

Built for what's next: designing resilience into digital infrastructure

India

Country profile

Summary

India is one of the world's fastest-growing data centre markets, driven by rapid digitalisation, adoption of artificial intelligence and strong hyperscale investment.

Grid capacity, cyber security and climate resilience are the defining operational challenges as demand accelerates across major digital hubs.

Resilience efforts focus on cyber security, energy management and infrastructure protection, supported by strong governance and resilience investment.

The next stage of resilience will depend on stronger community engagement, climate adaptation and better preparedness for disruptions that affect multiple systems.

Key data

Scale

164
data centres¹

Capacity

4,480
MW²

Capacity growth

23%
annual IT-load growth
(estimated 2025–2031)³

Geographic hubs

Mumbai is the country's largest data centre hub, accounting for over half of the country's total industry capacity. The National Capital Region (Delhi-NCR) and Chennai are the next-largest hubs, with demand increasingly expanding into other cities. Low vacancy rates point to a market that remains short of supply. Cloud adoption, AI, digital financial services and 5G networks drive demand.⁴



About this research

Built for what's next is an Economist Enterprise research programme, sponsored by global property insurer FM. It examines how risks across energy, people and technology often come together to disrupt digital infrastructure, and how organisations can best prepare to meet those shocks.

The research is based on:

- A global survey of 1,800 data centre stakeholders across the digital infrastructure value chain from 21 countries
- Interviews with global industry experts
- An expert panel discussion

Market overview

Growth trends

India's data centre market is expanding rapidly. Operational IT capacity grew by about one-third in 2025 after new supply more than doubled from the previous year. Capacity is expected to exceed 4GW by 2030. Vacancy rates have fallen to about 4%, showing that demand still outstrips supply as cloud services, AI, digital financial services and 5G networks drive growth. India also has a cost advantage over many established markets. Data centre construction costs are around 30-40% lower than in America and China, helping to attract institutional investors. Investment is also expanding beyond established data centre hubs, with locations including Telangana, Kolkata and Ahmedabad emerging as new growth markets.^{5,6,7}

Investment trends

India's data centre investment pipeline is accelerating as global technology companies expand their cloud and AI infrastructure. In late 2025, Microsoft, Amazon and Google contributed to a cumulative investment pipeline exceeding 12trn rupees (US\$126bn). Foreign institutional investors have also played a major role, accounting for around 86% of more than 1trn rupees (~US\$15bn) invested between 2020 and April 2025, with a further 2trn rupees or more (US\$20–25bn) expected by 2030.^{8,9,10}



Key regulatory developments

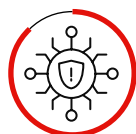
India's National Strategy for Artificial Intelligence and broader digital transformation programmes continue to support investment in data centres through incentives and infrastructure development. The Digital Personal Data Protection Act (DPDPA), enacted in 2023, and the DPDP Rules 2025 establish a national framework for protecting personal data. Transfers of personal data outside India are permitted, subject to requirements that the Central Government may specify, including in relation to making personal data available to a foreign state or entities under its control. Cross-border transfers may also be restricted through government notification. India does not impose broad data-localisation requirements, although organisations relying on cross-border cloud services must account for evolving transfer requirements.^{11,12,13}

Key risks

Economist Enterprise's survey found that Indian data centre stakeholders perceive the following as the **greatest systemic risks facing the sector**:

**91%****Grid capacity constraints**

India's data centre electricity demand is projected to reach over 13GW by 2032, placing increasing pressure on local distribution networks.¹⁴ Connection delays are prompting some businesses to invest in captive solar and wind generation to secure reliable power.¹⁵

**88%****Cyber-attacks**

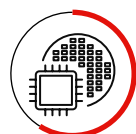
Cyber-attacks rank as the second-largest risk. Indian organisations face an average of 3,195 cyber-attacks each week, driven by ransomware and increasingly complex cloud environments.¹⁶ In response, businesses are strengthening cyber resilience through zero-trust security models and automated threat detection.¹⁷

**72%****Investment or insurance withdrawal**

As AI data centres become larger and more power-intensive, investors are increasingly assessing projects as infrastructure rather than real estate. Long-term access to power, resilient design and stable customer contracts are becoming more important determinants of investment than traditional property metrics.¹⁸

