

# ESYWORLD

THE LATEST FROM THE WORLD  
OF AUTOMATION AND LIGHTING

## SWARM MENTALITY IN THE OFFICE

WHEN LIGHTING GROUPS COMMUNICATE WITH EACH OTHER INTELLIGENTLY

## A KNACK FOR INNOVATION

ESYLUX FOUNDER AND SENIOR PARTNER PETER KREMSEK ON WHAT HAS CHANGED,  
WHAT HAS STAYED THE SAME AND HIS PERSONAL RECIPE FOR SUCCESS

## MASTER MAKER LIGHT

HOW STUDENTS AND TEACHERS IN THE TRAINING BUILDING AT  
HWK DÜSSELDORF BENEFIT FROM INTELLIGENT LIGHTING SYSTEMS

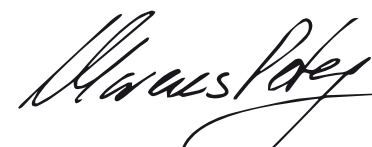
# WELCOME

**Dear readers,**

People have been searching for the key to a successful career since time immemorial. Confucius maintained that hard work and perseverance were essential, whereas the Greek dramatist Menander asserted that it was about being in the right place at the right time. Countless would-be advisers claim to have tips that will guarantee success, but the sheer number of people proffering advice suggests that perhaps it isn't quite so easy. A prime example of an

accomplished career is undoubtedly the story of ESYLUX founder Peter Kremser. More than 50 years as an entrepreneur and more than 25 years of ESYLUX speaks for itself. The latest edition of **ESYWORLD** reveals what drives him and outlines how his principles will enable ESYLUX to continue innovating in the future. Happy reading!

**Mareks Peters**



Chairman and CEO, ESYLUX

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# SWARM MENTALITY **IN THE OFFICE**

WHEN LIGHTING GROUPS COMMUNICATE  
WITH EACH OTHER INTELLIGENTLY

## LIGHTING SYSTEMS FEATURING ESYLUX LIGHT CONTROL ELC

- Simple plug-and-play installation
- Ready to use immediately
- Co-ordinated components
- Energy-efficient Human Centric Lighting
- Cost-efficient investment in future-proof technology



# GROUPING, SCALING, NETWORKING: ALL VIA PLUG-AND-PLAY

There are lots of buildings where people already benefit from lighting systems featuring ESYLUX Light Control ELC. One reason for their popularity is the range of configuration options that allow for a wide design spectrum to accommodate specific customer requirements. Another useful feature is that the control units can communicate with each other.

With possibilities such as time-dependent control, scene control or individual light control in different zones of a room, basic »light on/light off« options are rarely the choice these days when modernising lighting. Some customers have very precise ideas, while others have rather vague ideas. In any case, it is highly advisable to be well-versed in the potential of a particular solution – such as the ELC lighting systems.

## LIGHTING SYSTEMS ALWAYS READY FOR IMMEDIATE USE

Many ESYLUX customers are already familiar with compiling basic versions of the systems comprising ELC control units, ELC sensor systems and ELC ceiling lights. Only the SMARTDRIVER control unit needs the involvement of an electrician to connect it to the 230 V mains voltage. The systems, which meet safety extra-low voltage (SELV) requirements, are then installed via plug-and-play; the intelligent factory settings mean that they are instantly ready to use with no programming needed. The system also recovers quickly from power cuts – the lights will be back on in four seconds at the latest!

But just how do I set up the promised individual light control in different room zones? The advantages for users are obvious: Firstly, comfort is increased when lighting automatically reacts to different levels of daylight and selects the optimal brightness in each zone. Secondly, lighting control based on room zones improves energy efficiency as artificial light is only turned up as much as is actually required.

## GROUPING VIA PLUG-AND-PLAY

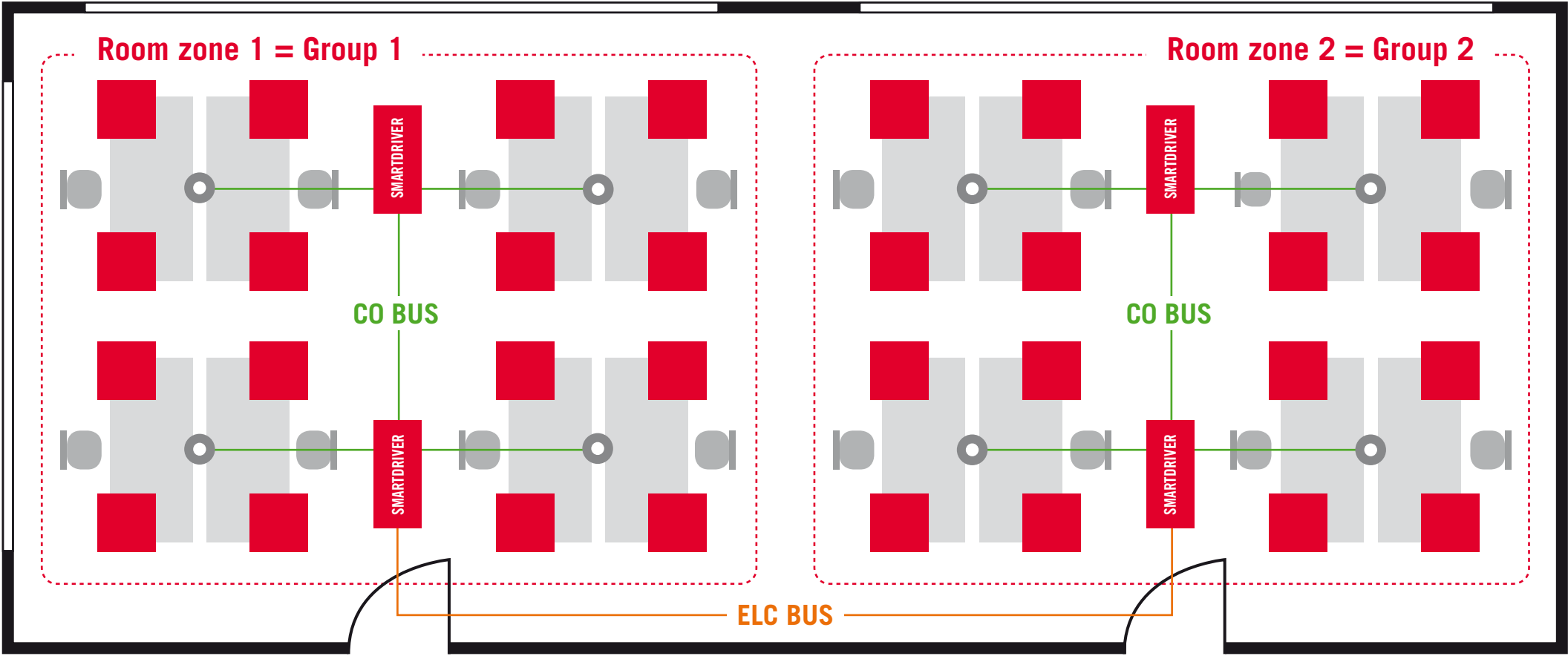
To understand how to do this with the ELC lighting systems, you first need to know how to build and scale groups. Ultimately, each room zone needs to have a group that automatically controls the light within its area. Forming a group is remarkably simple: The smallest possible ones consist of a sensor, a control unit and the main lighting connected to this. Everything operates via plug-and-play.

This also applies when scaling a group, which uses the CO bus – one of two options for connecting a system's control units. Scaling via CO is a good option when more lights are needed in a room than is possible with a single ELC control unit. The CO socket enables one control unit to be connected to another via a connector plug. Additional lights can then be attached to the second control unit using an RJ45 connector. ►



► Not just for open-plan offices: When dealing with more spacious rooms and varying levels of daylight, individual light control in different room zones becomes an ever more preferable option.





