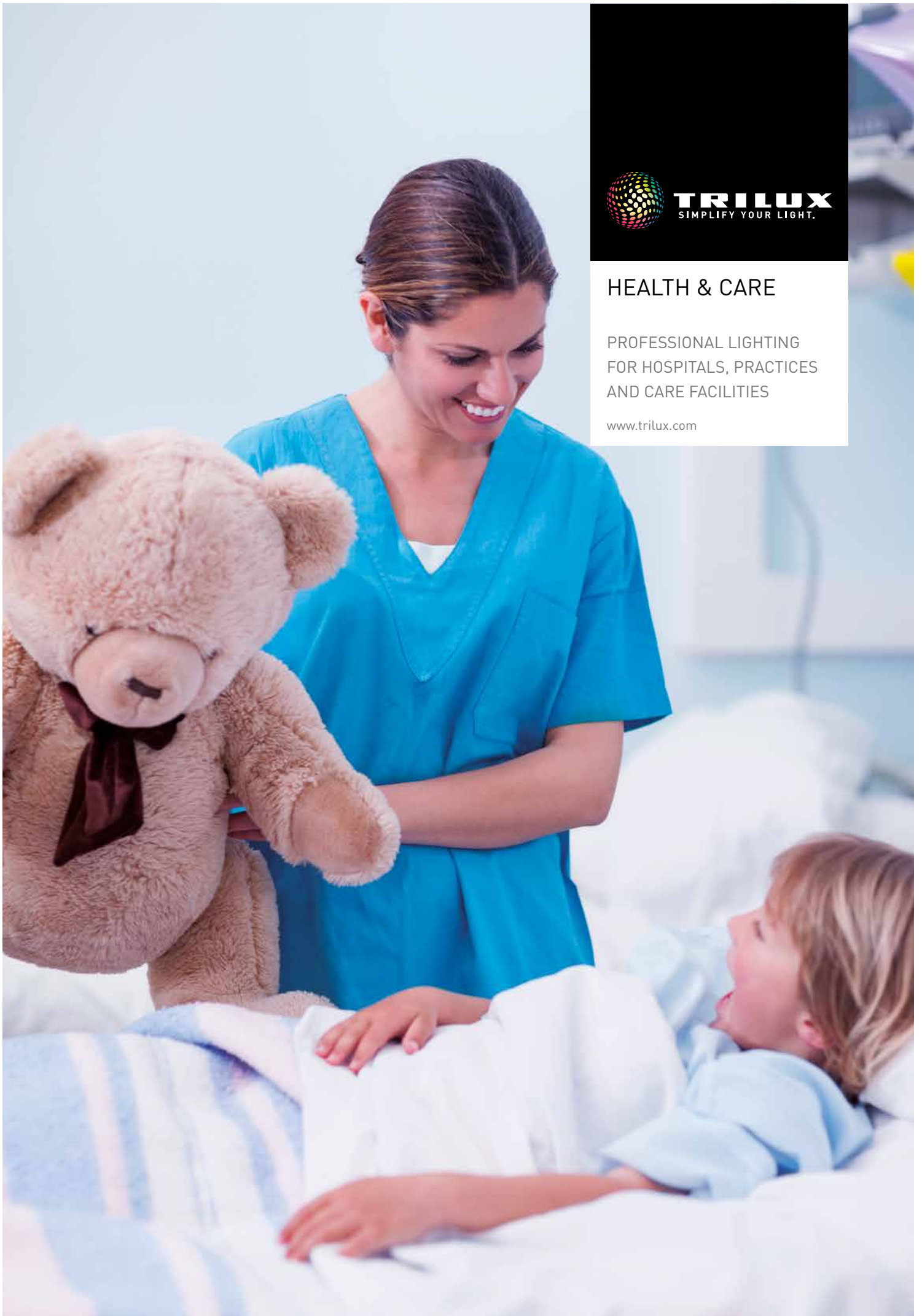


TRILUX
SIMPLIFY YOUR LIGHT.

