Minimizing Light-emissions

Guideline to Efficiency

Traffic lights have turned green for a new generation of street lighting. Innovative, energy efficient and guiding towards a new direction.

Light. when needed. As much as needed.

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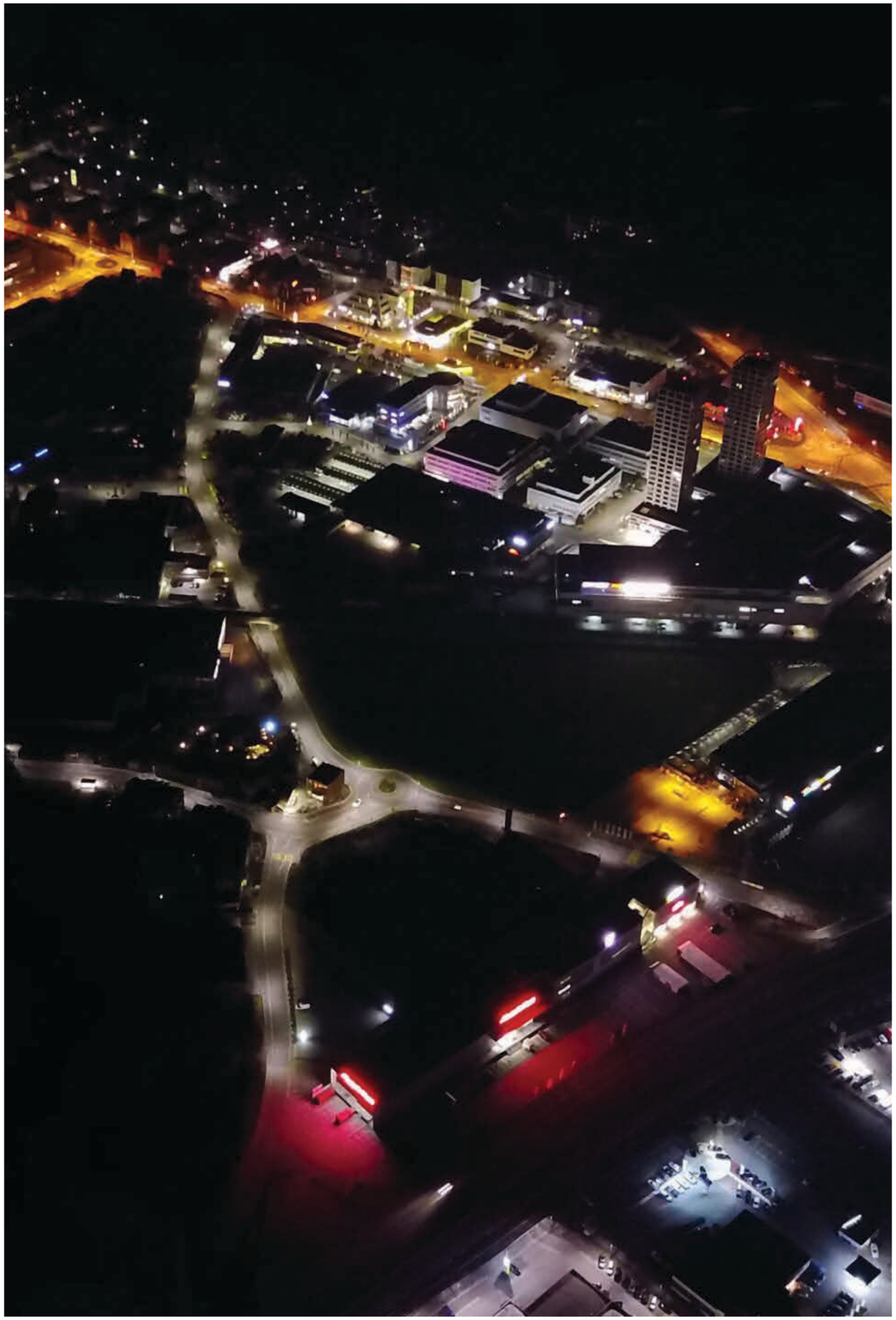
Smart.
Sustainable.
Efficient.



