competition named as main challenges

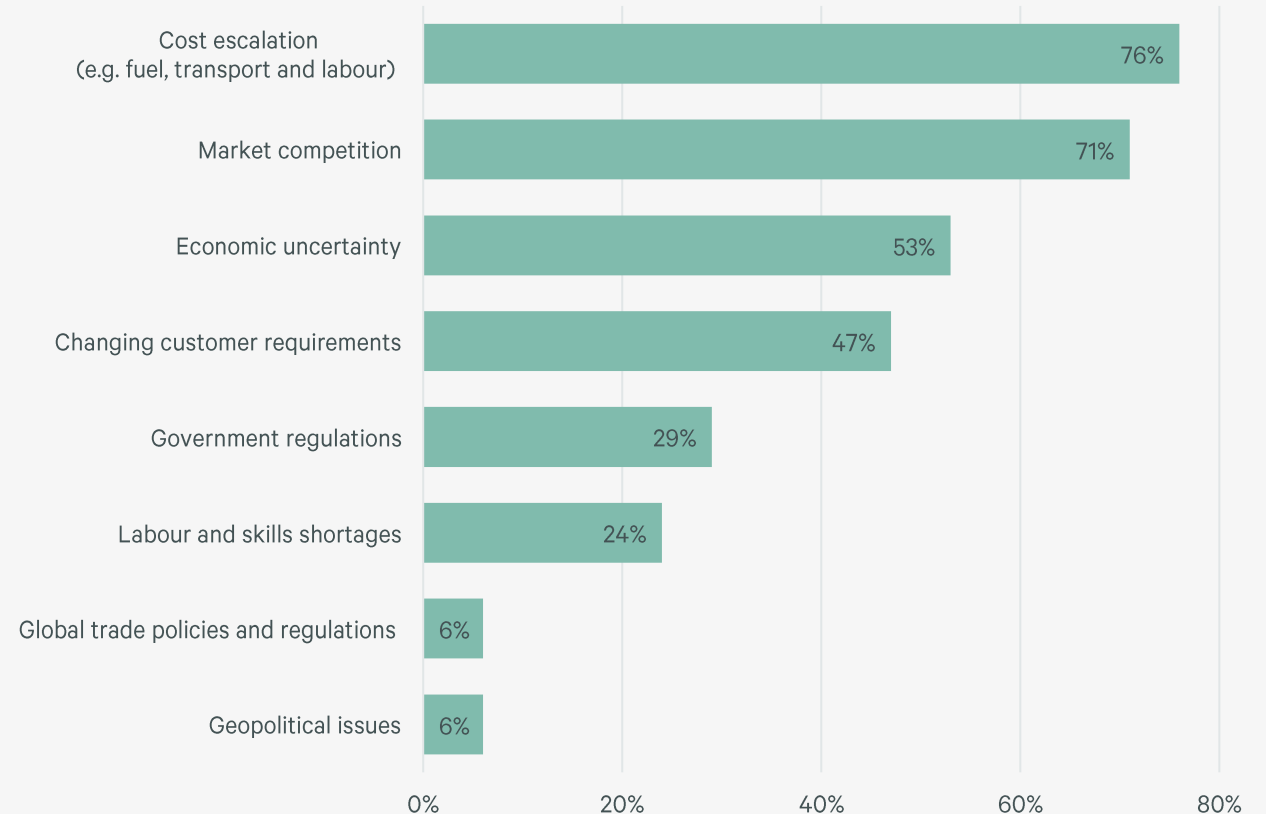
Amid high inflation and slowing economic growth, most respondents pointed to rising costs as the biggest risk factor set to impact the 3PL industry.

Some 3PL companies are raising delivery prices due to the burden caused by rising logistics costs such as fuel, transportation, and labour. CJ Logistics has raised delivery rates for each of the past three years, with the company's rates in 2023 found to have increased by about 25% compared to 2021.

Market competition was also cited as a major challenge for 3PL companies. As same-day delivery services become more common, major online channels are actively establishing direct delivery systems. As new players enter the market, 3PLs market share is declining. In 2023, domestic e-commerce platform Coupang established its subsidiary Coupang Logistics and began its 3PL business by providing fulfilment services to sellers.

