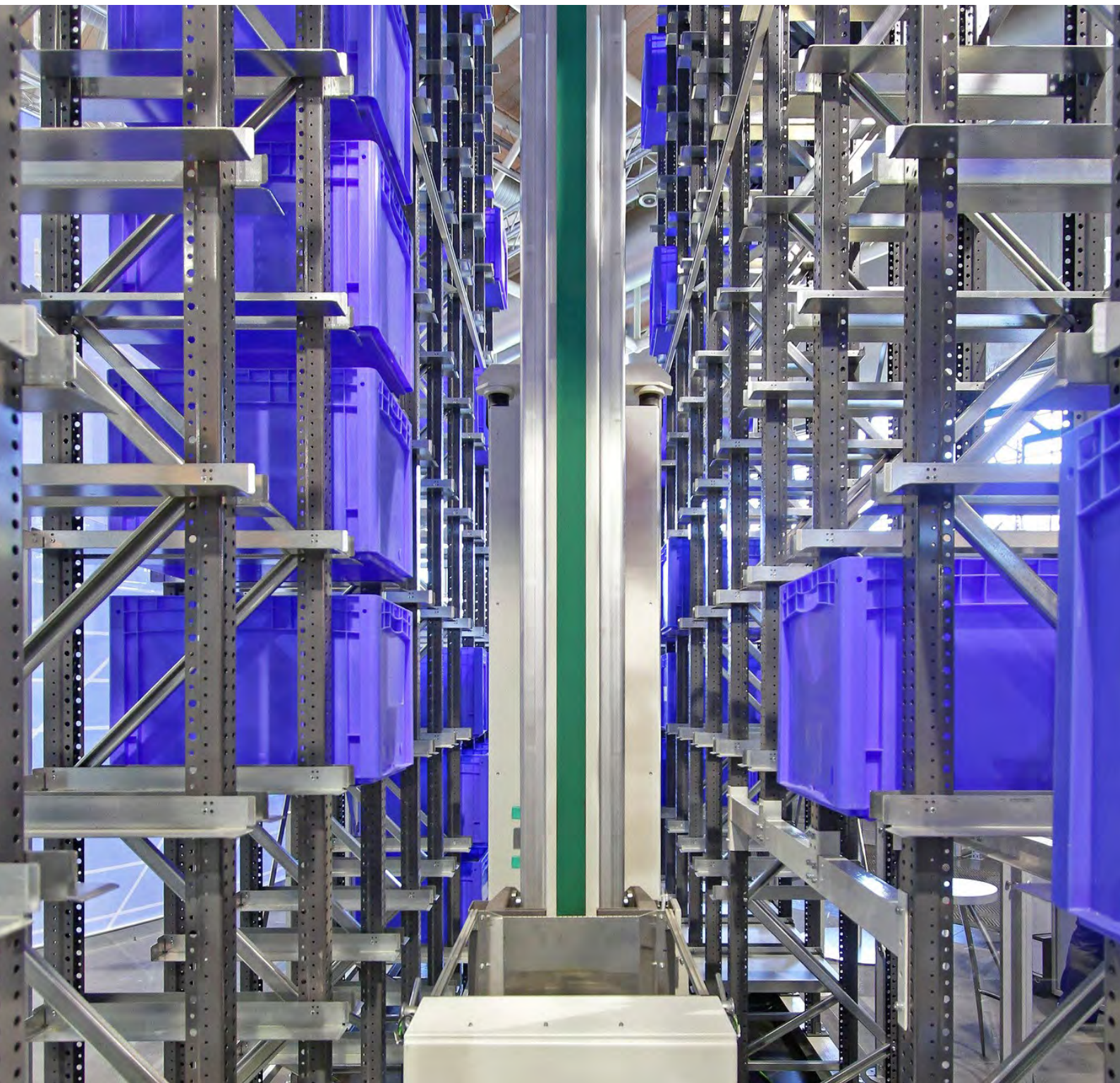


Thailand Logistics Property Market H1 2022





HIGHLIGHTS



THE TOTAL SUPPLY OF READY-BUILT WAREHOUSES IN THAILAND INCREASED STEADILY BY 3.2% H-O-H TO 4.84 MILLION SQ M.



THE OCCUPANCY RATE REACHED 85.5%, INCREASING BY 0.8% H-O-H.



THE AVERAGE ASKING RENT DECREASED SLIGHTLY BY 0.5% H-O-H TO 158 BAHT PER SQ M PER MONTH.



CONTINUED DEMAND FROM E-COMMERCE AND 3PL DROVE NET ABSORPTION IN H1 2022 TO 134,000 SQ M.