Smart Street Lighting

Traffic lights are green — paving the way for sustainable street lighting

Light emissions, power shortages, and climate change are concerns shared across all age groups. In the field of lighting, sustainable concepts, future-proof lighting management systems, and individualized, digital, and automated solutions are becoming increasingly important.

By controlling LED luminaires on demand, energy use and consequently operating costs, can be greatly reduced without compromising comfort or safety. At the same time, this approach extends luminaire lifespan and significantly lowers unnecessary light emissions.

With esave's smart solutions, street lighting can be managed either based on traffic volume or on demand.

esave revolutionizes street lighting

1 Stand alone lighting control

An autonomous lighting management system for demand-based lighting control. Luminaires are configured directly on site and operate without any central infrastructure.

2 Intelligent lighting control

A networked lighting management system with centralized access to the lighting infrastructure. Luminaires can be configured and monitored remotely from any location via the esave SL-Control web platform.

3 Replacement ring control

A digital replacement for conventional ring control systems. Lighting is switched automatically based on sensor inputs such as ambient light levels, time schedules, or astro profiles.

Stand Alone Lighting Control

Stand alone smart lighting control

+ One-off purchase cost for a SLC-USB stick including software license
+ Updates at no additional cost
+ Configuration stored directly in the light

As soon as power is supplied to luminaires equipped with an esave controller (e.g. SLC-Hub203), an automatic wireless mesh network is created. The installation can then be accessed, configured, controlled, and monitored on site using a laptop or tablet together with an SLC-USB dongle.

The user-friendly and intuitive SLConfigurator software interface provides strong support for all of these setup and management tasks.

