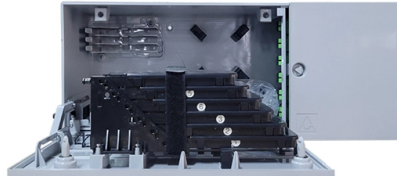


IDC Internet Data Center Site Selection



AI Overview

Selecting the right site for a data center requires balancing power availability, network connectivity, cooling capacity, environmental risk, and regulatory compliance to ensure long-term operational efficiency and scalability.

Key Technical Considerations

Power Availability: Reliable and scalable power is the backbone of any data center. Sites must have access to sufficient utility power or the potential for on-site generation, such as natural gas, fuel cells, or small modular reactors, to meet current and future energy demands. AI-focused data centers may require upwards of 200 MW, while hyperscale facilities can exceed 100 MW, making proximity to power plants and grid infrastructure critical. On-site generation is increasingly adopted, but utility power remains preferred for cost and reliability.

Network Connectivity: High-speed, low-latency connectivity is essential. Sites should be near major fiber routes, internet exchange points (IXPs), and carrier-neutral facilities to ensure flexibility and redundancy. Dense urban centers typically offer the strongest network performance, but smaller cities are investing in connectivity upgrades to attract data center projects.

Cooling Infrastructure: Efficient cooling is vital to manage heat from high-density operations. Traditional water-based cooling may require millions of gallons daily for AI workloads, while alternative methods like LNG cooling or proximity to chilled water plants can reduce water dependency. Climate and local water availability significantly influence operational costs and sustainability.

Environmental and Risk Factors

Natural Disaster Risk: Sites should avoid flood zones, earthquake-prone areas, and regions with severe storms. While retrofits like raised floors or flood barriers are possible, they increase costs and residual risk.

Regulatory Compliance: Local regulations, including noise ordinances, air quality standards, and public notification requirements, must be considered. Early engagement with communities helps mitigate opposition and ensures smoother project approvals.

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7 considerations for data center site selection

There are many considerations to take into account when selecting a location for a data center, especially its proximity to internet exchange points. The situations that follow are challenges

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Learn about data center site selection strategies and see the main factors experts consider when deciding where to build a new facility.

Data Center Site Selection: Key Factors for Success

Explore the key factors for data center site selection — power availability, connectivity, risk assessment, and location strategy for long-term

Considerations for Data Center Site Selection

When comes to data center site selection, companies need to carefully consider various factors to ensure optimal performance and efficiency.

Contact Us

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