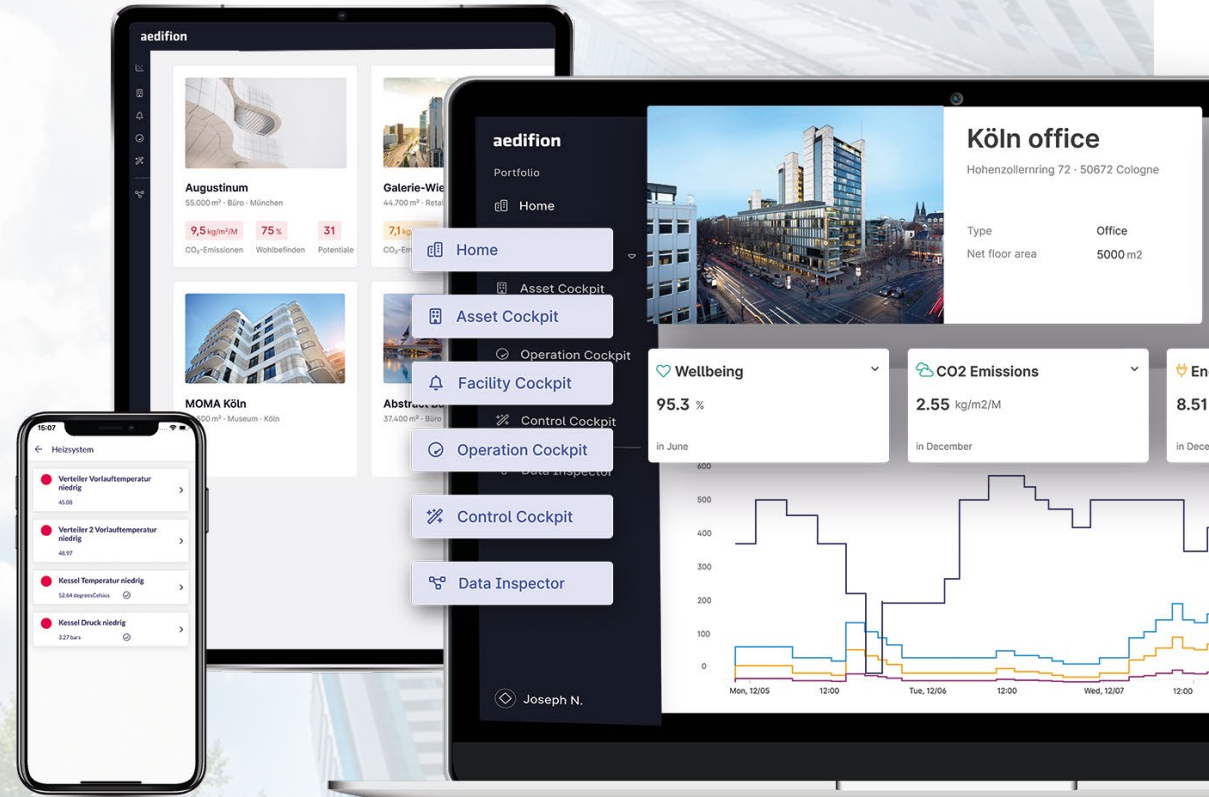


# aedifion

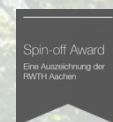
Buildings Simply Made Better



Forbes

Handelsblatt

im immobilienmanager



The biggest AI-enabled, vendor-neutral **Smart Building Cloud Platform** in Europe, a one-stop solution for **net-zero building operation**.

**We turned award-winning research into one of the world's most advanced AI-based performance optimization and control systems to make buildings simply better!**



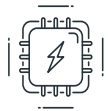
### We are a diverse team

- 58 employees
- 11 nationalities



### We are backed by research

- Multiply patented solution
- Top notch German engineering & research



### We are a technical team

- More than 50% of our employees are in development or product



### We got Smart Money

- WorldFund, BeyondBuild, FO Hopp, BitStone Capital, Phoenix Contact, MOMENI, Drees & Sommer, Bauwens

# aedifion

75 customers

200+ buildings

2.3 Mil m<sup>2</sup> connected

Positive ROI within 6 months

Up to 43%  
proven energy savings

## Management Team



**Dr.-Ing.  
Johannes  
Fütterer**  
CEO |  
Engineer



**Dr. Jan Henrik  
Ziegeldorf**  
CTO |  
Computer  
Scientist



**Felix  
Dörner**  
CFO |  
Business  
Economist

# The Challenge

The Real Estate Industry is at a Tipping Point for a Transformation

To support the cities and people of tomorrow, the building of the future will be ...



