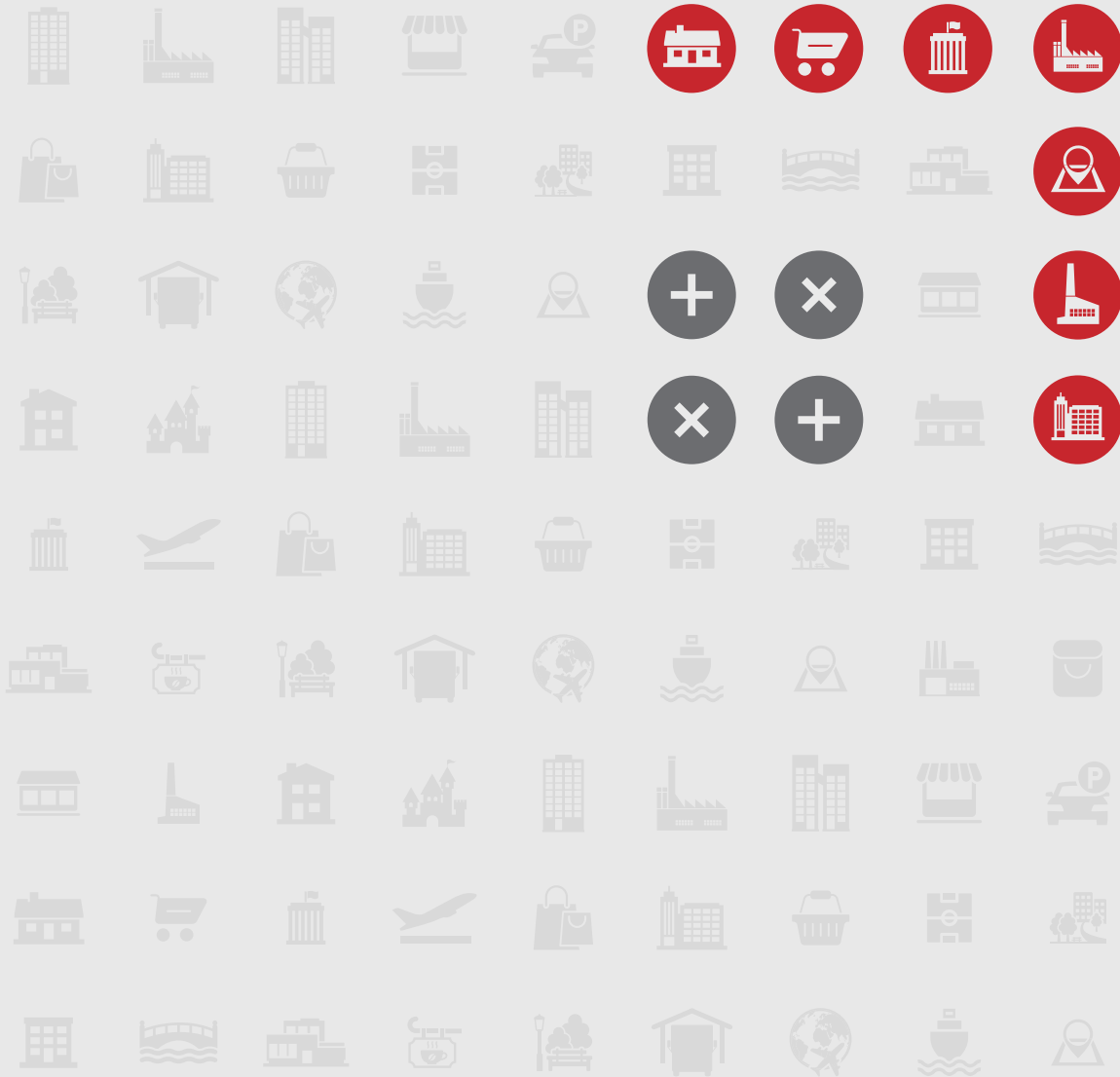


NO.1 PROPTECH RSQUARE

2023
H 1

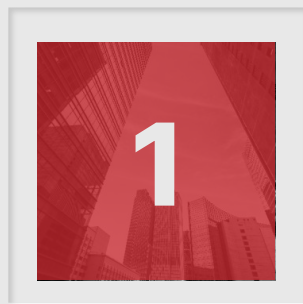
MARKET REAL REPORT

LOGISTICS

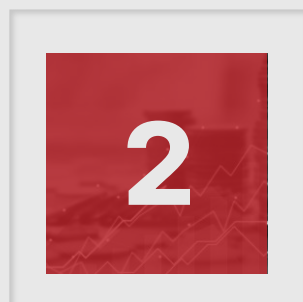


CONTENTS

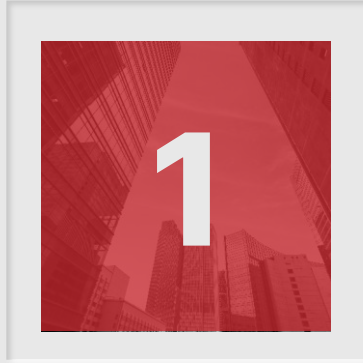
2023 H1 MARKET **REAL** REPORT **LOGISTICS**



Rental Market



Investment Market



Rental Market

The rental market for logistics centers
in the metropolitan area.

