CUSTOMER STORY

The Hotel Brussels: leaks and faults found the same day

At The Hotel Brussels, the energy services company Sensorea installed Energis.Cloud in 2018 to monitor water, energy and temperature remotely. Leaks and equipment faults are now found the same day instead of weeks later.



CUSTOMER	PARTNER	SECTOR	COUNTRY
The Hotel Brussels	Sensorea	Hospitality (hotel)	Belgium

+5%

energy savings per year

Abdeljabbar Rharssi, Cluster Chief Engineer at The Hotel Brussels, on finding leaks and equipment faults the same day (in French).

At a glance

- **Who:** The Hotel Brussels, part of the Pandox group, monitored by Sensorea (https://www.sensorea.be/), a Belgian energy monitoring and advice company that looks after some fifteen hotels and other buildings.
- **What they set up:** water, energy, temperature and CO_2 read every 15 minutes, one dashboard per building, anomaly rules and the follow-up of each fault, on Energis.Cloud since 2018.
- **The result:** faults found the same day instead of weeks later, and about 5% more savings each year.

The challenge: no real-time view of a large hotel

A hotel balances its guests' comfort against its energy use, and most of its waste comes from water leaks and equipment faults. Before Energis.Cloud, the engineering team had no real-time view of consumption: "maybe per month, not in real time" (0:42 (https://youtu.be/1MSI6KMbNDA?t=42)).

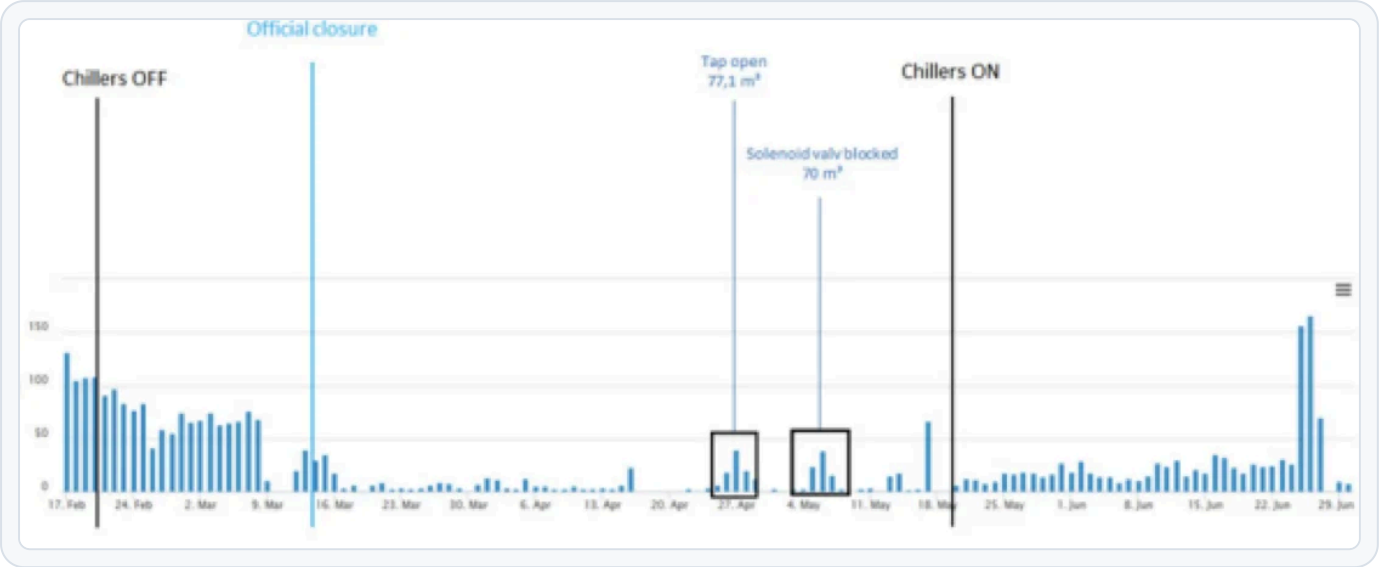
Sensorea needed one platform that gathers all the data of very different buildings, hotels, industrial halls and theatres, and monitors it day by day.

The hotel had set itself targets in 2013, with a return on investment within five years: 20% less water, 35% less electricity, 25% less gas, 20% less CO_2, an energy performance certificate (PEB) from D to B, and a reaction time cut from several days to 15 minutes.

What they set up in Energis.Cloud

- **Data every 15 minutes.** Water, electricity, gas, temperature, humidity and CO_2 from meters, sub-meters, chillers, HVAC, boilers and fibre-optic sensors arrive every quarter of an hour, so an anomaly shows up quickly. See data integration.
- **A dashboard per building.** A general dashboard covers every building; a dedicated one per hotel lets the team investigate building by building. See dashboards.
- **The consumption of each piece of equipment.** The platform tracks each piece of equipment and gives an energy forecast for the building.

- **A benchmark first.** Before the project, Sensorea benchmarked the building on its energy performance certificate (PEB) to set the target, and the hotel's consumption is read against it.
- **Expected consumption.** Models built from the weather, the occupancy and previous years predict each day's consumption hour by hour, so a drift from what was expected shows at once.
- **Anomaly rules.** Leaks, faults and drifts become anomalies the team acts on. See anomaly detection.
- **Indoor air quality.** CO_2 sensors read every 15 minutes show, for example, a fault in a ventilation unit. See comfort and air quality.



