

DATA COOLING SYSTEM UPGRADE

ENSURING RELIABLE DATA CENTRE COOLING WITH COMPUTATIONAL FLUID DYNAMICS

A leading global provider of IT infrastructure and services, was planning to upgrade the cooling system in one of its data centres. They wanted to ensure that the new system would be able to meet its needs, even in the most challenging conditions.

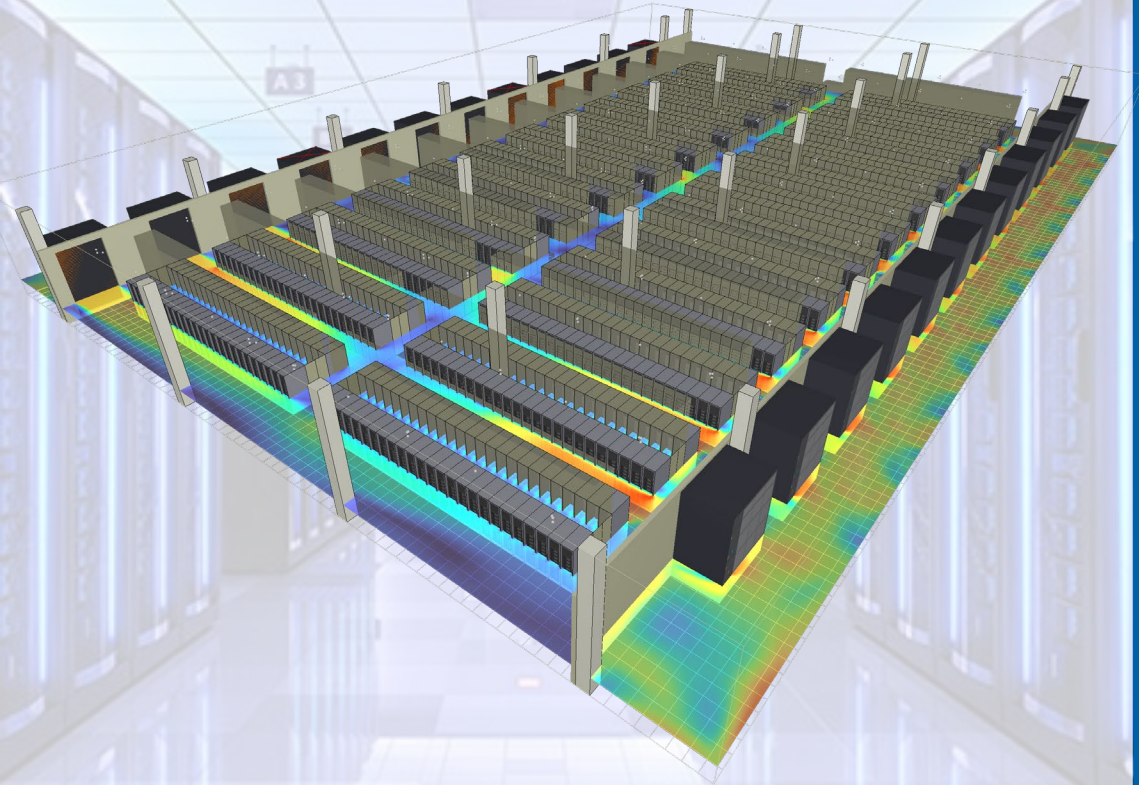
To achieve this, they engaged with Keysource, a leading provider of data centre design and consulting services. Keysource used **computational fluid dynamics (CFD)** analysis to model the new cooling system and predict its performance under a variety of scenarios.

CFD analysis is a computer simulation technique that is used to model and analyse fluid flows. It is a powerful tool that can be used to optimise the design of complex systems, such as data centre cooling systems.

Keysource used CFD analysis to simulate the new cooling system under the following conditions:

- Full IT load
- Normal operation
- Failure conditions
- Different wind conditions

The CFD analysis results showed that the new cooling system would meet their requirements in all the simulated scenarios. Meaning that the new system would be able to operate efficiently and reliably, even in the most challenging conditions.



SERVICES DELIVERED & TYPE OF WORK

The CFD analysis results showed that the new cooling design would be:

- Able to maintain a safe and comfortable temperature for the IT equipment, even at full IT load.
- Resilient to a variety of failures, such as pump failures and condenser failures.
- Operate efficiently and effectively under different wind conditions.

BENEFITS

The CFD analysis provided a number of benefits, including:

- Increased confidence in the new cooling design.
- Reduced risk of failures.
- Improved performance and efficiency.
- Potential cost savings.

QUOTE

“Keysource's CFD analysis expertise was invaluable in helping us to design and implement a new cooling system that meets our needs and delivers the performance we require.

The analysis helped us to validate the design and identify opportunities for improvement and the project has helped to secure a longer-term relationship between us and Keysource.”

Project Manager – IT Infrastructure and services provider