

Houlihan  
Lokey

# Real Estate Highlight

Data Center—India Edition

December 2025

# India's Data Center Landscape

## India's Digital Economy

India's rise as the world's fourth-largest economy in 2025, with a nominal GDP of \$4.2 trillion,<sup>(1)</sup> is powering an unprecedented digital boom. Its digital economy, already contributing to nearly 12% of GDP, is expected to grow two to three times faster than the traditional economy and is set to make up one-fifth of national income by 2030, surpassing the agriculture and manufacturing sectors.

Reflecting this surge, India now ranks among the top 10 countries globally in terms of data center installed capacity—a testament to its growing digital infrastructure and strategic importance in the global data ecosystem.



Yet, the Indian data center market remains **markedly underpenetrated**, with approximately **1 MW of capacity per million internet users**, compared to roughly 4 MW in China and 51 MW in the United States.

Sources Savills, Data Center Map, Forbes, Government of India Press Information, Wright Research, IMARC, EY, DataReportal, India Briefing, Economic Times, Drishti IAS, Motilal Oswal.

(1) The USD has been used as the base currency across the report to ensure consistency, given that several statistics compare India with other countries and many figures are originally reported/published in USD.

## Growth Drivers

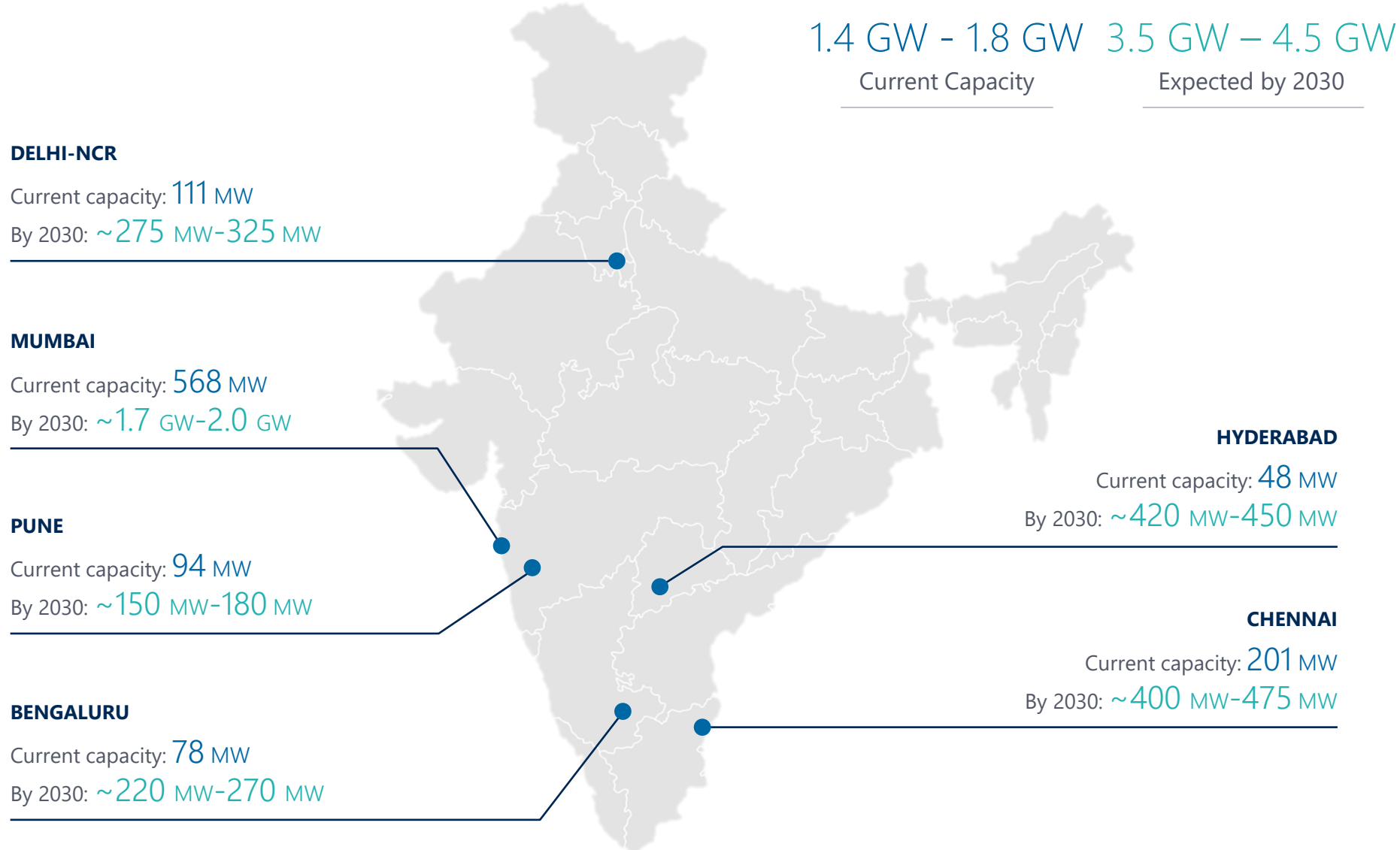
### Demand Side

- 01 Cloud Adoption, Hyperscalers, and Tech Investments** – The surge in cloud adoption following the COVID-19 pandemic (projected to grow at a CAGR of 22.33% through 2033) is fueling unprecedented demand for enterprise data center capacity.
- 02 Emerging Technologies (5G, AI, Edge Computing)** – 5G rollout is driving cloud and low-latency demand, while AI (GPU-heavy) and edge computing workloads are surging. Additionally, generative AI is projected to add \$1.2 trillion to 1.5 trillion to GDP by 2030, pushing compute and storage growth. Edge data center capacity is expected to grow from ~70 MW in 2025 to 300–400 MW by 2030 as well.
- 03 Data Generation and Consumption** – India's 944 million internet and 491 million social media users are generating massive data, driving storage and processing needs. Meanwhile, e-commerce is expected to grow from \$70 billion (since 2023) to \$325 billion by 2030. With mobile data usage rising substantially (the highest per-user consumption globally at 25GB per month), digital payments volume will more than triple by 2030.
- 04 Data Localization (Digital Personal Data Protection or DPDP Act, 2023)** – India generates nearly 20% of global incremental data but stores only 3% locally. With the DPDP Act mandating data localization, enterprises are shifting storage and processing back to India, driving strong growth in domestic data center capacity.
- 05 Enterprise Colocation Growth** – Although hyperscalers dominate data center demand, enterprise colocation is gaining traction. High costs for capex, opex, security systems, GPUs, and real estate make colocation an increasingly attractive option for enterprises seeking scalability and cost efficiency.

### Supply Side

- 01 Expansion of Hyperscale Data Center Campuses** – Large-scale campuses (100+ MW) are emerging, especially in Navi Mumbai and Hyderabad. More than \$5.7 billion in capital will be needed for capacity additions through 2026.
- 02 Investment Inflow** – India attracted ~\$14.7 billion in data center investments between 2020 and April 2025, with foreign institutional investors contributing about 86% of the total. Approximately \$20 billion to \$25 billion in additional investment is expected by 2030.
- 03 National Initiatives** – The Draft National Data Center Policy simplifies clearances and promotes ease of doing business; the Data Center Incentivization Scheme (DCIS) provides fiscal incentives to attract investments; and the DPDP Act, 2023, mandates data localization, creating a strong regulatory framework that promotes the responsible growth of the data center industry.