**65%****Extreme weather or climate impact**

Heatwaves, flooding and water scarcity pose growing risks, particularly in major hubs such as Mumbai and Chennai. Higher temperatures reduce cooling efficiency, while greater demand for water creates operational challenges in water-stressed regions. These pressures are encouraging investment in more resilient infrastructure and alternative cooling technologies.¹⁹

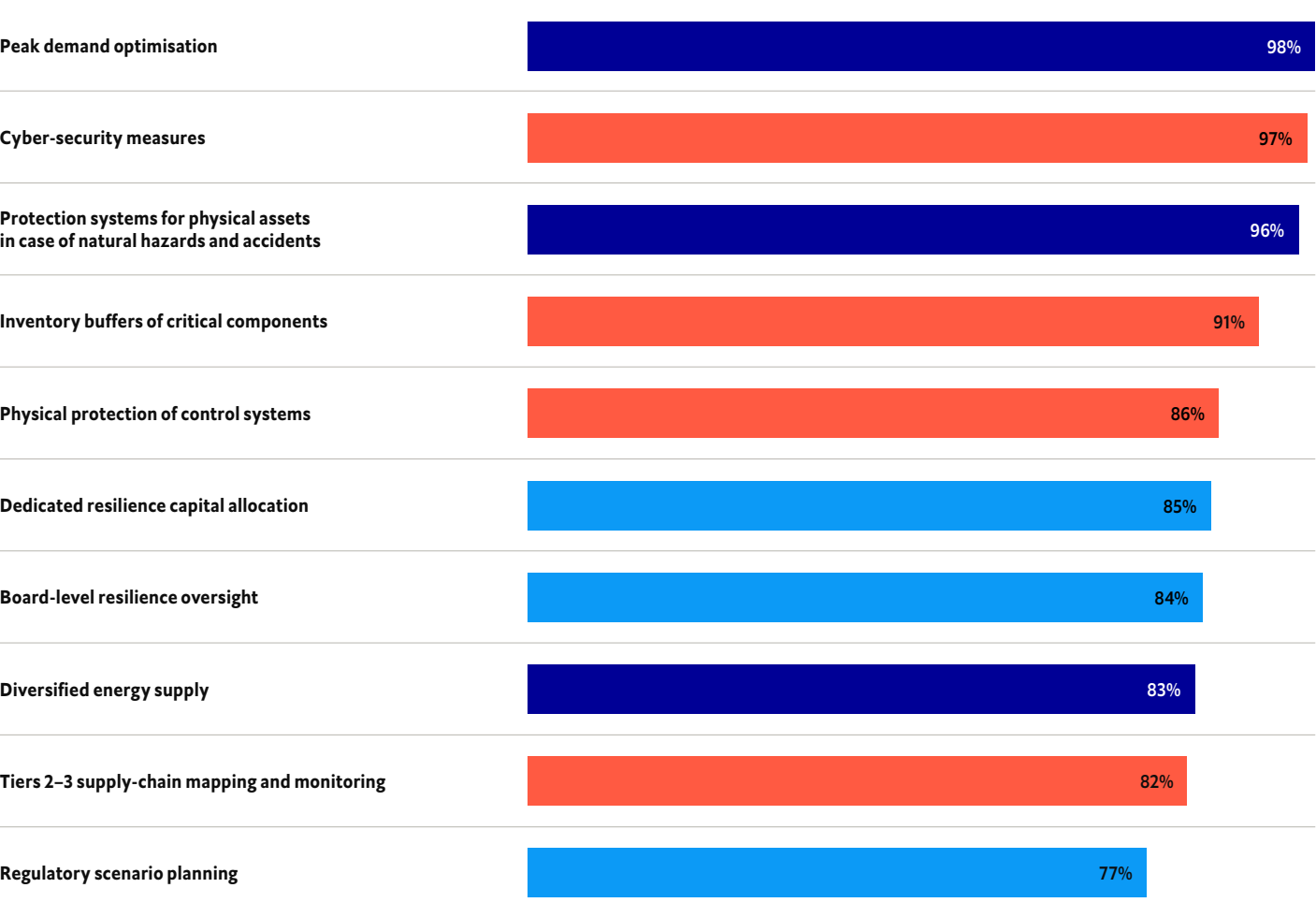
**59%****Limited critical minerals, semiconductors or cloud vendors**