HEALTH & CARE

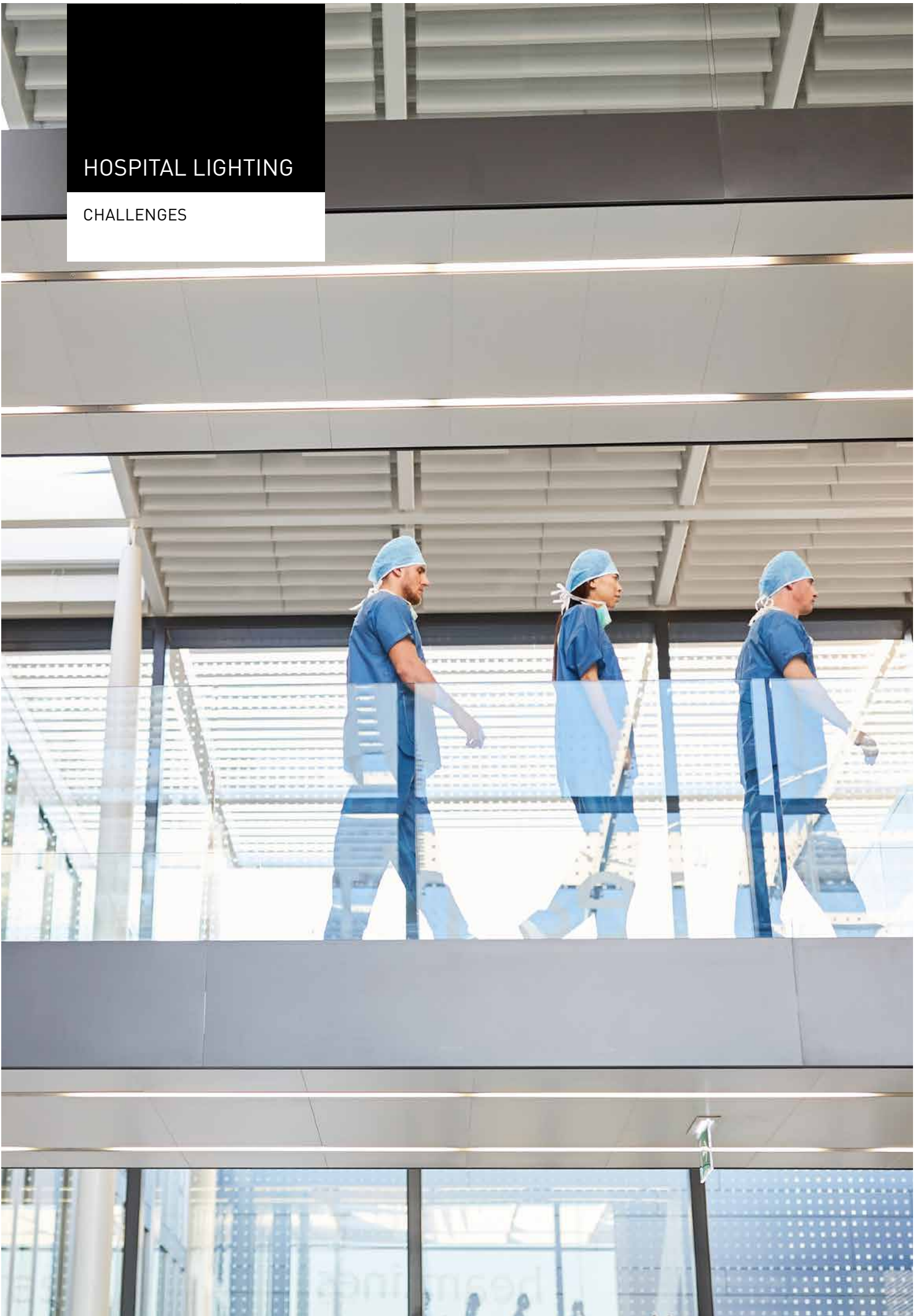
PROFESSIONAL LIGHTING
FOR HOSPITALS, PRACTICES
AND CARE FACILITIES

www.trilux.com



HOSPITAL LIGHTING

CHALLENGES



Be it precision work in operating rooms or intensive care units, a feel-good atmosphere in patients' rooms, glare-free computer workstations or safety and orientation inside and outside of buildings: hardly any other application area places demands as diverse and exceeding on lighting as hospitals, medical practices and care facilities. In addition to high quality standards, there are often additional requirements, for instance in terms of hygiene or for the special protection and comfort of patients, visitors and staff.

Beyond that, hospitals in particular are increasingly under pressure to cut costs, to operate efficiently and sustainably – but at the same time to increase the quality of care and patient/employee satisfaction

TRILUX knows the requirements for lighting in the health and care sector and offers customised, intelligent and sustainable systems for all areas.



Economic efficiency and cost savings

Due to the constant use of artificial light, energy efficiency plays a decisive role, especially for hospitals. Refurbishments reduce CO₂ emissions and, in addition to maintenance costs, lower energy consumption by up to 85%. Various subsidy programmes support hospital operations with financial resources to benefit from this great savings potential.



Light comfort

Good lighting in the healthcare sector must provide more than ideal visual conditions in line with standards, not only due to increased demands for comfort, differentiation and attractiveness. Well-being and performance play an equally important role. Dynamic lighting concepts contribute, among other things, to strengthening the biorhythms of patients and staff as well as to ensuring greater relaxation or concentration.



Safety and orientation

On complex hospital grounds, it is important to provide orientation for visitors, patients and staff alike. At the same time, hospital processes must be able to run smoothly and efficiently. This always requires compliance with safety and hygiene regulations. Smart applications for digital hospitals such as location-based services and asset tracking make a significant contribution in this regard.



ENERGY EFFICIENCY

PROFITABILITY MEETS
SUSTAINABILITY

SUSTAINABILITY

CONSERVING RESOURCES

**ENVIRONMENTAL
PROTECTION**

REDUCING OPERATING COSTS

CO₂ EMISSIONS

COMPETITIVENESS

High energy costs, limited resources and increased awareness for environmental concerns: Energy efficiency is more important than ever for medical settings today. This also applies to lighting, since it is responsible for a large share of industrial energy costs. Lighting systems with high energy efficiency guarantee permanently low operating costs and thus enhance competitive capacity. In addition, the lowered energy consumption reduces the carbon footprint and thus contributes to achieving sustainability targets.



Refurbish and benefit now

Reducing operating costs and increasing quality of light, comfort and sustainability – while simultaneously setting the course for the future with an intelligent, networked lighting system. All very simple thanks to refurbishment solutions tailored to your needs.

Refurbishment solutions – for smooth replacement

TRILUX luminaires are designed for quick and simple refurbishment at all levels.

