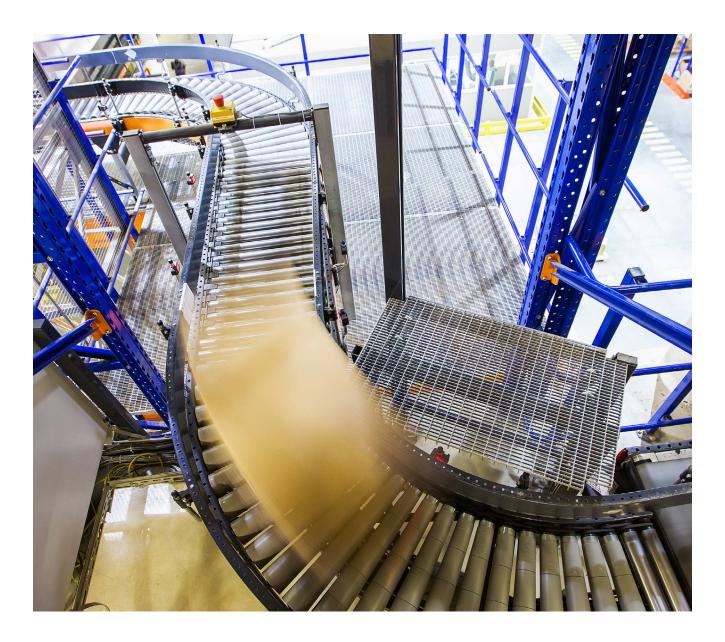
By the end of 9 months of 2021 some **764,000 sq m** were commissioned in the Moscow region

Total take-up amounted to **1.86 million sq m**



WAREHOUSE MARKET REPORT MOSCOW REGION

Q3 2021





Konstantin Fomichenko Regional Director, Industrial & Warehouses Knight Frank

"The third quarter became a record in the history of the market for the absorption of warehouse space, and this gives us every reason to believe that by the end of 2021 we will set a new benchmark for the volume of demand for warehouse space in the Moscow region at the level of 2.4-2.6 million sq. m. A consequence of the high demand was the minimum level of vacancy, which resulted in a sharp increase in rental rates".

Key conclusions

- By the end of 9 months of 2021 some 764,000 sq m were commissioned in the Moscow region
- The vacancy rate reached 0.6%
- Total take-up amounted to 1.86 million sq m
- Weighted average asking rental rate in the Moscow region reached RUB 4,900 / sq m / year triple net.

Supply

By the end of 9 months of 2021, 764,000 sq m of quality warehouse real estate premises were commissioned in the Moscow region, which is 28% higher than the same indicator of 2020. The total warehouse stock in Moscow region amounted to 16,8 million sq m.

According to the results of nine months of 2021, the new supply was dominated by built to suit projects accounting for 52% of completions, which in absolute terms is 396,000 sq m. The largest object was the logistics center for the online retailer Ozon, which includes a sorting center and an order fulfilment factory in the Orientir Zapad warehouse complex with an area of 154,000 sq m.

Key indicators

About 33% of the new completions or 252,000 sq m were speculative projects. It is worth noting the commissioning of a new building in the warehouse complex «Atlant-Park» with an area of 50,000 sq m, as well as the commissioning of a new building in the «South Gate» industrial park with a total area of 43,000 sq m.

According to the results of 9 months of 2021, the share of facilities for end use in the total volume of the new supply was 15%. The largest object was the fourth phase of the distribution center of the online retailer Wildberries with a total area of 54,000 sq m.

| | Q3 2020 | Q3 2021 | Change |
|--|-------------------|-------------------|--------|
| Total supply volume of quality warehouse space, thousand sq m | 15,804 | 16,805 | - |
| New delivery, thousand sq m | 599 | 764 | • |
| Lease and purchase transaction volume, thousand sq m including: | 1,070 | 1,863 | • |
| Lease and purchase in delivered facilities | 358 | 863 | • |
| construction of new facilities | 712 | 1,000 | • |
| Share of vacant space,% | 2,5 | 0,6 | • |
| Weighted average asking rental rate in class A for BTS projects, RUB/sq m/year * | 4,050 | 4,800 – 5,300 | • |
| Weighted average asking rental rate in class A for finished premises, RUB/sq m/year* | 4,000 | 4,900 | • |
| Operating payment range, RUB/sq m/year, excluding VAT ** | 1,000 – 1,400 | 1,000–1,400 | • |
| Range of the asking price of the sale of a ready-made dry warehouse of class A, RUB/sq m excluding VAT | 35,000– 42,000 | 45,000– 55,000 | • |

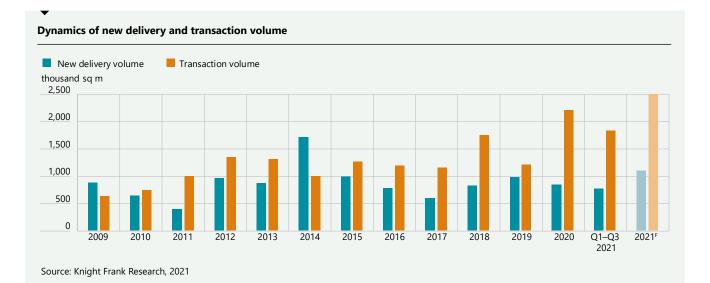
* Hereinafter, asking rent rate for a standard Class A dry warehouse with no VAT,

operating expenses, and utility charges.