MARCUS BURTENSCHAW
Executive Director,
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LOGISTICS PROPERTY MARKET INDICATORS

	4.84M SUPPLY (sq m)	4.14M OCCUPIED SPACE (sq m)	85.5% OCCUPANCY RATE	158 ASKING RENT (THB / sq m / month)
% Change				
H-o-H	▲ 3.2%	▲ 4.4%	▲ 0.8% pts.	▼ 0.5%
Y-o-Y	▲ 5.0%	▲ 8.3%	▲ 2.5% pts.	▲ 0.3%

MARKET OVERVIEW

The Thai economy expanded by 2.4% Y-o-Y in H1 2022, increasing from 0.8% Y-o-Y in H2 2022. However, exports were outpaced by imports, resulting in the trade balance plunging to an all-time low in the last ten years.

The Office of the National Economic and Social Development Council (NESDC) assessed that economic recovery in the first half of 2022 was mainly supported by private consumption, which increased 10.2% Y-o-Y. Private investment and public spending continued to grow but at a slower pace compared to H2 2021. The tourism and service sector saw a slight improvement supported by the relaxation of COVID-19 restrictions, leading to more foreign tourist arrivals.

Headline inflation is expected to rise to 6.2% at the end of 2022 compared to the previous forecasts of 1.2% at the year-end of 2021. The accelerating rise in prices globally was linked to high energy and

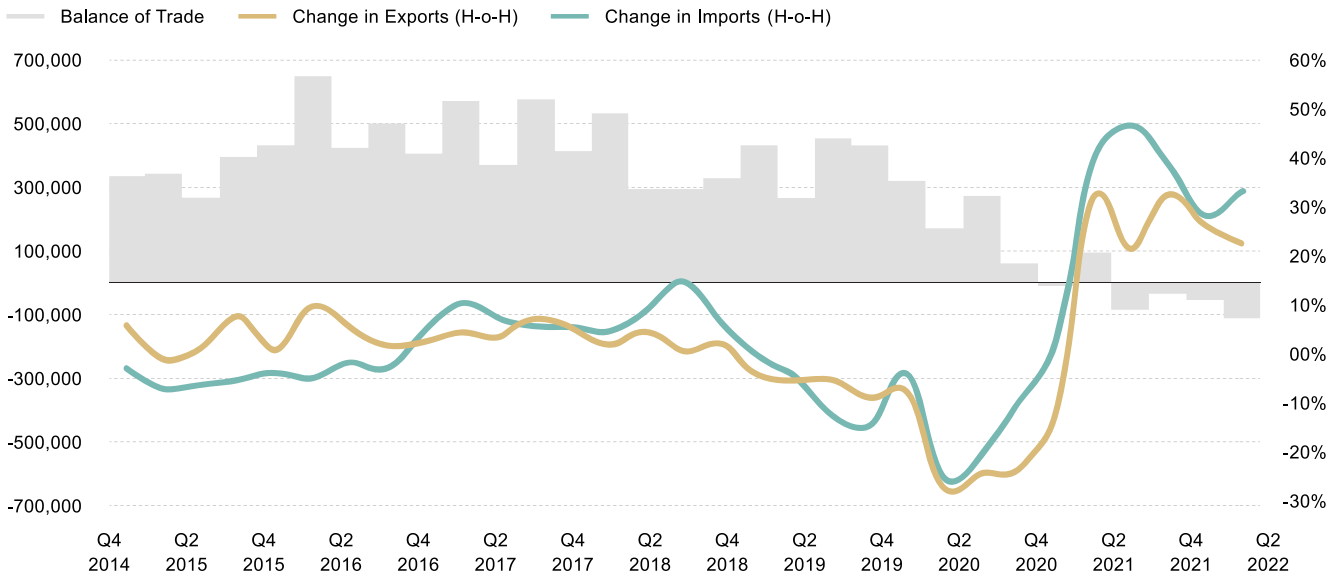
commodities prices amid the Russian-Ukraine war along with the lockdown in major cities in Mainland China, which added strains to the global supply chain.

The exports value in H1 2022 increased by 24.7% from the improvement in trading partner's demand for agricultural products and industrial goods such as integrated circuits, air-conditioning units, parts of electronic appliances, metal and machinery, except for passenger cars, which contracted from the shortage of semiconductors. Although exports saw an expansion, the import's value rose faster by 31%, mainly from fuel prices, food and beverage, medical products, and raw materials. In addition, the

imported inflation and the weakening Thai Baht in dollar terms also worsened the balance of trade, especially when the country's imports exceeded its exports in real term.

On the production approach, the transportation and storage sector rose by 4.8% in H1 2022, rebounding from a 0.9% increase in H2 2021. Air transport saw a significant rebound in H1 2022, by more than 30%, thanks to the more relaxed restrictions for air travel. Land transport continued to increase at 2.2% Y-o-Y, while water transport slowed, rising only 0.1% Y-o-Y.