- 01 Supply Status and Trends
- 02 Trends for Logistics center's supply and Demand

01 Metropolitan logistics center market

23.1H Metropolitan logistics center market SNAPSHOT

Southeast region

Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	289966	▲ 43906
Vacancy Rate Room Temperature	4.2%	▲ 0.9%p
Vacancy Rate Room Temperature	5.5%	▼ 0.5%p
Rental Rates Room Temperature	KRW 30,000	▲ 0.1만원
Rental Rates Cold	KRW 57,000	▼ 0.1만원
Transaction Volume KRW billion	15959	▲ KRW 4,754 billion

Northwest region

Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	24667	▲ 2962
Vacancy Rate Cold	3.6%	▲ 2.6%p
Vacancy Rate Room Temperature	45.3%	▲ 10.6%p
Rental Rates Room Temperature	KRW 45,000	▼ 0.3만원
Rental Rates Cold	KRW 69,000	▼ 0.2만원
Transaction Volume KRW billion	2000	▼ KRW 180 billion

Southern region

Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	302031	▲ 201189
Vacancy Rate Cold	2.0%	▲ 0.2%p
Vacancy Rate Room Temperature	9.3%	▼ 3.0%p
Rental Rates Room Temperature	KRW 30,000	-
Rental Rates Cold	KRW 61,000	▲ 0.1만원
Transaction Volume KRW billion	2294	▼ KRW 2,226 billion

Western region

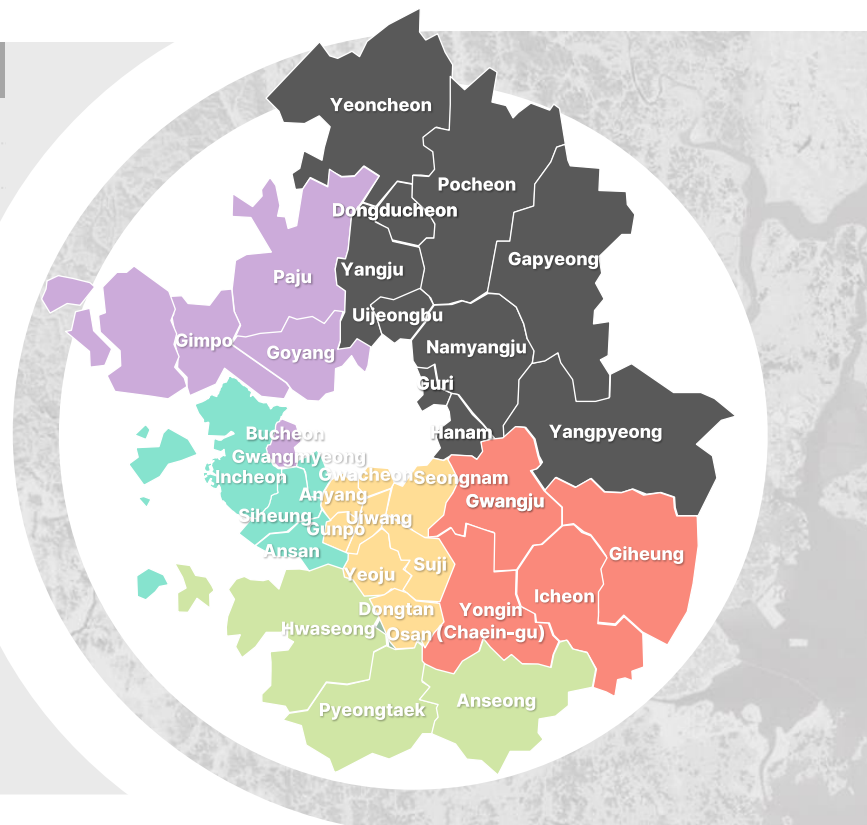
Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	285061	▲ 15703
Vacancy Rate Cold	4.1%	▲ 0.7%p
Vacancy Rate Room Temperature	24.5%	▼ 8.4%p
Rental Rates Room Temperature	KRW 38,000	▼ 0.1만원
Rental Rates Cold	KRW 64,000	▼ 0.2만원
Transaction Volume KRW billion	9414	▲ KRW 6,112 billion

Middle region

Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	37732	▼ 19834
Vacancy Rate Cold	2.0%	-
Vacancy Rate Room Temperature	5.8%	▲ 3.1%p
Rental Rates Room Temperature	KRW 35,000	▲ 0.1만원
Rental Rates Cold	KRW 70,000	▲ 0.1만원
Transaction Volume KRW billion	3230	▲ KRW 565 billion

Other Metropolitan Areas

Items	'23.1H	Growth rate (QoQ)
New Supply pyeong	23535	▲ 15377
Vacancy Rate Cold	0.0%	-
Vacancy Rate Room Temperature	17.7%	▲ 4.7%p
Rental Rates Room Temperature	KRW 33,000	▼ 0.2만원
Rental Rates Cold	KRW 63,000	▼ 0.1만원
Transaction Volume KRW billion	-	-