◀ The CO bus and the ELC bus provide two ways of connecting the control units in the ELC lighting systems with each other: Groups are scaled via the CO bus and networked together via the ELC bus. The example on the left shows a room containing two zones. A group is formed and scaled in each zone. Connecting the groups via the ELC bus enables both room zones to be intelligently networked.

INTELLIGENT NETWORKING OF GROUPS VIA ELC BUS

At first glance, we seem to have solved the task we set ourselves earlier of setting up individual light control in different room zones. As mentioned, this requires a group for each room zone. Now that we know how to form and scale groups, the obvious solution is simply to install and commission groups independently in all relevant zones. However, when implemented in this way there is no connection between the individual groups, which prevents a collective manual override and communication between the groups!

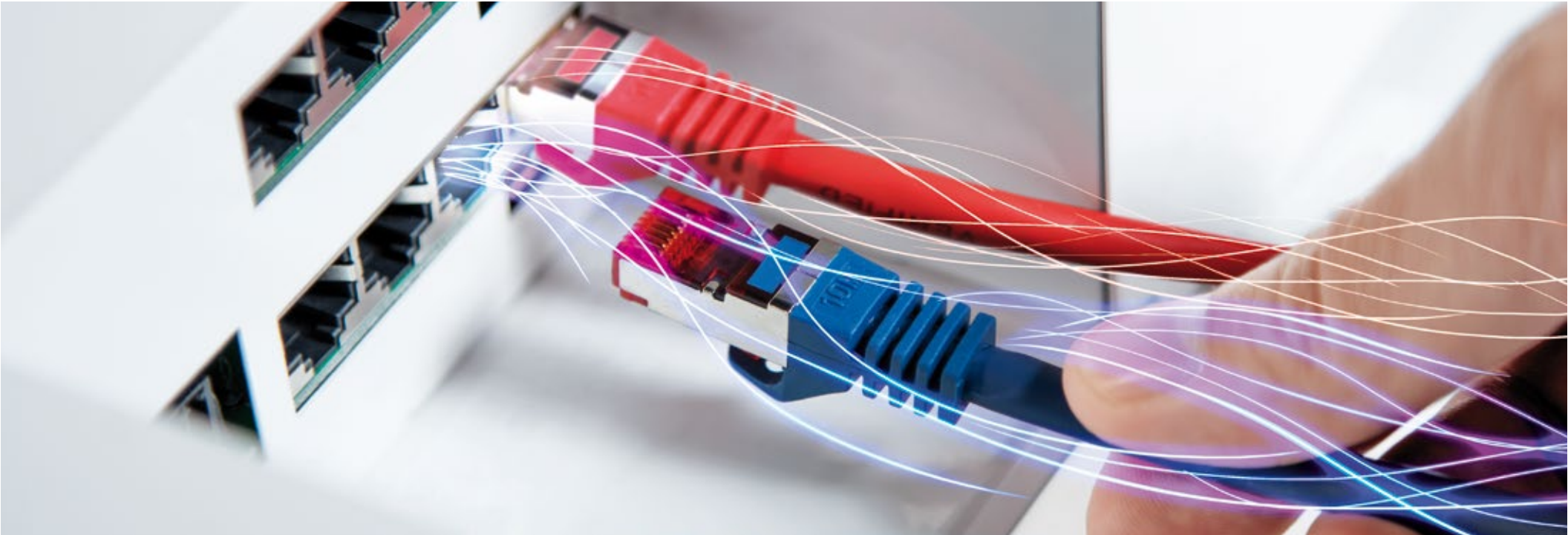
This is where the second option for connecting ELC control units comes in: the ELC bus. Whereas the CO bus is used to scale groups, the ELC bus allows these groups to be intelligently networked with each other. This is also achieved via plug-and-play, specifically using an RJ11 connection. The groups then each automatically control the lighting in their zones but can be overridden using the same buttons. This configuration also allows scenes to be formed and switched across groups. ▶

▼ SMARTDRIVER, the ELC control unit, facilitates simple grouping, scaling and networking via plug-and-play, enabling error-free and quick configuration.

SCALING GROUPS VIA CO BUS

Connecting components via the CO bus offers more advantages than just a greater number of lights – it allows the entire system to be overridden using the same buttons. Furthermore, up to 10 presence detectors can be connected per group, which extends the detection range of the system accordingly. If one of the presence detectors within the group detects a human presence, all control units connected via CO register this – and therefore switch on the lights, or keep them switched on, in their own zone too.

Once a group has been formed and scaled as necessary, more precise configuration options can be set using the ESY app and the ESY-Pen. For example, the RJ45 outputs on the control units (and therefore also the connected luminaires) can be assigned to one of up to four light channels offered by the system. These light channels are used both for basic configuration in standard mode and to form individual scenes.





▲ A dimmed orientation light in unoccupied room zones makes working in open-plan offices more pleasant and protects the eyes when twilight descends.

SWARM FUNCTION FOR EXTRA COMFORT

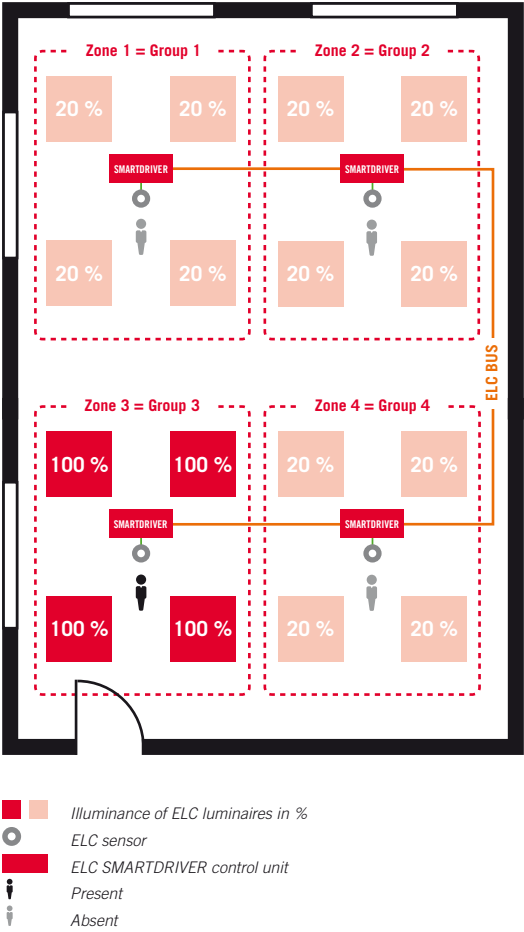
There is one more technical feature of the ELC lighting system that only becomes available when the system is communicating via the ELC bus: the swarm function, the name of which refers to the concept of swarm intelligence. This is a subject of research into fish, bird and insect behaviour, and is the ability of groups to interact intelligently by communicating with each other. By contrast, the swarm function offered by ELC lighting systems focuses on people and on increasing their level of comfort in open-plan or large-capacity offices.

Anyone who has worked in this type of office will be familiar with the situation. Very often, the room is not fully occupied and might even be empty. As the lighting around your own workstation is switched off, you soon find yourself in an isolated pool of light. Most people find this uncomfortable and the larger the room, the lonelier it is – especially in the evening when it's already dark outside.

AVOIDING STRONG LIGHT CONTRASTS

The swarm function, which is activated automatically by default, prevents strong contrasts in lighting. When a single workstation or only a few workstations are occupied, this function ensures that a dimmed orientation light remains on in the unoccupied areas. This is much more pleasant for those who are still working, and it is also more gentle on the eyes. Once dusk falls, the orientation light prevents strong light contrasts in the room that could fatigue the eyes in addition.