FIG 1 : GOODS & SERVICES BALANCE | THAI BAHT (MILLIONS)



Source: NESDC

SUPPLY

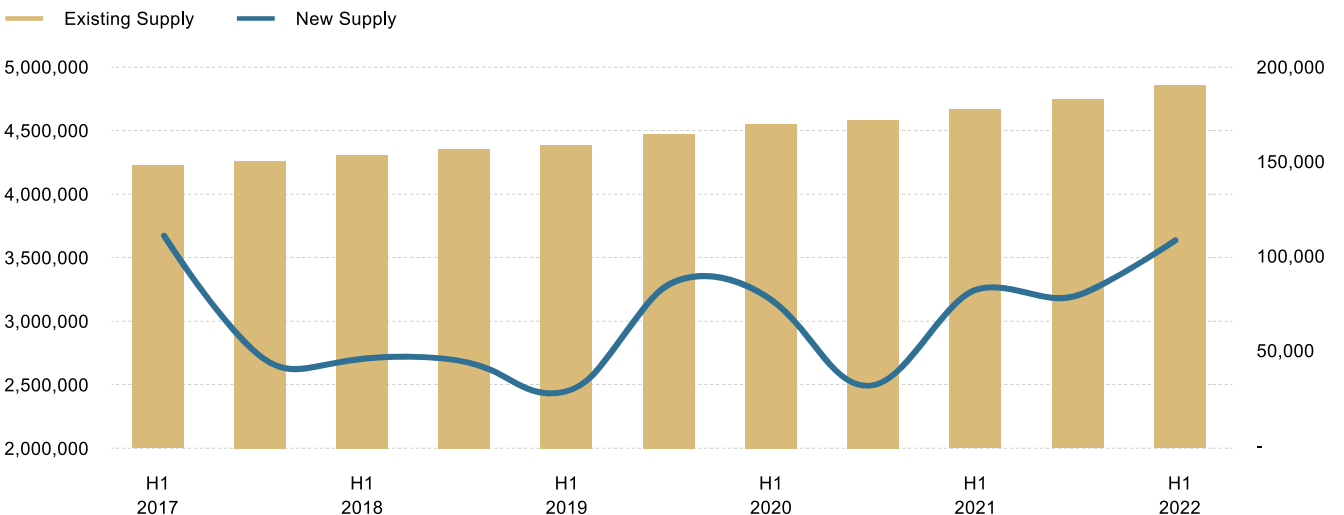
The total supply of ready-built warehouses accounted for 4.84 million sq m, an additional 107,200 sq m of warehouse space compared to the previous half-year. This addition represents a growth of 4.0% Y-o-Y, mainly from Bangkok

free trade zone 2 and 3 by Prospect Development in Samut Prakan province within the Bangkok Metropolitan Region.

Although supply growth in this half-year accelerated from the past few years,

it was still relatively below the average growth before 2017, in which build-to-suit warehouses started to gain more popularity in all major markets in Thailand.

