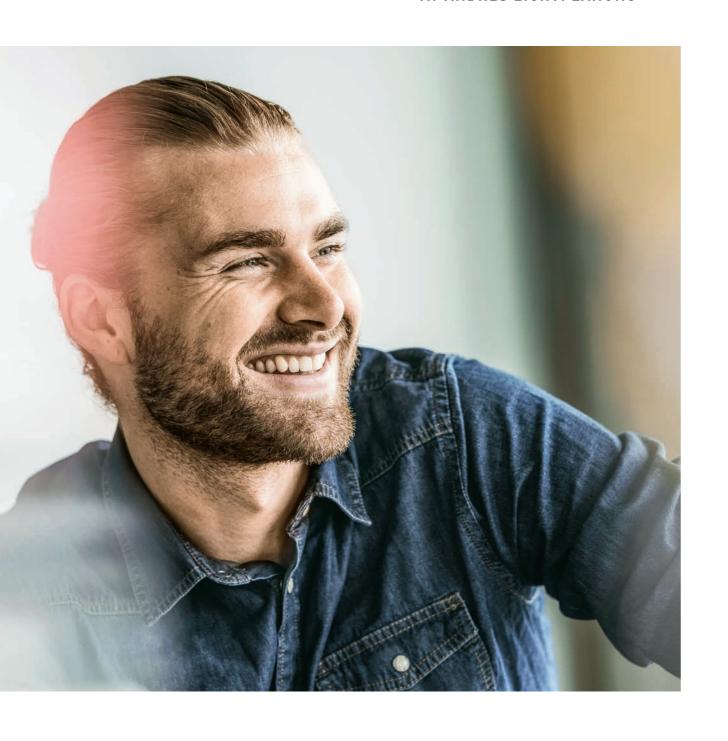


"DAYLIGHT HAS A TRUE IMPACT ON HUMAN BEINGS.

ALL THE MORE IMPORTANT, THEN, TO BASE PLANNING AROUND THE SUN."

ARNE HÜLSMANN, LIGHTING DESIGNER AT ANDRES LICHTPLANUNG



LIGHT AFFECTS THE WAY WE FEEL.

WE HUMANS SPEND 87% OF OUR TIME INDOORS.

Light has a major impact on how we feel, how we work and how we live.

Just imagine, you're standing outside with the warmth of the sun on your face. How do you feel? And how do you feel after a long day's work in a poorly lit office? There's a real difference. When the light is right, we synchronise our natural biorhythms and so boost our health. Studies prove that the right light is a key contributor to our feeling of wellbeing.

And this is precisely why companies, architects, lighting designers, property developers and investors are paying more and more attention to the phenomenon. The experts all agree: lighting conditions for humans need to be improved. And we are developing a solution. Wellumic is a system that creates a perfect combination between daylight and artificial lighting, uses an intelligent control to adapt to the needs of human beings and makes it easy to plan and handle light. We'll show you how that's done and explain the Wellumic concept in detail on the pages that follow.

WELLUMIC: FEEL
THE RIGHT
LIGHT.

THE SYMBIOTIC RELATIONSHIP BETWEEN ARTIFICIAL LIGHTING AND DAYLIGHT THAT MAKES ALL THE DIFFERENCE.

WAREMA and TRILUX, the specialists for daylight and artificial lighting, have joined forces to improve lighting conditions for people. The result is Wellumic. One lighting control system that achieves an ideal combination between daylight and artificial lighting. A unique association that elevates energy efficiency and lighting quality to a new level.

Why are daylight and artificial lighting used in combination?

In addition to a high incidence of daylight, which has positive emotional and physical effects on us as humans, we often need indoors an additional light source, which balances out the irregularities in natural light sources. This is where artificial lighting comes in. So instead of pure daylight or pure artificial lighting, Wellumic uses a combination of the two light sources. The daylight-optimised system is based on natural light from outside and is augmented with artificial lighting in the room as and when necessary. Thanks to the intelligent sensor-based control, the process is completely automatic. A combination that allows ideal lighting conditions, based on the outdoor environment, in interior spaces around the clock.

ONE SYSTEM - A HOST OF ADVANTAGES.



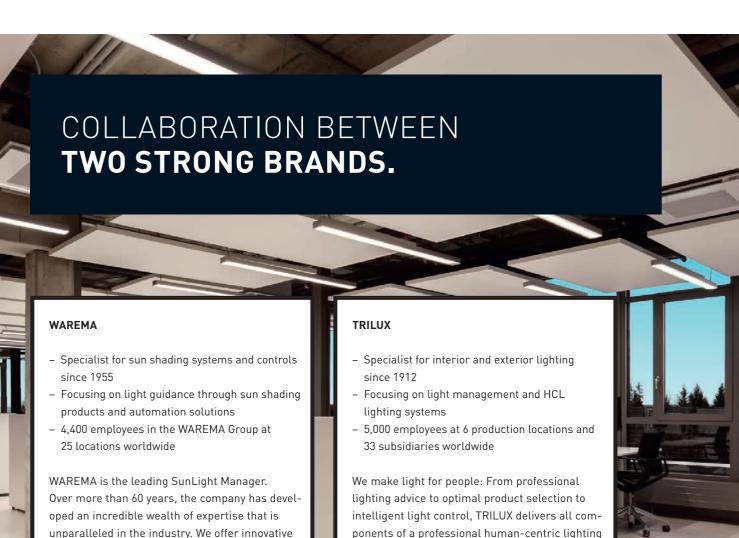
- More well-being
 Optimised conditions for creativity
- Better quality of sleep



and high-grade sun shading and control systems

from just one source.