01 Logistics Center Rental Market

Supply Market

Cumulative Supply Status

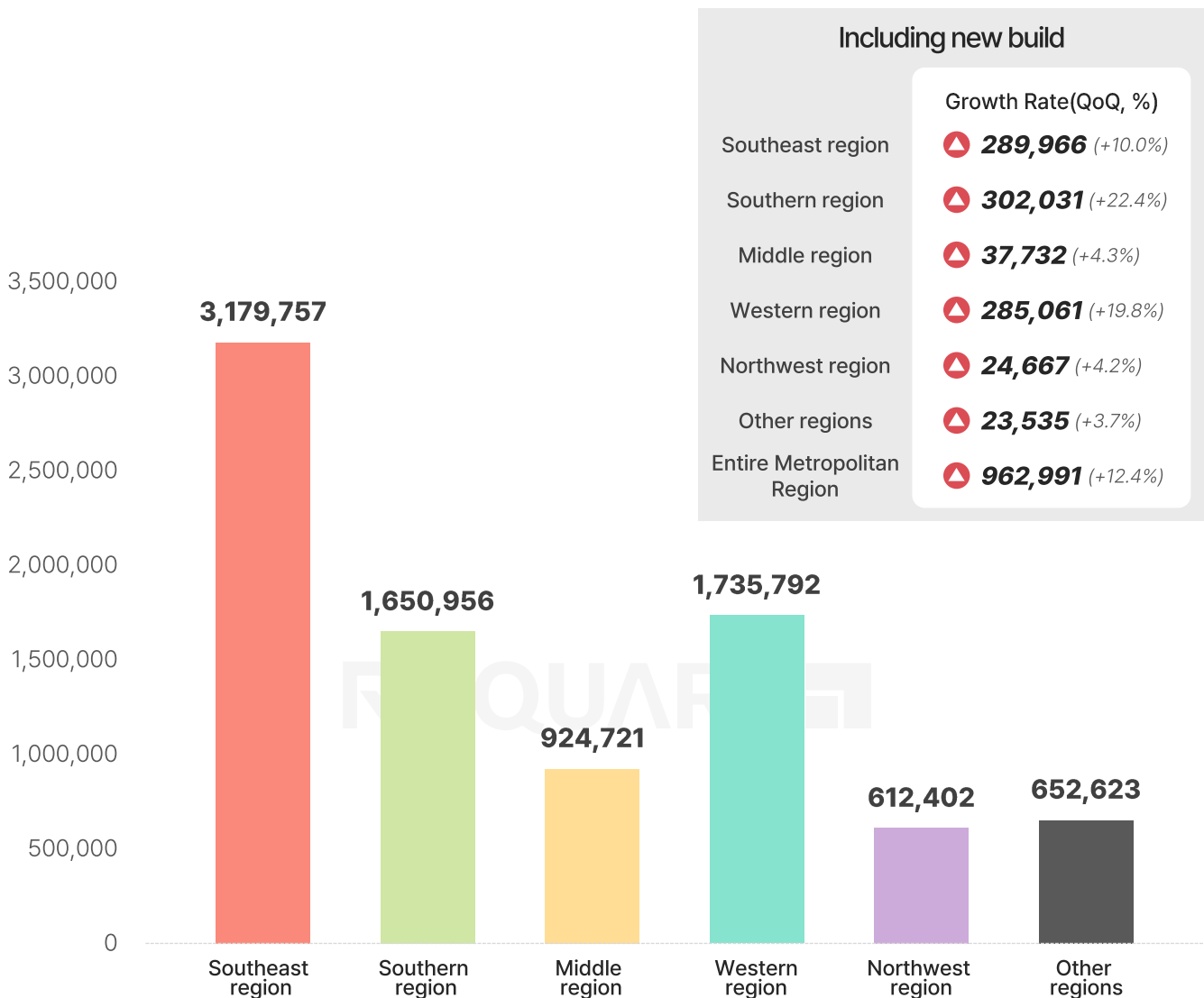
CHECK 1

In the first half of 2023, the cumulative supply of logistics centers in the metropolitan area increased by about 1 million pyeong to 8.76 million pyeong

- As of the first half of 2023, the cumulative supply of logistics centers in the Seoul metropolitan area was approximately 8.76 million pyeong, and the increase in supply in the first half of the year was mainly in the traditional logistics center areas of 'South', 'West', and 'Southeast'.
- In particular, the cumulative supply growth rate (HoH) for the first half of the year in the 'Southern' and 'Western' areas was 22.4% and 19.8%, respectively. This is significantly higher than the cumulative supply growth of the entire metropolitan area (12.4%), suggesting that the concentration of logistics centers in these areas is relatively more pronounced than in other areas.