FIG 2 : READY - BUILT WAREHOUSE SUPPLY | SQ M



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

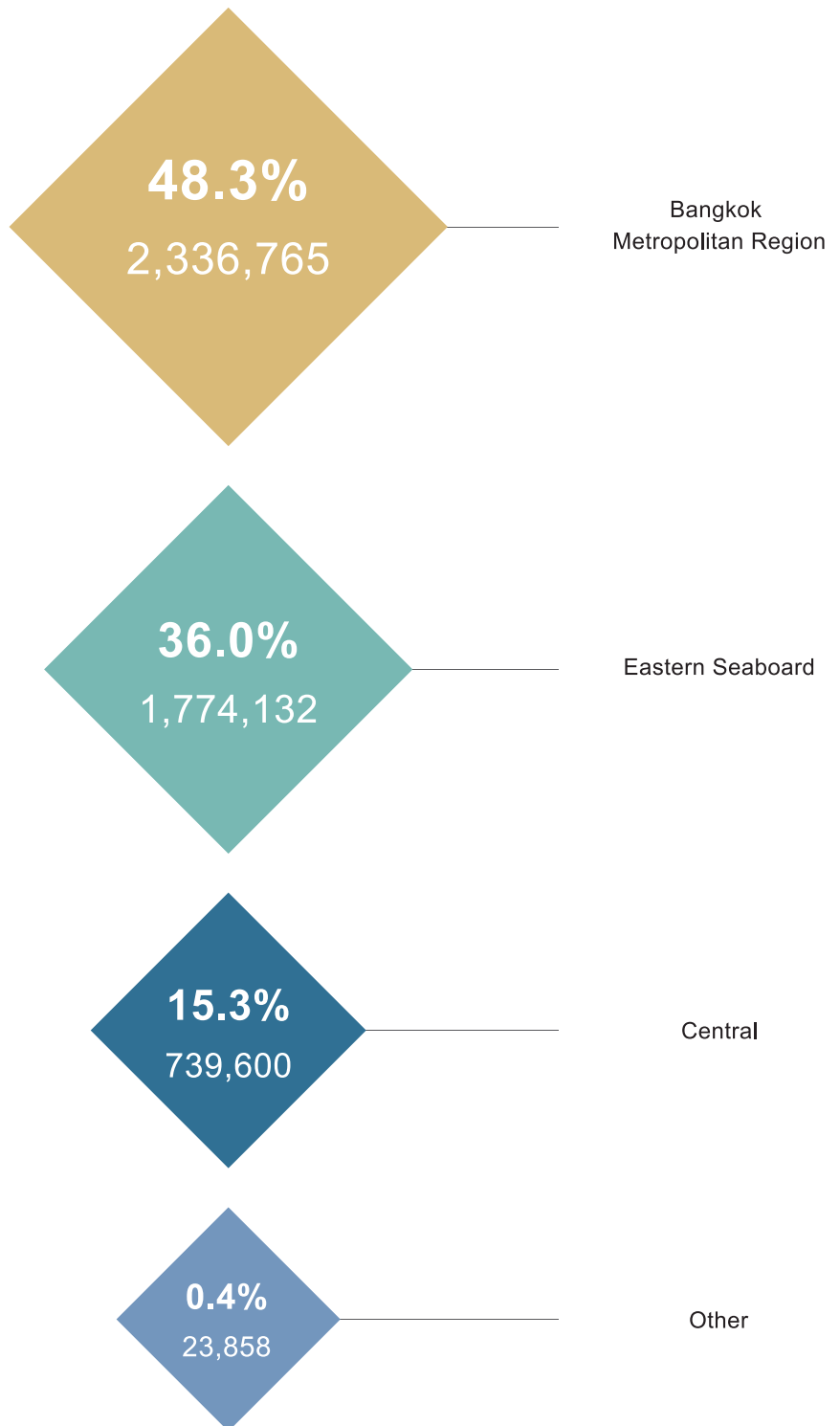
SUPPLY DISTRIBUTION

Bangkok Metropolitan Region continued to have the largest market share. During the first half of 2022, its supply increased by 8.4% Y-o-Y to 2.3 million sq m or 48.3% of the total collection of ready-built warehouses. All new supply was in Samut Prakan province, prompting a higher concentration of modern logistic properties in this area.

The Eastern Seaboard and Central Region remained unchanged in terms of total supply since the last half of the year, with a market share of 36.0% and 15.3%, respectively. Neither of these regions has recorded any significant supply growth in recent years.

There was new warehouse space in the northeastern region; however, the size is relatively small and does not have much impact on the supply distribution.

FIG 3 : READY - BUILT WAREHOUSE DISTRIBUTION BY REGION



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

DEMAND

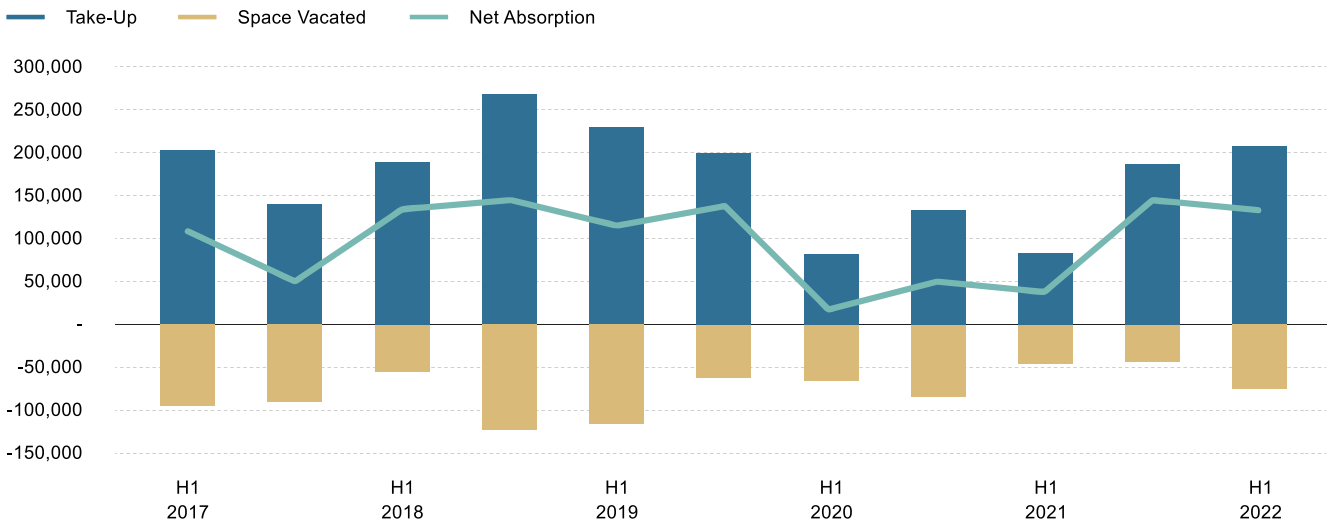
In H1 2022, the take-up rate soared to over 208,000 sq m reaching the new all-time high since the pre-pandemic began. The space vacated during this half of the year accounted for about 74,000 sq m, resulting in a positive net absorption rate of 134,000 sq m., which was 7% below the H2 2021 net absorption.

