

DIGITAL TRANSFORMATION

Accelerating
THE DEMAND
for Data Center Solutions



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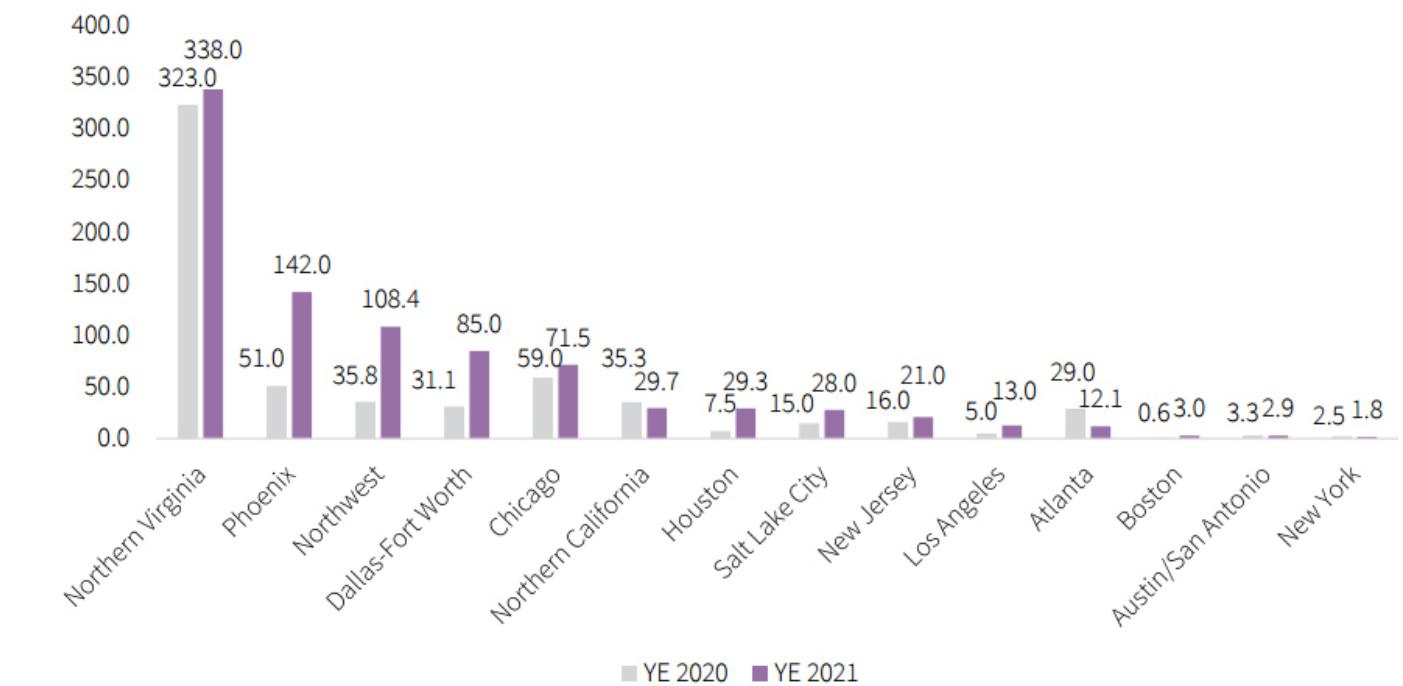
The worldwide pandemic has been a game changer in how corporations are utilizing their technology and office portfolios. COVID-19 drove businesses to operate remotely, increasing the demand for fast and reliable computing services to digitize their business functions. This digital transformation clearly highlighted the critical role data centers are playing in establishing a key pillar for the new foundation of business processes.

Due to these new technology adoptions, essential scenarios are being developed at an expedited rate. According to Gartner, by 2025, 85% of firms' digital infrastructure plans would combine their on-premise, colocation, cloud, and edge delivery choices, up from 20% in 2020. All of this expanded data requirements will need the establishment of additional data centers, colocation solutions and cloud solutions to manage, protect, and store the computing requirements of enterprises.



The growth of these data requirements has lead to a significant increase in absorption of data center space highlighted in the following markets:

Absorption (MW) by U.S. market, YE 2021



Source: JLL Research

The Rise of Data Centers

Investment Monitor senior economist, Glenn Barklie, noted that data center foreign direct investment is among the few market segments that actually rose in terms of project counts in 2020, growing by 35%, while many others decreased dramatically as the Covid-19 issue made its impact felt. This acceleration has proved particularly difficult for data centers to keep up with growth trends as there remains an imbalance between data centers supply and demand.

After several years of cloud growth, data center developers are expanding even more rapidly this year, with about half of the data centers being leased before they are even completed. JLL noted in its 2021 Year-End Data Center Outlook that absorption reached a massive

total of 885.7MW across 14 domestic markets, due to an impressive second half of 2021 led by large cloud and technology company expansions. This absorption figure is a 44.3% increase year-over-year. Key players including real estate experts, banking and healthcare professionals, and data center providers have all acknowledged that this rapid growth "trend" is projected to continue as more companies look to expand their global network. Available landsites in key data center markets have been limited due to competing industrial demand, power deployment constraints and supply chain issues for critical infrastructure. This has resulted in hyperscale users competing for data center space that can accommodate large-scale growth that was previously unheard of (i.e., 36+ MW requirements).

GlobalData analyst, Amy De Carlo, believes many global firms will be more comfortable dealing with data center infrastructure services because they have the necessary infrastructure, accreditations, and regulatory requirements.





Key Technologies Contributing to Data Center Expansions and Growth

The rising penetration of 5G and the adoption of advanced technologies such as AI, IoT, and edge & cloud computing are all propelling the growth of the data center market. A recent study conducted by the strategic consulting and market research firm, BlueWeave Consulting, revealed that the data center market was worth USD 206.2 billion in the year 2021. It is estimated to grow at a Compound Annual Growth Rate of 10.20%, leading to an estimated revenue of around USD 404.9 billion by the end of 2022.

Given the ESG considerations for the majority of critical tenants, data center operators are focused on investing in green electricity to satisfy their power needs. In addition, it is anticipated that data center operators will make significant investments in solar, hydroelectric, fuel cell, wind and nuclear power.

Other key data center growth drivers are:

- ❖ The new normal in the form of remote/hybrid work.
- ❖ Existing procedures are being digitized.
- ❖ Increasing the industrial sector's use of digital technology.
- ❖ Over-the-Top (OTT) services, a new technique of providing movies and television directly through the internet without the need for conventional cable or satellite broadcasts, are becoming more popular.

The significant increase in the growth of AI, IoT and 5G technologies are expanding the requirements for data centers, could solutions and colocation solutions.

CONCLUSION

The world's total data center infrastructure is expanding rapidly and will continue in the upcoming years. Data center investments more than doubled this past year, rising from USD \$24.4 billion in 2020 to USD \$53.8 billion in 2021. Additionally, the total volume of data center transactions expanded by 64% during the same period, rising from 69% in 2020 to 113% in 2021, (global law group DLA Piper 'The meteoric rise of the data center: Key drivers behind global demand'). From pandemic adoptions to rapid 5G/AI/IoT expansion, data centers are making their mark globally, and will continue flourish and make an impact over the coming decade.

James Quinn is an Executive Managing Director at JLL (Fortune 500 Company) with 25 years of real estate/ technology advisory experience. James has represented some of the largest global financial firms, technology and other major corporations on their technology/ real estate portfolios. He is also author of "Tech Trends 24/7and the Impact of Covid-19" which made CIO Insight's Recommended Book for CIO's List. James is also founder of Beacon of Hope 365 charity that leverages technology to help people in need.