Cumulative Supply of Logistics Centers by Metropolitan Areas

Unit Pyeong



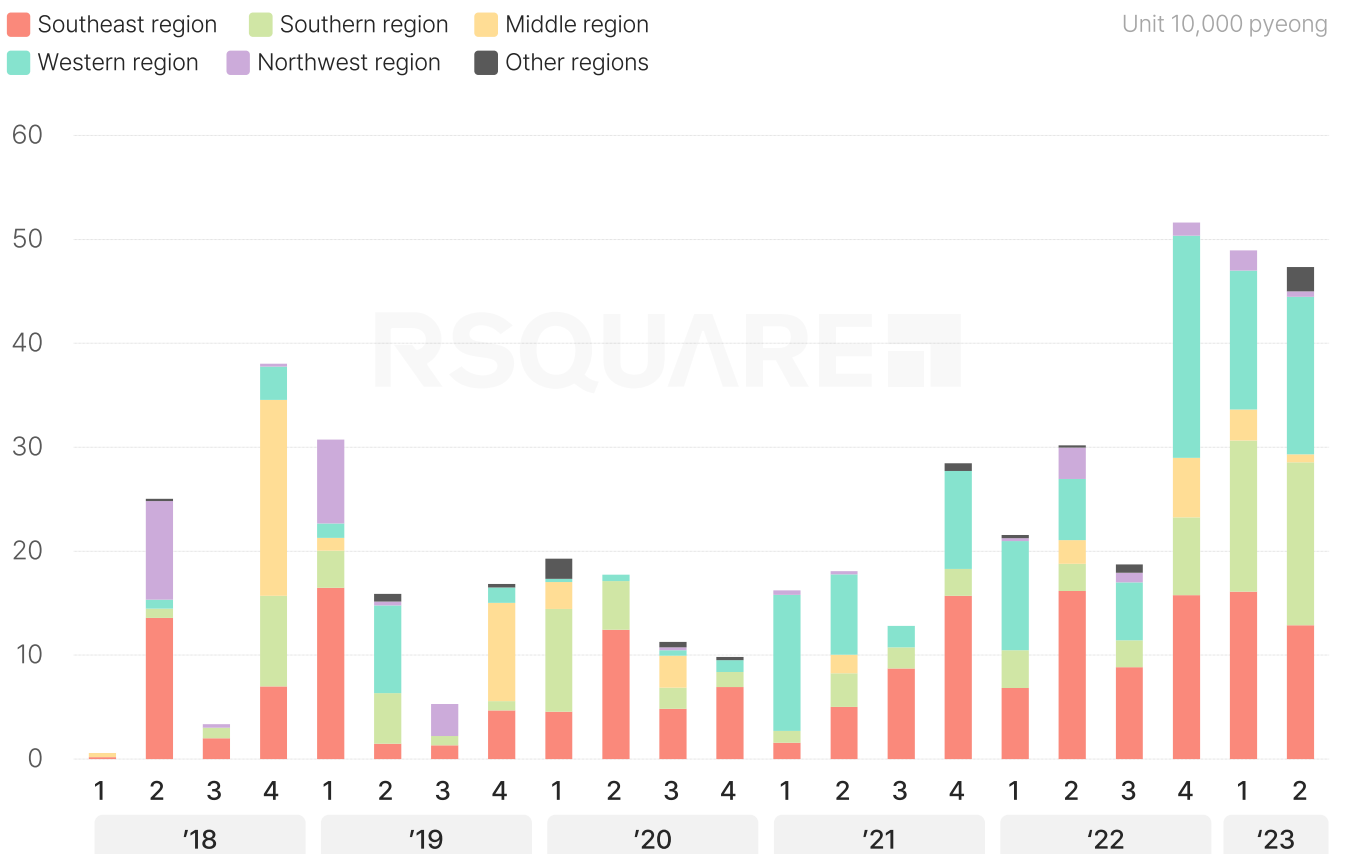
01 Logistics Center Rental Market

Supply Market ▶ New Supply Status

CHECK 2 Record Supply of Logistics Centers in the Half-Year, with Massive Supply Expected in the Second Half of the Year

- In the first half of 2023, new supply of logistics centers in the Seoul metropolitan area increased by about 37% from the second half of last year, with 960,000 pyeong supplied, marking the largest half-yearly supply on record.
- Major assets delivered in the first half of this year include S&K Logistics Center (44,842 pyeong of gross floor area) in the Western area, Incheon Hangdong Dream Logistics Center (40,326 pyeong of gross floor area), LogisHub Incheon (37,940 pyeong of gross floor area), and Wonchang-dong 394-15 Warehouse Facility (59,684 pyeong of gross floor area), PAMS Pyeongtaek Camp (60,438 pyeong of square meters) in the Southern area, and Kendall Square Pyeongtaek Logistics Park (58,029 pyeong of gross floor area) were completed.
- On a quarterly basis, approximately 490,000 and 470,000 pyeong were supplied in Q1 and Q2, respectively, marking the third consecutive quarter of large-scale supply of more than 500,000 pyeong, following the supply of 520,000 pyeong in Q4 last year.
- In terms of size, a total of seven logistics centers of 30,000 pyeong or more were supplied in the first half of the year, with four and three in the West and South areas, respectively, driving an increase in the supply of logistics centers in these areas.
- In the second half of this year, it is expected that more than 500,000 pyeong of logistics centers will be supplied, intensifying concerns about supply and demand instability due to a large supply backlog.

New Supply of Logistics Centers by Metropolitan Area



01 Logistics Center Rental Market

2023 1H New Supply Cases for Major Logistics Centers

Completion Date	Name of Logistics Centers	Purpose	Area	Sub-area	Gross Floor Area (pyeong)
'23.2Q	Kendall Square Pyeongtaek Logistics Park	Room temperature	Southern region	Pyeongtaek City	58029
'23.2Q	S&K Logistics Center	Combined	Western region	Incheon	44842
'23.2Q	Incheon Hangdong Dream Logistics Center	Combined	Western region	Incheon	40326
'23.2Q	LogisHub Incheon	Combined	Western region	Incheon	37940
'23.1Q	PAMS Pyeongtaek Camp	Combined	Southern region	Pyeongtaek City	60438
'23.1Q	Wonchang-dong 394-15 Warehouse Facility	Combined	Western region	Incheon	59684
'23.1Q	JW Pharmaceutical Logistics Center in Hwaseong	Combined	Southern region	Hwaseong City	37913

Supply and Demand Market

Metropolitan Area Supply and Demand Trends Overview

Average vacancy rate rises of logistics centers in the metropolitan area due to continued large-scale supply

- The average vacancy rate has been rising due to the large-scale supply, with 500,000 pyeong of new logistics centers being supplied every quarter since the end of last year. This shows that recently completed or upcoming logistics centers are struggling to attract shippers, leading to an increase in vacancy rates, while the vacancy rates of existing warehouses are relatively stable.
- In the Western area including Incheon, there has been a steady supply of ultra-large assets with a gross floor area of 50,000 pyeong or more since the first half of 2021, and the risk of vacancy due to supply and demand instability is more pronounced than in other areas.

Growing Supply and Demand Imbalance Centered Around Cold Centers

- As of the first half of 2023, the average vacancy rate for cold centers in the metropolitan area is over 10%, about three times higher than that of room temperature centers.
- This is largely because "e-commerce" companies, whose rapid expansion in the past has helped lower vacancies of cold centers, are revising their business strategies, delaying or withdrawing new leases. Based on this strategy, there are some cold centers that were previously leased being converted to sublease agreements.

