Ekko Sense | AI

Global Bank Case Study

EkkoSense helps leading global bank reduce risk, increase operational insight and cut energy consumption across its core North America, EMEA and APAC data center sites

866 kW

Combined cooling energy saving

3,111 CO_2

Total carbon savings tonnes/year

c.$500,000

OPEX savings through reduced energy usage

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The EkkoSense® Effect

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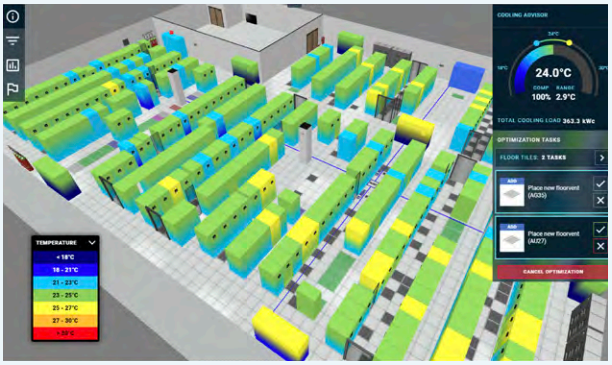
The company has a global footprint and serves as a trusted partner to its clients by responsibly providing financial services. Its core activities are safeguarding assets, lending money, making payments and accessing the capital markets on behalf of its clients. The bank has a long history of helping its clients meet the world's toughest challenges.

Commitment to sustainable operations

Working on Environmental, Social and Governance (ESG) issues for more than 20 years, the bank has demonstrated ESG progress, including participating in the creation and adoption of ESG-related principles and standards.

An emphasis on Sustainable Operations focuses on efforts to reduce the environmental footprint of its facilities and strengthen its sustainability culture. It also acknowledges that meeting the need the need for energy access while also accelerating the transition to a low-carbon economy is no easy feat. As a business, the bank is committed to minimizing the impact of its global operations, and optimizing the performance of the bank's Critical Facilities is an important part of the bank's broader sustainability activities.



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Increasing operational insight for the bank's data centers

According to the bank's Global Head of Critical Facilities: "we're constantly working to optimize the performance of our multiple sites, and investigating new ways to improve the efficiency of our operations. However, to really make a difference we knew we needed much greater levels of operational insight across our facilities."

"We realized that standard BMS reporting wouldn't give us the answers that we needed. Instead, we wanted an optimization solution that would give us definitive visibility into any thermal risks, how resilient our facilities were, and what cooling capacity we had in place to cope with inevitable workload increases. Then we heard about EkkoSense and its AI-enabled, software-driven approach to data center performance optimization."

Unlocking data center visibility with EkkoSense

Unlike traditional, IT-led DCIM solutions, EkkoSense offers a distinctive, light-touch approach to data center optimization. The company's EkkoSoft® Critical solution brings together a mix of patented technologies and capabilities – including an innovative SaaS platform, low-cost Internet of Things (IoT) sensors, machine learning, gaming-class 3D visualization and Digital Twin capabilities, AI analytics and embedded advisory support – all backed by EkkoSense's PhD-level thermal and engineering skills.

New levels of granular real-time sensing support temperature and humidity monitoring, contributing directly to the effectiveness of the machine learning algorithms that support continuous improvements in optimization. The software also enables data center teams to visualize complex data quickly and easily; while the application of AI analytics provides the actionable operational insights that help them to remove thermal and power risk, optimize cooling capacity, and minimize energy waste.

EkkoSoft Critical can be deployed in data centers of all sizes, from remote edge facilities through to the largest multi-room facilities and extended estates. Its ability to remove thermal risk, lower energy consumption, reduce CO_2 emissions, and free stranded M&E capacity enables organizations to secure tangible data center carbon savings extremely quickly – often in weeks.

"What we were looking for initially was a way to operate our core US data centers with reduced risk, increased operational insight, and reduced energy consumption. The EkkoSense platform's ability to capture and visualize the complex thermal performance of thousands of racks across multiple rooms and sites looked like it would give us the real-time operational insight we needed to help run our facilities more efficiently," added the bank's Global Head of Critical Facilities.

