

Buildings
Simply Made
Better

aedifion



Iconic Building of Energy Efficiency and Global Charm

Case Study: Ettlinger Tor, Karlsruhe

Space: 38 800 m² | Year of Construction: 2005 | Type: Shopping center | Data Points: 19 000 |
Co-Owner: Deka Immobilien Investment GmbH

As one of the largest inner-city shopping centers in Southern Germany, the Ettlinger Tor shopping gallery is the “beating heart” of Karlsruhe. Spanning three levels beneath its impressive 150-meter-long glass dome, the gallery hosts approximately 130 specialty shops alongside various restaurants, cafes, and bars, inviting visitors to stroll and linger. In addition to an attractive mix of sectors and tenants and a spacious, bright ambience, the prestigious property managed by the ECE Group is considered a pioneer in terms of energy efficiency and quality of stay.



59 370 €

annual energy
cost savings*

(1.53 €/m²/a)



672 MWh

annual
energy savings*

(17.31 kWh/m²/a)



74 t CO₂

annual
avoided emissions*

(1.9 kg/m²/a)

*Calculated heating and cooling energy savings are based on estimates from annual simulations and extrapolations (period: 2023).

Task

The aim at Ettlinger Tor was twofold: initially, to analyze the operation of the technical systems; subsequently, to achieve sustainable reduction of operating costs through proactive, demand-driven control, while ensuring consistently comfortable indoor conditions in the retail spaces, all with maximum energy efficiency.

Solution

The aedifion cloud platform provides the shopping center's asset management and operations teams with transparent, real-time control of all technical systems and savings potential in the property. The self-learning software provides customized optimization recommendations and automatically implements them during operations.

Measures

aedifion's successful optimization of the shopping center's operations is based on three key elements:

1. Transparent monitoring and proactive control of building operations through simple and securely encrypted provision of real-time reporting data in the cloud platform.
2. Continuous identification of savings potentials and their tailored implementation in line with the owner's profitability and sustainability goals.
3. Full-service package with comprehensive support from the aedifion team, including data collection and targeted implementation of all measures during ongoing operations.

Achievements

A key step in maximizing the building's energy efficiency was the optimization of the air handling units. Annual savings of about EUR 12 700 were achieved simply by decoupling an air handling unit from the grease exhaust of the catering kitchens and lowering the supply air temperature setpoints in the central heating system. Another success was the identification of a faulty outdoor temperature sensor which was impeding the efficient use of heat recovery. The correction resulted in additional annual cost savings

of approximately EUR 7 300. Furthermore, continuous predictive control of the heating circuits based on weather forecasts and outside temperature was implemented, saving an additional EUR 37 000 per year. Since then, the intelligent shutdown of the heating system on warm days has prevented unnecessary heating energy consumption at night and ensured a comfortable indoor climate during the day.



Equivalent to the annual carbon
offset of approximately

5 920 trees

Customer Feedback

"aedifion impressively demonstrates how to achieve maximum results in existing buildings with minimally invasive measures. The intelligent cloud platform gives me everything I need to manage my building efficiently and keep my tenants happy."



Mario Graf

Technical Manager | ECE Projektmanagement GmbH
& Co. KG