

The time
is now for
human centric
lighting!

Human Centric Lighting: Going Beyond Energy Efficiency

Latest findings from the ground-breaking
LightingEurope, ZVEI, and A.T. Kearney
market study



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What is Human Centric Lighting?

Human centric lighting is intended to promote a person's well-being, mood and health. It can improve concentration, safety and efficiency in workplaces or educational environments. It can support healing processes and prevention of chronic diseases among persons with irregular daily routines or in elder care. In short, lighting is not just visual; it is now evident that lighting has biological and emotional impacts on human beings.

How do we know about Human Centric Lighting?

At the beginning of this millennium, a third photo-receptor (besides rods and cones) in the eye was discovered. After this discovery, it became evident that human biological rhythms and cognitive performance are influenced by specific light conditions. In other words, lighting has tremendous effects on human health, productivity and well-being.

Why is it important?

Human centric lighting enormously widens the applications of light from simply visual tasks. Initial potential benefits of biologically efficient lighting include improved sleep/wake cycle, daily changes in alertness, performance and mood (circadian changes) as well as responses to seasonal changes. Benefits can be achieved with new technology that allows for greater adaptation of light's color temperature, illuminance levels, and distribution so it more closely resembles natural conditions. Potential beneficial applications can include health, education, office, industrial, wholesale/retail, hospitality and residential sectors.

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The first of its kind, the joint study by LightingEurope, the German Electrical and Electronic Manufacturers' Association (ZVEI) and the global management consulting firm A.T. Kearney shows that human centric lighting can also become a multi-billion-euro business, covering around 7% of the general lighting market in Europe.

Joint efforts of European industry and policy makers needed

The realization of this market potential is not a given, but requires joint efforts of European industry players and policy makers to overcome barriers for growth. Among others, these barriers include lacking information with regard to the potential benefits. In addition, customer requirements are heterogeneous and sometimes conflicting across geographies, segments and stakeholders. On the supply side, today's delivery capabilities and go-to-market setups need to be built up due to the heterogeneous value chain structure and rapidly evolving technological requirements.

What's next?

More than 100 years after the invention of electric light, the lighting industry in Europe is undergoing unprecedented change. The shift to LED technology not only provides a highly energy efficient lighting technology, but it also enhances the possibilities lighting offers to consumers, designers and the environment, making the possibility of human centric lighting now a reality.

The European lighting industry has always been at the forefront of innovation. Still today Europe is the leading region when it comes to technological development and scientific research related to light in its different applications. Europe is poised to take a leadership role in this exciting new technology. Building on its native strengths of high-tech industries and SME innovation, the time is now for human centric lighting!

For more information visit

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