

THE **ESY** PRINCIPLE

**INTELLIGENT SYNERGY
FROM AUTOMATION
AND LIGHTING**



MAKING LIGHT INTELLIGENT MEANS UNDER- STANDING A BIT ABOUT SENSOR TECHNOLOGY

ESY,

WHEN YOU'RE ONE OF THE LEADING PROVIDERS OF AUTOMATION SOLUTIONS

People operating in today's working environment fulfil a wide variety of tasks and in doing so they try their best every day. For this they need good light, as well as fresh, oxygen-rich air if they are to remain vital, concentrated and productive. ESYLUX focuses on people's needs, increasing their comfort and well-being in the workplace. It does so with innovative automation and lighting solutions that reduces energy consumption, thus ensuring lower operating costs and the protection of natural resources.

At the same time, the requirements that we face are often complex – not least because today's working environment requires us to think in networks and across different industries. In this respect, however, we can only help if we are able to offer solutions that are simple to implement and operate, and which by themselves improve the atmosphere in every workspace. We call it **Performance for Simplicity**. It is this philosophy of simplification that we apply consistently to all areas of our internationally operating company – from product development through to customer service. All over the world.

Based on research, development and production at our site in the German town of Ahrensburg, and on our experience in demand-based building automation, we are able to create the perfect synergy. The synergy consists of automation and lighting: with modern sensor systems, biologically effective LED lighting systems, intelligent control technologies and efficient use of daylight. Better quality of life from the most simple application, combining maximum energy savings with minimum costs. That is the ESY principle.

OUR VISION

Our intelligent solutions improve quality of life and energy efficiency in every workplace.

OUR MISSION

Offering demand-driven automation and lighting solutions for offices, educational and health care facilities, we are first choice for installers, planners and investors.

SIMPLY IMPROVING QUALITY OF LIFE AND ENERGY EFFICIENCY



ENERGY ONLY WHEN IT'S NEEDED: FROM THE SPECIALIST IN SENSORY SYSTEMS

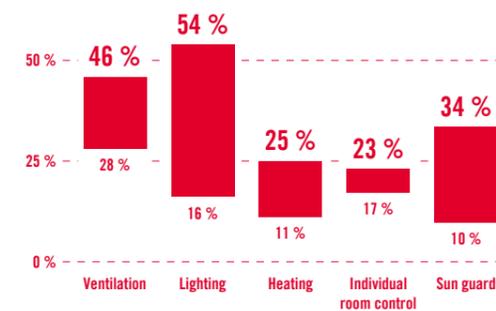
Imagine the joy of never again having to think whether the light in the workplace is on or off. And how much more cost-effectively a building can be operated if energy is only used when it is actually needed. The perfect task for an experienced automation professional like ESYLUX.

Since the company was founded, our success has been defined by demand-driven building automation, as well as outdoor and safety lighting. With LED having been our preferred illuminant, in 2014 we were able to merge the two business divisions by venturing into intelligent indoor lighting which, with impressive energy efficiency and durability, is also an application that is perfectly suited to electronic control. Today, we are a leading provider of intelligent automation and lighting solutions, our competence which is evidenced not least by the energy-efficient human centric lighting of the SymbiLogic technology.

▲ **EnergiMidt's Hovedkontor in Jütland:**
PD-C 360i/24 DIMplus presence detectors ensure maximum convenience and cost efficiency.

► **Krifa in Aarhus:** Set over 12,590 m², the headquarters of the Christian Association uses ESYLUX sensors that combine design, efficiency and flexibility.

ENERGY SAVING POTENTIAL OF DEMAND-DRIVEN BUILDING AUTOMATION (MIN./MAX.)



Source: Zentralverband Elektrotechnik- und Elektroindustrie e.V. (ZVEI)/Biberach University

REDUCING COSTS WHILE INCREASING COMFORT

Just one single ESYLUX presence detector saves a lot of energy because it only switches the light on when people are in the workplace and the brightness of the incoming daylight is not sufficient enough. Detectors with constant light control work even more efficiently by adjusting the connected artificial light only until a specific target value has been reached. For integrated automation we offer presence detectors that, in addition to the light, also adapt the ventilation to the current room conditions in order to make the best possible use of energy.

At the same time, our intelligent automation and lighting solutions substantially increase the quality of life. People benefit from an ideal room atmosphere in which they feel comfortable and able to operate effectively. Light is at its best when it enables optimum vision and guarantees orientation and safety in every situation. Our intelligent sensor systems act as a person's counsel, ensuring a high degree of automation comfort so that people can concentrate fully on their task at hand.