Commercial buildings are responsible for ~35% of global energy consumption and ~40% of carbon emissions.



... sustainable  
... efficiently operated  
... grid-active



The demand for occupant comfort, wellness & health in workplaces is rising.



... healthy & safe  
... productive  
... flexible & comfortable



Decrease in office demand and lack of skilled technical engineers are making building operations more expensive.



... data-driven operated  
... connected  
... smart

# Why now?

Decarbonization is no Longer Optional. Regulators, Tenants and Investors are Pushing it!



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**EU** By 2030 all new construction must be **zero-emission** in the EU.

**US** By 2030 NYC Local Law 97 requires a **40% drop in GHG emissions** in CRE.

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**23% of Fortune Global 500 companies** have made commitment to reach carbon emission reduction targets by 2030, incl. Google, Amazon, and Microsoft.

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In 2019, more than **69 of world's largest institutional investors** with \$10.4 Trillion in AUM, including BlackRock, committed to transition their investment portfolio to net zero GHG emissions by 2050.

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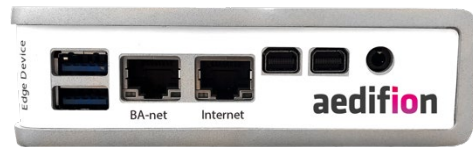
*... and the Ukraine Crisis just accelerated the need to optimize energy consumption.*



# Our Approach

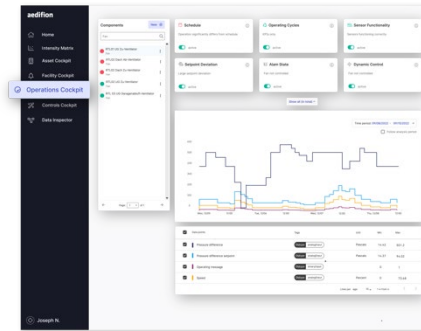
The Backbone of a Building to Ensure Decarbonization, Net-Zero & Future-Proof Building Operations

## Connect



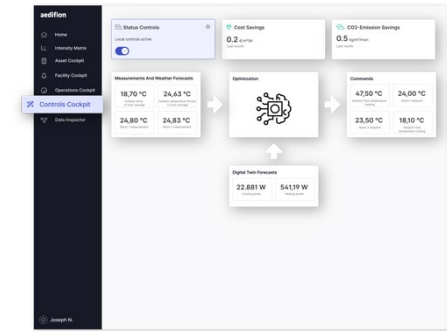
We connect technical building equipment and various data sources **plug-and-play** using our **edge device** and **API**

## Analyze



Our **advanced fault detection and diagnosis framework** produces actionable recommendations to **save up to 25 % of energy**

