

The VELUX logo consists of the word "VELUX" in a bold, white, sans-serif font, with a registered trademark symbol (®) to its upper right. The text is centered within a solid red rectangular background.

VELUX®

The word "Commercial" is written in a white, sans-serif font and is centered within a solid black rectangular background.

Commercial

The background of the entire page is a photograph of a modern building's interior. It features a series of white, curved architectural elements that create a sense of depth and light. Sunlight filters through the structure, casting soft shadows and highlighting the textures of the materials.

DESIGNING
WITH **DAYLIGHT**

DAYLIGHT DESIGN GUIDE

Transforming spaces with daylight and ventilation through the roof

A roof has more purpose than simply keeping the rain out – it presents a unique opportunity to bring in daylight. Daylight through the roof can transform a space like no other façade.

The introduction of daylight and fresh air allows people to enjoy a room – any room, all year-round. Students learn better in schools and office employees are more productive at work with fewer days of absence.

Rooflights improve an indoor climate, while also helping to reduce energy consumption and carbon footprints. If we replace mechanical ventilation with fresh air through the roof and artificial lightning with daylight, it's to the benefit of both people, and planet.

VELUX Commercial designs and manufactures daylight and ventilation solutions for industrial, commercial, and public buildings.

In our design guide, we hope to encourage and inspire you to design buildings, where generous levels of daylight and fresh air is used to transform spaces into favourite places.

Enjoy the read!

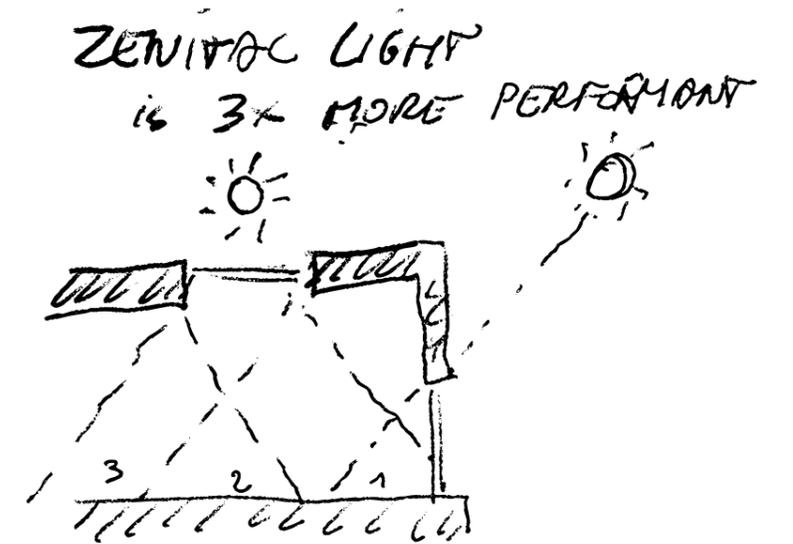
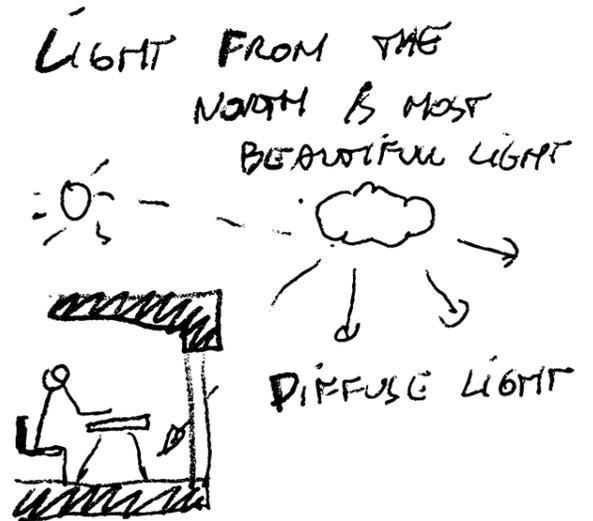
Anna Spring

Senior Vice President, VELUX Commercial

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Daylight and natural ventilation solutions for working, learning and shopping

On average, people are now spending up to 90% of their time indoors.

Daylight and fresh air are playing increasingly important roles in architectural design choices. The positive impact of this includes improved well-being with productivity being increased by employees by as much as 15%.

Rooflights also play a central role in removing unwanted smoke and toxins from a building in the event of a fire or spillage. When using rooflights, energy consumption caused by artificial lighting can also be reduced by as much as 50% in some commercial buildings.

But many commercial buildings are not incorporating daylight solutions into their project design plans. Part of the reason is that building owners and decision makers are not aware that simple and functional daylight solutions exist, allowing fresh air and natural light to transform spaces benefitting people and the planet.



Daylight and ventilation facts and figures

There is a 15% increase in productivity and the learning development of students when offices and schools have access to plenty of daylight and fresh air.

(Source: World Green Building Council 2013)

↑ +15%

19% of global energy consumption comes from electric lighting. Daylight solutions can reduce electricity consumption by as much as 50%.

(Source: International Energy Agency SHC Task 61)

↓ -50%

Commercial buildings use 15-20% of the worlds' energy consumption.

(Source: Sustainable Workplaces for Human Health and Productivity, FAIA, 2019)

→ 20%

There is a 10% decrease in employee performance when temperatures are too high or low.

(Source: Seppänen, O., W.J. Fisk, and Q.H. Lei 2006)

↓ -10%

Daylight and comfort ventilation combined with heat control prevents glare and direct sun exposure, offering unique possibilities to create healthy, comfortable and more productive indoor spaces.

(Source: Healthy Home Barometer 2016-19)

People spend about 90% of their time indoors.

(Source: International Energy Agency SHC Task 61)

→ 90%

47% of office workers have no natural light in their working environment.

(Source: Human Spaces 2015)

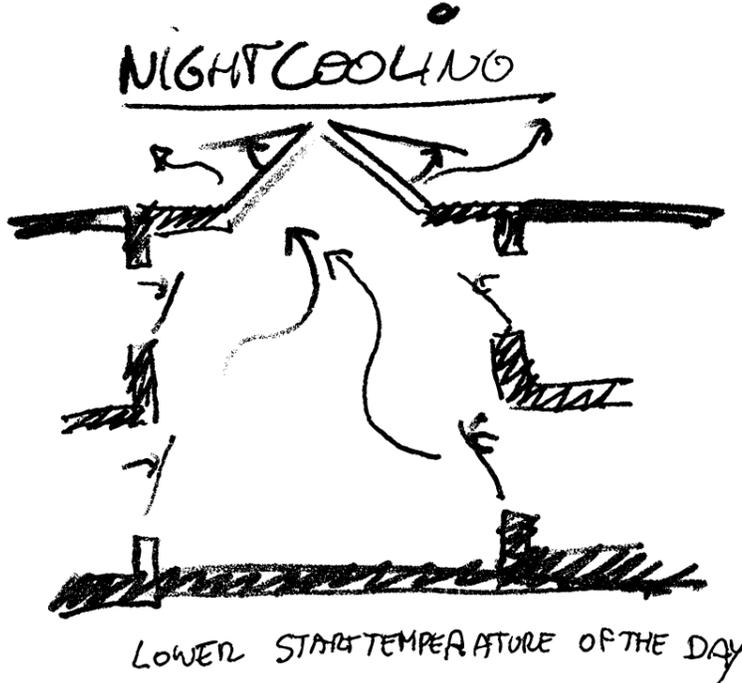
→ 47%

Natural ventilation can reduce air-conditioning and energy consumption by 30-50%.

(Source: CE classifications according to EN Standard)

↓ -50%





Creating a healthy environment and sustainable future

Sustainable buildings can have a positive impact on both people and the planet. A core purpose of VELUX Commercial is to contribute to a better indoor climate that improves well-being, as well as helping to reduce energy consumption through the introduction of daylight in commercial building spaces.

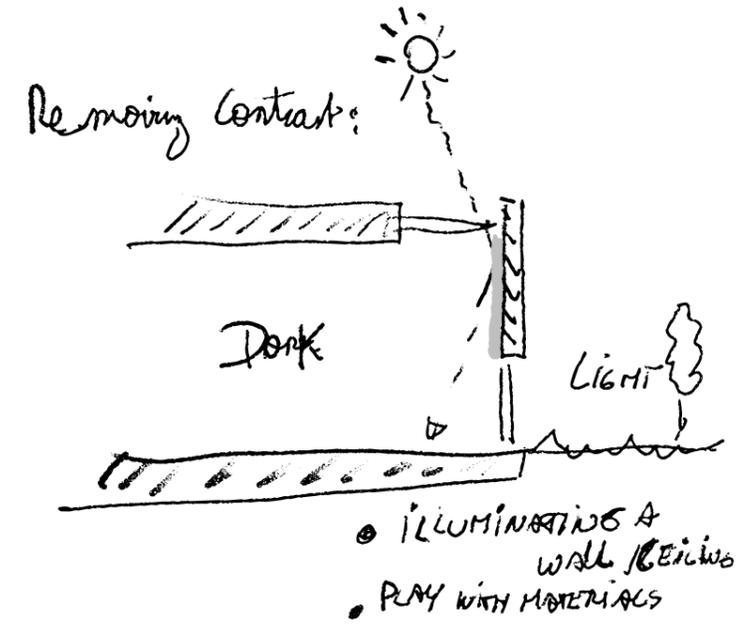
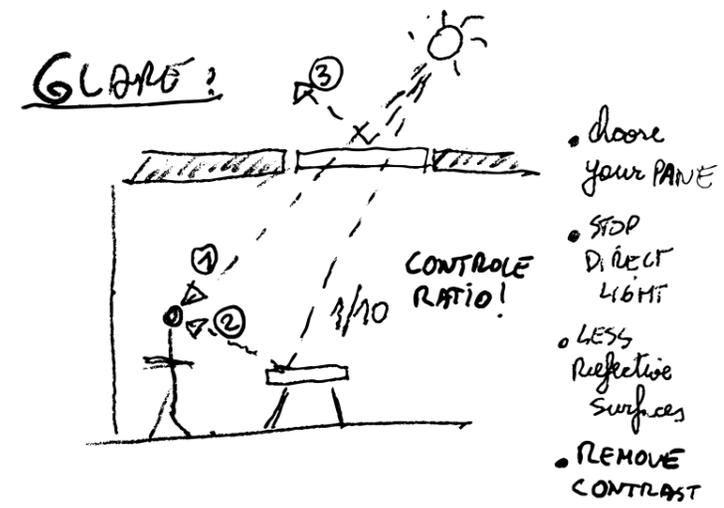
Natural ventilation also plays an important role in sustainable approaches to design. Not only does it provide additional comfort to people with unwanted toxins able to be removed from a building space, but a reliance on air conditioning is also reduced when rooflights are able to provide fresh air as an alternative cooling option.







SUSTAINABLE
BUILDING
CERTIFICATES



Valuing sustainable certification

Why certification matters

When a building receives a sustainable certification, this further illustrates the important role sustainability plays in the design phase; the key components of a project can be prioritized when looking to improve the quality of a building.

Daylight and natural ventilation play an important role in sustainable design, helping to make energy usage more cost efficient, while also improving the wellbeing of building occupants. Our daylight and ventilation solutions can be incorporated into certification schemes and contribute to a healthier indoor climate for people and the environment.

Sustainability can lead to certification

Sustainability is a fundamental part of our business model. We continuously seek to minimise our footprint and wish to lead in the development of healthy and sustainable buildings, in close communication with designers and planners in the building sector.



Overview of sustainable building certificates

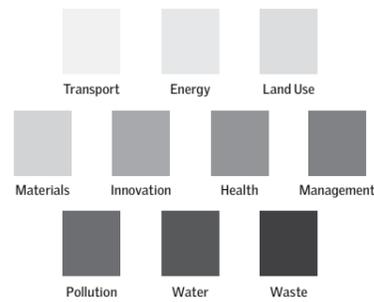
Eight of the most common planning tools and their respective structures pursue a holistic strategy that encompasses energy and other environmental issues, as well as indoor climates. Life cycle costing also plays a role in the DGNB systems.

The WELL Building Standard focuses only on aspects of health and well-being. Most schemes offer several levels of certification (such as Silver, Gold and Platinum) whereas others, such as Active House, put a stronger emphasis on planning guidance.

BREEAM

Initiated by	BRE (Building Research Establishment) Group
Year	1990
Website	www.breeam.com

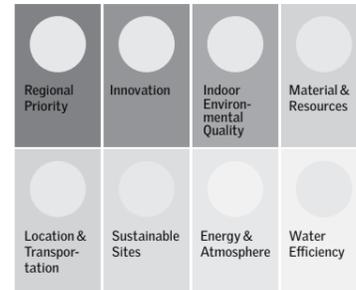
Structure



LEED

Initiated by	U. S. Green Building Council
Year	1999
Website	www.usgbc.org

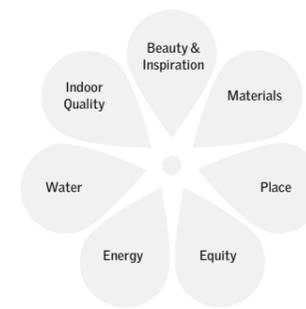
Structure



THE LIVING BUILDING CHALLENGE

Initiated by	International Living Future Institute
Year	2006
Website	www.living-future.org

Structure



DGNB

Initiated by	German Sustainable Building Council (Deutsche Gesellschaft für Nachhaltiges Bauen/DGNB)
Year	2008
Website	www.dgnb.de

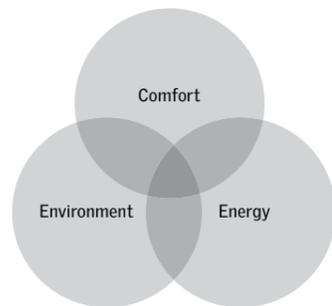
Structure



ACTIVE HOUSE

Initiated by	Active House Alliance
Year	2012
Website	www.activehouse.info

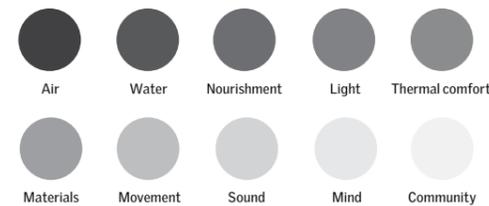
Structure



WELL BUILDING STANDARD

Initiated by	International WELL Building Institute (IWBI) and Delos Living LLC
Year	2014
Website	www.wellcertified.com

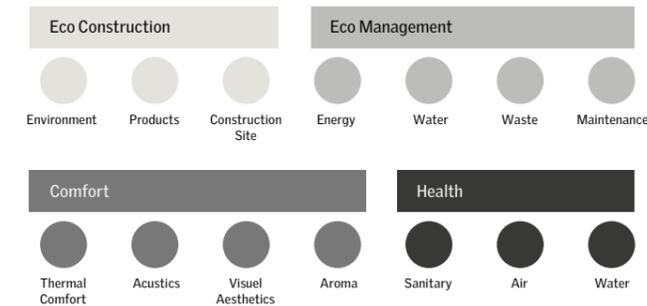
Structure



HQE®

Initiated by	Haute Qualité Environnementale (HQE)
Year	1995
Website	www.behqe.com