Economic uncertainty and changes in suppliers' needs were identified as additional risk factors. As Korea's logistics market is based on inland transportation, respondents showed relatively less concern about international trade policy and geopolitical risks compared occupiers from other markets in Asia Pacific.

Figure 20: What are the major challenges your business faces over the next three years?



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Rising burden of transportation and delivery costs

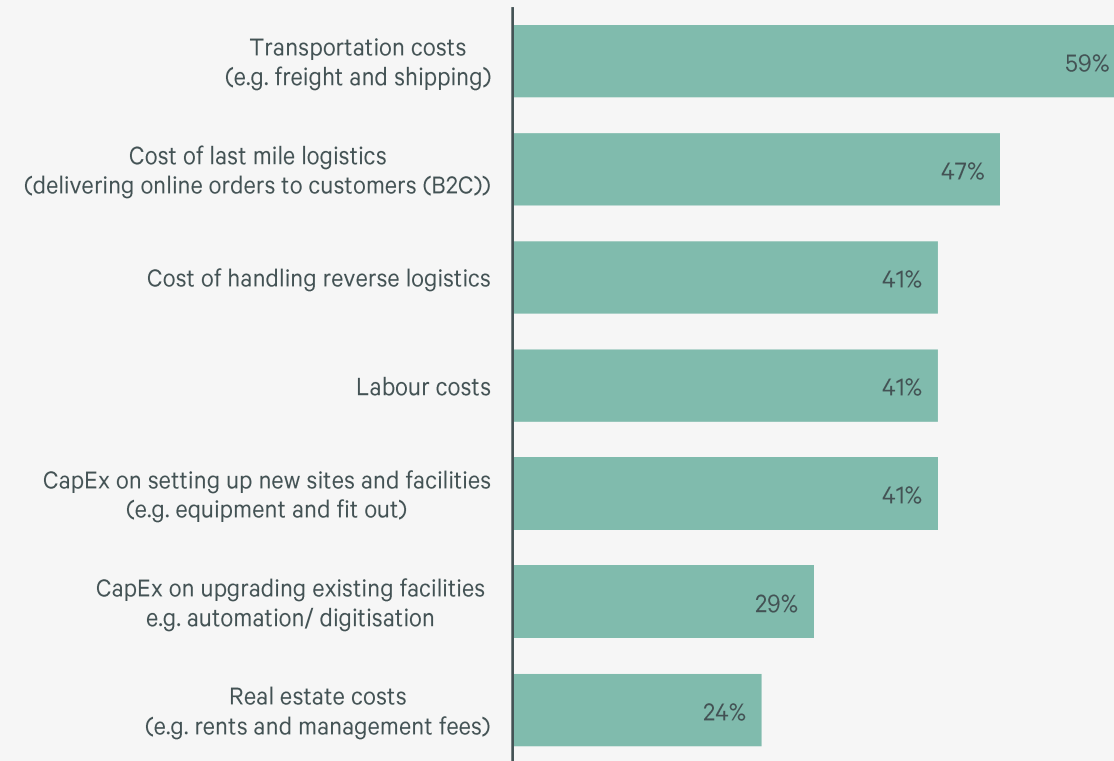
The survey found that transportation and delivery were the two largest components of overall logistics costs. According to a 2020 corporate logistics cost survey conducted by the Ministry of Trade, Industry and Energy, transportation accounted for about 60% of total logistics costs (Figure 22).

With last-mile delivery requiring small products to be delivered individually and quickly to end consumers, costs are higher than those for transportation between logistics bases. Other concerns include the cost of return services that 3PL companies provide to meet consumer demand.

As 3PLs augment fulfilment services, adoption of the latest technologies for logistics centres is expected to continue to grow, increasing the burden of investment required for new facilities.

Respondents showed little concern about real estate costs. This is due to the ongoing completion of large-scale new logistics supply in Greater Seoul, which has expanded tenants' options. Annual rental growth of 1.5-2% is insignificant compared to the rate of increase in other logistics costs.

