

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

# United States

## Country profile

## Summary

Hyperscale artificial intelligence investment and advanced digital infrastructure continue to reinforce the United States' position as the world's most influential data centre market.

Compared with Europe, The US benefits from greater scale and investment capacity, but faces sharper power and land constraints and growing community opposition around major data centre hubs. This is increasingly shaping state and local policy. New York has moved to pause permitting for new large data centres while regulators assess their environmental, energy and water impacts. In Illinois, policymakers have proposed stronger requirements for energy and water-use reporting, community impact assessments and public engagement. These developments highlight the need to balance data centre growth with responsible resource use and tangible local benefits.

Across the data centre value chain, stakeholders are prioritising cyber security, infrastructure protection and energy resilience, supported by wider US initiatives on critical infrastructure and semiconductor supply chains. However, while data centre stakeholders are actively investing in resilience, preparedness for interconnected disruptions remains less mature.

Looking ahead, resilience will require greater community engagement, distributing capacity across a broader range of locations, climate-informed planning and preparation for compound disruptions involving power shortages, extreme weather, cyber attacks and supply-chain disruption.

## Key data

### Scale

**5,427**  
data centres<sup>1</sup>

### Capacity

**41,000**  
MW<sup>2</sup>

### Capacity growth

**14%**  
annual IT-load growth  
(estimated 2025–2030)<sup>3</sup>

### Geographic hubs

Virginia, Texas and California are the three largest data centre markets in the US by number of facilities. Atlanta, Georgia, has also emerged as a prominent data centre hub, attracting investment from all four major hyperscalers: Meta, Microsoft, Google and AWS. While New York remains among the ten states with the largest number of data centres, new hyperscale development faces greater constraints following the introduction of a recent regulatory moratorium.<sup>4,5,6</sup>



## 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

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## Growth trends

The US accounts for 55% of global operational hyperscale data centre capacity and continues to see rapid AI-driven expansion. Across North America, vacancy fell to a record low of close to 2% in H1 2025, with 74% of capacity under construction already pre-leased. However, power shortages are emerging as the main constraint, encouraging development in power-rich markets such as Texas and Indiana.<sup>7,8,9</sup>

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## Investment trends

Investment remains strong. In January 2025, OpenAI and SoftBank announced the Stargate Project, backed by initial equity funders including Oracle and MGX, with plans to invest US\$500bn over four years in AI infrastructure across the United States. AI demand is also driving substantial hyperscaler investment. Alphabet, Amazon, Microsoft and Meta invested an estimated US\$410bn in capital expenditure in 2025 and plan to spend around US\$725bn in 2026, with the vast majority directed towards AI infrastructure, including data centres, GPU clusters and custom silicon.<sup>10,11</sup>



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## Key regulatory developments

The US policy environment is increasingly focused on accelerating AI and digital infrastructure deployment. Executive Order 14318, issued in July 2025, streamlines federal permitting for large-scale AI and data centre projects through faster environmental reviews, expanded use of the FAST-41 process, a federal framework for accelerating approvals for major infrastructure projects, and greater access to federal land. America's AI Action Plan further positions AI infrastructure as a national security and economic priority, reinforcing federal support for data centre expansion. While federal policy is seeking to accelerate AI and data centre development, states are introducing additional requirements to manage local impacts, including energy costs, water use and land-use pressures.<sup>12,13,14</sup>

# Key risks

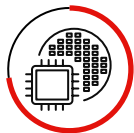
Economist Enterprise's survey found that the US data centre stakeholders perceive the following as the **greatest systemic risks facing the sector**:

**95%****Cyber-attacks**

Cybersecurity threats continue to intensify as operators expand cloud and AI infrastructure. America remains one of the world's most targeted cyber environments, with more than 1,700 publicly reported data compromises recorded in the first half of 2025 alone. As cyber threats become more sophisticated, data centre operators are strengthening zero-trust security, continuous monitoring and AI-enabled threat detection following guidance for critical infrastructure from the Cybersecurity and Infrastructure Security Agency.<sup>15,16</sup>

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

Utility forecasts anticipate 166GW of additional peak electricity demand by 2030, with data centres accounting for about 55% of the projected increase. Because transmission upgrades can take five to ten years, operators are increasingly investing in on-site generation, battery storage and microgrids to secure reliable power.<sup>17,18</sup>

**73%****Limited critical minerals, semiconductors or cloud vendors**

Rapid AI expansion is intensifying competition for advanced semiconductors, transformers and other critical infrastructure components, increasing supply-chain risks and deployment timelines. The US is responding by expanding domestic semiconductor manufacturing through the CHIPS and Science Act, signed in 2022, strengthening critical mineral supply chains.<sup>19</sup>

**70%****Extreme weather or climate impact**

Heatwaves, droughts, hurricanes and wildfires are increasing operational risks for data centres. Many major data centre markets face exposure to chronic climate stresses such as extreme heat and drought, which can increase cooling requirements, water and electricity consumption and operating costs. Acute hazards, including wildfires, flooding and extreme winds, can also disrupt operations and power infrastructure, increasing the risk of downtime. These pressures are particularly relevant as data centre development expands in climate-exposed markets across the US.<sup>20,21</sup>