Structure



BNB

Initiated by	Assessment System for Sustainable Building (BNB) (In association with DGNB and BBSR)
Year	2015
Website	www.bnb-nachhaltigesbauen.de

Structure



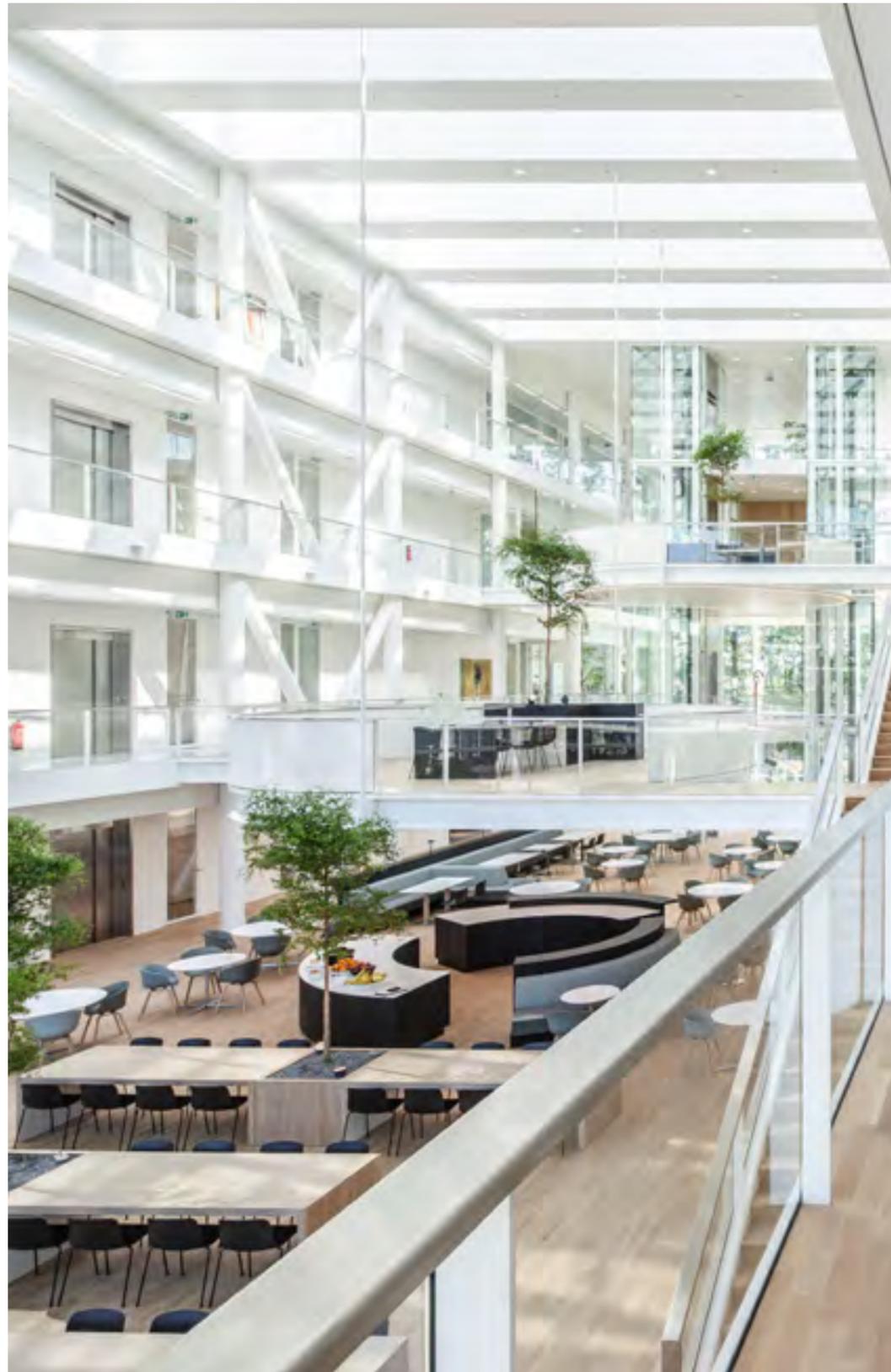


Pushing sustainability boundaries with certification

Contributing to an excellent indoor climate

Certifications help shift industry perspectives, driving change by formalising design and performance criteria so that what was once considered innovative becomes common. The process of evolving certification tools forces stakeholders to raise green building standards in response to new factors such as the Paris Agreement.

Certification is also successful in raising the awareness of sustainability within the building industry. The following is a range of certified buildings in which VELUX Commercial contributed to the excellent indoor climate, helping them achieve outstanding ratings and classifications.



Genmab
Utrecht, The Netherlands

Achievement: BREEAM Excellent



The research facility of international biotechnology company Genmab has a meticulous focus on design, functionality and sustainability.

Utopia Library
Aalst, Belgium

Achievement: BREEAM Excellent



Light and fresh air make visitors forget all about old and dusty libraries. A former military school has been transformed into a modern city library and performing arts academy.





Green Solution House
Rønne, Denmark

Achievement: DGNB and Active House



At Green Solution House, every component in the building contributes to circular sustainability. Daylight plays an important role in the ambitious sustainability strategy of the hotel and conference centre.

DZNE,
German Centre for Neurodegenerative Diseases
Bonn, Germany

Achievement: BNB Gold



Creating a bright and inspiring
research environment.

When planning its new head-
quarters, the DZNE research
centre went for a building that
would reflect its ground-breaking
research and provide a healthy
indoor climate.





Siemens Head Office
Ballerup, Denmark

Achievement: LEED Gold

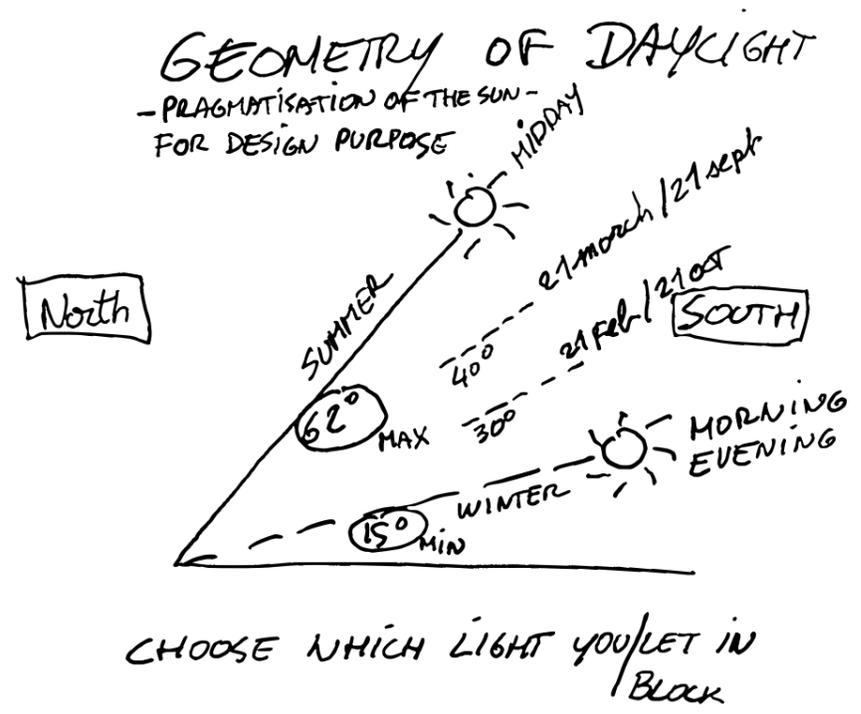


When building a new head office in Denmark, Siemens wanted to take advantage of the latest technologies to create a bright and productive office environment.





DESIGNING WITH DAYLIGHT AND NATURAL VENTILATION



EN 17037

Daylighting in buildings and the importance of EN 17037

In reaction to scattered European daylight legislations, the EN 17037 was introduced.

European Standard EN 17037 was published in 2018 with the aim of helping building designers achieve appropriate levels of daylight in any type of building, making them future proof.

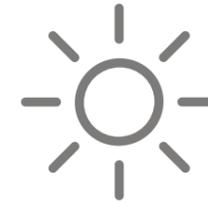
The intent of EN 17037 is to change the focus of building design and the role of glazing in those designs to improve occupant comfort and overall energy efficiency. The need to provide glazed openings and well-distributed daylight to interior spaces, while reducing artificial lighting usage should be considered against the balance between heat loss and solar gains.





WHAT ASPECTS OF DAYLIGHT DESIGN DOES THIS STANDARD COVER?

Although written for new buildings, EN 17037 provisions can also be applied to works undertaken on existing buildings. Some designers may have familiarity with designing to provide daylight, but the other three aspects of design significantly extend the scope of the standard compared to existing best practice.



Daylight provision

Daylight provision or illuminance levels allow users to carry out tasks and play a part in determining the likelihood of artificial lighting being switched on. Assessment can be via either climate-based modelling or daylight factor calculations.



Assessment of window view

Building users should have a large, clear view of the outside. EN 17037 considers the width and outside distance of the view, as well as landscape 'layers' (sky, landscape and ground). The view should be perceived to be clear, undistorted and neutrally coloured. Width of view can be established via a detailed or simplified approach. Outside distance and number of layers are each measured by a single approach.



Access to sunlight

Calculating access or exposure to sunlight is a comfort and health factor for users of dwellings, nurseries and hospital wards. Daily sunlight exposure can be established through detailed calculation or table values.



Prevention of glare

As the name suggests, prevention of glare is concerned with removing the probability of glare for building users, especially those who do not choose where they sit. It uses detailed calculations of daylight glare probability (DGP), or a standard table of values for sun-screening materials.

Designing with daylight and natural ventilation

Improving well-being and comfort

With people spending up to 90% of their time indoors, designing with daylight becomes increasingly important if wishing to improve well-being. Innovative daylight design connects the inside of buildings to the world outside. Natural light helps stimulate the mind and creates comfortable environments for work, study and leisure. When thermal control is combined with natural light and fresh air, comfort and well-being is maximised.

Daylight and ventilation with additional comfort features

VELUX Commercial offers several unique features to help create great daylight designs. The availability of roller blinds, awnings and opening modules for ventilation help reduce heat and glare exposure, as well as providing climate control.





FIVE CONSIDERATIONS WHEN DESIGNING BUILDINGS WITH DAYLIGHT AND NATURAL VENTILATION

Optimize daylight

Maximize windows and rooflights and consider the size, shape and angle of the roof, as well as orientation of the building.

Utilize ventilation modules to provide comfort

Ventilation removes toxins and replaces them with fresh air.

Choose a seamless solution for maximum daylight and transparency

Rooflight designs with smooth interior linings and discreet profiles can eliminate shadows.

Use sun screening blinds and/or awnings

Block glare and heat from the sun.

Prevent glare and direct sunlight exposure

Fritted and opal glazing divert sunrays, bounce heat and let in lots of daylight.

Ventilation and better indoor air quality

Why indoor air quality is important and how to improve it

Indoor air quality is generally a product of two factors: pollutants generated indoors and the levels of pollution in outdoor air surrounding the building. Indoor air with high levels of pollutants can cause general discomfort and a range of negative health effects, including irritation of the eyes, nose and throat.

Good indoor air quality creates a sense of comfort and well-being. The pleasant sensation of pollution-free air, as well as its positive effects can be felt immediately when a person enters a room. Clean air can improve general well-being and mental performance.

A recent study¹ conducted to improve ventilation in 16 classrooms demonstrated how high-quality indoor air improves the learning progress of students. Computerised tasks performed by more than 200 students showed "significantly faster and more accurate responses for choice reaction, colour word vigilance, picture memory and word recognition, at higher ventilation rates"¹.

CO₂ as a key indicator

We now know that indoor air quality affects both health and performance. But which indicator for indoor air quality is generally used in schools and other learning environments?

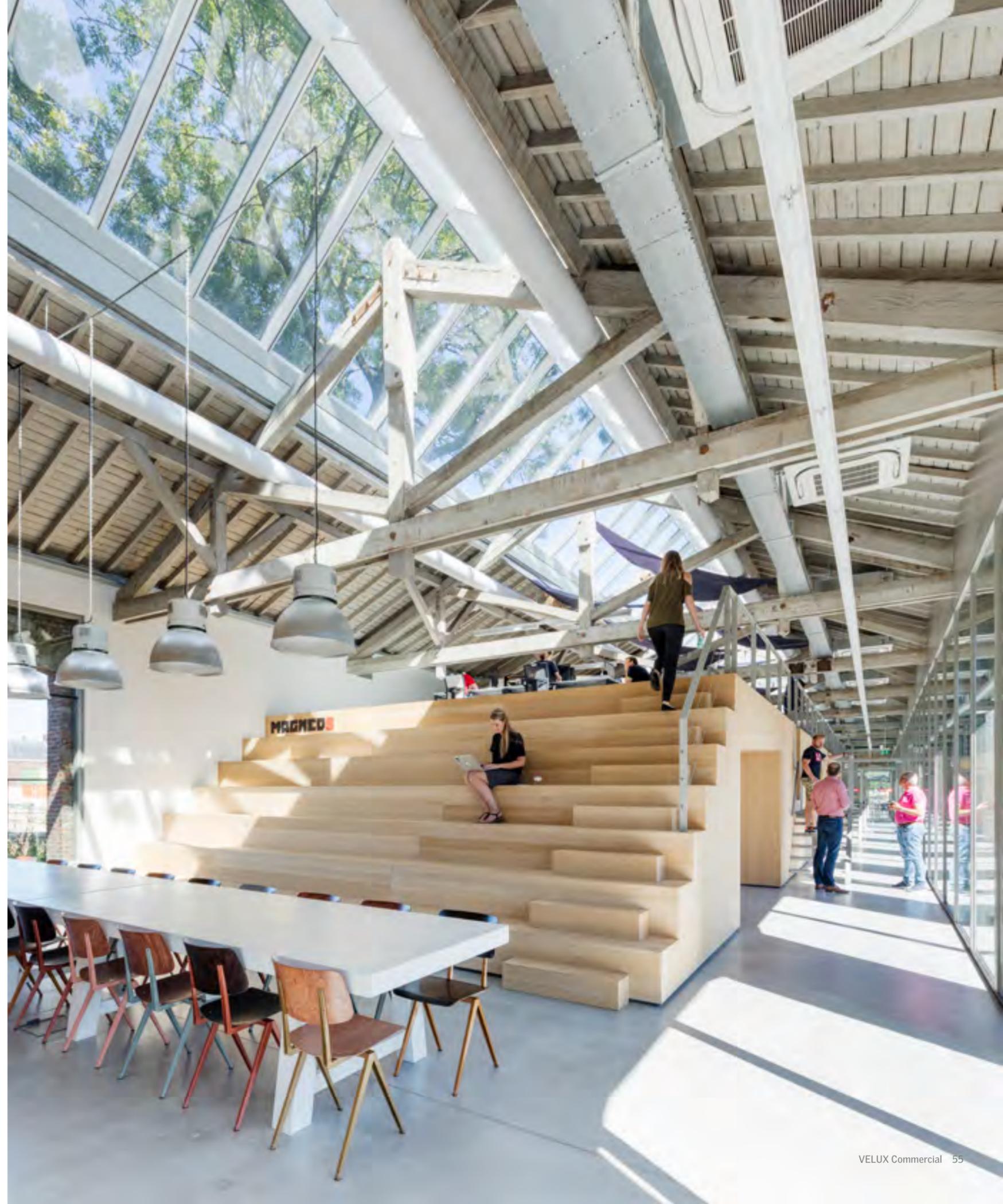
CO₂ – carbon dioxide – is the most relevant indicator for indoor air quality as it relates to people, whether in homes, offices or schools. CO₂ is measured in parts per million (ppm).

