

CASE STUDY



CLIENT: GKN Fokker Elmo
LOCATION: Hoogerheide, The Netherlands
PROJECT: Warehouse lighting - Intelligent LUCI LED fitting



CASE STUDY

EVERT-JAN WISSE - GKN FOKKER ELMO

"Warehouse lighting GKN Fokker Elmo only on when necessary"

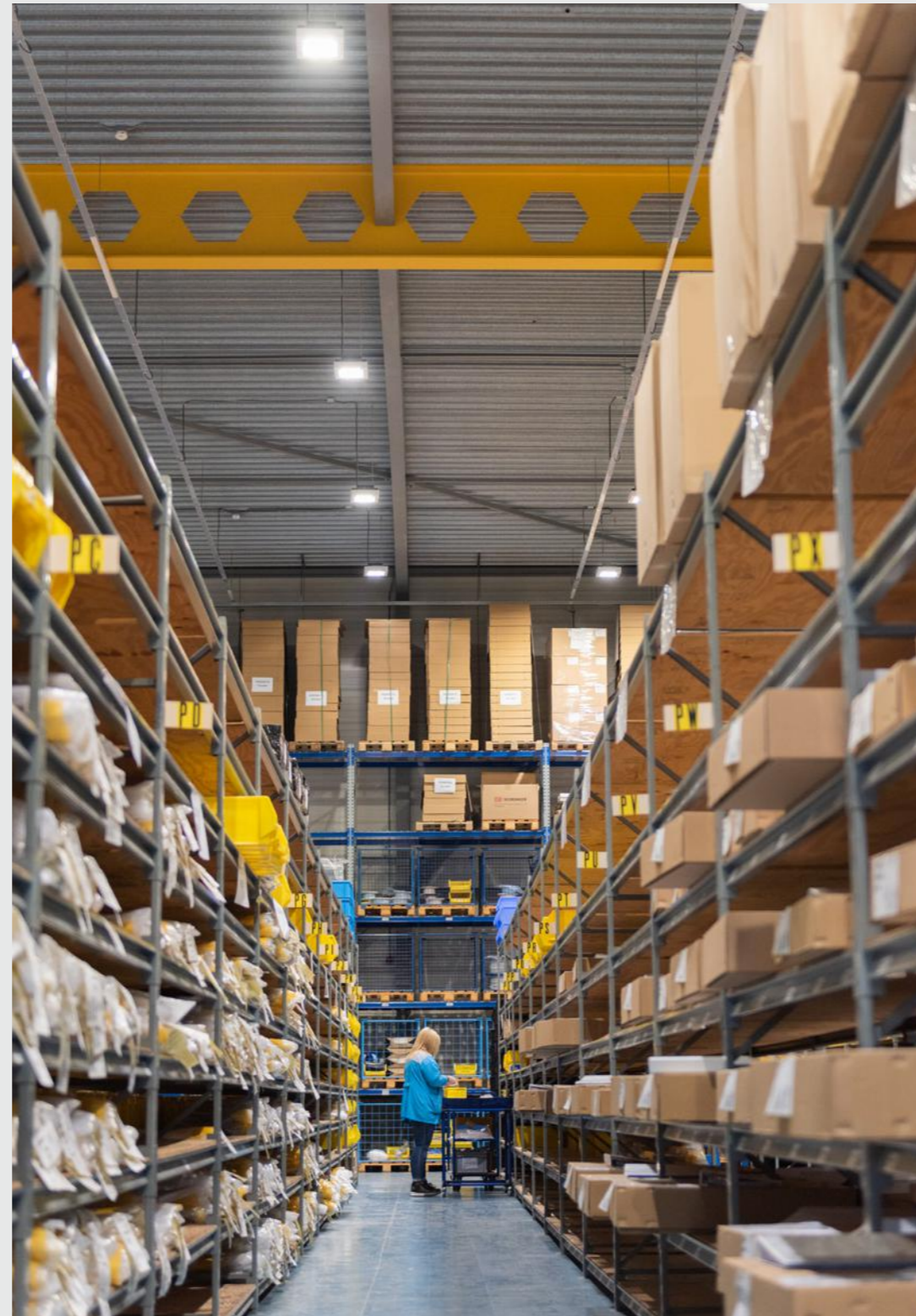


GKN Fokker Elmo, part of Fokker Technologies, is a specialist in the design and production of Electrical Wiring Interconnection Systems (EWIS). Its Hoogerheide site has been engaged in the manufacturing of electronic and electrical wiring and data cables for commercial and military aircraft since the end of the 1980s. It is not just the components for the wiring and cables but also the finished products that are invariably stored in a large warehouse, which was recently fitted with sustainable LED lighting.

