

Seven Supply Chain Predictions for 2023

E-Commerce, Growth Markets, Green Building and More



Prologis Moissy II Distribution Center 1, Moissy, France.

Prologis Research leveraged decades of industry experience and proprietary data, as well as unique insights from our approximately 1.2 billion square feet global portfolio and 6,200 customers, to predict the following seven non-pandemic trends for 2023. (And check out how we did with our 2022 predictions at the end of this report.)

- Prediction #1** **U.S. warehouse development starts will drop to a seven-year low**, even as rent growth exceeds 10%.
- Prediction #2** **California's barriers to development will permanently constrain logistics demand**, allowing Texas to become the #1 state for net absorption.
- Prediction #3** **Mexico demand will hit a new annual record** as nearshoring drives expansion along the border.
- Prediction #4** **India will rise from fourth to the third-most-active country for development starts**, behind the U.S. and China.
- Prediction #5** **Build-to-suit rents will reach new levels in the U.S. and EU** as market rents are capitalized at higher rates, despite falling land and construction costs.
- Prediction #6** **E-commerce leasing will bounce back** to become the second-most-active year on record (after 2021).
- Prediction #7** **Demand for sustainable warehouses will grow rapidly**. Installed rooftop solar capacity will double, and EV truck charging capacity will exceed 10 megawatts.

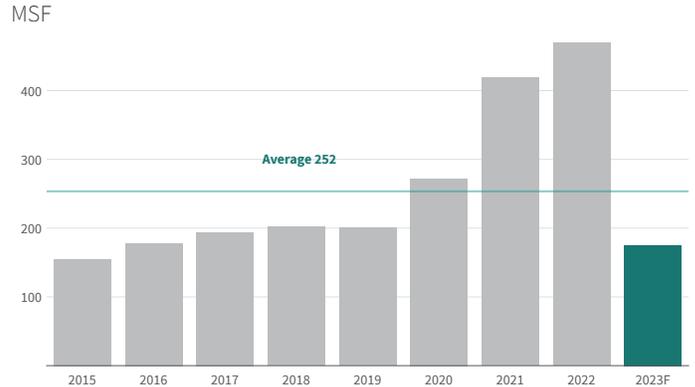
Prediction #1

U.S. warehouse development starts will drop to a seven-year low, even as rent growth exceeds 10%.

Supporting facts:

- Driven by a rapid rise in the cost of capital, development starts will decline by 60% to less than 175 million square feet in 2023. We've already seen quarterly starts fall 30% from their peak in Europe and expect a similar pattern in the U.S.
- **A pullback of this magnitude would create a shortage of space in 2024.** The pipeline will drop from over 500 million square feet in Q3 2022 to 275 by year-end 2023.
- **Low vacancy will produce another year of double-digit rent growth.** Even if new demand fell to zero, the national vacancy rate would increase by just 260 bps to 5.9%, well below the long-term average.

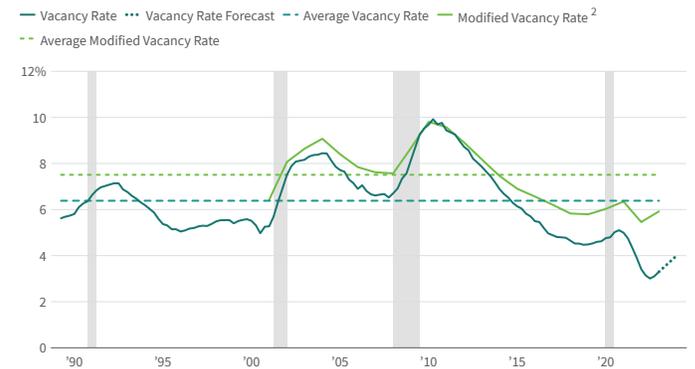
DEVELOPMENT STARTS, PROLOGIS U.S. MARKETS



Source: Prologis Research.

MARKET VACANCY RATE, PROLOGIS U.S. MARKETS

If the currently unleased construction pipeline (365MSF) delivered today without any absorption, the current market vacancy rate would increase to 5.9% – well below long-term average of 6.4%. Vacancy forecast¹ for year-end 2022 is **3.3%** and year-end 2023 is **4.0%**.



Note: Gray area indicate recessions.

1. CBRE, JLL, Cushman & Wakefield, Colliers, CoStar, CBRE-EA, Prologis Research
2. Modified vacancy rate reflects the addition of the unleased under construction pipeline. Pre-lease data available from 2000-2022.

Market vacancy rate represents Prologis' 31 U.S. markets.

