Principal Real Estate

Principal Asset Management℠

The Decisive Eye

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European logistics: An evolving landscape

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Introduction

The logistics industry has become vital to our global and interconnected society. Once purely related to the military art of supplying and moving troops across the battlefield, in today's world, the industry encompasses a large group of companies specialising in the transportation, warehousing, and management of goods. These companies are the backbone of international trade, global supply chains, and e-commerce services. They ensure the seamless flow of raw materials, semi-finished products, and consumer goods from all continents to our doorsteps.

Over the last few decades, the industry has undergone a remarkable transformation and is still evolving. In this paper, we will first present the state of the industry, then examine emerging trends and their impact in shaping logistics requirements.

We believe that investors should pay keen attention to:

- Land scarcity in core markets;
- The potential impact of new sustainability legislation; and
- Opportunities arising from the implementation of warehouse automation and AI-based technologies.

This issue of *The Decisive Eye* does not address demand-side market trends (e.g. e-commerce) as these topics are covered widely and more comprehensively in other reports from Principal Real Estate.

Logistics investment boom

Following the end of the Second World War, international trade arguably experienced its most rapid growth in history. Commerce and investment barriers gave way to trade agreements that allowed for greater market efficiencies. Companies started establishing branches and subsidiaries outside their domestic markets, and supply chains stretched longer and became more intertwined. Consequently, logistics became a crucial topic discussed in board meetings as the competitiveness and survival of businesses started to depend on the ability to source and manage suppliers effectively.

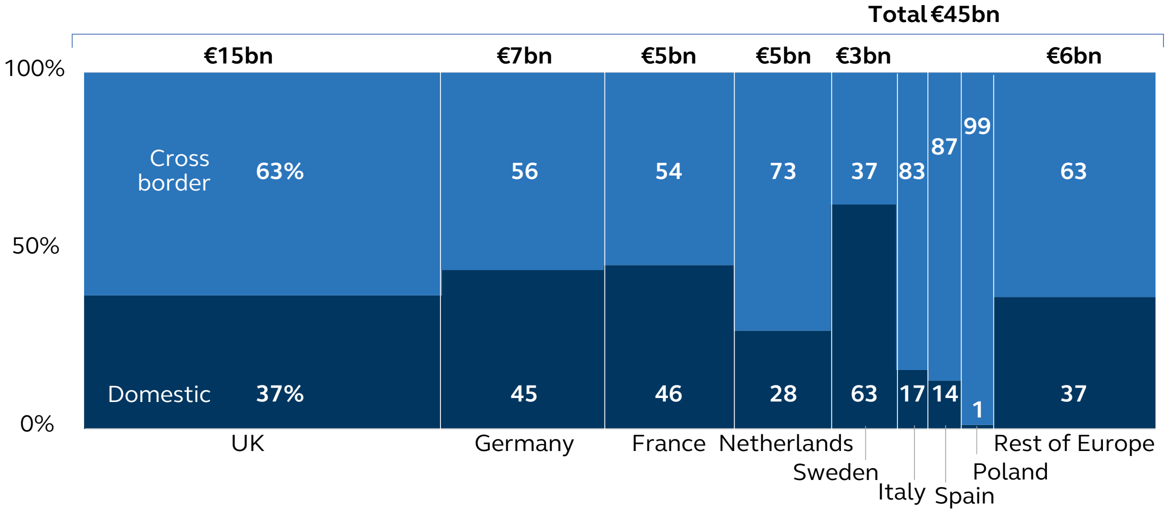
These changes have had profound implications on the demand for warehouse space. However, until the middle of the last decade, logistics assets remained inexpensive on a per-square-meter basis compared to other real estate property types from both a purchase and development standpoint. This valuation gap has now narrowed. The global pandemic and the rapid increase in e-commerce sales that followed have led businesses and investors to a race to secure warehouse and distribution facilities, in strategic locations along the continent's supply chains and, perhaps most importantly, in proximity to the largest consumer markets. As a result, logistics assets have increased significantly in value, particularly in the UK, and have outperformed the other traditional property types across the continent since.

Rotterdam is a prime example. Home of the largest container port in Europe, benefiting from an extensive intermodal network connections with the rest of the continent, and with an affluent population catchment of around 52 million people within a 3-hour drive time, it is one of the most desirable logistics hubs for operators in need of a getaway to the European markets. Not surprisingly, demand for warehousing space in and around Rotterdam has been exceptional. The market benefitted largely from the pandemic-induced rise of trade and e-commerce, resulting in record take-up levels in three of the last four years, which, in turn, pushed up valuations and rents.