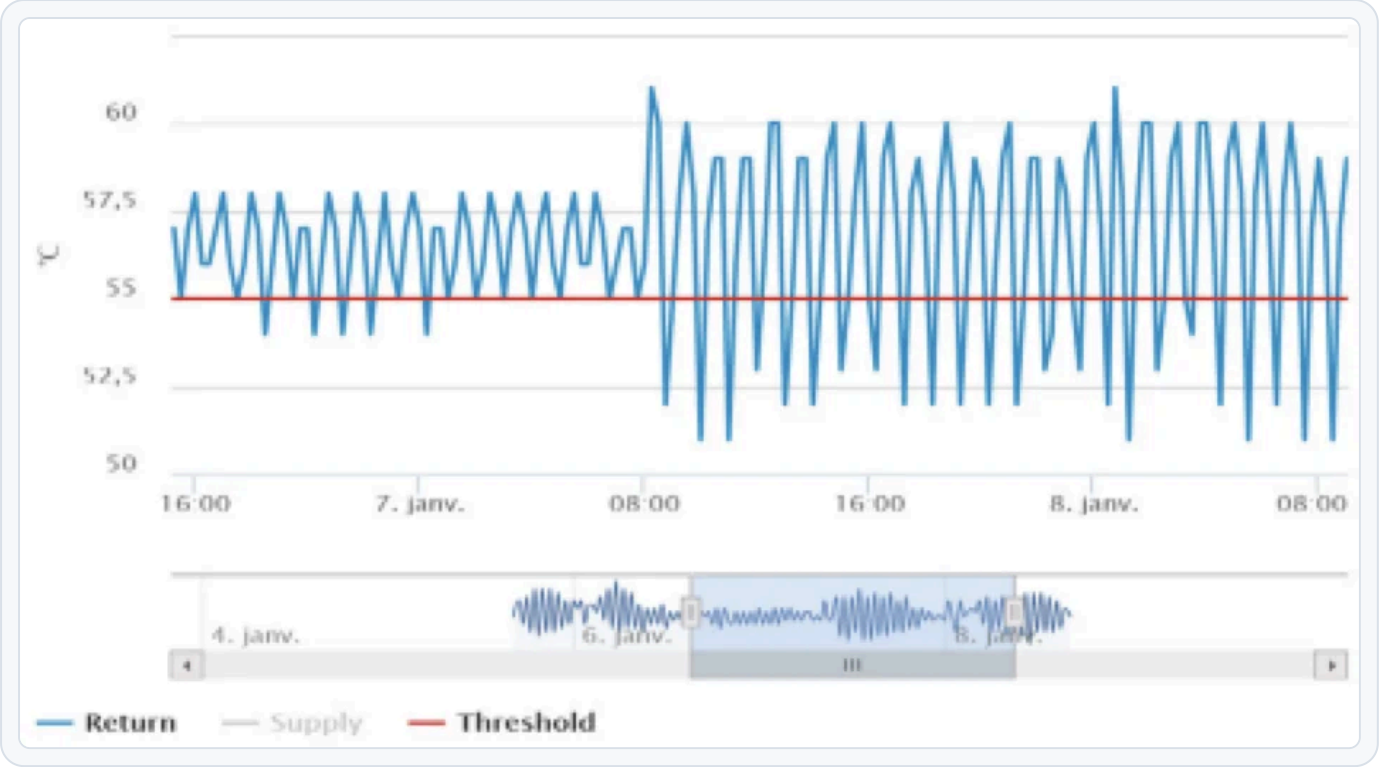
Water use during the first lockdown in 2020: the closure, a tap left open and the blocked valve, each visible in the daily figures. From the Sensorea case study.

The results

	Before	With Energis.Cloud
Visibility	Monthly figures	Every 15 minutes, per building and per piece of equipment
Reacting to a fault	Several days, sometimes weeks	The same day: the blocked valve was found the day it happened
Savings		About 5% more each year
Water leak in the lockdown	Weeks later, or with the next bill	Found the same day, resolved within two days

“During the first lockdown, a valve stayed blocked and we were losing around 70 m³ of water a day. Before Energis.Cloud we might have found it two or three weeks later; we found it the same day” (1:48 (https://youtu.be/1MSI6KMbNDA?t=108)).

Data does not replace the people who know the building. Once, the boiler’s return temperature started to swing more widely, not enough to trigger an anomaly. The chief engineer read the pattern and prevented a boiler failure.



The boiler's return temperature: the wider swings the chief engineer noticed before they became a failure. From the Sensorea case study.

In their words

> “In the morning we can see whether all the buildings behave correctly, then investigate building by building on the dedicated dashboards.”
>
> **Abdeljabbar Rharssi**, Cluster Chief Engineer, The Hotel Brussels (1:21 (https://youtu.be/1MSI6KMbNDA?t=81), translated from French)

> “Thanks to alarms, we can react quickly to anomalies and take corrective actions in the building. The software allows following the impact of our actions.”
>
> **Chloé Ponsart**, General Manager and Owner, Sensorea

For whom

Sensorea is a metering and monitoring company that delivers energy services to its clients: the work we describe for integrators and engineering offices.

Frequently asked questions

How quickly can a hotel find a water leak?

As soon as the data shows it. With water read every 15 minutes and a rule on abnormal night or base consumption, a leak becomes an anomaly the same day, instead of on the next invoice.

Can one platform follow hotels, industrial halls and theatres together?

Yes. Each building gets its own dashboard and rules, and one general view covers them all, so a monitoring company looks after very different buildings in one place.

What does CO_2 monitoring add?

It shows indoor air quality next to energy. A rise in CO_2 in an empty or ventilated space points to a fault in the ventilation, as Sensorea found during the lockdown.

Is the video in English?

The interview is in French. The quotes on this page are translated, with a link to the moment they are said.