** Hereinafter, operating expenses range for a standard Class A dry warehouse.

Source: Knight Frank Research, 2021

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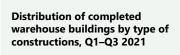
The vacancy rate in the Moscow region warehouse market declined to 0.6% by the end of Q3 2021, becoming the lowest since the first half of 2008, when the vacancy rate was 0.4%. In absolute terms, 101,000 sq m remained vacant by the end of Q3 2021. The decrease in vacant space is facilitated by the consistently high demand, which subsequently leads to the situation when the speculative projects are almost fully leased before the commissioning, another reason is the general lack of speculative projects.

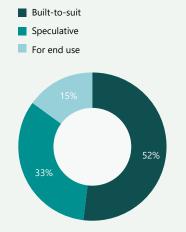
Compared to the final indicator of 2020, the vacancy rate in the Moscow region decreased by 1.7 p.p. In absolute terms, the decrease in the share of vacant space in 9 months of 2021 amounted to 262,000 sq m.

The largest volume of vacant space was observed in the north-west - more than 28,000 sq m, or 27% of the total vacant space volume.

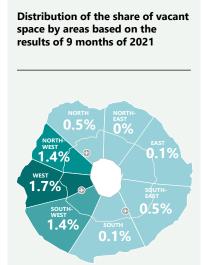
The lowest volume of vacant warehouse space in is observed in the north-east of the Moscow region: there are practically no free spaces in this direction.

The largest change in the share of vacant space occurred in the western direction, where the share of vacant space decreased by 6.5 p.p. compared to the final indicator in 2020. The decrease in the share of vacant space is due among other things to the withdrawal of vacant warehouse blocks from the market in the Kholmogory industrial park and in the Pushkino LP.

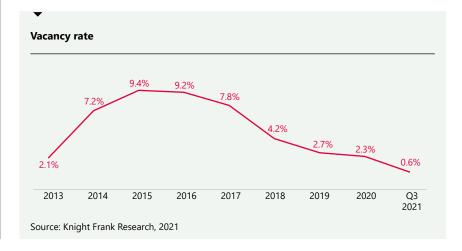








Source: Knight Frank Research, 2021



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Largest objects commissioned in 9 months of 2021 in the warehouse real estate market of Moscow region

| Object | Developer / Owner | Total area, sq m |
|---------------------------------------|-------------------|------------------|
| Ozon Distribution Center | Orientir | 154,029 |
| "VseInstrumenti.ru" Warehouse Complex | PNK Group | 92,374 |
| Wildberries Distribution Center | WB Development | 53,500 |
| PSK "Atlant-Park", building 33 | PSK "Atlant-Park" | 50,468 |
| "South Gate" IP | Radius Group | 43,562 |
| Source: Knight Frank Research, 2021 | | |

A slight increase in the share of vacant space was noted only in the south-west - +0.3 p.p. compared to the final indicator of 2020.

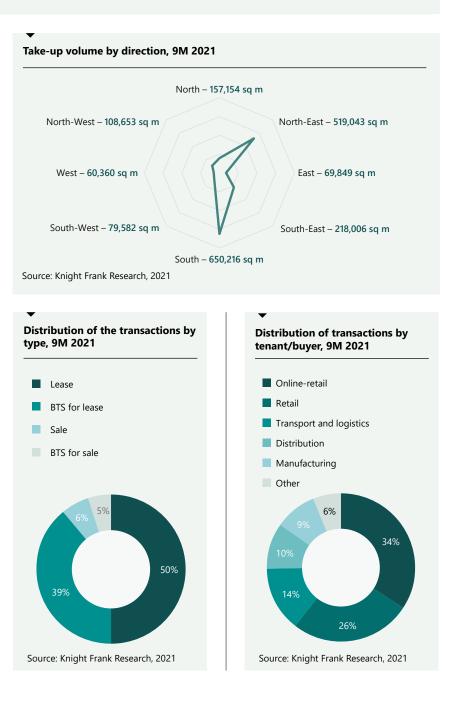
Demand

By the end of 9 months of 2021 the total take-up in the Moscow region amounted to 1.86 million sq m, which is almost 75% higher than the result of 9M 2020, when the volume of transactions amounted to 1.07 million sq m.

The largest volume of transactions was concluded in the south and north-east of the Moscow region. The southern direction accounted for 35% of the total take-up volume, which in absolute terms is 650,000 sq m. The largest deal in the south was the purchase of the Efes industrial and warehouse complex with an area of 70,000 sq. m. by Ixcellerate to accommodate a data center.