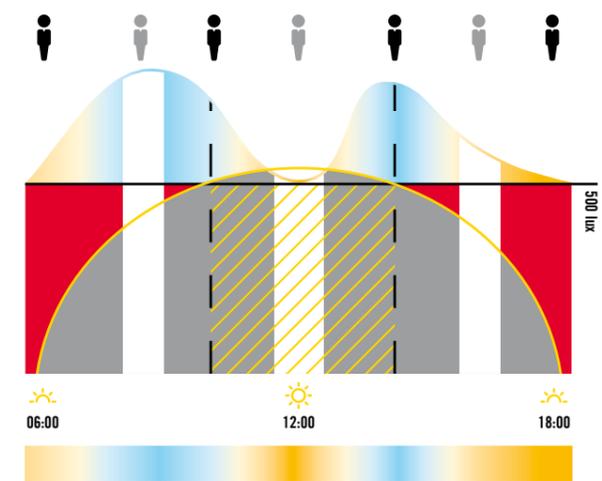
THE BEST LIGHTING FOR WORKPLACES IS EFFICIENT NO MATTER WHERE IT IS

ESY,

WHEN BIOLOGICALLY EFFECTIVE LIGHTING IS INTELLIGENTLY CONTROLLED

Innovation is the driving force behind ESYLUX. We develop products and solutions in order to find simple answers to complex requirements, and in doing so creating synergy effects. The best example for this is the SymbiLogic technology that we have developed for energy-efficient control of biologically effective lighting.

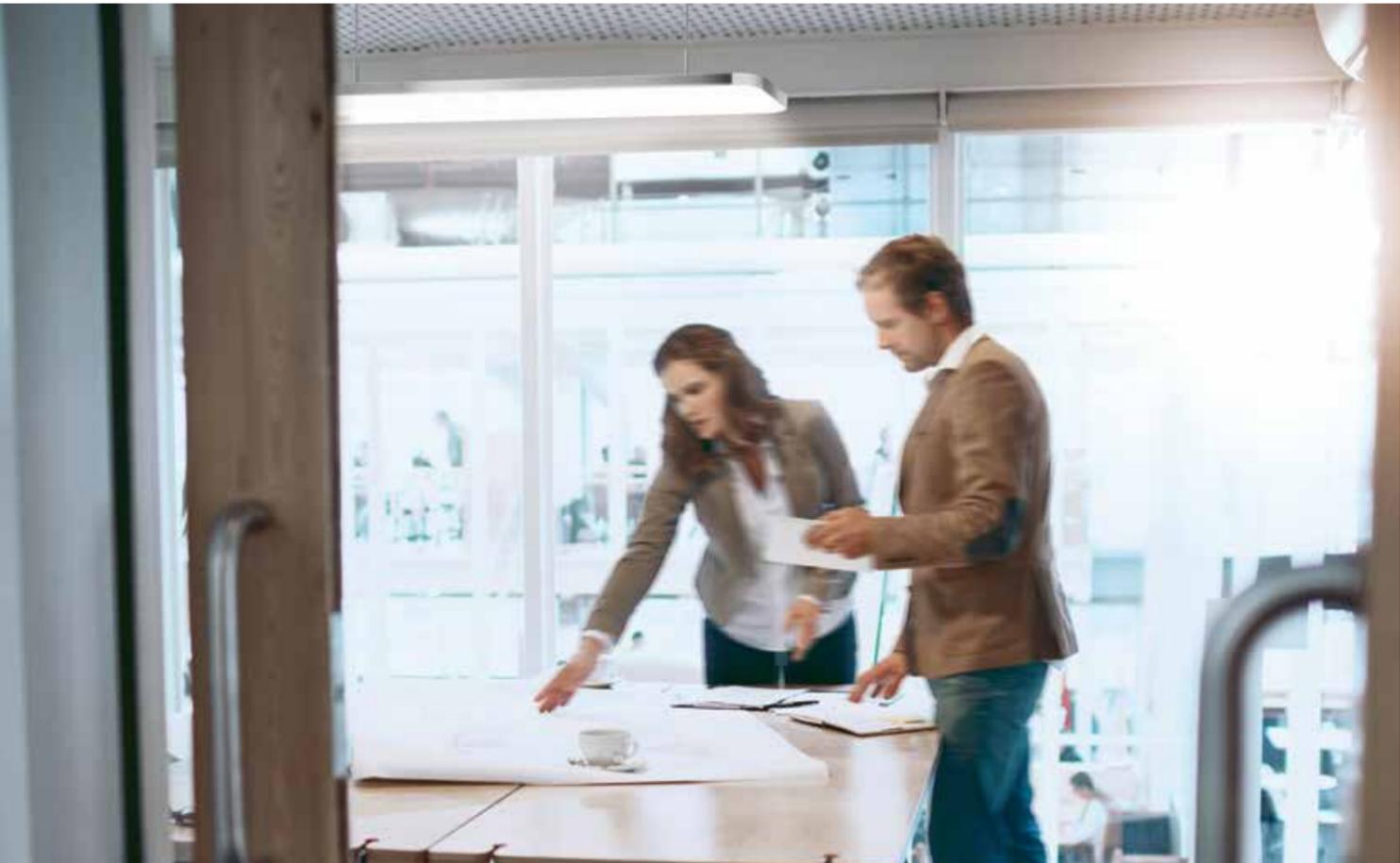
So-called human centric lighting simulates the dynamic gradient of natural daylight at the workplace, supporting a person's biorhythm. During the day brighter, cold-white light keeps people alert and productive. In the evenings, darker warm-white light enables a person to relax and sleep better. In the long term, motivation and vitality are thus increased. Innovative SymbiLogic technology makes human centric lighting particularly efficient. Illumination is switched depending on presence and daylight, and thanks to adaptive HCL light control a high degree of innovation is achieved by its use of incoming daylight even during the biodynamic brightness gradients.



