

Challenges for Data Centers in the AI Era



Customers Expectations

Customers continue to prefer infrastructure concentrated around major metropolitan areas

- ✓ Near-zero latency remains critical
- ✓ Service quality expectations continue to rise
- ✓ Data, businesses, and digital ecosystems remain concentrated in large cities



Energy Availability

Power resources are increasingly available farther from where demand is concentrated

- ✓ Grid capacity is constrained around major AI hubs
- ✓ Renewable energy resources are often located in remote regions
- ✓ • New power connections can require significant lead times



Operational Complexity

Distribution introduces new challenges that can erode traditional data center advantages

- ✓ More complex operations and maintenance
- ✓ Increased networking and coordination requirements
- ✓ Reduced economies of scale from large centralized campuses

The challenge is not simply to distribute data centers, but to preserve the performance, economics, and operational efficiency of centralized infrastructure while unlocking the sustainability and scalability benefits of distribution