When the office finally empties at the end of the day, the collective intelligence of the ELC lighting system kicks into action for the last time. Now that there is no human presence, the switch-off delay time begins before the orientation light illuminates the area once more. Only then does the lighting system turn off for the rest of the night – saving money and energy until the start of the next working day. ■



▲ Intelligent communication between the lighting system groups via the ELC bus provides greater comfort thanks to the swarm function. If only one of the four zones in the example room is still occupied, the lighting in the other three zones is dimmed to the orientation light.

Open-plan offices are just one of many environments in which an orientation light is useful, and the swarm function is just one of many functions which increases the configurability of ELC lighting systems. Come and visit us at the Light + Building 2020 exhibition in Frankfurt to discover the full potential of the ELC software functions! See page 46 for where and when to find us.



# A KNACK FOR INNOVATION

## INTELLIGENT CONTROL WITH EXPERIENCE

50  
YEARS

Since the end of 2018, ESYLUX has been celebrating a notable double anniversary: 25 years of ESYLUX and 50 years of entrepreneurship for Peter Kremser. It is high time to ask what, from the perspective of our senior boss, has changed over the years, what has stayed the same – and what he now sees as the secret to long-term success.



▲ ESYLUX founder and senior boss, Peter Kremser.

◀ Birthplace of intelligent automation and lighting solutions: ESYLUX location in Ahrensburg, northern Germany.

**Mr Kremser, a news portal recently reported that Germany lacks entrepreneurial spirit, and that potential founders prefer a permanent position nowadays. Does it take a special character to become an entrepreneur?**

It's undoubtedly a question of attitude. Some people tend to be cautious and are content with a secure salary, even if it is not a very big. Then there are others who are more willing to take risks and they will have an income that can be very good at times and at other times quite the opposite. The opportunity to become a successful entrepreneur is always there and there are different possibilities every time. Take a look at what has happened in the IT sector over the last 10 or 15 years. There are always things opening up.

**When you founded your first company, Peter Kremser e. K., more than 50 years ago in Hamburg-Niendorf, it was a risky option.**

An exciting time, but also a challenging time. When I told my mother on the phone that I'd quit my job as an engineer at AEG, she was horrified: »What about your salary? What about your expenses?« She was even more shocked by the news that I now wanted to become a representative. »That's not why I sent you to university!« I came from a family of civil servants. We became doctors or lawyers. To my family the word »representative« evoked images of the airy-fairy vacuum cleaner salesman who went knocking door to door. The ideal of the respectable merchant was unknown to them and unfortunately so was the fact that reputable commercial representation of large companies was a respectable profession.

**It sounds as if your decision came as quite a surprise.**

Not to me. As early as the age of ten, I would sit on the bench in front of my parents' house and think about my life. I knew I could calculate faster than many others. And I knew that I could be persuasive. Although I still had no idea what this meant in terms of the bigger picture, it was already clear to me at this point that I would only be interested in sales. But for the sake of my family, I first studied electrical engineering and later I benefited from that. When I talked to an installer about the products, I always knew exactly what I was talking about. ►



»AUTOMATION AND AN ENERGY-EFFICIENT CONTROL SYSTEM WERE THE FOCUS RIGHT FROM THE START.«

What were the products at the beginning?

In those days, the heating systems using coal and wood in Germany were being converted to central heating systems with oil or night storage heating. In order to save energy, a timer was needed to lower the temperature automatically at night. Alternatively, an automatic system was required for night storage heaters to charge the heaters' storage tanks before the end of the low tariff period, so that they could supply sufficient heat during the high tariff period in the daytime. These devices from Grässlin and Schlüter, which at the time were still very new companies, formed my first portfolio. Automation and an energy-efficient control system were therefore the focus of my attention right from the start.

What were the biggest challenges initially?

The biggest one was getting an appointment with an electrical wholesaler. Nobody had heard the name Peter Kremser. And in northern Germany, which was my first sales area, Grässlin and Schlüter were also still completely unknown, as this was uncharted territory for those companies. It took around three or four months before anyone even offered me a coffee. Still, I was fortunate.

▼ Focus on diffuser design: Peter Kremser in conversation with production manager Christopher Gluth.



The products were innovative, came at just the right time and had already overcome their teething problems. In addition, wholesalers quickly realised that they could make a lot more money with these products.

»THE MORE SENSES YOU CAN POSITIVELY APPEAL TO, THE MORE YOU CAN SELL.«

From your point of view, what makes for successful sales work?

Three main things, which I believe have not changed to this day. Firstly: Stay credible and build trust. You can never cheat a customer. Moreover, this is the only way to build long-term customer relationships. There are many people who have gone on to become managing directors who I knew from their days as trainees in the same wholesale companies. What could be better for someone who has done so much right by that stage?

Secondly, it goes without saying that it depends on your ability to sell. When making initial contact, never jump straight in and never divulge everything over the phone immediately. Raise the customer's curiosity first. During an on-site appointment later on, you should listen attentively in order to find out what the current issues and challenges are from the customer's perspective. Some people are preoccupied with acquiring new customers, others have the wrong profit margin, someone is having storage problems and so on. This is where you turn the customer's curiosity into a genuine interest in buying and you offer them an appropriate solution. And then at the end, it's no longer a question of »if« but »when« and »how much«.

And thirdly?

These days, you hear talk in the advertising industry of multi-sensual or multi-sensory marketing. That might sound modern, but in actual fact there's nothing new about it. I've never sold anything using just a catalogue or a brochure. Even at the start of my career, the customer always knew that I would bring product samples to an appointment. I would lay the samples out on the table, and the customer could look at them, touch them and examine them. The more senses you can positively appeal to, the more you can sell. ►



▲ Presence detectors, motion detectors and outdoor lighting now and then.





**Your success has meant you have often had to move to larger company premises over the years. The last one in 1993 coincided with the launch of ESYLUX. What did this step mean?**

When launching ESYLUX, we extended our distribution to the whole of Germany and we had to start from scratch again. It all started with six sales representatives in the south. Bavaria, no turnover, one sales representative. Baden-Württemberg, no turnover, one sales representative. And so on. But more importantly, with ESYLUX we were able to evolve from a commercial agency to a developer and finally to a manufacturer. A very big step, which of course considerably increased our scope for action and design.

**»SENSOR-CONTROLLED AUTOMATION REQUIRES SPECIALIST KNOWLEDGE.«**

**What decisions accompanied this process?**

The most important one concerned product quality. At that time, there were many disadvantages to manufacturing in China. Today the quality has improved, but in the past a lot of – let's call it – »manual work« was done there. In addition, competitor products would also have benefited from these improvements if they had been made by the same Chinese manufacturers. That wouldn't have been in our interest, of course. At our in-house production site in Ahrensburg, we now have a much more reliable quality control system and use load tests to ensure that components such as capacitors really can withstand many years of use.

**Intelligent automation and lighting solutions have determined ESYLUX's success right from the outset. Which subsequent developments were trendsetting for you?**

The introduction of the presence detector class in 2002 / 2003 and the leap in LED quality with simultaneous price reduction, which enabled us to venture into intelligent indoor lighting in 2015. The options offered by the LED were the optimal prerequisites to allow the LEDs to be combined with our control system. After all, we're not just any old lighting store. Our lighting is intelligent because it is automatically controlled as required, and we can offer co-ordinated combinations of automation and lighting from a single source. A lighting manufacturer would not be in a position to do this. Sensor-controlled automation requires specialist knowledge.

**When you look back over the past decades, what do you see as the secret to long-lasting success?**

There is definitely no single secret to success, because there are always multiple things that ultimately lead to success. But if I had to choose one thing in particular, it would be the innovation. I have always focused on this subject with my customers, in the past and to this day. If you are the first, you talk about marketing and the joint acquisition of new customers. If you're the second, you can only talk about the price. Sometimes a customer would rather stay with a manufacturer they know. In which case we would say: »Fine, no problem. But we've got something completely new that your manufacturer doesn't offer at all. How about that?« And we had won them over already.