According to Property Market Analytics (PMA), an independent real estate information provider, the average capital value of logistics assets in the Rotterdam area has increased by 27% over the three years to December 2023. Similar increases have been recorded in other European prime markets, led by London with a rise of 30% over the same period, followed by Rotterdam, Berlin, Manchester, Paris, and Rome. Logistics demand and prices softened in 2023 amid a recessionary environment, the elevated cost of capital, and the erosion of property premiums over other asset classes, such as government bonds. However, once the economy regains momentum and yields stabilise, possibly in the second half of 2024, we believe that warehouse space competition will grow again and extend into new locations. As land constraints intensify, construction planning becomes more complex, and environmental laws impose more stringent limits to greenfield investments while accelerating old assets' obsolescence, the demand-supply imbalance in the sector will underpin a solid performance over the medium term.

EXHIBIT 1: European industrial and logistics investment market

Annual transaction volume (€bn) and source of capital (%), 2022 and 2023 average.



Source: RCA, Q1 2024

Due to rounding, figures may not equal 100. €45bn includes the markets of Italy €1.9, Spain €1.6, and Poland €1.3

Are the days of elevated supply coming to an end?

Location is the most important factor for warehouse and logistics operators. Choosing the right site requires an in-depth analysis of several components, including workforce availability, rental levels, and transportation costs. All these elements must be closely considered to select the right location that optimises operational efficiencies. However, the most desirable areas for leasing standing assets or building new ones can be grouped into two categories: near ports and major transportation hubs, or closer to densely populated urban centres. In most of these locations, also referred to as the European logistics core markets, availability rates remain close to record low levels despite an uptick in vacancies in the last two quarters.

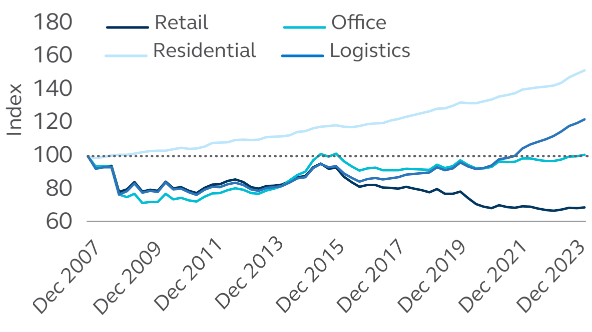
Can the construction of new distribution centres accommodate additional demand in the future? Probably not, as land availability is becoming a severe constraint preventing the expansion of the existing logistics stock. Europe is one of the most intensively used landmasses on the globe. Decades of urbanisation and population growth have made it increasingly difficult for construction companies to find suitable sites for warehouse development, particularly in or around densely populated areas. The competition to secure available land will likely intensify as municipalities and local governments prioritise constructing other property types over sheds and warehouses. This trend is not new. An analysis of the land supply carried out by the Greater London Authority (GLA) shows that the London metropolitan area lost an estimated 1,500 hectares of industrial land between 2001 and 2020, equivalent to 18% of the total stock, primarily to accommodate new housing. As housing affordability is projected to worsen in most European metropolises, it is reasonable to assume that the political agenda will shift even more in that direction. Amsterdam, for example, is expected to see a net loss of circa 350 hectares of industrial land by 2040 amid conversion to residential use, according to Het Parool, a Dutch newspaper.

The trend mentioned above makes urban logistics an attractive investment strategy, as scarcity of supply will undoubtedly lead to further capital appreciation and rental growth. The segment comprises assets below 5,000 square meters, located on the fringes of cities, usually with easy access to the road network and within an hour's drive from centres. Due to tight supply, high barriers to entry, and increasingly shorter delivery times demanded by consumers, these assets have been able to command substantial rental growth in recent years. According to PMA, the gap between this asset type over large out-of-town distribution centres (also known as big-box logistics) has increased substantially, and we expect it to widen further in the coming years. Indeed, the trends outlined in the following paragraphs, the decentralisation of distribution networks, the rise of sustainability regulations, and the impact of new technologies, support our view.