Indoor levels rise as a result of human activity and can only be lowered through ventilation. The more CO₂ that is present in a room the more pollutants you are likely to experience overall.

What constitutes good air quality?

Outdoor CO₂ levels are approximately 400 ppm. Because breathing generates CO₂ indoor air will always have a higher concentration when people are present.

A CO₂ level of up to around 1,150 ppm is considered good air quality. 1,400 ppm will be acceptable in most situations, although not for prolonged periods. CO₂ levels above 1,600 ppm indicate lower air quality, and exposure time above this level should be minimised. With our key indicator in place, it's time to look at how designers and architects can improve air quality in buildings.



1) Bakó-Biró, Z., D. J. Clements-Croome, N. Kochhar, et al. (2012), "Ventilation rates in schools and pupils' performance." Building and Environment 48 (0): 215-223.

Combining mechanical and natural ventilation to create a healthy indoor climate

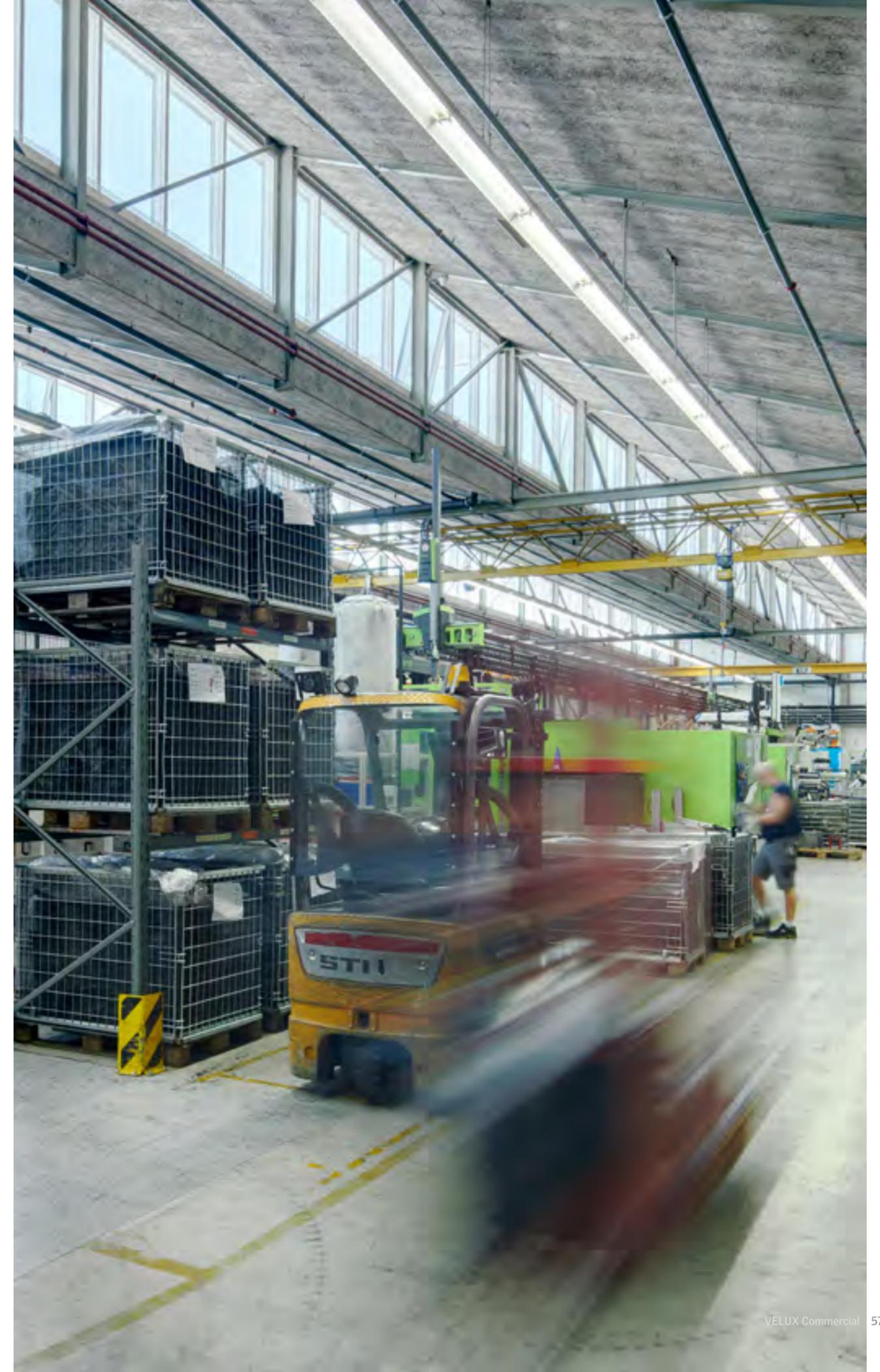
Mechanical and natural ventilation systems work together to improve indoor climates and help reduce potential exposure to viruses and toxins. Mechanical systems create a constant hygienic air change rate while natural ventilation provides the additional climate change required to dilute air sufficiently, for example, when spaces are being used for longer than normal by building occupants.

Natural ventilation uses wind and buoyancy to provide fresh air in buildings and can be used as both background ventilation and to quickly fill a space with fresh air. Providing operable windows gives system users more control and is a simple way to achieve high ventilation rates. Natural ventilation also provides a building with additional air-cooling capabilities in hotter summer months.

Mechanically controlled ventilation is independent from evolving weather conditions such as high or low winds, making it easier to control an indoor climate and maintain temperatures. The ventilation rate also remains unaffected when there's an absence of building occupants.

Strengths and Weaknesses of Natural and Mechanical Ventilation

	Natural ventilation (natural supply and exhaust)	Mechanical ventilation (mechanical supply and exhaust)
Strengths	<ul style="list-style-type: none"> ✓ Very high air change rates can be achieved by airing. ✓ Due to ventilative cooling extra ventilation is stimulated in summer. ✓ Room air cleaners with HEPA filter can be used. ✓ Easy to understand; direct user feedback and personal control. 	<ul style="list-style-type: none"> ✓ Ventilation rate is independent from wind conditions and outdoor temperature. ✓ Ventilation can be maintained during absence without safety consequences. ✓ Direction of air flow is clear. ✓ Room air cleaners with HEPA filter can be used.
Weaknesses	<ul style="list-style-type: none"> ✗ Ventilation rate depends on user behaviour. ✗ Ventilation rate depends on outdoor conditions (e.g. weather, traffic noise). ✗ Use of ventilation facilities depend on the building design (usability, safety). ✗ Direction of air flow depends on indoor and outdoor conditions. 	<ul style="list-style-type: none"> ✗ Increasing the air change rate by airing is not possible. ✗ If centralized air handling units are equipped with a recirculation sector, virus particles can re-enter the building. ✗ No user feedback from mechanical ventilation.



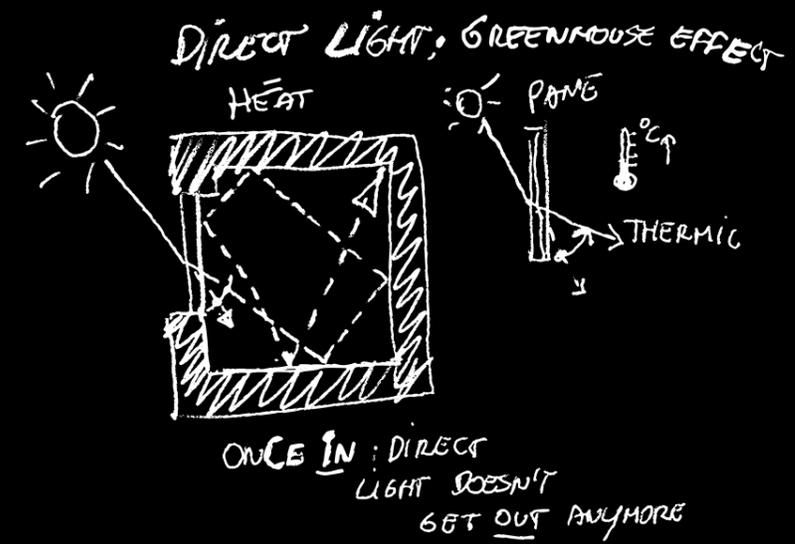
Smoke and heat exhaust ventilation in the event of a fire

Smoke and heat exhaust ventilation (SHEV) is a critical part of commercial building design. Daylight solutions can be specified with SHEV solutions to offer additional safety support in the event of a fire. Our rooflights can be configured to open automatically, removing toxic smoke from a building, and reducing heat exposure to a building's infrastructure. The removal of smoke also assists in helping people leave a building more quickly, while a reduction of heat protects against a potential building collapse.

Smoke and heat exhaust ventilation solutions are designed in accordance with EN 12101. SHEV solutions are tested and regulated to ensure they perform optimally in the event of a fire. Both pneumatical and electrical options are available when choosing a rooflight with smoke and heat exhaust ventilation capabilities, and these designs can be easily incorporated into project planning.







⇒ AVOID DIRECT LIGHT:

- USE YOUR ARCHITECTURAL SHELL!
TO DO SO: LOW TECH
- VENTILATE IF YOU CAN'T PREVENT
DIRECT LIGHT

Adding daylight to your design plans

Incorporating daylight into building design to transform spaces

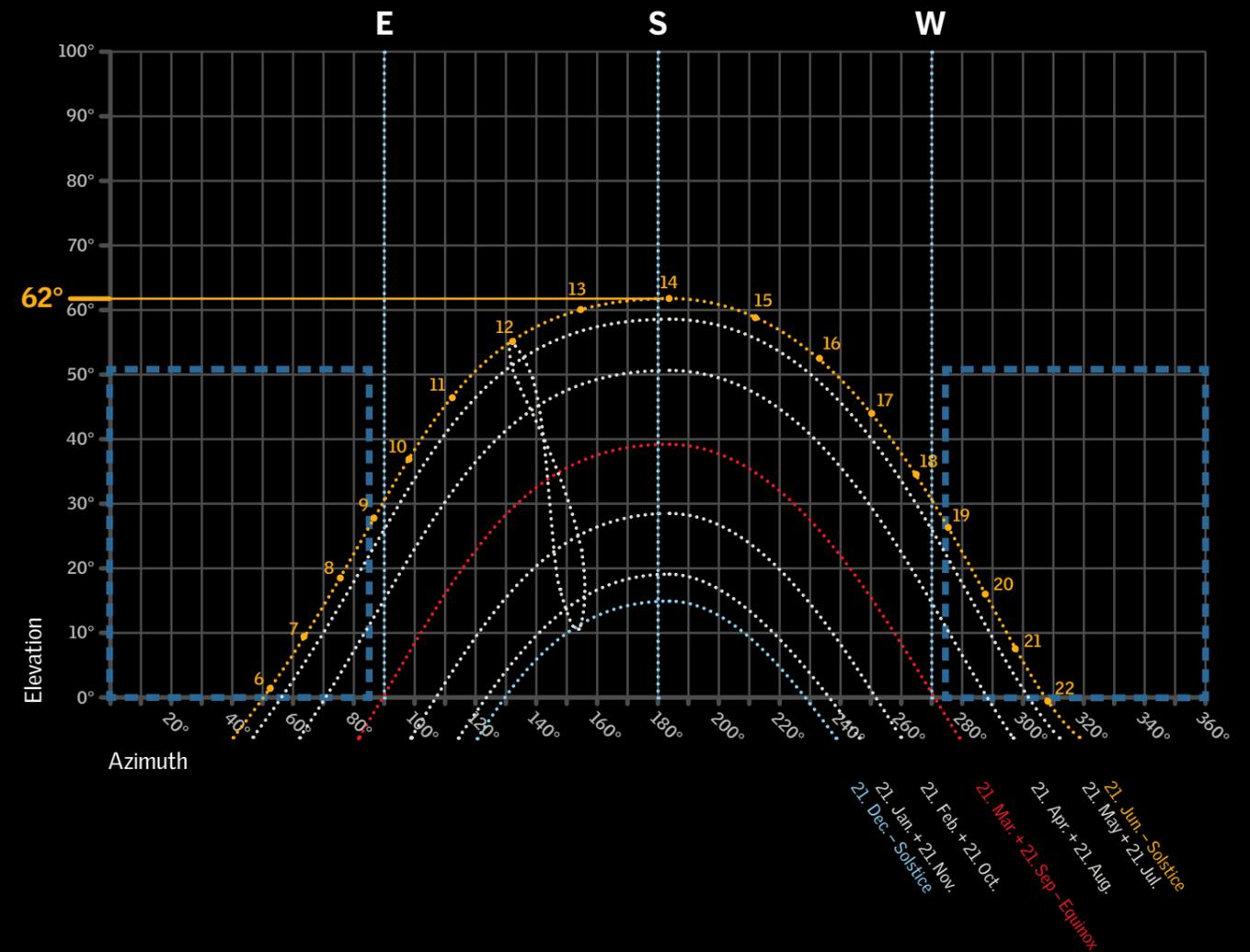
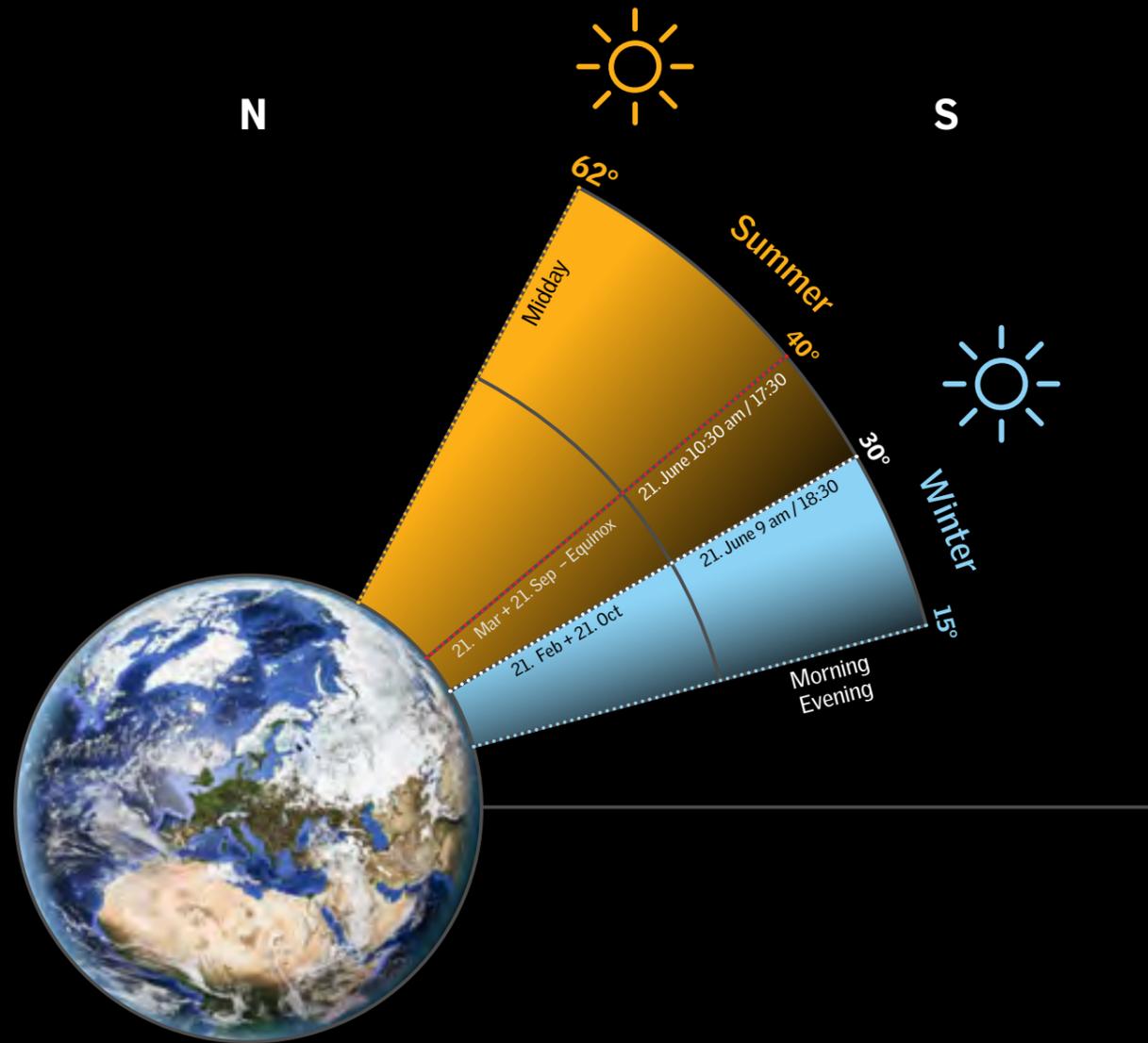
Architects face challenges to create user-friendly, efficient building spaces, which may mean daylight is not a priority in design specifications. However, if embraced and incorporated into designs there are several positives.