- 04 State-Level Measures** – Policies such as stamp duty waivers, land access, and tax subsidies further support India's data center ecosystem by encouraging investments and expansion beyond major metro cities.
- 05 Infrastructure Status** – The government's "Infrastructure" status for the data center sector enables long-term loans, flexible foreign investment, and better financing options, aligning with India's power upgrades and renewable integration to ensure scalable, resilient energy supply for data centers.
- 06 Cost Competitiveness** – Capex per MW in India is aided by affordable land, labor, and construction costs, and is lower relative to the global average. Competitive power tariffs, aided by policy flexibility and renewable expansion, further strengthen India's cost advantage for hyperscale deployments.

# MegaWatt Capacity Footprint



1.4 GW - 1.8 GW Current Capacity     3.5 GW - 4.5 GW Expected by 2030



## Data Center Hubs in India

- **Mumbai, Chennai, and Delhi-NCR** lead India's data center hubs: Mumbai for global connectivity and power, Chennai for low costs and coastal access, and Delhi NCR for government access and strong infrastructure.
- **Hyderabad, Pune, and Bengaluru** are fast-emerging as India's next data center powerhouses: Hyderabad for its affordable real estate, proactive policies, and IT giants; Pune for its cost-efficiency, tech talent, and proximity to Mumbai; and Bengaluru for its deep tech ecosystem, abundant talent, and cool climate.
- Tier 2 and 3 cities in India are rapidly emerging as strategic locations for **edge data centers**, driven by low-latency needs, affordable real estate, policy support, and modular models—shifting the landscape beyond metros while boosting connectivity, inclusion, and investor confidence.

Source: Savills Research.  
Note: Various estimates as of December 2024.

# Investment Landscape

## Key Players in India's Data Center Ecosystem:

India's data center market is driven by three key stakeholder groups:

01

Investors funding new infrastructure through direct investments, joint ventures, and platform commitments.

02

Developers/operators building and scaling hyperscale and colocation campuses; responsible for construction, operations, and service delivery across cloud, enterprise, and telecom-driven data centers.

03

Occupiers such as hyperscalers leasing large-scale capacity and anchoring new supply, and enterprise tenants leasing colocation space for mission-critical IT workloads.

Sources: JM Financials, Cushman & Wakefield, JLL, Forbes, Newsweek, Financial Times, Data Center Dynamics, Sify Technologies, PR Newswire, Developing Telecoms, STT GDC, NIIF, Business Standard, Prop News Time, Economic Times.

## Investors

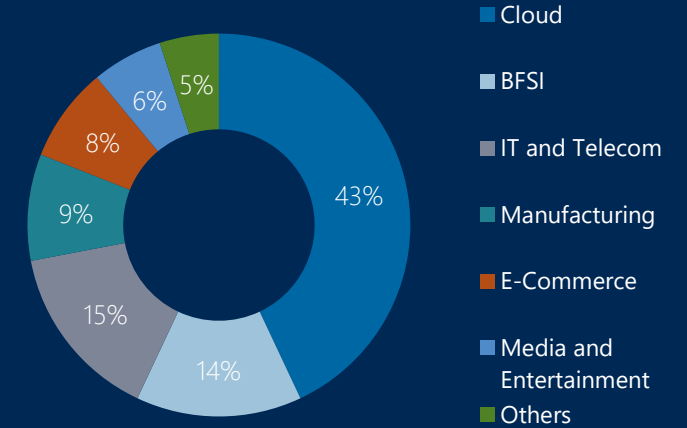
- **Kotak Alternate Asset Managers** launched a dedicated data center fund targeting partnerships with industry leaders such as Netmagic and NTT, including a notable \$72.3 million infusion as of July 2023 into Sify's data center business.
- **Singapore's CapitaLand Investment** committed \$1.15 billion to expand its Indian data center portfolio as of September 2024 through its CapitaLand India Trust (CLINT), which is currently developing four data centers in India.
- **Brookfield Asset Management** announced this year that it plans to build on its \$13 billion investment in Indian infrastructure and is making additional commitments for data centers in India through its joint venture with Digital Realty.
- **Blackstone** invested ~\$2.9 billion in India's data centers prior to 2025, signed \$6 billion MoUs as of January 2025, and made a \$11 billion long-term commitment (10-year horizon) for AI and cloud infrastructure growth.
- **National Investment and Infrastructure Fund (NIIF)** partnered with Digital Edge and AGP in January 2023 to invest \$2 billion in a 300 MW hyperscale data center in Navi Mumbai, marking one of India's largest greenfield projects in the sector.