Optimizing data center performance for the bank

Once the decision was taken to deploy the EkkoSense performance optimization solution across the bank's North American data centers, EkkoSense engaged with the company's facility services provider to get the project under way.

EkkoSense's combination of wireless sensors, web-based 3D visualizations with analytics, and simple installation make for light-touch deployments. In contrast to DCIM solutions that can take years to implement, EkkoSense's software-driven thermal optimization approach takes just weeks to deploy – giving data center teams rapid access to insights, and accelerated time to cooling energy and carbon savings.

EkkoSense began the installation and commissioning of its low-cost wireless sensors and integration hardware in August, with the goal of deploying the EkkoSense SaaS platform across the bank's core US data centers before Thanksgiving. EkkoSensor temperature/humidity sensors were installed on each live IT rack in the computer rooms. EkkoAir cooling duty sensors were also deployed into each CRAH. The team then installed multiple EkkoHub receivers at height to receive sensor data and transmit this to an EkkoLink site data aggregation device for secure transmission to the EkkoSoft Critical SaaS software.

Before beginning the optimization process, EkkoSense's Data Center Optimization team conducted a comprehensive physical survey across the core bank sites, helping them to come up with a realistic estimation for potential energy savings from the process. During the benchmarking process any potential hidden risks were identified and shared with the bank's facility services partner.

Once hardware installation and benchmarking were completed. EkkoSense began the initial optimization with the process at each of the bank's core sites taking under two weeks each. Final reports were then produced, and details of energy savings submitted. In total, the operational phase of the project for each site from installation through to final reports was just 11 weeks!

Quantifiable cooling efficiency and carbon savings for the bank

"Our key drivers for engaging EkkoSense to optimize performance at our major North American data center sites were to reduce risk, cut energy consumption, and increase our operational insight," said the bank's Global Head of Critical Facilities. "We also wanted to accelerate the project so that we could secure any benefits before our sites went into change freeze before our traditional busy period through Thanksgiving and beyond.

"I'm pleased to say that we were collectively able to deliver against all those objectives, ensuring increased rack performance within ASHRAE TC9.9 compliance bands, securing quantifiable energy savings, and also uncovering potential hidden risks that simply weren't visible before this EkkoSense optimization process," he added.

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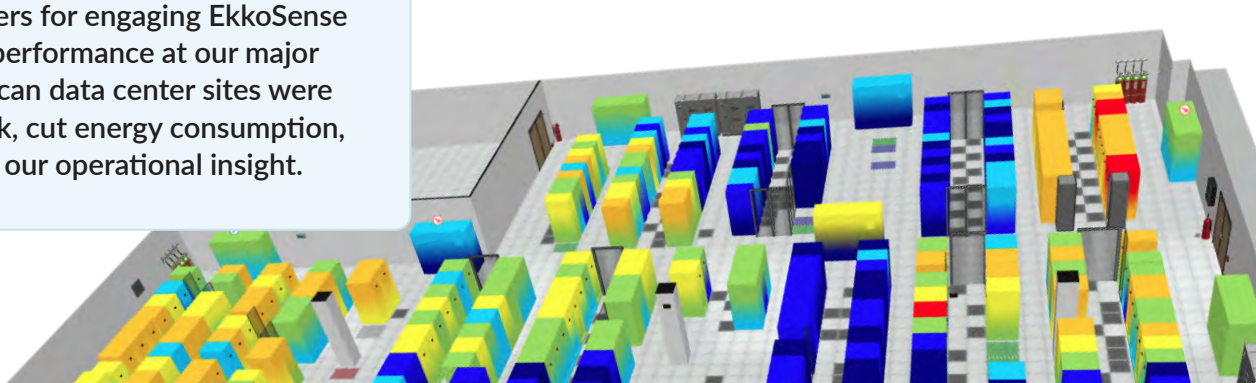


During the process the EkkoSense team optimized computer rooms at four of the bank's locations to reduce risk, balance airflow, modify the CRAH strategy to reduce cooling energy consumption through rack inlet temperature analysis, fan speed analysis and temperature setpoint modifications, and also resilience tested the optimized facilities. Full site reports were also produced on the energy saved, risks discovered, changes made to site cooling, and also recommendations for further optimization.

