A deep dive into the world of
DATA CENTER SITE SELECTION

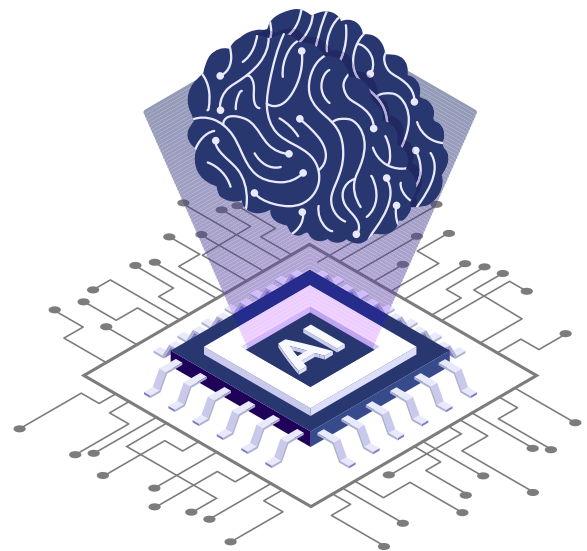## Key Points to Consider for Data Center Site Selection

- **Power Scalability & Capacity**
- **Fiber**
- **Hazards from Nature**
- **Flight Path**
- **Geographic Location**
- **Ease of Access**
- **Site Layout**

A Guide to Data Center Site Selection.

India's data center (DC) industry has been growing at an unprecedented rate in recent years. Data traffic is soaring higher than ever. The increasing investment in artificial intelligence (AI), including generative AI (GenAI), big data analytics, cloud adoption, and 5G technology will generate even more customer data leading to an exponential increase in data volumes.
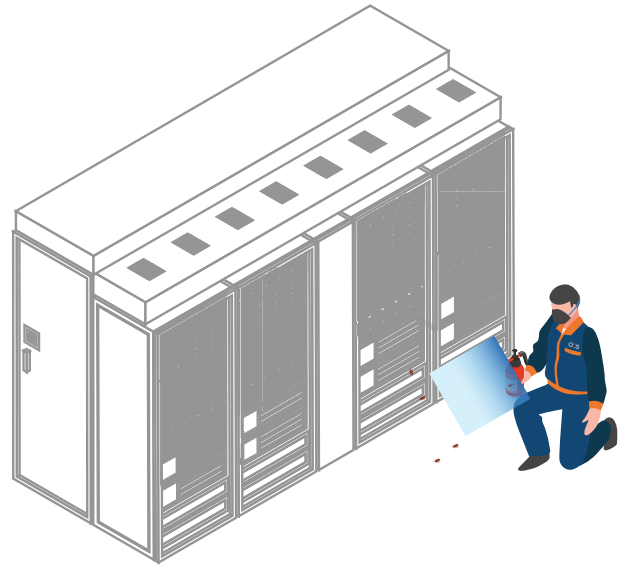
As data centers become even more critical and as more DC capacity is added, site selection will become a critical success factor. Data Centre site selection is a complex and important decision that entails multiple decision points. This guide will help to identify the key points that must be evaluated before selecting the correct site for DC.

Data Center Business Scenario in India.

In today's Data Center business scenario, fastest delivery wins the race. Hence it is crucial to get the project up and running in the shortest possible time.

Also, a research states that a supportive regulatory framework and allied infrastructure development can offer an advantage to you. Some states in India such as Maharashtra, Gujarat, Telangana, Andhra Pradesh, and Tamil Nadu offer various incentives and a supportive regulatory framework to develop DC infrastructure.

Government Policies & Incentives

A few years ago, DC were set up in SEZ or similar notified areas to avail the benefits of various incentives i.e. favourable tax benefits, subsidies, rebates, and exemptions. This is no longer the most important criteria.

Key Points to Consider for Selecting the Ideal Data Center Site.

■ Power Scalability & Capacity

Power feasibility was limited to the proximity of the utility sub-station. Actual capacity was not really assessed. Today scalability of power is the key success factor. Limited capacity is a deal breaker. While dual feed is desirable, dual physical paths are a must for higher reliability. Higher input voltage means higher reliability and generally lower tariff; hence site should have the option to take power at MV/HV.

Also, power taken from renewable sources lowers DC's cost of operations and creates a positive environmental impact.

■ Fiber

A few years ago, the availability of two fiber paths was good enough to select the site. Today, clients are asking for four diverse paths from multiple service providers. Add to this diverse POP and we have a winner. Proximity to a cable landing zone will always be a preferred location. The DC site should be located in a fiber-rich area with enough capacity in the ducts for future expansion.

Submarine cable landing stations at locations such as Mumbai, Kochi, Chennai & Tuticorin can provide better access to international networks.

> With more than 30 odd statutory and compliance requirements; speed of approval is a crucial element that determines the "Go Live" timetable of the project.

Mahesh Trivedi
Strategic Advisor to
OCS Group India, Data Centers

Ease of doing business is the top priority while setting up a DC.

Key Points to Consider for Selecting the Ideal Data Center Site.

▮ Hazards from Nature

While zeroing in on a particular site, it will be wise to consider the risk from natural hazards. Some locations are prone to hazards from nature such as earthquakes, floods and hurricanes. A few years ago, while deciding the location of a DC, the benchmark was to collect the last fifty years flood history.