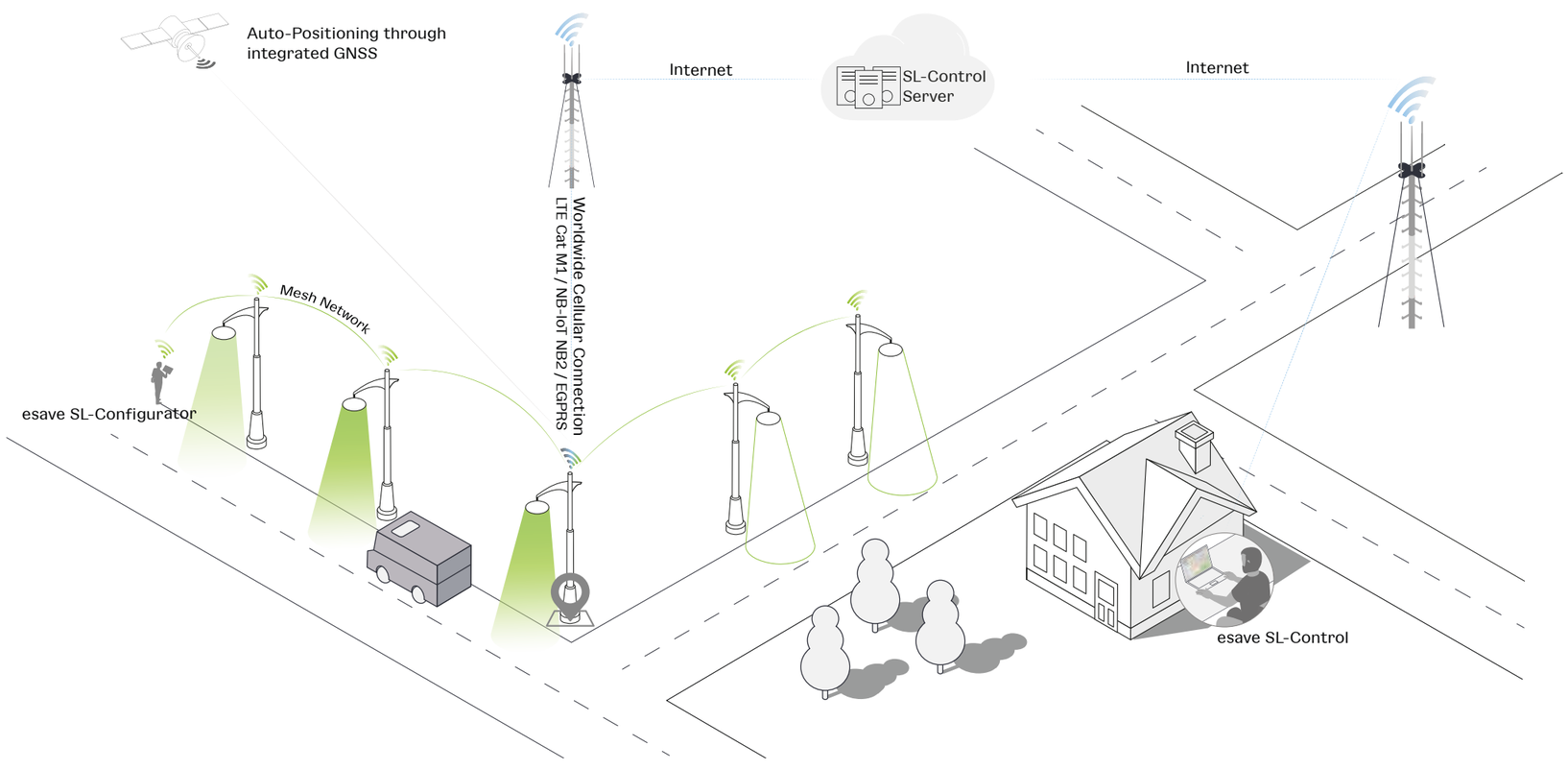
Smart Lighting Control

Cloud-based, smart street lighting

+ Export current luminaire data
+ Evaluation of traffic data
+ Export energy consumption
+ Real-time monitoring and real-time maintenance
+ System remote management and monitoring

Thanks to the integrated eSIM and gateway functionality, the Cellular Devices can connect directly to the SL-Control web platform while simultaneously maintaining a network with all nearby esave-enabled luminaires.

The user-friendly and intuitive SL-Control web platform enables remote configuration, control, and monitoring of any esave lighting system, and also provides advanced features for detailed visualization, data analysis, and display of measurement results.