- Improved energy efficiency
- Lighting designs with safety and ease
- Working without glare



system from just one source.

THE AIM IS A FEELING OF WELL-BEING.

AN INTERVIEW WITH ARNE HÜLSMANN, LIGHTING DESIGNER AT ANDRES LICHTPLANUNG.

How aware, would you say, are customers of professional lighting solutions?

We are seeing a growing level of awareness in this area. Property agents also know that interiors with a good supply of daylight are easier to market. No surprise there, because the biological effect of light has significant effects on our sleep patterns, our concentration and our health.

What for you is the perfect combination between daylight and artificial lighting?

A good combination is, notably, when the two resources are handled sensibly and carefully. However, the aim is always the well-being of the users who, thanks to intelligent planning, ideally do not even notice the role that light plays.

Could you tell us a little more about the physical and emotional effect of light?

Investors and property developers want to sell easily marketable, economically attractive construction projects. That's where daylight often slips between the wheels of energy efficiency. But let's take a look at what happens in city centres on winter days when the weather is calm and sunny: people sit outside, despite the cold temperature, and relax with the sun on their face. You can literally feel people breathing a sigh of relief.

GOOD REASONS FOR YOUR WELL-BEING PROJECT.





INTENT ON CHANGING THE MARKET.

Property developers who go for Wellumic are setting new benchmarks. This system not only helps attain a WELL-Building Certificate. With Wellumic, you are supporting more energy-efficient, more sustainable building planning procedures that benefit both people and our environment.

INSPIRED, BECAUSE LIGHTING DESIGN HAS NEVER BEEN THIS EASY.

Casting one's own architecture in the right light is not always easy. And so we want to assist you with planning interior lighting solutions. The interface reduction of our system guarantees the success of your project.

THE NEW WAY OF CONTROLLING LIGHT.

How does the Wellumic smart light control work? We will explain the control system and its functions by following a typical day in the office.

DAWN

The sun rises. Artificial lighting with proportions of blue light in the indirect light ensures a focused start to the day. At the same time, the warm, direct light creates a pleasant climate in the room.

Lighting:

Warm light at the desk, cold light on the ceiling

External venetian blind: closed to the east



A PRODUCTIVE START TO THE DAY.

Only 15% of office lighting is based on professional lighting design. Yet it is proven to improve employee performance and job satisfaction. If there isn't enough sunlight at dawn, artificial lighting is added. A rapid increase in the proportion of blue light promotes concentration and helps us wake up.

12 A.M.

8 A.M.



Energy efficiency is a key criterion in the search for a suitable lighting solution. Wellumic augments artificial lighting only when there is insufficient daylight. The integrated sun shading system significantly reduces cooling loads in the summer and energy costs in the winter. This saves energy and makes buildings more sustainable.



Lighting:

no artificial lighting required

External venetian blind: horizontal slat position

MIDDAY

The sun peaks at midday. This is the brightest time of the day. The external venetian blind protects against direct solar radiation and deflects the maximum amount of diffuse daylight into the office. So we can work in glare-free, optimum lighting conditions.

WELLUMIC: FEEL THE RIGHT LIGHT.

AFTERNOON

The position of the sun falls, the external venetian blind automatically closes its slats to guarantee we can continue working without glare. The decreasing proportions of blue light in the daylight are optimally rendered in the spatial depth by the artificial lighting.

Lighting:

warm light throughout the room

External

venetian blind: half-closed to the



PERFECTLY SUPPORTED.

It is often difficult to work in rooms illuminated by natural daylight when the light conditions change. Wellumic prevents this by adapting to every situation. If there is too much solar radiation, a sun shading system is used to prevent glare. A sudden lack of light when clouds pass over is rectified by artificial lighting. And the entire process is automatic thanks to the smart control.

6 P.M.

3 P.M.

MORE HARMONY.

The trend towards a 24-hour society is having fatal effects on our health. Gearing artificial lighting to the dynamic of daylight, on the other hand, supports the body's natural biorhythms and improves our sleep. So we face the next day feeling refreshed.



Lighting:

warm light throughout the room

External venetian blind:

closes only at night to ensure thermal protection and privacy

DUSK

During the evening hours, high proportions of blue light in the artificial lighting are avoided to prevent our biological clock dropping out of synch. Warm light and a reduced illuminance level have a relaxing effect and prepare us for the biological rest phase during the night.