**Over the last 50 years, innovations have not only been part of your portfolio, but also in your everyday professional life a lot has changed when it comes to technology. Which aspect would you mention in particular?**

When it comes to communication there is no comparison. Email has largely replaced the fax and the letter, the PC has replaced the mechanical typewriter and the mobile phone means that people can be reached at any time, no matter where they are. When I got a car phone in 1969, it was called Landfunk (land radio). Then it was ultra-modern, but now it's unimaginable. The connection technology took up a quarter of the luggage compartment, a large aerial towered outside and an equally bulky receiver could be found on the inside. The monthly basic fee alone cost half of an average employee's income, and accessibility was another issue entirely. Anyone wanting to get hold of me had to know what radio mast I was near as they had a very limited range. When I was out and about and my wife in the office wanted to put me in touch with a caller it was often a guessing game.

**»MY RECOMMENDATION TO MANAGERS IS NOT ONLY TO GIVE SPACE TO CREATIVITY, BUT ALSO TO REWARD IT.«**

**You've been married to your wife since 1965. To what extent has she been a part of your professional success?**

Not only have I known my wife for almost 60 years, but she was also my first colleague after founding the first company. In the beginning she only worked half-days so that she could continue to work in her old job so we were still able to pay the rent on our small apartment and put food on the table. Later on she worked full-time. I couldn't have wished for a more reliable partner. She was the only one who always openly told me what she thought and always stood by me, even in difficult times. I couldn't have done all of this without her.

**One final question, Mr Kremser – what advice would you give the company for the future?**

My recommendation to managers is always to listen closely to their teams, to be open to better arguments and not only to give space to creativity, but also to reward it. My honest advice to all employees is to always think and speak positively. This will not only help the individual, but it will also spread to their colleagues and is invaluable for a good working atmosphere. The future always stirs the heart a little because you don't know what it holds. But there's no reason to be afraid. The future of the company is in good hands, and competitors don't have any magic ingredients. Besides, other companies that have a large market presence today have been growing over the last 100 or even 150 years. With just 50 years behind us we still have time on our side.

**Many thanks for the interesting conversation. ■**

◀ An area of 4000 m<sup>2</sup> with approximately 4500 pallet spaces at the Ahrensburg site serves as an interim storage space for ESYLUX products before they are dispatched. A 3000 m<sup>2</sup> extension to the site is already prepared and soon to be implemented.



# MASTER MAKER LIGHT

## HWK DÜSSELDORF MODERNISES TRAINING BUILDING

During the modernisation of their crafts schools, the Handwerkskammer Düsseldorf (Düsseldorf Chamber of Crafts) opted for an easy-to-install ESYLUX ELC lighting system. Today, the system offers presence- and daylight-dependent constant light control in the training rooms and workshop areas, providing flicker-free light for ideal learning and teaching conditions. ►

▼ The site that many thousands of fellows have left as newly qualified master craftsmen: The fully renovated Building C on the HWK Düsseldorf campus, with 260 rooms on five floors.





# INTELLIGENT LIGHTING FOR 25 TRADES

The industrial revolution, the digital revolution, the economic miracle of the post-war era – since it was founded in 1900, the Handwerkskammer Düsseldorf has constantly had to confront new social, economic and technical developments. But despite changing circumstances, it has always been able to support its members with a wide range of activities, from numerous information and advisory services to representing its interests to the general public and politicians.

### COMPLETE REPLACEMENT OF ROOM TECHNOLOGY AND FURNITURE

One of the core tasks of the Handwerkskammer is to train prospective artisans. The five-floor Building C in the centre of the Düsseldorf campus houses training rooms and workshop areas for the 25 artisan schools. This is where the students undertake practical and theoretical training for different trades and develop their commercial and pedagogical skills. Often more than 500 people per day pass through the extensive complex, which was built in 1972.

Decades after the building's construction, despite regular modernisation measures, it required a thorough renovation. The roof was first refurbished in 2007, when the external façade was also insulated and large windows installed. About ten years later came the time when selective repairs to the interior no longer seemed worthwhile. Therefore, in 2016, a complete renovation of 8000 of the approximately 10000 square metres of floor space began. All the building technology, media technology and furniture was replaced and the specialist departments, some of which were spread over different floors, were brought together.



▲ Homogeneous, flicker-free lighting provides ideal learning and teaching conditions and enables focused work: The workshop for prospective dental technicians.

### OPTIMAL USE OF DAYLIGHT, EVEN INDOORS.

»In addition to introducing a modernised energy system and a more usable floor plan, we also wanted to bring the building's technology up to date and create an ideal learning environment«, explains Dieter Bellen, the head of property services at the Handwerkskammer. This also included creating relaxation areas, installing soundproof acoustic ceilings and coming up with an energy-efficient and healthy way of using natural light: Huge windows installed between the rooms on the outside of the building and the corridors flood the inside of the building with daylight.

Energy efficiency and the use of daylight were also considered when selecting the overhead lighting. As well as the NOVA Quadro-Sets, an ESYLUX lighting system featuring ESYLUX Light Control (ELC) technology was also installed in the classrooms and workshop areas. The system – comprising ELC ceiling lights, an ELC sensor system and ELC control units – switches the lights on or off depending on whether there are people in the room, and ensures daylight-dependent and thus energy-efficient constant lighting control. ►

▼ A combination of natural light and daylight-dependent lighting control ensures optimal visibility: Prospective master painters at work.

▼ One of 25 trades in total for which the Handwerkskammer provides training to artisan level: The orthopaedic technology workshop area.





INTEGRATED CONTROL AND SENSOR TECHNOLOGY

The architects opted for ceiling lights from the NOVA series with a central divider splitting the diffuser down the middle. Not only did this fit well with the overall design concept, but the control unit and sensors are also directly integrated in the luminaires, making planning and installation significantly easier. The system variants are available with energy-efficient, biologically effective light and Tunable White, but the final choice of the light colour was neutral white 4000 Kelvin.

»I think the lighting is great«, says Gunda Lippert, a lecturer specialising in tailoring who sat her own master's exams in the old rooms of the building in 1993. The fact that the lighting adjusts automatically based on the amount of daylight is perfect for her and her students when they are sewing and working. »The brightness is perfect.« Stephanie Remmen, a lecturer in dentistry, is especially pleased with the restoration work: »The lighting conditions are clearly better and so is the equipment.«

▼ Concentrate and work in peace without having to adjust the light: master tailor students.



▲ The heavy special machinery called for fast, easy installation of the lighting during continuous operation: The workshop in the metal engineering department at HWK Düsseldorf.

▼ Even the panel lighting is integrated into the presence-dependent control system and switches off automatically when the room is empty: Prospective master electricians in the classroom.

FLICKER-FREE, FATIGUE-FREE LIGHT

»As well as the futuristic lighting, the lecturers also love the uniform design of the space as a whole«, reports Dieter Bellen, who is also pleased that his decision to opt for an LED-based system has proved to be justified. »LEDs are state of the art, the quality is constantly being improved and they are, of course, the first choice when it comes to energy efficiency«. But although it is still too early to determine the amount of energy being saved over one year, it already looks as though the percentage will reach double figures.