This is facilitated, for instance, by:

- clever housing geometries
- flexible luminous flux packages
- smart accessories

Fully calculated – a plus in terms of profitability

Refurbishing an obsolete lighting system with LED technology and a light management system reduces energy costs by up to 72 per cent. This means that the refurbishment can often finance itself through the savings in terms of operating costs.

A tip: Calculate energy efficiency, CO₂ savings and amortisation individually with the TRILUX efficiency calculator:

www.trilux.com/efficiency-calculator



	Old installation	New LED installation	New LED + LM** installation
Luminaire	Prismatic diffuser luminaire IP54 T8 4 x 18 W ECG	FidescaBS G3 M84 DL 55-840 ETDD	FidescaBS G3 M84 DL 55-840 ETDD
System power per luminaire	84 W	39 W	39 W
Number of luminaires in the object	70 pcs	70 pcs	70 pcs
Total system power	5,880 W	2,730 W	2,730 W
Energy consumption p.a.	23,520 kWh	10,920 kWh	6,552 kWh
Energy costs Ø p.a.*	7,203 €	3,344 €	2,007 €
Savings potential		54%	72%
Energy savings p.a.		12,600 kWh	16,968 kWh
Energy cost savings Ø p.a.*		3,859 €	5,196 €
CO₂ savings p.a.		6.11 to	8.23 to

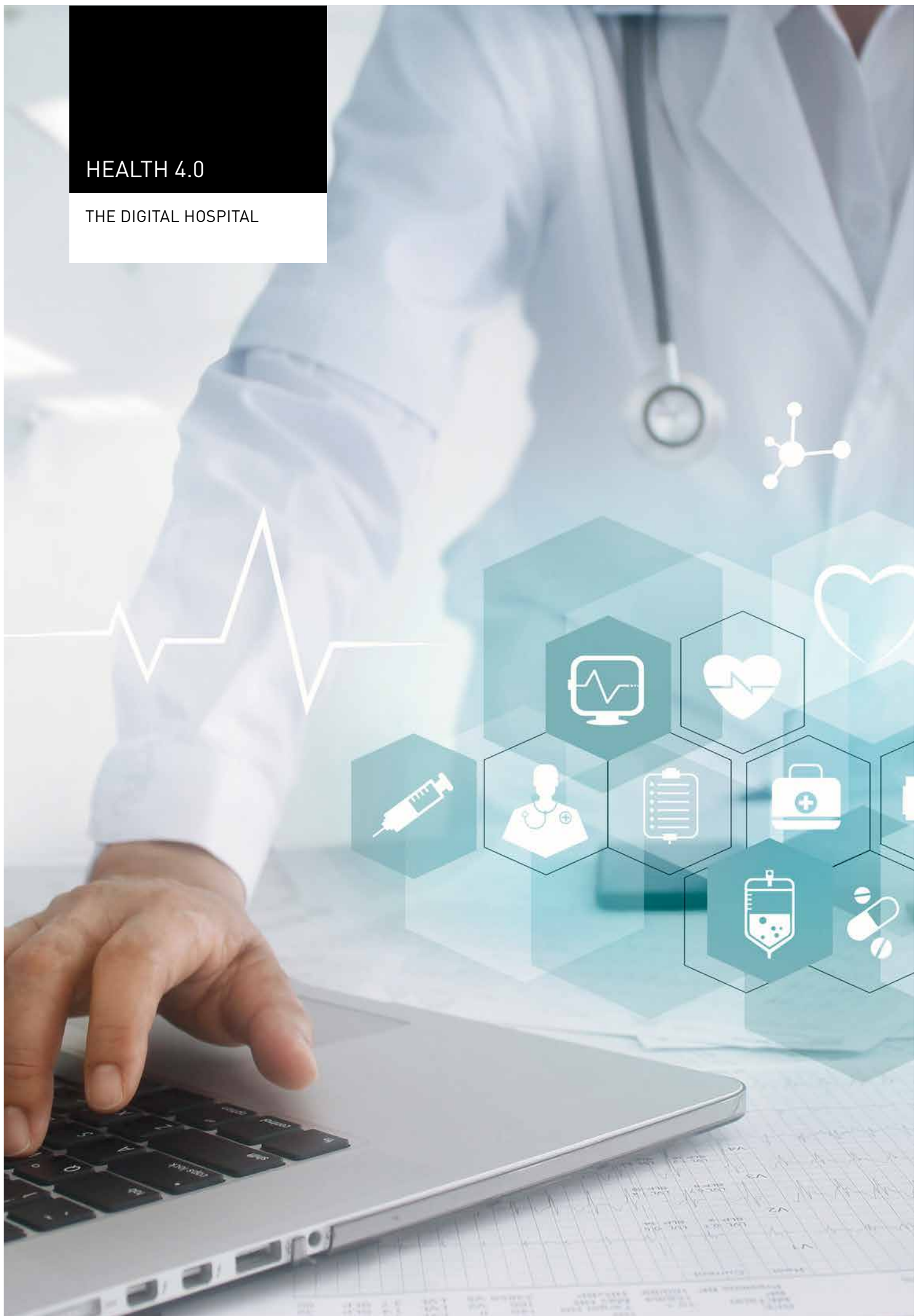
* This is based on an average energy price per kWh of 0.25 € in 2021 and an annual inflation rate of 3% /a.