- Proportion of artificial light
- ▨ Sufficient daylight
- ⦿ Present
- ⦿ Absent

SymbiLogic technology from ESYLUX with presence- and daylight-dependent switching and adaptive HCL light control.

SIMPLY **FIRST-CLASS LIGHT:** FOR MAXIMUM RELAXED VISION

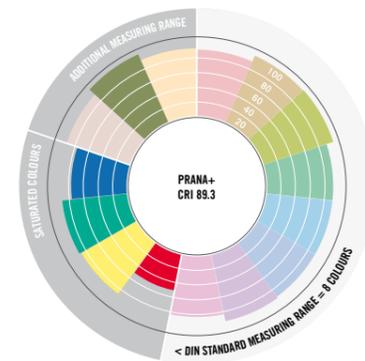


Light is not just light, which is why at ESYLUX we are constantly working in our in-house light laboratory towards achieving the best possible light quality. Through constant quality checks using the Colour Rendering Index (CRI) and Colour Quality Scale (CQS) we ensure that both weak and saturated colours are rendered as realistically as possible.

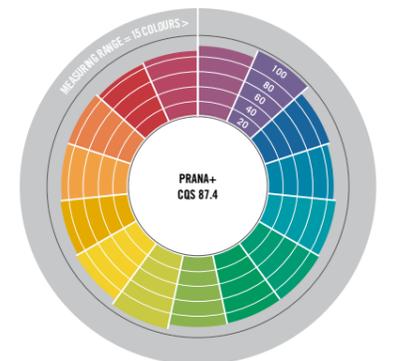
FLICKER-FREE EVEN AT LONG VIEWING DISTANCE DUE TO AN EXTREMELY LOW FLICKER FACTOR

Because LEDs react quicker than light bulbs to natural fluctuations in the alternating current they can easily flicker and thus adversely affect health. ESYLUX copes with this challenge too and with an extremely low flicker factor of less than 3 percent in the indoor lighting area, it ensures optimal light quality and a clear view.

▲ *The designer Office Floor Light PRANA+ combines biologically effective lighting with maximum colour brilliance. Its simple, classy design received numerous awards.*



ESYLUX CRI spectrum measurement result, example based on PRANA+



ESYLUX CQS spectrum measurement result, example based on PRANA+

SIMPLY **CROSS-INDUSTRY**: FOR BEST INDOOR AIR AND EFFICIENT CONTROL

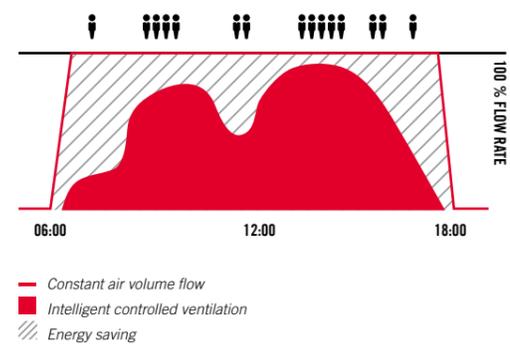


AUTOMATICALLY IMPROVING THE INDOOR CLIMATE

Apart from light, what people need above all is sufficient oxygen. So the quality of the air also affects how comfortable we feel in a room. The intelligent cross-industry automation of air and lighting creates a productive working environment and, at the same time, optimal light intensity.