Polarizing Shipper Preferences Based on Lease Competitiveness by Different Logistics Center Asset

- As the supply and demand market instability is expanding due to large-scale supply and slowdown in demand of shippers centered on cold centers, the rental competitiveness of logistics centers is also affecting the attraction of shippers. The more competitive the rent, the better the location, and the more preferable the physical specification, the more likely it is to attract shippers, and the more difficult it is to attract shippers if it is not.
- As the imbalance in the supply and demand of logistics centers in the metropolitan area is expected to continue to deepen for the time being, such polarization by asset is also expected to continue.

Real Rents Fall as Supply and Demand Imbalance of Logistics Centers Becomes Visible

- In the first half of 2023, the average nominal rent of logistics centers in the metropolitan area mostly remained unchanged from last year at KRW 3.3 million per pyeong for room temperature centers and KRW 6.2 million per pyeong for cold centers
- However, the risk of vacancy due to large-scale supply is becoming visible, and there is a polarization of rental competitiveness by asset. As a strategy to attract shippers, there are cases where assets that are at a competitive disadvantage are being offered rent-free, lowering the actual rent. Actual rents are expected to continue to be adjusted, especially in areas with high vacancies.

01 Logistics Center Rental Market

Supply and Demand Market

Supply and Demand Trends in Metropolitan Areas (by Area)

Western Area - Widening Gap in Rental Competitiveness of Logistics Centers Between New and Old Centers

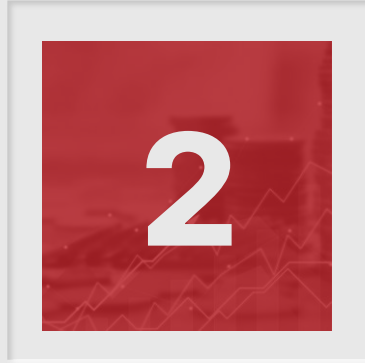
- In the first half of 2023, 'BNP Logistics' completed a lease agreement for approximately 5,400 pyeong at 'Alpha Flux Logistics Center' and 'LK GLS' completed a lease agreement for approximately 1,700 pyeong at 'Grey Box Ansan', with vacancies steadily declining mainly in new logistics centers in the Western region except for Yeongjongdo. This is thanks to the excellent locational characteristics such as easy access to Seoul and specialized demand for the port, which have led to steady lease reviews from shippers, indicating the recent large-scale supply has intensified competition to attract shippers, and lease terms have been significantly eased, leading to actual contracts.
- While the Western area has a higher average vacancy rate than other areas as of the first half of 2023, we can expect to see a gradual stabilization of vacancy over the long term in this area, given the potential for a supply cliff after a period of massive supply and current steady rental demand.
- However, due to the predominance of new supply in the western region, old logistics centers seem to be less competitive for leasing. In the case of a logistics center in Sihwa Industrial Complex, which was completed in 2002, the center conducted three on-bid tenders to select an outsourced operator in the first half of this year after the tenant shipper refused to extend the contract and moved out, but all of them were unsuccessful and the center is still facing difficulties in selecting an outsourced operator. This demonstrates the recent trend of shippers preferring newer, larger logistics centers, and the rental competitiveness gap between new and old centers in the Western area is expected to widen further.

Southeast, Southern Area - Widening Gap in Demand by Area with Slow Demand and Diversifying Rental Strategy

- The 'Southeast' and 'Southern' areas are characterized by the significant gap in demand for assets by area due to large geographical areas. These are the areas with the largest supply of logistics centers in Korea and logistics centers are still actively being supplied. Depending on the location of each asset, there are significant differences in road transportation networks, infrastructure, and background demand, resulting in different demand competitiveness for each asset in the current market with supply-demand imbalance, and strategies for attracting shippers are diversifying accordingly.
- Due to shippers' preference for logistics centers with excellent overall location competitiveness, such as having excellent highway IC access or being located near residential areas where it is easy to secure manpower and background demand, there are centers that have relatively short lease-up periods and are being pre-leased before completion.
- On the other hand, logistics centers with less competitive locations are facing increasing pressure to attract shippers and are trying various rental strategies to address this issue. For assets under development, it is found that there are various efforts to secure leases, from changing the ratio of hot and cold areas to expanding driveways, changing the design, and adopting Build-to-Suit (BTS) methods. In addition, in the case of existing assets, it was found that landlords are responding to the current supply and demand market in various ways, such as offering attractive real rents by providing RF, FO, and TI, attracting shippers after converting cold areas to room temperature areas, and directly operating logistics centers in a consigned manner.

Other Seoul Areas - the northern part of Gyeonggi emerging as the logistics center area in terms of supply and demand

- The northern part of Gyeonggi is expected to grow as an emerging logistics center area thanks to improved road transportation networks, increasing background demand, and the supply of new large warehouses. Contrary to previous perceptions, as the northern part of Gyeonggi has recently seen various favorable factors such as the development of the third phase of new cities and improved road infrastructure (the 2nd Ring Expressway and 2nd Gyeongbu Expressway are planned to be developed), there is a significant increase in the expected supply of logistics centers, mainly in the areas of Namyangju, Yangju (partially), and Uijeongbu, which are close to Seoul.
- In the second half of this year, the completion of the 'Byeolnae ONE Logistics Center (all room temperature, 14,799 pyeong of gross floor area)' in Byeolnae-dong, Namyangju-si, Gyeonggi-do is scheduled. As the first modern logistics center to be supplied to the northern part of Gyeonggi, it is expected to serve as a barometer of other upcoming logistics centers in the area when it comes to lease demand, rent, and sales price.