## Developers/Operators

**Top operators** – These firms lead in building, owning, and operating large-scale infrastructure across key hubs:

- **STT GDC India** – Operates 30 data centers across 10 cities with ~390 MW IT load; investing \$3.2 billion to add ~550 MW, targeting ~900–940 MW by 2029–2030.
- **NTT Ltd.** – Current capacity is ~290 MW across five markets; investing \$1.5 billion to double capacity to ~700 MW across 30 data centers by 2027.
- **CtrlS Datacenters** – Operates 15 data centers with ~250 MW; investing \$2 billion to reach ~650 MW by 2030 (adding 600–700 MW).
- **Sify Technologies** – 14 data centers with 190 MW; aiming for ~407+ MW by 2025; campuses scalable to 970+ MW in major metros (Mumbai, Noida, Chennai, Hyderabad, Kolkata, Bengaluru).
- **Nxtra Data (Bharti Airtel)** – 14 data centers, 200 MW capacity; investing \$600 million to reach ~400 MW by 2027.

## Occupiers—Segmentation



- **Cloud service providers dominate occupancy** (43%) with hyperscale players like **AWS, Microsoft Azure, and Google Cloud** driving demand through AI workloads and sovereign cloud initiatives.
- **BFSI, IT, and telecom** segments remain strong due to **data localization mandates and compliance requirements**, with major occupiers such as **HDFC Bank, ICICI Bank, and Bharti Airtel**. BFSI is expected to grow further as financial institutions accelerate AI adoption for risk and customer analytics.
- Emerging occupiers like **e-commerce, media, and entertainment** (14% combined) are projected to rise sharply, fueled by **OTT streaming, gaming, and 5G rollout**, with companies like **Flipkart, Amazon India, and Disney+ Hotstar** expanding their infrastructure footprints.

# Investment Landscape (cont.)

## Notable JVs

### Investors



**Digital Connexion-Brookfield Infrastructure** (asset manager) × **Reliance Industries** (telco/cloud ecosystem) × **Digital Realty** (global operator): First campus (MAA10) launched in Chennai in January 2024; capable of 100 MW, with Mumbai project in the pipeline expected to launch in 2026 with 40 MW capacity.

**Digital Edge** (Stonepeak-backed operator platform) × **NIIF** (India sovereign fund) × **AGP** (developer): Pan-India JV; first project is a 300 MW greenfield hyperscale campus in Navi Mumbai (BOM1); groundbreaking in 2024.

**Lumina CloudInfra** (Blackstone) × **Panchshil Realty** (developer): JV platform developing multiple Navi Mumbai campuses (Airoli and Mahape), with reports in 2025 of a planned 500 MW “AI data center” campus.

### Developers/ Operators



**Colt Data Center Services** (operator) × **RMZ Digital** (developers’ digital infrastructure arm): Their \$1.7 billion joint venture targets hyperscale demand in Mumbai and Bengaluru, focusing on AI-driven infrastructure (JV).

**AdaniConneX – Adani Enterprises** (infra developer) × **EdgeConneX** (global operator, EQT-backed): Platform to build ~1 GW across India; has since raised large construction financing to scale build-out and is tied to sustainability goals.

**Web Werks** (operator) × **Iron Mountain** (global data center/REIT): JV to expand across India (Mumbai, Pune, Bangalore, Chennai). In April 2025, Iron Mountain agreed to acquire the remaining stake, taking full ownership (historically still one of India’s landmark JV platforms).

**EverYondr Everstone-controlled** (2025) – **Yondr** (developer/operator) × **Everstone** (PE): \$1 billion India JV set up in 2021; in July 2025, Yondr exited, with Everstone taking full ownership of the platform. Still notable as a JV lineage and for pre-leases with hyperscalers.

**STT GDC** (Temasek portfolio/operator) × **Tata Communications**: Created via 2016 strategic partnership/JV when STT bought 74% of Tata Communications’ data center business. Tata Communications retained ~26%; this remains one of India’s largest data center platforms.



Current Data Center Investment

USD \$14.5B  
to \$15.0B

2020 to 2025E



Estimated Future Data Center Investment

USD \$20.0B  
to \$25.0B

By 2030

# Investment Landscape (cont.)

## Key Trends

### Investors



**Large-Scale Platform and JVs:** Big ticket investments via JV models (e.g., AdaniConneX 1 GW platform, Brookfield-Data4) to spread risk and accelerate market entry.

**Green and Sustainability-Linked Financing:** Access to green bonds and sustainability-linked loans is becoming a differentiator; financing terms are now often tied to renewable power adoption.

**Diversification Beyond Mumbai and Chennai:** Investors are chasing higher yields and lower entry costs in emerging hubs like Hyderabad, Pune, and Kolkata, anticipating substations, cable landings, and state incentives.

### Operators



**AI and HPC-Ready Infrastructure:** The rise in AI model training, analytics, and gaming content delivery is driving demand for GPU-ready racks, higher densities (20–40 kW per rack versus 8–10 kW previously), and liquid cooling readiness. In May 2025, RackBank announced plans for an AI-focused data center park in Raipur with ultra-high rack densities of 80–200 kW.