For this purpose, ESYLUX offers presence detectors with a unique multi-sensor system: In addition to presence, they detect any change in the light situation, temperature, air humidity and quality of air, and control terminal devices as needed and in an energy-efficient manner. This is particularly economical because the multisensory detectors save on the use of multiple individual solutions, and the ventilation system only ever works at the exact intensity required.

SAVINGS POTENTIAL THROUGH DEMAND-DRIVEN VENTILATION



The TOUCH presence and motion detector with touch-sensitive lens surface.

SIMPLE MANUAL OVERRIDE

People like to enjoy comfort while at the same time maintaining control in every situation. Perfect automation is therefore just a convenient option for us that can be overridden manually at any time, quickly and simply. At the push of a button, users can adapt everything to their individual needs or access stored room scenes. Simply by push button, remote control or ESYLUX Light Control App via Bluetooth from a mobile device.

The operating concept of our TOUCH presence and motion detectors is also innovative: The touch-sensitive lens surface enables the detector to simultaneously become a push button.

WE DEVELOP SOLUTIONS ALSO FOR INVESTORS, PLANNERS AND INSTALLERS

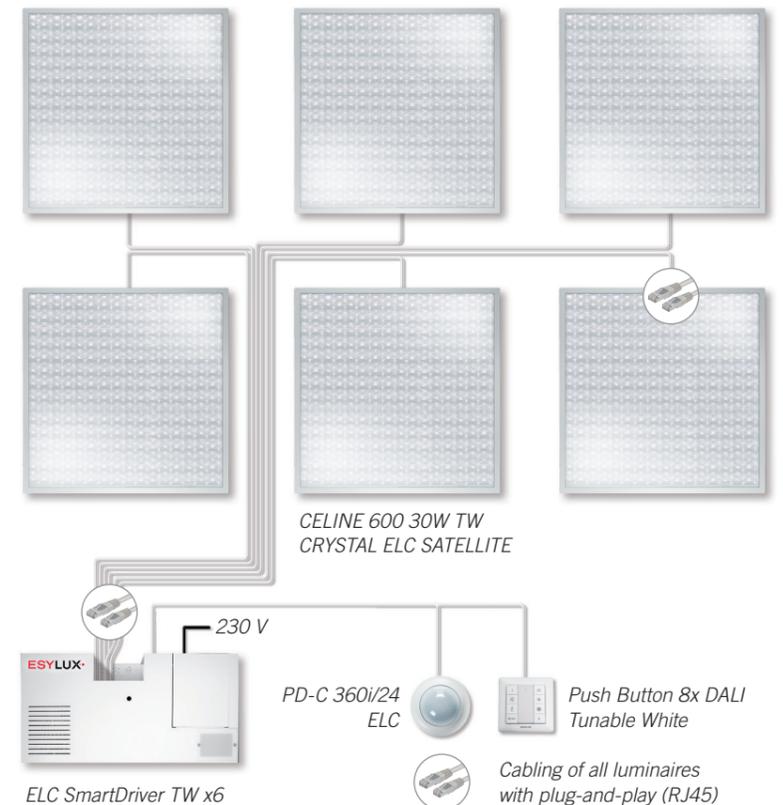
ESY,

WHEN EFFICIENCY AND EASY IMPLEMENTATION IN ALL PHASES ARE KEY

Anybody who has the well-being of people in mind will of course ensure, that solutions benefit everybody that uses them. That is why we are developing our innovations not only for end users, but also for the benefit of those who consciously opt every day for the quality that ESYLUX provides: investors, planners and installers. Thanks to the perfect synergy of automation and lighting we are able to meet the highest demands in terms of economic viability, efficiency and profitability.

Our modern automation and lighting solutions guarantee excellent value for money and maximum energy-saving for cost-effective building operation. Above all, we are concerned to ensure that every individual step can be carried out as simply as possible whilst saving time – from planning and assembly through to commissioning and control. Last but not least, we have confidence not only in the durability and design of our products, but also in the helpful service we offer.

Our ELC-based solutions (ESYLUX Light Control) are not just about planning. They are easy to install and commission with plug-and-play. Moreover, when our solutions with SymbiLogic technology are used, the return on investment in a property will increase.