EXHIBIT 2: Mind the gap, urban logistics speeds up

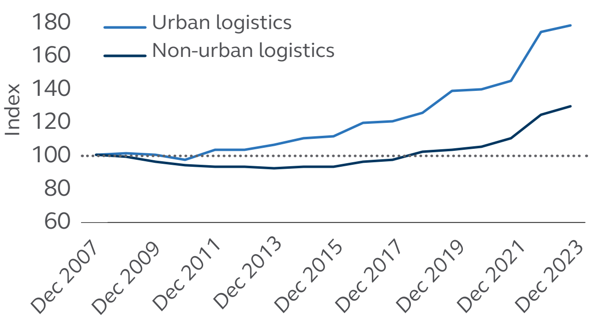
Market rental growth index by sector

Europe, European index, Q4 2007 =100



Market rental growth index by logistics segment

Europe, European index, Q4 2007 = 100



Source: (Left chart) MSCI, (Right chart) PMA, Q4 2023

Smaller, taller, and closer: The sprawl of decentralised hubs

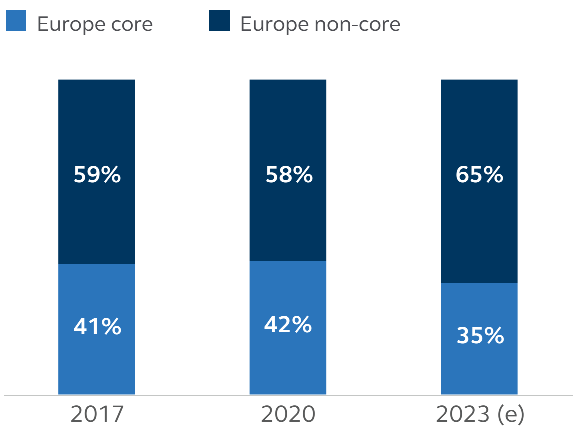
Data on new developments support our thesis regarding the growing attractiveness of urban markets. Construction is a procyclical industry and can prove more volatile than economic cycles, experiencing pronounced expansions in growth phases and deeper recessions during periods of crisis. Over the last decade, a period characterised by cheap credit and abundant capital chasing real estate yields, the development of warehouses and distribution centres in Europe has increased on average by 20% annually. However, a weakening macroeconomic environment and the tightening monetary policy over the last eighteen months created the conditions for the first significant drop back in development activity in more than a decade. Since then, the number of new projects has gradually been scaled back. On one hand, operators became more hesitant to pre-lease new space after years of aggressive expansion. On the other hand, some developers have put speculative projects on hold, waiting for more favourable macroeconomic conditions and lending costs to moderate. These dynamics are particularly evident in Germany, whose economy is still grappling with the consequences of transitioning away from cheap fossil fuels from Russia.

However, two further insights become evident by examining projects that are still being developed. Logistics assets are sprawling over a more comprehensive European area while the average lot size has declined. Of the space completed over the last two years, only around 35% was located within the core thirty logistics markets, compared to 40% in 2018. In other words, the development activity points to a decentralisation of logistics sites. This trend is familiar to most Western European nations, with few exceptions, such as Spain and Italy, where consolidation is ongoing. In most other countries, the construction of new facilities is shifting towards secondary locations, where land is more readily available, planning permissions are easier to obtain, and the optimum size of a fulfillment centre is (usually) smaller. A recent survey by Buck Consultants International (BCI) revealed an additional reason contributing to the spread of smaller logistics units in new locations. A larger share of leading pan-European operators and developers plan to modify their operational model and geographical footprint from one based on a single large distribution platform to another based on a network comprising a central hub and satellite facilities closer to the end customers, which are usually located in urban centres.

