



See2Do

Breda, The Netherlands

IN A NUTSHELL

Seeing is believing. This stimulates citizens to commit to action to improve energy efficiency. This was the principal of the See2Do project in which Breda participated. The project concerns all residents of Breda. The main tool is the use of thermographic photos in certain residential areas.

Also part of the project is showing some useful innovative techniques in the city office of Breda. Breda inspired people, companies and institutions to take energy saving measures by installing those measures in public buildings where the public could see them operating live. Breda took steps on energy saving in three areas: cooling its computer servers, lighting its office buildings, and using paint to reduce heat loss.

Keeping the servers cool

Breda's computer server room needs to be kept permanently at a low temperature to ensure that all their data is kept safe and the system doesn't lose connectivity. This was formerly done using standard air conditioning, meaning that air conditioning units were simply on and operating almost all the time, using lots of electricity.

Now the air conditioning has been replaced with a thermal energy system that cools the servers using cold water from an underground reservoir. This reduces the temperature enough that no air conditioning is necessary any longer, though the older system remains in place as an emergency backup.

Not just the city, but any medium to large business will have to have a server room, so this method of cooling, while it does require certain available infrastructure, could potentially be interesting for a range of organisations.

Beyond LED lighting

The switch to LED lighting, while it is by no means complete throughout Europe, is proven and well understood. Breda pushed the basic switch further with some innovative control systems that can squeeze even more savings out of LED.

One system is hooked up to light sensors outside, so that the indoor LEDs can mimic the intensity and colour of the outdoor light levels. This creates a more comfortable light atmosphere for people working inside, rather than having intense white light all the time.

Another system is a set of controls that lets the people in the space individually adjust each light source to create whatever complex light pallet appeals most to them and is most suitable for their situation.



Source: <https://www.grenzeloossamenwerken.eu/blog/see2do>

BREDA

<p>Population: 180,937</p>	<p>Area 128.7 km²</p>
<p>Signatory to the Covenant of Mayors since: 2009</p>	<p>CO₂ emission reduction target: Carbon neutral by 2044</p>

The pilot found that these LED lighting systems would be most suitable for corporate offices and settings where lighting is left on for prolonged periods, as well as conference centres and places where little or no daylight enters at all.

Thermal reflecting paint

Breda has also piloted 'Thermoshield' paint, a brand of matte wall paint that reflects heat and light. Compared to a standard paint of the same colour, this paint reflects about 20% more heat and light, and the darker the colour the better this brand compares to regular paint. With 20% more light and heat reflection, it is possible to reduce the levels of lighting and heating by 20% in the rooms that have been painted with this innovative material. This saves on electricity consumption, reducing expenditure and emissions.

This solution is ideal for the public, as people can easily purchase and apply this paint themselves.

Communicating the options

The point of this pilot project was not just to try out the measures, but to demonstrate them to people and businesses as a way to encourage uptake. These measures have made the city offices of Breda not only places of work, but giant showcases for what is achievable when you set your mind to it.

The offices have extremely high foot traffic from locals coming for administrative reasons, such as renewing their passport and driving licence, and as they wait, they can peruse information about energy saving measures and their effects.

Communication is not just limited to the demonstration buildings, however. Since October 2018, a mobile information station, 'The Greenhopper' has been hopping around Breda informing residents about this and other energy saving possibilities. The grasshopper, run by the local energy cooperative Bres, travels around the neighbourhoods of Breda. The energy officers that staff the booth inform residents on the results of the project and about the energy transition and their chance to be a part of it while making savings in their homes.



KEY FIGURES

20% more heat and light from thermal paint

€40 for thermal image and home consultation



FINANCING THE PROJECT

- + **Cooling of server:**
€135,000
- + **LED lighting:**
€40,000
- + **Thermo shield paint:**
€1,700
- + **Funding sources:**
Breda 50%, ERDF 50%

USEFUL LINKS

- ▶ Interreg website: <https://www.grensregio.eu/projecten/see2do>
- ▶ www.woonwijsbreda.nl



CONTACT

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