SIMPLY CREATING **SYNERGY ADVANTAGES:** SAVING ENERGY, TIME AND MONEY



FOR PLANNERS: MAXIMUM FLEXIBILITY IN ROOM USE AND DESIGN

When developing your construction projects, energy-saving building automation is assured thanks to the flexibility and planning security provided by ESYLUX. The high functional range and technical design of individual components allow you to engage in variable room design and thereby remain free and flexible when it comes to architectural design.

FOR INSTALLERS: EASY INSTALLATION AND QUICK MODERNISATION

Installers are excited by the simplified commissioning and control, particularly by our pre-configured set solutions and time-saving plug-and-play installation. The clear price advantage and extended warranty period offered by ESYLUX are also impressive. Because many solutions can be ideally integrated into existing building systems, you can also modernise existing properties quickly and easily – room by room.



UP TO 70 %

POTENTIAL ENERGY SAVINGS*
Through the use of demand-driven control combined with modern lighting.

*Source: Energy Efficiency Initiative, Deutsche Energie-Agentur GmbH (dena)



UP TO 60 %

**TIME SAVING THROUGH
PLUG-AND-PLAY**

FOR INVESTORS: INCREASING COST EFFICIENCY AND PROPERTY VALUE

As an investor you attach great importance to high energy-saving potential in building automation through low investment and operating costs, to flexible lighting control for different room concepts, and to the robust quality of individual components. And best of all, you also benefit further from reduced operating costs when the solution has long been amortised.

Whether you are planning a new project or would like to modernise your existing environment – with the affordable forward-looking solutions from ESYLUX you are laying a foundation stone for your property to increase in value over the long term and enjoying a higher return on your investment. Additional advantages: Your staff will save a lot of time because our solutions are so easy to operate, while maintenance is kept to a minimum.



INTELLIGENTLY IMPROVING ALL ROOMS FOR OFFICE, EDUCATION AND HEALTH CARE



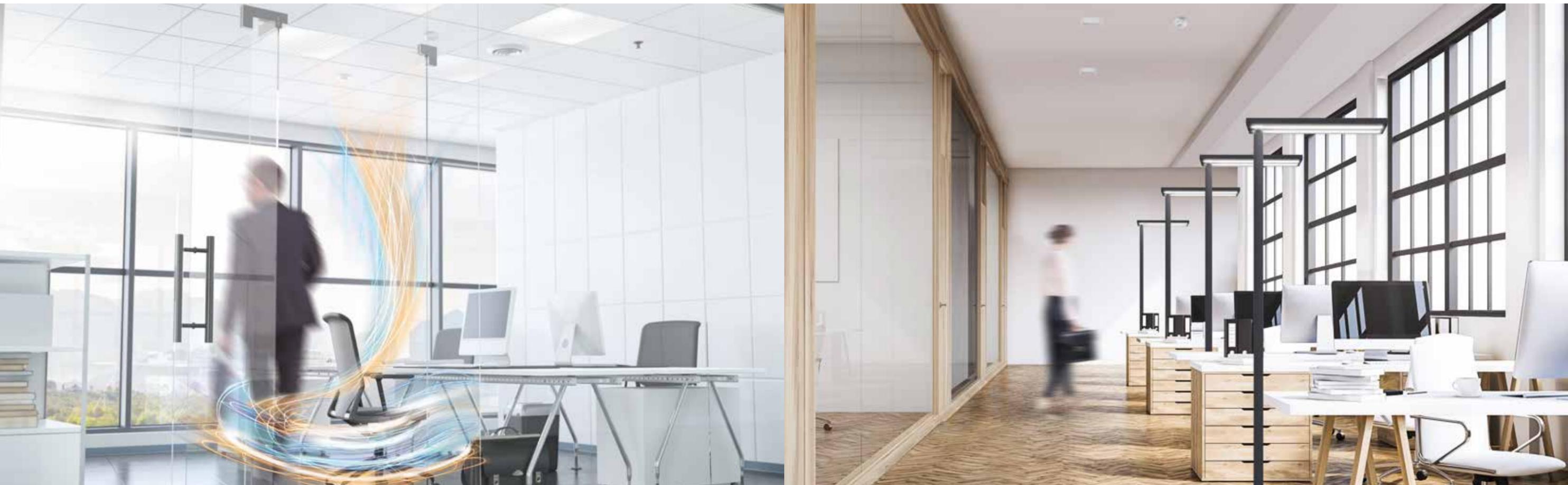
ESY,

WHEN INDIVIDUAL SOLUTIONS ARE OFFERED FOR EVERY WORKPLACE

When we work on new technologies and products at ESYLUX, we are helped not only by our innovative capacity, but also the ability to understand different situations and needs. Only by doing so can we develop intelligent demand-driven, highly efficient automation and light solutions that provide optimal support for people all day long in all areas.