EXHIBIT 3: Logistics is moving closer

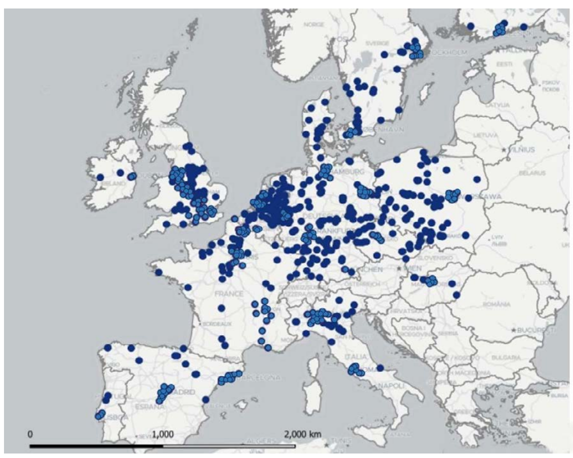
Logistics completions breakdown

Percentage of total completed floor, 2017-2023



Core and non-core completions

2023



Source: PMA, Q4 2023

Greenfields are approaching net zero

Ground up development will become increasingly complex and pose another limit to constructing new logistics assets due to tightening sustainability standards and public criticism regarding having distribution facilities "polluting" the landscape. The European Union has set the objective of no net land taken by 2050. Thus, new greenfield projects will become unviable unless the loss of land is compensated by rewilding. Although the directive's deadline is in the distant future, some member states have already embedded more stringent measures and progressive targets in their national legislation. In Germany, the federal government has set a goal of reducing new land use to less than 30 hectares per day by 2030 and zero hectares by 2050. In France, a new law obliges companies to minimise the net "artificialisation" of land by half (compared to 2010 levels) by 2030 and to net zero by 2050. In the Netherlands, under the new "zero percent nitrogen regulation", a project can only go ahead if there is evidence it does not adversely affect protected nature areas. These regulations can negatively impact the supply pipeline by limiting the number of greenfield development opportunities or making the construction process longer and more costly. According to CTP, a pan-European developer of industrial and logistics parks, the rising complexity of the regulatory requirements, including but not limited to environmental considerations, has already increased the time needed to obtain a development permit by ten months compared to the pre-pandemic average. As a result, acquiring a permit in Western European markets can take between eighteen and thirty-six months, with Germany and the Netherlands being the countries with the longest periods.

The impact of more stringent sustainability regulations also extends to standing assets. The effects on this side of the market are difficult to calculate, as some of this legislation is being negotiated at the European level, and each member state may translate or implement the law differently. In any case, it is reasonable to assume that warehouse obsolescence will accelerate and non-compliant assets will have to endure expensive modernisation programs. For example, under the EU Energy Performance of Buildings Directive (EPBD), member states must establish minimum energy performance requirements for buildings and implement measures to improve energy efficiency, including using renewable energy sources and energy-efficient building designs. Meanwhile, the UK government raised the minimum energy efficiency level (EPC) for all commercial buildings from the current E rating to C and B by 2027 and 2030, respectively. CoStar, a leading real estate data provider, estimated that circa 60% of the UK warehouse stock is more than 30 years old, meaning most will fail to meet the new standards. Therefore, these assets may be deemed unlettable or stranded, unless substantially upgraded.

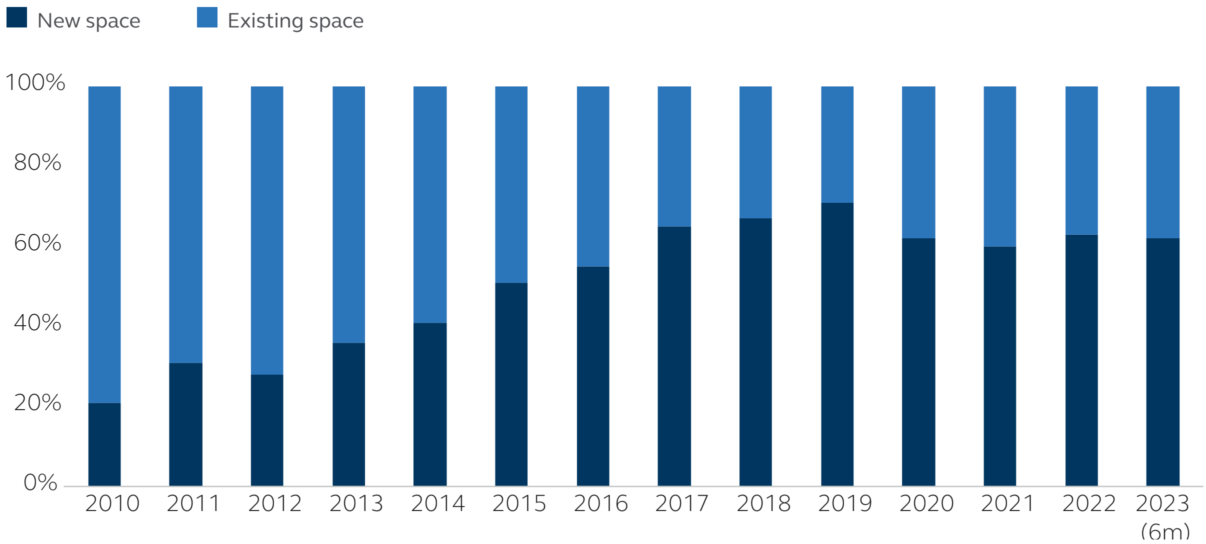
Indeed, logistics companies themselves are moving faster than regulators in an effort to minimise their carbon footprint, and to drive down energy costs. For example, a growing number of operators are investing in renewable energy solutions and electric vehicle (EV) fleets. In the future, most carriers will be powered by batteries with a longer autonomy and shorter charging. But for now, battery technologies are still in their infancy, and due to a limited range per charge, their adoption is an additional factor pushing operators to shift towards smaller sites closer to their end customer markets. In the longer term, large-scale trucks will all switch to carbon neutral energy sources, and refueling requirements will impact location decisions—not every site can accommodate the additional infrastructure needed.