## Control

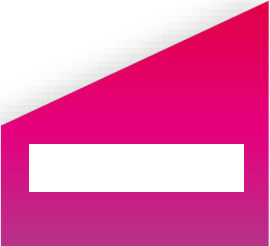
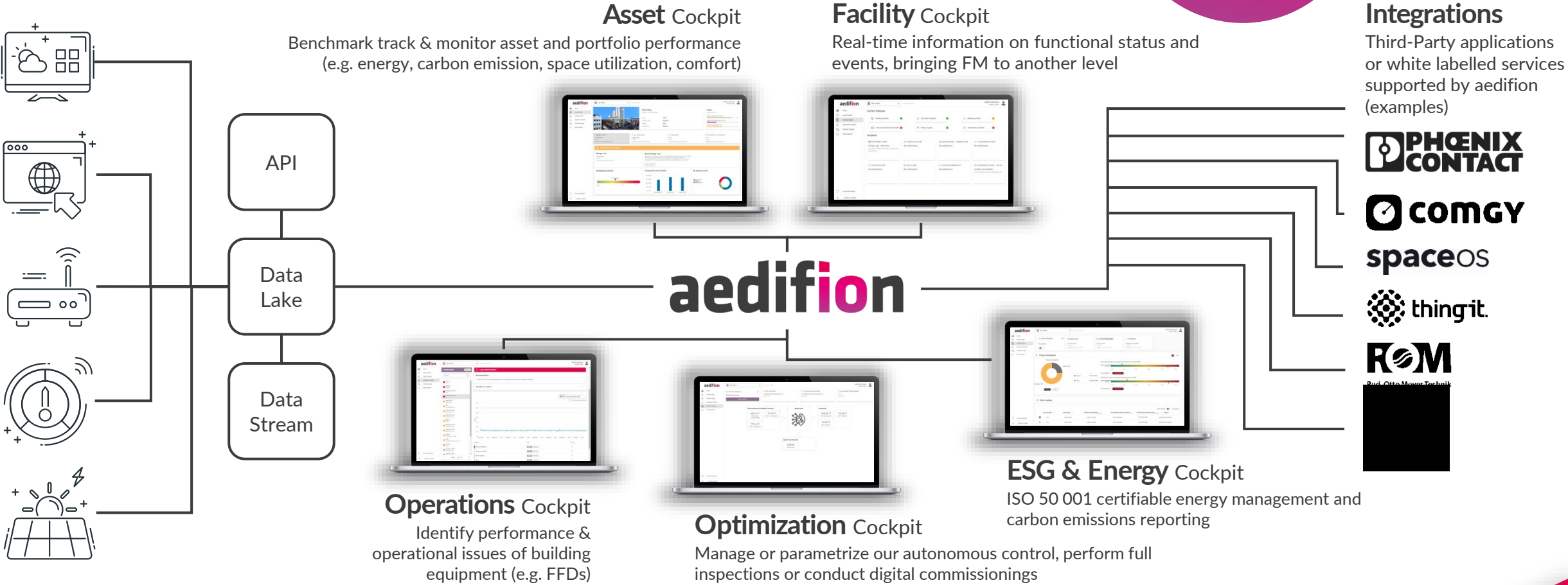


Our AI-based **control system** achieves up to **15 % in additional savings** with model prediction and external data

