

## Case study

# Vertiv supports development of major Nigerian data centre



## Background

A leading data centre provider in Nigeria required a state-of-the-art and fully customised prefabricated modular data centre to be implemented in Lagos, the country's largest city.

This was the customer's second local facility and was planned to be interconnected with its existing site. The new facility was also designed to link with the customer's cable landing station in Nigeria, creating an important hub for subsea connectivity.

Together with additional landing points, including one in Ghana, this critical digital infrastructure forms part of a growing subsea network connecting West Africa to the global undersea cable system.

## Challenge

The customer sought a rapidly deployable data centre solution. The planned site for the new data centre was long and narrow and covered three floors, posing space constraints and necessitating a custom-built solution.

Vertiv was invited to respond to the request for proposal and was ultimately appointed to deliver the project due to its quality solutions and extensive local expertise.

Vertiv was able to deliver on these requirements with an integrated, prefabricated solution that could address not only the spacing constraints but also:

- Minimise the need for specialised on-site customisation through expert pre-engineering;
- Navigate permitting timelines with a ready-to-deploy modular approach; and
- Accelerate implementation to meet tight deadlines, even in the face of unexpected challenges.

### Company profile:

Global data centre provider

**Industry:** Data centres, colocation, and interconnection solutions

**Region:** Nigeria, Africa



## Solution

The decision to implement a Vertiv integrated modular solution was driven by two key factors: the need for rapid deployment and the limited space available on-site.

Prefabricated data centres bring significant advantages, including high-quality construction, faster time-to-market and reduced project risk, thanks to pre-engineering and offsite integration.

Upon completion, the Lagos-based data centre features:

- 1 MW IT capacity with 232 racks, designed to accommodate current demand and future growth.
- 8 kW of rack density, 230V-power distribution units (PDU), and a dual power supply for resilience.
- 2N electrical IT system topology, supporting full redundancy and uptime.
- Power rooms featuring a 2600 kW Vertiv™ Liebert® EXL S1 1200 kVA uninterruptible power supply (UPS) system, with valve regulated lead acid (VRLA) batteries providing five minutes end-of-life (EOL) backup at 1200 kW per side.
- High-efficiency cooling through direct expansion (DX) perimeter cooling with Vertiv™ Liebert® PDX units and raised floor design, with N+1 redundancy across all rooms.
- Reliable backup power, supported by 2650 kVA generators supplied by a third party.

## Results

By delivering a customised integrated infrastructure solution aligned with the customer's design requirements and completing the project within six months, the Vertiv team allowed the customer to expand and enhance its renowned data centre services.

As the first major prefabricated data centre in Nigeria directly leveraging a cable landing station, the project establishes a strong foundation for regional connectivity. By integrating with subsea networks across Nigeria and Ghana, the facility enhances low-latency access and positions West Africa as a more prominent participant in global digital traffic flows.

The client has indicated that this project is just one phase of many to support growing digitalisation in Africa and has since launched a third local facility.



“One of the key benefits of this project is the ability to deliver a high-quality, fully operational facility within a short build and commissioning period. The positive feedback received from stakeholders demonstrates the value of a carefully designed and executed solution. By combining global expertise with strong local support, Vertiv has been able to help strengthen Nigeria's critical digital infrastructure and position our customer to meet growing market demands. Our team's flexibility and attention to detail were critical to completing the project on time and to specification.”

— **Gary Chomse**

*regional director for Central and Southern Africa at Vertiv*