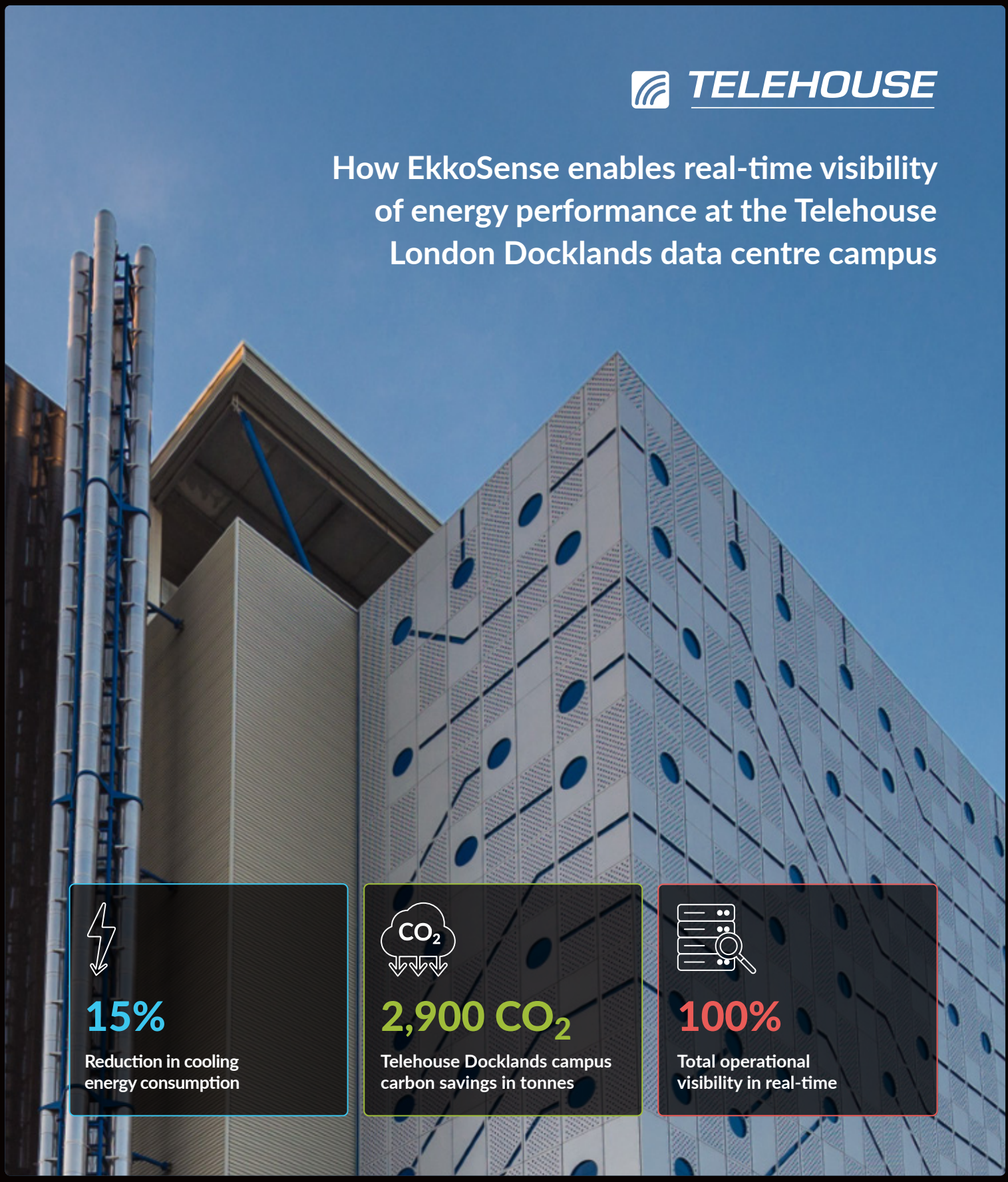
Ekko Sense | AI

CASE STUDY



TELEHOUSE

How EkkoSense enables real-time visibility of energy performance at the Telehouse London Docklands data centre campus

15%
Reduction in cooling energy consumption

2,900 CO_2
Telehouse Docklands campus carbon savings in tonnes

100%
Total operational visibility in real-time

Telehouse London Docklands Estate and EkkoSense AI

Using EkkoSense's award-winning EkkoSoft Critical AI-enabled monitoring, visualisation and analytics software, Telehouse gets immediate visibility of the critical data required to optimise performance at their data centre campus.