**High-Density and Edge Design:** New builds feature liquid cooling, modular power blocks, dedicated edge node space, high floor loading (2,500 kg/sqm), and 18-foot floor-to-ceiling heights to support AI workloads and low-latency services.

**Capacity Expansion:** Leading operators (STT GDC, Nxta, NTT, Web Werks, Yotta) are developing 50–100 MW+ campuses through multi-phase rollouts, often across multiple cities.

**Energy Efficiency and Sustainability:** PUE in India is expected to decline over the next five years due to hyperscaler standards, new cooling technologies, AI optimization, and green energy integration. Even a drop from 1.65 to 1.50 can reduce power consumption by ~9%, boosting NOI. Examples include Digital Connexion's immersion cooling and magnetic levitation chillers (Chennai facility operates with zero water dependency) and Equinix's switch to air-cooled chillers.

**Green Power Integration:** Liquid cooling is complemented by 50%–100% green power sourcing via open-access solar and wind PPAs to meet hyperscaler sustainability requirements.

### Occupiers



**Shift Toward Hyperscale Pre-Leasing:** Cloud majors (AWS, Microsoft, Google) and BFSI players are increasingly locking in multi-MW capacity before facilities go live to secure space in power and fiber-rich hubs like Mumbai, Chennai, and Noida.

**Evolving Demand Dynamics:** Technology firms, BFSI players, and cloud service providers will remain the primary demand drivers for both colocation and hyperscale data centers, while small to mid-sized corporates are expected to steadily migrate from enterprise setups to colocation facilities. Additionally, engineering, manufacturing, and technology companies are likely to develop dedicated data centers for R&D purposes.

**Rack Density:** BFSI clients tend to have higher densities compared to tech clients.



# Investment Landscape (cont.)

## Major Announcements in the Last One Year



**Lodha Developers Ltd.** signed a \$3.35 billion MoU with the Maharashtra government to develop a green integrated data center park in Mumbai, with three parks planned initially, where high-power-consuming data centers will run on green and alternative energy sources (September 2025).



**OpenAI** is planning to build a new data center in India with a capacity of at least 1 GW. Ahead of the opening of its new office, OpenAI has begun hiring in India (September 2025).



**Sify** is preparing to launch an IPO for its data center arm, Sify Infinet Spaces, aiming to raise approximately \$500 million via a DRHP filing. The listing would mark one of the first stand-alone equity plays in India's colocation infrastructure sector (August 2025).



**Google** plans to invest \$6 billion to develop a 1-gigawatt data center and its power infrastructure in the Southern Indian state of Andhra Pradesh (July 2025).



**Anant Raj Ltd.** plans to spend 180 billion rupees on data centers, aiming for a capacity of more than 300 MW by 2032 (June 2025).



**Adani Group** plans to invest \$10 billion to build data centers in India (possible locations include Andhra Pradesh, Maharashtra, Gujarat, and Tamil Nadu) with an aim to scale up its portfolio to 10GW over time (April 2025).



The **National Stock Exchange (NSE)** is converting its headquarters in Mumbai's Bandra-Kurla Complex (BKC) into a large data center. The new office, which will consolidate all operations, is expected to be completed in about three years (March 2025).



**Airtel's Nxtra** announces plans for a 200 MW Hyderabad data center to go live in the next few years (November 2024).





Sources: Lodha, Mint, Business Standard, Reuters, Tech In Asia, Bloomberg, Economic Times, Data Center Dynamics.



# Comparison of Key Metrics

A key industry trend is growing interest in emerging markets, as power delivery timelines in established markets lengthen, redirecting traffic toward areas where power is more plentiful, land availability is a lesser concern, and economics are more favorable.

## Evaluating Key Metrics Across Emerging and Developed Markets

 India	 Greater China	 Singapore	 United States
<p><b>Cost of Development<sup>(1)</sup></b></p> <ul style="list-style-type: none"> <li>→ \$5.5M–\$8.5M per MW; among the lowest globally, due to cost-effective labor and construction materials.</li> </ul> <p><b>Average Rentals</b></p> <ul style="list-style-type: none"> <li>→ ~\$80–\$100 per kW/month; competitive pricing, particularly attractive for hyperscalers and cloud players.</li> </ul> <p><b>Power Availability</b></p> <ul style="list-style-type: none"> <li>→ Grid reliability is uneven, but availability remains expandable. Developers can secure new power via dedicated substations, while captive and renewable PPAs de-risk supply. Regulatory reforms and relaxed emission norms enable cost-efficient, large-scale capacity growth.</li> </ul> <p><b>Operating Expenses</b></p> <ul style="list-style-type: none"> <li>→ Electricity is ~\$0.7M–\$0.9M/MW per year; total is ~\$1.0M–\$1.2M/MW per year with labor/admin. Opex remains among the lowest globally, though higher PUE partly offsets savings.</li> </ul>	<p><b>Cost of Development<sup>(2)</sup></b></p> <ul style="list-style-type: none"> <li>→ \$5.0M–\$9.0M per MW.</li> </ul> <p><b>Average Rentals</b></p> <ul style="list-style-type: none"> <li>→ ~\$100–\$150 per kW/month, depending on city/tier and facility level.</li> </ul> <p><b>Power Availability</b></p> <ul style="list-style-type: none"> <li>→ Rapid demand growth and policy-driven energy quotas create allocation limits in key hubs. While national capacity is large, new supply often requires government approvals or renewable-linked solutions, driving expansion to less saturated regions.</li> </ul> <p><b>Operating Expenses</b></p> <ul style="list-style-type: none"> <li>→ Electricity is ~\$0.8M–\$1.05M/MW per year; total is ~\$0.9M–\$1.3M/MW per year with compliance/efficiency overhead. Power is the dominant expense, but moderate tariffs and local sourcing help.</li> </ul>	<p><b>Cost of Development<sup>(2)</sup></b></p> <ul style="list-style-type: none"> <li>→ \$9.0M–\$14.5M per MW.</li> </ul> <p><b>Average Rentals</b></p> <ul style="list-style-type: none"> <li>→ ~\$300–\$475 per kW/month, depending on city/tier and facility level; one of the highest globally.</li> </ul> <p><b>Power Availability</b></p> <ul style="list-style-type: none"> <li>→ High grid reliability and low outage risk, but national power envelope and land constraints limit new bulk supply; operators optimize efficiency per MW and pay relatively high energy costs.</li> </ul> <p><b>Operating Expenses</b></p> <ul style="list-style-type: none"> <li>→ Electricity is ~\$1.7M/MW per year; total is ~\$2.0M–\$2.4M/MW per year with cooling and manpower. This is among the highest opex in Asia due to power and real estate costs.</li> </ul>	<p><b>Cost of Development</b></p> <ul style="list-style-type: none"> <li>→ ~\$9M–\$12M per MW.</li> </ul> <p><b>Average Rentals</b></p> <ul style="list-style-type: none"> <li>→ ~\$160–\$225 per kW/month; toward the higher end, especially in top-tier markets like Northern Virginia and Silicon Valley.</li> </ul> <p><b>Power Availability</b></p> <ul style="list-style-type: none"> <li>→ Overall capacity is abundant, but acute transmission bottlenecks exist in high-density hubs like Loudoun County, Virginia. Utilities warn of multi-year delays, even as large new connections are added, which makes local availability a key challenge.</li> </ul> <p><b>Operating Expenses</b></p> <ul style="list-style-type: none"> <li>→ Electricity is ~\$1.22M/MW; total is ~\$5.0–5.5m/MW-year with staffing, cooling, compliance.</li> </ul>