Volume based Lighting Control

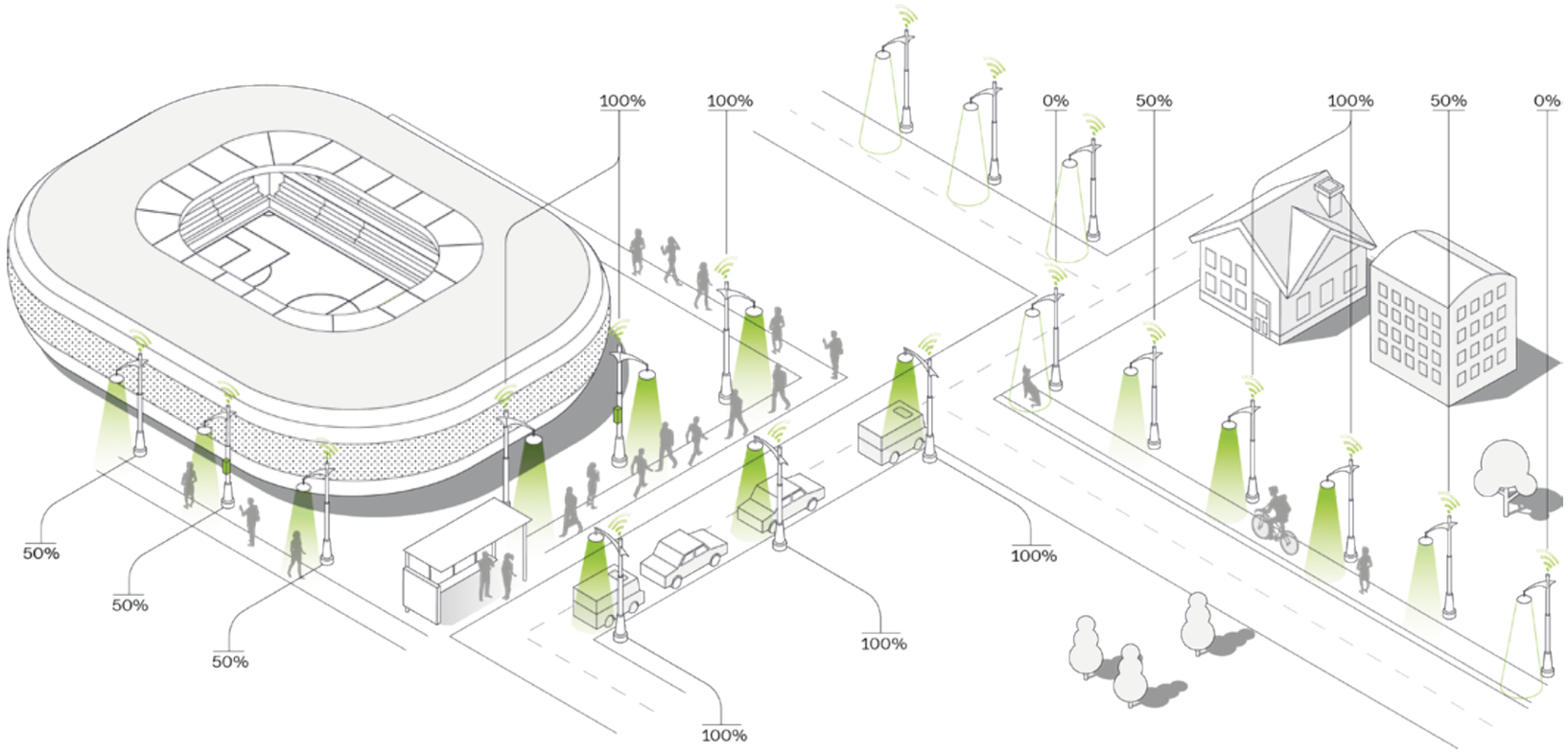
Intelligently implementing the perception of our environment

esave's volume-based control turns your lighting system into an intelligent, traffic-responsive solution. By integrating sensors that measure traffic density, lighting levels can be dynamically adjusted to match actual demand. This enables significant energy savings and reduces unnecessary light emissions, while maintaining safety for pedestrians and all road users.

Light on Demand

Light - when needed, as much as need, where needed

Light on demand can be implemented easily by equipping each streetlight with a motion sensor that responds to passing traffic participants. When movement is detected, the luminaire automatically increases its light output. After a defined period, it then dims back to the preset standby level.



Environmen-tally concious lighting

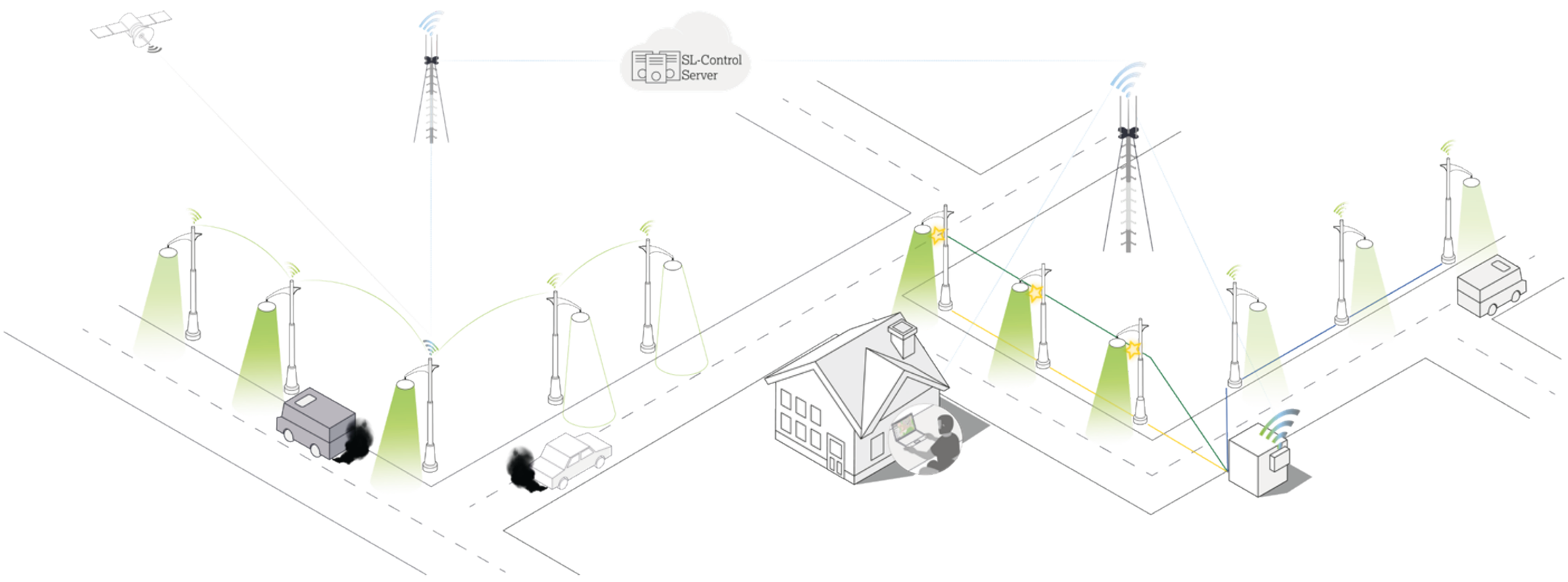
Light management and air quality monitoring