**60%****Investment or insurance withdrawal**

Although investment remains robust, access to capital is increasingly linked to projects with secure power and grid access. As AI infrastructure investment accelerates, investors and insurers are placing greater emphasis on energy availability, climate resilience and long-term operational viability, increasing financing challenges for projects in constrained markets.<sup>22,23,24</sup>

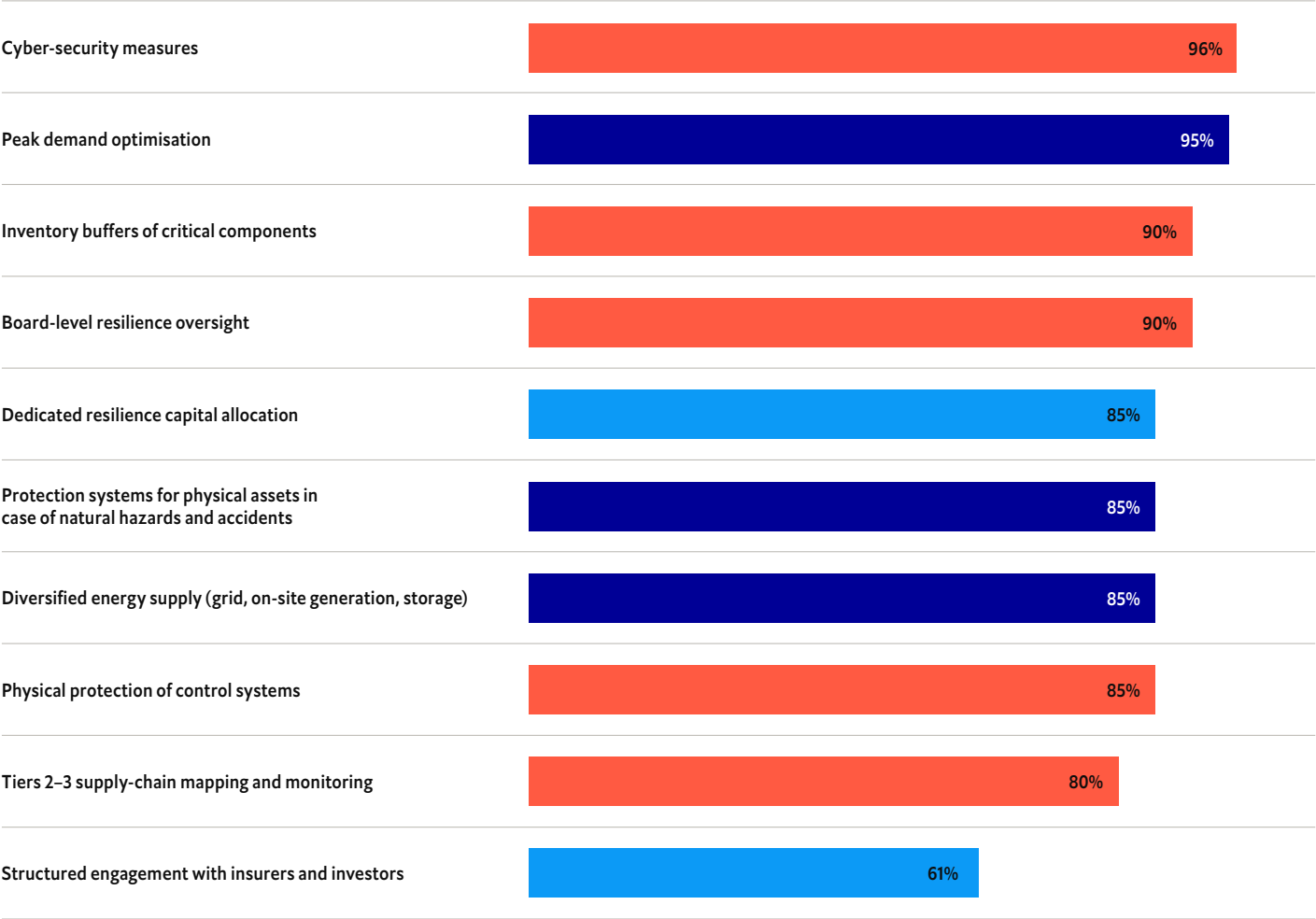
Source: Economist Enterprise survey, February-April 2026

Although infrastructure and security remain the most pressing concerns, community opposition is emerging as a parallel threat. As data centres occupy more land and consume more power and water, local resistance to their environmental impact is growing. In the US in the first months of 2026, local opposition halted or delayed projects worth tens of billions of dollars.<sup>25</sup>

# Resilience measures

## Top 10 resilience measures adopted by data centre stakeholders in the US

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



Source: Economist Enterprise survey, February-April 2026

### Key takeaway

In the US, resilience efforts prioritise cyber security, infrastructure protection and energy resilience to support rapid market growth. Strong governance and supply-chain measures demonstrate a proactive approach to operational risks, while lower adoption of climate-informed planning, community engagement and compound-shock testing points to opportunities to strengthen long-term resilience, particularly in addressing interconnected disruptions and concentration risk.