- Save on energy usage
- Reduce glare
- Avoid overheating



Understanding how daylight enters a building

Understanding the way daylight enters a building at different times of the year can lead to building designs that optimize the use of daylight.



In summer, light can increase to 62 degrees in certain countries, and understanding this will influence architectural design plans. Glare and overheating are additional challenges that can be overcome with a considered approach and a deeper knowledge of solutions such as diffuse lighting.

In winter, the increase of light is reduced by as much as 15 degrees in certain countries, meaning light enters building spaces gradually and with much less risk to exposure or glare.

This Suntool Earth tool diagram (SunEarthTools.com) shows every specific region and what the highest sun angle is during the year. If you design your building based on the highest angle you can control daylight.

Improving design knowledge to bring daylight into commercial building spaces

Understanding a building's structure and incorporating innovative daylight design allows natural light and fresh air to enter complex buildings, improving occupant well-being and performance while transforming spaces with optimized daylight.

Ensuring you have the daylight knowledge required will also help with making design adjustments. In the following chapter, we showcase three examples of how daylight can be incorporated into building design with simple specification.



Hallway with rooflights.
A typical example of how to open up the roof and incorporate light and the outside view into the building design.



Hallway without rooflights

A multipurpose office

The term multipurpose office is specific to typical offices found adjacent to larger industrial buildings. Because of how they are constructed, these buildings are often unable to bring in natural light through all four sides of the building. You need to overcome several design challenges to create a healthy, well-lit, and enjoyable working environment. Specific challenges to incorporate daylight into complex building spaces include: central staircases, communal kitchens, conference rooms and hallways.



Front



Ground floor

Reception
First impressions should be well lit.

Staircase
How to light up this dark corner?

Kitchen
This is the heart of the building for employees

Meeting room
No windows, no natural light

Sitting corner
Should be a comfortable space for visitors

Hallways
Usually dark



Ground floor and first floor

Positive effect of adding daylight

Traditional layouts of a multipurpose office don't allow much daylight to enter the core of the building. In this example, we show the effect of installing daylight solutions in the roof.

Multipurpose office without rooflights



Dark staircase, insufficient light in the reception area and sitting corners



Hallways, meeting room and kitchen require additional artificial lighting

Multipurpose office with rooflights



Well lit reception area, plenty of natural daylight in the sitting corner and hallways



Well lit staircase, the meeting room, hallways and kitchen area are now comfortable places instead of dark and uninviting

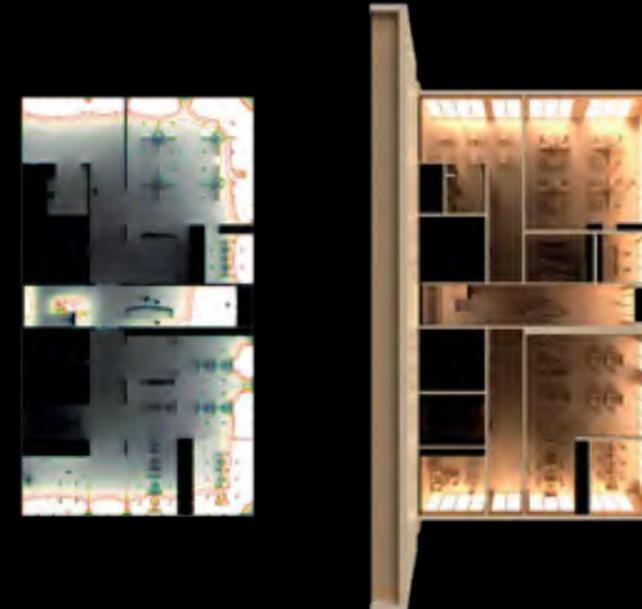
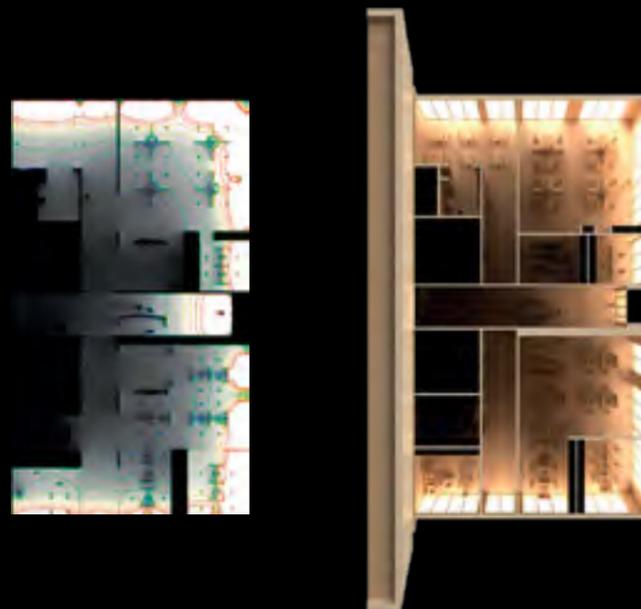
Daylight simulation

The VELUX Daylight Visualizer is a 3D simulation tool that analyses daylight conditions in buildings, showing the amount of daylight gained by adding rooflights which delivered three times more daylight than windows installed in the façade.

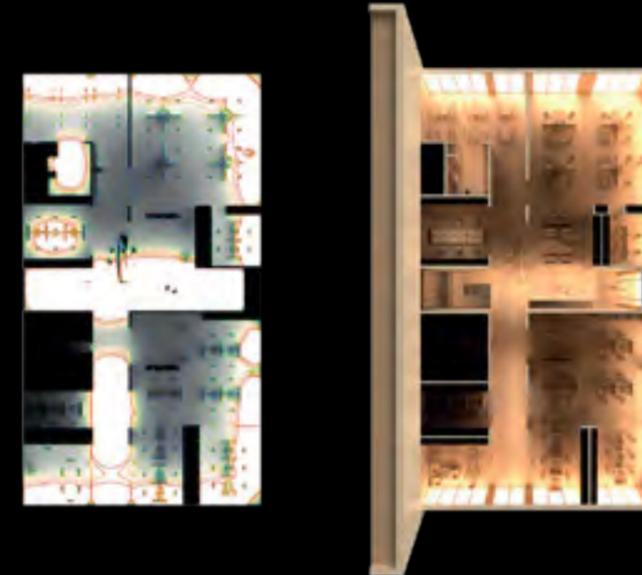
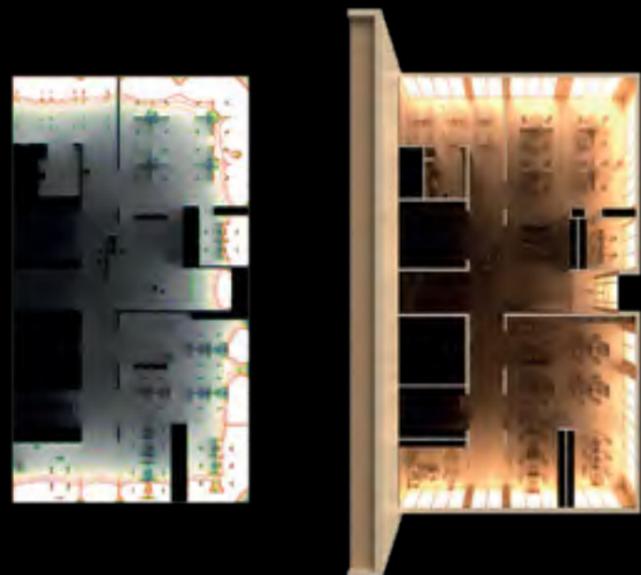
Without rooflight

With rooflight

Ground floor



First floor



Reception area, 3D rendering.



With rooflights



Without rooflights

Staircase, 3D rendering.



With rooflights



Without rooflights

A showroom

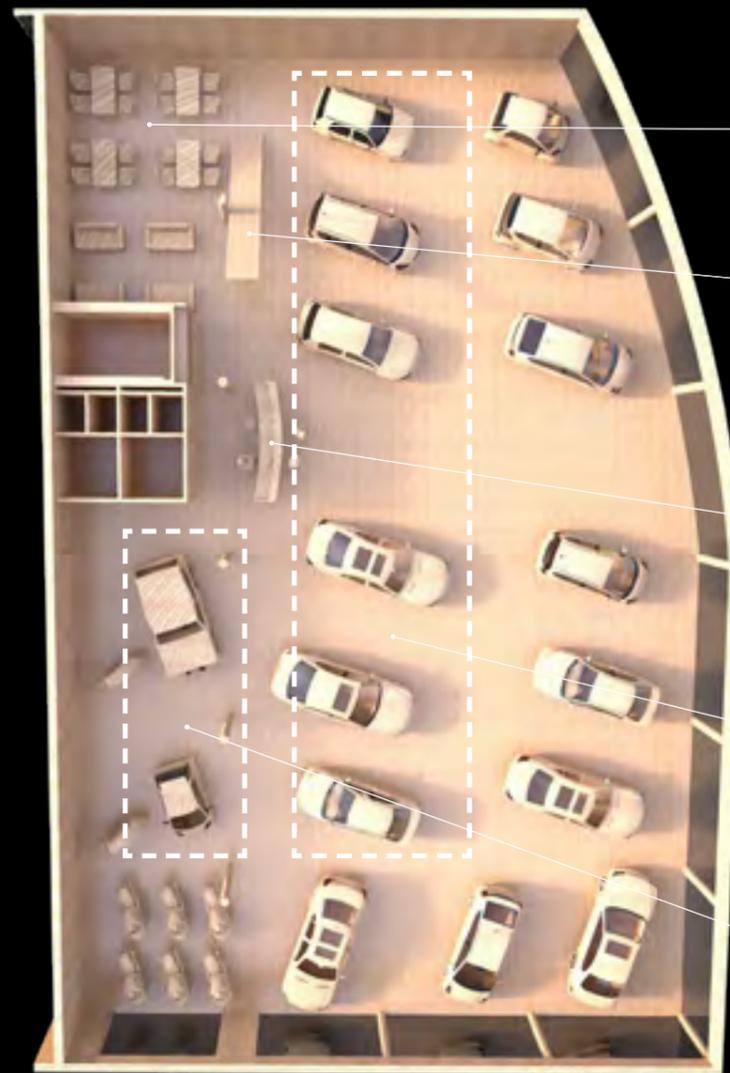
Showrooms are typically large areas that showcase products such as cars. They need to be represented in the best possible light for customers and clients to visualize and invest in products. Because a big surface area is often required, and because of the location of showrooms—as well as budget limitations, it's difficult to bring in natural light through all four sides of these large spaces.

Creating a pleasant and healthy work environment

You need to overcome several challenges, if wishing to create a pleasant environment full of daylight. Spaces that are challenging to transform include central meeting points, waiting areas, meeting rooms and reception areas. Here we take a closer look at the possibilities to overcome the challenge of incorporating natural light into complex building spaces.



Front



Ground floor

Waiting/meeting corner
Often no windows & dark

Staircase
Safety first. SPINE:
Leads to the balcony and
let people overview the
showroom

Reception
Attraction point & first
impression for visitors.
Should be well lit.