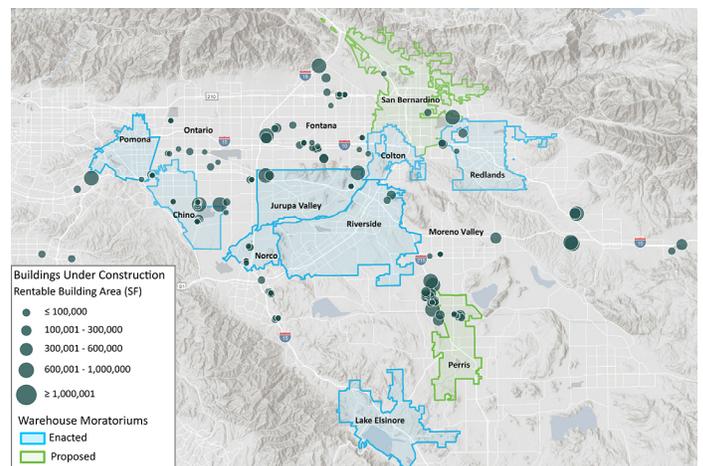
Prediction #2

After leading for 25-plus years, California's barriers to development will permanently constrain logistics demand, allowing Texas to become the #1 state for net absorption.

Supporting facts:

- **California is short on developable land, and barriers to supply are rising.** By November 2022, for example, one-third of the buildings under construction in the Inland Empire were in municipalities that had proposed or enacted local moratoriums on industrial development. Limits on future development in these areas would increase the value of existing properties and create challenges for customers looking to grow.
- **Texas demand drivers are accelerating.** Population growth is expected to continue, and regionalizing supply chains will send more goods through Mexico and Texas.

Warehouse Development Moratoriums are Spreading



Source: CoStar, Prologis Research

Prediction #3

Mexico demand will hit a new annual record as nearshoring drives expansion along the border.

Supporting facts:

- **Nearshoring-related expansions made up half of new leasing in 2022.** Monterrey, Juarez and Tijuana were the primary beneficiaries.¹
- **Increased deliveries in 2023 will allow for more absorption because the vacancy rate is at an all-time low.** The under-construction pipeline rose to a record 25 million square feet in Q3, while vacancy fell to 1.4%.²

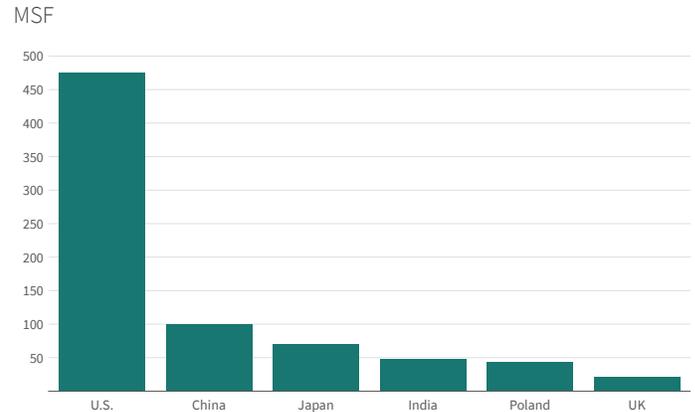
Prediction #4

India will rise to the third-most-active country for development starts, behind the U.S. and China.

Supporting facts:

- **India is becoming more investable as demand drivers evolve.** The combination of strong demographics, increasing exports, favorable regulatory and tax policy changes, and improving infrastructure have attracted capital to India, producing dry powder for logistics development.
- **India was fourth in 2022,** more than doubling the volume of development starts in only five years and overtaking Europe's most active development markets.³

LOGISTICS DEVELOPMENT STARTS BY COUNTRY, 2022E



Prediction #5

Build-to-suit rents will reach new levels in the U.S. and Europe as market rents are capitalized at higher rates, despite falling land and construction costs.

Supporting facts:

- **Financial market volatility has led to markedly higher costs of capital.** Lending costs have risen substantially as central banks increased rates, with the 10-year T-bond hovering between 3.7 to 4.1% in November 2022.
- **Construction cost softness lags economic cycles.** Costs may respond eventually to the overall economic landscape, but they haven't yet. We estimate 10-15% decline in construction costs by year-end 2023, back-loaded in the second half of the year.

WAREHOUSE CONSTRUCTION COST INDEX, U.S.

Dec 2004=100, not seasonally adjusted



Note: Grey bars indicate recessions. Source: U.S. Bureau of Labor Statistics, Producer Price Index by Industry: New Warehouse Building Construction [PCU236221236221], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/PCU236221236221>, November 30, 2022.

Prediction #6

E-commerce leasing will bounce back to become the second-most-active year on record (after 2021).