Pairing the SLC-Enviro203-C with a particulate matter sensor enables air quality measurement. This integrated feature expands the SLC-Enviro203-C's functionality by allowing comprehensive monitoring and management of a city's environmental conditions.

Ring Control Replacement

Revolutionized Ring control

Equipped with three built-in relays, the SLC-RC Switch can serve as a replacement for a traditional ring control. Its integrated eSIM allows connection to the esave SL-Control web platform, enabling real-time synchronization and processing of various parameters. The SLC-RC Switch can be installed on a DIN rail, directly replacing a ring control within a control cabinet.



Office and Building

Smart lighting control

An esave “smart lighting solution” allows office lighting to be fully integrated into a central control system, enabling optimal management based on daylight, occupancy, and individual preferences.

Savings

The system can automatically switch lights on or off at scheduled times, adjust brightness according to available daylight, and turn off when a room is unoccupied, helping reduce energy costs by up to 90%.

Wellbeing and productivity

Environmental factors are well known to influence mood and productivity. By equipping office spaces with environmental sensors, facilities can be transformed into modern workspaces focused on employee well-being.

Proper lighting, neither too bright nor too dim, creates a comfortable atmosphere, while poor lighting, such as the yellow or orange tones from conventional lamps, can cause eye strain, blurred vision, and headaches.

Bright, glare-free LED lighting, on the other hand, can enhance concentration and reduce errors.

1 Choice of light color

Even simple elements like light color can have a significant effect on brain activity, as well as mental and physical energy. Using colored lighting, these effects can be intentionally influenced to promote increased energy or relaxation.

2 Humidity

CO_2, humidity, and temperature sensors monitor indoor air quality. The data can be displayed to employees or sent directly to a connected ventilation system, which can adjust the building’s air in real time.

The IOT enabled Building

Adjusting lighting levels to meet the needs of office buildings

Good lighting goes beyond simply illuminating streets or rooms. Luminaires equipped with motion sensors anticipate activity, helping to significantly reduce energy costs. Brightness and motion sensors provide optimal lighting levels in office buildings. With esave controllers, the luminaires can be grouped, configured, controlled, and monitored efficiently.

Central light switch

A button or switch can serve as a master control point, allowing a group of luminaires in a room to be managed together. This enables manual override of the programmed settings at any time.