Central market zone
Layer 2
How can daylight reach
the deeper part

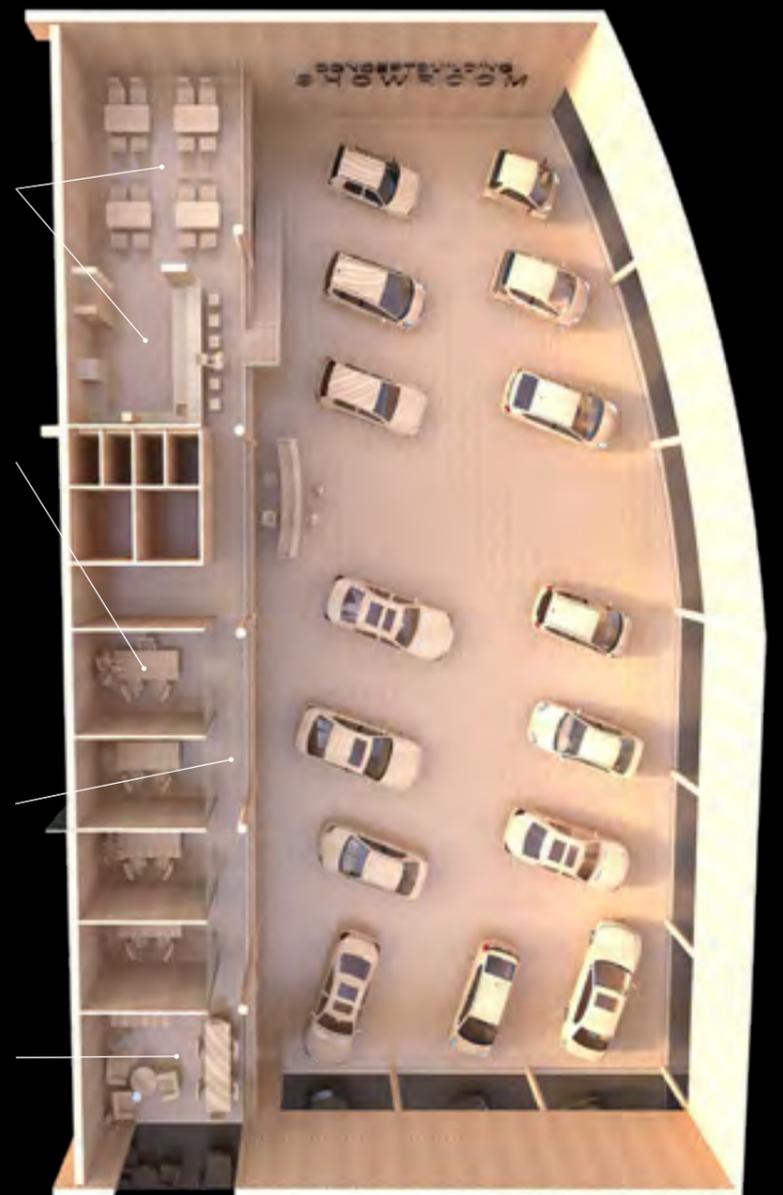
Podium zone
Layer 3
These are the most beautiful
exposed models

Reception/kitchen
This is the heart
of the building for
employees and the
place to invite
the clients

**Meeting room/
Administration**
No windows,
no natural light
• Need for perspective
& outside views
• Enough views:
See EN 17037
• Need for natural light

Balcony
Connecting everything on
first floor. Usually dark

Principals office
With the best
possible overview
of the Showroom



Ground floor and first floor

Deeper interior still not well lit:

Showroom without rooflights



Showroom without rooflights – Larger facade windows



Showroom with rooflights



Adding rooflights potentially requires just 85% of glass compared to facades (100%).

- Natural daylight spreads throughout the entire space
- Extra perspective point on first floor (EN 17037)

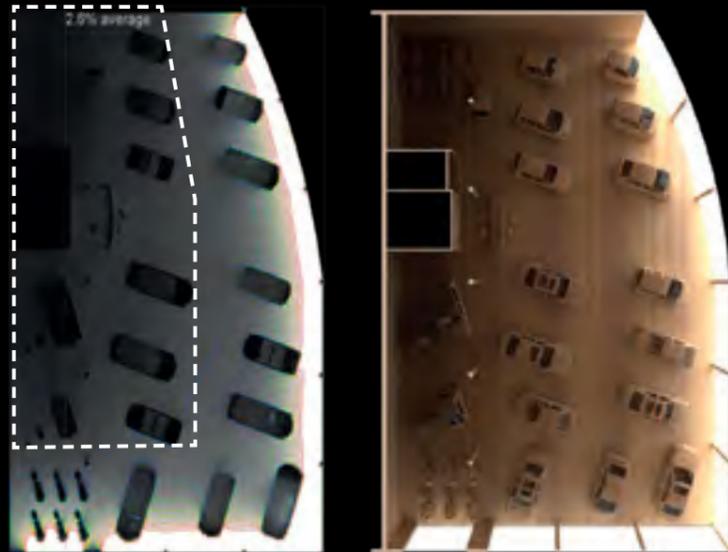
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Windows 300 cm height

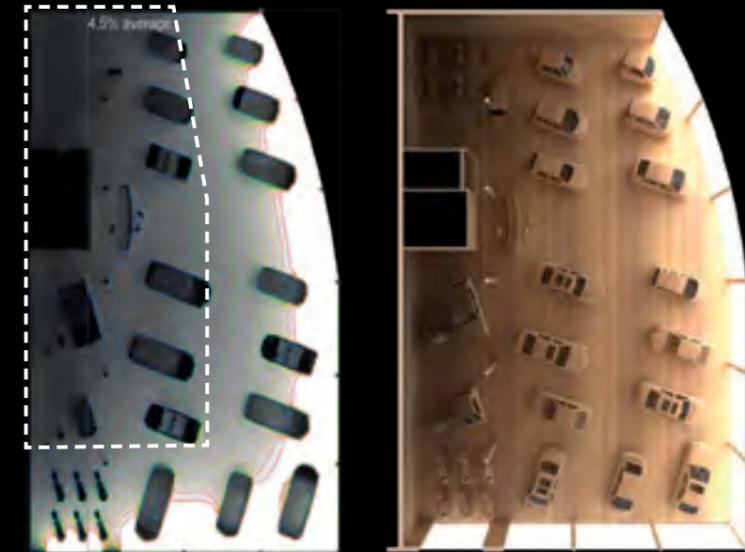
DFav 2.6%
(5%=target)
This option is underperforming

Show room



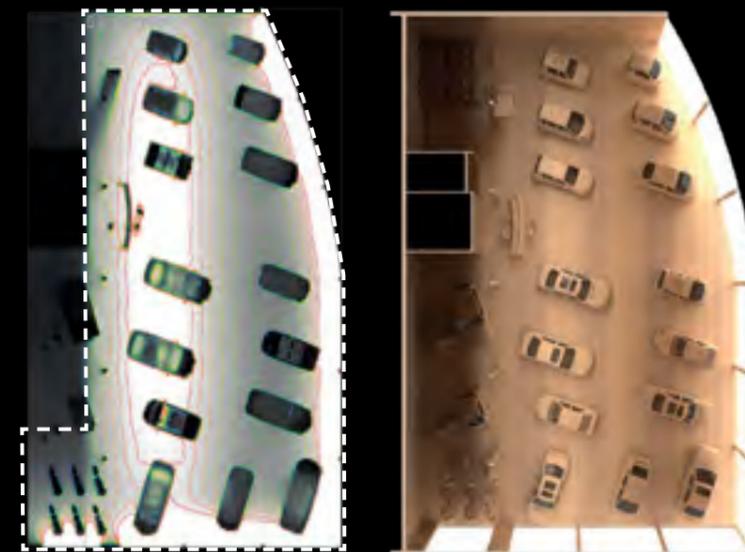
Windows 300 + 220 cm height

DFav 4.6%
but very bad
spreading of light
EN 17037



Windows 300 cm height / With rooflight, Area 85%

DFav 5.8% =
more than enough
light + uniform
spreading
(EN 17037)



Ground floor, 3D rendering



With rooflights



Without rooflights

First floor, 3D rendering



With rooflights



Without rooflights

Auditoriums

In enclosed auditoriums where students and teachers spend long periods of time learning, people can feel cut off from the world outside. Artificial light often ensures a space is lit but combining this with daylight can create a better learning environment with natural light and fresh air.

Daylight and ventilation solutions give learners an energy boost, empowering them to focus and be more productive. A connection to the outdoors can be achieved when building design considers rooflights as part of a building project, allowing fresh air into group spaces while transforming spaces, and improving wellbeing with natural light.



The student:

- 300 Lux on the worktop
- Outside view
- No reflectance on the screen
- No glare in the field of vision



The projection screen

- In the dark: high contrast required
- No direct light on the screen



The teacher

- Outside view
- No glare in the field of vision

Effect of adding daylight



Solution 1

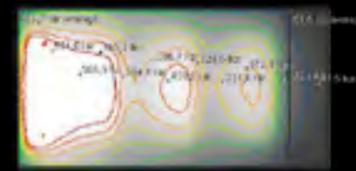
Side window

- More light on teacher vs on screen
- Causes high contrast for the teacher
- Possible direct sunlight on board



Solution 2

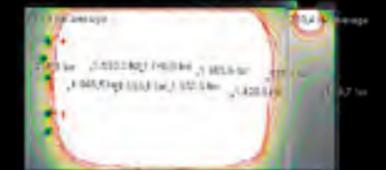
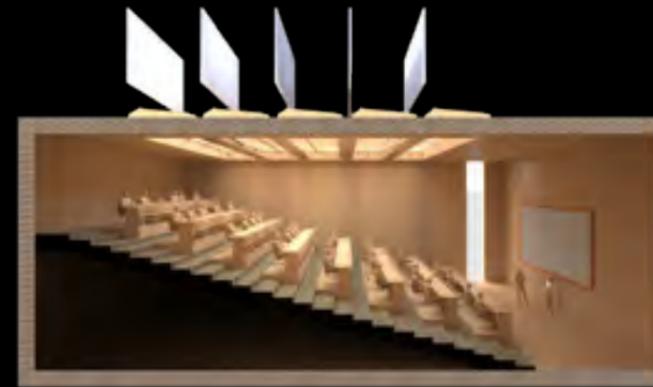
Sidelight and shed solution



Solution 3

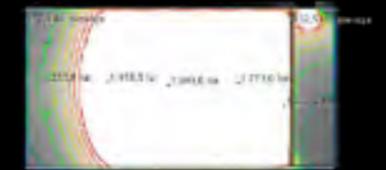
Sidelight and shed solution

- The window brings in most light, however:
- It can cause reflection on laptops in upper rows of tiered spaces
 - Possible direct sunlight exposure on project screen



Solution 4

Blocking and reflective vertical outside panels



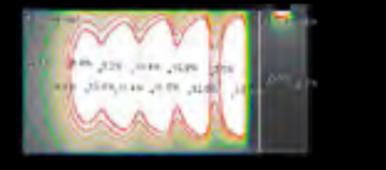
Solution 5

Blocking and reflective vertical inside panels



Solution 6

Blocking and reflective ceiling



Solution 7

Enhanced blades

3D rendering

Scenario 4:
Blocking and reflective vertical outside panels



Scenario 6:
Blocking and reflective ceiling



Scenario 5:
Blocking and reflective vertical inside panels



Scenario 7:
Enhanced blades

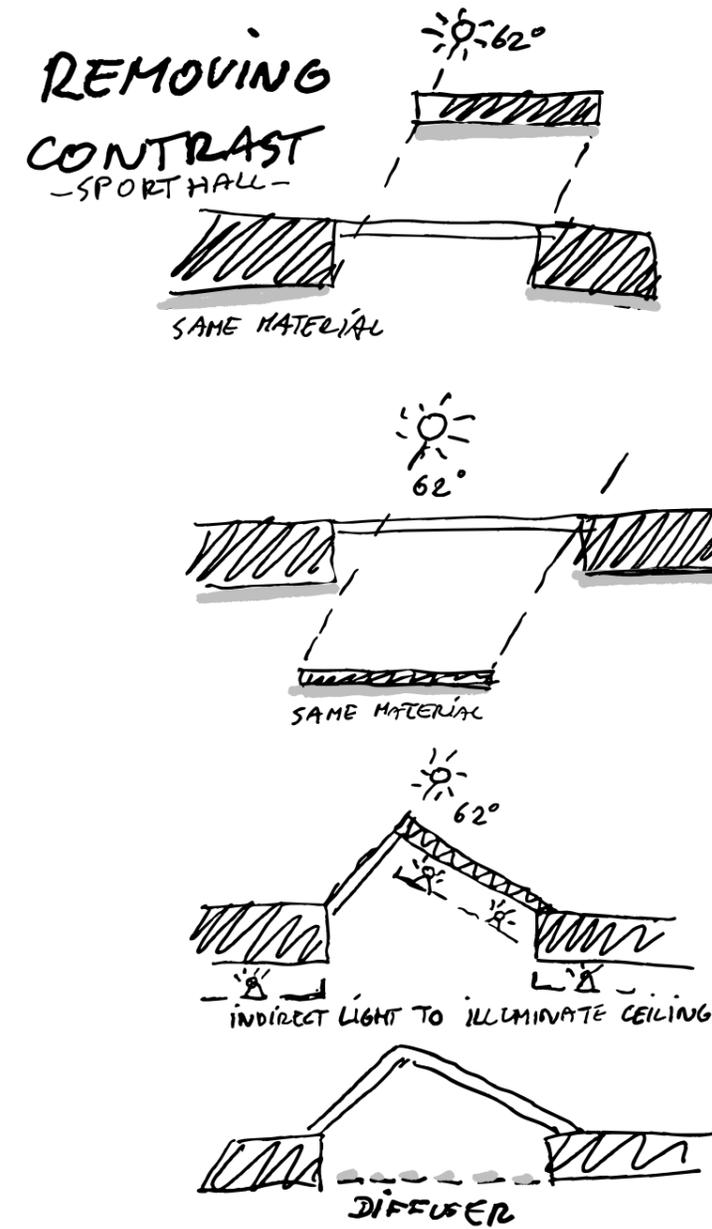




TERMINAL 3



PRODUCTS AND SOLUTIONS



Our solutions

VELUX Commercial offers solutions in following categories:

Domes and flat roof windows

Our complete range of prefabricated, ready-to-install domes and flat roof windows provide single sources of daylight and fresh air as well as smoke and heat exhaust ventilation.

Continuous rooflights

Our economic continuous rooflight systems provide large areas of natural, diffused light as well as comfort and certified smoke and heat exhaust ventilation options in a lightweight construction.

Glass systems

Our reliable glass systems with design flexibility enable you to produce a building with optimal daylight and fresh air as well as smoke and heat exhaust ventilation to support occupant wellbeing.

Smoke exhaust and comfort ventilation

Our solutions for smoke and heat exhaust ventilation, comfort ventilation and daylight and heat control ensure safety and occupant wellbeing.

Service and maintenance

When you invest in a rooflight system from VELUX Commercial, you can also choose installation as part of your solution. VELUX Commercial has specially trained installers and service technicians, as well as an installer partner network, who can install your rooflight solution or support you and your team with installation. This means you can ensure your rooflights are installed safely and correctly.



Dome Rooflights



Standard Dome Rooflights

A dome rooflight solution for daylight and fresh air combined with smoke and heat exhaust ventilation. Whether 1, 2, 3, 4, 5 - skin vaulted dome rooflights, there is an optimal product for every construction task. Acrylic (PMMA), polycarbonate (PC) or heatstop materials are available in opal, clear, sun protection or black.

Hybrid Dome Rooflights

Hybrid Dome Rooflights offer large amounts of daylight, outstanding heat insulation as well as reduction of nuisance noise and intruders. These rooflights improve the overall energy efficiency, safety and convenience in your building. Our Hybrid Dome Rooflights are mountable on most common construction upstands and can be combined with a variety of dome rooflight designs.