A service life of 15 years with 4,000 operating hours each is assumed.

** Additional energy savings of up to 40% via light management (daylight-dependent constant light control).

HEALTH 4.0

THE DIGITAL HOSPITAL



The lighting of the future is intelligent and networked. And it provides users with enormous optimisation potential on all levels thanks to features like dimming, sensor control, Human Centric Lighting, cloud monitoring, location-based services and asset tracking. And there is more: a networked lighting installation creates the perfect infrastructure for networking hospital applications and thus forms the foundation for the digital hospital of the future today.

LiveLink

With LiveLink, intelligence comes to light: be it an entry-level or customised project solution – the light management system enables realising digital services, representing the key to intelligent control for the digital hospital.

www.trilux.com/livelink



Energy & light monitoring

TRILUX LED luminaires can be connected to form an intelligent network quickly and simply via the LiveLink light management system. Users can evaluate central operating parameters such as operating time and energy consumption via TRILUX Monitoring Services and use these to optimise the lighting system.



Asset tracking

Optimisation of processes: with the help of asset tracking, people and objects can be simply located via beacons. This saves long waiting and search times and generates security in daily hospital routines.



Indoor navigation

Accessing new communication channels: using smartphones with an active app, hospitals can navigate visitors through buildings, send push messages and provide up-to-date information.



People counting

Stricter safety and hygiene regulations require control and management of attendance and access to publicly accessible areas. An access management system records the number of people across entire buildings, individual floors or stations, as well as canteens and waiting areas in real time.

HOLISTIC EXPERTISE

MAIN AREAS



Treatment rooms

The light should not only enable doctors and care staff to work in a concentrated and fatigue-free manner, but can also provide a stimulating or calming effect to make patients feel relaxed and comfortable.

Solutions: Arimo Fit LED, Fidesca BS G3 LED

Patient rooms

Bright and colourful rooms with the right light create a comfortable feel-good atmosphere.

Functional and night lighting ensures maximum safety during medical examinations and treatments.

Both in normal and intensive care.

Solutions: Arimo Fit LED, Sanesca W4 LED

Cleanrooms

The highest standards of hygiene and safety apply in operating rooms and surrounding areas. Maximum lighting quality, simple maintenance and cleaning, high protection ratings and economic efficiency are just some of the requirements for an ideal lighting solution.

Solutions: Fidesca PM G3 LED, Fidesca SD G3 LED

Laboratories & pharmacy

These highly sensitive areas require compliance with strict hygiene and safety regulations. In addition to tailored light distributions and ideal colour rendering, the standard-compliant lighting of VDU workstations also plays an important role.

Solutions: Fidesca PM G3 LED, Fidesca SD G3 LED

Recreation rooms and waiting areas

With the right lighting, areas such as the cafeteria and visitor rooms serve as spaces for relaxation and create a pleasant atmosphere. Individual light accents or even islands of light can lend structure to large rooms.

Solutions: Polaron IQ LED, Solvan Flow LED, Sonnos LED

Corridors and stairways

The first priority is homogeneous, uniform and glare-free illumination and the avoidance of hard shadows. Ideal visitor navigation is enabled by location-based services via app.

Solutions: Finea LED, 74 R/Q LED

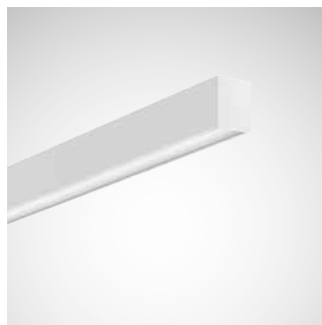
Entrance areas

Harmonious lighting is inviting and creates a pleasant, relaxing atmosphere that relieves fears and worries and inspires confidence.

