

Buildings
Simply Made
Better

aedifion



Data-Driven Building in a Class of Its Own

Case Study: I/D Cologne A2, Köln

Space: 17 465 m² | Year of Construction: 2021 | Type: Mixed Use | Data points: 32 000

Operator: Sauter FM

I/D Cologne is Cologne's new fashionable district. On a total of seven hectares of a former freight station, modern work meets relaxed living. With its modern building infrastructure, the lively Veedel combines various types of use in the office, hotel, gastronomy and fitness areas. Especially in I/D Cologne A2, owner BNP Paribas Real Estate Investment Management Germany GmbH and operator Sauter FM GmbH meet the challenges arising during operation with an open, modern cloud solution from aedifion.



62 549 €

annual operating cost savings

(3,58 €/m²/a)



526 MWh

annual energy savings

(30 kWh/m²/a)



162 t CO₂

annual avoided emissions

(9,3 kg/m²/a)

Task

The commissioning of the concrete core activation system was to be digitally monitored on the basis of data in order to transfer the building to optimal system operation. Energy savings based on this and a reduction in CO₂ emissions should be made possible downstream in continuous operation.

Solution

Thanks to the simple plug-and-play connection, the building was quickly brought into regulated system operation despite complex system technology. Savings have been identified on the basis of the data collected since the system was connected. In the future, autonomous, predictive control will be implemented for permanent optimization.

Measures

With a clear objective in mind, the optimization of the I/D Cologne A2 started in March 2022. Four phases were decisive in the course of the project before the cloud platform was taken over into continuous optimization operation.

1. Data acquisition by simple plug-and-play installation of an Edge Device.
2. Analysis of the plant components to accompany commissioning
3. Guarantee of correct plant operation
4. Realization of energy savings

Supported by the comprehensive basis of operating data, the facility management team was able to track the concrete core activation and thus optimally accompany the commissioning. The AI-based analysis of the plant components continuously provided valuable insights and facilitated the subsequent documentation and evaluation. After a successful commissioning of the plants, the focus was on the fine-granular correction of the plant operation. Immediate savings were realized through various small adjustments, such as optimizing the running times of the air handling units.

Successes

Since using the aedifion cloud platform, energy has been continuously saved in the I/D Cologne A2 through optimized operation. In this way, the operating team simultaneously reduces operating costs and lowers the CO₂ emissions of the building. Despite state-of-the-art equipment, savings can thus be achieved and the operator team's workload reduced. A win-win-win result for owners, operators and tenants.

Forecast

Permanent optimization and predictive control - Future-proof system operation is the focus for the modern building, so that predictive switching between heating and cooling becomes possible completely autonomously.

Customer Feedback

The I/D Cologne A2 is a beacon in terms of digitization and efficiency. We are particularly proud of this project, because with aedifion we have a strong digital tool and an experienced team as a sparring partner for the challenges of such a complex building operation.

Philipp Enenkel

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BNP Paribas REIM Germany GmbH