Thanks to the strong demand for ready-built warehouses, the total occupied space increased by 7.2% Y-o-Y to 4.14 million sq m, representing an occupancy rate of 86%, the highest in the past decade.

Demand continued to be mainly driven by e-commerce-related operators and

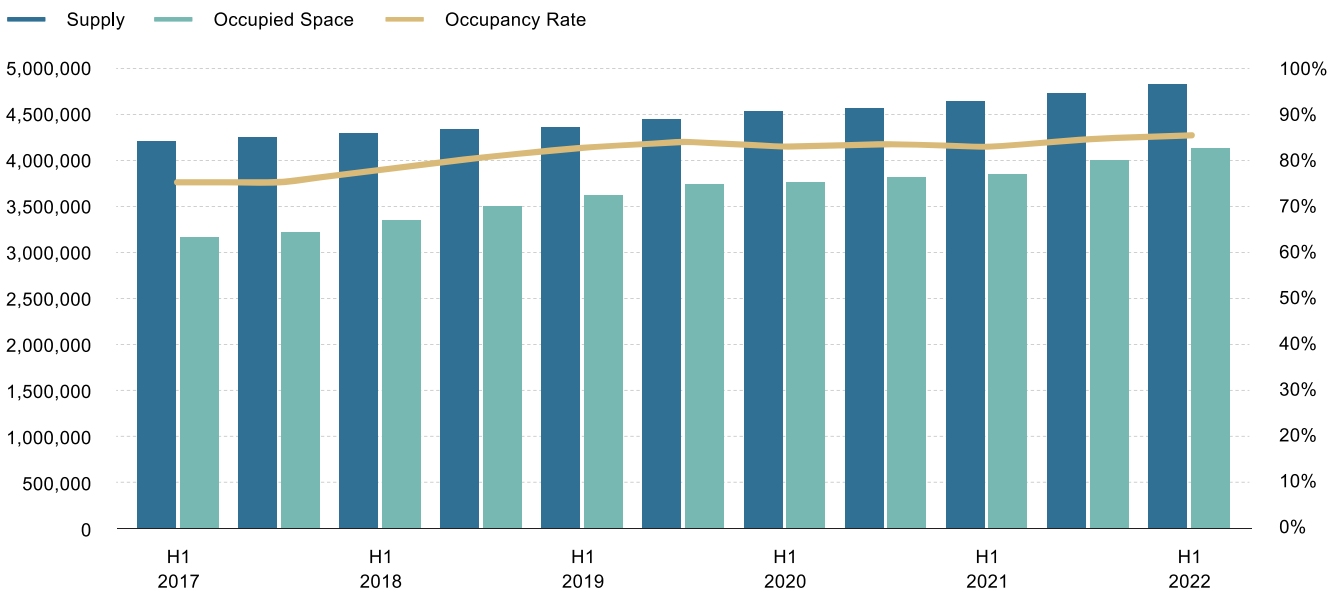
third-party logistics (3PL) companies, yet the expansion was slower compared to H2 2021. We started to see more activities from EV manufacturers and used car dealers, expanding their operation bases to Thailand with the need for plants, together with warehouse space to keep their parts nearby.

FIG 4 : READY - BUILT WAREHOUSE SUPPLY - DEMAND DYNAMICS | SQ M



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

FIG 5 : READY - BUILT WAREHOUSE SUPPLY, DEMAND & OCCUPANCY RATE | SQ M



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

In H1 2022, the market occupancies continued to rise due to the high demand for ready-built warehouses in the EEC. The combination of a high absorption rate and limited new supply resulted in significant occupancy rate growth to 84.5%, increasing 3.4% pts H-o-H or 8.8% Y-o-Y.

Bangkok Metropolitan Region, the largest logistics property market, saw the highest volume of market activities. However, the relocation started to dominate the new leases with a lot of new supply added to the region, resulting in the decline of occupancies by 1.8% pts H-o-H and 3.0% Y-o-Y to 87.4%, the lowest figure in the last five years.

Elsewhere, the central region saw an improved performance as the market occupancies rose to 82.9%, improving by 2.9% pts H-o-H and 3.9% Y-o-Y.