The uncertainty related to the cost and timing of upgrading lower-quality assets, alongside the growing importance and convenience of energy-efficient buildings, contribute to driving increasing demand for newer and more sustainable warehouses. Last December, European tenants surveyed by BCI declared they are prepared to pay a higher rent for ESG-compliant facilities. Almost all would accept a premium of up to 3% for this asset quality. The proportion declines to three-quarters and two-fifths for a premium of up to 6% and 9% respectively. Meanwhile, data on take-up points to a similar conclusion: tenant demand is skewed towards modern, sustainable, and more operationally efficient space.

EXHIBIT 4: Quality matters

Take up by space type

Europe, percentage of total

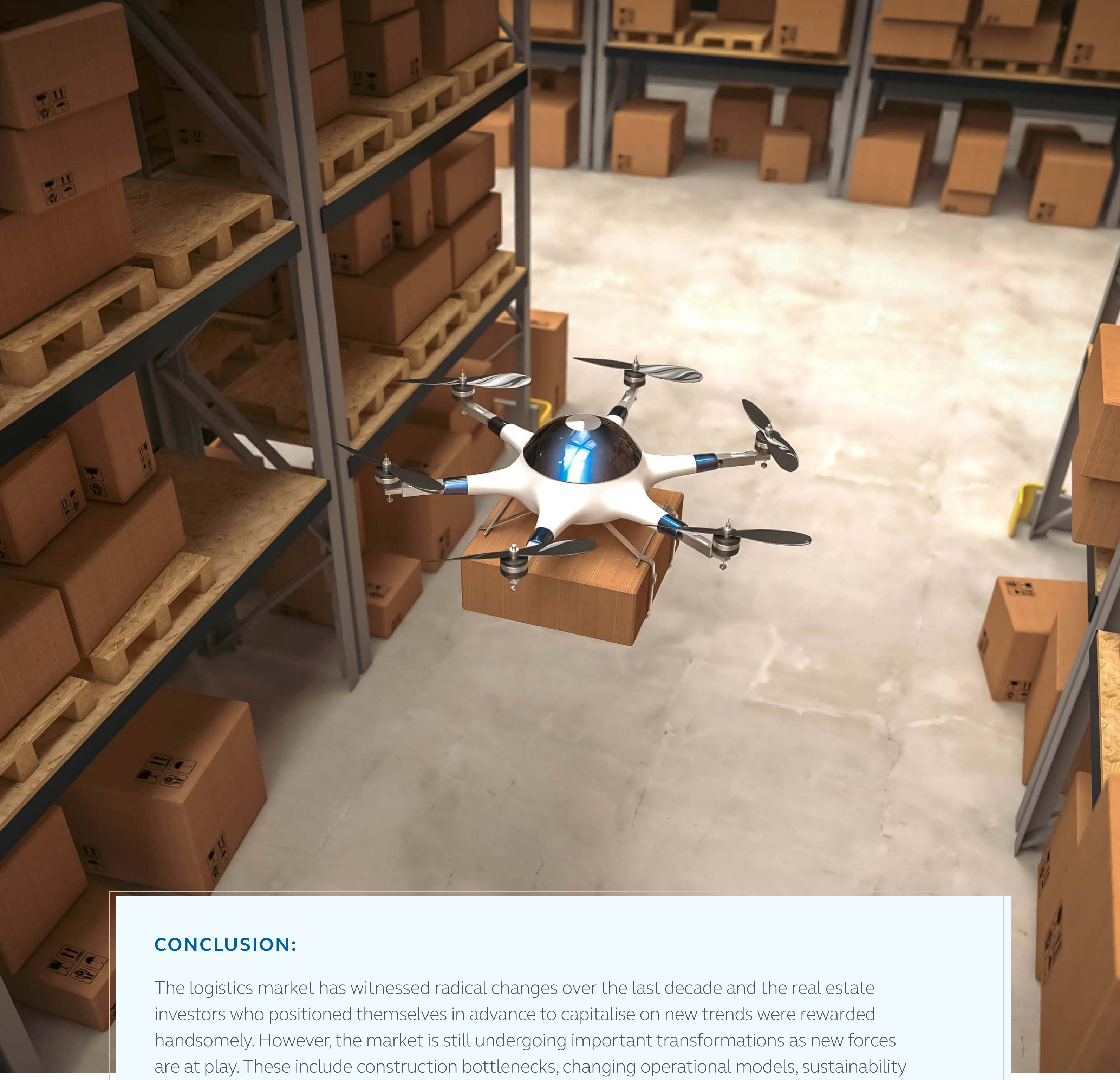


Source: PMA, Q3 2023

When AI meets the warehouse

In addition to solar panels and electric vehicles, other technologies are expected to shape logistics space requirements in the medium term. This shift is turbocharged by recent advances in the field of artificial intelligence (AI), which in turn, makes the algorithms used to guide autonomous robots more reliable, secure, and accurate. Not surprisingly, the warehouse automation market, which comprises both software and hardware covering the whole cycle of warehouse operations from storage to fulfilment and shipping, is expected to increase four and a half fold over the next ten years, from $16bn to $71bn by 2032 globally, according to Precedence Research.

The fastest-growing segment is anticipated to be autonomous mobile robots used to pack, pick, sort, and route packages. Prologis, a global leader in logistics real estate, predicts half of all warehouses will utilise autonomous mobile robots in the next decade. This may reduce the industry's reliance on labour, as worker availability is one of the operators' main concerns when considering a new locations. Moreover, the adoption of advanced systems will significantly impact the intensity at which facilities operate and dictate warehouse space requirements, including design, size, height, and location. Take fulfilment centres as an example; until now, these were only housed in large, flat buildings on an out-of-town trading estates. New robots allow these facilities to become smaller, taller, and closer to the end customers in densely populated areas. Although