

One of the world's first fully carbon-neutral film post-production facilities is now available at Kajawood Studios

The first phase of the new European film center, Kajawood Studios, has been completed in Sotkamo, Finland with an innovative technology that makes Kajawood Studios stand out. The facilities now meet the post-production needs of large-scale international VFX productions with a fully carbon emission-compensated solution. The eco-friendly technology warms the studio's properties with the waste heat generated from the special effects and post-processing of films and TV series.

Kajawood Studios is technologically one of the world's most advanced film studio projects, where sustainable and ecological solutions and the creation of a cost-effective operating environment have been considered from the very beginning. It has resulted in a unique studio concept, which includes, in addition to traditional studios, new virtual studio technology, office spaces, production facilities, stage workshops, and five-star luxury accommodations right in the studio area.

Kajawood Studios can significantly reduce the carbon footprint of film productions and promote sustainable development with the help of technological innovations. Kajawood's properties, facilities, and geothermal wells are heated with the waste heat generated from the creation of digital special effects, which brings considerable savings to the heating costs of the properties and reduces the carbon footprint.

Making animations and the post-production of film visual effects significantly burden the environment. For example, making a 90-minute animated film produces so much co2 that it equals a 4-bedroom home for about 28 years. To offset such an impact, Kajawood Studios wants to be a pioneer in responsible film production. In this innovative concept, the supercomputer processing VFX data is placed on premises needing heat. This enables almost 100 % of the heat generated as a by-product of the post-production on the servers to be utilized directly in the water circulation heating of Kajawood's studio properties. As a result, it reduces the carbon footprint by 95 % compared to a traditional data center. Kajawood Studios and its partners were the first to implement this innovative technology that combines circular economy, carbon reduction, and high-performance computing into such an effective system. Thus, film productions benefit from high computing power and minimal carbon footprint. The render farm is also ISO27001 security certified.

- We want to create a new and more ecological film production. We use the servers in our property for effects and post-production. The waste heat generated from them as a by-product is being used to heat the film studio buildings, reducing our heating costs, CEO of Kajawood Studios, **Miika J. Norvanto** states.

Kajawood has invested in ecological energy technologies. When, for example, the heat generated by the servers cannot be used in the summer for heating the buildings, it is stored in a geothermal well. The heat stored in this way can be used later when the weather cools down and the need for heating increases. Alongside geothermal heat, the company utilizes solar and wind energy in its energy and heating solutions.

Kajawood's and its partner's team installed the render farm at Kajawood's VFX facilities.

The customer automatically receives a report on how much the computing work has produced carbon emissions. Today, several large international companies in the film and TV industry are already requiring their partners to use more ecological production processes. For example, major studios, such as Netflix, have announced to become carbon neutral as soon as possible. Also, governments worldwide are demanding the film industry to do their share in co2 reduction and therefore are setting up new laws to make this happen.





- We feel it is essential that with this new system, we can report to our customers the carbon footprint of every animation and work process in the future. We believe this is the future technology towards ecological and sustainable values in film industry productions, says **Timo Puustinen**, the Managing Partner of Kajawood. He also shares that now Kajawood Studios is a full-service producer of VFX services, from artists to technology solutions.

More information:

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