

LIGHTLIFE

5

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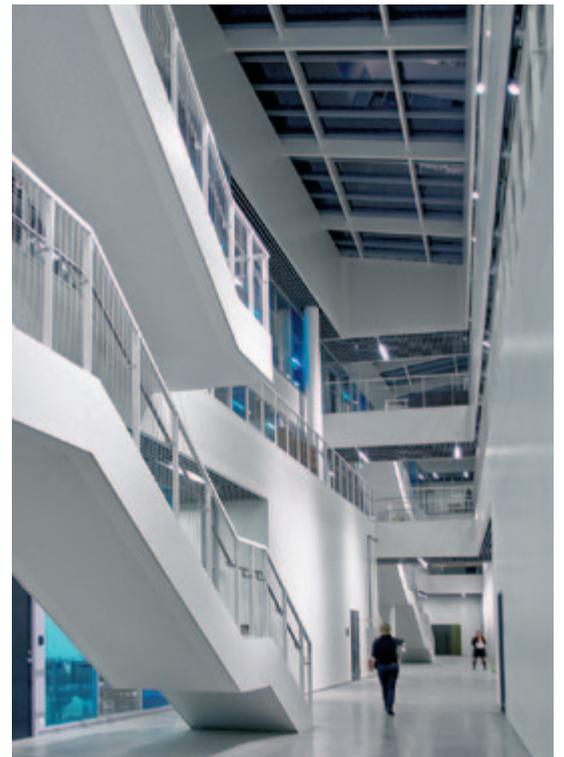
Topic:
**WHAT
CONNECTS
US?**



Client: EFF, Reykjavik/IS
Architecture: Henning Larsen Architects, Copenhagen/DK, ARKIS Architects, Reykjavik/IS
Lighting Design: VERKIS, Reykjavik/IS
Electrical Installation: Rafmiolum hf, Reykjavik/IS
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REYKJAVIK UNIVERSITY

NORTHERN CLARITY



Artificial light and an efficient lighting control system play an important role all over the campus because of the typical lighting conditions in northern latitudes (top).

The individual departments are arranged around the central circular hub in the shape of a star. The open fan-shaped floor plan brings the surrounding beach and forest landscape right inside the campus (left page).

Cutting edge, integrated, modular and minimal dimension lighting system for the new campus of Reykjavik University

Located half way between established European and North American academic centres, Reykjavik University is developing into a new top address for research and technology. The star-shaped campus converging on a central circular hub was designed by Henning Larsen Architects, Copenhagen, in conjunction with ARKIS Architects, Reykjavik. It is located between Reykjavik's old city airport in the west, the city's most popular beaches in the south, and a forest area in the north and east. Further building modules can be added to the central circular hall retrospectively. Northward and eastward extensions to the length and width of the fan-shaped building modules radiating from the central area are possible and envisaged. The floor plan is open towards the outside, which allows integration of the beach and forest landscape far into the core of the premises. Apart from endowing all of the rooms with the unique quality of a natural environment, this layout also permits optimal illumination and heating with natural daylight, which is a first significant aspect contributing to the sustainability of the building. The campus design was not only intended to realise cutting edge and sustainable building technologies, but to make it possible to study these technologies themselves as well. Since moving into the premises, students and teaching staff can for example study the phenomena of the special northern lighting conditions using data from Zumtobel's Luxmate daylight sensor, which normally merely supplies the automatic daylight-based lighting and blind control system with measured data.

The lighting management solution developed by the lighting designer Gudjon L. Sigurdsson itself also makes maximum use of innovative technologies for ultimate comfort and flexibility of the building. Litenet with the integrated emergency lighting technology Onlite, permits flexible and conveniently easy response to changing area usage. Most of the luminaires were supplied with Dimming On Demand (DOD) ballasts. The decision whether a luminaire should be dimmable or not therefore only had to be made after initial operation. The large number of luminaires made a considerable cost saving possible. A 'maintenance cockpit' fully integrated in the control interface (Object Linking and Embedding for Process Control) allows optimisation of maintenance intervals. This reflected by lower maintenance costs.



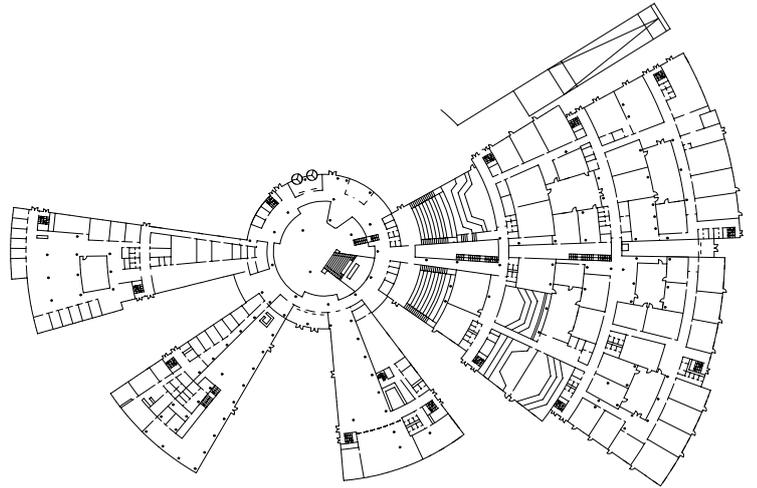
Most of the building has a specially designed ceiling system with perforated slat-shaped sheet metal segments which also integrates the illumination. Zumtobel won the competition for the best possible fulfilment of the diverse illumination requirements initiated by the client.