Another important factor was ensuring that the system lights did not flicker at all. »When you're in a class or sitting an exam that will last a few hours, you want a constant, flicker-free light so that you can concentrate«, Bellen explains. And in workshops where there are numerous rotating parts, like the one in the metal engineering department, flicker-free lighting is especially important. Metal workshop foreman Thomas Scholz also places great importance on the illuminance of the luminaires, and jokes: »We use 1000 lux here – that way I can still see when I'm marking and punching, even at my advanced age«. ■

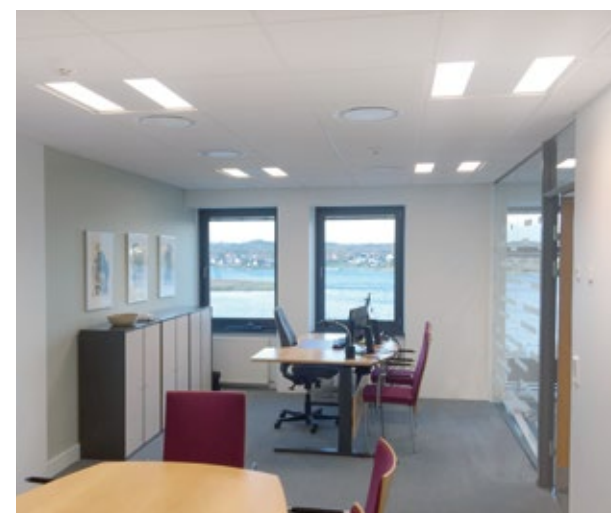




# BETTER SERVICE DUE TO PERFECT LIGHTING

## JYSKE BANK IN SILKEBORG GETS A LIGHTING UPGRADE

For Jyske Bank A/S, the second largest publicly listed bank in Denmark, the goal is clear: to develop simple, future-oriented and reliable financial services. The bank wants its 3700 members of staff to think innovatively and, when necessary, to take a more unconventional approach. The bank wants to use this new way of thinking and acting to forge new paths and set itself apart from the competition.



▲ Human Centric Lighting with a view: Individual office in Silkeborg with a small conference area and a view of the lake.

To ensure that all the most important requirements would be taken into consideration, the management paid particular attention to the working conditions at the bank's headquarters in Silkeborg, Denmark, and at its branches in Hamburg and Gibraltar. The modernisation of the service centre in Silkeborg, where the workspaces are divided into a large, open-plan office and an individual office with adjoining conference area, was key to staff welfare and satisfaction.

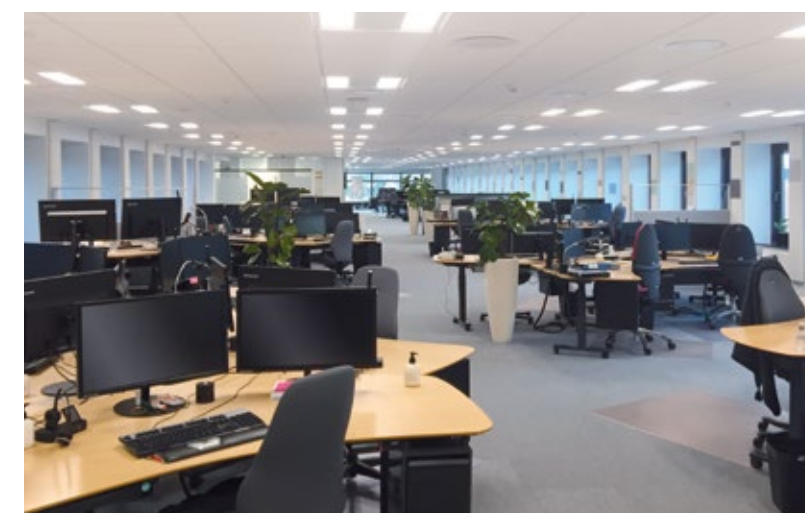
### INDIVIDUAL LIGHTING CONTROL FOR DIFFERENT ROOM ZONES

To ensure perfect light quality, a lighting system featuring ESYLUX Light Control with SymbiLogic technology for energy-efficient Human Centric Lighting was installed. Windows on three sides of the building flood the space with daylight – this is where the automatic switching function using the integrated sensor system proves itself to be especially advantageous. Staff can also benefit from biologically effective lighting.

The design was further optimised by establishing and networking seven system groups. Not only does the individual light control in different room zones ensure more energy-efficient use of daylight and optimal brightness for the staff, but there is also a swarm function, where empty areas are illuminated by a dimmed orientation light even if there are still people in other areas of the room. ■

◀ Surveys indicate a high level of satisfaction among both customers and staff: The Jyske Bank A/S building complex in Silkeborg.

► Individual light control in different room zones ensures comfortable lighting conditions and maximum energy efficiency: The service centre's open-plan office.





# FLICKER-FREE LIGHT FOR THE CHILDREN OF RIJSWIJK

The Kindcentrum BuitenRijck in the Dutch town of Rijswijk is a modern childcare centre with a primary school, day care centre and after-school care. When the building was being built, energy efficiency, comfort and lighting quality were all at the top of the agenda.

For this reason, the group rooms and classrooms have all been equipped with recessed lights from the NOVA series, intelligently controlled by PD-C 360i/24 DUO DALI presence detectors. In the assembly hall, entrance areas, sleeping areas and sanitary areas, STINA and ALICIA downlights create a pleasant ambience and are controlled by FLAT motion detectors for energy-efficient activation. Moisture-proof lights of the OLIVIA series are fitted in the storerooms. ■



# ENERGY-EFFICIENT HCL FOR NETWORK PROVIDERS IN STORA SUNDBY

Westermo Network Technologies, a world-leading specialist in industrial data communication, supplies hardware and software solutions for areas such as water and wastewater technology, infrastructure, and machine and plant engineering. Quality and innovation have been the cornerstones of the company since it was established in 1975.

When modernising the lighting at their head office in Stora Sundby, Sweden, the first step the management took was to improve the living standards and energy efficiency in the dining and relaxation areas. They chose an ELC lighting system with NOVA ELC recessed lights and SymbiLogic energy-efficient Human Centric Lighting. This system is easy to operate due to the specially designed ELC push buttons. ■





# ENERGY GIANT OPTS FOR HUMAN CENTRIC LIGHTING

## STAFF AT RWE ARE USING AN ESYLUX LIGHTING SYSTEM WITH SYMBOLOGIC

Publicly listed company RWE is one of the largest energy suppliers in Europe, working worldwide to build a sustainable energy future. When it came to choosing their new headquarters, the group's history, dating back more than 120 years, was a key factor. The company built its first power station near the disused Victoria Mathias coal mine in Essen, western Germany. And now it is coming home: From 2020, a new campus will house the business administration facilities for the entire company.

▼ A façade steeped in history, which is now home to the latest in building technology: The new, fully renovated RWE corporate headquarters in Essen.



▲ Quadratic ELSA downlights blend harmoniously with the design of the corridors and adjoining relaxation areas.

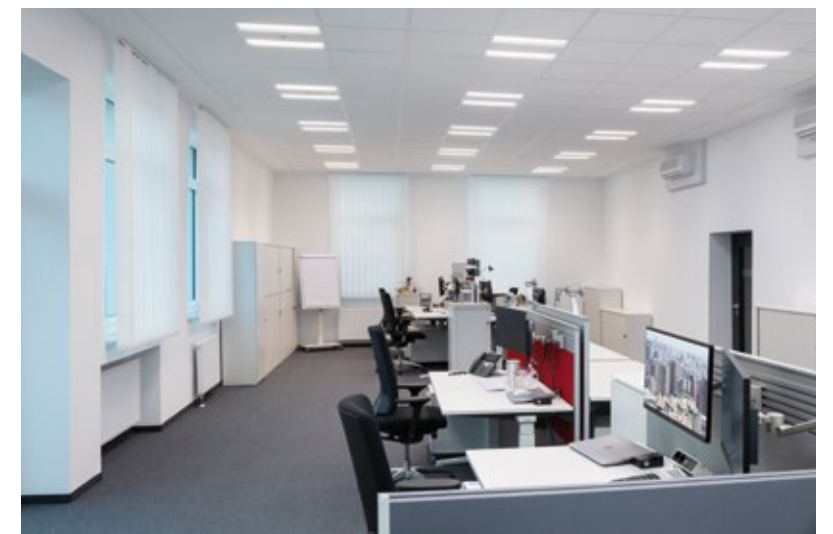
► The ELC lighting systems on all four floors feature energy-efficient Human Centric Lighting and boost the standard of living and well-being in the workplace.

