

## IMPACT\_CASE

# DABEL – ENERGY SAVING THROUGH AI



### CASE / PROBLEM

Current building management systems (BMS) are manually controlled, but even a single building produces over 20.000 variables per minute. This inefficient control is very expensive for companies and our planet, as 70% of the variables are not taken into account, resulting in over 40% wasted energy, unnecessary CO<sub>2</sub> emissions and an unhealthy indoor climate.

The goal of the environmentally conscious energy supplier Gelsenwasser AG was to reduce the emissions and energy costs of its +30.000 m<sup>2</sup> headquarter-buildings without investing too much time and financial resources in the implementation of a complicated technical solution.

### SOLUTION

- Replace human control of energy systems with artificial intelligence
- Remote implementation process of the software in less than a week per building, without upfront costs
- Autonomous real-time control of energy systems by software that considers all relevant variables
- Self-learning algorithms, which adapt automatically to the conditions of the building

### RESULTS

- +29% in energy savings & reduction of CO<sub>2</sub> emissions on average
- +50.000 control decisions by DABEL in real-time per month without human intervention, e.g. valve settings
- 0,19 €/ m<sup>2</sup> cost reduction per building per month on average

### COLLABORATION



### INNOVATION AREA

## BUILDING ENERGY EFFICIENCY

### COST SAVINGS

# 70.000 € p.a.

### CO2 SAVINGS

# 433 T/p.a.

equals the planting of 20.000 trees

### IMPACT VISION 2030

- +700.000 € Savings
- 4.330 T CO<sub>2</sub>-Reduction