Figure 21: Concern towards the following cost items



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Logistics Cost Structure

Figure 22: Logistics cost structure

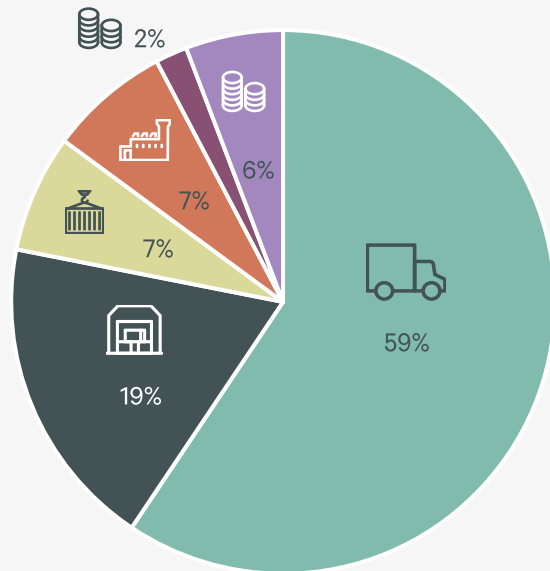
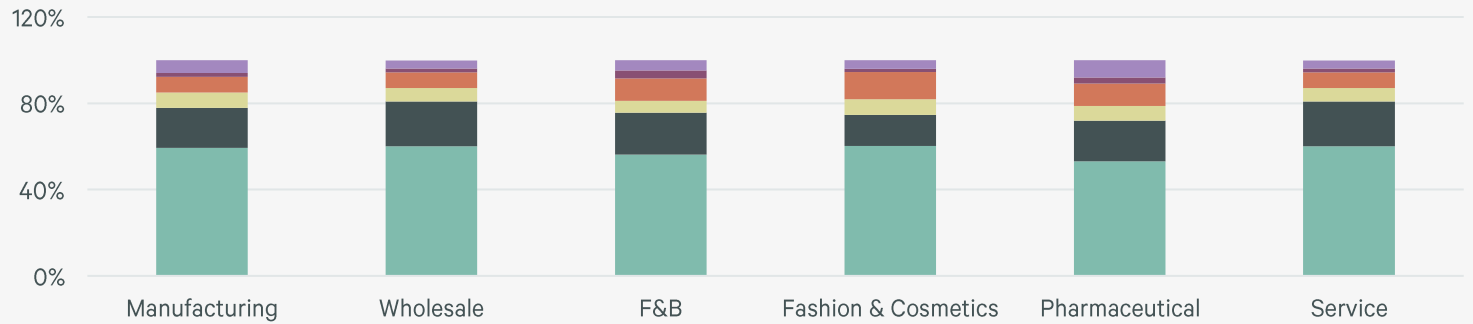


Figure 23: Logistics cost structure by industry



- Management: Logistics costs resulting from logistics management activities such as planning, coordination, and facility control.
- IT: Cost related to manage processes such as purchasing, transportation, operations, inventory management, and distribution network.
- Packaging: Logistics costs due to logistics packaging activities such as boxes and pallets to facilitate movement and storage of products.
- Unloading: Logistics costs incurred when transporting materials such as loading and unloading, picking, and sorting.
- Storage: Costs spent on storing goods in logistics centre.
- Transportation: Logistics costs associated with delivering goods between logistics bases and to customers.