Solutions: Solegra LED, Lunexo LED



Arimo Fit LED
www.trilux.com/arimo-fit-led



Finea LED
www.trilux.com/finea-led



Fidesca PM G3 LED
www.trilux.com/fidesca-g3-led



Polaron IQ LED
www.trilux.com/polaron-iq-led



Sanesca LED
www.trilux.com/sanesca-led



Solegra LED
www.trilux.com/solegra-led



Solvan Flow LED
www.trilux.com/solvan-flow-led

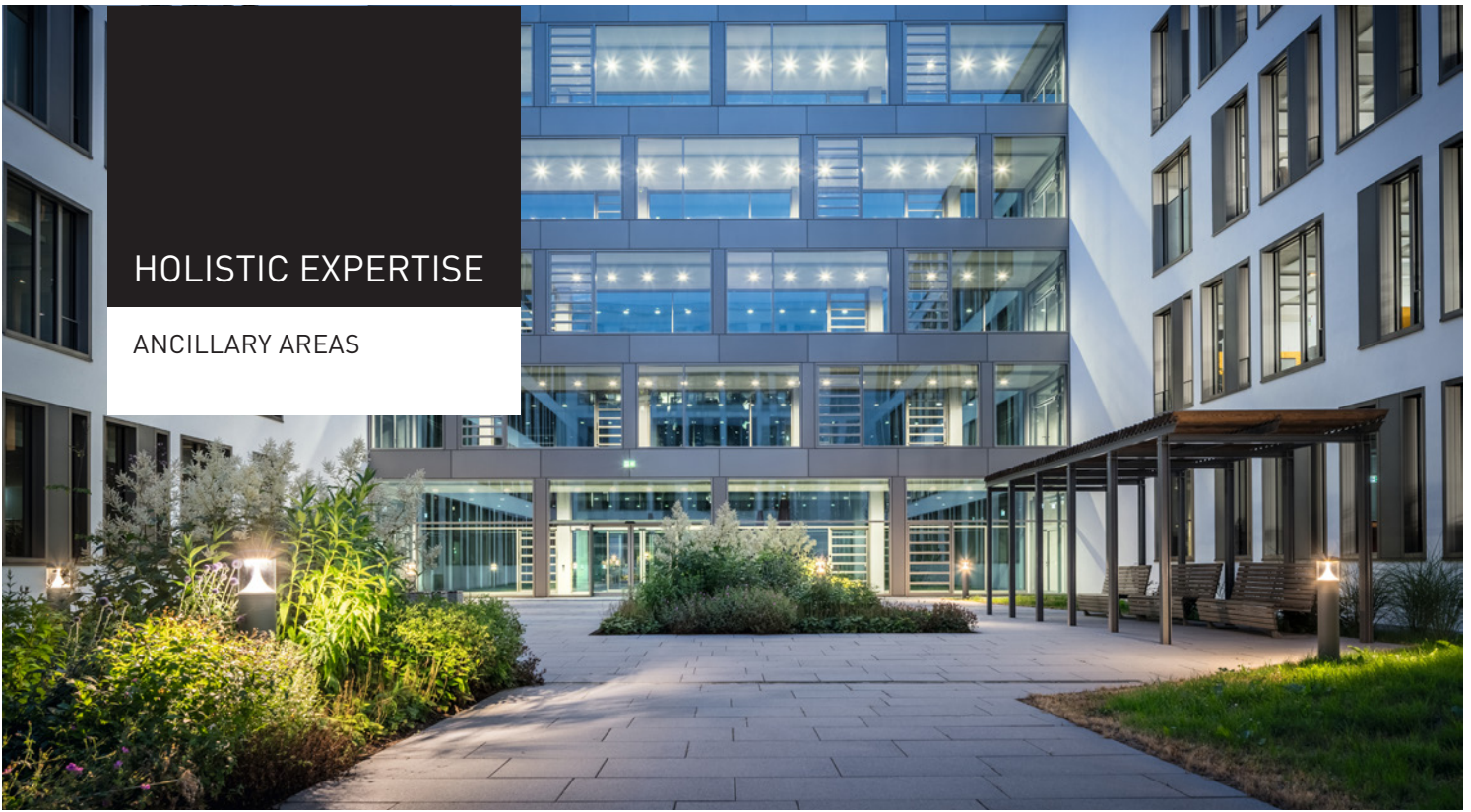


Sonnos LED
www.trilux.com/sonnos-led

Our entire lighting solutions and services portfolio can be found online at www.trilux.com/produkte.

HOLISTIC EXPERTISE

ANCILLARY AREAS



Utility and functional rooms

Ideal lighting supports the technical departments in ensuring the functionality of installations, supply systems and building automation. Durability, efficiency as well as fit & forget are just as important as fulfilling higher protection rating requirements.

Solutions: Aragon Fit LED, Oleveon Fit LED

Offices

Standard-compliant, glare-free illumination of rooms and individual task areas supports continuous concentrated, fatigue-free work. Integrated CO₂ sensors monitor air quality.

Solutions: Opendo LED, Luceos LED

Sanitary areas

Glare-free illumination combined with individual light colour choices generates a pleasant atmosphere.

Daylight and presence sensors ensure maximum cost efficiency.

Solutions: Acuro LED, Sonnos LED

Canteen/cafeteria

New hygiene and safety regulations require access monitoring and level measurement. Digital people counting systems take care of this and collect valuable insights into customer behaviour along the way.

Solutions: Arimo Fit IP LED, Limba LED

Facades

The architecture and attractive details of modern hospital buildings can be showcased through skilful facade highlighting. Objects and signs are specifically illuminated for orientation.

Solutions: Faciella LED, Skeo LED

Paths

Illuminated representative outdoor areas as well as adequate path lighting help achieve more safety and orientation even during dark hours in the morning, at night and in the evening.

Solutions: 8841 LED, Invego LED

Car parks

Ideal illumination without glare and shadow zones ensures safety in parking garages and car parks.

Efficient systems with light management significantly reduce energy costs and provide orientation with the help of smart applications.

Solutions: Aragon Fit LED (Indoor), Jovie LED (Outdoor)



74 R/Q LED
www.trilux.com/74rq-led



8841 LED
www.trilux.com/8841



Aragon Fit LED
www.trilux.com/aragon-fit-led



Limba LED
www.trilux.com/limba-led



Luceos LED
www.trilux.com/luceos-led



Oleveon Fit LED
www.trilux.com/oleveon-fit-led



Opendo LED
www.trilux.com/opendo-led



Skeo LED
www.trilux.com/skeo-led

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TRILUX CASE STUDY & REFERENCES

HOSPITAL
ENFERMERA ISABEL ZENDAL,
SPAIN





The emergency hospital complex in Madrid was built in a record time of just 100 days. TRILUX took charge of all lighting tasks and not only scored points with a technically perfect result but also with attractive design: a comprehensive, innovative and highly functional lighting concept from a single source. Despite the record pace, sustainability was not left behind: The TRILUX luminaire models used are "Smart Lighting Ready (SLR)" and can also be flexibly upgraded later on to form a smart system – for example through networking, cloud connection or non-lighting IoT equipment.