The north-east accounted for 28% of the total volume of transactions, or 519,000 sq m in absolute terms. The largest deal was the lease of 270,000 sq. m. in «PNK Park Pushkino-2» by Ozon.

By the end of 9 months of 2021, 50% of the take-up volume were transacted on the secondary market. The decline of vacant secondary spaces was primarily contributed by online-retailers. It is worth noting such major transactions as the lease of 55,000 sq m by Aliexpress in the PLT-Chekhov warehouse complex, as well as the lease of 51,000 sq. m in the "Istra" logistics park by the online retailer Ozon.



| Tenant / buyer | Type of company | Property / location | Total area, sq m | Transaction type |
|----------------------------|-----------------|---------------------|------------------|------------------|
| Ozon | Online-retail | PNK Park Pushkino-2 | 269,698 | BTS lease |
| DNS | Retail | LP Kholmogory | 88,079 | BTS lease |
| LPP | Retail | PNK Park Zhukovsky | 79,947 | BTS lease |
| Ixcellerate | Other | PSK Efes | 70,534 | Sale |
| Aliexpress | Online-retail | PLT Chekhov | 55,000 | Lease |
| Source: Knight Frank Resea | arch, 2021 | | | |

Largest transactions concluded in the warehouse real estate market of Moscow region for 9 months 2021

Among the built-to-suit deals, the main volume consists of transactions with subsequent lease. According to the results of 9 months 2021, such deals accounted for 39% of the total take-up volume in the Moscow region. The increase in the share of built-to-suit transactions with subsequent lease has been observed since 2019.

The online-retailers remained the main demand drivers accounting for

34% of the 9M 2021 take-up volume, which in absolute terms is more than 640,000 sq m.

Traditional retailers accounted for 26% of the total transactions volume, or 458,000 sq m in absolute terms. It is worth noting the signing of a built-to-suit lease agreement by the omni-channel retailer DNS in the Kholmogory logistics park (88,000 sq. m).

Commercial terms

The weighted average rental rate amounted to 4,900 RUB/sq m/year triple net by the end of the first nine months of 2021 which is 21% higher compared to the final indicator of 2020, when the weighted average rental rate was 4,050 RUB/sq m/year triple net.



On the back of extremely low vacancy rate, as well as the shortage of new speculative supply, the weighted average rental rates are derived based on future projects.

The highest level of rental rates is observed in the south-western and western directions – 5,000 RUB/sq m/ year triple net.

The lowest level of rental rates is observed in the east and south-east of the Moscow region – 4,400 RUB/sq m/year triple net.

However, the asking rental rates are higher near MKAD. For example, in the 0-5km from MKAD zone the rental rate is in the range of 5,500– 6,500 RUB/sq m/year triple net.

The asking rental rate for quality warehouses within the city is about 8,000–10,000 RUB/sq m/year triple net.

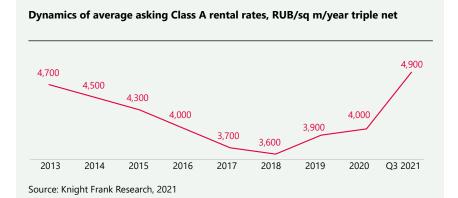
Forecast

By the end of 2021, the total annual volume of new supply in Moscow region will amount to 1,0-1,2 million sq m.

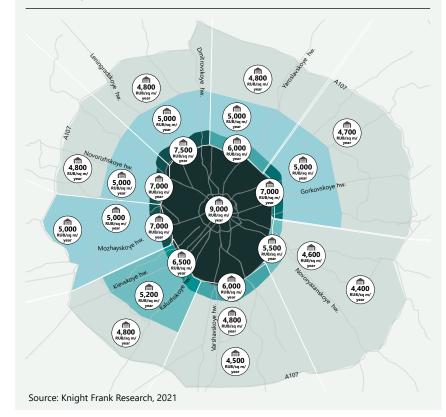
According to forecasts of Knight Frank analysts, the vacancy rate will remain low and by the end of 2021 it will be at the level of 0.3-0.5%

By the end of 2021 we expect a recordbreaking level of take up at the range of 2.4-2.6 million sq m.

The weighted average asking rental rate will continue to grow throughout 2021: according to Knight Frank forecasts, by the end of the year it will amount to RUB 5,100-5,300 / sq m / year triple net. The growth in rental rates is due not only to the consistently high demand for warehouse facilities, but also to the growth in construction costs, which forces developers to raise rental rates.



Average weighted asking rental rates in directions of the Moscow region, RUB/sq m/year triple net



Largest properties scheduled for delivery in 2021

| Object | Developer | Total area, sq m |
|--|-------------------------|------------------|
| Wildberries Distribution Center in Elektrostal | WB Development | 100,000 |
| X5 Retail Group Distribution Center | Smart development group | 89,384 |
| Bosch Siemens warehouse in LP Sofyino | AT "Real Estate" | 58,790 |
| Source: Knight Frank Research, 2021 | | ' |

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