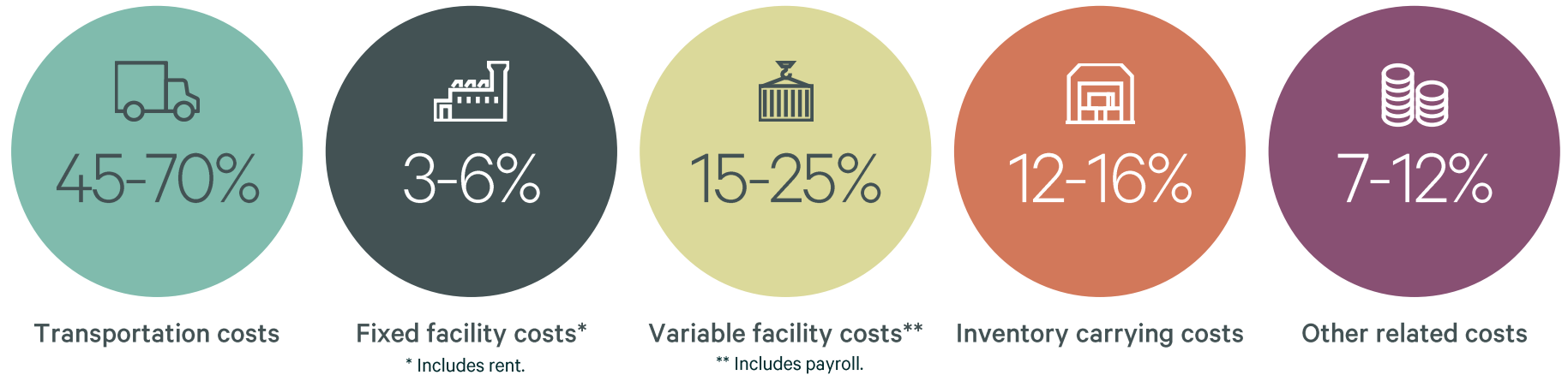
Source: 2020 corporate logistics cost survey conducted by the Ministry of Trade, Industry and Energy, Transportation, KOSIS

“

It takes roughly an 8% increase in fixed facility costs to equal the impact of just a 1% increase in transportation costs.

”

Figure 24: APAC Logistics cost structure



Source: CBRE Supply Chain, May 2023.

# Costs continue to rise due to freight vehicle regulations

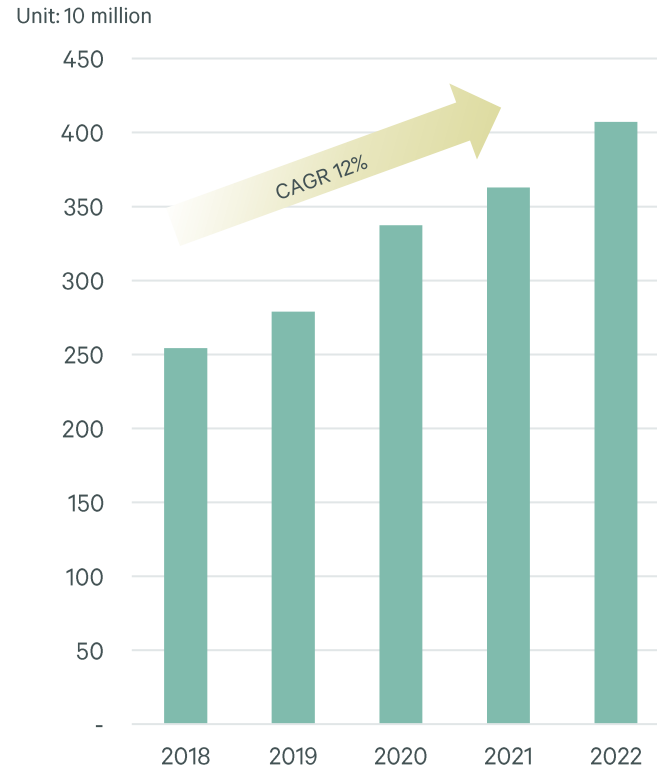
Cost pressure on transportation is expected to grow in the coming years as regulations limit the number of freight vehicles at a time when cargo volume increases.

Between 2018-2022, domestic cargo volume increased by an average of 12% per year, while the number of registered cargo vehicles rose by just 3% per year over the same period. Although parcel delivery volume has increased rapidly since the pandemic, vehicles to support delivery services has been insufficient due to the government's regulations on vehicles under operation.

While the Logistics Committee of the Korea Chamber of Commerce and Industry recently asked the Ministry of Land, Infrastructure and Transport to ease regulations on increased vehicles, measures have not yet been announced.

As oil price fluctuations are reflected in the cost of fuel, they pose an ongoing risk to logistics transportation costs. While 3PLs can offset some of the risk by linking oil prices to freight rates for the duration of lease contracts, the burden remains high.