TABLE 1 : READY – BUILT WAREHOUSE OCCUPANCY RATE BY REGION

Region	H1 2022	% Point Change	
		(H-o-H)	(Y-o-Y)
Total	85.5%	▲ 0.8% pts	▲ 2.5% pts
Bangkok Metropolitan Region	87.4%	▼ 1.8% pts	▼ 3.0% pts
Eastern Seaboard	84.5%	▲ 3.4% pts	▲ 8.8% pts
Central	82.9%	▲ 2.9% pts	▲ 3.8% pts
Other	54.6%	▼ 8.7% pts	▼ 8.7% pts

SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

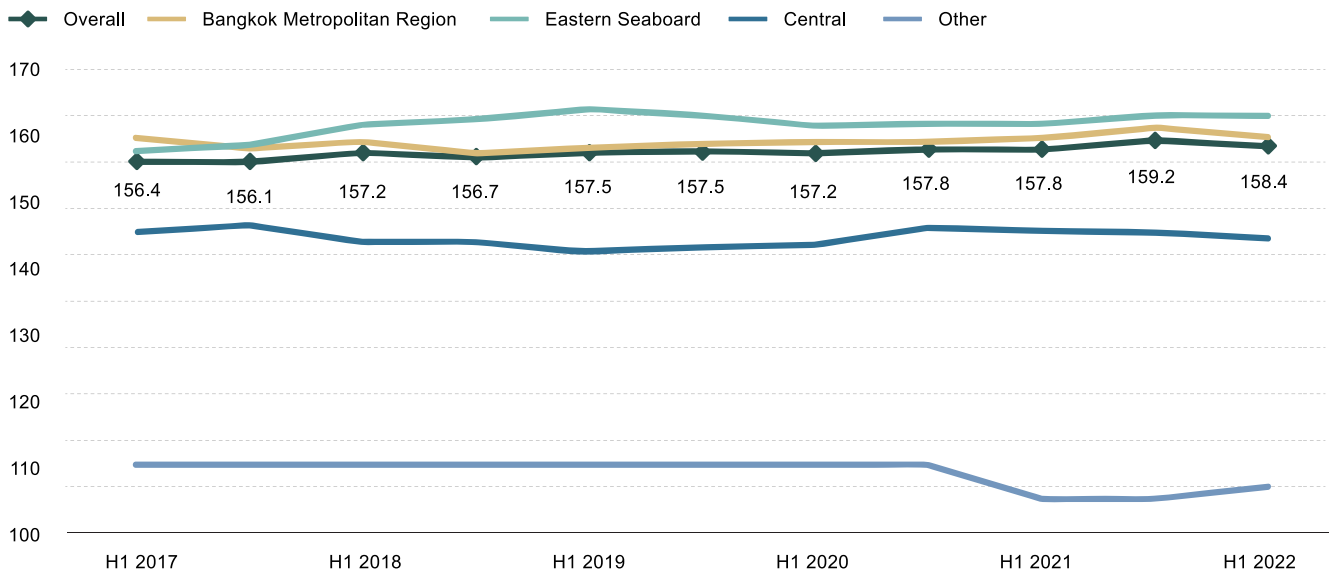
RENTAL RATES

The average asking rent for ready-built warehouses in Thailand decreased by 0.5% H-o-H while increasing 0.3% Y-o-Y to 158 baht per sq m per month. The asking rents for most warehouses remained stable, with a handful of properties dropping their rentals to fill up vacant space and a few properties with sub-average rents added to the market. Although there was a minor correction in the first half of 2022, the annual increase was still in line with the ten-year average.

Over the past year, asking rents in the Bangkok Metropolitan and Eastern Seaboard regions increased to 159.8 and 162.9 baht per sq m per month, representing a growth of 0.2% and 0.7% Y-o-Y, respectively. As new supply outpaced demand in the Bangkok Metropolitan Region, the asking rents increased slower than expected. However, the lack of new supply of ready-built warehouses in the Eastern Seaboard combined with strengthened demand

during the first half of the year gave a chance for developers to increase their rents. Finally, the Central region, the third major sub-market, recorded a minor decline in the asking rents by -0.6% Y-o-Y to 144.7 baht per sq m per month.

FIG 6 : READY - BUILT WAREHOUSE AVERAGE ASKING RENT BY REGION | BAHT PER SQ M PER MONTH



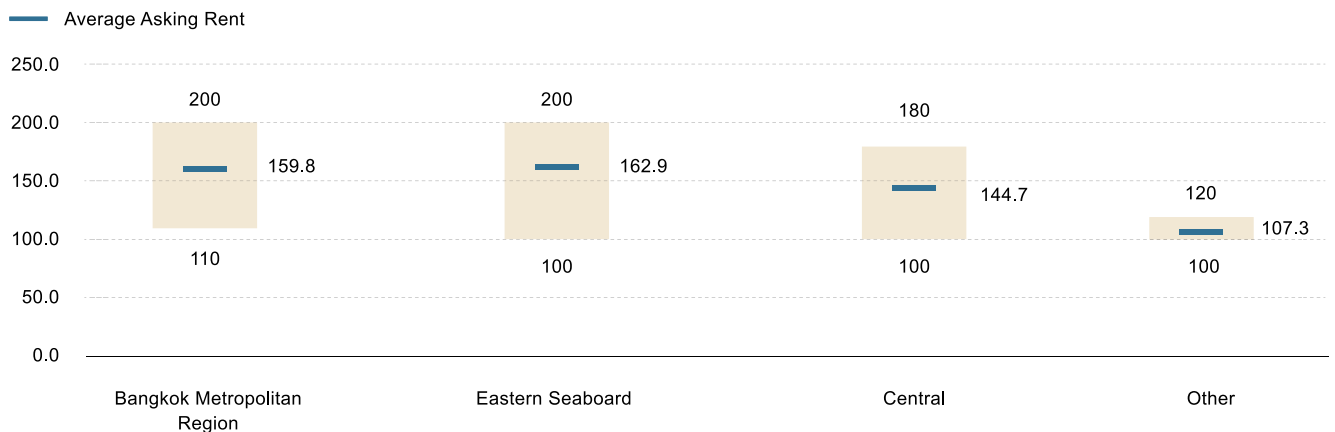
SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