The EkkoSense AI Effect...

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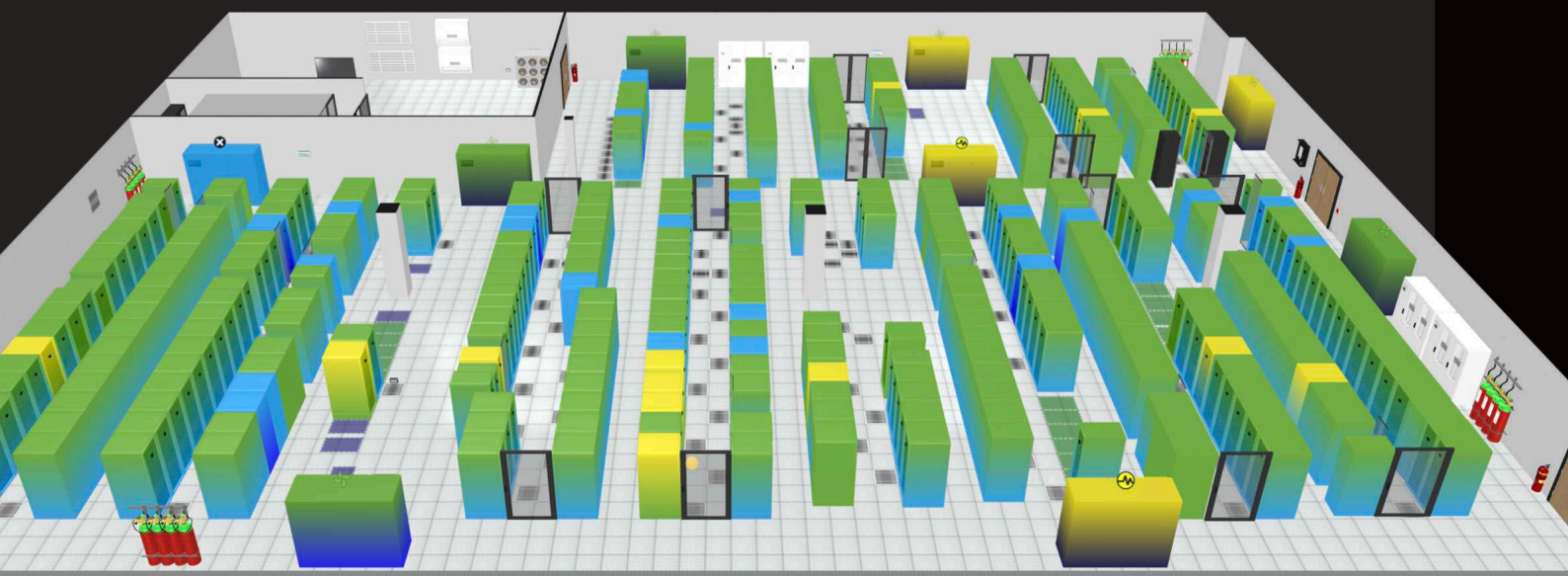
With data centres evolving faster than ever before, there's never been a greater need for organisations to know exactly what's going on across their estates in real-time. Many data centre operations teams simply don't have access to this kind of information. However, Telehouse is working with data centre management software specialist EkkoSense to bring all this together.

