

Avans University saves 40% on energy

ecoBuilding has delivered a saving of almost 40% on natural gas consumption in a pilot project at the 's-Hertogenbosch campus, Avans University of Applied Sciences (Avans Hogeschool). "But, for us, it's about a lot more than saving money," argues energy coordinator Sebastian van Velthoven. "ecoBuilding helps us reach our quality and sustainability goals."

- Educational sector
- Den Bosch, The Netherlands
- 35,000 m², with two large boilers and 38 air handling units
- reduced 40% of gas consumption



Avans is one of the larger universities of applied sciences in the Netherlands, offering more than 60 degree courses to 33,000 students - and employing 2,800 staff. Across 14 sites in Breda, 's-Hertogenbosch, Roosendaal and Tilburg, the University is known for its commitment to quality. In Keuzegids Hbo 2020, which assesses and compares the quality of higher education in the Netherlands every year, Avans was nominated the best applied sciences university in the Netherlands.

Sustainable, the new normal

However, excellence in education is not the only thing high on the Avans agenda. Sustainability is also a key priority. The University believes its students are the future and will play a major role in the transition to a more sustainable society. Avans is there to guide them. In fact, sustainable development is a constant thread running through the University's teaching, research activities and, of course, its working and learning environment. This ambition is also expressed in practical terms, including in the campus facilities. All buildings, for example, have to be at least energy neutral by 2030.

"This will be quite a challenge for a university with a huge variety of buildings in different locations," admits Sebastian van Velthoven, the University's contract manager and energy coordinator. "Among other things, we're investing in renewable energy, with solar panels on every rooftop, and we're drawing up energy saving plans for all our locations to systematically reduce consumption."

" ecoBuilding does things a building management system would never do with if-then rules. It was surprising and fun to watch how smart ecoBuilding is. "

Engineer, Van Beek

Unexpected savings

With this in mind, Avans had for some time been looking for a good system to control and monitor its heating systems. At the end of 2019, the university decided to set out on a pilot project with ecoBuilding on its Den Bosch campus. This site covers a fairly large area of more than 35,000 m², with two large boilers and 38 air handling units (AHUs). The results far exceeded expectations. "We had expected to save around 25% on natural gas," confesses Sebastian. "Anything above that would be a bonus. But ultimately, in the first two months of the year – before the Covid-19 lockdown – we were already achieving savings of almost 40% compared to the same period in 2019".

Hidden problems

"Implementing ecoBuilding also uncovered a number of hidden pain points in our current installations," says Sebastian. "For example, we noticed that problems arose when we wanted to switch to heating at lower temperatures. With a few simple actions, we immediately got higher efficiency from our installations."

"We often find that ecoBuilding reveals sub-optimal operation in existing installations," says Frank Visscher, who was involved in the project as a Priva consultant. "Our software calculates exactly how much energy is needed to get a room to a certain temperature and sends exactly that power to the installation. If that doesn't turn out to be enough to heat the room, you know something's wrong somewhere. With conventional controls, these things all too often remain hidden. The only thing you see is high consumption."

Student experience

But energy saving, however spectacular, is only one side of the story. "Perhaps, what appealed to me most about ecoBuilding is that user comfort is central," says Sebastian van Velthoven. "And that's extremely important to us. Because students who choose Avans choose quality. That's not only reflected in the quality of the education we offer, but also in the appearance and perception of our buildings."

"A good indoor climate – not too hot, not too cold – ensures that students get even more from their experiences. With lockdown, we don't have much insight into this yet because students spent a lot of the spring at home. But I'm pretty sure we'll see the positive effects in the autumn."



What ecoBuilding can do for you?

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The future is now

Sebastian van Velthoven now looks back on our collaboration with satisfaction. "Of course these are the great results, but we also learned a lot during the pilot project about how we can make our installations and our buildings even more sustainable. The collaboration with the various parties went smooth, despite some delays in implementation. It's natural that you have to deal with a number of unforeseen circumstances in a pilot project."

In the meantime, the project is still moving forward. "In the same building, ecoBuilding is now also

controlling the cooling functions - and we're already looking at how we can extend the system to all our buildings and locations."



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53%

cost saved

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[Bielefeld, Germany](#)



"high levels of comfort and sustainability, low maintenance costs and energy efficiency to our customers and employees"

"With ecoBuilding the temperature is just right – meaning that a perfect indoor climate is assured."

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20%

energy saved

City Hall Groesbeek

[Groesbeek, The Netherlands](#)



The municipality of 'Berg en Dal' was the first municipality in the Netherlands to apply ecoBuilding in their town hall. The excellent results speak for itself: 20% energy savings and a CO2 reduction of 17,30 metric tons.

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