Investment Market

Logistics Center Investment Market

02 Logistics Center Investment Market

Overview of Logistics Center Investment Market

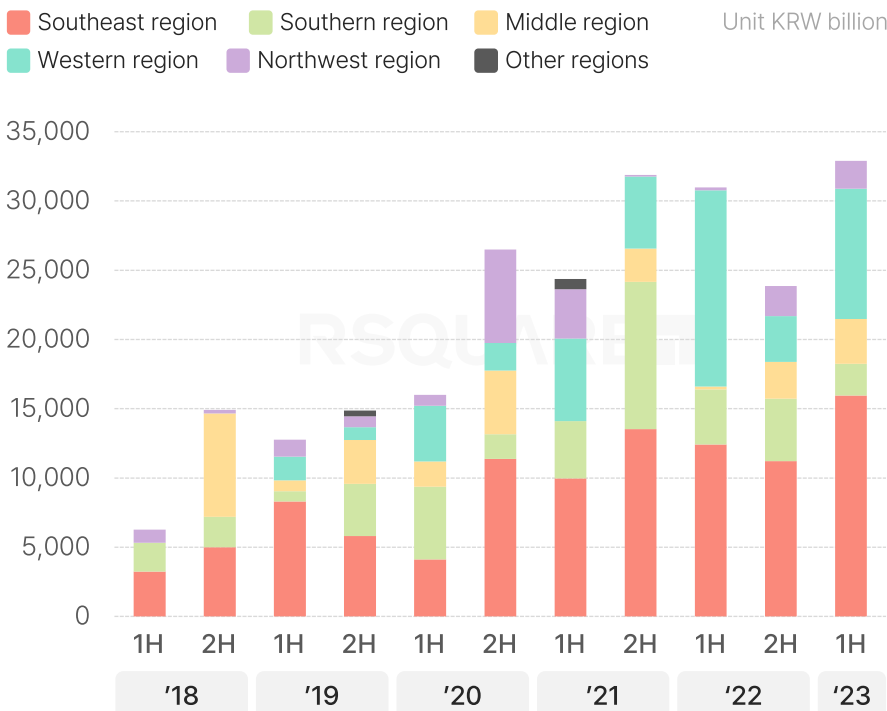
Largest Pre-Purchase Deal Closing in History

- In the first half of 2023, the total transaction value of logistics centers in the metropolitan area was KRW 3.2 trillion and the transaction area was 50.1 million pyeong. This represents a Quarter-over-Quarter increase of more than 30% in each case, and the highest transaction value and volume since logistics center transactions began to be tracked in 2010.
- The main reason for this dramatic increase in transaction size is the inclusion of transactions that were completed in the first half of this year after previously signing pre-purchase agreements.
- In the first half of this year, pre-purchase transactions accounted for around 66% of the total transaction volume, with the closing of pre-purchase deals centered on medium-sized and above assets such as 'Bonduri Logistics Facility', 'Osan Logipolis', and 'Samsung Fresh Logistics', and slightly lower than the second half of last year when excluding pre-purchase deals.

Transaction Decline in the South and Small Logistics Centers

- By area, the southern part of Seoul saw a sharp year-on-year decline in transaction volume. Transaction volume in the South has been steadily declining since the second half of 2021, with the first half of this year seeing a 43% year-on-year decline. In recent years, when the logistics center transaction market was booming, the southern area emerged as an investment alternative to the southeastern region, the traditional logistics area, and the transaction volume increased significantly, but it can be explained that the investment activity was more affected by the recent rapid market changes.
- By size, small logistics centers with a gross floor area of less than 10,000 pyeong showed a significant decrease in transactions. After peaking at around KRW 1 trillion in the second half of 2021, the transaction value of small logistics centers has been steadily declining, falling 91% to KRW 93.4 billion in the first half of 2023. This is in stark contrast to the increase in assets of all sizes over 10,000 pyeong. This is largely attributed to the decline in transactions of this size, as the supply and demand market for logistics centers has become unstable and the investment market has tightened, and the buying environment has gradually deteriorated as the main investment targets of indirect investment vehicles and REITs have focused on core assets.