Using EkkoSense's award-winning EkkoSoft Critical AI-enabled monitoring, visualisation and analytics software, Telehouse can now get straight to the critical power, capacity and thermal data they need to run their data centre estates more effectively. And it's already unlocking benefits in terms of optimised performance and carbon reduction, with EkkoSense contributing to around 3,000 cumulative CO_2 savings across its London Docklands data centres from April 2022 to September 2025.



Leading colocation data centre provider

Telehouse is a leading colocation data centre provider in London, with the most established, carrier-neutral ecosystem on the market. Telehouse operates secure and resilient data centres in London Docklands, providing the digital infrastructure foundations to enable the tenants' current and future connectivity needs.

Owned by KDDI, a Japanese Fortune 500 company and one of the top 10 telecommunications companies in the world, Telehouse has over 3,000 customers worldwide to which it upholds a 99.999% uptime service level agreement. Drawing on more than 35 years of expertise, Telehouse operates Europe's most connected campus – strategically located to provide access to a rich ecosystem of data centres underpinned by exceptional customer service, technical expertise and sustainable best practice.

The Telehouse London Docklands campus is home to Europe's most carrier-dense data centre ecosystem, including leading internet exchanges, cloud service providers, ISPs, ASPs and much more. Telehouse North opened in 1990 and was the first purpose-built colocation data centre in Europe. Since then, the London Docklands campus has expanded to include Telehouse West, East, North Two and South, and Telehouse has recently broken ground on its new £275m Telehouse West Two data centre that will be purpose-built to support the rapid adoption of emerging technologies such as AI.

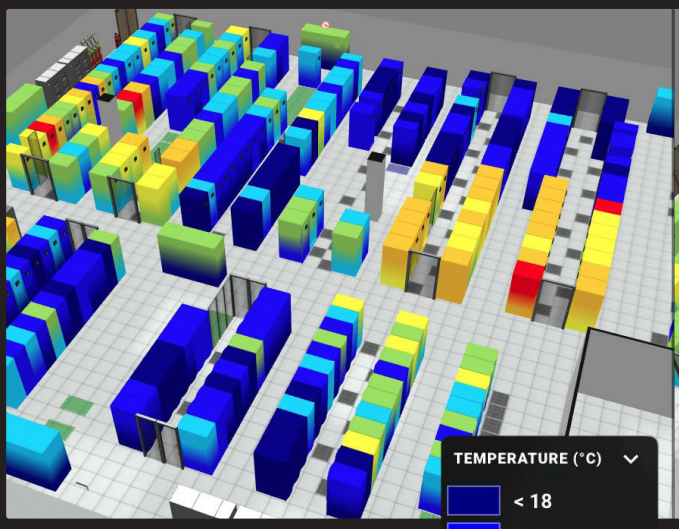
Placing sustainability at the heart of the Telehouse business

Telehouse recognises that its data centres are significant consumers of energy, and the company is committed to environmental sustainability. Specific environmental goals include improving its PUE (Power Usage Effectiveness) and WUE (Water Usage Effectiveness) levels.

Telehouse has focused on three key areas - Energy Efficiency, Agreements & Standards, and Innovative Technologies. In addition to powering its operations with 100% renewable energy backed by REGO certificates, Telehouse has also replaced UPS & cooling units to provide continued, resilient service with a focus on efficiency & sustainability. A key area of focus has been the deployment of EkkoSense's next generation AI-powered data centre monitoring and optimisation software to help achieve a significant reduction in CO_2 and cooling energy usage.

