### **Office Stock Pyramid 2021**



January 15, 2021

Xymax Real Estate Institute hereby releases "Office Stock Pyramid 2021" covering the 23 wards of Tokyo (hereinafter, "Tokyo 23 Wards") and the city of Osaka (hereinafter, "Osaka City"). The Office Stock Pyramid is a survey of buildings with a gross floor area of 300 tsubo or more used mainly for offices and indicates the breakdown of the rentable area and the number of buildings by size and age of the building and age.

1 tsubo = approx. 3.3 sqm

#### **Main Findings**

### 1. TOKYO 23 WARDS | Comparison of Small & Medium Buildings and Large Buildings

- ✓ The office stock at the end of 2021 is expected to be 13 million tsubo on a rentable area basis, which is almost evenly split between small & medium buildings and large buildings, at 6.05 million tsubo (47%) and 6.95 million tsubo (53%), respectively.
- ✓ In terms of the number of buildings, the office stock is expected to be 9,318 buildings, of which small & medium buildings account for 92% (8,563 buildings).
- ✓ The average age of the buildings is 32.3 years for the entire stock, 33.0 years among small & medium buildings and 24.3 years among large buildings, which indicates that the stock of small & medium buildings are aging in particular.

### 2. TOKYO 23 WARDS | Comparison of 5 Central Wards and 18 Peripheral Wards

- ✓ The office stock of the 5 central wards (Chiyoda, Chuo, Minato, Shinjuku and Shibuya Wards) consists of 6,836 buildings with a total rentable area of 97.5 million tsubo, which is approximately 75% of the entire office stock, while the office stock of the 18 peripheral wards consists of 2,482 buildings with a total rentable area of 32.5 million tsubo.
- ✓ The average building age is 32.5 years in the 5 central wards and 31.7 years in the 18 peripheral wards.

#### 3. OSAKA CITY | Comparison of Small & Medium Buildings and Large Buildings

- ✓ The office stock at the end of 2021 is expected to be 2.79 million tsubo on a rentable area basis, which is evenly split between small & medium buildings and large buildings, at 1.40 million tsubo (50%) and 1.39 million tsubo (50%), respectively.
- ✓ In terms of the number of buildings, the office stock is expected to be 1,731 buildings, of which small & medium buildings account for 89% (1,545 buildings).
- ✓ The average age of the buildings is 33.3 years for the entire stock, 33.8 years among small & medium buildings and 29.7 years among large buildings.



# 1. TOKYO 23 WARDS | Comparison of Small & Medium Buildings and Large Buildings

The office stock in Tokyo 23 Wards as of the end of 2021 will be 13 million tsubo on a rentable area basis (**Figure 1**). Of this, small & medium buildings with a gross floor area between 300 and 5,000 tsubo amount to 6.05 million tsubo, 47% of the total. Large buildings with a gross floor area of 5,000 or more account for roughly the same amount of stock at 6.95 million tsubo, 53% of total.

The average building age of the entire office stock is 32.3 years. The average age of the stock of small & medium buildings (33.0 years) is older than that of large buildings (24.3 years).

Tokyo 23 Wards 13.00 million tsubo 9,318 buildings Age (year):32.3 Small & Medium Buildings Large Buildings (Gross floor area: 300-5,000 tsubo) 70 (Gross floor area: 5,000 tsubo or more) 6.05 million tsubo 8,563 buildings Age (year): 33.0  $_{65}$ 6.95 million tsubo 755 buildings Age (year): 24.3 60 55 50 Old seismic standards: Old seismic standards 45 1.48 million tsubo (24%) 1.12 million tsub (16%) 40 20 years or older: 20 years or older: 35 3.52 million tsubo (51%) 5.02 million tsubo (83%) 30 25 20 15 10 Less than 20 years: Less than 20 years: 3.43 million tsubo (49%) 1.03 million tsubo (17%) 5 50 50 40 30 20 10 0 20 30 40

Net Rentable Area (million tsubo)

Figure 1: Tokyo 23 Wards Office Stock Pyramid 2021 (Net Rentable Area)

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In terms of the number of buildings, the office stock of the entire Tokyo 23 Wards is 9,318 buildings, of which small & medium buildings account for a majority with 8,563 buildings (92%), while large buildings number 755 buildings (8%) **(Figure 2)**.

Tokyo 23 Wards 9,318 buildings **Small & Medium Buildings Large Buildings** 70 (Gross floor area: 300-5,000 tsubo) (Gross floor area: 5,000 tsubo or more) 8,563 buildings 755 buildings 65 60 55 50 Old seismic standards: Old seismic standards: 45 128 buildings (17%)  $\sqrt{2,167}$  buildings (25%) 40 20 years or older: ge (year) 35 20 years or older: 7,486 buildings (87%) 425 buildings (56%) 30 25 20 15 Less than 20 years: Less than 20 years: 10 1,077 buildings (13%) 330 buildings (44%) 800 200 600 400 200 400 600 800 Number of Buildings

Figure 2: Tokyo 23 Wards Office Stock Pyramid 2021 (Number of Buildings)

Many small & medium buildings were completed during the bubble economy period (i.e., completed between 1986 and 1997; building age 24–35 years), with 83% (5.02 million tsubo) of the buildings aged 20 years or older. New supply has been few after the bubble period, with only 1.03 million tsubo of the rentable area aged less than 20 years. Buildings aged 20 years or older also account for a majority of small & medium buildings on a number of building basis, with 7,486 buildings aged 20 years or older and 1,077 buildings less than 20 years old.