TRILUX CASE STUDY & REFERENCES

REFERENCES



Hospital greater Stuttgart area



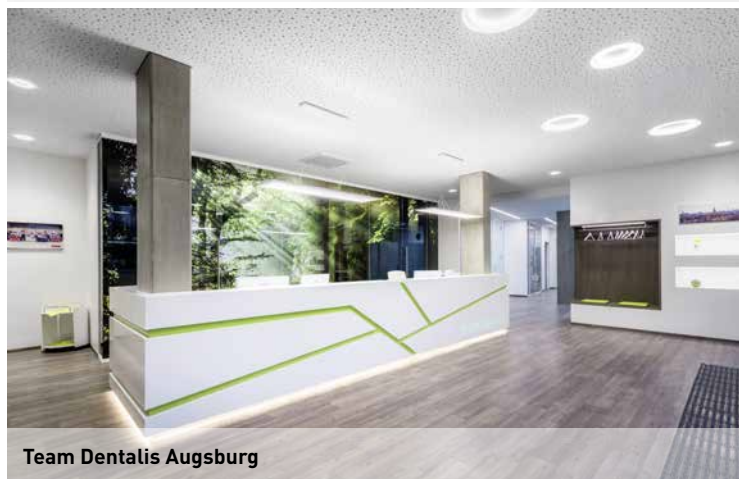
Heidelberg University Hospital



Hospital greater Stuttgart area



Annemarie-Griesinger-Haus Gerlingen



Team Dentalis Augsburg



Klinikum Oldenburg



Klinikum Crailsheim



Heidelberg University Hospital



Klinikum Crailsheim

HUMAN CENTRIC LIGHTING

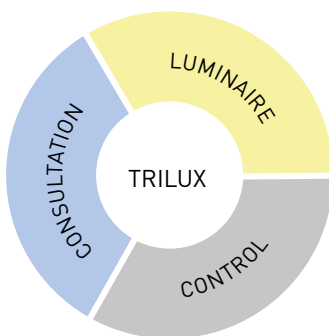
FOR TREATMENT
AND THERAPY



Mood changes from one moment to the next, sleep problems, restlessness, the discomfort of dark corners and restricted vision – for people with dementia, this is everyday life.

HCL is not only proven to improve well-being, light also actively helps combat fears that plague patients. A professional lighting solution with HCL can be used in the context of an innovative therapy approach and contribute significantly to recovery.

Light can also introduce a new quality of life to the everyday lives of elderly people: regardless of health status, they need a greater light intensity than young people due to reduced field of vision and lens opacity – a 75-year-old needs roughly 20 times more light intensity than a 20-year-old.



Individual complete solutions from a single source

We create light for people: From professional light consulting to ideal product selection and intelligent light control, TRILUX supplies all components of a professional Human Centric Lighting system from a single source.



Consulting

- individual consulting according to room situation and the desired lighting tasks
- Support for standard-compliant light calculation
- Creation of individual lighting situations



Control

- **Basic:** simple diurnal progression in the form of a predefined curve
- **Comfort:** individual curve adjustments within certain limits via app
- **Comfort Plus:** realisation of a completely customised solution including system monitoring

