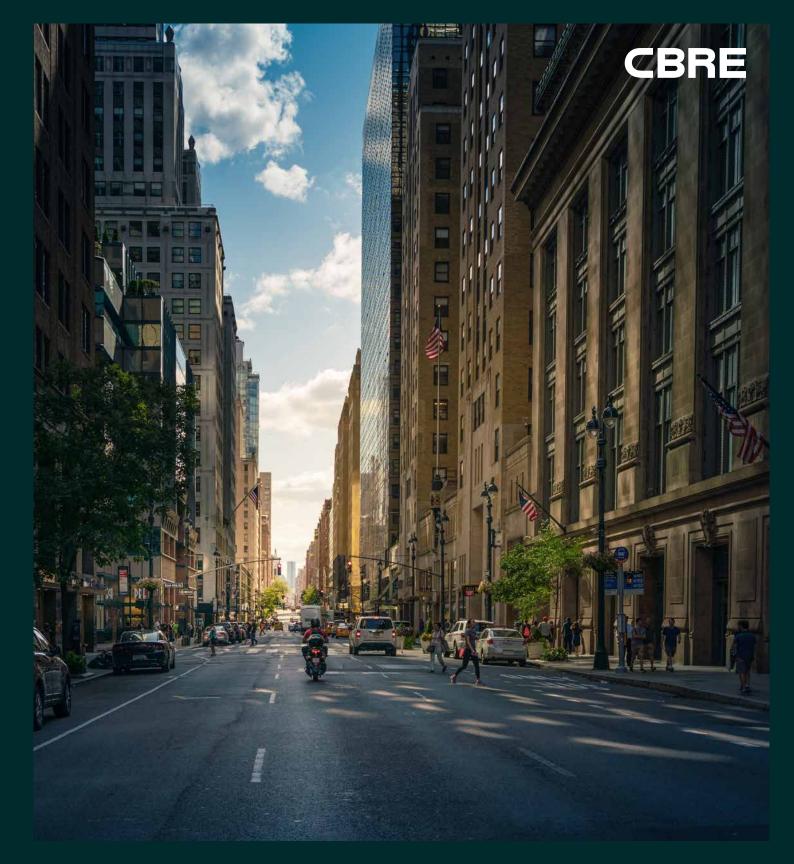
Intelligent Investment

2022 U.S. Real Estate Market Outlook

REPORT

Despite uncertainty from the omicron variant and other risks, a growing economy will fuel demand for space and increase real estate investment across all property types

CBRE RESEARCH DECEMBER 2021



os Data Centers

Data center needs will continue to grow as cloud service providers and social media and content streaming companies expand and 5G, Al and edge computing gain traction, spurring development of additional capacity nationwide.

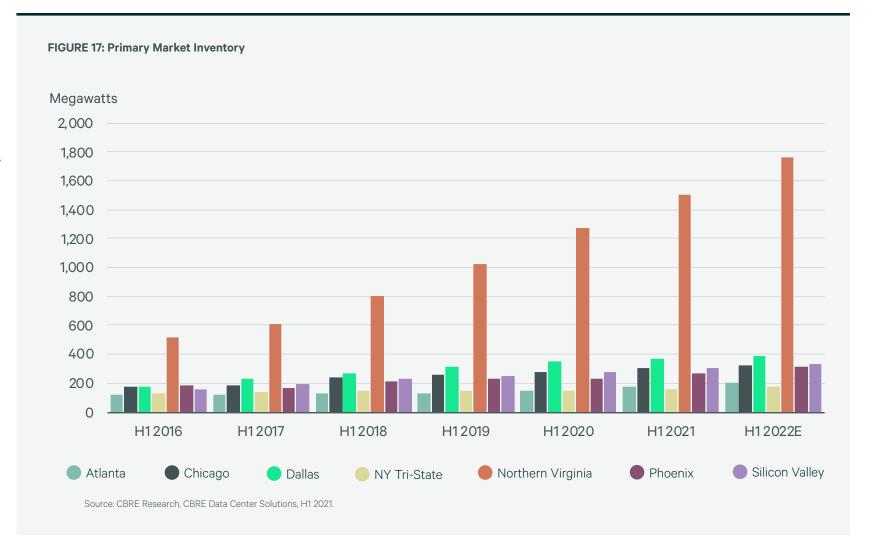
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Data center development flourishing

Data centers are becoming an ever more important and larger commercial real estate asset class as businesses expand their digital infrastructure. With emerging technologies like 5G, AI and edge computing adding to already high demand for data centers, development will increase in 2022, spurring growth in established primary markets, as well as secondary and tertiary markets.

Since 2016, wholesale colocation inventory in primary markets (Northern Virginia, Silicon Valley, Chicago, New York Tri-State, Dallas, Phoenix and Atlanta) has more than doubled to 3.08 gigawatts (GW). With 527.6 megawatts (MW) under construction in primary markets—an increase of nearly 350 MW from 2016—the accelerated growth of the data center sector will continue in 2022.

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With 290.5 MW currently under construction and an additional 586.5 MW of planned future capacity, Northern Virginia is expected to outpace all other North American markets through 2022.