Among large buildings, 3.52 million tsubo of rentable area are aged 20 years or older, while roughly the same amount (3.43 million tsubo) is aged less than 20 years. In terms of the number of buildings, 425 buildings are aged 20 years or older, which slightly outnumbers the buildings that are less than 20 years old (330 buildings). The difference is small, however, indicating that the supply of large buildings has continued since the end of bubble economy.



### 2. TOKYO 23 WARDS | Comparison of 5 Central Wards and 18 Peripheral Wards

Here we compare the office stock of the 5 central wards (Chiyoda, Chuo, Minato, Shinjuku and Shibuya Wards) and the 18 peripheral wards. At the end of 2021, the office stock in Tokyo's 5 central wards will be 9.75 million tsubo based on rentable area, which accounts for 75% of the entire office stock of Tokyo 23 Wards (13 million tsubo). This is broken down into 4.47 million tsubo (46%) of small & medium buildings and 5.28 million tsubo (54%) of large buildings (**Figure 3**). The average age of the stock in the 5 central wards is 32.5 years. Small & medium buildings are aging more rapidly than large buildings, with the average ages 33.2 years among the former and 25.2 years among the latter.

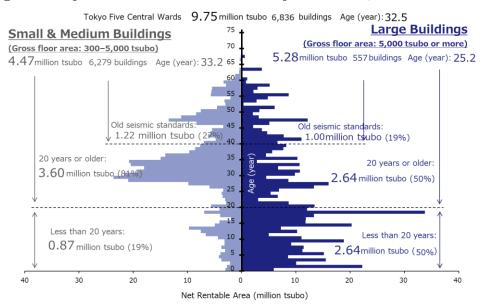


Figure 3: Tokyo 5 Central Wards Office Stock Pyramid 2021 (Net Rentable Area)

The number of buildings is 6,836, of which 6,279 (92%) are small & medium buildings and 557 (8%) are large buildings (**Figure 4**).

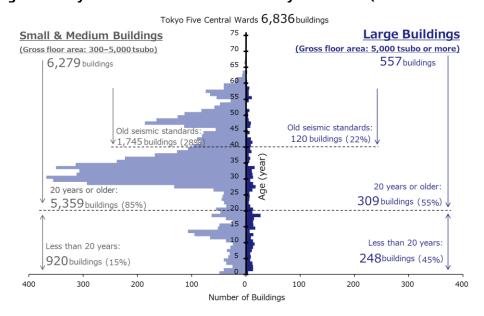


Figure 4: Tokyo 5 Central Wards Office Stock Pyramid 2021 (Number of Buildings)

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Meanwhile, the office stock in Tokyo's 18 peripheral wards at the end of 2021 will be 3.25 million tsubo on a rentable area basis, 25% of the entire stock of Tokyo 23 Wards (13 million tsubo). Of this, small & medium buildings account for 49% with a rentable area of 1.58 million tsubo, while large buildings account for 51% with 1.67 million tsubo (**Figure 5**). The average building age of the entire stock of the 18 peripheral wards is 31.7 years, which is not significantly different from the 32.5 years of the 5 central wards. By building size, the average age of small & medium buildings is 32.6 years, while that of large buildings is 21.8 years.

Tokyo 18 Peripheral Wards 3.25 million tsubo 2,482 buildings Age (year): 31.7 **Small & Medium Buildings** Large Buildings 70 (Gross floor area: 300-5,000 tsubo) (Gross floor area: 5,000 tsubo or more)  $1.58\,\mathrm{million}$  tsubo 2,284 buildings Age (year):32.6  $^{65}$ 1.67 million tsubo 198 buildings Age (year): 21.8 60 Old seismic standards Old seismic standards: 0.26 million tsubo (16% 0.12 million tsubo (7%) 50 45 40 20 years or older: 20 years or older: 35 1.42 million tsubo (90% 0.89 million tsubo (53%) 30 25 15 Less than 20 years: 10 Less than 20 years 0.16 million tsubo (10%) 0.78 million tsubo (47%) 10 10 15 Net Rentable Area (million tsubo)

Figure 5: Tokyo 18 Peripheral Wards Office Stock Pyramid 2021 (Net Rentable Area)

The number of buildings is 2,482, of which 2,284 (92%) are small & medium buildings and 198 (8%) are large buildings (**Figure 6**).