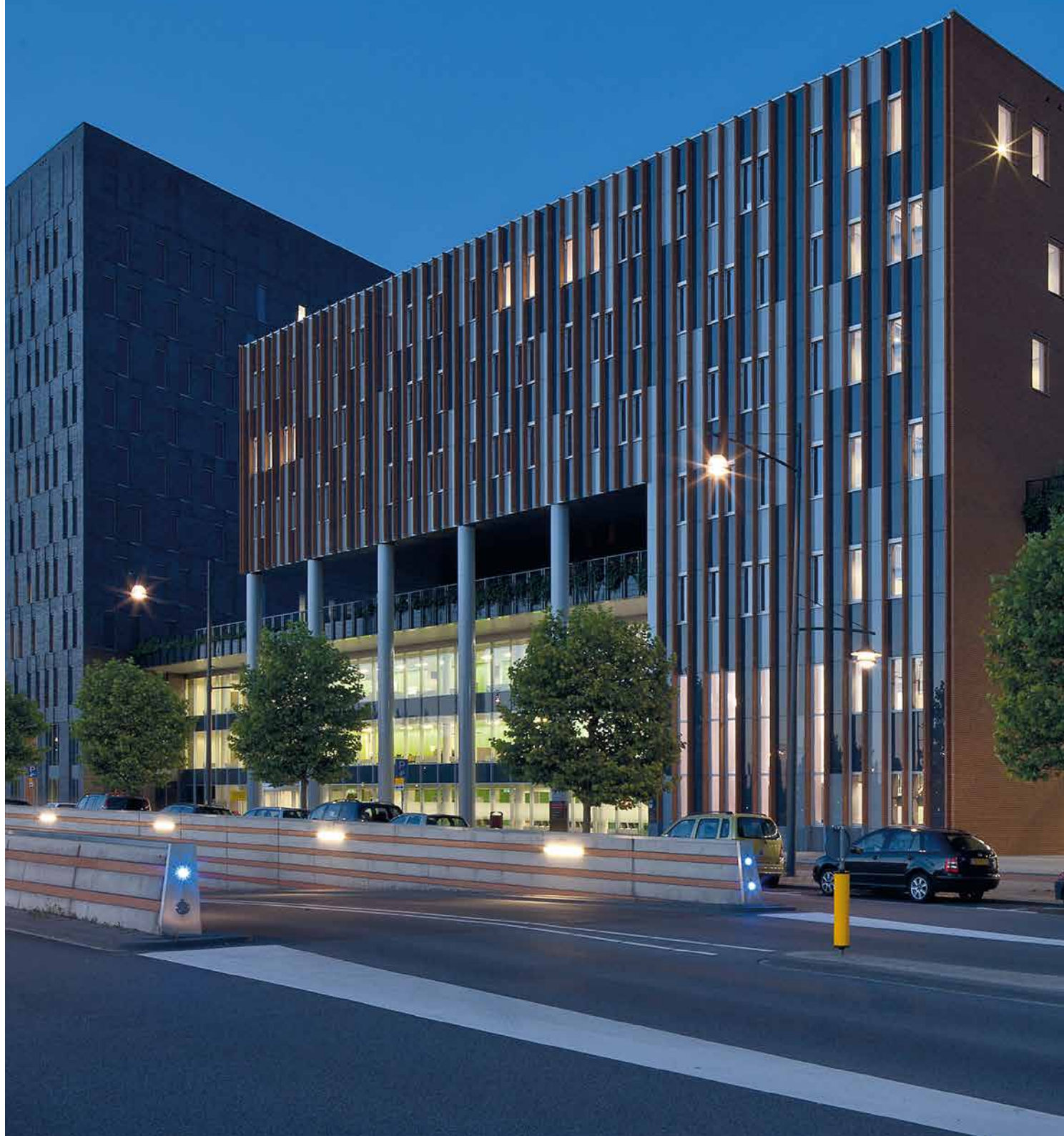


Luminaire

- TRILUX Active portfolio
- Control via DALI
- e.g. Arimo Fit LED or Sanesca LED

LIGHTING SOLUTIONS & SERVICES

FULL SERVICE
FOR YOUR PROJECT



Achieving perfect light has never been simpler

The lighting market has changed enormously due to LED transformation, increasing digitalisation and social mega-trends such as connectivity and big data. On the one hand this provides various opportunities. On the other, lighting solutions are becoming increasingly complex and their selection, configuration and operation more complicated.

TRILUX makes this complexity manageable thanks to intelligent solutions that set new standards in terms of energy efficiency and quality of light, and also by offering a wide range of customer-oriented services.



CONSULTING AND INFORMATION

In times of nearly unlimited possibilities for light control, TRILUX makes increased complexity manageable through its extensive solutions and services portfolio. A comprehensive range of smart tools and individual consulting services, you will simply find your perfect solution.

- Technology consulting
- Energy and cost efficiency calculation
- Custom lighting concept creation



PROJECT MANAGEMENT

Usually, numerous different trades are involved in designing and installing an intelligent, networked lighting solution. If desired, we can take complete care of project management for all aspects of lighting. This simplifies the path to a customised lighting solution and guarantees a perfectly coordinated chain of trades.



DIGITAL SERVICES

With TRILUX Digital Services, customers can benefit from the full potential of digital lighting solutions. The result is more comfort, more transparency and reduced costs.

- Monitoring services
- Location-based services
- Emergency light monitoring



TECHNICAL SERVICES

With TRILUX Technical Services, you can commission your new lighting installation without any worries. All installation work is carried out by a reliable supplier from the TRILUX partner network. On request, specialist companies with whom you already cooperate can also be integrated. TRILUX takes charge of coordinating all project stakeholders so that you can concentrate fully on your core business.