'The existing fluorescent lighting in our warehouse had reached the end of its technical lifespan', explains Evert-Jan Wisse, Head of Supply Chain & Purchasing at GKN Fokker Elmo 'A lot of the fittings were in a poor condition. Meaning that like-for-like replacement with fluorescent tubes wasn't advisable. Instead, we looked for high-end LED luminaries with a high degree of reliability and energy-efficiency, as well as a higher lux value, higher colour accuracy and uniform illumination of the warehouse floor. Sometimes we're picking really small components in our warehouse. Good lighting is essential to enable us to check whether we're picking the right products. What's more, uniform lighting and high colour accuracy make working here more comfortable for our staff.'

HIGH LIGHT INTENSITY

The aviation industry sets certain requirements in terms of light intensity, says Wisse. 'Whereas customers like Boeing and Airbus stipulate a level of 1,000 lux in the production areas, 500 lux is the requirement in the warehouse. It used to be the case that we had trouble meeting this standard. However, the Luci Series Industry LED luminaries from Bever Innovations' Industrial division ensure optimum fulfilment. The luminaries also provide a high degree of operational reliability.' Which is a must, he adds, as GKN Fokker Elmo produces all cable harnesses just in time. 'As an organization, we're continuously steering things in terms of short turnaround times, from order to delivery. Unsurprisingly, then, any disruption to the order picking and production process caused by faulty lighting is unwelcome, and the same goes for light



loss due to ageing of the luminaries. The LED luminaries from Bever Innovations feature various technologies that compensate for this loss.' Jeroen de Jonge, Sales Director at Bever Innovations, Industrial division: 'When the temperature of the LEDs exceeds 80°C on the circuit board, the LIPS (Luminaire Intelligent Protection System) kicks in automatically, dimming the lamp to provide optimum protection for the luminaire and avoid making any concessions in terms of the stated lifespan. What's more, every segment of the circuit board is continuously checked for voltage spikes, short circuits and temperature breaches. In addition, the luminaries feature a Light Normalizer that continuously measures reductions in light output and, if necessary, automatically compensates for them'.

