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FRANKFURT / MAIN



LIGHT + BUILDING 2022 TOP THEMES

## Dynamic digitalisation and sustainability

Intelligent, future-proof and trend-predicting – these are the top themes of Light + Building 2020 (13/18 March 2022, Frankfurt am Main). All three are linked by the subjects of dynamic digitalisation and sustainability.

**Picture this scenario** – what happens when a resident parks in front of their house? Depending on the time of day, the lighting in and around the house is switched on, the e-car is charged, the house door opens via face recognition and selected music goes on in the living room. For buildings and towns, digitalisation offers a completely new spectrum of possibilities, limited only by the bounds of imagination.

To this end, however, all electronic components must be linked digitally with each other and communicate via a common language. The possibilities opened up by dynamic digitalisation

are closely bound up with energy saving and the efficient use of resources. In this case, the buzz word is sustainability.

### Intelligent

The top theme "Intelligent" focuses on systems whose key elements are connectivity and interoperability that enable them to communicate seamlessly with each other. The result is increased convenience and efficiency in buildings. Additionally, it is easier to monitor specific climate goals.

### Energy + efficiency

Light is essential for carrying out a variety of tasks and plays an important role in people's feeling of wellbeing. Accordingly, LED lighting is extremely important in smart homes and buildings. Great efficiency and a long service life save electricity and maintenance costs. In combination with intelligently-linked operations employing sensors and actuators, LEDs offer great potential for saving energy and cutting carbon footprint.

### Connectivity + security

If fire breaks out in a smart home or smart building, the windows close automatically to reduce the flow of oxygen. But what happens

then with the emergency escape route? In intelligent buildings, the prioritisation of automatically interconnected functions and operations is an integral part of the electronic safety and security technology. The basis for this is the interoperability of different building-automation systems and components.

### Charging management + E-infrastructure

Whether on private land, in the underground carpark or in an office building, charging stations for e-cars are set to play a major role in the private sphere in the future. The long periods spent at work or at home represent ideal circumstances for charging e-cars. The integration of charging points into the electrical infrastructure of a building offers additional benefits.

Depending on the time of day and demand, it is possible to regulate the electricity used. Moreover, it is possible to avoid overloading the infrastructure by combining it with an intelligent electricity network (smart grid) offering regenerative energy economically and around the clock.

### Future-proofing

How can production processes be made more efficient and sustainable? When does the machinery actually need servicing and in which language does the house door communicate with the heating? These and many other questions are at the heart of the "Future-proof" theme.

### X + service

Whereas an X in mathematics stands for an unknown, in the case of the abbreviation X as a service it represents a technology, a service or a complete package. In common with a rental agreement or leasing, the customer receives a specific service – why? Because that which is really needed can also be obtained in other ways. Typical applications in the field of lighting and building services technology include "Light as a Service" (LaaS) and "Safety as a Service".

### Analyse + predictive maintenance

Whether in the health or heating fields, regular monitoring promises the early detection of defects. In the building services sector, new technologies make it possible to connect components with each other and to collect data continuously.

This permits servicing requirements to be predicted. In this connection, regular monitoring helps estimate when, for example, the lighting system should be optimised or the control technology of a lock system updated.

### Physical + digital twin

Numerous different disciplines are involved in the planning, construction and operation of a building. As with a good orchestra, all parts should interact perfectly and access the necessary data. In this connection, the "digital twin" of the building helps in the form of the IT-aided data interface ... building information modelling (BIM). The use of BIM leads to shorter planning and construction times, more efficient work processes and fewer errors.

### Health + light

Light makes things visible. However, it achieves so much more – it influences our feeling of wellbeing, health and performance. Human centric lighting technology (HCL) revolves around the targeted and long-term impact of light on humans. In addition to the visual quality of the light, modern lighting systems can adjust the colour temperature in accordance with the time of day, thus permitting the optimum light for a variety of situations, in homes and workplaces.

### Trend-predicting

This top theme not only emphasises lighting and luminaire design but also shows how light becomes part of the network.

### Practical + beautiful

An office at home becomes a wellness zone, a waiting room becomes a prestigious lounge. The focus of the Light + Building trend theme is on the challenge of adapting the individual lighting requirements in the best possible way. On the design and technical levels, luminaires are variable and changeable. Track-lighting systems, modular components and smart ways of controlling them are suitable for use in public/private spheres.

Reduced forms and reusable materials, such as aluminium and glass, conserve valuable resources. Accordingly, designers are now taking account of the reusability of their creations during the product development stage.

### Classic + real

Stringent and timeless: classic luminaire design does not age. It has unmistakable

material, colour and sensory elements that delight a large number of devotees at all times. Coupled with personal memories and in conjunction with renowned designers, these coveted objects continue to be topical.

Alongside futuristic designs, classic luminaires have a prominent place at Light + Building with a spectrum ranging from sparkling chandeliers to clear Scandinavian standard lamps or industrial loft luminaires. Together, they meet the demand of users for classic luminaire design and future-oriented connectivity.

### Historic + contemporary

Flexibility, dynamism and increasing digitalisation are characteristic of modern life. More and more, the internetaffine society is defining itself via greater convenience with network solutions that make everyday life easier and more plannable. Thus, many of the luminaires by international designers to be seen at Light + Building are compatible with this, and their connectivity forms a technological bridge to the future.

In appearance, they often include references to historical and classic archetypes. Lantern shapes, chandeliers and even the filament lamp itself provide for a retro-look in combination with state-of-the-art technology.

### Futuristic + plain

Agility is playing an increasingly significant role in many projects and companies. It is also to be seen in people's dynamic lifestyle. Private, working and leisure activities are overlapping ever more and taking place both indoors and outdoors, as required. New luminaire designs reflect this trend and facilitate flexibly from one aspect of life to another.

At Light + Building, this theme spotlights freedom from a fixed location. LED table luminaires and lanterns made without inconvenient mains cables but with loops or hooks can be positioned almost anywhere. Standard lamps are also portable and can be astonishing in terms of shape, colouring and design.

See <https://light-building.messefrankfurt.com/frankfurt/en.html> ■



The protocols and "language" used are critical to future-proofing sustainable, interlinked systems.