Sources: Cushman & Wakefield, CBRE, The Economic Times, Cyfuture, The Straits Times, Statista, NDTV, IEEFA.

(1) Includes Bangalore, Chennai, Delhi, Hyderabad, and Mumbai.

(2) Excludes Hong Kong and Taiwan.

# Valuations

Unlike global markets where sale-leasebacks and asset trading are common, India's data center landscape remains focused on greenfield developments, fueled by strong demand and foreign investment.

As a result, most operators are still in early investment phases, holding assets long-term to achieve outsized returns, thus limiting secondary market activity. Consequently, valuations are still evolving (shaped by scarce comparables and reliance on forward-looking assumptions around demand, utilization, and yields), while taking directional cues from cap rates and transaction multiples observed in developed markets.

Sources: Cushman & Wakefield, CBRE.



## Data Center Asset Valuation

**Data center assets are specialized facilities** combining real estate and critical infrastructure, with value driven by contracted revenues, operational efficiency, and long-term demand.

**Valuation** is typically based on **income approaches** (discounted cash flow or direct capitalization approach), supported by market approach (sales comparisons) and, where relevant, cost approaches.

**Key considerations** include lease structures (wholesale vs. retail), tenant concentration and credit quality, occupancy and contracted capacity, energy efficiency (PUE), lifecycle capex, availability of power and connectivity, and regulatory environment.

**Financial assumptions** such as **discount rate, exit capitalization rate, leverage, and taxation** are central to reflecting asset-specific risks.

**Risks to value** include oversupply, technology obsolescence, tenant concentration, and ESG/sustainability requirements.



## Market Approach

**Benchmarks:**  
Comparable transactions, guideline public companies.

**Metrics:**  
Cap rates (NOI).

**Calibration:**  
Adjust for asset quality, location, tenant credit.



## DCF

**Revenues:** Contracted, renewals, lease-up.

**Costs:** Energy, O&M, staffing.

**CapEx:** Lifecycle, upgrades, expansion.

### Discount Rate:

- Stage of lifecycle (operational, under construction, under development, etc.).
- Certainty of revenue and costs (whether capacity has been contracted out, whether power has been secured, etc.).
- Underwriting IRR, adjusted for progress made on development, change to the risk profile of cash flows, performance of the business, and market factors.
- Corroboration of IRR implied by recent bids for projects.

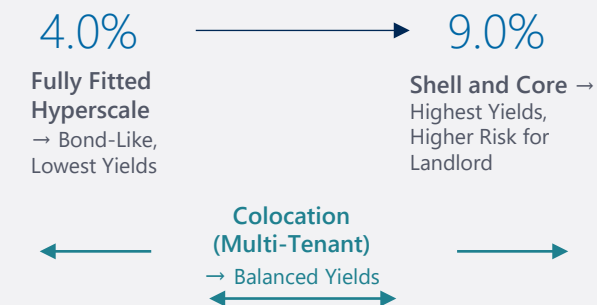
**Exit Value:** Cap rate (NOI).



## Cost Approach

Certain early-stage development sites may be valued at cost/amount spent, unless signs of impairment are observed or key milestones are met.

## Yield Spectrum by Structure



## Drivers of Cap Rate Variation

### Lower Cap Rates

**U.S.** 4.5% to 6.5%, **Japan** 3.9% to 4.7%, **Singapore** 5.0% to 6.5%

- High-quality tenants, long-term contracts.
- Viewed as infrastructure assets.
- High liquidity and REIT participation.

### Higher Cap Rates

**India** 7.5% to 8.5%, **China** 4.5% to 9.0%

- Early-stage demand maturity.
- Political/currency risks.
- Oversupply in China (AI-driven builds → distress).
- Regulatory risks.
- Higher government yields.