The minimum asking rents are similar across different regions at around 100-110 THB per sq m per month for all regions. The ceiling ranged more widely from 200 THB per sq m per month in Bangkok Metropolitan and Eastern Seaboard, 180 THB in the central region and 120 THB for the rest of Thailand.

This disparity in asking rents for ready-built warehouses in the same region reflects the level of specifications

from older buildings to modern logistic properties. Location was another key factor. The warehouses adjacent to the national highways or significant routes, making them more attractive for logistic operations, usually had higher rents than their peers. In addition, modern technology such as AI and robotics, if implemented more widely in warehouse properties, the variation in the asking rents is likely to widen as well.

FIG 7 : READY – BUILT WAREHOUSE ASKING RENT SPREADS | BAHT PER SQ M PER MONTH



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

MARKET DYNAMICS

The following treemap chart shows the province's total stock and net absorption in H1 2022. Each rectangle has a proportional size to the market share of each province. The largest market for ready-built warehouses remained in Samut Prakan, a home for more than 2.1 million sq m of warehouse space or 42% of the market share. The province has several competitive advantages for industrial players to set up warehouses, such as its proximity to Bangkok and EEC, great transportation network, either motorways or expressways and the so-called clustering effect where related businesses have already settled operations in the area. Other major warehouse locations after Samutprakarn

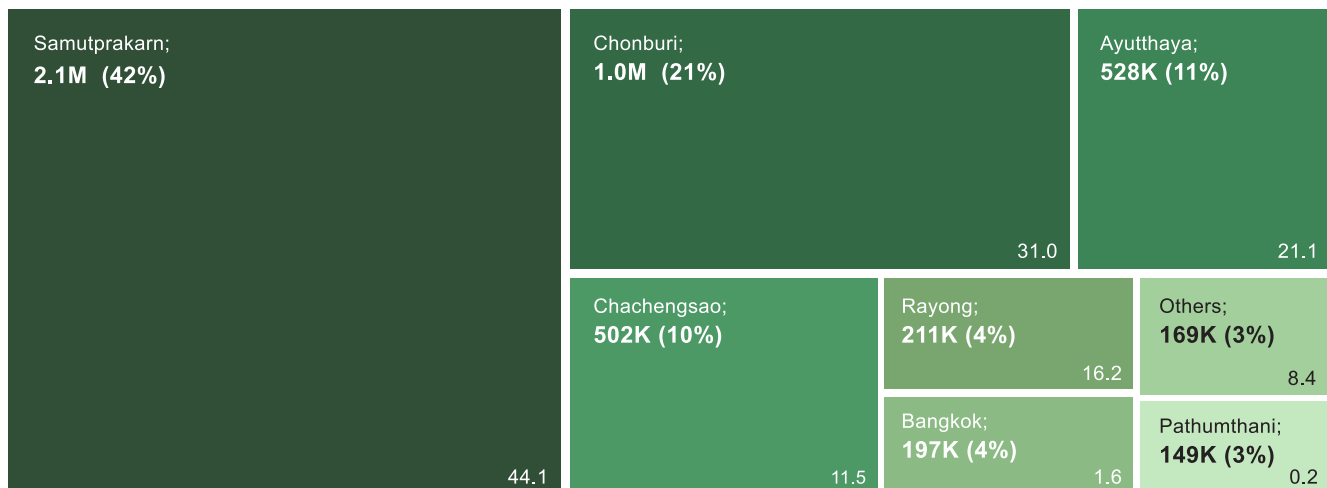
include Chonburi, Ayutthaya and Chachoengsao, with a net lettable area of 1,031,000, 528,000 and 502,000 sq m respectively. These top four provinces account for 85% of Thailand's ready-built warehouse space.

Net absorption for each province is shown at the bottom right of the rectangle in thousand sq m. The colour shade indicates the differences in current period performance, where the darkest green colour refers to the highest net absorption, whilst the lightest green represents the lowest. It is clear that larger sub-markets outperformed smaller ones, as shown by net absorption figures. Samutprakarn saw the highest net absorption at 44,100

sq m, whilst smaller markets like Bangkok and Pathumthani witnessed relatively lower net absorption at 1,600 sq m and 200 sq m, respectively.