Yet even though the requirements differ so much in offices, educational establishments and health facilities, it is healthy, beneficial light and fresh, pleasant indoor climate conditions that play an essential role everywhere when it comes to well-being, motivation and ability to concentrate in the workplace. For us, people always come first.

SIMPLY MAKING OFFICES **LIVEABLE**: FROM CONFERENCE ROOMS TO EXECUTIVE SUITES



EVERY AREA IN AN OFFICE BUILDING REPRESENTS DIFFERENT REQUIREMENTS IN TERMS OF LIGHT, AIR AND SAFETY

Light and air are significant factors for the well-being of people at their workplace. Light influences people's day-night-rhythm and in an ideal case, is biologically effective, while fresh air supplies people with oxygen and promotes their ability to concentrate. Light and air fulfil different roles in the different spaces within an office building.

In the entrance area, for example, atmospheric lighting creates an inviting atmosphere, while in an open-plan office bright light is required for good visibility and with it, error-free working. In exclusive individual offices, lighting also provides a representative function in most cases, while in canteens the right light supports relaxation during the lunch break. In a multifunctional meeting room, light and ventilation must ensure maximum concentration on the one hand and a relaxed communicative atmosphere on the other.

▲ The **CELINE Quadro-Set**, the pre-configured, ready to use plug-and-play solution for offices up to 20 m², supports the biorhythm and optimal working performance with SymbiLogic technology. The **DALI-Switch** simply integrates ventilation into the demand-driven system.



▲ The presence detector in the light head of the **ISABELLE** office floor light regulates the light depending on presence and daylight. The **PD-ATMO** controls the ventilation and the homogeneous light of the **ELSA** downlights.