# Valuations (cont.)

## Platform Valuation

- Data center platforms typically include operational sites (identified under development/construction sites), unidentified sites, and a notional “platform value,” which captures the ability of the platform to identify and execute projects in the future.
- While value can be ascribed to operational and identified sites, ascribing value to unidentified sites and “platforms” is a matter of judgment and is dependent on various factors, including the history of the platform (from an execution perspective) and the experience of its key personnel.
- A sum-of-the-parts (SOTP) approach may be used for valuing platforms, segregating the business into segments based on the stage of development, geography, anchor tenant, or any other relevant factors.
- An SOTP approach may consider similar valuation methodologies such as the DCF and market approach. For estimating the exit value, one or more following approaches could be used:
  - EV/EBITDA multiple (particularly for operational assets).
  - Booked-but-not-billed (BBNB) multiple; however, the capex required to complete the capacity has to be deducted.
- Capitalization rates, EV/EBITDA multiples, and BBNB multiples may be used (from guideline public companies and guideline transactions). Capex required to complete the BBNB capacity should be deducted.
- Calibration to underwriting expectations may be performed.
- However, this method may not fully capture the capacity coming online in the future and the capex associated with it.

Sources: Cushman & Wakefield, CBRE, PwC.



## Other Considerations

Certain anchor tenants may invest in the data center platforms and have certain differential rights and preferences (either over the entire platform or proceeds from certain projects/SPVs).



## Yield on Cost

- Developed APAC (Singapore, Japan, South Korea): 11%–12%.
- United States: 11%–12% (in line with the APAC average).
- Eight APAC markets above 12% YoC: India, Indonesia, Thailand, Malaysia, the Philippines, Singapore, South Korea, Vietnam.
- Emerging APAC markets deliver higher yields, balancing out the lower development cost base and providing strong investment opportunities.
- India’s high-yield profile makes it attractive for investors seeking returns, especially those with higher risk tolerance.



## Key Insights

- Public data is limited, but market indications suggest data center yields in India are modestly above logistics yet below prime office; spreads remain anecdotal and likely to compress as transactions deepen.
- Exit multiples for data centers in India currently range between 16x–18x EV/EBITDA, compared to 20x–25x observed in recent APAC platform transactions—reflecting scope for valuation uplift as the market matures.
- Given this, India currently has the highest cap rates among the listed APAC cities (ranging from 7.40% to 8.50%), indicating higher risk premiums, a relatively less mature investor base, and potential for yield compression as the market grows.
- If India’s data center market continues to scale with regulatory clarity and improved investor confidence, we can expect cap rate compression (i.e., valuations will rise and yields will narrow, as seen in markets like Singapore and Japan).

# Future Outlook



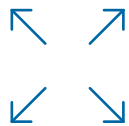
## Tech-Driven Evolution

In India's evolving data center landscape, rapid growth is accompanied by emerging technological trends such as AI, cloud computing, IoT, and edge computing. These advancements, alongside initiatives like workforce training for tally cloud, are shaping the future of decentralized and innovative data infrastructure across the country.



## Geopolitical Influence

Global tech shifts are boosting India's role in the digital economy. The U.S.–China rivalry and regional capacity limits are attracting hyperscaler investments, while data localization rules fuel domestic demand. Tariff uncertainties on IT and telecom equipment are causing hesitation in capex decisions, prompting operators to strengthen local supply chains. Meanwhile, U.S.–India technology partnerships reinforce India as a secure, geopolitically aligned hub for data infrastructure.



## Tier 2 City Expansion

Rising costs and capacity constraints in metros are driving data center expansion into Tier 2 cities such as Ahmedabad, Kochi, and Visakhapatnam, which offer cheaper land, improved connectivity, and access to new user bases. Supported by the Digital India initiative, this shift will extend digital infrastructure to underserved regions and diversify capacity beyond traditional hubs. However, Tier 2 expansion will likely remain limited to large developers capable of building integrated ecosystems; for instance, Google is building a 1 GW data center cluster in Vizag, and Reliance is planning to build GW-scale, AI-ready data centers powered by green energy in Jamnagar.



## Rising Demand for Edge Computing

With ~944 million internet users, rising 5G adoption, and real-time data needs, India is set for strong edge computing growth. Edge data centers will reduce latency for e-commerce, healthcare, and financial services, while smart city initiatives and 5G rollouts will drive investment in distributed micro data centers nationwide.



## Sustainability Push

Green data centers are moving mainstream as operators adopt renewable energy, advanced cooling, and carbon credit mechanisms under the CCTS framework. Deals like Google's purchase of 100,000 biochar carbon removal credits in Gujarat underline the trend. For enterprises, choosing low-carbon operators will be essential for meeting net-zero goals.

# Key Considerations



## Power Supply Management

India's ability to add low-cost capacity—driven by abundant coal reserves, flexible regulation, and rapid renewable deployment—creates a structural advantage over more constrained global markets. While baseload supply remains primarily thermal, reflecting the early stage of large-scale energy storage, India's policy environment enables both stability and scalability through high-voltage connectivity, onsite backup systems, and renewable integration via long-term PPAs. Recent measures—such as revised SHAKTI-based coal allocations, extended emission compliance timelines, and streamlined renewable project approvals—support continued capacity expansion.



## Rising MEP Costs

Mechanical, electrical, and plumbing (MEP) costs are increasing as data centers scale to support AI workloads and high-density computing. Factors include advanced cooling requirements, high-capacity power infrastructure, green building compliance, inflation in raw materials like copper and steel, and increased import duties on specialized equipment. Operators are exploring modular designs and prefabrication, but cost pressures remain substantial.



## Water Scarcity

Cities such as Bengaluru, Chennai, and Mumbai face high water stress, which affects cooling for data centers. Water-efficient cooling technologies such as liquid immersion cooling (LIC) and direct contact liquid cooling (DCLC) are being deployed, but water availability continues to be a limiting factor for sustainable operations.