Transaction Volume Trends of Logistics Centers by Metropolitan Area



Transaction Volume by Asset Size

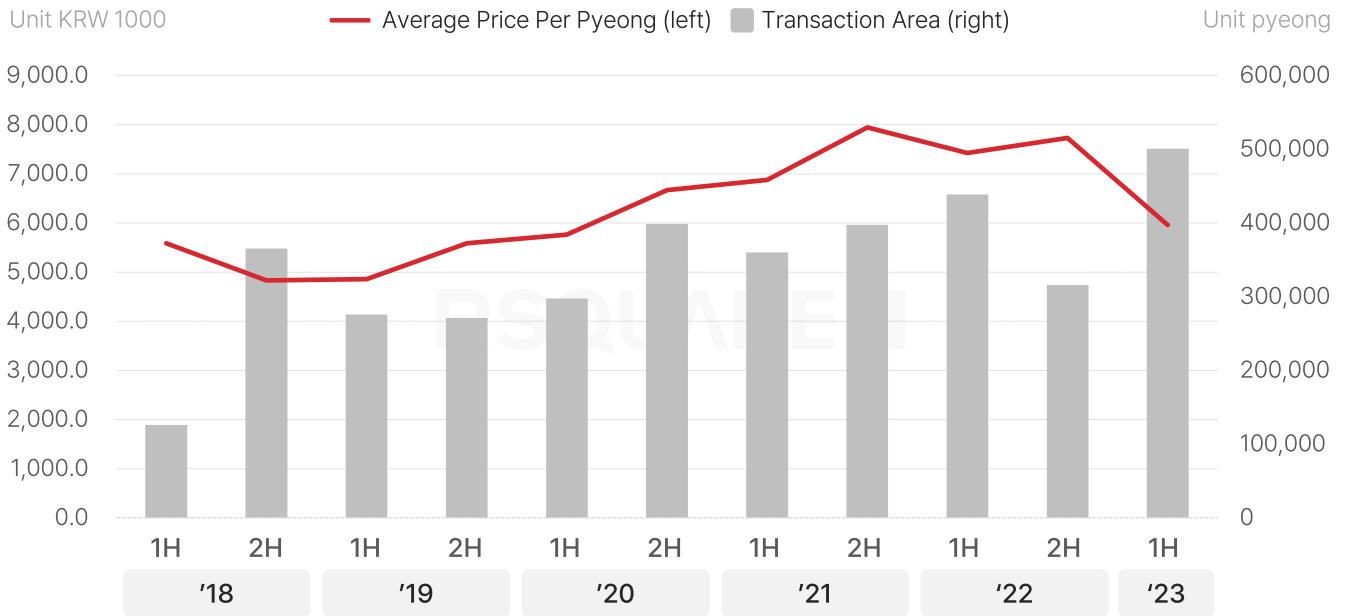
Asset Size	Transaction Amount (KRW billion)	Growth Rate (QoQ, KRW billion)
All	32896	▲ 9025
Extra Large	6590	▲ 4340
Large	9630	▲ 3474
Medium	15741	▲ 3558
Small	935	▼ 2348

02 Logistics Center Investment Market

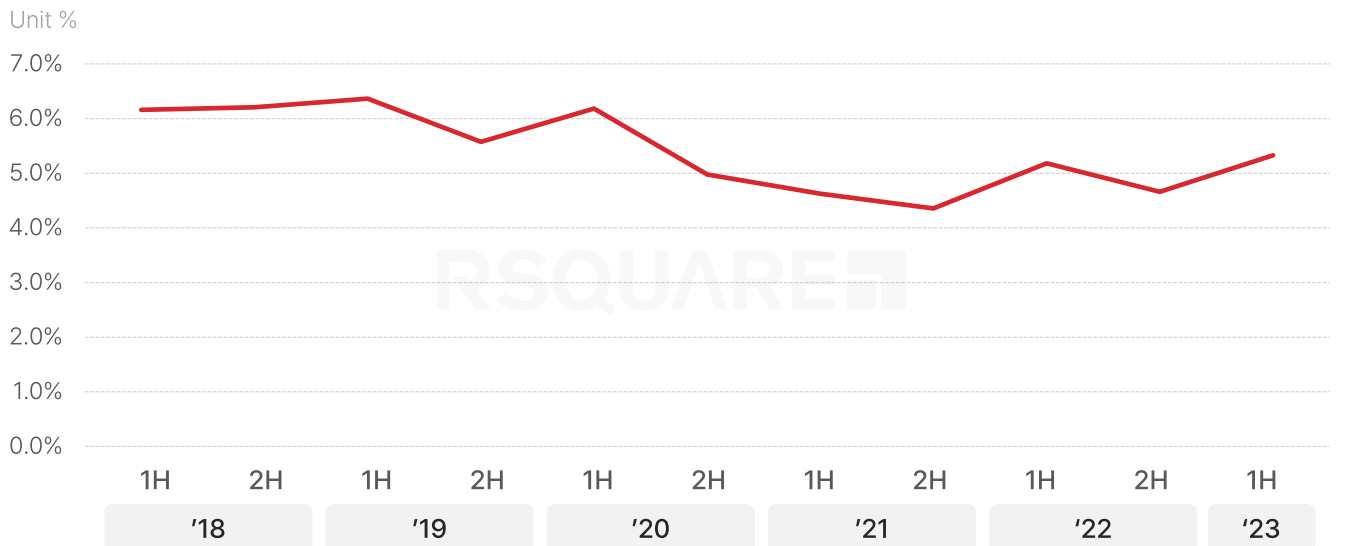
Continuous monitoring is needed as sales prices of logistics centers continue to decline

- The average transaction price of logistics centers per pyeong in the metropolitan area, which had been rising sharply due to the contraction of the logistics center investment market caused by the interest rate hike since last year, fell by about 23% from the second half of last year to KRW 5.96 million.
- The cap rate trend has also been on an upward trend even though there have been fluctuations since the second half of 2021, when the rate hike was implemented. However, it is necessary to be cautious in interpreting the data as each transaction case is highly individualized depending on various influencing factors compared to offices such as vacancy rate at the time of the transaction, whether it attracts top shippers, and rent level, and therefore, it is more important to continue to monitor the trend of the average price per pyeong of transacted assets in the future.

Average Price Per Pyeong in Seoul Metropolitan Area Logistics Centers*



Trends in Average Cap Rate for Logistics Center Transactions in the Metropolitan Area*



*Excluding pre-purchase and transactions for development purposes

02 Logistics Center Investment Market

2023.1H Major Transactions for Logistics Centers in the Metropolitan Area

Logistics Center Name	Area	Gross Floor Area (pyeong)	Transaction Amount (KRW billion)	Average Price Per Pyeong (KRW 10,000)	Buyer	Seller	Note
Cheongna Logistics Center	Western region	130151	6590	506	Brookfield	KP Logistics PFV	Pre-purchase
CJ Logistics Yongin Namsa Center	Southeast region	39931	3560	892	CJ Logistics	Hangang Logistics	Pre-purchase
Osan Logipolis	Middle region	45488	3230	710	YNP Asset Management	OST Partners	Pre-purchase
Yeoju Bonduri Logistics Facility	Southeast region	47343	2840	600	Pebble Stone Asset Management	Mplus Asset Management	Pre-purchase
Samsung Fresh Logistics	Northwest region	12600	2000	1587	Blue Cove Asset Management	Fresh Samsung PFV	Pre-purchase
CBRE GI West Icheon Logistics Center	Southeast region	23648	1448	612	Maple Tree Logistics	CBRE IM	
Osan Fulfillment Logistics Center	Southern region	12710	1408	1108	Korea Super Freeze Osan Co.	Osan fulfillment	