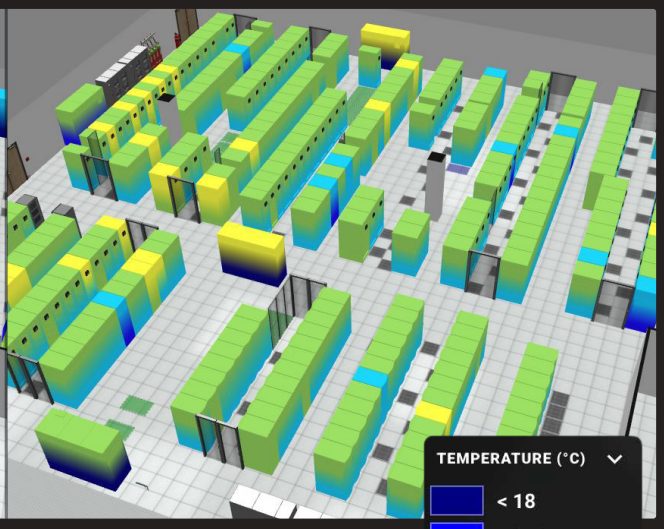
"With EkkoSoft Critical now deployed across five of our Docklands sites, our operations teams now benefit from true real-time visibility into our cooling and capacity performance."

Before EkkoSense optimisation



Comprehensive thermal data capture and monitoring gives full visibility and uncovers risk, predicts failures and provides opportunities for improvement.

After EkkoSense optimisation



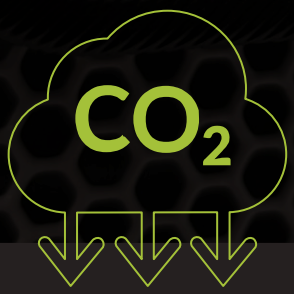
AI powered EkkoSoft Critical with Machine Learning allows operators to quickly and easily fine tune the data center to ensure maximum efficiency.

Increasing operational visibility across the Telehouse Europe London Docklands campus

EkkoSense's powerful EkkoSoft Critical machine learning and AI-powered software works by monitoring, visualising, and analysing the cooling, power and capacity performance of data centre facilities.

It analyses thousands of temperature, cooling and power points across sites in real-time to identify exactly where levels of performance can be fine-tuned. It also dramatically increases the level of insightful data available to the Telehouse data centre operations and customer service teams to provide new insights and important aspects for service differentiation.

"At Telehouse we constantly strive to ensure best practice data centre operations, and we find that the granular insights we get from EkkoSoft Critical help us to gain a much clearer picture of what's actually going on across our campus," explained Mark Pestridge, Telehouse's Executive Vice President & General Manager. "With EkkoSoft Critical now deployed across five of our Docklands sites, our operations teams now benefit from true real-time visibility into our cooling and capacity performance – giving them the critical insights they need to make informed decisions when it comes to optimising our data centre performance."



EkkoSense has contributed to cumulative savings of 2,900 tonnes of CO_2 emissions for Telehouse

EkkoSense's 3D digital visualisations allow cooling and thermal performance information to be monitored and interpreted quickly. This AI-driven visualisation helps in terms of highlighting potential anomalies and displaying suggested airflow and cooling improvements.

"At Telehouse we're determined to perform to the highest sustainability standards, so we're always focused on ways that we can use energy as efficiently as possible," added Mark. "Having EkkoSoft Critical in place is an important part of this, and with our first deployment of the EkkoSense software in Telehouse North we were able to move quickly and achieve a reduction in our cooling energy use."

Following deployments in the Telehouse North, West, East and North Two data centres, EkkoSoft Critical's optimisation recommendations have resulted in cooling energy savings and significant carbon emission reductions. "Working with EkkoSense we have already cumulatively secured 2,900 tonnes of CO_2 savings across our Telehouse Docklands campus - contributing directly to our broader corporate sustainability goals," said Mark. "We also extended our EkkoSense deployment to the Telehouse South building and will be broadening our EkkoSoft Critical usage as we progress our latest Telehouse West Two expansion."

Since first deploying the EkkoSense software, Telehouse has continued to optimise its cooling systems performance to right size for IT load and ensure continued CO_2 emissions reductions.

According to Mark: "we've currently monitoring across five buildings, with EkkoSense temperature sensors capturing data from some 7,500 racks and 500-plus air conditioning units. It's a lot of connected devices, producing and reporting critical data in real-time. We've only just started in terms of how can put this kind of data to work for our customers."