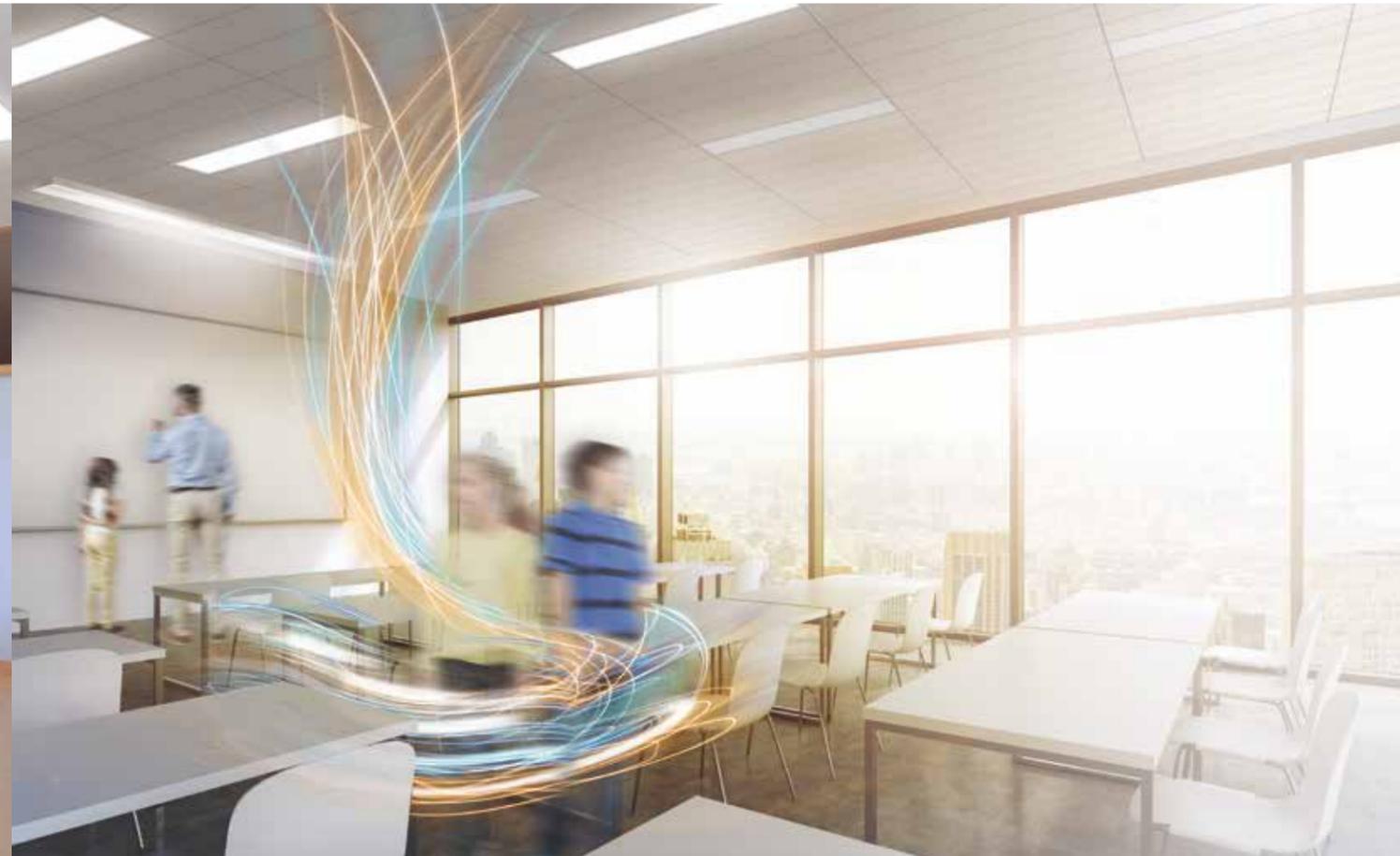


INCREASE WELL-BEING AND MOTIVATION WITH INTELLIGENT AUTOMATION AND LIGHTING SOLUTIONS

The innovative, demand-driven solutions from ESYLUX automatically improve every room in the entire office building. Whenever daylight is not enough for relaxed vision to be at its best, ESYLUX solutions are able to enhance it with flicker- and glare-free artificial light. Presence-dependent light ensures safety in corridors and on stairwells. When the air quality changes, for example in canteens or bathrooms, it is optimised by multi-sensory presence detectors.

In this way we can use light and air to improve people's comfort and well-being in the office at all levels, keep them alert, motivated and productive all day long, and supporting a restful sleep at night. They don't need to do anything at all, and the energy of the building is used as efficiently as possible.

SIMPLY OPTIMISING CONDITIONS FOR LEARNING: FROM PLAYGROUPS TO CLASSROOMS



SWITCH THE ROOM TO FULL CONCENTRATION WITH INTELLIGENT AUTOMATION AND LIGHTING SOLUTIONS

In educational facilities such as schools, universities and day-care for children, large groups of people are located for long periods of time in one room and need a pleasant atmosphere that is conducive to learning. This is because the brain can only be truly productive if you feel well overall. Light has a significant impact on mood and the ability to concentrate. But learning also consumes a lot of energy and oxygen and that's where air can become thin. That is why light and air quality must be at its best in enclosed spaces such as these if it is to create the optimum conditions for people, motivation and successful learning.

Depending on the educational facility, there are further requirements for individual areas. For example, in classrooms individual light scenes are appropriate for teacher-centred learning or learning in groups. Younger children on the other hand, need play areas in which light provides optimum support in periods of activity and during breaks.

▲ The flat **STELLA** panel lights ensure the right atmosphere when used in combination with the homogeneous light emission of the **ELSA** downlights. The presence detector increases energy efficiency through demand-dependent constant light control and simple group control.



▲ The lighting system used in the **CELINE** series combines biologically effective lighting with intelligent ELC technology for flexible light control in different zones. The board light **BOARDLIGHT** for even vertical illumination of the presentation area is integrated.



WHERE A LARGE NUMBER OF PEOPLE LEARN TOGETHER, LIGHT AND AIR CAN ENSURE FOR IDEAL CONDITIONS

Group rooms, classrooms, assembly halls or gymnasiums: With our demand-driven automation of lighting and air we are able to ensure optimal conditions for learning in every room. For this we use biologically effective lighting that imitates the dynamic gradients of daylight and thus has a positive effect on hormones and the day-night-rhythm. As a result, children and young people can remain attentive, productive and motivated.

Today's public facilities need to be particularly cost-effective. This is where ESYLUX can oblige with specially pre-configured set solutions – e.g. for classrooms. The ready-to-use sets with sensors, lights, ELC control, cabling and DALI push buttons offer energy-efficient light management and the best possible light quality. They also represent excellent value for money.