Space and power limitations could constrain new development, which may cause an increase in colocation asking rates and lead more developers to explore vertical construction of data centers. Silicon Valley, also facing a potential squeeze in new supply due to space and power needs, is still on track to grow its inventory by more than 50 MW in 2022.

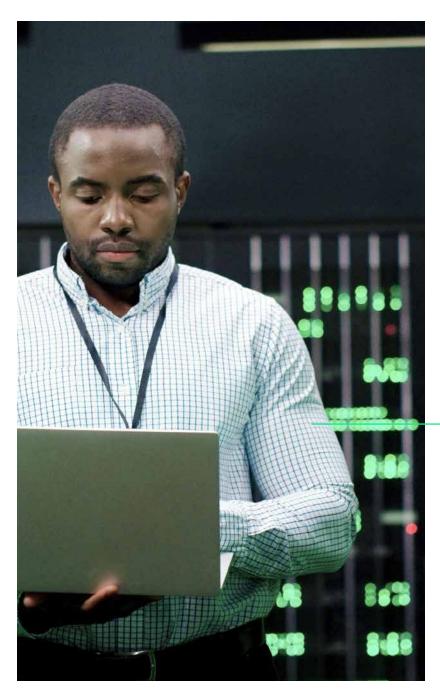
Secondary markets will continue to grow as developers seek to expand capacity, focusing on affordable land in favorable climates, network connectivity, clean and inexpensive power sources and favorable tax incentives. Hillsboro, Oregon, which possesses many of these qualities, is expanding faster than other secondary markets and will see increased activity through 2022.

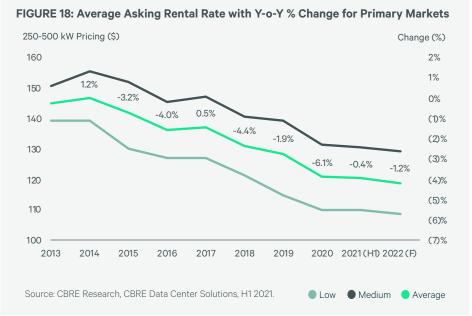
Asking rates dip as new supply delivers

On average, pricing continues to decline across both primary and secondary markets, largely due to more competition as new data centers come online. Some lower-vacancy markets, as well as markets facing potential supply bottlenecks, are beginning to see prices flatten out or, in some instances, tick up. We anticipate this trend to continue in 2022, with space availability and power having the largest impact on asking rates. High-quality, highly connected assets such as carrier hotels will continue to command a premium for both new and existing tenants.

ESG drives changes in data center operations

As companies evaluate their digital transformation in relation to their ESG initiatives, both providers and end users will seek clean power solutions. Providers attempting to satisfy the environmental standards of their customers, or to meet their own carbon neutrality targets, want to lessen their reliance on traditional, carbon-intensive fossil fuels by powering their operations with clean, affordable energy. Industry professionals are focused on solving this issue, though it remains difficult as rapid growth and an ever-increasing demand for power persist. These environmental considerations will likely impact site selection, benefiting markets with an abundance of clean energy like Montreal and Hillsboro, Oregon, and adding challenges to markets with tighter resource restrictions like water conservation in Phoenix, Las Vegas and Salt Lake City.





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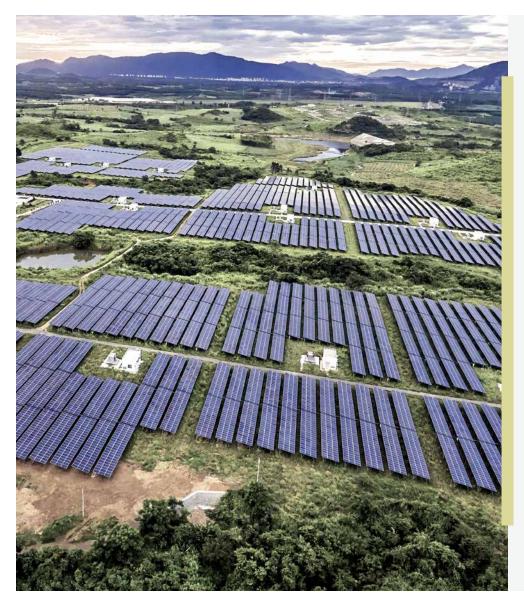
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Potential supply chain interruptions

Supply chain disruptions, notably from the continued global impacts of the pandemic on international trade, could inhibit data center development and delay the delivery of new supply. As uncertainty looms amid pandemic-related restrictions for markets outside of the U.S., particularly in Asia-Pacific, material shortages and increased shipping delays into U.S. ports have the potential to delay new facility developments and impact refresh cycles of data centers. These delays could drive up costs, potentially raising rents in affected markets 4%-6%.

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Trends to watch

Going vertical in land-constrained markets

Markets with limited land availability will begin to see more vertical construction of data center space. There will also be a continued premium in asking rates at highly connected, high-quality data centers.

Power availability key

Power requirements for data center occupiers will continue to grow, leading to larger lease deals and lower rents on a per kilowatt basis in 2022. Power constraints will remain the biggest threat to new developments in markets like Northern Virginia and Silicon Valley. ESG initiatives will also prompt providers to seek renewable and more efficient energy sources to power their centers.

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