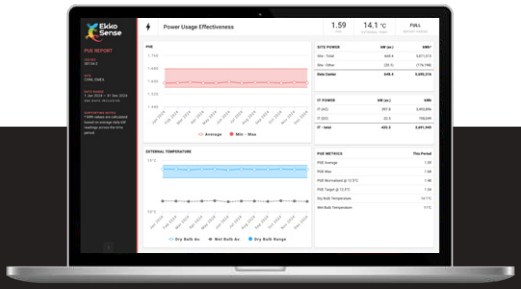
Helping Telehouse to differentiate in terms of Service Delivery

Acknowledging the benefits already secured through optimising cooling systems performance, the Telehouse team recognises that there are further opportunities to unlock significantly more opportunity with additional EkkoSoft Critical functionality. "We're determined to set the standard when it comes to data centre operations, achieving the best PUE and WUE scores we can, and providing our customers with even greater insight into how Telehouse is performing," explained Mark.

"That's why we're excited to be extending our EkkoSoft Critical deployment across a range of areas, moving beyond just cooling to embrace key areas such as power and capacity," he added. "We want EkkoSoft Critical to ingest as much data as we can feed it, with a view to extending beyond our white space to key grey space functionality such as chiller optimisation. For Telehouse it's all about opening up complete visibility across our London Docklands campus, and taking this real granular level detail and translating that into the visualisations and analysis that will show customers exactly what's going on with their systems."

Taking data centre optimisation to the next level with EkkoSense

A key benefit of working with EkkoSense for the Telehouse operations team has been how the EkkoSoft Critical AI-powered platform not only improves visibility into cooling and capacity performance but also helps reduce much of the administrative burden for already busy team members. Whether it's the introduction of new consolidated estate views that enable operations teams to navigate quickly from estate to site to floor to room, or automated ESG reporting that will allow the team to deliver regular ESG and sustainability reports to thousands of customers, EkkoSense continues to add value to its data centre performance optimisation proposition.



Unlocking automated reporting benefits

"EkkoSoft Critical helps put us on the front foot with our clients now, because we are actively telling them, this is what you've done in your space, or this is what we have done to mitigate any issues they might have had.

And likewise, we can see when they're moving equipment around or are deploying more equipment – potentially leading to opportunities in terms of increased space or more cross-connects," added Mark.

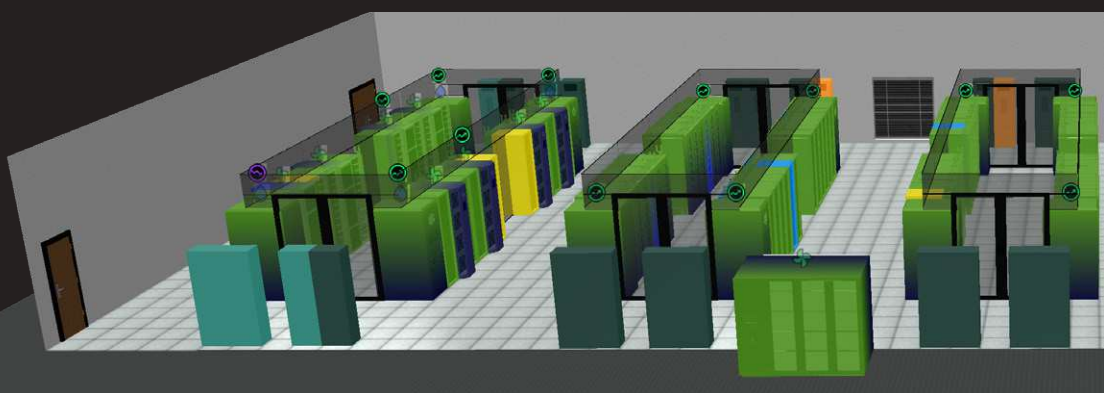
EkkoSense also offers a powerful embedded ESG reporting capability that automates reporting for the EU's CSRD and the EC's EED directives.