In the first stage of the project, the former coal mine's administration building underwent extensive refurbishment lasting over one and a half years. The objective was to create an ideal working environment for around 90 members of staff, including the executive board of RWE, while keeping energy consumption low. The renovations included a redesign of the interior as well as the installation of highly insulated windows and modern air-conditioning technology.

### SENSOR-CONTROLLED SYSTEM LIGHTS WITH PLUG-AND-PLAY INSTALLATION

To improve the quality of life in the workplace and increase energy efficiency, the company opted for an intelligent ESYLUX lighting solution. All individual offices, meeting rooms and open-plan offices feature ELC lighting systems that use the SymbiLogic technology for energy-efficient Human Centric Lighting. »An innovative design that adds a touch of comfort«, believes Thomas Rathmann from the properties head office at RWE AG, a view that is also echoed by his co-workers.

»I am very pleased with the lighting – it makes my office feel very comfortable«, says Dr. Burkhard Pahnke, the Senior Manager for Investor Relations at RWE. His colleague, Anja Bartsch, is particularly impressed by the lack of glare from the lighting on her computer screen. And the energy-efficient light management is widely appreciated. »That's the right way to do it«, says Bartsch. After all, we're always telling our children: »Turn off the lights and save energy!« ■





# SPECIALISTS IN CORRIDOR LIGHTING

## THE PD-C AND MD-C 360i/40 CORRIDOR PRESENCE AND MOTION DETECTORS

With the PD-C and MD-C 360i/40 Corridor presence and motion detectors from the COMPACT series, ESYLUX is presenting new product solutions for energy-efficient light control in corridors. The systems have a large maximum range of 40 m, meaning that long corridors can be covered by a single detector. An integrated tungsten pre-contact ensures that the switching behaviour of the LED lights does not damage the relay.

Environments such as offices, educational institutions and health care facilities often require a solution for demand-driven building automation that is exactly tailored to the application at hand. If ceiling mounting in corridors is required, presence detectors are the best choice as their detection range is elliptical, allowing them to cover the widest range possible and reduce the number of devices needed.

### EXTENSIVE RANGE – INCLUDING MOVEMENTS DIRECTLY IN FRONT OF THE DETECTOR

With the PD-C and MD-C 360i/40 Corridor presence and motion detectors, ESYLUX is presenting new solutions with a total range of up to 40 m in diameter. Within this range, the devices detect motion in the corridor from either direction or any angle that crosses them. If the movement occurs head-on, they can identify this within a range of 20 m. This range means that a single detector can be used to cover long corridors and turn the lighting on and off depending on presence, movement or daylight.

### OPTIMAL USE OF LED LIFETIME

The detector is equipped with a tungsten pre-contact – this ensures that the relay is not damaged by the switching behaviour of the LED lights, allowing the user to take full advantage of a long service life using demand-driven automation. Alternatively, the lights can be operated manually using a push button input. By using a DIP switch, the user can then specify that the lighting should only be switched on – this prevents all lighting being switched off accidentally, for example if there are still people on other floors of a staircase.

As with all detectors in the COMPACT series, the two-part housing and the low depth of the powerbox ensure easy installation and wiring. The default factory settings enable the detectors to be commissioned immediately. If necessary, the parameters can be adjusted easily via a potentiometer on the device or using the ESY-Pen from ESYLUX in conjunction with a smartphone or tablet. ■



# INTELLIGENT DOWNLIGHTS

## ELSA-2 SERIES WITH INTEGRATED SENSOR TECHNOLOGY

The ELSA-2 series is the first ESYLUX downlight series for DALI and 230 V with integrated presence and motion detectors. These detectors can provide energy-efficient control for the sensorless lights in this series. The sensorless DALI versions feature a SwitchDIM function, enabling the lights to be switched and dimmed using conventional switches. The lights have a low installation depth, making the installation process much more flexible.

The more technology there is in a room, the more effort needs to be put into planning and installation. From a visual perspective too, it makes sense to keep the number of devices to a minimum. One way to achieve this is through synergy, for instance, by combining automation and lighting.

### INTELLIGENT SENSOR SYSTEM IN THE CENTRE OF THE DIFFUSER

ESYLUX offers a prime example of this with their new series of ELSA-2 downlights. These contain LED lights with a presence or motion detector incorporated in the centre of the diffuser. This makes it considerably easier to operate the lights, particularly in the DALI variants. In addition to the standard and sensor-equipped downlights, the series also features downlights that include an integrated DALI power supply as well as the sensor system.

This series provides users with all the components needed for a comprehensive DALI lighting system that is controlled in an intelligent and energy-efficient manner. The default settings and broadcast mode also mean the parameters do not need to be configured manually.

### SENSORLESS DALI DOWNLIGHTS WITH SWITCHDIM FUNCTION

Beyond the DALI variants, the ELSA-2 series also features downlights for the standard 230 V switch operation. There are DALI versions with presence detectors and 230 V version with motion detectors for passageways that receive very little natural light. The sensorless DALI versions have an integrated SwitchDIM function and can therefore be switched and, above all, dimmed with standard single push-buttons as an alternative to sensor control.

Like those in the earlier ELSA series, the downlights in the ELSA-2 series have a low installation depth, making installation easier. The latest series of downlights have an even higher luminous flux and efficacy. However, the high-quality white aluminium housing and the option to select light colours between 3000 and 4000 Kelvin remain unchanged. ■

The sensorless ELSA-2 downlights are available now. The variants with integrated sensors will be available Q2.2020.



# COLOUR FIDELITY FOR OPTIMAL WORK LIGHTING

## ELC RECESSED LIGHTS FROM THE CELINE SERIES WITH $R_a > 90$

New variants of the CELINE recessed lights for ELC lighting systems mean that the systems can also be used in places where colour rendering is of the utmost importance, such as in hospitals and other medical facilities. The lights are included in two versions of the Patient Room-Set or can be integrated into freely configured systems via plug-and-play. The luminaires feature protection type IP54, indicating that they are reliably sealed.

From the deli counter in the supermarket to the changing rooms in a clothes shop, colour rendering that is as realistic as possible is essential in many different workplaces.

