



Case study

TBC Bank deploys high-density modular data center infrastructure with Vertiv in Tbilisi



Background

TBC Bank is the leading financial institution in Georgia, serving millions of customers across retail, SME (Small and Medium-sized Enterprise), and corporate segments. With a strong digital-first strategy, TBC is widely recognized as one of the most innovative and technologically advanced banks in the region.

With a long-term focus on energy-efficiency, reliability, and customer trust, TBC offers a comprehensive portfolio of banking, payments, business solutions, and lifestyle services, supporting customers at every stage of their financial journey.

TBC Bank has also achieved significant success in Uzbekistan, where it became the first bank to launch a fully digital banking service in the country, setting new standards for innovation in the region.

Company profile:

TBC Bank is a leading universal financial institution in Georgia, serving millions of customers across retail, business, and corporate segments

Industry: Banking, Finance

Region: Georgia, Central Asia

Challenge

TBC Bank required the rapid deployment of a scalable and reliable data center in Tbilisi sized for IT load up to 240 kW, with the flexibility to integrate new technologies over time without the extended timelines and budget risks associated with conventional construction.

The bank sought a faster route to market that could operate reliably in challenging environmental conditions, including heat and dust. In addition, the solution needed to be scalable, cost-efficient, and designed from the outset with built-in redundancy and advanced cooling capabilities to maintain high availability and long-term resilience.





Solution

Vertiv addressed these requirements by deploying the **Vertiv™ SmartMod™ Combo** prefabricated, modular data center solution which combines **Vertiv™ SmartMod™ Max** together with a **Vertiv™ Power Module**, as TBC Bank's initial requirement was to separate the UPS systems from the white space to enhance both reliability and operational safety. The solution provided fully integrated power and cooling infrastructure with rapid deployment capabilities.

The prefabricated modules were manufactured in Europe under controlled factory conditions and shipped to Tbilisi, reducing dependence on on-site construction and mitigating supply chain delays. Vertiv™ SmartMod™ Max modules were deployed, enabling rapid, streamlined installation, delivering up to 48 racks and 240 kW of IT load capacity.

The overall infrastructure solution consists of three prefabricated modules covering a total area of 204 square meters, and includes the following components:

- **Vertiv™ Power Module** in a 2N configuration, supporting IT load up to 240 kW.
- **Vertiv™ Liebert® EXM2 Uninterruptible Power Supply (UPS)** systems rated at 250 kVA, backed by valve-regulated lead-acid (VRLA) batteries providing 15 minutes of runtime.
- **Vertiv™ Liebert® CRV In Row Cooling Systems** with N+1 redundancy per row.
- **Vertiv™ Liebert® PDX Compact Direct Expansion Cooling System** dedicated to the modular power room.
- **Vertiv™ PowerIT Rack Power Distribution Units (rPDUs)** installed in each rack, supporting power densities of up to 7 kW per rack.
- **Vertiv™ VR Rack** enclosures.
- Access control systems for physical security.
- Fire detection, alarm, and suppression systems within each module.



“Working with Vertiv on the TBC-TBL-01 data center has been an excellent experience. Their technical expertise, professionalism, and strong local partner network played a key role in delivering this complex project with precision and confidence. This collaboration proved that when the right teams come together with shared commitment, world-class results can be achieved.”

— **Yuri Semenikhin,**
Deputy CIO, TBC Bank

Results

The Tier III data center was built and delivered in 36 weeks, with zero-downtime maintenance capability, half the time of traditional construction. This rapid deployment increased data center capacity availability, strengthened business continuity, and enabled the bank to bring new IT services online faster, accelerating return on investment.

The prefabricated design supports consistent quality, performance, and reliability from day one. In addition, the scalable pay-as-you-grow model provides long-term flexibility, allowing capacity to expand in line with business demand without the need for major upfront capital investment.

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