The modular luminaires can be adapted to the many different illumination situations in the building. As well as being a distinctive feature of the campus design, sustainable and cutting edge building technology is also a subject that can be studied at Reykjavik University.

Floor plan on a scale of 1:2000. The radial arrangement of the individual departments around the central area permits future extensions to the length and width of the building.



The Luxmate blind control system was developed further to meet the special local lighting conditions: in northern latitudes sunlight strikes the earth at small angles for long periods of time. The sophisticated light management system is apparent to the occupants of the building because of touch screens in all lecture and seminar rooms, which control the local automation modules. Staff can save valuable lecture time normally spent adjusting the lighting by storing their personal light settings and selecting these when booking lecture theatres.

For most of the building, the architects and lighting designers opted for a ceiling system composed of rolled and partially perforated, slat-shaped sheet metal segments. These are effective acoustically, allow ventilation from above the ceiling surface, and hide the ceiling installations. All the slats are aligned towards the central circular hall and therefore automatically serve for orientation. The luminaires integrated in these slats are intended to enhance this effect. The client initiated a competition among several lighting system manufacturers for the development of these luminaires, which additionally had to fulfil the illumination requirements of the lecture theatres, seminar rooms, offices, libraries and thoroughfares. Zumtobel's success in this competition is attributable to a concept that offered a number of advantages: high luminaire efficiency despite very small dimensions, complete fulfilment of the anti-glare specifications, simple modularity allowing easy in-situ adjustment to the particular lighting requirements. The fact that 'technology' is the subject of the building is fittingly illustrated by a visible T5 lamp and a visible luminaire interior. At the same time, reference is made to natural phenomena that are unique to Iceland. The crystalline clarity of the luminaire is reminiscent of the typical clear lumps of ice on the Icelandic lava beaches.

It was moreover possible to improve the efficiency of the luminaire by over 15% compared to values expected using standard technologies, by means of translucent side reflectors, optimised mini grids and an optimal lamp operating temperature. The modularity of the design allows free positioning on a carrier section, as well as wallwasher and free illuminating versions. By making maximum use of the still existing advantages of T5 lamps, coupled with staging this lamp as a protagonist, the luminaire became a kind of, 'paean of praise of the fluorescent lamp' in times in which it seemed that innovation simply had to involve LEDs.

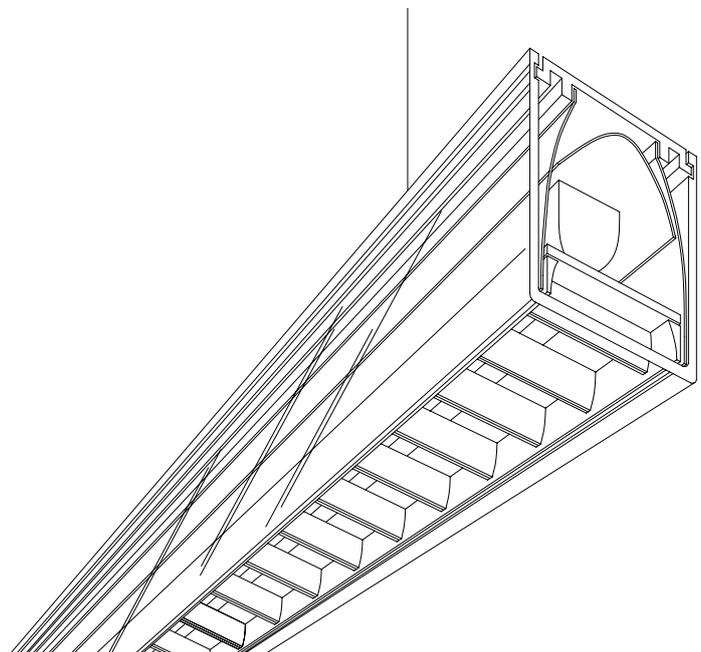
The basic design of Reykjavik University was developed before the world financial crisis, which affected Iceland particularly severely. It was nevertheless extensively realised during the crisis. The special circumstances of the crisis lead to even better and more sophisticated, cutting edge solutions.

Lighting Solution

RU-SLIMLIGHT/Z-fortyfive special luminaire, PERLUCE surface-mounted luminaire, FEW louvre luminaire, VIVO spotlight, LITENET light management system, ONLITE emergency light system



The illuminant specially developed for the building offers a very high efficiency despite its very small dimensions and fulfilment of the anti-glare specifications. The illuminant used is a visible, innovative T5 lamp.



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excellent colour rendition,
maintenance-free
operation and sophisticated design.

The interaction with
intelligent lighting control
systems creates
dynamic solutions providing a
perfect combination
of lighting quality and energy
efficiency.



Intelligent lighting solutions
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a perfect balance of lighting
quality and energy
efficiency - HUMANERGY BALANCE.

 **EuroShop**
Düsseldorf, Germany
26.2. - 2.3.2011
Hall 11, Stand A16



*DISCUS – form follows LED, boasting a flat design and an innovative cooling system.
Design: EOOS*



Track-mounted and ceiling-recessed versions, fitted with efficient light sources, provide for solutions in a consistent design.



The new track-box/adaptor platform in a compact, unobtrusive design emphasises the minimalist spotlight concept.

