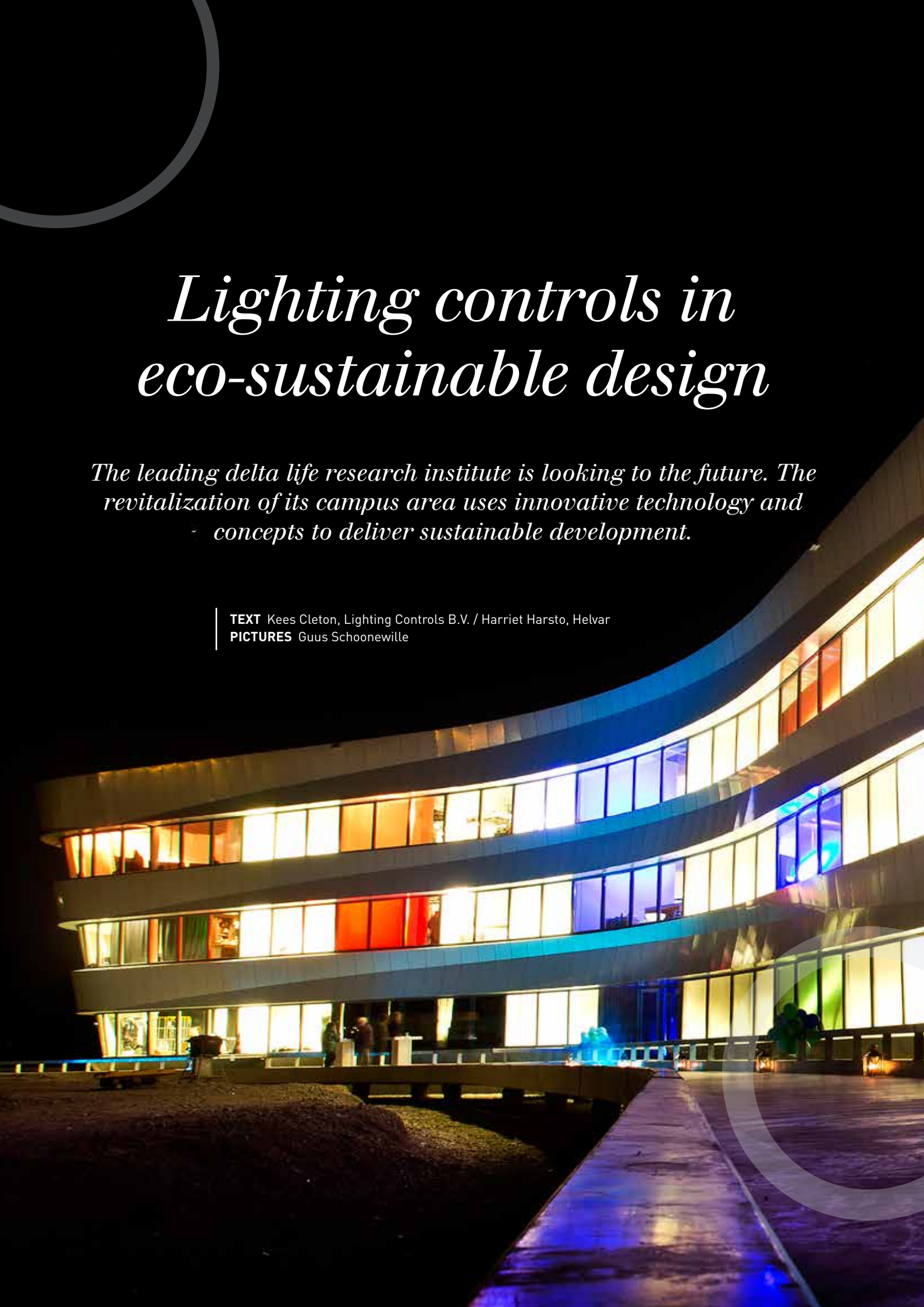
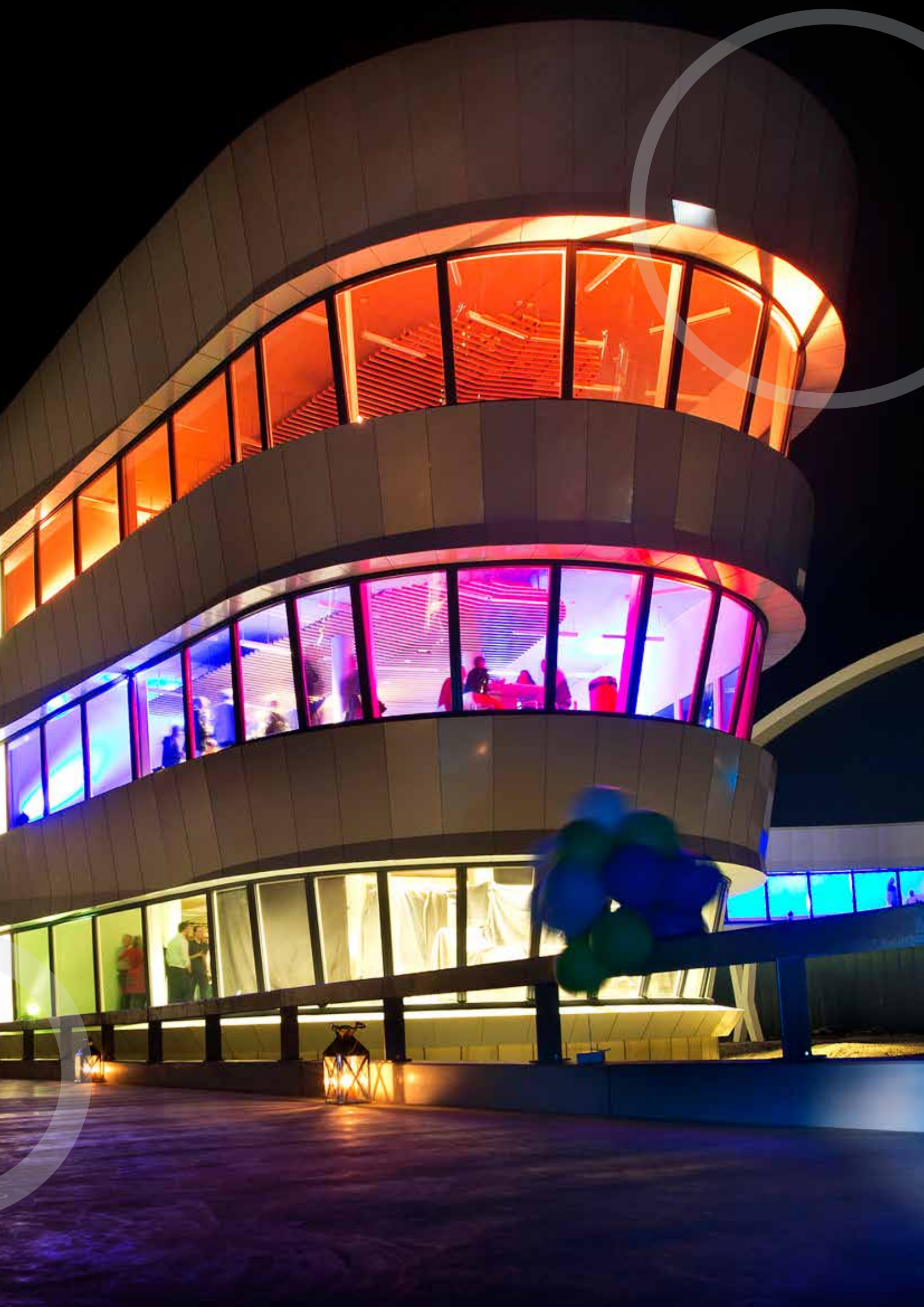
Lighting controls in eco-sustainable design

