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Lighting as a key element of Indoor Environmental Quality (IEQ)

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Topics

- What is Indoor Environmental Quality (IEQ)?
- Why is it important
- Key aspects of lighting IEQ
- Why is it a key topic today for LightingEurope?
- Opportunities for stakeholder groups in lighting value-chain

What is Indoor Environmental Quality (IEQ)?



- “The result of an assessment inside a building based upon parameters such as relating to the temperature, humidity, ventilation rate and presence of contaminants, influencing the health and wellbeing of its occupants” EU Energy Performance of Buildings Directive
- While Indoor Air Quality (IAQ) addresses the air that building occupants breathe, IEQ additionally considers the overall environment they experience, including what they see, hear, and feel while inside the building.
- **Lighting is a key component in IEQ**

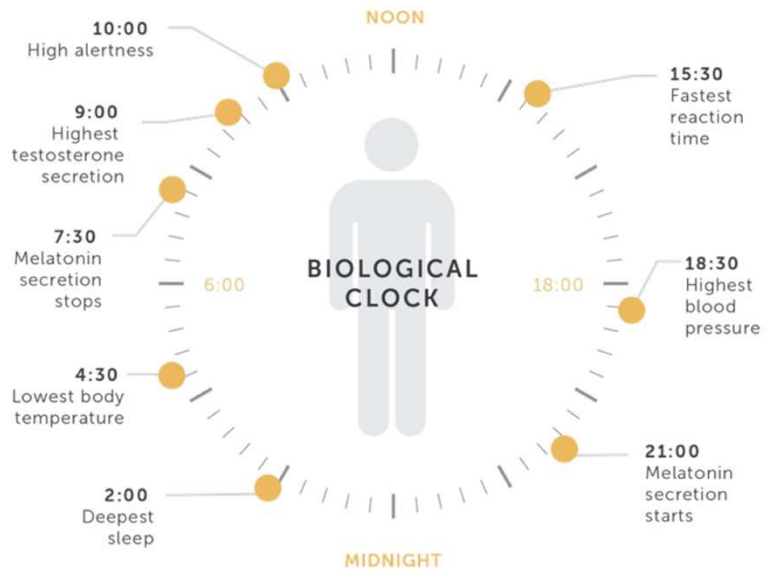


Why is Lighting IEQ important?

- We typically spend around 90% of our time indoors, meaning...
- We can become starved of 'natural' daylight:
 - Many indoor spaces have little or no daylight whatsoever
 - Those that do have daylight usually have:
 - a changed spectral content
 - no daylight coming from above