Hybrid Dome Rooflights are designed for easy installation when delivered as a pre-assembled product or as an upgrade for already installed dome rooflights.

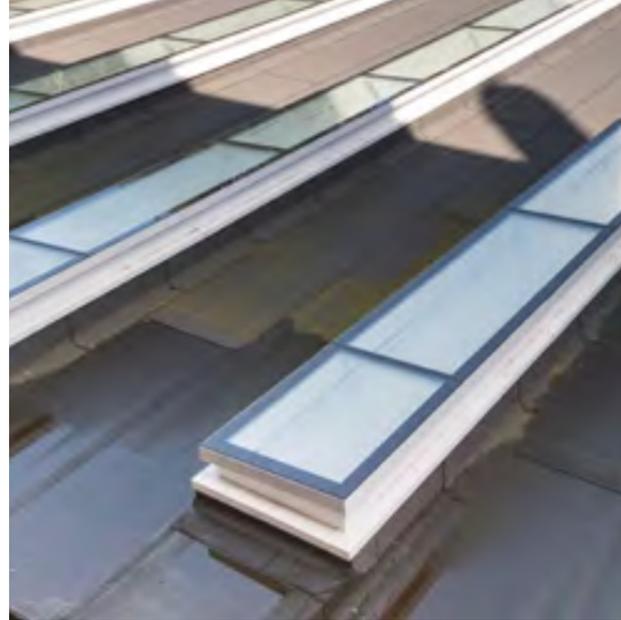
Special Dome Rooflights

Dome Rooflights are a safe solution for blocking daylight, supporting fresh air circulation, and offering smoke and heat exhaust ventilation.

Roof access

Frequent or occasional access to the roof. The complete roof access products offer a high level of safety. VELUX Commercial roof access products are robust that create energy-efficient buildings. Thanks to modern series production with additional components, it is possible to produce high-quality prefab products.

Flat Roof Windows



Monolight

Modular Rooflights are glass rooflights for flat roofs, they maximise the amount of natural light without intrusive framing being visible from beneath. Modular Rooflights have an elegant, aesthetic design and bring daylight into commercial buildings.

Linearlight

Modular Rooflights – Linearlight
These pleasing aesthetic designs are made-to-measure, ready-to-install solutions that come with optional blinds.

Each individual module can be as much as three metres wide and designed for short and wide modules. There is also a possibility to design with venting modules next to each other.

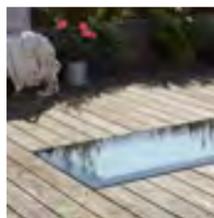
Circularlight

For buildings with an extraordinary architectural style, Circularlight can be installed to provide natural light and visual interest. The elegant round shape can serve as a single focal point, or multiple units can be combined to create an array that looks great both inside and out.

Modular Skylights

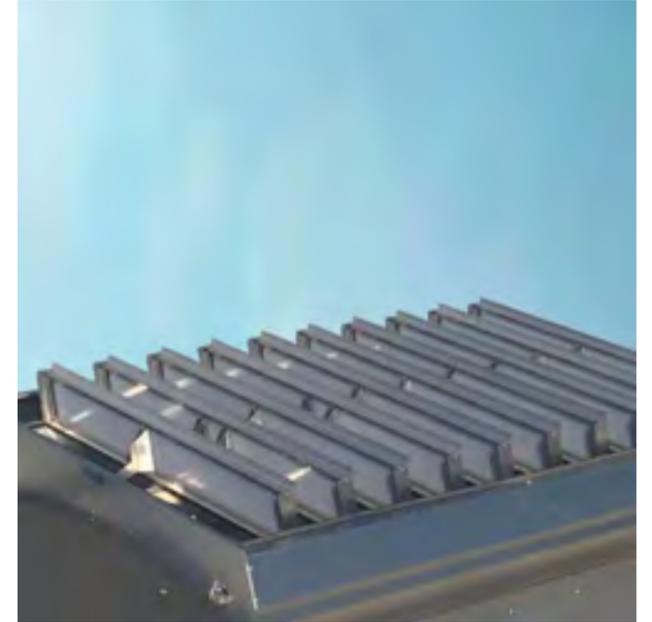
These skylights are a pre-engineered modular design complete with optional roller blinds.

Modular Skylights can be combined in a number of rooflight configurations such as Longlight, Ridgelight, Northlight, Atrium and Step. Each roof glazing solution is delivered with a prefabricated flashing to ensure the perfect fit.



Monolight – Walk-on

Continuous Rooflights



Vario Continuous Rooflights

These are lightweight, prefabricated made-to-measure systems with multiple configuration possibilities that provide diffused natural light and certified smoke and heat exhaust ventilation.

Available as barrel vault, mono and dual-pitched polycarbonate rooflights, Vario Continuous Rooflights is a made-to-measure product that can be customised with multiple configuration options, ensuring the perfect solution for every project requirement.

Grillodur® Continuous Rooflights

This is a unique, light weight construction comprised of durable semi-transparent fibreglass panels with excellent mechanical properties and high chemical resistance, providing glare-free daylight and certified smoke and heat exhaust ventilation.

The made-to-measure Grillodur® system offers barrel vault and mono and dual-pitched solutions. Its unique fibreglass material can be designed to suit thermal and daylight requirements of any project.

Comfort Ventilation and Smoke and Heat Exhaust Ventilation (SHEV) for Vario Continuous Rooflights

Combine Vario Continuous Rooflights with a choice of ventilation systems. With a wide selection of flap types and compatible pneumatic or electrical opening devices, the Vario ventilation systems are suitable for use with Vario Continuous Rooflights. They can be used to provide daily fresh air ventilation, and can also be used for effective smoke and heat exhaust ventilation (SHEV).

Systems may be customised to fulfill specific project requirements and all devices are tested and certified to EN 12101-2.

LOUVERED VENTILATION – SMOKEJET®

A high-performance louvre system or blind system, Smokejet® is an economical and option for providing large areas with fresh air or redirecting large volumes of warm air. It can be integrated as a SHEV device within the roof and is also compatible with all Vario Continuous Rooflights.

A range of customisation options are available, allowing the system to be adapted to customer and project requirements.

Glass Systems



Modular Skylights

These skylights are a pre-engineered modular design complete with optional roller blinds.

Modular Skylights can be combined in a number of rooflight configurations such as Longlight, Ridgelight, Northlight, Atrium and Step. Each roof glazing solution is delivered with a prefabricated flashing to ensure the perfect fit.



Glazing Panels

Prefabricated panels with slim profiles for aesthetically pleasing, elegant design. Design freedom with corner solutions as gable, hip and valley.

The bespoke nature of our glazing panels enable you to create rooflight designs for any type of commercial building project.



Stick System

Stick-glazing systems assembled onsite provide made-to-measure solutions with almost unlimited design flexibility for the entire building envelope.

The certified, bottom-hung ventilation solution provides smoke and heat exhaust ventilation. It can be installed in pitches between 2-90° for roofs and facades, closing the complete building envelope.

All components are delivered and assembled onsite. It is always offered as a turn-key solution including installation.



Grillodur® Daylight Systems

Impact resistant fibreglass panels for diffuse daylight in a lightweight construction with flexible design for the entire building envelope.

Grillodur® is a bespoke daylight system with semi-transparent fibreglass sheets mounted on a self-supported aluminium frame system. This enables you to create almost any design such as pyramids, custom rooflight solutions, canopies and facades. Due to the low weight and high degree of prefabrication, the system is ideally suited for refurbishment projects.

Grillodur® is offered as an end-to-end solution.

Service and Maintenance

From product selection, design and technical support, through to installation and aftersales service, VELUX Commercial aims to be your preferred partner for commercial rooflight solutions. We can support you with the following:

- Rooflight product selection and design
- Planning and delivery
- Installation
- Aftersales service



Installation Service

Installation manuals and videos are available as well as onsite training for your teams. For certain solutions, we also have our own installation team who will work with you on site to install the products and ensure your roof glazing solution is safe and installed to the highest standards.



End-to-End Rooflight Support

At VELUX Commercial we understand the importance of supporting you, the contractor and installer, throughout a commercial project programme - from product selection and technical support, through to installation and aftersales services.



Guarantee and conditions

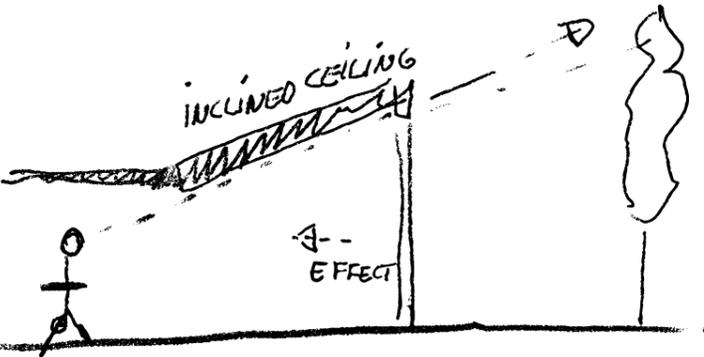
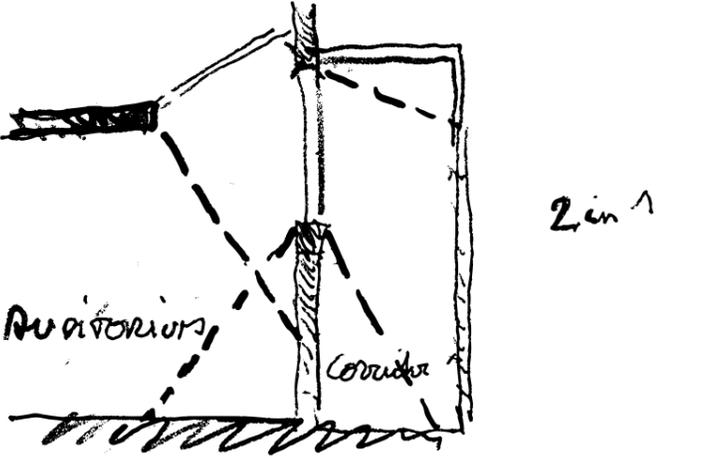
Discover which guarantee and conditions your product is covered by. The guarantee is subject to correct installation and usage. Guarantees are available on our website.



Contact us

Our aim is to provide all the tools and answers to make your project as simple and trouble-free as possible. Thus, we offer a wide range of expert support and consulting from before the project starts to well after its completion.