India remains heavily dependent on imported semiconductors and AI chips. Global supply constraints continue to delay infrastructure projects and increase costs. Government support through the India Semiconductor Mission aims to strengthen domestic manufacturing and reduce long-term dependence on overseas supply chains.^{20,21}

Resilience measures

Top 10 resilience measures adopted by data centre stakeholders in India

■ Energy and environment ■ Governance and human capital ■ Technology and supply-chain digital infrastructure



Source: Economist Enterprise survey, February-April 2026

Key takeaway

Resilience strategies are strongest in areas that support day-to-day operations, including energy management, cyber security and physical infrastructure. Governance measures are also well established, indicating that resilience is increasingly treated as a strategic priority rather than a purely operational concern.

Priority actions

Least-adopted resilience measures and underestimated risks among data centre stakeholders

Risks	Measures
Data centre technologies become obsolete 5%	Multi-cloud, multi-vendor and network redundancy 6%
Limited land availability 6%	Community engagement 10%
Community backlash 7%	Compound shock simulation and rehearsal 12%
Sabotage of critical digital infrastructure 7%	Low-water or alternative cooling systems 14%
Water scarcity affecting cooling 8%	Geographic diversification across grids and jurisdictions 17%
	Resilient and resource-efficient design and construction standards 17%

Source: Economist Enterprise survey, February-April 2026

Build community engagement

Only 7% of respondents identified community opposition as a major risk and just 10% reported active community engagement. As data centre development accelerates in India’s largest cities, operators will need to work more closely with local authorities, utilities and communities to build trust, reduce planning delays and support long-term expansion.

Key actions:

- 1 Establish collaborative regional forums uniting operators, utility providers, local authorities and community representatives.
- 2 Maintain transparent communication channels detailing data centre land use, power draw and environmental metrics.
- 3 Assess community, water, power and land-use impacts alongside site-selection and expansion decisions.
- 4 Factor public sentiment trends and permitting delays into corporate risk-modeling exercises.

Design for climate adaptation

Water scarcity (8%) and technology obsolescence (5%) remain low priorities despite increasing climate pressures and rapid advances in AI hardware. Only 17% of respondents prioritise resilient, resource-efficient design, while 14% use low-water or alternative cooling systems. Closer collaboration between technology vendors, infrastructure engineers, investors and enterprise tenants will help ensure facilities remain adaptable as cooling requirements and computing densities evolve.

Key actions:

- 1 Assess heat, flooding, water availability and power resilience before site selection and expansion.
- 2 Set shared design and engineering assumptions for future rack density, electrical load and cooling requirements.
- 3 Use resource-efficient cooling and modular power systems designed for maintenance and future equipment upgrades.
- 4 Use lifecycle stress tests to assess retrofit costs, downtime and long-term asset value.
- 5 Test infrastructure against extreme heat, water constraints, power interruption and changing technology requirements.

Improve preparedness for compound disruptions

Only 12% of respondents conduct compound shock simulations, 6% use multi-cloud or multi-vendor redundancy and 17% diversify operations across power grids or jurisdictions. Improving resilience will require closer co-ordination across operators, tenants, utilities, suppliers and government agencies to prepare for disruptions that affect multiple systems at once.

Key actions:

1

Map dependencies across electricity, telecommunications, water and critical suppliers.

2

Conduct joint exercises that combine cyber incidents, infrastructure attacks and grid failures.

3

Establish clear crisis roles and escalation procedures across operators, tenants, utilities and government agencies.

4

Use exercises to update maintenance and testing schedules, critical spares, recovery plans, staff preparedness and capital investment.

Conclusion

India's data centre sector has strong foundations in cyber security, energy management and governance. Sustaining its rapid growth will require greater attention to grid resilience, climate adaptation and preparedness for interconnected disruptions.

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About FM

This research programme is sponsored by FM, one of the world's largest commercial property insurers, and is dedicated to helping organisations build resilience and protect long-term business value. Drawing on nearly two centuries of engineering expertise, scientific research and loss-prevention experience, FM helps clients better understand and manage the risks that affect critical operations and infrastructure.

FM Intellium brings together research, engineering insight and resilience intelligence to help organisations evaluate, strengthen and benchmark resilience across the digital infrastructure ecosystem. By providing a clearer view of resilience vulnerabilities, system interdependencies and emerging risks, FM Intellium supports better business, investment and policy decisions in an increasingly complex digital environment.