## Land Acquisition Constraints

Securing suitable land near urban centers remains challenging due to limited availability and complex state-level regulations. Large contiguous plots are scarce in high-demand regions, prompting interest in AI-testing-focused inland data centers that do not require proximity to cable landing stations. At the same time, new coastal nodes are expected to emerge, leveraging India's long coastline to enhance capacity and connectivity.



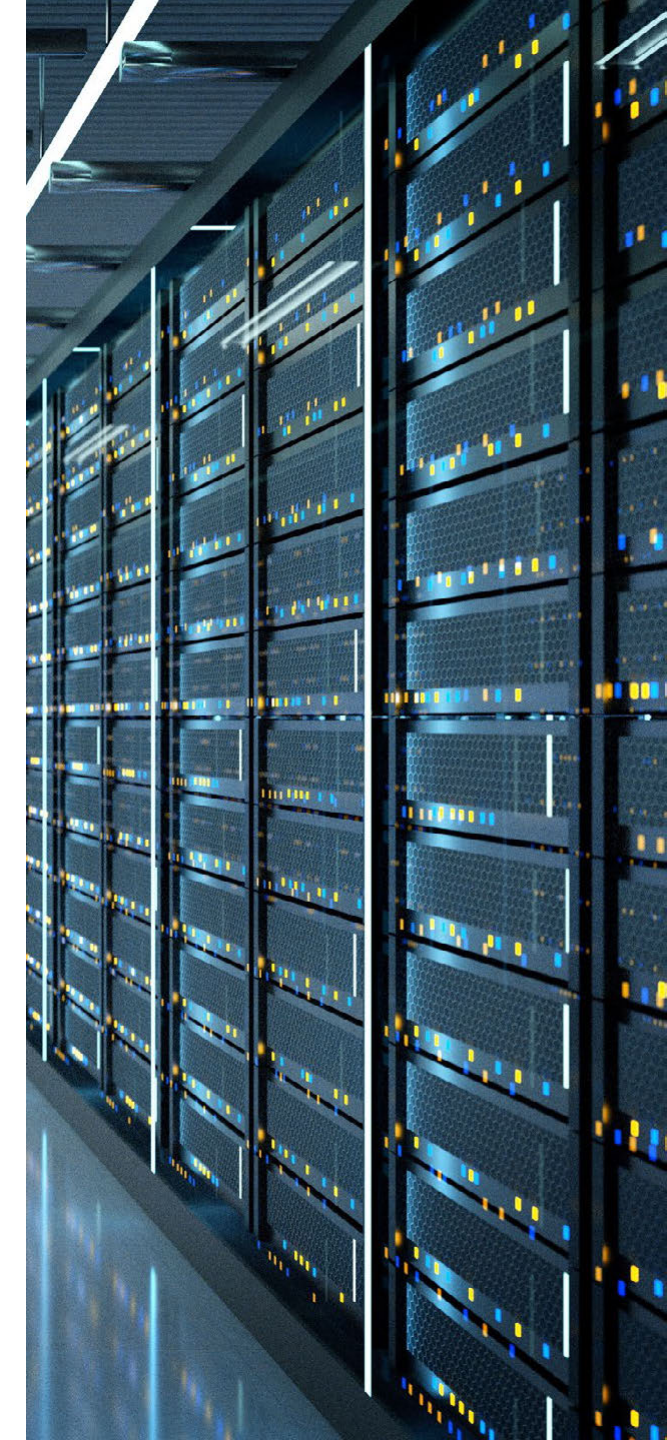
## Regulatory and Approval Navigation

Data center development in India is slowed by complex approval processes and fragmented regulations across central and state levels. "Day 0 readiness"—land, title, and permits—remains the biggest hurdle. As noted by Sureshkumar Rathod, President at CtrlS Datacenters, "A data center should be built in a year, but in India, it takes at least three and a half to four years." Streamlining approval frameworks and improving interagency coordination will be key for accelerating project timelines.



# Glossary

<b>Hyperscalers</b>	Large-scale cloud service providers (like AWS, Microsoft Azure, and Google Cloud) that build and operate massive data centers to deliver computing, storage, and networking at global scale.	<b>Rack Density</b>	The amount of power consumed per rack, typically measured in kW.
<b>Colocation (Colo)</b>	A facility where organizations rent space for servers and IT hardware, sharing power, cooling, and security infrastructure with other tenants.	<b>PUE (Power Usage Effectiveness)</b>	A metric measuring data center energy efficiency: $PUE = \text{Total Facility Power} \div \text{IT Equipment Power}$ . A lower PUE means better efficiency.
<b>MW (Megawatt)</b>	A unit of power capacity (1 MW = 1,000 kW). Used to describe the size of a data center's power load. Typical enterprise data centers range from a few MW to tens of MW.	<b>Liquid Cooling</b>	Direct liquid-based methods for high-density computing.
<b>GW (Gigawatt)</b>	A larger power capacity measure (1 GW = 1,000 MW). Rarely used for a single facility but relevant in discussing total regional or national data center capacity.	<b>Edge Data Center</b>	Smaller data centers located close to end users or devices to reduce latency.
<b>Rack</b>	A standardized frame (often 19-inch width) for mounting servers, switches, and other IT equipment.	<b>Latency</b>	Time delay in data transmission; critical in edge and hyperscale operations.
		<b>GPU (Graphics Processing Unit)</b>	A processor optimized for parallel computing, widely used in data centers for AI, analytics, and high-performance workloads.



# Houlihan Lokey Global Data Center Qualifications

Houlihan Lokey has significant valuation experience across the data center sector, including advising clients in the context of acquisitions and valuations for their real estate assets and portfolios.