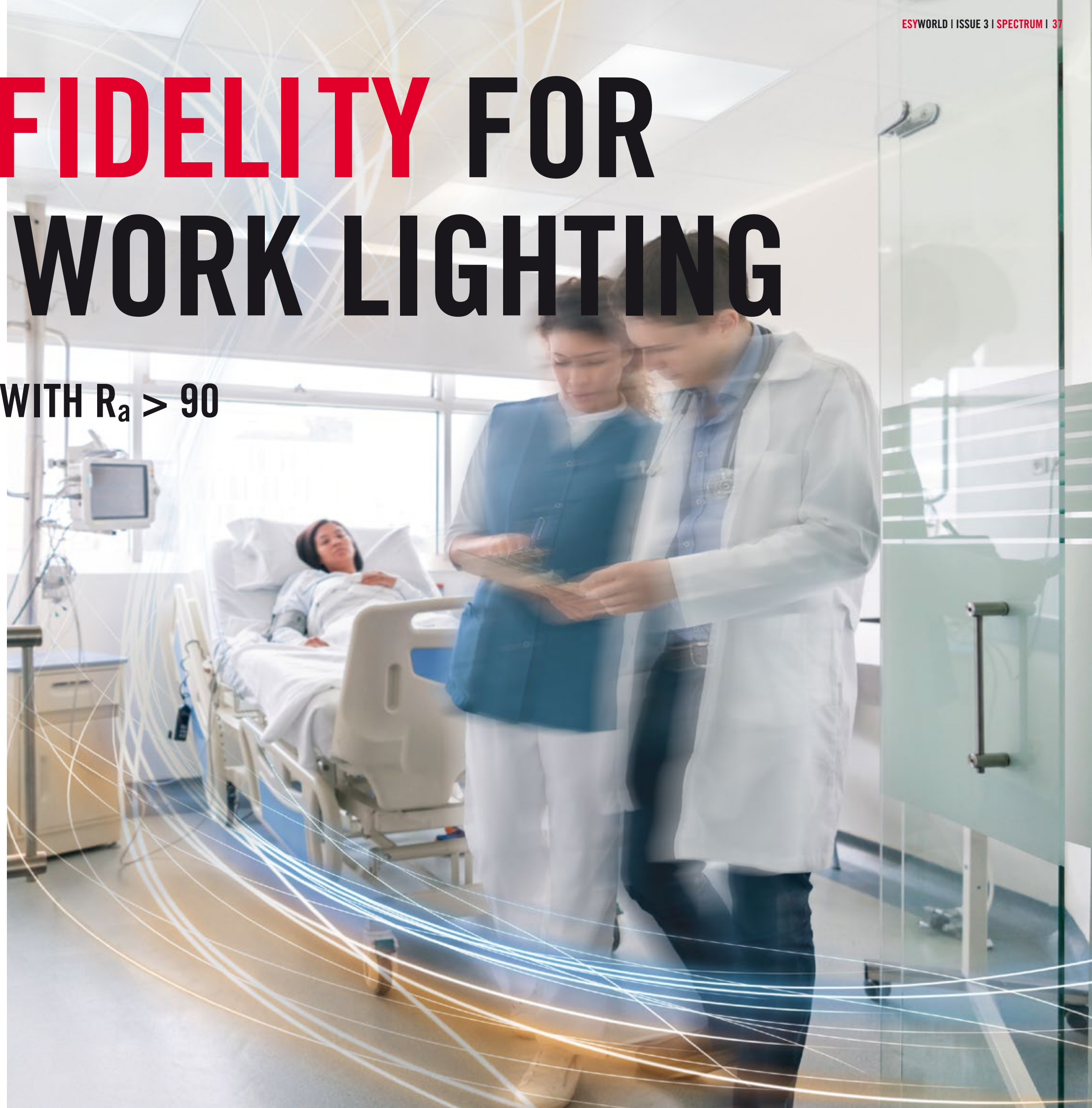
### $R_a > 90$ FOR REALISTIC COLOUR RENDERING

ESYLUX has now developed CELINE recessed lights with a high colour rendering index of  $R_a > 90$ , thereby increasing the application area of lighting systems featuring ESYLUX Light Control ELC. For example, the recessed lights are incorporated into two versions of the Patient Room-Set to help doctors with their daily bedside examinations. These system variants with the ESYLUX SymbiLogic technology for energy-efficient Human Centric Lighting are supplied preconfigured and ready to install, and are ideal for use in standard twin-bed patient rooms.

### SEALED TO IP54 STANDARDS

The lights can also be freely configured into the lighting system and are available with the Tunable White function (light colour 2700 - 6500 Kelvin) for use in SymbiLogic systems. As usual, these ELC systems enable 400 system lights to be installed in up to ten individually controlled groups. The CELINE panel lights are also available in a 4000 Kelvin version for use in ELC systems with a fixed light colour.

The systems measure 625 x 625 mm or 600 x 600 mm. Users can select between either crystal or milky for their full-surface diffuser. The luminaires feature protection type IP54 to keep them well protected against the ingress of water or dirt. ■





# LET'S NOT LIGHT UP THE NIGHT UNLESS WE NEED TO

WHY LIGHT POLLUTION SHOULD BE  
REDUCED AUTOMATICALLY

There is a global issue on the rise with consequences that we can't even begin to conceive. Night-time illumination is growing at an alarming rate in all corners of the Earth, with increased energy consumption being just one of the negative effects. In many places it is possible to combat this problem with a few simple measures. ►



*You often have to travel to remote locations to marvel at the beauty of our own galaxy, the Milky Way: Radio telescopes at the Ming'antu observing station in central Mongolia – a country so sparsely populated that the night sky has not yet been ruined by the growing problem of light pollution.*



While a view of the Earth from the depths of space may be fascinating, it can also reveal something else about our planet. NASA regularly releases photos of our world taken at night. Land and sea are coated in a beautiful dark purple blanket and many areas are decorated in what looks like gold dust. But upon closer inspection, it becomes clear that this gold dust is nothing more than swathes of night-time illumination in densely populated areas. And when we take an even closer inspection, we can see that we have a big problem.

**FADED CONSTELLATIONS AND AN INVISIBLE MILKY WAY**

The term »light pollution« does not refer to a lack of cleanliness but rather to an excessive amount of artificial light at night – in fact, the amount of artificial light around the world is increasing at a rate of two percent each year. By looking back up at space from Earth, we can see one of the issues that light pollution causes. In places where large numbers of people live, the stars seem to be considerably duller than they were 50 years ago – even Orion does not shine as bright as he once did. It is often not possible to see the stars in the Milky Way at all.

Some people may be able to live with that fact, but you don't have to be a keen stargazer to recognise that light pollution is a serious issue. It is partly due to the inescapable fact that global energy consumption is constantly on the rise, which can often be attributed to wasteful human behaviour. Canadian researcher Christopher Kyba recently reported that, contrary to predictions, some areas are actually becoming brighter, as replacing older sodium lamps with cheaper LEDs frees up funds to install additional lighting.

**PROTECTED »DARK SKY« AREAS AS A FINAL NATURAL REFUGE FROM LIGHT POLLUTION**

The effects of light pollution on nature are devastating. Artificial light at night can impact trees' ability to detect the current season. It can disorientate migratory birds, causing them to have fatal collisions with illuminated buildings. It stimulates a phototactic response in millions of insects, causing them to circle around the light endlessly instead of feeding and breeding, and often driving them to exhaustion and death. Experts believe artificial light to be linked to the current increase in insect mortality which, in turn, has a negative impact on bird populations and plant life.

By 2007, the issue of light pollution had become so noticeable that UNESCO signed a declaration to protect areas with natural darkness and a clear night sky from light pollution. Communities in Florida whose artificial light sources confuse sea turtles have banned night-time lighting on beaches where the mothers lay their eggs. A few countries have started implementing laws or regulations in an effort to stem the increase in light pollution.



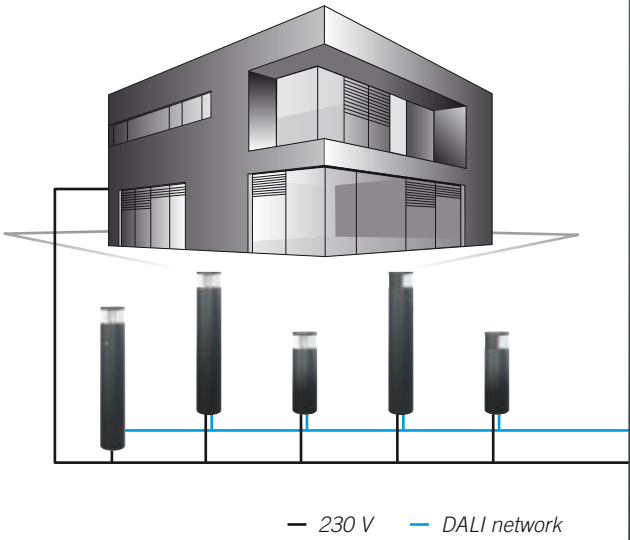
**DEMAND-DRIVEN LIGHTING TO REDUCE LIGHT SMOG**

Introducing bans is not always practical or possible, not to mention the fact that existing legal measures had hardly made an impact on reducing the annual amount of night-time lighting. However, it would be easy to take countermeasures in many locations as lighting solutions are available that can significantly reduce light pollution without compromising on lighting quality. One option is an intelligently controlled light that only shines at night when it is absolutely necessary and remains inactive the rest of the time.