Supporting facts:

- **E-commerce sales are re-accelerating** as the outsized desire for in-person experiences diminishes and the e-commerce value proposition for consumers remains intact. [We maintain our prediction that >25% of retail goods will be sold through online channels by 2025, up from 15% in 2019.](#)
- **Leasing activity is re-accelerating.** Prologis’s proportion of new leases signed by e-commerce customers rose to more than 17% in Q3 from a trough of 13% in Q1 2022, lifted by a record diversity of customers as parcel networks expand, mid-size retailers improve service levels and new concepts emerge.
- **Parcel delivery costs remain high.** Online retailers will look to network design to achieve both cost savings and sustainability goals. Specifically, adding an urban hub to the end of e-fulfilment supply chains can yield cost and [environmental efficiencies of 50%](#) on average by shortening the final mile.

Prediction #7

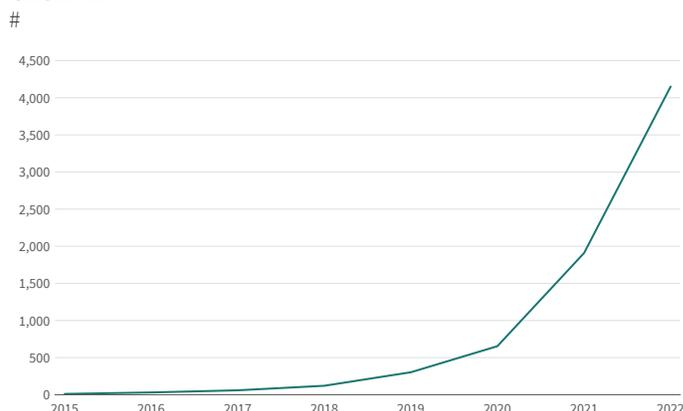
Demand for sustainable warehouses will grow rapidly.

Installed warehouse rooftop solar capacity will double, and EV truck charging capacity will exceed 10 megawatts.

Supporting facts:

- **Building future-proof facilities can shield logistics companies from future operational risks**, including changing regulations, community resistance and volatile fossil fuel-based energy pricing. Costs for sustainable building and operations are dropping. Government incentive programs and the European energy crisis have the power to turbocharge these longer-term trends.
- In California, **a commission found that 157,000 rapid chargers will be needed by 2030** to support fleet electrification and achieve the state’s carbon reduction goals. (Prologis, which already [invests in commercial EV infrastructure](#), has committed to installing 1 gigawatt of solar by 2025.)
- In Europe, **cities with low-emission transportation zones comprise more than 60% of logistics markets** as of 2022, up from less than 25% in 2015.⁴

COMPANIES WITH SCIENCE-BASED NET ZERO TARGETS, GLOBAL



Source: Science-based Targets, <https://sciencebasedtargets.org/companies-taking-action>

NATURAL GAS PRICE, EU

\$USD per Million Metric BTU, Not Seasonally Adjusted



Source: Science-based Targets, <https://sciencebasedtargets.org/companies-taking-action>

A look back—what did we get right and wrong in 2022?

- ✓ Demand would match supply and keep vacancy at a historic low.
- ✓ E-commerce growth would slow and then re-accelerate.
- ✓ Supply chain disruptions would persist through 2022.
- ✓ Inventories would grow by double digits to meet sales and begin to build in resilience.
- ✗ U.S. rent growth would slow to 10% from 2021's 20% pace.
 - 2022 rent growth is expected to total 30% in the U.S. and 25% globally.

Endnotes

1. CBRE, Prologis Research
2. Note: Top six major markets. Source: CBRE, Prologis Research
3. Savills, Prologis Research
4. Note: Prologis EU markets only. Source: European Commission, Urban Access Regulations, Prologis Research

Forward-Looking Statements

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About Prologis Research

Prologis' Research department studies fundamental and investment trends and Prologis' customers' needs to assist in identifying opportunities and avoiding risk across four continents. The team contributes to investment decisions and long-term strategic initiatives, in addition to publishing white papers and other research reports. Prologis publishes research on the market dynamics impacting Prologis' customers' businesses, including global supply chain issues and developments in the logistics and real estate industries. Prologis' dedicated research team works collaboratively with all company departments to help guide Prologis' market entry, expansion, acquisition and development strategies.

About Prologis

Prologis, Inc. is the global leader in logistics real estate with a focus on high-barrier, high-growth markets. As of September 30, 2022, the company owned or had investments in, on a wholly owned basis or through co-investment ventures, properties and development projects expected to total approximately 1.0 billion square feet (97 million square meters) in 19 countries. Prologis leases modern logistics facilities to a diverse base of approximately 5,800 customers principally across two major categories: business-to-business and retail/online fulfillment.