## Malaysia and India

Houlihan Lokey was engaged by a private equity fund and special situations fund to provide a valuation opinion on the fund's equity ownership interest in data center facilities in Malaysia and Mumbai (on a stand-alone basis) for internal compliance purposes, in relation to a potential merger transaction with another portfolio company.

## Japan

Houlihan Lokey was engaged by a private investment firm with a focus on global RE and managing more than \$100 billion in assets. Its data center platform is focused on developing 10+ MW hyperscale data centers in Asia. Certain funds associated with the firm were concurrently participating in a primary equity issuance and a secondary purchase of equity interests from other associated funds. Houlihan Lokey rendered an opinion to the general partner of the firm regarding the fairness—from a financial point of view—of the consideration paid to the associated funds in the transaction.

## Australia

Houlihan Lokey was retained to render a financial opinion on the total equity value of a private equity client's investment in acquiring an owner and operator of data centers throughout Asia and Australia.

## Indonesia

Houlihan Lokey was engaged as the financial advisor to provide a purchase price allocation for a data center in Jakarta, constructed in 2016, that was partially leased to a variety of regional and global users. A combination of an income approach, sales approach, and cost approach was utilized to value the data center and overall business acquisition, along with subcomponents, including land, building, site improvements, and other real estate intangibles.

## Australasia

Houlihan Lokey was retained to perform valuation work for an alternative asset manager in connection with its investment in a financing package issued to an operator of company-controlled data centers across North America, Europe, and Australasia.

## Houlihan Lokey Engagements by Region



## Houlihan Lokey Global Data Center Qualifications (cont.)

Houlihan Lokey has significant valuation experience across the data center sector, including advising clients in the context of acquisitions and valuations for their real estate assets and portfolios.

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### Spain

Houlihan Lokey conducted a leasehold analysis of six data center leases in Europe and one owned data center in Spain in connection with Cube Telecom's acquisition of EXA.

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### Pan-European

Houlihan Lokey was retained to perform valuation work for a large alternative asset manager in connection with its investment in a credit facility issued to a European hyperscale data center owner and operator focused on single-tenant built-to-suits in primary markets with loan proceeds used to fund the construction and development of contracted data centers.

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### Europe

Houlihan Lokey was retained to perform valuation services for a large alternative asset manager in connection with its investment in a credit facility issued to partially fund the acquisition of a provider of Cisco ACI and data center solutions to large-cap customers in Europe.

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### United Kingdom/ Europe

Houlihan Lokey was retained by a large alternative asset manager to perform valuation services in connection with an investment in credit facility issued to fund the recapitalization and acquisition of a provider of connectivity, cloud hosting services, and data center operations in the U.K. and European markets.

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## Houlihan Lokey Engagements by Region



## Houlihan Lokey Global Data Center Qualifications (cont.)

Houlihan Lokey has significant valuation experience across the data center sector, including advising clients in the context of acquisitions and valuations for their real estate assets and portfolios.

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### North America

Houlihan Lokey was retained to perform valuation services for a large alternative asset manager in connection with its investment in a credit facility issued to an operator of colocation data center facilities to fund the acquisition of a data center provider located in North America.

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### United States

- Houlihan Lokey was retained by a digital infrastructure company to perform valuation services in connection with its investment in several portfolios of data center assets and wireless tower assets in locations throughout the United States.
- Houlihan Lokey was retained to render a financial opinion on the fair value of the equity of a private equity client's investment in the corporate entity that holds the data center assets.
- Houlihan Lokey was retained to perform the purchase price allocation valuation work for a large nontraded REIT in connection with its acquisition of a five-property portfolio throughout the United States.

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### United States/Europe

Houlihan Lokey was retained to render a financial opinion on the total equity value of a private equity client's investment in the development of data centers in top-tier U.S. and European markets.

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### Canada

Houlihan Lokey was retained to perform PPAs for two data center acquisitions in the United States and one data center acquisition in Canada. Two data centers have continued to be valued every subsequent quarter for financial reporting purposes.

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## Houlihan Lokey Engagements by Region



# Houlihan Lokey's Real Estate Expertise

Houlihan Lokey has a successful track record of assisting its clients—comprising real estate investors, owners, and other stakeholders—with various valuation, transaction, and special situation needs.

## Valuation and Advisory Services



We have deep **valuation expertise** in investment, financial reporting, and tax matters.



We advise **boards of directors and special committees** as they navigate a range of strategic situations and challenges.



We value **large portfolios** of real estate equity and debt positions and offer **bespoke valuation services** (e.g., positive assurance) to help clients mitigate valuation risk.



Leveraging our accounting and real estate expertise, we help clients with **transaction advisory services** related to real estate equity and debt investments.



Our bench of experts includes **dispute resolution counselors** to advise on valuation matters involving disputes, mediation, arbitration, and litigation.



We provide **fairness opinions, solvency opinions, and valuation opinions** to clients across a variety of property- and entity-level transactions.

## Investment Banking



We have a track record of structuring and executing **value-optimizing transactions** for our clients.



We run efficient, momentum-driven processes that drive results in **M&A and capital raising** for both healthy corporate finance and restructuring transactions.



We advise clients on **strategic alternatives** that enable them to accomplish next-level strategic goals—whether the aim is accelerated growth or divestiture—for PropCo and/or OpCo structures.



Our team of experienced financial professionals has an **extensive and expansive reach** of traditional and nontraditional real estate debt and equity investors around the world.



We are well versed in crafting tailored solutions to achieve client objectives, with deep experience **across sectors, company types, and market cycles**.



We are uniquely positioned to help address special situations, ranging from **liquidity management to recapitalizations**.

## Leadership

Please reach out to one of our team members to discuss this quarter's market update or to explore how we can serve your business needs.



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