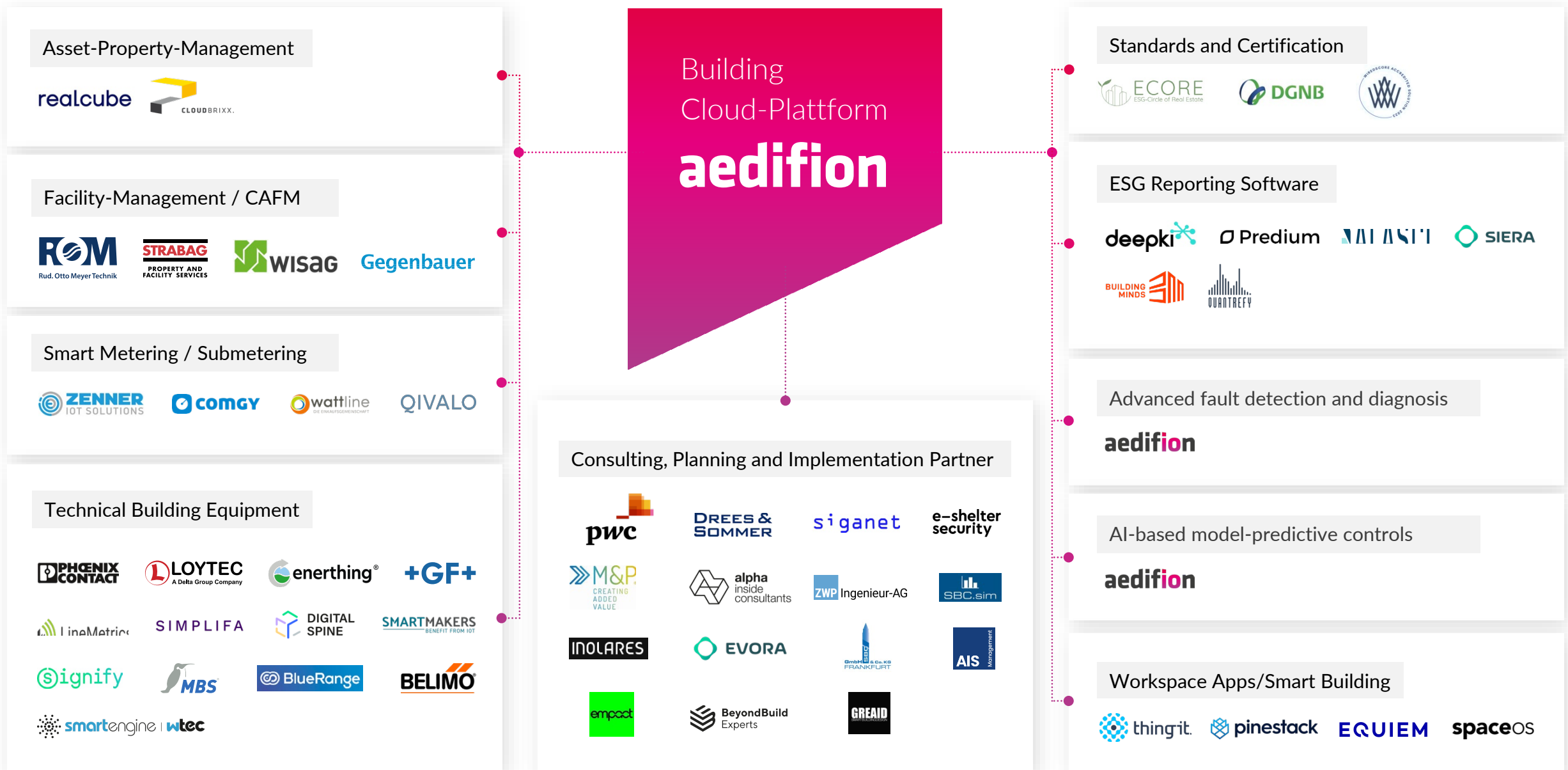
# Our Cloud Platform

Holistic - AI-enabled - Easy Scalable

All features included for 0,10 €/m<sup>2</sup>



# Our Digital Sustainable Asset Management Ecosystem



Note: aedifion has ongoing business relations or partnership agreements with all mentioned companies

# Impact

Our Customers See a Positive ROI Within 6 Months



**20% - 50%**



Energy Consumption



**15% - 60%**



Carbon Emission



**5% - 15%**



Operating Cost\*



**4 - 6 months**

Until positive ROI



“After just **one month**, we have seen almost **20% savings** in CO2 emissions and energy costs.”

*Tim Fischer FRICS, Managing Director, MOMENI*

## References



### Auditorium / Multi-Use

Location: Aachen, Germany  
Area: 6,500 m<sup>2</sup> (70,000 SF) | Year built: 2008  
Customer: Leading University

Positive ROI in:	3 months
Energy:	20% ↓
Carbon Emission:	25% ↓
Costs:	28% ↓



### Office Building

Location: Aachen, Germany  
Area: 7,000 m<sup>2</sup> (75,000 SF) | Year built: 2016  
Customer: One of the largest asset managers in Europe

Positive ROI in:	4 months
Energy:	43% ↓
Carbon Emission:	43% ↓
Costs:	42% ↓



### Office Building

Location: Cologne, Germany  
Area: 22,200 m<sup>2</sup> (237,000 SF) | Year built: 1977  
Customer: AEW Invest

Positive ROI in:	6 months
Energy:	22% ↓
Carbon Emission:	21% ↓
Costs:	23% ↓



# Customer and User Persona

## Pain points

## Impact from



**Tina**  
Technical Operator

- Tenants complain about the temperature, bad indoor climate, and unexpected high energy bills
- Must satisfy the management's requirements for operations and investments
- Staff complains about high workload

- Operational optimization
- User and tenant satisfaction
- Data availability



**Petra**  
Asset Manager

- Prove the performance of the asset (ESG-criteria, operation of technical equipment, development in value) to the asset owner
- Ensure compliance of the indoor air climate with the contractually assured conditions
- Base her decisions on solid facts

- Clear and relevant KPI about building performance via Asset Cockpit
- Reliable well-being due to optimal indoor climate
- Reduced CO2 Emissions and energy costs



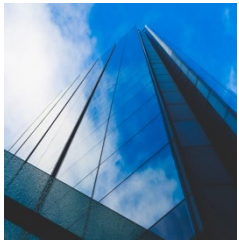
**Hector**  
Facility Manager

- Safe equipment operation
- Complex energy systems need a lot of attention
- Many buildings under management, few time
- High expectations coming from tenants, asset manager, etc.

