

# Vision Smart Lighting The Next Generation

#### Energy Consumption by End Use 2010-2016



Source: The Department of Business, Energy and Industrial Strategy

# The Next Generation of Lighting?

Out of the major building services, lighting has seen one of the biggest improvements in energy efficiency in the last decade, and is predicted to rise further. The latest technologies, including DALI connected networks, have been at the forefront of decreasing energy consumption within lighting.

But is it enough?

### **Enhancing the Circular Economy**

A significant proportion of materials used in a DALI wired network include copper, plastic and rubber. On average **8,000m** of cable is used in a typical DALI installation.

A circular economy aims to design out waste, maximise value, improve maintenance and return materials into the cycle at the end of their lives. This presents engineers with an opportunity to improve system performance, decrease whole-life cost and reduce the environmental impact of their buildings.

Source: CIBSE







## **Simpler Smart Lighting**

Smart Lighting utilises the latest wireless technology, reducing the need for cabling and precious earthly elements such as copper, as well as reducing the reliance on plastic.

Consuming less energy, and using fewer components, means that the new generation of simpler, smart lighting systems are changing the way buildings are managed.



#### From Classroom to Campus From Office to Estate

In a smart lighting system, each luminaire has its own integral wireless node. A designer can therefore scale up the lighting from one room, to a whole building, to an entire estate.



For designers and consultants, this means that lighting installations at the time of commissioning no longer need to be set in stone. Instead, they can be adjusted as the usage patterns of individual spaces or entire buildings change.

### **Energy Monitoring**

Smart lighting systems are capable of live "energy interrogation", luminaires providing an ongoing breakdown of how much energy is being used, from a single room to multiple sites.

Energy interrogation makes it easier for decision makers to better understand their energy consumption, and make informed decisions about their building.

### **Making Perfect Sensors**

Wirelessly connected luminaires are fitted with PIR sensors, delivering additional control and reducing energy consumption by **up to 30%**. Daylight harvesting sensors can deliver a **further 40%** energy savings.

Smart sensors can be changed to suit the requirements of the space, with longer or shorter switch-off times depending on the room usage.

**35-40%** of European offices are not in use during work hours.



Source: CIBSE



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Emergency manual testing costs on

Average **£2,800** p.a.

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#### Simplified Emergency Lighting

The law, such as BS 5266, dictates that emergency luminaires must be tested monthly and annually. However, employing a contractor to do this can be costly over the course of a year.

Basic self-test emergency systems will remove this cost, by conducting tests automatically. However, these occur at random, which can cause disruption to building managers, employees and visitors.

Smart wireless emergency systems allow specific scheduling of monthly and annual tests, providing peace of mind and minimal disruption.

Source: https://www.electricalsafetycertificate.co.uk/emergency-light-testing/



#### Security

Wireless lighting systems that operate outside of Wi-Fi frequencies, create an exceptionally secure link that is still as flexible and user-friendly as a Wi-Fi based network. These networks are also free from regular internet interference, ensuring that they run quickly and smoothly.

Smart lighting systems work on dedicated networks, and do not need to be integrated into existing IT systems. This reduces the risk of a security breach whilst controlling your lighting which is a comfort for facility managers.

### **Our Vision**

Tamlite believes a circular economy, occupant wellbeing and safer buildings through the power of smart lighting are the future.

#### **Lighting Controls Made Easy**

If you have any questions about how smart lighting can benefit your facility, building or lighting design, we are here to help.

Visit www.tamlite.co.uk/visionsmart

#### Lighting for a Living

+44 (0)1527 517 777 sales@tamlite.co.uk

Tamlite Park Farm Industrial Estate Redditch, Worcestershire B98 0HU

tamlite.co.uk/visionsmart

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