



## Critical Infrastructure Modernization for a Global Banking Technology Provider

### Overview

A global banking technology provider, recognized for enabling financial institutions to modernize without replacing legacy systems, was experiencing rapid growth in its development and test environments. Operating from its 15-storey headquarters in a major technology hub, the company required a reliable and scalable data center to support its expansion plans.

To achieve this, the provider engaged Black Box to design and build a high-performance infrastructure that could meet immediate needs while supporting long-term scalability and compliance with industry standards.

### Challenges

The project involved several critical challenges. The data center had to be designed for high availability and scalability within a multi-storey tower. The solution required seamless integration of IT, power, cooling, and building management systems under one framework. In addition, the infrastructure needed to meet stringent banking compliance standards, ensure redundancy to minimize downtime risks, and remain flexible enough to accommodate future growth.

### AT A GLANCE

#### CHALLENGES

- High availability and redundancy in a multi-storey facility
- Integration of IT, electrical, cooling, and IBMS systems
- Compliance with banking industry standards
- Flexible design for future growth

#### SOLUTIONS

- Structured cabling with Cat6A and MPIO Fiber supported by intelligent monitoring
- Containment zone with 14 racks, expandable to 24
- Redundant in-row cooling, power distribution, and HVAC systems
- Fire suppression with NOVEC 1230 and early detection with VESDA
- Centralized IBMS integrating security and environmental controls

#### RESULTS

- Scalable and future-ready infrastructure
- Uninterrupted operations ensured through redundancy
- Simplified monitoring and faster resolution of issues
- Unified control over security and environment
- Compliance with banking-grade standards

#### BENEFITS

- Strong foundation to accelerate innovation in banking technology
- Reduced operational risk with real-time monitoring and redundancy
- Simplified management through unified systems
- Future-proofed infrastructure capable of scaling with business needs
- Enhanced client confidence with industry-compliant infrastructure



## Solutions

Black Box approached the project with a comprehensive design that addressed performance, resilience, and future scalability. The foundation was laid with structured cabling on Cat6A and MPIO Fiber, paired with intelligent monitoring software to provide real-time visibility across the network.

Within the containment zone, 14 high-capacity racks were installed, with provisions to scale up to 24 as business demands increased. To maintain operational continuity, in-row Dx-based cooling units were configured in a 3+1 redundant setup, ensuring that performance would not be compromised even during equipment maintenance or unexpected failures. Fire safety was strengthened with NOVEC 1230 gas-based suppression systems, complemented by VESDA technology for early smoke detection.

On the power side, reliability was secured with an isolation transformer, busbar trunking, and redundant distribution units designed to handle critical loads without interruption. HVAC systems were also deployed across the data center and server rooms, ensuring optimal environmental conditions for uninterrupted operation.

Equally important was the integration of a centralized Building Management System (IBMS). This brought together CCTV surveillance, access control, public address, rodent management, and water leak detection into one unified framework, giving the client a single, cohesive platform to monitor and control all critical systems.

## Why Black Box?

The banking technology provider chose Black Box for our proven expertise in designing and delivering complex, mission-critical data center environments. With experience in integrating IT, electrical, cooling, and management systems into unified frameworks, Black Box offered both technical rigor and future-focused planning. Our ability to deliver scalable, compliant, and fully redundant infrastructures, backed by strong project management and skilled execution, made us the ideal partner for a project of this scale and importance.

## Results

The completed data center provided the client with a resilient, scalable, and compliant infrastructure. Redundant systems ensured uninterrupted operations, while intelligent monitoring enabled faster detection and resolution of issues. Security and environmental systems were consolidated under a single framework, simplifying management and improving reliability.

The new infrastructure not only addressed current requirements but also established a strong foundation for future growth, enabling the banking technology provider to continue delivering innovative solutions to its clients with confidence.

Black Box is a global leader in digital infrastructure solutions, delivering network and system integration, managed services, and technology products to Fortune 100 and top global enterprises. With a presence across the United States, Europe, India, Asia Pacific, the Middle East, and Latin America, Black Box serves businesses across financial services, technology, healthcare, retail, public services, and manufacturing.