- Overview of all technical equipment in the building, their status and operation mode
- Automated fault detection
- Decreased energy consumption
- Flexible maintenance on demand

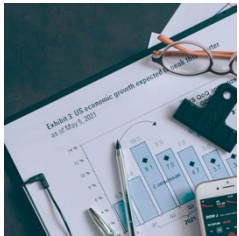
# Our Competitive Moat – Risk Awareness

We are the One-Stop Solution Tailored to EMEA’s Highly Regulated Market



## World-class building experts:

Our team includes leading researchers in energy efficiency & building automation. Our technical knowledge is incomparable.



## Proven results & returns for customers:

In addition to reduce carbon emission, our customers have seen positive ROI within 4 - 6 months from operational efficiency.



## Focus on EMEA market:

We have built robust relationships with our customers, incl. some of the biggest asset owners & managers in Europe.

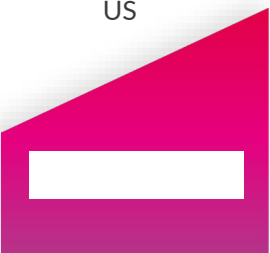
	HQ	Digital Twin	Energy Efficiency <sup>1</sup>	Facility Management <sup>2</sup>	Tenant Comfort <sup>3</sup>	Asset-level Reporting	Geographic Focus
 aedifion	Cologne, Germany	✓	✓	✓	✓	✓	EMEA
 SWITCH AUTOMATION	Denver, CO, US	✓	✓	✓	✓	✓	US, APAC
 aquicore	Washington DC, US	✓	✓	✗	✗	✓	US
 KUBITZKY	Montreal, Canada	✗	✓	✓	✗	✗	US, Canada, APAC
 DeltaQ	Brussel, Belgium	✗	✓	✗	✗	✗	EMEA
 arloid.	London, UK	✗	✓	✓	✗	✗	EMEA
 BuildingIQ	Foster City, CA, US	✓	✓	✓	✗	✓	US
 NANTUM prescriptive data	New York, NY, US	✓	✓	✓	✓	✓	US

Note:

<sup>1</sup> Energy efficiency incl solutions to reduce energy consumption, water consumption, and carbon footprint.

<sup>2</sup> Facility management incl solutions on predictive maintenance, fault detection related to HVAC.

<sup>3</sup> Tenant comfort incl solutions on occupancy, indoor air quality etc.

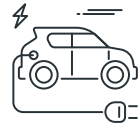


# Our Vision

Automated Buildings will Disrupt the Real Estate & Energy Sector



Electrical Vehicle



Integration with Clean Energy System



Autonomous Driving / Shared Cars



AUTOMATION

INTEGRATION

NETWORK



Smart Building Operations



Demand-Responsive Building



Virtual Power Plants



# Em Hätz vun Kölle!

Get to know us!

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# Appendix



# Appendix – Case Study

ONE COLOGNE, an office building in Cologne, Germany

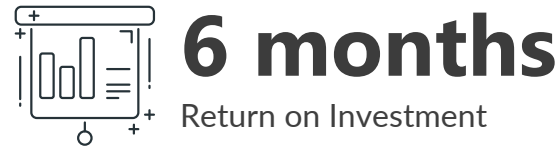
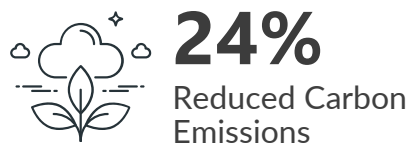
## About the Building

ONE COLOGNE is an architecturally outstanding property owned by AEW, which is focusing on sustainable real estate with this property.

**Location:** Cologne      **Area:** 22 000 m<sup>2</sup> / 237 000 SF  
**Year built:** 1977      **Type:** Multi-tenant Office  
**Data points:** 8 400      **Automation:** Sauter / BACnet IP

## Results

With aedifion, the operators were able to reduce the operating costs, save energy and CO<sub>2</sub> and improve the comfort for the tenants at the same time.



## Quote

“The aedifion solution delivers in line with our ESG strategy: we want to have sustainable buildings whose operation is completely demand-driven without wasting resources and energy. By using the cloud platform, we have not only been able to improve our energy efficiency and save CO<sub>2</sub> but also increase comfort for our tenants.”

*Johannes Mayer, Associate Director Asset Management, AEW Invest GmbH*

