

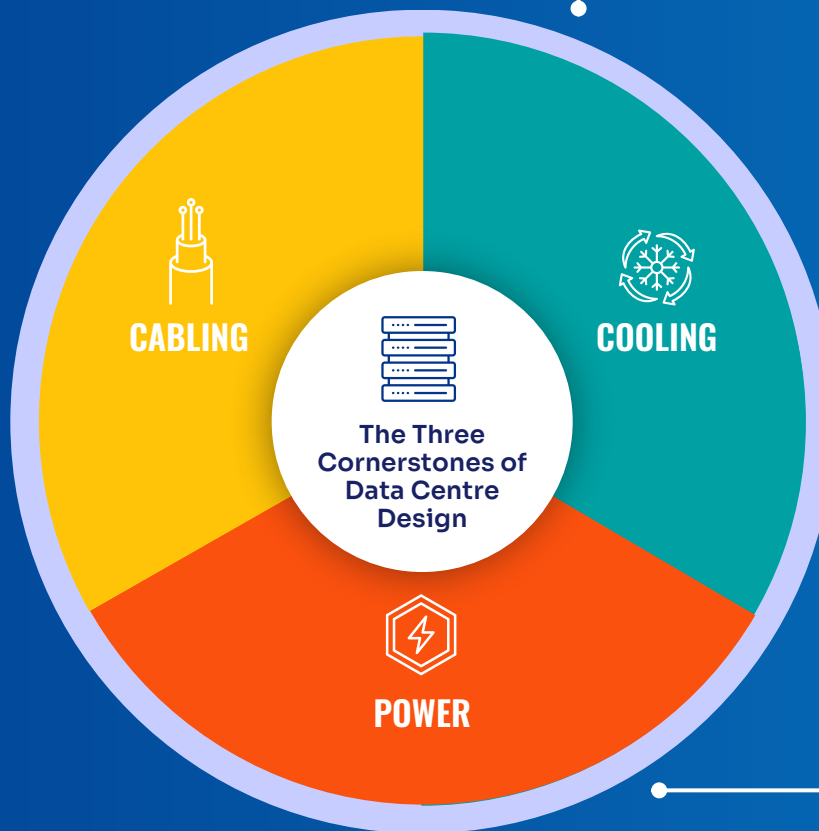
THE THREE CORNERSTONES FOR EDGE DATA CENTRES

AI is reshaping industries, but this revolution demands the right infrastructure. As demand for AI-driven services grows, organisations must rethink data centre design to support next-gen workloads. Edge computing could be key to bridging the supply gap. Yet to ensure these facilities can support the demands of the new AI age, operators must consider the three cornerstones of data centre design simultaneously: power, cooling and cabling.



CABLING

Cable congestion is a major challenge in Edge data centres, where limited space demands careful planning. High-power AI cabling generates heat, exposing poor materials and risking connectivity issues. Poor layouts slow deployments, complicate maintenance, and increase troubleshooting time.



COOLING

As next-generation hardware continues to push power consumption higher, effective thermal management is key. Facility teams deploying high-density solutions must address the heat challenge. While air cooling is more traditional and cost-effective, liquid cooling offers greater efficiency for managing high-density workloads and the intense thermal output typical of AI applications.



POWER

Edge facilities must balance efficient power delivery with decarbonisation goals. Located near populated areas, they strain local grids while needing sustainable solutions like energy integration, advanced power management, and tailored UPS systems.

To navigate this complexity, operators need trusted partners who can provide the expertise, technology and strategic guidance required to build and scale AI-ready infrastructure. By embracing holistic design principles and leveraging the right partnerships, organisations can create resilient and future-proof Edge data centres that support AI innovation for years to come.



VERTIV™

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Onnec and Vertiv have co-authored this eBook to combine their expertise in infrastructure and critical systems, and help organisations overcome the power, cooling, and cabling challenges that stand in the way of scalable, high-performance Edge data centre deployments.

