A Helvar Case Study
Wärtsilä Headquarters
Helsinki, Finland

Helvar

AI saves both energy and increases wellbeing

Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets.

Wärtsilä wanted its new headquarters at Salmisaari to be equipped with the latest data driven technology. The planning and construction schedules were tight. Lighting Design started in December 2017, and Wärtsilä moved in from early November 2018. The premises cover almost 11,000 square meters and brings together 530 employees. During the renovation, the work rooms were replaced with open spaces with areas suitable for different working methods. In addition to desks and quieter working spaces, there are groups of loungers, telephone booths and a communal living room with a café. A key aim of the project was to save energy, which greatly influenced the design of the premises. Human Centric Lighting supports the wellbeing and productivity of staff and visitors. The facilities have been awarded the BREEAM Very Good environmental rating.

The Wärtsilä Helsinki Campus is equipped with the world's first artificial intelligence-based lighting control system, Helvar ActiveAhead. It is the first large building scale ActiveAhead project installed in Finland. Wärtsilä selected Helvar's wireless, self-learning and future-proof solution ActiveAhead as they wanted all of their building systems to include state-of-the-art technology.

Helvar

"As we wanted all building systems to have state-of-the-art technology available, we selected Helvar's wireless, self-learning and future-proof lighting control solution ActiveAhead."

THOMAS HOLLFAST
REAL ESTATE DIRECTOR, WÄRTSILÄ

The project was implemented with ActiveAhead ready wireless luminaires as well as DALI luminaires connected to the ActiveAhead mesh network using the ActiveAhead Control Unit DALI product. Meeting rooms have wireless control panels for scene control.

On every floor, the floor level HVAC is connected to a relay, which is controlled by an ActiveAhead Control Unit DALI. This keeps the HVAC running only when someone is present on the floor, thus reducing energy consumption when the floor is vacant. Occupant comfort is also increased when the floor is in use during non-working hours.

Open plan areas operate with the patented Artificial Intelligence based self-learning algorithm in the ActiveAhead solution. Corridor lights are configured to be kept on while any of the adjacent meeting rooms are in use.

As luminaires form a dense network in buildings, the lighting control systems such as ActiveAhead, are a natural data acquisition platform for other real estate automation and various intelligent networks.

AI based ActiveAhead lighting control solution provides around 10-30% extra energy savings compared to traditional lighting and presence control solutions.

Installation:
- More than 1300 ActiveAhead-luminaires equipped with ActiveAhead Control Units and sensors.
- 185W Control Panels were used in some of the spaces for wireless lighting control.
- In addition to the ActiveAhead solution, Helvar DALI Router solution was used on some of the public spaces.

Photos: Sampsa Pärnanen