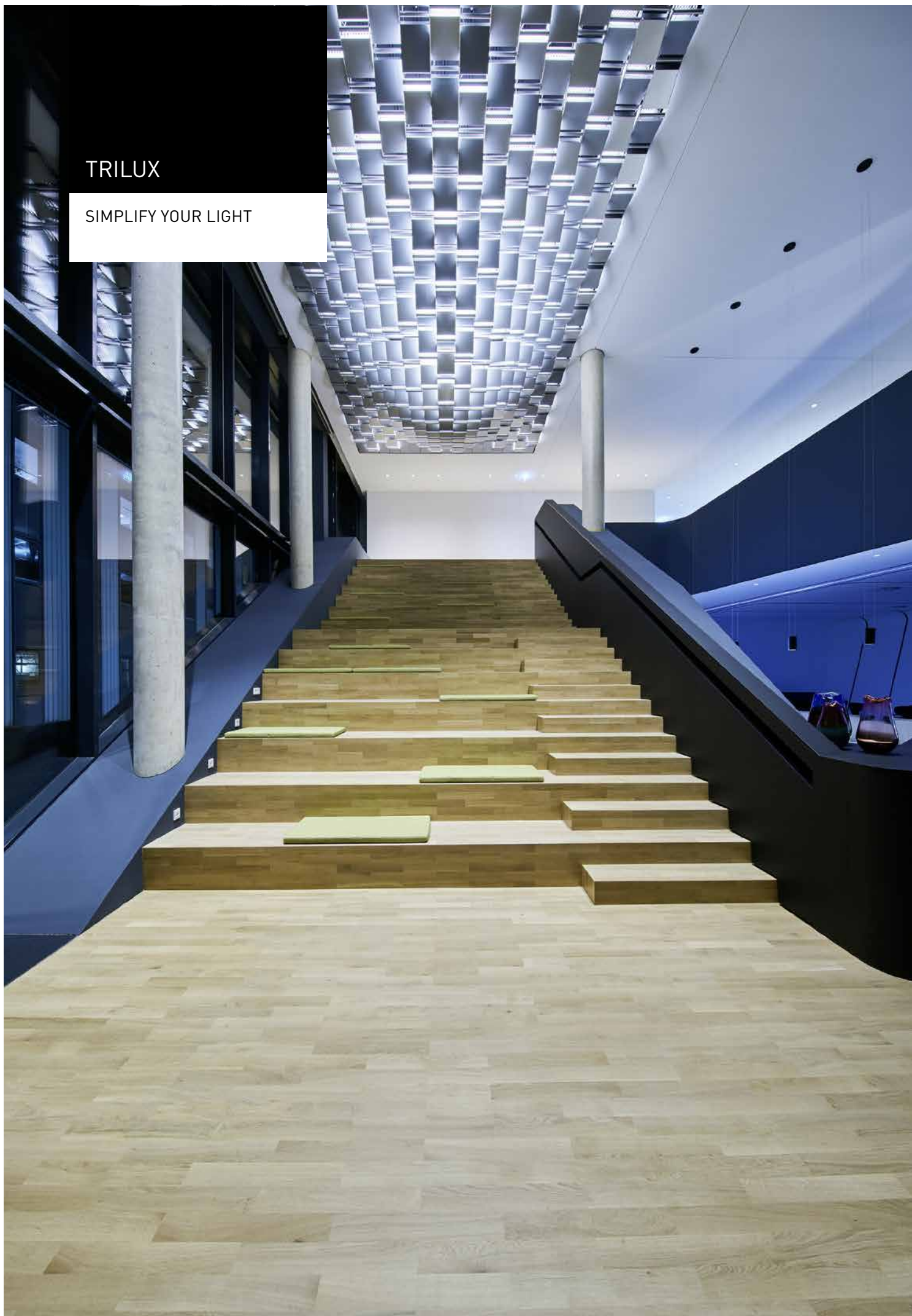


FINANCING SERVICES

TRILUX offers you a wide range of individual financing instruments for your light. Take advantage of the opportunity to immediately reduce running cost in a balance sheet-neutral way without own investments.

TRILUX

SIMPLIFY YOUR LIGHT



German engineering, customised solutions and innovative designs – this all indicates 'Made by TRILUX'. We place great importance on high-class workmanship and products with maximum quality that adapt to the individual needs of users and the diverse range of applications. TRILUX offers not only standard solutions, but in close cooperation with the customer develops atmospheric and simultaneously functional lighting concepts complying to current standards. Your special requests are our forte. This is ensured by the use of premium materials, in-house developed optics, extensive data records and efficiency levels. Made by TRILUX is your guarantee for the highest level of quality across the board.

www.trilux.com/quality

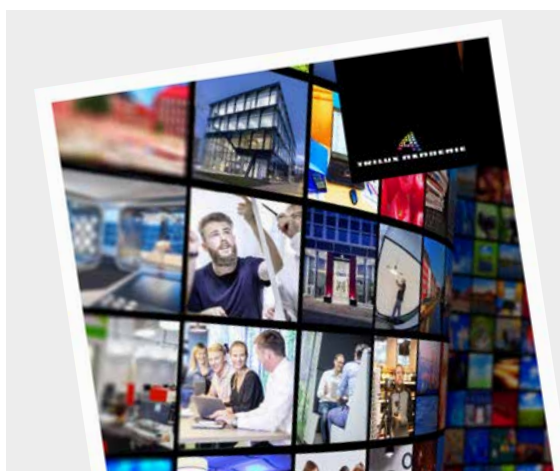


Sustainability – TRILUX facilitates sustainable buildings

Maximum energy efficiency for maximum sustainability: We help companies improve their CO₂ footprint through particularly energy-efficient products. This is not only sensible from an ecological standpoint, it also reduces operating costs and thus increases the profitability of a lighting solution. TRILUX solutions regularly set new standards in terms of energy efficiency and are an important component for sustainable building certifications such as BREEAM or DGNB.

Sustainability and climate protection are not limited to efficient products. TRILUX also shows commitment in the context of corporate responsibility, generating transparency in the supply chain and researching pioneering concepts for resource protection and material efficiency. Detailed information can be found in the TRILUX sustainability report on our website.

www.trilux.com/sustainability



TRILUX AKADEMIE

The TRILUX Akademie is the qualification partner for everyone professionally concerned with light. Light becomes intelligent, activating, relaxing or transforms into experiences. The latest specialist knowledge is therefore vital to optimally exploit the possibilities created by new products and applications.

The TRILUX Akademie communicates expert knowledge through various training formats for any training need. The wide-ranging programme of theme days, seminars and webinars enables seasoned lighting professionals to stay up-to-date and beginners to get a simple start in the world of light.

www.trilux-akademie.com



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All technical data including dimensional and weight specifications have been checked carefully. Errors excepted. Possible colour deviations are due to printing processes. We reserve the right to modify in the interest of progress. Luminaires are partly shown with accessories that must be ordered separately. Images of installations may show custom manufactured luminaires. Printed on PEFC-certified paper in an environmentally friendly way.