The leading delta life research institute is looking to the future. The revitalization of its campus area uses innovative technology and concepts to deliver sustainable development.

TEXT Kees Cleton, Lighting Controls B.V. / Harriet Harsto, Helvar
PICTURES Guus Schoonewille





Deltares is an independent institute for applied research in the field of water, subsurface and infrastructure. Deltares applies its advanced expertise worldwide to help people live safely and sustainably in delta areas, coastal zones and river basins. To encourage collaboration and knowledge exchange inside the organization, Deltares decided to revitalize its campus area in Delft, South-Holland.

ENABLING SUSTAINABILITY

The revitalization of the Deltares campus includes a new office building, a conference centre and new test facilities, all reflecting the mission of Deltares: enabling sustainable delta life. Deltares has applied its own Eco Dynamic Design (EDD), which links the development of a site or infrastructure to the specifics of the location, generating positive effects in terms of ecological values, soil, water and air quality, possibilities for recreation, and options for future use and experience. The Deltares mission "Enabling Delta Life" is realized by using the campus as a testing ground for innovative technology and concepts.

Delft-based Jeanne Dekkers Architectuur designed the new office and meeting buildings to fit into the environment and current buildings, keeping in mind the Eco Dynamic Design principles of Deltares. The two buildings, Tetra and Pavilion, use mainly natural materials, such as wood, and natural, light colours in the decor. Tetra, the new 6 100 m² office building, symbolizes the transparent way Deltares wants to operate and to encourage knowledge exchange within the organization. Tetra is an energy and CO_2-efficient building featuring a green roof, and a façade that adapts to its changing orientation. With three storeys, windows starting from ground level, and three wings on each floor radiating from the central staircase, the building is designed for 360 workstations, also including meeting areas and test facilities.

> *"The Deltares mission "Enabling Delta Life" is realized by using the campus as a testing ground for innovative technology and concepts.*

Tetra (down left) is an energy and CO_2-efficient building featuring a green roof, and a façade that adapts to its changing orientation.

> *The intelligent daylight control and presence detection in the office spaces enhance the Eco Dynamic Design principles.*

FREEDOM FOR LIGHTING CONTROL

All offices and the pavilion are equipped with digital DALI luminaires controlled with a Helvar lighting control system. The intelligent daylight control and presence detection in the office spaces enhance the Eco Dynamic Design principles, providing energy efficiency and a comfortable working environment with correct light levels in workspaces at all times. Corridors and public areas are controlled from a centralized user interface to achieve safety, ease-of-use and efficient use of lighting.

System facts

- 13 x DIGIDIM 910 Router
- 2 x Imagine 920 Router
- 210 x iDim 315 System sensor
- 10 x DIGIDIM 317 High Bay PIR Presence / Absence Detector
- 20 x DIGIDIM 444 Mini Input Unit
- 10 x DIGIDIM 498 8 channel Relay Unit
- 1 x uSee User Interface
- 1 x Helvar IP Driver (Tridium)
- Architect: Jeanne Dekkers Architectuur
- Helvar lighting control system implementation: Lighting Controls B.V.