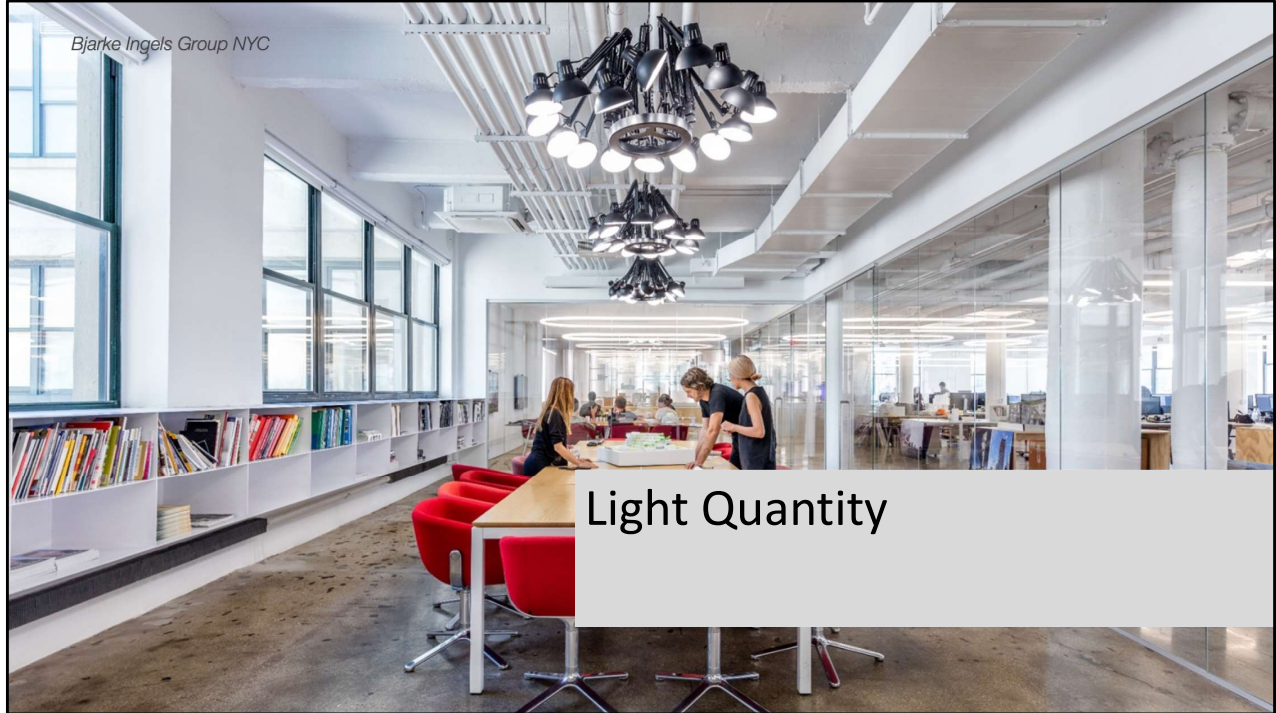


Good Lighting IEQ has the potential to support occupant comfort and wellbeing and help increase the enjoyment of a space



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There are a variety of organisations out there driving towards giving recommendations for lighting to support well-being outcomes.



Here we're speaking mainly about the quantity of light that's required to perform the visual task. This is highly personal. We all require and prefer different amounts of light even to carry out the same visual tasks and different visual tasks need different amounts of light. You can imagine that more intricate and detailed tasks, like reading printed text in small font requires is generally much more visually challenging than,, for example, walking along a corridor. Another hugely important factor dictating the amount an individual needs is how well their eyes perform and for most of us, our eyes quickly drop off in their acuity as we age



Quality light illuminates the human experience by creating beautiful, comfortable, and productive environments free from disturbing flicker and with high colour rendition abilities that accurately show the objects in the space and consistent light output with no color shift over time.

Also lighting the space, ambient lighting. So walls, ceiling and any large obstructions that impact the impressions of the space.



Adaptive and personalized control, is described as Intelligent Solutions that adapt and provide personal control, in as far as possible of intensity, colour temperature, and distribution.

Harnessing lighting solutions with intuitive personal controls gives occupants the power to change their space wherever and whenever they might need to.

Complementing personal control is automation, which creates an environment that intelligently adapts throughout the day as smart systems and sensors behind-the-scenes react to environment conditions and respond accordingly.

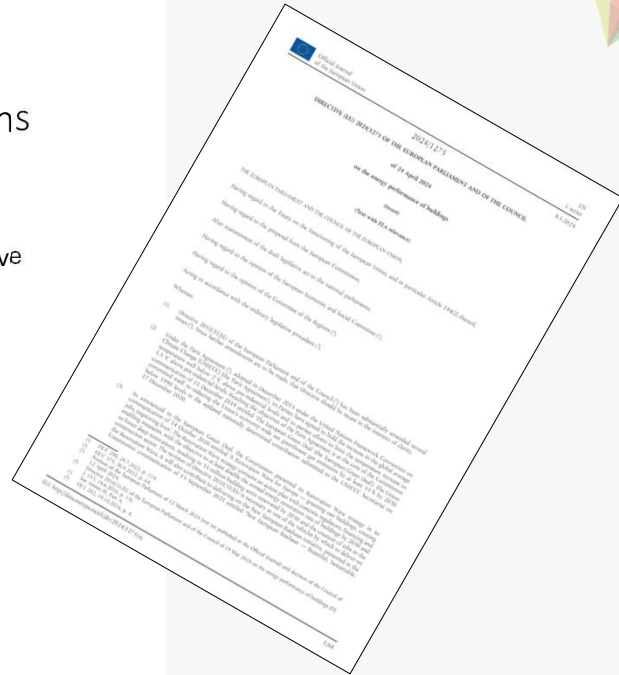
The Value of Lighting IEQ to Different Stakeholder Groups

- **Users / Employees** – Enjoy the space, have improved satisfaction at work and better wellbeing
- **Employers** – Improved employee recruitment and retention
- **Building Owners / Investors** – More valuable buildings can command higher rental fees from tenants
- **Electrical Installers and Lighting Designers** – Can differentiate themselves with their greater expertise in this crucial and developing topic



IEQ Helps meet legal obligations

- EU Energy Performance of Buildings Directive (EPBD)
- Employers have a legal duty of care for employees, including for their safety, etc.



Why is IEQ a key topic for LightingEurope Right now?

- Increased public awareness of the importance of IEQ post covid
- Drive for carbon emission reduction can conflict with the drive to improve IEQ for occupants
- Legislative developments are referencing IEQ



And Finally...



- Treating IEQ as the same as IAQ is missing a great opportunity to make a difference in the spaces we create and work in.
- Help us spread the word!
 - Good IEQ should be considered to be a 'must have' for occupants in a building, not merely a 'nice to have'
 - Support EU Member States to include lighting as an **explicit** part of their total EPBD IEQ requirements





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THANK YOU

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