SIMPLY SUPPORTING HEALING PROCESSES: FROM CONSULTATION TO THE PATIENT ROOM



THE RIGHT LIGHT AND AIR QUALITY ARE ALSO CRUCIAL IN ROOMS DESIGNED FOR HEALTH

In most cases, people in health facilities scarcely ever come into contact with natural daylight for longer periods of time. The result is tiredness and an adverse effect on regeneration processes. Moreover, patients in hospitals and rehabilitation clinics have quite different sleep needs depending on their age and illness. Flexible light management and demand-driven ventilation help to provide optimum support for the healing process of every individual.

In some rooms, light takes on quite different functions. In an examination room, for example, the lighting must offer a high degree of relaxed vision while at the same time creating a calm, trusting atmosphere.

▲ The **PRANA+** Office Floor Light offers innovative SymbiLogic technology in an exclusive design. **STINA** down-lights create a stylish ambience and the **ATMO** presence detector uses multisensory systems to control light and climate as required.



▲ Control of the biologically effective lighting in the ELC lighting system **CELINE** is particularly energy-efficient due to the SymbiLogic technology. The **ATMO** presence detector automatically ensures optimal air.



INVIGORATING BODY AND SOUL WITH INTELLIGENT AUTOMATION AND LIGHTING SOLUTIONS

Multi-bed rooms, nurse rooms or examination rooms: ESYLUX combines biologically effective lighting with demand-driven automation for a feel-good environment that has a positive effect on the recovery process. This human centric lighting, with its dynamic daylight-like brightness and colour gradients, supports the hormone balance and the natural day-night-rhythm. Variable, appropriate light scenes simplify treatment.

Also from the economic perspective, the intelligent synergy of automation and lighting is a benefit with ESYLUX. For example, with the best price-performance ratio the pre-configured, ready-to-use set solutions for patient rooms (patient room sets) offer maximum energy efficiency and top light quality.

**THE MOST
PROMISING
IDEAS ARE
THOSE THAT
ALREADY HAVE
AN IMPACT
TODAY**

ESY,

**WHEN INNOVATIONS ARE DYNAMICALLY IMPLEMENTED
IN SIMPLE SOLUTIONS**

Finding out what people will need in the future and then quickly implementing those findings into simple products and solutions – that's what ESYLUX is about. When developing innovative technologies and products we are also able to respond quickly to market trends because we have a powerful international network. Experienced trading partners the world over and numerous subsidiaries in Europe, Asia and Oceania are the reasons why we can boast outstanding value for money of ESYLUX products even in a heavily competitive environment.

With more than 20 years of experience in the field of demand-driven electronics, ESYLUX has followed a consistent path to intelligent synergy of automation and lighting. Due to this expertise and our quality standards we offer first-class products which are unique in terms of efficiency, safety, durability and convenience. Numerous patents, prizes and awards prove this quality.

**INNOVATIONS NOW SHOWING THE WAY:
ESYLUX LIGHT CONTROL AND ESY-PEN**



Simply planning, installing, commissioning, maintaining and operating intelligent, biologically effective light – and all energy-efficiently! Not merely a dream of the future, with the ESYLUX innovation ELC.

Quickly configuring presence and motion detectors, as well as light controllers, by smartphone and remote operation, measuring light and managing project libraries with special precision – the ESY-Pen is truly a multi-talent for installation.

SIMPLY BEING A GOOD PARTNER: FROM PLANNING THROUGH TO THE LAST HANDLE



LET US TACKLE NEW TASKS TOGETHER

For ESYLUX, excellent service above all means being close to the customer. Our experts can provide advice and provide support in all phases of your project – from planning energy-efficient solutions and selecting products through to installation and reliable support via our technical hotline. What is more, you benefit from our helpful tools, training opportunities for planners, traders and technicians in the ESYLUX Academy, and an extended manufacturer's warranty.

Why not put ESYLUX to the test: We accept any challenge and look forward to implementing exciting projects with you. And we will prove that everybody benefits from demand-driven automation and lighting: a gain for people, for the environment, and for your balance sheet. Welcome to ESYLUX.



**ESYLUX
ACADEMY**

*Informing and instructing
our customers is of utmost
importance to us.*



**SUPPORT FOR
PLANNING AND
PROJECT MANAGEMENT**

*From project planning
through to completion, we
are always at your side when
you need us.*



**EXTENDED
MANUFACTURER'S
WARRANTY**

*Quality is often just an empty
promise. For us, it is an
obligation.*



**ONLINE-
DOCUMENTATION**

*Information is precious – if it
is easy to find and use.*

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