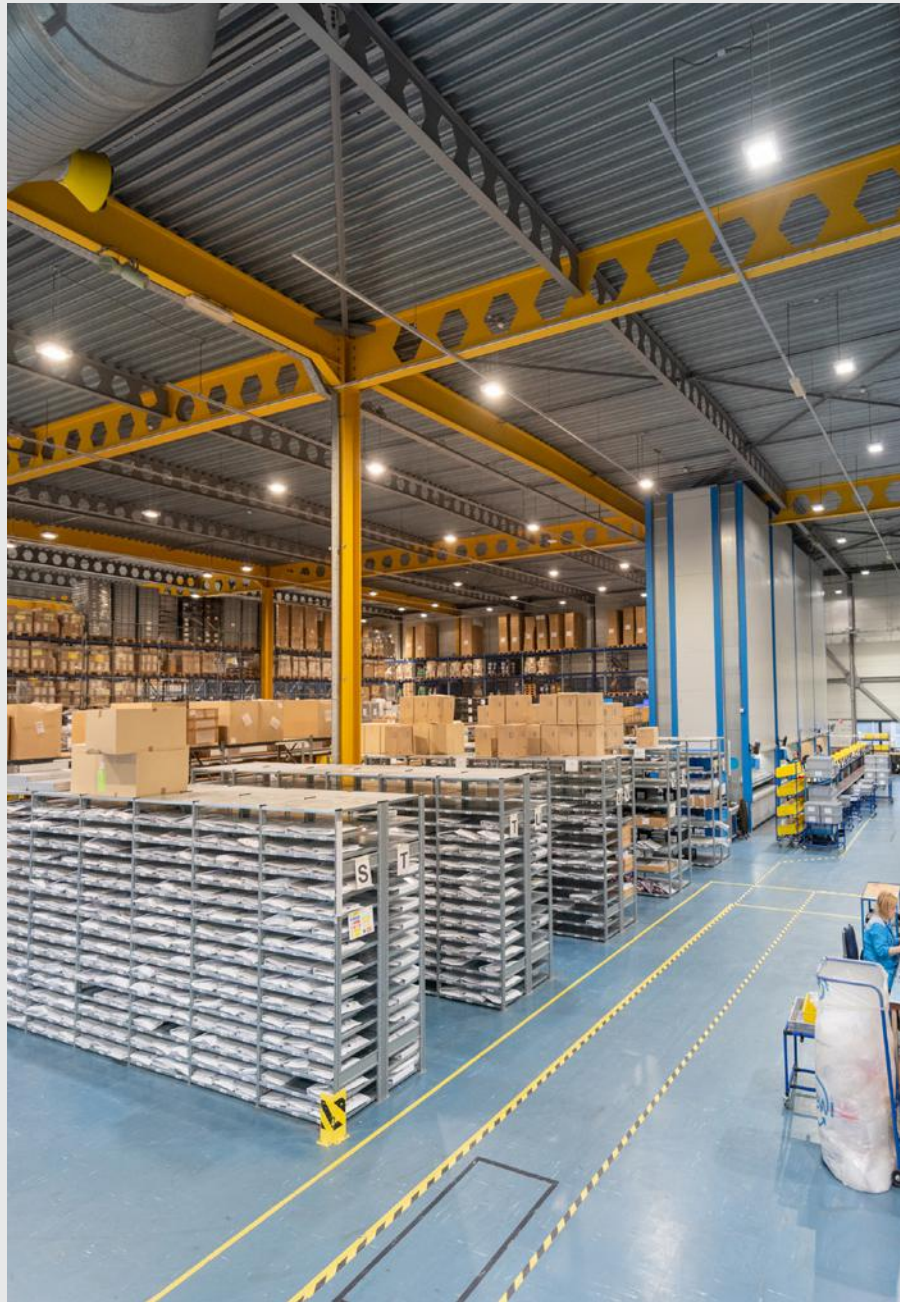
AUTOMATIC DIMMING

'The lighting at GKN Fokker Elmo is set to a minimum of 500 lux, but can be scaled up to 700 lux if need be', says De Jonge. 'This higher light level is particularly desirable in those areas where quality checks are carried out and/or labels need to be read.' Varying and often limited staffing levels in the warehouse mean that all lighting is being dynamically controlled. 'A marked improvement on the old situation, in which the light was on full power from 7 a.m. until 6 p.m.' 'When staff enter the warehouse, the lighting switches on automatically up to a pre-determined level, taking into account the daylight ingress, room temperature and the applicable aviation and health and safety standards. 'Subsequently, the lighting automatically dims back down to a minimum light level (c. 30%). The upshot of this being optimum energy-efficiency coupled with optimum safety.'

For the purposes of installing the Luci Series Industry LED luminaries, Bever Innovations used the existing lighting infrastructure, explains De Jonge. 'The LED luminaries were powered by the existing lines, which we sealed off with special blanking plates. All luminaries are suspended approximately one metre below the ceiling, in spots where lighting is desirable. Rather than 306 fluorescent lights, the space now accommodates just 70 Luci luminaries, despite the lux value, colour accuracy and uniformity being considerably higher.'

INTELLIGENT LUMINARIES

'When choosing new lighting, we not only considered the technical properties but also the price and cost recovery period', says Wisse. 'Bever Innovations wasn't the cheapest party, but they did offer a huge amount of intelligence at only a small additional cost. In addition to motion and daylight sensors, plenty of control options have been built in to the modular luminaries. The lighting equipment is easy to manage and is controlled using an app on a smartphone/tablet. What's more, it'll be possible to link it up to the emergency lighting and/or evacuation alarm in the future. And if we want to renovate and/or extend the warehouse in a few years' time, adapting the lighting accordingly will be relatively straightforward. Making our warehouse ready for a sustainable future!'



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