this concept is still embryonic, small and micro logistics hubs have started to appear in mixed developments or residential projects. A new study from Interact Analysis, a research company, shows that almost 7,300 automated micro-fulfilment centres will be operational by the end of 2030, up from just 86 at the end of 2021. In other words, new technologies could open the opportunity to convert non-performing real estate property types, such as retail stores, offices, and car parks, into valuable assets able to significantly reduce the cost of the last mile delivery, which at present accounts for a staggering 40% of total supply chain expenses, according to Capgemini, a global advisory company. In London, British Land, a listed developer, is working on what the company calls its "next generation last mile logistics hubs", a 2.9 million square foot pipeline comprising several urban logistics sites, including multi-story facilities and low-carbon freight micro sites. Meanwhile, in Paris, the French property group Icade and logistics specialist Segro have partnered to develop an innovative concept combining offices and leisure space with a modern last-mile delivery and distribution hub.



CONCLUSION:

The logistics market has witnessed radical changes over the last decade and the real estate investors who positioned themselves in advance to capitalise on new trends were rewarded handsomely. However, the market is still undergoing important transformations as new forces are at play. These include construction bottlenecks, changing operational models, sustainability legislation, and radical new technologies. We believe these forces will play a crucial role in dictating the demand for warehouse space, including its location, design, and format. Embedding these considerations into the investment process will have an even greater importance today than it had in the last decade, when the performance of real estate assets was largely driven by yield compression amid ultra-loose monetary policy. Our analysis shows it is now a good time to think about positioning for the next cycle. As the logistics market continues its maturing momentum there will be increasingly specific emerging opportunities, especially for those investors with a 'decisive eye'—able to discern the suitable asset type in supply-demand unbalanced locations.

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