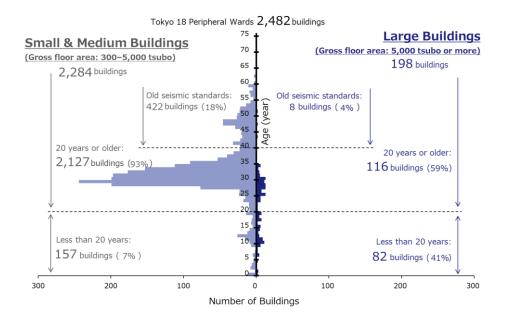


Figure 6: Tokyo 18 Peripheral Wards Office Stock Pyramid 2021 (Number of Buildings)



# 3. OSAKA CITY | Comparison of Small & Medium Buildings and Large Buildings

The office stock in Osaka City at the end of 2021 will be 2.79 million tsubo on a rentable area basis (**Figure 7**). This is evenly split between small & medium buildings with a gross floor area between 300 and 5,000 tsubo (1.4 million tsubo) and large buildings with a gross floor area of 5,000 or more (1.39 million tsubo). The office stock of Osaka City of 2.79 million tsubo is a fifth of that of Tokyo 23 Wards of 13 million tsubo.

The average building age of the entire office stock is 33.3 years. The average age of small & medium buildings is 33.8 years and that of large buildings is 29.7 years.

In terms of the mix by building age, office stock aged 20 years or older accounts for 89% of small & medium buildings, with 1.24 million tsubo aged 20 years or older and 0.16 million tsubo aged less than 20 years, indicating that the supply over the past 20 years has been small. Among large buildings, 0.98 million tsubo are aged 20 years or older, while 0.41 million tsubo are less than 20 years old.

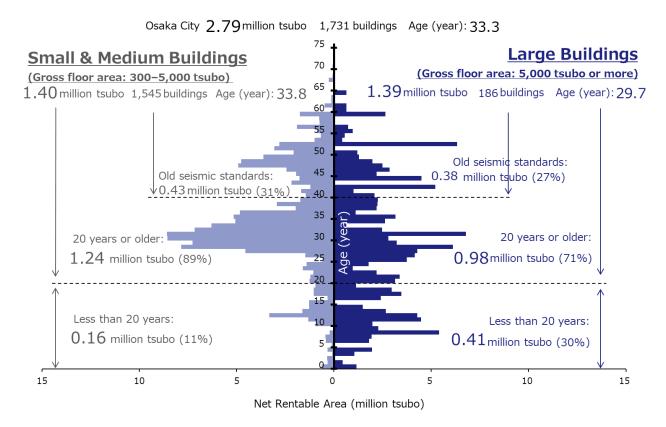


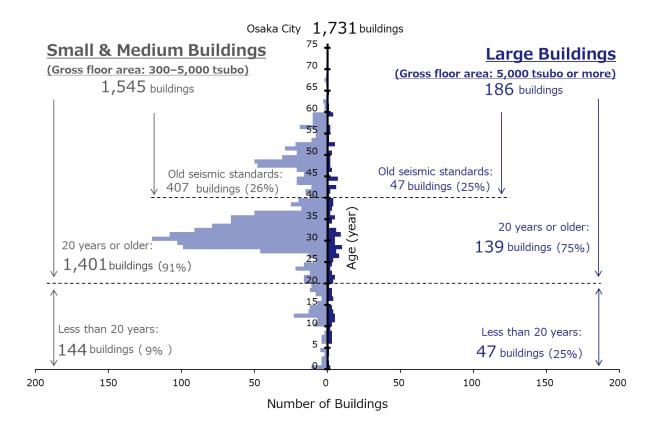
Figure 7: Osaka City Office Stock Pyramid 2021 (Net Rentable Area)

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The number of buildings of Osaka City is 1,731, of which 1,545 (89%) are small & medium buildings and 186 (11%) are large buildings (**Figure 8**).

Figure 8: Osaka City Office Stock Pyramid 2021 (Number of Buildings)





### **Survey Overview**

Survey Timing

December 2020

Coverage

23 wards of Tokyo, city of Osaka

Target properties

Office buildings with a gross floor area of 300 tsubo or more, completed (or scheduled to be completed) in or after 1946 and used mainly as office space as of the end of 2021

Target data The number and office rentable area (tsubo) of large and small & medium office buildings.

Large buildings: Gross floor area of 5,000 tsubo or more

Small & medium buildings: Gross floor area between 300 and 5,000 tsubo

- \* The data were collected from properties whose date of construction is known based on publicly available information such as newspaper articles and for-rent information (including that of the past). Owner-occupied buildings were excluded.
- \* The data of reconstructed or demolished buildings have been collected and reflected to the extent possible.
- \* The sum figures may not match due to rounding.
- \* The figures of this survey are the aggregated figures as of the date of the survey. Since information is added and updated on a daily basis, any differences from figures published in the previous year are not necessarily due to new construction or demolition.
- \* The office stock in 2021 includes buildings whose scheduled completion date is known as of December 2020.
- \* The rentable area represents such area, if published, and if not, the area estimated from gross floor area based on a formula jointly developed with Naoki Kato Lab, Architecture and Architectural Engineering, Kyoto University Graduate School of Engineering.
- \* In this report, buildings completed in and before 1981, when the Revised Seismic Design Method of 1981 was enforced, are aggregated as "old seismic standard" buildings.

### For further inquiries please contact:

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