However, low net absorption does not always mean low demand. For Bangkok, the substantial rise in industrial land prices causes the development margin for speculative warehouses to be thinner, resulting in the absence of new supply in the area. With the limited availability of the current supply, Bangkok's vacancy rate stood at only around 2-3%, and net absorption for Bangkok could be higher without the supply-side constraints.

FIG 8 : READY – BUILT WAREHOUSE MARKET SIZE AND NET ABSORPTION BY PROVINCE | SQ M



SOURCE: KNIGHT FRANK (THAILAND) – OCCUPIER STRATEGY & SOLUTIONS

REVIEW & OUTLOOK

The overall logistics and warehouse market in H1 2022 continued to improve from the previous year, supported by an economic rebound as we put COVID behind us. Occupancies constantly rose to the all-time high at 86%, while rent remained stable, which is typical for the industry. The sector's solid performance was mainly attributed to the rise of e-commerce businesses catalyzed by the pandemic. However, since the physical stores became active again, customers have more options, not just relying on online sources like in the past two years. The e-commerce industry may grow at a slower pace or experience corrections, which could result in less room for the logistics property's upside. Still, the automotive industry and its sub-industries, including the electric vehicle and used car segments, are rising. We saw foreign operators expand their businesses and demand factory and warehouse space in Thailand, especially in the EEC, where qualified projects receive additional incentives.

When it comes to movements and trends in the logistics property market, the cold supply chain has become one of the new frontiers for logistics-related companies to expand into due to growing consumer demand and changing customer behaviours. The industry involved activities ranging from storing and managing to transporting perishable goods, such as fresh food, fruits, vegetables, and pharmaceutical products, in temperature-controlled environments. Key players such as Thailand Post, JWD and Flash express joined hands to form Fuze Post, a brand-new cold chain delivery entity, to capture surging demand primarily in the Bangkok metropolitan area and major provinces of Thailand. According to their estimate, the current market size of

cold-chain delivery in Thailand reached 34 billion Baht, with an annual growth of 8% and constitutes 5% of the logistics market share. Kerry and Betagro also announced a JV named Kerry Cool as a cold delivery platform. With a specialization in express delivery services and agro-industrial business, they aimed to be the market leader in cold chain delivery in the country. Apart from the big names, Thailand's cold-chain market was relatively fractional and contained several local players, where operation bases were primarily in Bangkok, Samut Sakhon and Samut Prakarn.

E-commerce fulfilment is another current business model that demands spacious warehouse space. The basic fulfilment model helps business owners store and retrieve goods, handle incoming orders, and ship products to businesses (B2B) or consumers (B2C) who purchased them. As e-commerce became accessible to all, the industry landscape was more competitive than ever. It is more efficient for a merchant to have a third-party operator managing some of the most repetitive and tedious parts of the work while they can focus more on the business side. Until now, the fulfilment providers have expanded their services more broadly to serve the relentless demand of e-commerce businesses. Take DPX and MyCloudFulfilment as examples. They allow flexible storage, which can be adjusted based on the stock size at a particular moment. Clients can customize their product packages, access real-time stock data using Application Programming Interface (API) or outsource customs clearance services. As the fulfilment model is thriving, warehouse developers and operators should closely monitor the movement of these businesses.

In the past five years, we have seen the trend moves toward built-to-suit. Many developers decided to add more weight to the pre-lease facility to prevent the risks from long void periods. However, the ready-built warehouses are still in great need as they are more standardized and give flexibility in case the tenants want to move into the properties more quickly. In many instances, the ready-built warehouses are also prepared for the future expansion of the current build-to-suit tenants, who receive the first right of refusal on extra space. Therefore, it is common to see most warehouse developers still have both types of developments with different proportions, depending on strategy and focus, in their portfolios.

For the next three years, several key warehouse developers such as Frasers, WHA, MK and Best Bonded have released roadmaps for expansion. SC Asset, the country's leading residential real estate developer, followed the Origin JV's Alpha by teaming up with Flash Express to set up SCX One. The newcomer targets the first warehouse space and distribution centre in Nakhon Sawan, with more than 300,000 sq m, to be launched by the end of 2023. As new supply floods in, the logistics property market will likely be more competitive than ever.

GLOSSARY

Bangkok Metropolitan Region – Includes Bangkok, Samut Prakan, Samut Sakhon, Nonthaburi

Eastern Seaboard (EEC) – Includes Chachoengsao, Chonburi, Rayong

Central – Includes Ayutthaya, Pathum Thani, Saraburi

NOTE: ALL FIGURES EXCLUDE DEVELOPERS WITH TOTAL SUPPLY OF LESS THAN 10,000 SQUARE METERS AND PROPERTIES NOT READY FOR HANDOVER.

We like questions, if you’ve got one about our research, or would like some property advice, we would love to hear from you.



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