Figure 25: Domestic delivery volume trends



Source: KOSIS

Figure 26: Number of commercial cargo vehicle registrations

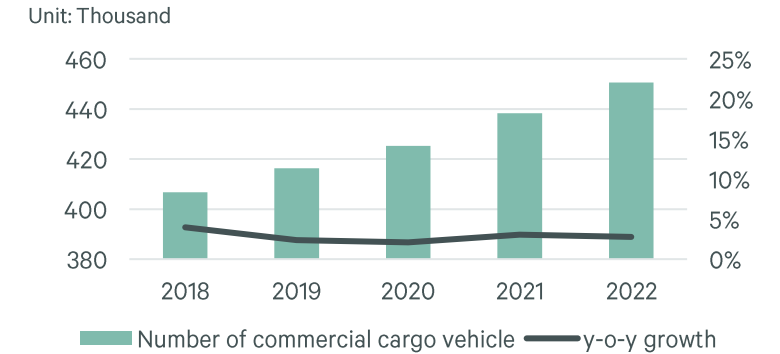
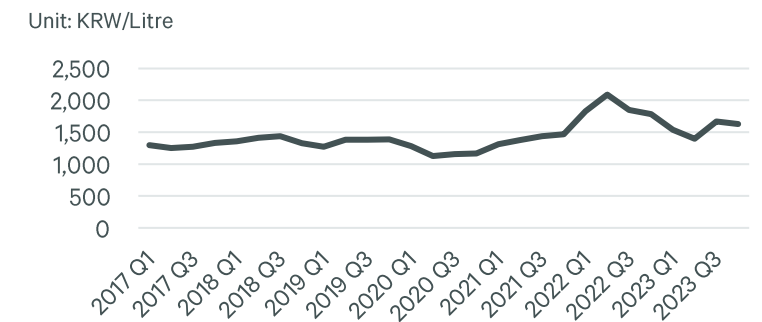


Figure 27: Average selling price of diesel



Source: KOSIS, OPINET

05

ESG

Demand for green  
features gains  
momentum



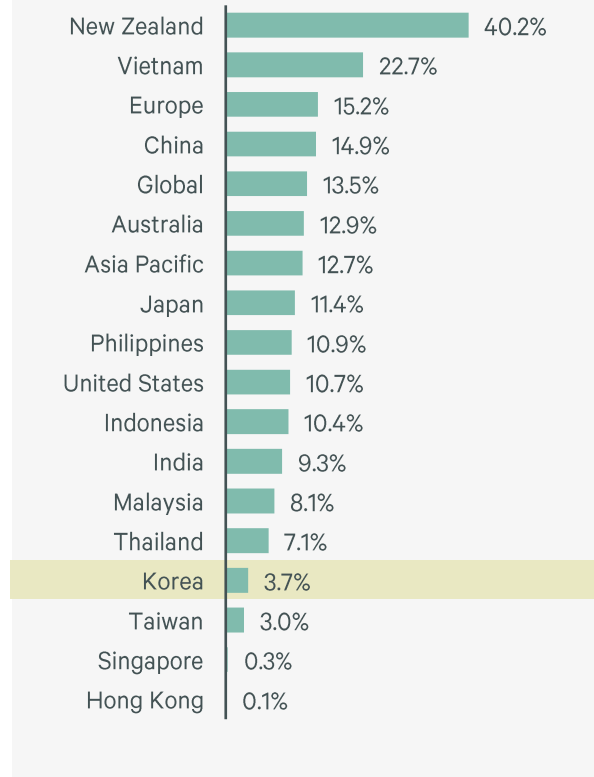
# Increasing awareness of green warehouses

Korea remains highly dependent on fossil energy such as oil and coal. According to energy company BP, the proportion of renewable energy produced in Korea was 3.7% in 2022, the lowest such level worldwide.

Recent years have seen a rise in interest in strengthening the adoption of ESG principles and practices within the domestic logistics industry. In 2021, Lotte Department Store's logistics centre in Incheon became the first facility to install rooftop solar panels, This measure reduced annual electricity bills by approximately KRW 200 million and cut carbon emissions by 630 tons.