ESYLUX offers an extensive portfolio of these solutions to give its customers endless possibilities, such as combining ESYLUX outdoor motion detectors with ESYLUX outdoor lights or fitting outdoor lights with an integrated sensor system. The bollard lights with integrated motion detectors from the ALVA series are a prime example, as these can be used to switch sensorless ALVA bollard lights on and off automatically, control entire lighting groups in an energy-efficient manner and also integrate 230 V lights via a DALI switch. In this way, these lighting solutions help combat the growing environmental issue of light pollution and improve safety – all while also saving money! ■

◀ Buildings that are lit up at night represent a real danger to migratory birds.

▶ Intelligent outdoor lighting automatically reduces the growing environmental issue of light pollution. Example: ALVA bollard lights with integrated motion detectors, which can control entire lighting groups and only shine when necessary.





# NEWSFLASH

## MODERNISATION PROJECT FEATURING INTELLIGENT ESYLUX LIGHTING WINS LIGHTING AWARD



◀ ESYLUX lighting system with energy-efficient Human Centric Lighting: EFG office space in Schwarzenbek, Germany.

The Lichtpreis lighting award is presented at the GET Nord trade fair in Hamburg to reward electrical retailers for their outstanding work in implementing lighting projects. Headed by the North German trade association for electrical engineering and information technology (NFE), the 2018 prize was awarded to EFG, a company that specialises in electrical trade, in the »Licht im Unternehmen« (lighting in business) category. Under the leadership of managing director Frank Günther, EFG had completely reconstructed a former sports hall in the north German town of Schwarzenbek to increase the size of its office rooms and bring them up to date.

ESYLUX was responsible for the lighting solutions: The PRANA+ Office Floor Light provides visitors waiting in the foyer with light that is as intelligent as it is visually appealing, while the PRANA+ Pendulum Light gives the conference room a prestigious appearance. ELSA downlights are fitted in the corridors, lighting them with a cosy ambience all the way to the office rooms, where lighting systems featuring the ESYLUX SymbiLogic technology for energy-efficient Human Centric Lighting. ■



## ESYLUX 2019 / 2020 CATALOGUE NOW AVAILABLE

From individual motion detectors to lighting systems with energy-efficient Human Centric Lighting: The entire ESYLUX portfolio has significantly grown in recent years. To provide our customers with a quick overview, our newly issued catalogue for 2019 / 2020 summarises all of the most important details at a glance.

Our catalogue contains nearly 250 pages and presents all series from our automation and lighting business divisions.

Each series is accompanied by a summary of its various accessories and an overview of the features that distinguish it from the rest. Each page contains large-scale illustrations, key features and product-specific details, such as detection range and angle for presence and motion detectors, or light distribution curves for products from our lighting range. The catalogue is available to download from the ESYLUX website now. ■



▲ Thanks to government funding, the PD-ATMO 360i/8 O KNX presence detector has never been a more worthwhile investment.

## ESYLUX SOLUTIONS NOW GOVERNMENT- FUNDED IN GERMANY

Using a combination of LED lighting and intelligent controls already holds huge potential for saving money. Now the German guideline for promoting municipal climate action projects within the National Climate Initiative is allowing companies in Germany to lower their costs even further.

The initiative provides government grants for refurbishing indoor lighting and air-conditioning systems, among other services. For details please visit [www.bundesanzeiger.de](http://www.bundesanzeiger.de) and search for Kommunalrichtlinie.

One detail that will be of particular interest to ESYLUX customers is that, with both of the above-mentioned services, funding is only provided if the renovation is performed in conjunction with control and regulation technology. The cost of this technology is then also subsidised. The funding rate is 20 % for indoor lighting and as much as 25 % for air-conditioning systems. Yet another reason why you should combine ESYLUX lighting with ESYLUX automation products such as the ATMO presence detector for improving ambient air using multi-sensor technology! ■



# 10 YEARS OF ESYLUX IN BELGIUM, DENMARK AND PORTUGAL

This year, it is not only the ESYLUX brand that is celebrating an anniversary. 2019 also represents an important milestone for three of our subsidiaries, meaning that they can now look back on a successful ten years since they were founded! We posed five questions to Rikke Schmidt Sørensen, Sales Operations Manager Nordics, and Cristiano Dias, Managing Director of ESYLUX Portugal.

## How was it finding your feet in your respective markets?

**Schmidt Sørensen:** In Denmark, we had a really strong start and lots of positive energy. The market welcomed us with open arms! We didn't have many competitors – that was obviously a big help, as was the quality of our products. Everything moved along at an incredible pace.

**Dias:** I think the secret to our success was the fact that everything we did, we did with passion, professionalism and sincerity. The ESYLUX brand instantly became synonymous with »that special something« – a brand that has more to offer than simply great products. This strength can be further evidenced by the way in which we conduct our business.

## What has changed for you these last ten years?

**Schmidt Sørensen:** As you would expect, competition sprung up eventually. But the good thing about competition is that, in the end, everyone benefits from it. It strengthens the motivation of those involved even more, and has driven us to improve our performance over and over again. Aside from that, we've gained a great deal of experience over the years and have managed to build lasting relationships with our customers and partners. Because of this, we're now in a better position than ever before.

**Dias:** During the initial phase, we benefited from the fact that the Portuguese government injected a lot of money into the construction and renovation of public buildings such as schools and hospitals. Today, we're seeing more investments in the private sector, and the competition is growing. That calls for us to be more adaptable and, needless to say, requires us to sharpen our competitive edge.

## What do your customers like about ESYLUX?

**Dias:** Our customers know that we listen to them, value them and care about them. It is often precisely these qualities that make the difference. In our daily contact with customers, we try to find a perfect balance between adaptability, commitment and professionalism. As a result, our customers come to view us as a good friend on the other end of the line – a friend who is also able to find a solution to meet their individual requirements.



**Rikke Schmidt Sørensen,**  
Sales Operations Manager  
Nordics



**Cristiano Dias,**  
Managing Director  
ESYLUX Portugal

▲ At the ESYLUX competence centre in Denderhoutem-Haaltert, Belgian ESYLUX customers have been experiencing and trying out intelligent automation and lighting solutions since early 2017.

► The ALVA bollard lights not only reduce night-time light pollution with the help of their integrated sensor system; they also prove their worth in coastal areas thanks to their housing, which is protected against sea air.

**Schmidt Sørensen:** Our customers also know that we'll be by their side every step of the way. We support them right up until the successful completion of their project. We love what we do, and our customers recognise that.

## What do you personally like about ESYLUX?

**Schmidt Sørensen:** ESYLUX is a company of countless opportunities, not only in terms of our range of products, but also when I consider my colleagues and my own role as an employee. The relationships we maintain with one another are all special in some way, not to mention incredibly valuable. And at ESYLUX, when you really want to develop and work hard at it, you have all the opportunities you need to help you succeed. What's more, there's so much variety. It's certainly never boring!

**Dias:** ESYLUX is like a family, one in which you're openly encouraged to put forward your own ideas, aspirations and expectations. It's more than just a marriage of experts, top-quality products and a modern brand – it's like a second home, one where you're always welcome.

## What do you expect to see in the future?

**Schmidt Sørensen:** As an organisation, we're stronger now than ever before. Aside from this, the continuous development of our demand-driven lighting solutions has meant that we now have a much bigger range. The ELC lighting systems, for example, have really caught on in Denmark, and customers love our ALVA bollard lights that are protected against sea air. No wonder, considering Denmark has 7314 kilometres of coastline! I'm certain that product solutions such as these have paved the way for a successful future.

**Dias:** The future always poses a challenge. However, due to the synergy we've created between automation and lighting, I strongly believe that we can accomplish great things across the globe. In 10 years' time, we'll have to meet up again to chat about our expectations for the next 20! ■





# PERFORMANCE FOR SIMPLICITY

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