

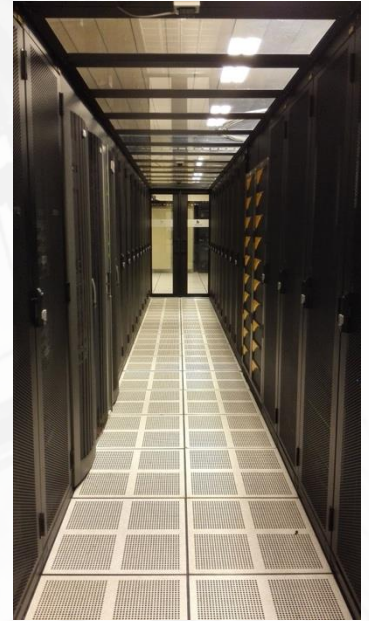
From Explosion Crisis to Intelligent Operations: The Comprehensive Revitalization of a Bank Data Center

As a key institution in a major international financial hub, the stability, security, and efficiency of the bank's data centers and server rooms are vital to its business continuity. Its core server rooms, located in the business district of Hong Kong, handle massive volumes of financial transactions and data processing, placing extremely high demands on operational management.

Critical Challenges Faced

Prior to project initiation, the bank's infrastructure team faced multiple, complex, and urgent challenges that directly threatened the stability of financial services and the security of core assets:

- 1. A Safety Wake-Up Call:** A failure to effectively monitor gas buildup in the battery room had previously led to a **battery explosion**, leaving visible damage. This serious incident exposed the major blind spots of traditional manual inspections and fragmented monitoring systems in preventing critical safety risks.
- 2. Ageing Infrastructure Risks:** Due to the building's age, server rooms suffered from **severe water leakage** through walls. In a data center environment where humidity control is paramount, water ingress poses an extreme risk of equipment short-circuits, damage, and even fire, creating an ongoing threat to operational safety.
- 3. Energy Saving & Cost Pressures:** As a corporate citizen, the bank has a social responsibility for energy conservation. Furthermore, Hong Kong's high electricity costs make data center energy consumption a significant operational expense. The customer urgently needed precise energy data and analytical tools to optimize efficiency, reduce PUE, and achieve both economic and environmental benefits.
- 4. Space & Asset Management Dilemma:** With premium space costs in Hong Kong, every rack unit (U) is invaluable. The lack of clear, real-time visibility into U-space utilization and physical asset distribution led to suboptimal resource use and inefficient operations and asset auditing.



Omara Integrated Solution

To address the bank's critical needs, Omara rapidly deployed its integrated "Smart Data Centre System v3.0," delivering a complete solution in just 30 days.

The implementation featured:

- 1. A Comprehensive Sensor Network:** This included explosive gas sensors for battery room safety; smoke, infrared, and water leak detectors; smart meters for full power chain visibility; integration with UPS and precision air conditioners; and over 150 Intelligent PDUs for per-outlet device-level monitoring.
- 2. A Centralized Intelligent Platform:** Data from hundreds of points was aggregated by Omara hosts and fed into a unified management platform. This system provides an intuitive visual interface with 3D floor plans and dashboards.
- 3. Advanced Analytics & Management:** Beyond real-time alerts, the platform delivers deep energy consumption analysis and streamlined asset management, turning data into actionable operational intelligence.

Why Omara Was Chosen

- **Holistic Risk Mitigation:** Omara presented a single, integrated platform that addressed safety, environmental, power, and efficiency concerns simultaneously, eliminating point solution silos.
- **Proven Speed and Reliability:** The ability to deliver a fully operational system across multiple, geographically dispersed facilities within one month was a critical deciding factor, proving Omara's project execution capabilities.
- **Actionable Intelligence, Not Just Data:** Omara's commitment to providing advanced analytics—transforming raw data into optimization insights for cooling and power—aligned perfectly with the bank's goals for continuous improvement and cost avoidance.



Project Outcomes & Value Realized

Safety & Risk Mitigation: Critical safety gaps were closed. Continuous explosive gas monitoring prevents battery room incidents, while instant leak detection minimizes water damage risk. A 24/7 automated monitoring shield has dramatically reduced operational risk.

Efficiency & Cost Savings: The Energy Analytics Module drives substantial gains. Managers now optimize cooling by analyzing set-point impacts, eliminate "phantom" loads using per-outlet PDU data, and track PUE to model strategies that cut energy waste and costs.

Operational Excellence: A single pane of glass provides unified oversight. The interactive 3D digital twin—linked to live PDU data—revolutionizes asset tracking and space management. Historical power usage data now enables accurate, data-driven capacity planning and sustainability reporting.

Conclusion

This Bank project is a prime example of the successful application of Omara Smart Data Center Solution in critical financial infrastructure. By combining IoT sensing technology, big data analytics, and deep industry insight, we successfully transformed the customer's data centers from a liability fraught with safety hazards into a secure, efficient, and modern intelligent asset, providing a solid foundation for the bank's business stability and sustainable growth.