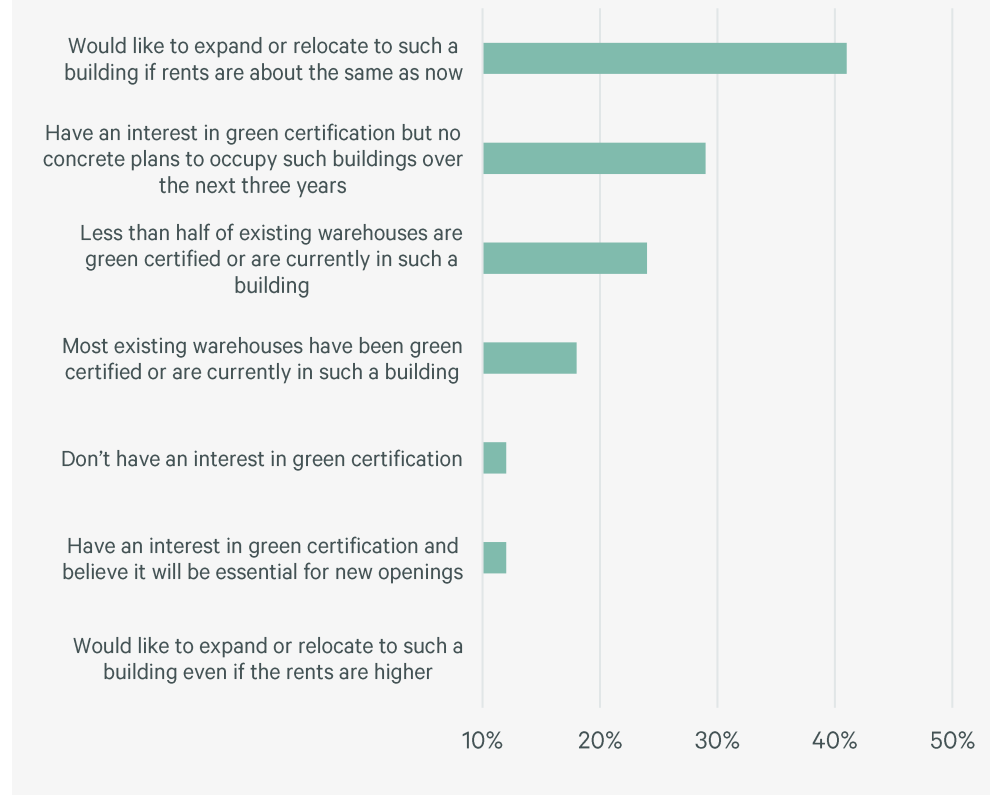
The survey found that while occupiers' interest in green logistics is evident, many are still wary of the cost burden and are unwilling to pay a premium for ESG certified logistics facilities.

Figure 28: Renewable energy as a % of primary energy production



Source: Our World in Data based in BP Statistical Review of World Energy, 2022

Figure 29: What aspects of ESG certification do you consider when constructing your logistics portfolio??



Source: 2023 Asia Pacific Logistics Occupier Survey, CBRE Research.

# Limited availability of green logistics space

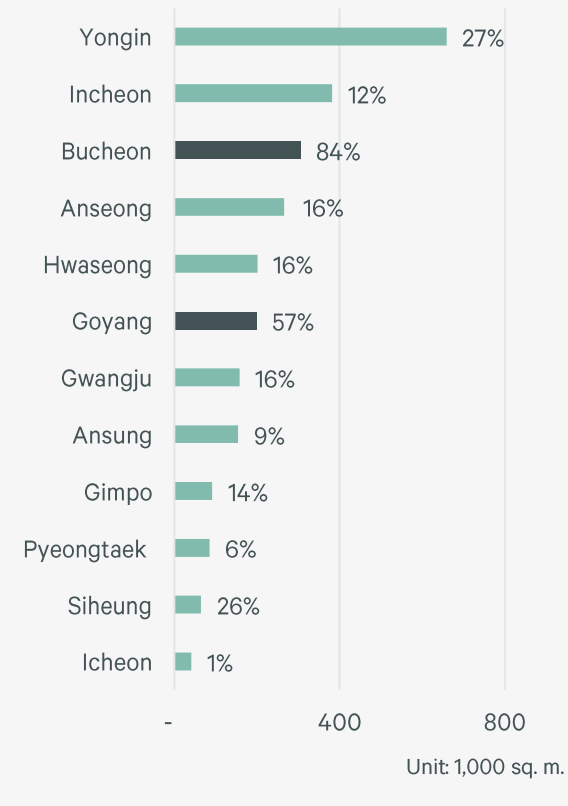
Although interest in ESG is increasing, there are just 25 Grade A logistics facilities in Greater Seoul that are LEED-certified as of September 2023 by the United States Green Building Council (USGBC), accounting for only 14% of total.