With global warming & climate change truly showing its effect, the new norm is to get flooding data of the last 100 years. For new DC campuses being built, proper terrain contour study is an essential task and mitigation must be planned to account for stormwater handling.

DC should be located in an area that is resilient against potential natural hazards.

▮ Flight Path

Data centers should ideally avoid high-risk areas, such as aircraft glide paths. Though this is an important criteria, but it may not be a deal breaker during site selection. At the very least avoid the landing / take-off funnel. While the proximity to flight paths is an important consideration, it's just one of many factors that need to be considered.

▮ Geographic Location

Geographic location can be a competitive advantage for you. Geography was and will always remain a key success factor. While factors such as proximity to roads, a location far away from factories causing pollution etc. still do matter but newer requirements such as availability of multiple approach roads that provide access for fuel tankers and containers are also important. Also, a location that allows for future expansion of the DC campus should be preferred.

Additional Factors to Consider for Data Center Site Selection.

DC Site Layout

- As new DC campuses are coming up campus design will be an important factor. Make sure the layout and design comply with the local laws and keep in mind safety around storage of Diesel, minimum set back distances and height of the structures.

- In order to optimize utilization of the land plot, diligent planning must be done to maximize the IT power. Care must be taken to factor in future road expansion, metro lines, rail lines or other public services or utilities.

Ease of Access

- The resources required to run the DC should be in proximity. Easy access to public transport will facilitate easier and faster movement of people and materials.

- This factor may impact the availability of skilled workforce to run your DC operations and also the ability of your vendor partners to support you. These factors can impact recruitment and retention of qualified staff.

- While selecting a location, air and soil quality evaluation was done as a routine exercise; but the bar has been raised to a new high. ESA-2 audit is a must and may become a reason for site rejection.

- Local laws around noise pollution, emission controls, soil disposal & tree replantation should also be carefully considered before finalizing a site.
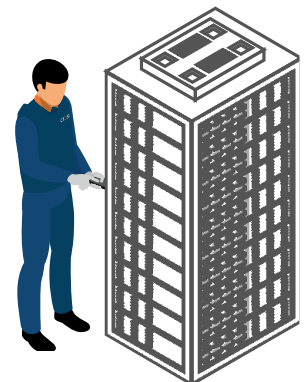
Our Industry Expert.

Mahesh Trivedi
Strategic Advisor to
OCS Group India, Data Centers

Mahesh is a veteran with an extensive career spanning over three decades. He is a visionary who brings a wealth of experience to the data center industry.

He has consistently maintained a remarkable record of near 100% uptime across all managed DC's.

Mahesh played a pivotal role in the conceptualization, design, and construction of key data centers across India.

Over the last decade he has advised leading DC players in the design, operation, and planning of mission critical facilities.
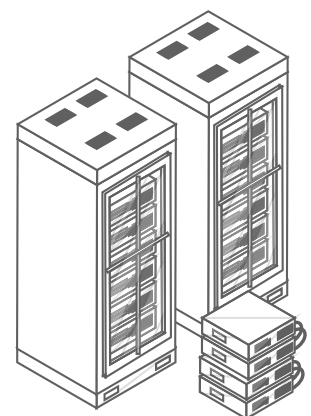
We provide a complimentary survey and report for Data Center Site Selection. Connect with us.

Anoop Sharma
Chief Sales & Marketing Officer
OCS Group India

For further enquiries on DC Site Selection, please contact Anoop Sharma at **expertcare@ocs.com**
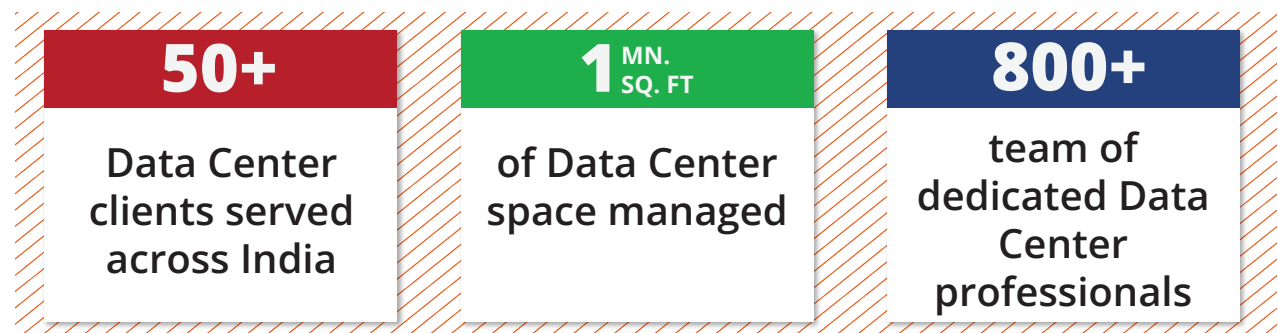
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We are the world's leading facilities service provider, delivering critical and essential services to support our **20,000+ customers.**

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Through our strategic partnerships, we offer **IOT solutions, IP security and surveillance solutions, energy management, electrical safety and risk mitigation solutions.**

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