Cheongna Logistics Center



CJ Logistics Operator Namsa Center



Osan Logipolis



Yeoju Bonduri Logistics Facility



Samsung Fresh Logistics



CBRE GI West Icheon Logistics Center



Osan Fulfillment Logistics Center

Major Logistics Centers to Be Transacted

Logistics Center Name	Area	Gross Floor Area (pyeong)	Seller	Note
Incheon Seo-gu Coupang Logistics Center	Western region	90522	KKR	Sublease for Coupang
Yangji Logistics Center	Southeast region	62251	Ewha Asset Management (Invesco)	Sublease for Coupang
Hwaseong Jegeri Logistics Center	Southern region	32631	Invesco	Completed Room Temperature Lease
Pyeongtaek Logistics Center	Southern region	30526	Mapletree	0% Overall Vacancy
Yongin Baekam Logistics Center	Southeast region	29974	Mastern Investment Management	
Icheon City Bubal-eup Sujeong-ri Complex Logistics Center	Southeast region	24470	Metheus Asset Management	
Iljuk Logistics Center	Southern region	23996	Invesco	
West Icheon Logistics Center	Southeast region	23648	CBRE IM	
Ansan Wonsi-dong Logistics Center	Western region	16611	KB Securities	
Daedae-Ri Complex Logistics Center	Southeast region	16351	Vestas Asset Management	
Byeolnae ONE Logistics Center	Northern area	14799	Right Idea	Pre-sale
GS Networks Goyang Center	Northwest region	13486	Kendall Square Asset Management	

Research Design

Research Design

Seoul Metropolitan Area

Research Target

Leasing Market

Lease-only logistics centers with 3,000+ pyeong of gross floor area

Supply Market

Logistics centers with a gross floor area of + 2,000 pyeong

Definition of Logistics Center

A logistics center with more than 50% of its gross floor area used for warehousing

Logistics center size classification

Extra Large

Gross floor area of 50,000 pyeong or more
165,289m² or more

Large

Gross floor area of 30,000 pyeong to 50,000 pyeong
99,174m² to 165,289m²

Medium

Gross floor area of 10,000 pyeong to 30,000 pyeong
33,058m² to 99,174m²

Small

Gross floor area of less than 10,000 pyeong
33,508m²

Area Classification Criteria

Southeast region

Gwangju, Icheon, Yeosu, Yongin
Chaein-gu

Southern region

Anseong, Pyeongtaek, Hwaseong
excluding Dongtan

Middle region

Gunpo, Uiwang, Anyang, Gwacheon, Suwon, Osan, Hwaseong
Dongtan area / Bansong-dong, Seokwoo-dong, Yeongdong, Cheonggye-dong,
Yeongcheon-dong, Osan-dong, Shindong, Mok-dong, Sanchuk-dong, Jangji-dong, Song-dong
Yongin Suji-gu, Giheung-gu Seongnam

Western region

Ansan, Siheung, Gwangmyeong, Incheon Metropolitan City
Jung-gu, Dong-gu, Michuhol-gu, Seo-gu, Namdong-gu, Yeonsu-gu, Ongjin-gun

Northwest region

Goyang, Paju, Gimpo, Bucheon, Incheon Metropolitan City
Gyeyang-gu, Bupyeong-gu, Ganghwa-gun

Other areas

Gyeonggi-do and Seoul, excluding the above areas

Survey Frequency

Semi-Annual

Survey Items

Rental Market

Security deposits, rents, maintenance fees, vacant areas

Investment Market

Transaction cases

Survey Methods

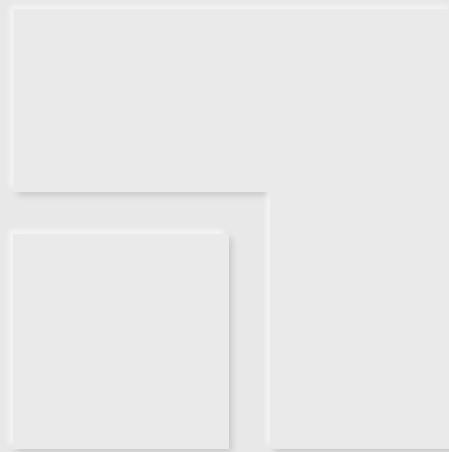
Telephone survey

Lease Information

MOLIT

Door-to-Door survey

Public Data



NO.1 PROPTech
RSQUARE

Big Data Consulting for Real Estate Investment and Development
CONTACT

Won Chang Jin

Director

wcjin@rsquare.co.kr

Soo Young Son

Senior

swimming93@rsquare.co.kr

Chan Young Moon

Researcher

mcy1213@rsquare.co.kr

Ji Won Lim

Researcher

jjeonelim@rsquare.co.kr

Yun Seo Jang

Researcher

yoonso1215@rsquare.co.kr

* The intellectual property rights for the information provided in this report (graphs, tables, etc.) belong to Rsquare Inc., and unauthorized copying and distribution for commercial purposes without prior permission may result in legal sanctions.