Approximately 23% of LEED certified assets are located in Yongin, followed by Goyang, Incheon, and Bucheon. Green logistics facilities in Yongin include the GO&S Logistics Centre, which came on stream in Q3 2023. Other prominent assets include Kendall Square Bucheon Logistics Park, which is the only Grade A asset in Bucheon.

CBRE expects the proportion of green certified logistics assets to gradually increase as awareness of ESG increases within the industry and the government promotes supportive policies such as green logistics conversion incentives.

Recent industry commitments include ESR's pledge to obtain certification for more than half of its current portfolio and GLP's intention to pursue all new development projects in compliance with green building design standards.

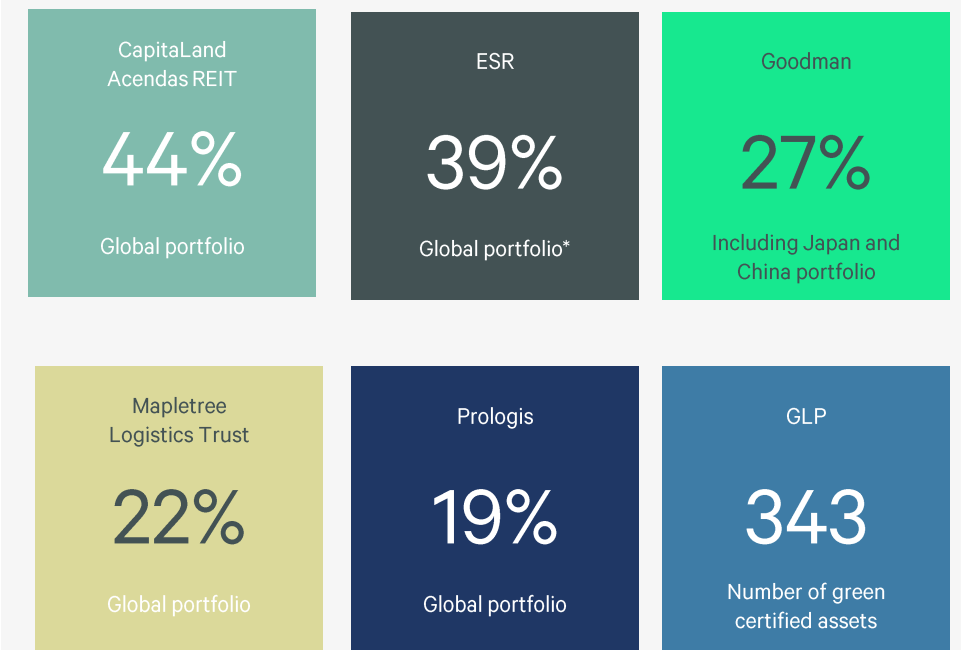
Figure 30: LEED-certified logistics volume by submarket



Note: Numbers for each submarket indicate the proportion of LEED-certified assets in respective markets

Source: USGBC

Figure 31: Major operators/investors of logistics centres and proportion of ESG assets in logistics portfolio



Source: Various companies' ESG reports, CBRE Research, July 2023

# Green conversion with electric vehicles

As part of the drive to embrace ESG, logistics players are accelerating the introduction of electric vehicles to perform delivery.

CJ Logistics recently announced a plan to convert all vehicles it owns to electric and hydrogen trucks by 2030 by participating in the Ministry of Environment's '2030 Zero-Emission Vehicle Conversion 100' project.

Lotte Global Logistics currently operates 96 electric cargo vehicles and has reportedly been increasing the proportion of electric vehicles every year since 2020.