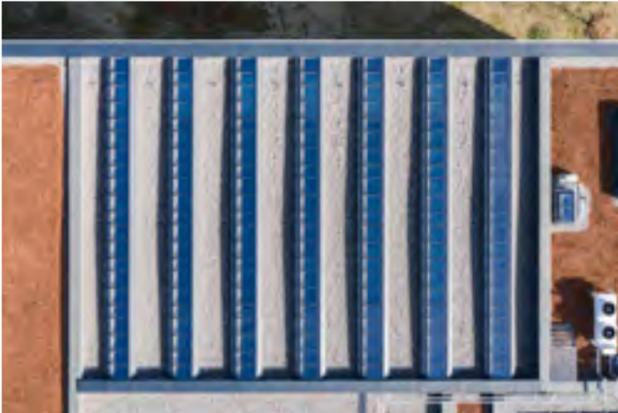




WINDOW IS MOVING CLOSER
BECAUSE OF DISAPPEARING CEILING

Complexe culturel et sportif, Romont, Switzerland

Solution: Modular Skylights, Longlight 5-30°



Exeter College, Great Britain

Solution: Modular Skylights, Step solution 5-25°



Dr. Knippenberg College, the Netherlands

Solution: Stick System, DC



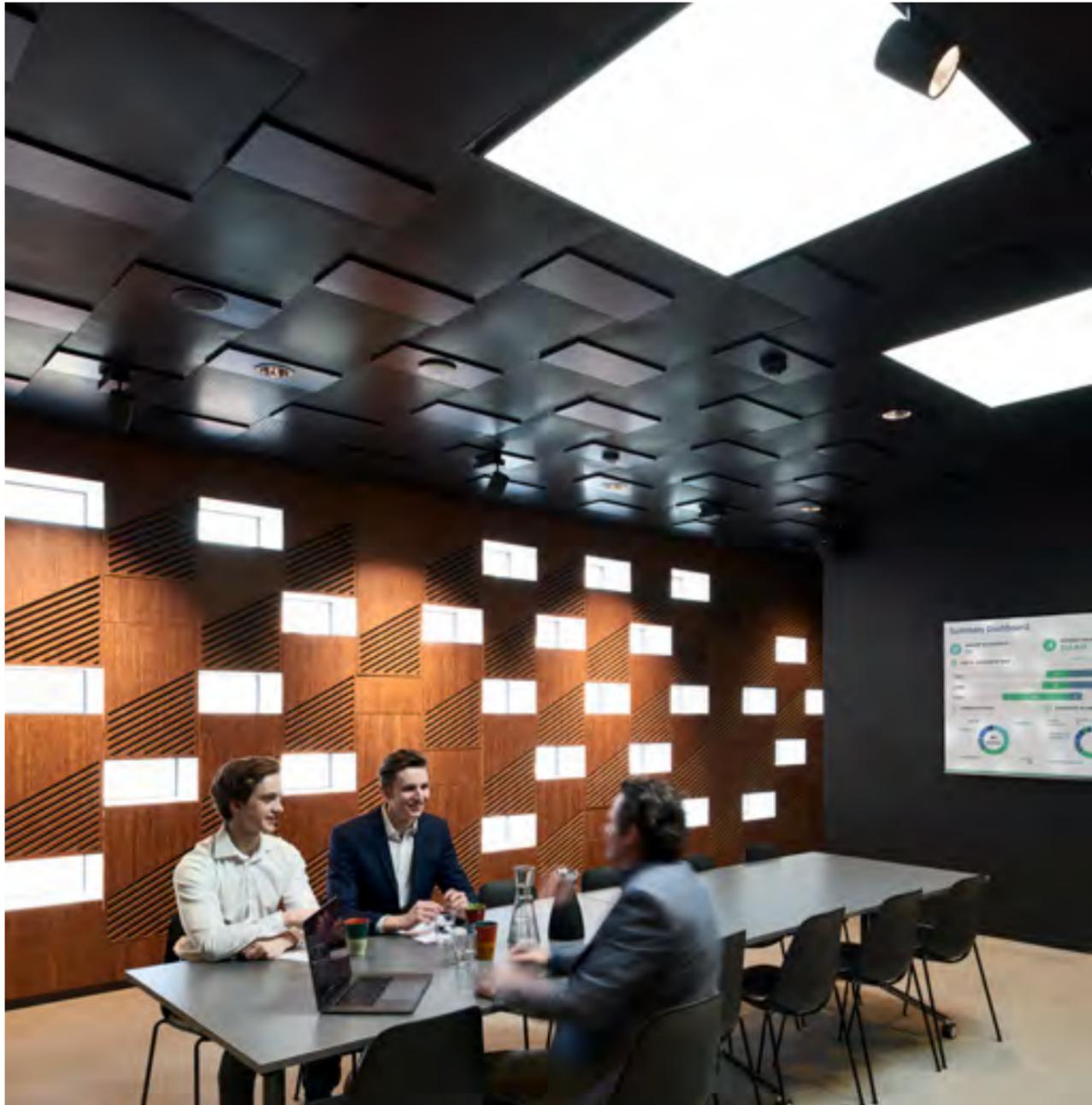
Jakon Headquarters, Denmark

Solution: Glazing panels, dual pitched solution



K.B. Hallen sports facility, Denmark

Solution: Modular Rooflights, Monolight



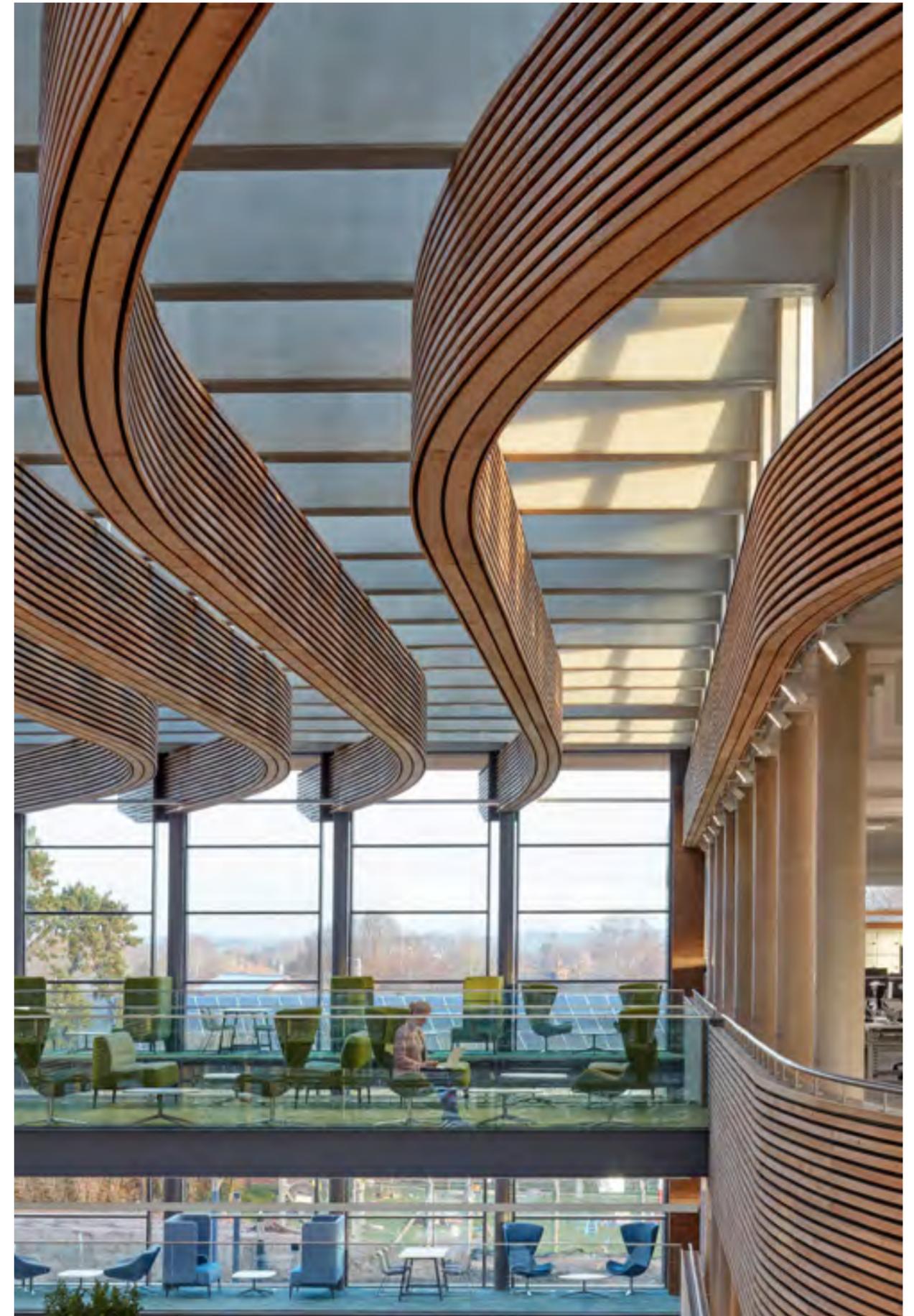
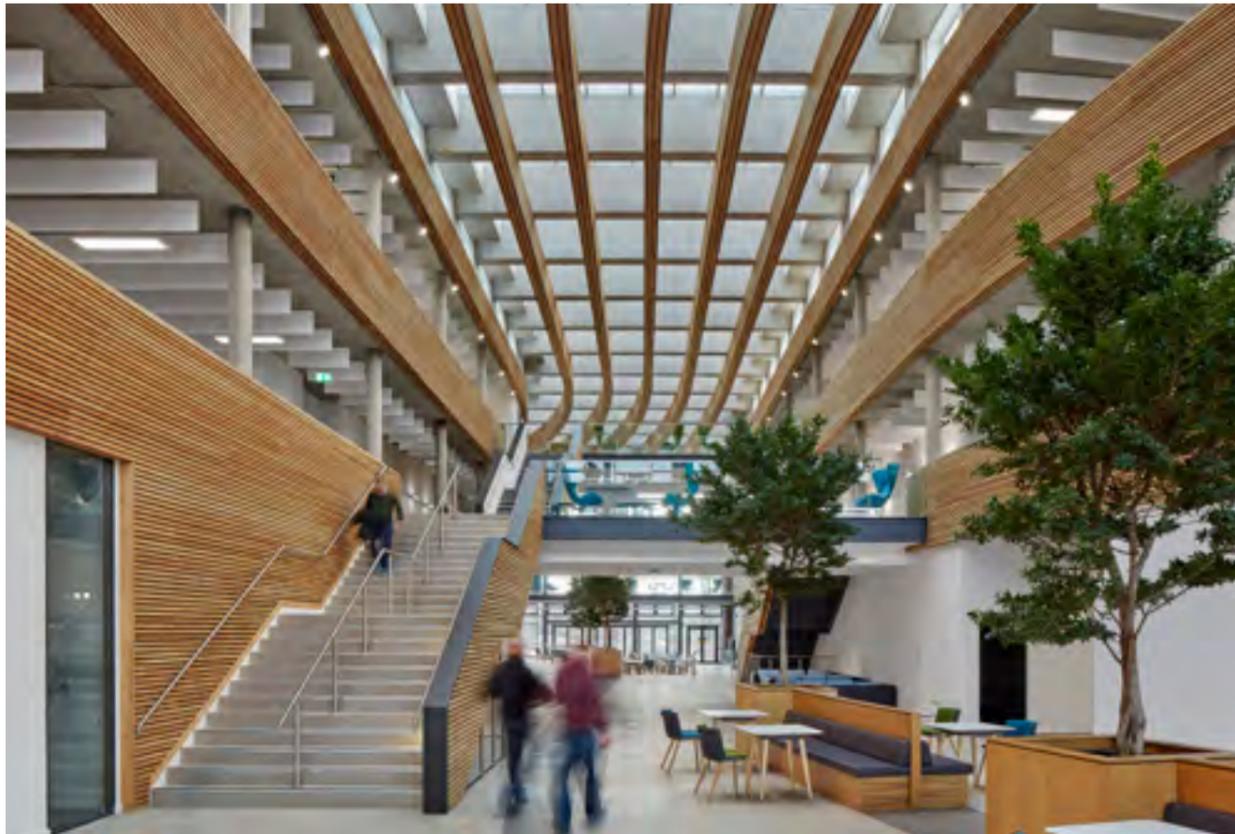
Residential apartments, Denmark

Solution: Modular Rooflights, Linearlight



UK Hydrographic Office, UK

Solution: Modular Skylights, Atrium Longlight



Koenig & Bauer Kammann GmbH, Germany

Solution: Dome rooflights with SHEV



Peder Lykke School, Copenhagen, Denmark

Solution: Modular Skylights Longlights 5-30°



Nordhavn Terminal 3, Denmark

Solution: Dome rooflights



Almere Railway Station, the Netherlands

Solutions: Dome rooflights and DC Stick system, BIPV



Jump World One, Klagenfurt, Austria

Solutions: Vario-Norm, SHEV, pneumatic system



Hotel Bodmin Jail, Cornwall, UK

Solution: Modular Skylights Ridgelight 25-40°



Otto Suhner AG, Switzerland

Solution: GRILLODUR® mono pitched continuous rooflight



APRIL / JUNE 2009

JAN - APRIL 2009

OCT 2008 - JAN 09

SEPT 2008

JULY - AUG 2008

APRIL 2008

MAY 2008

2008

FEB / MAR 2008

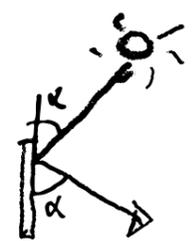
NOV 2007

JULY 2007

MAY 2007

OCT 2009
JULY 09
JUNE VENICE 2009
APRIL / JUNE 2009
JAN - APRIL 2009

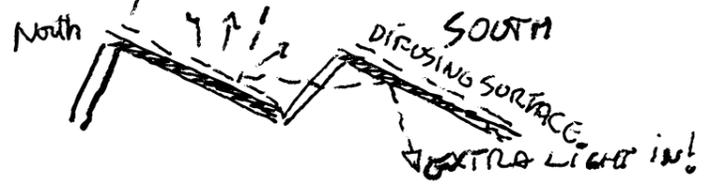
MIRRORS ARE NOT GETTING HOT
⇒ THEY DON'T STOP EFFECT OF DIRECT LIGHT, THEY ONLY CHANGE IT'S DIRECTION!



EGGSHELL SURFACES MAKE LIGHT DIFFUSE (PLASTER) SO LESS HARMFUL

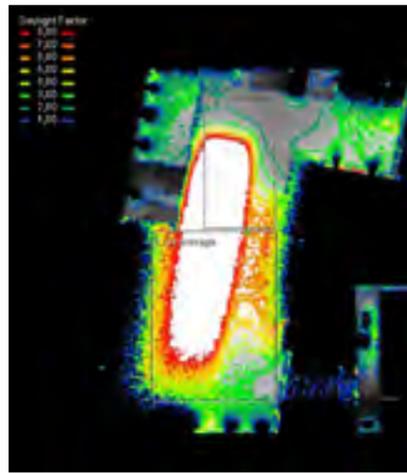


THINK "OUT OF THE BOX": REUSE OR CONVERT YOUR LIGHT!

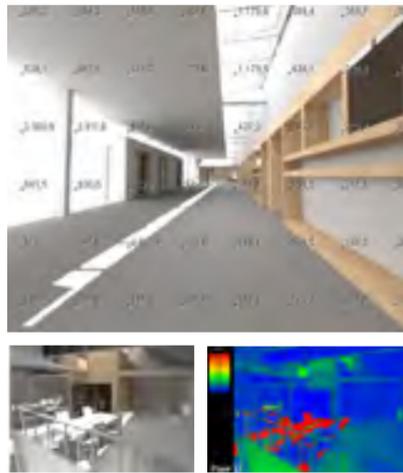


Daylight design support

VELUX Commercial provides design advice and support for all commercial buildings. Our support includes daylight analysis of your building spaces, analyzation rendering and animation examples that come with 360-degree interactive views of project space.



Daylight analysis



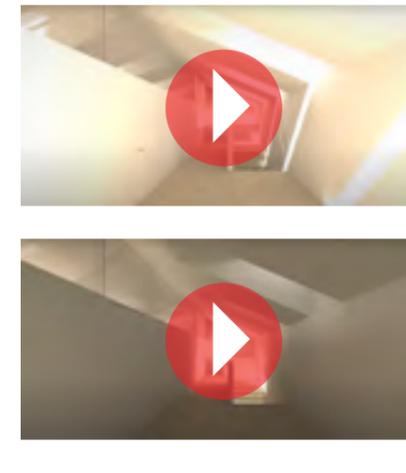
Luminance and illuminance simulations



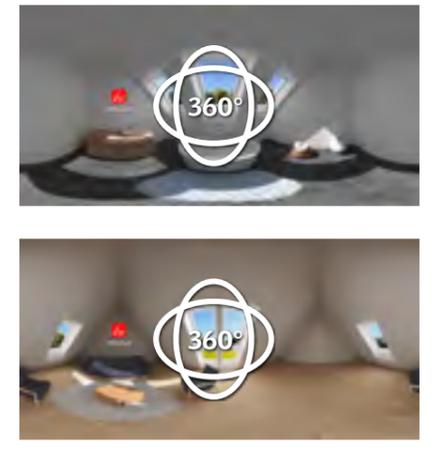
Interior render



Exterior render



Sunlight animation



360° View

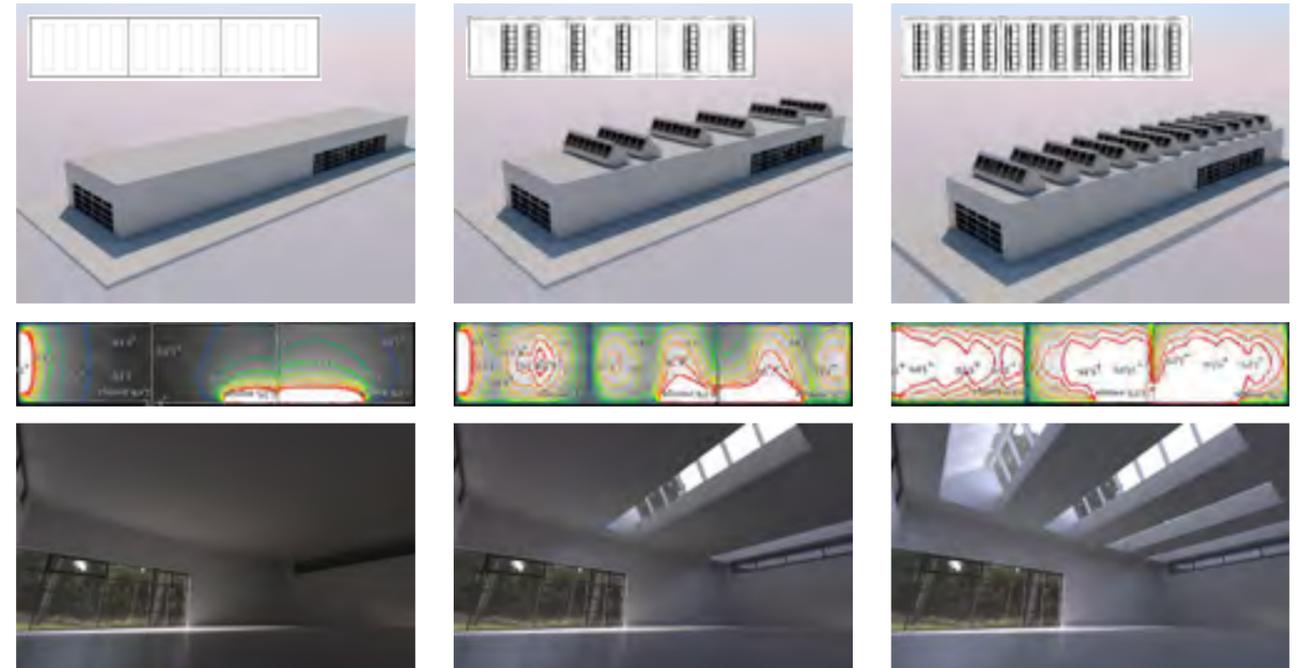
Daylight Visualizer

The VELUX Daylight Visualizer is a 3D simulation tool that analyses daylight conditions in buildings. This digital tool exceeds more commonly used visualization programs, giving you the ability to acutely simulate and quantify daylight levels in interiors, and make more informed design when specifying daylight requirements at the start of a project.

