

GENELEC®

# CASE STUDY

**Ilmatar Windpower  
blown away by  
Genelec Smart IP**

FINNISH UTILITY COMPANY  
RELIES ON SUSTAINABLE  
AV SOLUTIONS





## RENEWABLE ENERGY EXPERTS EQUIP NEW OFFICES IN HELSINKI WITH PREMIUM AUDIO SOLUTION FROM GENELEC

Ilmatar Windpower is a utility company with a difference. Born of a passion to help combat climate change and its devastating effects on our lives and environment, [Ilmatar](#) is dedicated to the supply of clean and affordable wind power as part of the drive to transition to renewable energy sources. The company has recently made their own transition to magnificent new headquarters in Helsinki, designed according to sustainable

practices with the aim of achieving optimum efficiency and wellbeing. AV solutions experts [4Business Oy](#) were called in to design and implement all the AV technologies for the new premises, which included a [Smart IP](#) audio solution from [Genelec](#).

According to 4Business's Janne Lankinen, the goal for Ilmatar was clear from the outset; a seamless blend of architecture, interior

” IT MET ALL OF THE CLIENT’S CRITERIA FOR QUALITY, AS WELL AS BEING THE MOST SUSTAINABLE AUDIO SOLUTION.

design and functionality that combines to communicate the brand’s ethic and offers a positive experience to customers and personnel alike. “This project was a pleasure to work on as the standards were high at every level, be it technical or aesthetic, audio or video,” he recalls. “We selected Genelec’s Smart IP solution for the audio system as it met all of the client’s criteria for quality — both sonically and materially — as well as being the most sustainable audio solution available.”

One of the biggest issues to be addressed from an audio point of view was auditory comfort in Ilmatar’s open workspaces — an integral part of any modern, activity-based office today. However, one of the inherent problems of an open plan workspace is a lack of privacy and disruptive noise coming from elsewhere in the environment that can easily lead to stress, difficulty in concentrating

and consequently a drop in efficiency. Ilmatar was extremely clear in their desire to create the most comfortable and efficient working environment possible in their open plan areas, and so paid great attention to sound behaviour in these spaces.

“The lobby and open work areas, as well as the meeting rooms and offices, are all exceptionally well designed from an acoustic point of view, with excellent reverberation times,” notes Lankinen. “There are also absorbing screens between the desks, and the background noise caused by ventilation has been minimized. Nevertheless, while these measures go a long way towards addressing the issue, they are incapable of eliminating it completely. In order to achieve the best results possible, we designed and implemented a custom sound masking system specifically tailored to Ilmatar’s requirements.”



” WE ARE DELIGHTED WITH THE OUTCOME AND BELIEVE THAT WE HAVE ONE OF THE MOST COMFORTABLE OFFICES IN FINLAND.

Based on detailed coverage simulations, 4Business implemented a comprehensive audio system; a total of 20 Genelec [4420](#) Smart IP speakers were distributed across two separate open plan spaces. The Smart IP technology platform delivers power, audio and control over a single CAT cable across a digital audio network — in this case, [Dante](#) — making them exceptionally easy to install and ensuring that the systems are fully scalable. “The site-wide loudspeaker system was individually measured with room acoustics analysis software and adjusted using Genelec’s [Smart IP Manager](#) software to ensure the most transparent audio reproduction possible,” observes Lankinen. “We used a combination of black and white loudspeakers with matching [mounting accessories](#) that allowed the speakers to blend comfortably into their surroundings without disappearing completely. In addition to the technical

features, the choice of loudspeakers was also guided by the fact that Genelec is a native Finnish brand and manufactured in Finland according to sustainable principles — criteria that are extremely important for Ilmatar.”

The deployment of a high quality audio system was the first step towards realising an efficient sound masking solution. Implementation of the masking signal itself fell to [Pyy Survo](#), sound designer and composer for [WSP](#), global infrastructure experts. Survo designed the signal according to the latest research to be as pleasant and even as possible — an ambient background sound that mimics airflow and is specifically engineered to match the frequencies of human speech and to sound comfortable. The sound is audible but not intrusive and serves to reduce speech intelligibility in the surrounding environment. As a result, nearby conversations or telephone



calls are no longer a distraction, ensuring comfort and privacy for all concerned.

“A high quality sound system and careful spatial measurement of the audio signal avoided the ‘whoosh effect’, which is a problem with low quality speakers and the wrong type of audio signal,” explains Lankinen. “The masking system generates a multichannel audio signal to avoid the sound distortion caused by differences in speaker distance that typically occurs with mono sound masking systems.”

In addition to the sound masking, Ilmatar had another objective; to create a unique atmosphere that reflects the company ethos of working with nature in order to preserve it. To this end, a generative soundscape emulating a natural environment was created for the entrance lobby and implemented using a WSP multichannel soundscape player and eight Genelec [4430](#) Smart IP active loudspeakers. Virtual nature is created with algorithms that mimic the mechanisms and the timelines of the natural world so that

the soundscape remains as authentic as possible and avoids playlist-like repetition. The soundscape for Ilmatar is designed to communicate the brand image as soon as you enter the premises; an important criterion was that it had to correspond to the view from the lobby windows as a way of maintaining continuity with the outside world — in this case that meant the sea, seagulls, and of course the wind.

A soothing four-channel forest soundscape was also created for the café area which is equipped with four Genelec 4430s in white.

“This project has been a bit of a personal favourite,” admits Lankinen. “It was a really interesting job and we had great communication and collaboration with our partners throughout. It was an honour to have been involved and we’re very happy with what we achieved.”

The final word goes to Mikko Toivanen, VP and co-founder of Ilmatar Windpower Oy: “Our goal was to create the best office in Finland for our staff; making full use of new innovative technologies in terms of comfort and usability was a major goal. This was achieved by 4Business thanks to their consultative sales methods and technical expertise, ensuring an excellent end result. We are very pleased with the outcome and believe that we have one of the most comfortable offices in Finland.”



## THE KIT

- 20 x 4420A
- 12 x 4430A
- 2 x 8331A
- 2 x G Three
- 1 x Smart IP Manager Software