The penetration rate of electric vehicles in the Korean logistics industry has increased since 2020 after the government began providing various incentives such as subsidies and fee discounts. Hyundai Motor Company and Kia Motors data show cumulative domestic sales of 1-ton electric trucks, such as Porter and Bongo, reached 100,000 units as of June 2023.

With charging infrastructure lagging increasing demand, property owners must expand the provision of electric vehicle charging facilities within logistics facilities to further promote the adoption of electric vehicles.

Figure 32: Selected examples of deployment EVs for logistics use

Company	Target/ current adoption rate of EVs
FedEx	FedEx Express: A global target for 50% of all newly-procured parcel pickup and delivery vehicles to be electric by 2025 and rise to 100% of new vehicle orders by 2030
SingPost	Target to fully electrify its owned delivery fleet by 2026
DHL	A global target of running 60% of its vehicles in pick-up and delivery electrically by 2030
Cainiao	Plans to replace all short-haul logistics vehicles with EVs by 2030
CJ Logistics	Convert the company's directly managed vehicles to 100% zero-emission vehicles by 2030
Lotte Global Logistics	In accordance with Ministry of Environment's 'Korean Zero Emission Vehicle Conversion 100 (K-EV100)' project, approximately 96 electric cargo vehicles are in operation as of 2023.
JD Logistics	Owns a fleet of 5,418 new energy vehicles, target to use 100% of new EVs by 2030
Yamato Holdings	Aims to introduce 20,000 EVs by 2030
Coupang	Starting with Jeju Camp 3 in 2021, established an integrated EV delivery centre in Busan, Chungju, and Cheongju, and plan to expand the integrated EVdelivery center nationwide.
Hanjin Logistics	As of the end of 2022, began operating 6 EV chargers at 4 delivery terminals, and are pursuing a strategy to diversify EV-related business, including providing charging services for electric trucks in 2023.

Source: Various companies' ESG reports, CBRE Research, December 2023

06

The Way Forward

Strategies and  
implications



# Occupier strategy: Optimizing logistics space to increase profitability



## Drive business growth while containing costs

- Diversify logistics strategies and collaborate with companies with products such as overseas direct purchase and pharmaceuticals that are growing recently
- Maximize utilization of assets by occupying centres that can accommodate various products
- Expand business by seeking fulfillment opportunities
- Secure competitive assets under favorable conditions in a tenant-favored market and prepare for potential expansionary demand



## Boost supply chain resilience and flexibility

- Strengthen logistics capabilities and competitiveness through professional 3PL services
- Optimize inventory management and improve operational efficiency through investment in hardware and software, such as automation technology in facilities
- Enhance flexibility by reviewing various options such as renewal, relocation, and self-development
- Negotiate flexible lease terms with the landlord, including short-term lease, early termination, and sales-aligned rent level



## Transition to sustainable logistics

- Reduce the risk of oil price volatility by introducing electric vehicles in the delivery sector
- Comply with internal ESG standards by regularly requesting landlords to provide information on the green status of assets
- Limit excessive packaging and convert plastic materials to eco-friendly products
- Utilize incentives for green logistics, such as government-provided subsidies and charging fee discounts

# Landlord/investor strategy: Review and modernise portfolios



## Demand analysis and risk minimization

- Analyse the features of assets preferred by 3PL tenants, such as transportation accessibility and rent
- Review strategies of target occupiers and demand for relocation and expansion and suggest lease opportunities
- Expand the geographic location and tenant composition of the assets to diversify risk
- Conduct thorough analysis on demand for dry and cold centres and develop new assets or remodel existing centres



## Realise returns

- Realize profits through the sale of assets with increased value and seek new investment opportunities in products with price adjustments
- Prioritize disposal of logistics centres with low possibility of additional facility upgrades and limited improvement in asset value
- Minimize vacancy risk through providing incentives and secure stable rental income in the long term



## Future-proof assets

- Invest in newly built assets that can apply cutting-edge logistics automation technology
- Increase the proportion of green certified assets in the portfolio
- Support tenant's ESG strategy by installing solar panels, securing renewable energy and build electric vehicle charging stations

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