With our Daylight Visualizer you can:

- Calculate daylight factors
- Evaluate requirements for the European Standard Standard for Daylight in Buildings EN 17037
- Perform photo-realistic and false colour visualizations of daylight in interiors under the 15 general sky types defined by CIE
- Quickly create simple models or import detailed models from a wide range of CAD/BIM software including REVIT, ARCHICAD, SKETCHUP and more

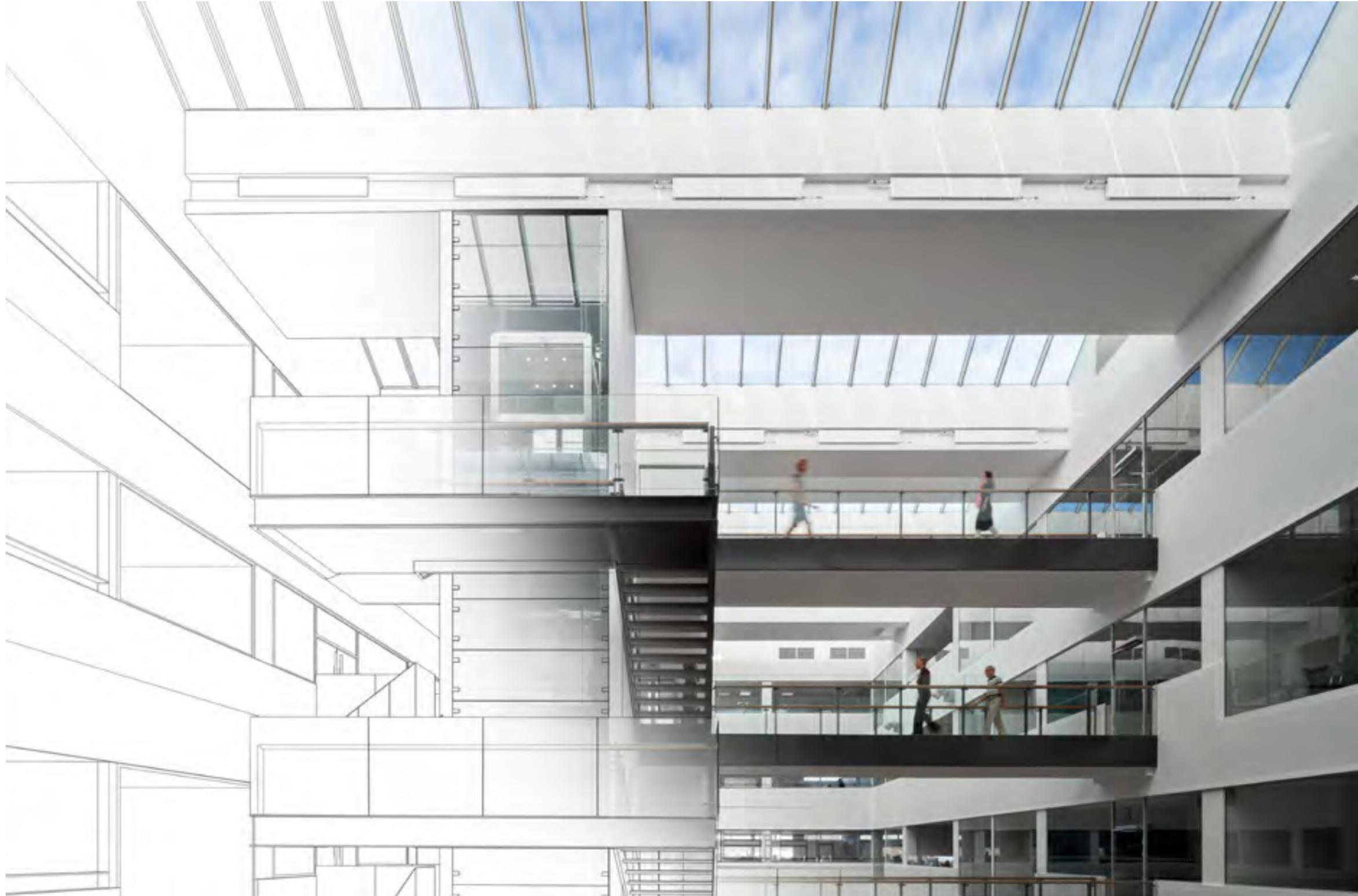
The Daylight Visualizer has been validated against the CIE 171:2006 test cases to assess the accuracy of lighting computer programs and passed all test cases dedicated to natural lighting.



CAD/BIM

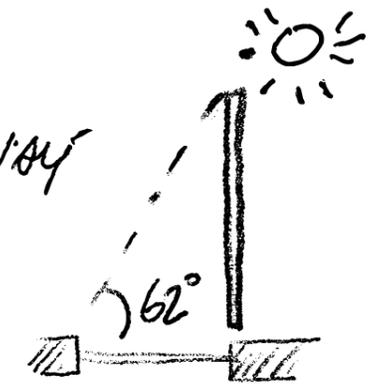
Take advantage of our CAD tools to create simple and visually appealing designs. VELUX Commercial BIM objects are available for the most popular modelling programs, including: Autodesk Revit, Graphisoft ArchiCAD and Nemetechek Vectorworks.

All 3D objects are compatible with Autodesk AutoCAD, Trimble SketchUp and 3D Studio/3DS.

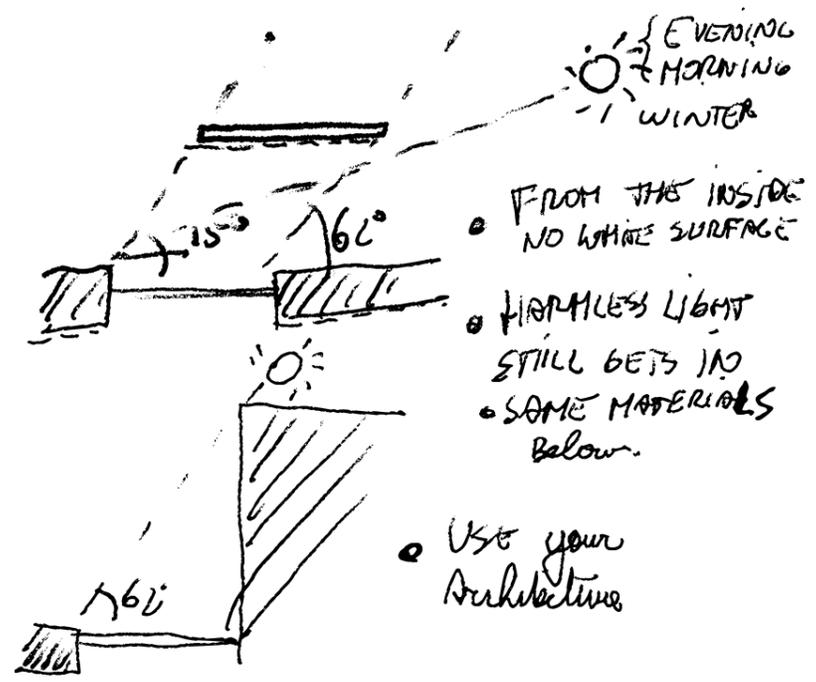




THERE ARE
DIFFERENT WAY
TO RECREATE A
SHED ROOF



SUMMER / NOON



- FROM THE INSIDE NO WHITE SURFACE
- HARMLESS LIGHT STILL GETS IN
- SAME MATERIALS Below.

• Use your Architecture



Our purpose

Daylight and ventilation can play a key role in redefining how buildings are designed for occupants to enjoy. Incorporating daylight and fresh air into design improves the well-being of people, while also working to reduce energy consumption and CO₂ levels.

Benefitting the environment through sustainable building design, our rooflights are innovative daylight solutions that help to reshape architectural design approaches for new builds or refurbishments, transforming how spaces are used and enjoyed by building occupants.

Who we are

VELUX Commercial was established in 2019, and comprises the former JET BIK, Vitral and VELUX Modular Rooflights organisations. Now, VELUX Commercial operates as one company with 1,100 employees working in sales, production and administration across 13 countries.

VELUX Commercial provides a broad product offering of daylight and ventilation solutions for industrial, commercial and public buildings. The product program ranges from industrial flat roof and smoke and heat ventilation exhaust solutions to bespoke glazing and ongoing maintenance.

"It's our nature"

Delivering sustainable goals

The VELUX Sustainability Strategy 2030 is our roadmap for the 'decade of action'. How we operate and the products and services we bring to market is changing, and this will significantly transform the way we do business. Our sustainability strategy helps keep our own house in order and involves employees and supply chain.

Our pioneering commitment is to become Lifetime Carbon Neutral by 2041. This means taking responsibility for both our past and future carbon emissions.

Our strategy is threefold:

1. Secure a responsible business

We will secure a responsible business for more diverse, inclusive, safe, healthy and innovative ways of working. We must keep our own house in order and live up to our model company objective.

2. Innovate sustainable products

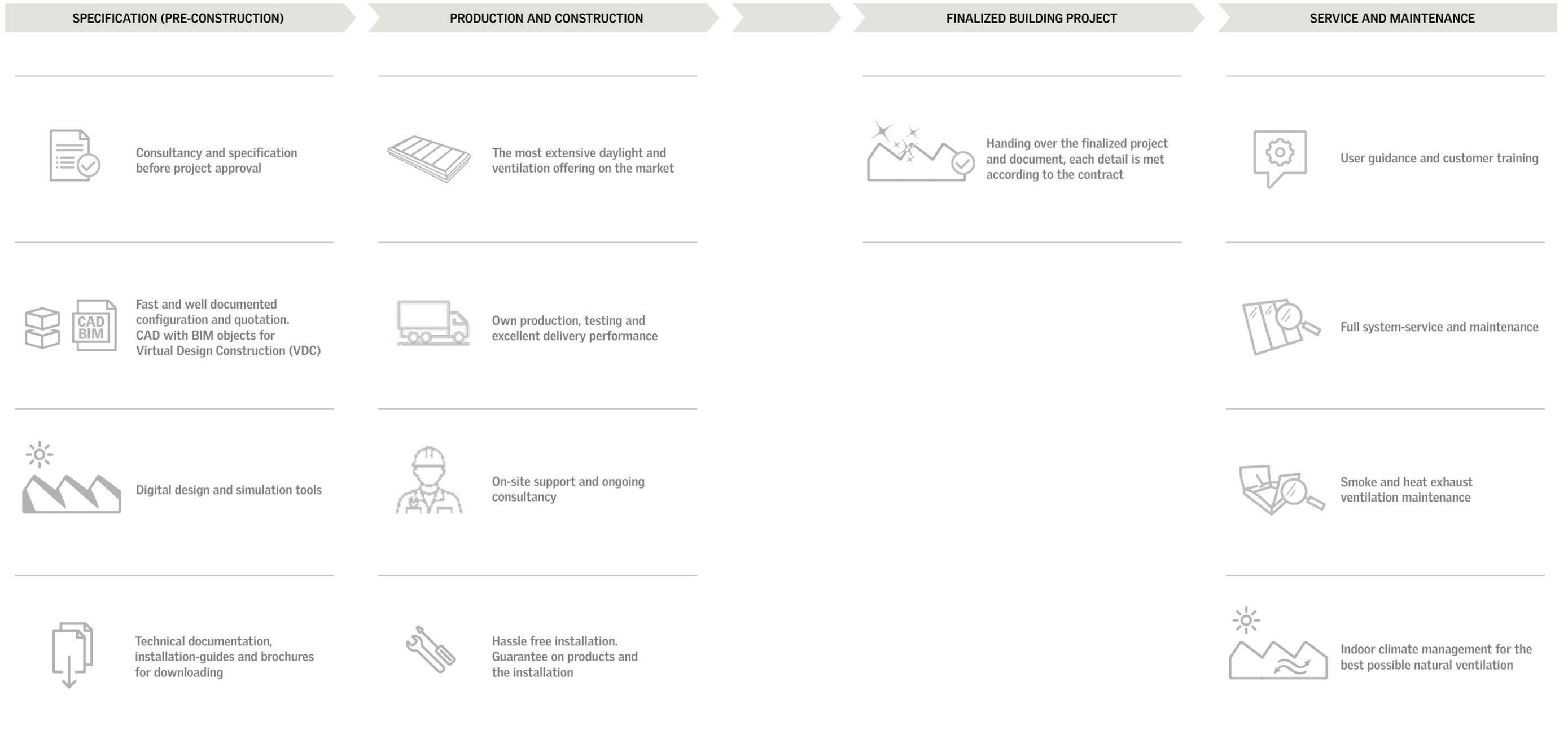
We will develop innovative and sustainable products to create better indoor spaces for people and the environment.

3. Pioneer climate and nature action

We will pioneer climate and nature action to become Lifetime Carbon Neutral and showcase sustainable buildings and communities.



Our services



VELUX Commercial Benelux

VELUX Commercial Belgium

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1301 Bierges (Wavre)
Belgium

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Web: veluxcommercial.be

VELUX Commercial Netherlands

De Veken 308
1716 KJ Opmeer
the Netherlands

Email: info@veluxcommercial.nl

Web: veluxcommercial.nl

Photographers: Jesper Blæsild, Jasper Leonard, Mads Frederik – Architectural Photography, Storm Production, Jack Hobhouse, Cepezed | Lucas van der Wee, Adam Mørk, Christian Alsing, Laura Stamer – STAMERS KONTOR, DSL Studio – Marco Cappelletti, Ronald Auée, Gregory Halpern, Dirk Linder, René Løkkegaard Jepsen – Itchy Copenhagen, Jürg Zimmermann – zimmermannfotografie, Jesper Jørgen, Martin Søllyst, Adobe Stock, Gettyimages, Dick Holthuis, Marcel Rickli, AHR Architects, Peter Witt, RoosRos Architecten, René de Wit, Arjen Schmitz, Gerd Perauer, Adam Coupe Photography Ltd, Adam Coupe, Rasmus Norlande.

VELUX®

Commercial

