Good lighting has many positive effects that are vital: it influences human health, productivity and the feeling of well-being. As the modern man spends most of his time with indoor activities, improving the inside circumstances has never been more important.

With Human Centric Lighting the office becomes an inspiring space that is able to stimulate people’s mood, behaviour and energy level. It also supports higher performance efficiency, the ability to concentrate, and it increases the comfort level as well.

Human Centric Lighting is a new land waiting to be explored.

Join SLE on this journey!
THE BIOLOGICAL EFFECT OF LIGHT

Photoreception in the human eyes leads not only to vision but also has effects on human physiology, often summarised as non-visual effects of light. As a result, light has influence on the daily hormone level, initiating continuous changes as the day progresses. It is supporting the circadian rhythm, which is responsible for the human biological clock, determining the sleep-wake cycle of the human body.

LIGHT QUALITY

The quality of our lives depends on light
Keeping the circadian rhythm in balance is essential to our physiological well-being. It regulates the sleep-wake cycle, therefore, it has influence on the core body temperature and hormone secretion.

Two hormones are determining the human biological clock:

Melatonin is the principal hormone produced by the pineal gland. It is responsible for our sleep. Cortisol enables the active hours, and its level is increasing in the morning. It is proven that light exposure drives cortisol level in the morning further up, while it is able to suppress the secretion of melatonin during the day.

Follow the rhythm of the day
Lighting that is adapted to the natural rhythm of the human body is able to improve vitality and concentration. The development of human centric lighting has led to a modern indoor solution that simulates daylight as the day progresses. It is based on the smart use of brightness, colour temperature and light direction to positively influence the human body. Office use can enhance concentration and performance during working time and aid relaxation and rejuvenation at the end of the day.

**PERCEPTION OF COLOUR TEMPERATURE**

- **2700K**: Low CCT lighting correlates in general with positive characteristics (calming and cosy).
- **6500K**: Higher CCT lighting creates a bright office space (energising and stimulating).

The office becomes an inspiring space.
The recessed LED luminaires provide efficient lighting with pre-programmed lighting cycles as the day progresses. A fully automatic control system is implemented for ultimate user comfort.
MULTI SENSOR
To maximise efficiency, multi sensor is implemented in the solution. It has two functions in one: both daylight intensity and presence of people in the room are detected. By presence detection we eliminate unnecessary lighting hours as the system switches OFF automatically when there is no movement and ON only when needed.

LUMINAIRE WITH THE LATEST LED TECHNOLOGY
The latest technology enables changing the spectral qualities and the colour temperature of the light within an automated system.

KEYPAD CONTROLLER
It is possible to disable the automatic cycle and choose a predefined lighting scene via a keypad controller mounted on the wall.

CONTROL UNIT
The control unit manages a DALI-based plug-and-play control system which fulfills the basic needs in offices with maximum energy saving options by daylight harvesting and presence detection.

Fully automatic control system

HCL SYSTEM

100% USER FRIENDLY
Enhanced productivity and alertness

RESEARCH RESULTS
Human centric lighting has several proven benefits. It has positive influence on the prevailing mood and on bodily functions, next to its positive effect on depression and certain anxiety states, and on convalescence dynamic.

Research results showed increase of:
- work performance (≈ 19%)
- reduction of fatigue (≈ 27%)
- concentration (≈ 37%)
- enhancement of alertness (≈ 23%)
and higher employee satisfaction.

PRODUCTIVITY
People who work in a human centric office report that they feel more energised, they are more productive and overall more satisfied in comparison with working in an office with traditional lighting.
SLE
Dojč 419
906 02 Dojč
Slovakia
+421 34 694 0847
office@sleprojects.com
www.sleprojects.com