In addition to PUE, key ISO/IEC 30134 metrics supported include CUE (carbon usage), CER (cooling efficiency), and WUE (water usage).

Recognising key Liquid Cooling engineering questions

EkkoSense recognises that key engineering questions need answering before simply deploying liquid cooling,

This includes establishing the exact blend of air and liquid cooling technologies needed, and dealing with the complexity of managing the operation of a hybrid air cooling and liquid cooling approach within the same room. This increases the need for absolute real-time white space visibility.



Making the most of continuous innovation

Adding power data into Telehouse's EkkoSoft Critical deployment opens new opportunities for the Telehouse Customer Service team – for example, by immediately highlighting where customers are over-using their allocation. This can then trigger conversations: do you need more space? Do you need more power? Do we need to amend your contract so that you won't be paying excess charges?

"With additional functionality such as integrating power data, EkkoSense is helping us to understand our customers and get even closer – it's all about making them more efficient and helping them deliver," continued Mark. "This kind of continuous innovation is also a core part of the Telehouse engineering approach, as we work to make our operations as efficient as possible. That's why the EkkoSense partnership is important to Telehouse, as we work together to unlock even more benefits from our innovative technologies."

Putting EkkoSense AI-enabled functionality to work

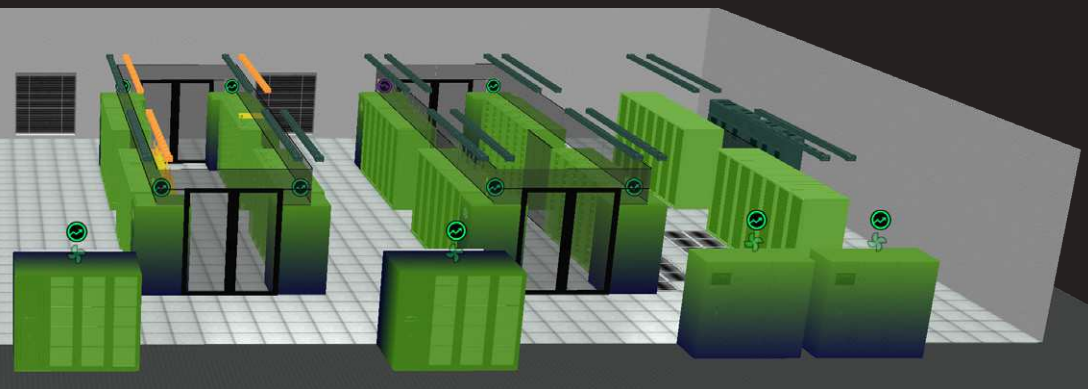
Unrivalled levels of sensing bring new levels of accuracy and granularity to Telehouse's data centre operations, with the EkkoSoft Critical 3D visualisation and analytics platform continuously providing advice and insight to the operations team.

In a dynamic colocation environment, the site IT load changes regularly. And EkkoSense's Cooling Advisor AI tool means that the site team can always take advantage of optimised cooling delivery. Cooling Advisor continuously learns about a specific cooling unit's operation and provides immediate advice on performance enhancements such as cooling unit changes, floor grill layouts and liquid cooling efficiency.

Proactive maintenance and downtime risk reduction

Another key EkkoSense innovation is Cooling Anomaly Detection that focuses in on any drift from a control set-point and then uses the data that EkkoSoft Critical collects from M&E equipment performance such as CRACs to alert any abnormal changes in performance.

Rather than wait for BMS monitoring to provide an alarm, Cooling Anomaly Detection will pick up a potential issue and give an operations team time to resolve an issue before it becomes critical. It's an important technology, that will help drive a move from traditional reactive monitoring to a more proactive maintenance approach.



Bring the power of EkkoSense AI to your critical facilities

Request your free demonstration and experience the future of data centre optimisation, today.

Watch our video

Book a demo

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