# Priority actions

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

| Risks                                             | Measures                                                                  |
|---------------------------------------------------|---------------------------------------------------------------------------|
| Community backlash<br>3%                          | Multi-cloud, multi-vendor and network redundancy<br>11%                   |
| Limited land availability<br>6%                   | Compound shock simulation and rehearsal<br>14%                            |
| Technology obsolescence<br>7%                     | Community engagement<br>15%                                               |
| Sabotage of critical digital infrastructure<br>7% | Geographic diversification across grids and jurisdictions<br>18%          |
|                                                   | Climate-informed site selection<br>18%                                    |
|                                                   | Resilient and resource-efficient design and construction standards<br>21% |
|                                                   | Asset-life and obsolescence stress testing<br>23%                         |

Source: Economist Enterprise survey, February-April 2026

### Build community support

Community backlash is an underestimated risk (3%). Despite growing scrutiny of data centres’ land use, energy consumption, water demand and environmental impact, only 15% of the stakeholders—tenants, owners and operators, investors, policymakers—have adopted community engagement as a resilience strategy. Early engagement with local authorities, transparent communication of economic benefits and stronger co-ordination between data centre stakeholders will be critical to maintaining public support.

### Key actions:

- 1 Establish joint planning forums between operators, utilities, local authorities, investors, tenants and communities.
- 2 Publish transparent data on projected energy, water, land-use, noise and local economic impacts.
- 3 Conduct community-impact assessments alongside site selection and expansion decisions.
- 4 Include community opposition and permitting delays in resilience and scenario-testing exercises.

### Diversify across grids, power models and jurisdictions

Geographic diversification across grids and jurisdictions is adopted by only 18% of the surveyed respondents, despite grid constraints being cited by 91%. The action is to reduce single-grid exposure by assessing sites through the combined lens of reliable power availability, transmission, clean-energy procurement and local approval risk.

A growing focus on safety aligns with trends in states like Illinois and New York toward resilient data centres that do not upend communities. Investors should prioritise projects with resilient power access, while tenants should avoid concentrating critical operations in a single facility by distributing workloads across different sites, regions or providers.<sup>26,27,28</sup>

### Key actions:

- 1 Assess sites against firm-power availability, interconnection timelines, transmission congestion, climate hazards and water exposure.
- 2 Evaluate clean onsite generation, storage and microgrids alongside utility-supplied power.
- 3 Balance established hubs with power-rich secondary markets to reduce single-grid exposure.
- 4 Test prolonged curtailment, utility failure and backup-system failure as part of capital approval and continuity planning.
- 5 Apply consistent engineering and operating standards across geographically distributed facilities.

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### Build future-ready infrastructure

Few stakeholders see technological obsolescence as an immediate risk. Yet rapid advances in AI, cooling systems and quantum computing could shorten asset lives and increase the risk of stranded assets. However, adoption of modular, retrofit-ready infrastructure (17%), resilient and resource-efficient design and construction standards (21%) and asset-life and obsolescence stress testing (23%) remains limited. Resilience will increasingly depend on infrastructure that can be upgraded as technology changes. This will require infrastructure, investment and procurement decisions that can accommodate changing power, cooling and computing requirements.<sup>29</sup>

#### Key actions:

- 1** Set shared design and engineering assumptions for future rack density, cooling, power, building structure and security needs before capital is committed.
- 2** Use asset-life stress tests to compare retrofit costs, downtime and residual value under multiple technology pathways.
- 3** Align owners, tenants, technology providers, insurers and investors on upgrade triggers and funding responsibilities.
- 4** Build modular power, cooling and data-network pathways into new and refurbished facilities.

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### Improve preparedness for compound disruptions

Resilience efforts remain focused on individual assets and operations, while adoption of compound-shock simulation (14%), geographic diversification (18%) and multi-cloud or multi-vendor redundancy (11%) remains limited. The leading risks in the US—cyber attacks, grid constraints, equipment delays, climate change and insurance withdrawal—can cascade across infrastructure, operations, finance and service continuity.

#### Key actions:

- 1** Map dependencies across power, cooling, cloud, networks, suppliers, insurers and public authorities.
- 2** Stakeholders, including tenants, operators, investors and infrastructure providers, should conduct joint exercises that combine cyber incidents with power shortages, heat stress or critical-component delays.
- 3** Define cross-functional crisis roles and escalation paths for operators, tenants, utilities and infrastructure providers and public agencies.
- 4** Use exercise findings to update maintenance and testing schedules, critical spares, contracts, recovery assumptions, staff preparedness and capital plans.

## Conclusion

US data centre stakeholders have established strong cyber, demand-management, inventory-buffer and governance foundations. However, resilience planning now needs to extend beyond individual risks to address the connections between power, technology, climate and supply-chain dependencies. Achieving this next stage of maturity will require better co-ordination across grid planning, community engagement, technology readiness and compound-shock testing as AI demand pushes capacity into new regions.

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