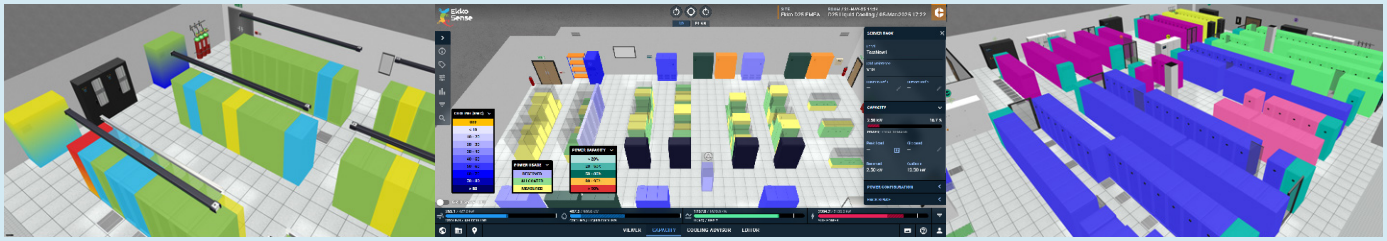
With EkkoSoft Critical software fully deployed, the optimization project clearly delivered against the bank's initial objectives and has succeeded in equipping the bank team with a powerful monitoring platform for all its live IT racks and associated CRAHs. Following the initial project success in North America, the bank then expanded its EkkoSense deployment to include key EMEA and Asia/Pacific data center sites. Performance improvements for the whole project to date include:

- Total cooling energy savings of 866 kW for the bank's core data center sites, representing a 10% data center cooling energy saving in just ten weeks
- Initial carbon savings of 3,111 tonnes per year - despite the fact that the bank's IT loads actually increased during the optimization project
- OPEX savings of c.$500,000 per year achieved through reduced energy usage
- Operational risk reduced through confirming IT racks as performing within ASHRAE TC9.9 compliance bands
- Rapid time-to-benefits, with EkkoSense's light-touch model and rapid deployment helping the bank accelerate its time to benefit

Next steps

EkkoSense was able to identify a number of potential risk areas that were illustrative of the kind of issues that emerge across all sites over time. These were previously hidden from view and were only identified thanks to EkkoSoft Critical's ability to provide comprehensive, real-time visibility across the end-to-end critical facilities estate. As part of the process, these have all been communicated to the bank's facility services partner.

EkkoSense is also supporting the bank's team with ongoing support through access to its online knowledge base and support desk. To ensure continued optimization, EkkoSense has also recommended a further optimization cycle following the completion of identified fixes.



EkkoSense Deliverables

- EkkoSoft Critical AI-enabled SaaS 3D visualization and analytics software
- Cooling Advisor embedded advisory tool
- Performance Optimization Managed Service
- EkkoSensor wireless sensors
- EkkoAir wireless cooling duty sensors
- EkkoLink site data aggregation device
- EkkoHub wireless data receivers

Benefits Achieved

- Rapid thermal optimization of the bank's core North American data center sites
- Identified exactly where specific cooling optimization actions were needed
- Helped the bank's facility services partner to uncover areas of thermal risk that weren't being picked up by BMS systems
- Provided the bank's team with full visibility of real-time risk, power, and capacity performance across core North American sites

ROI

- Initial cooling energy savings of 866 kW across all the bank's core sites
- Secured a 10% data center cooling energy saving in just ten weeks
- Significant CO_2 reduction of 3,111 tonnes per year, even with additional IT loads introduced during the project

Bring the power of EkkoSense AI to your critical facilities

Ekko Sense | AI

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