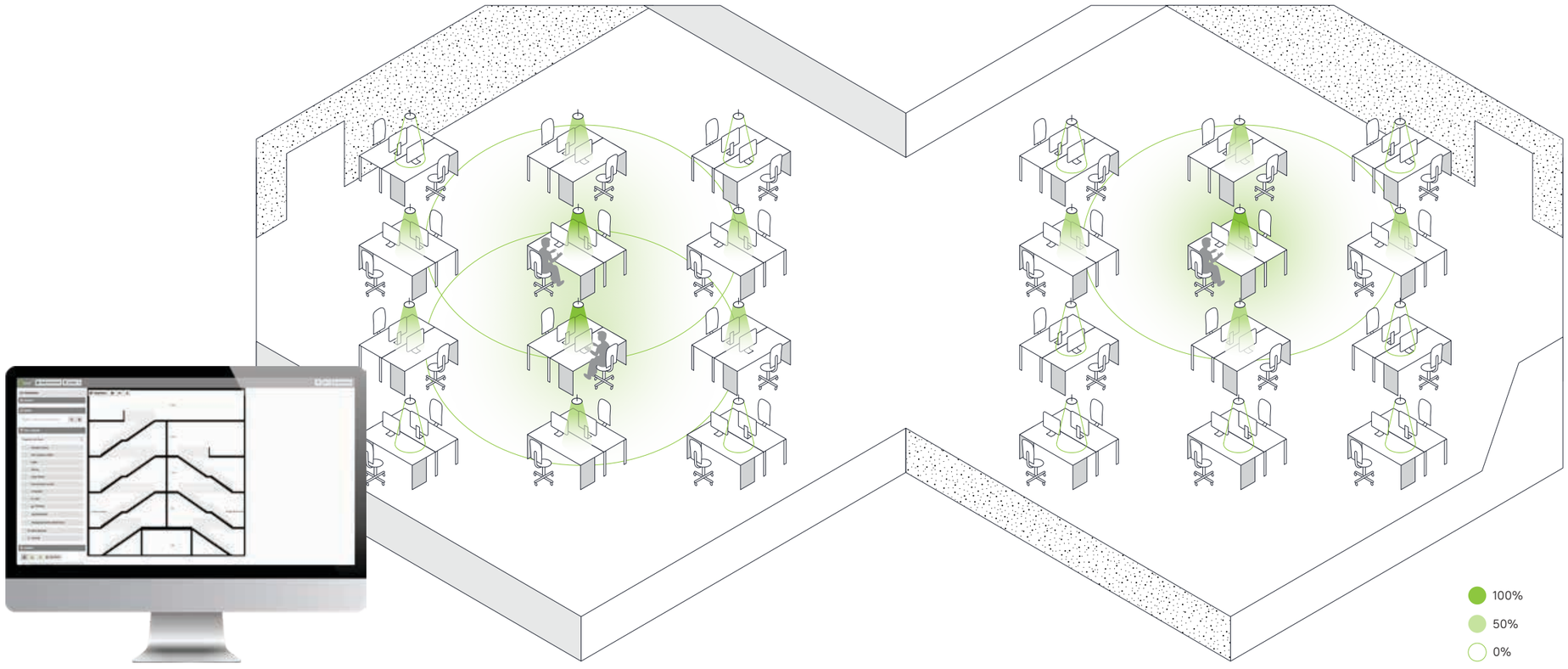
Swarm Intelligence

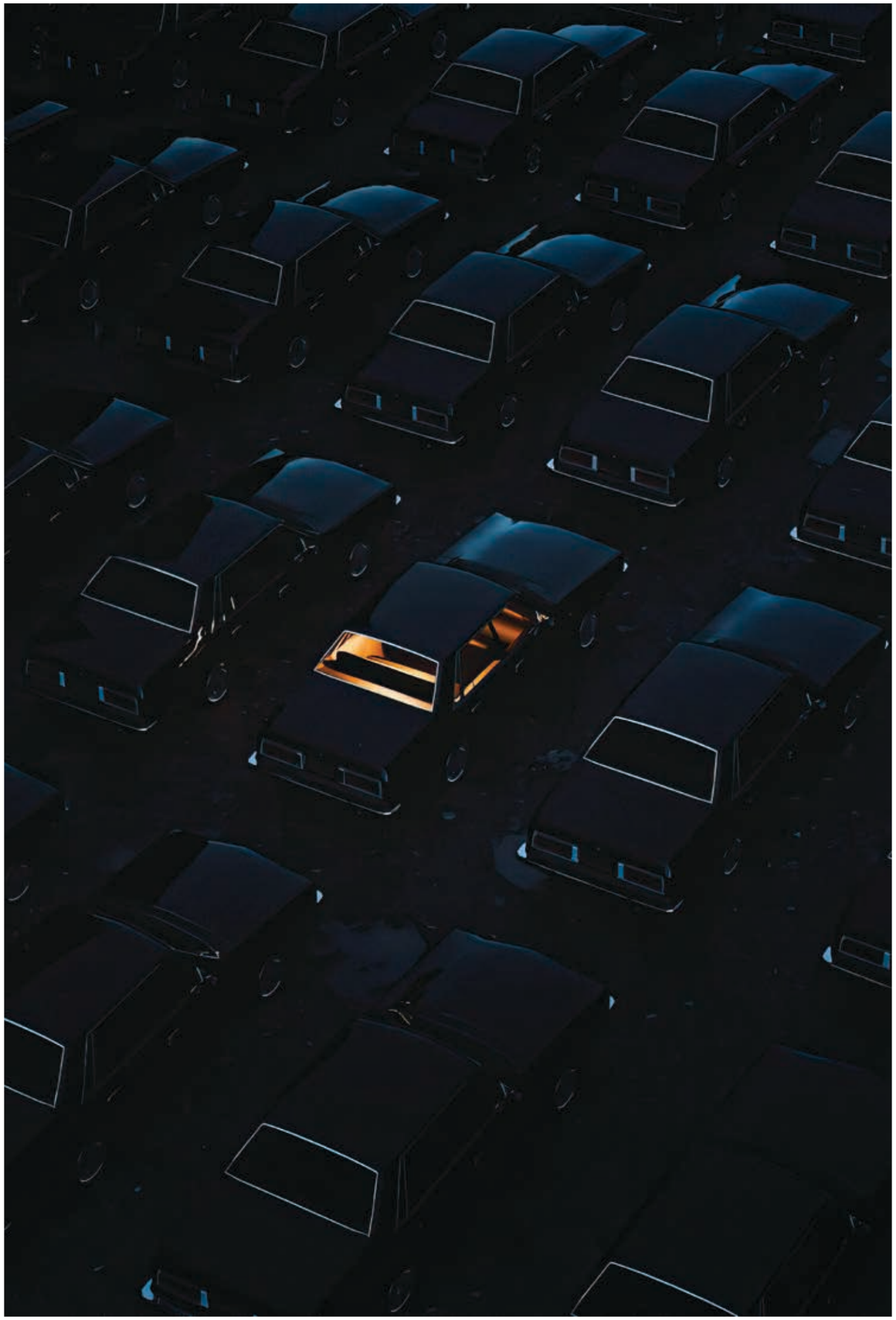
Smart lighting for smart spaces

Real-time and historical data analyses offer insights into space utilization, creating opportunities to optimize layouts and reduce energy costs. In the event of a fire, it also allows tracking of occupied rooms. An IoT-enabled, interconnected lighting system brings new possibilities, transforming your office into an intelligent, truly smart workspace.

Smart lighting for optimized space utilization

With swarm control, luminaires become part of an intelligent lighting system. This technology delivers significant benefits in energy efficiency, lighting comfort, and flexibility. Lighting can be adjusted based on daylight levels, occupancy, or the time of day.





Public Lighting

Efficiency, Safety & Comfort

IoT-Ready Solutions

Smart LED lighting promotes safety and well-being. Esave offers a broad range of lighting solutions designed to minimize energy consumption while enhancing comfort and safety.

The “Internet of Things” (IoT) enables the collection and analysis of data from connected nodes. The insights generated by the system improve operational efficiency and reduce energy usage. For instance, ventilation can be increased when particulate matter levels rise, humidity in multi-storey car parks can be monitored and maintained at optimal levels, and emergency signage can be controlled in the event of an incident.


1

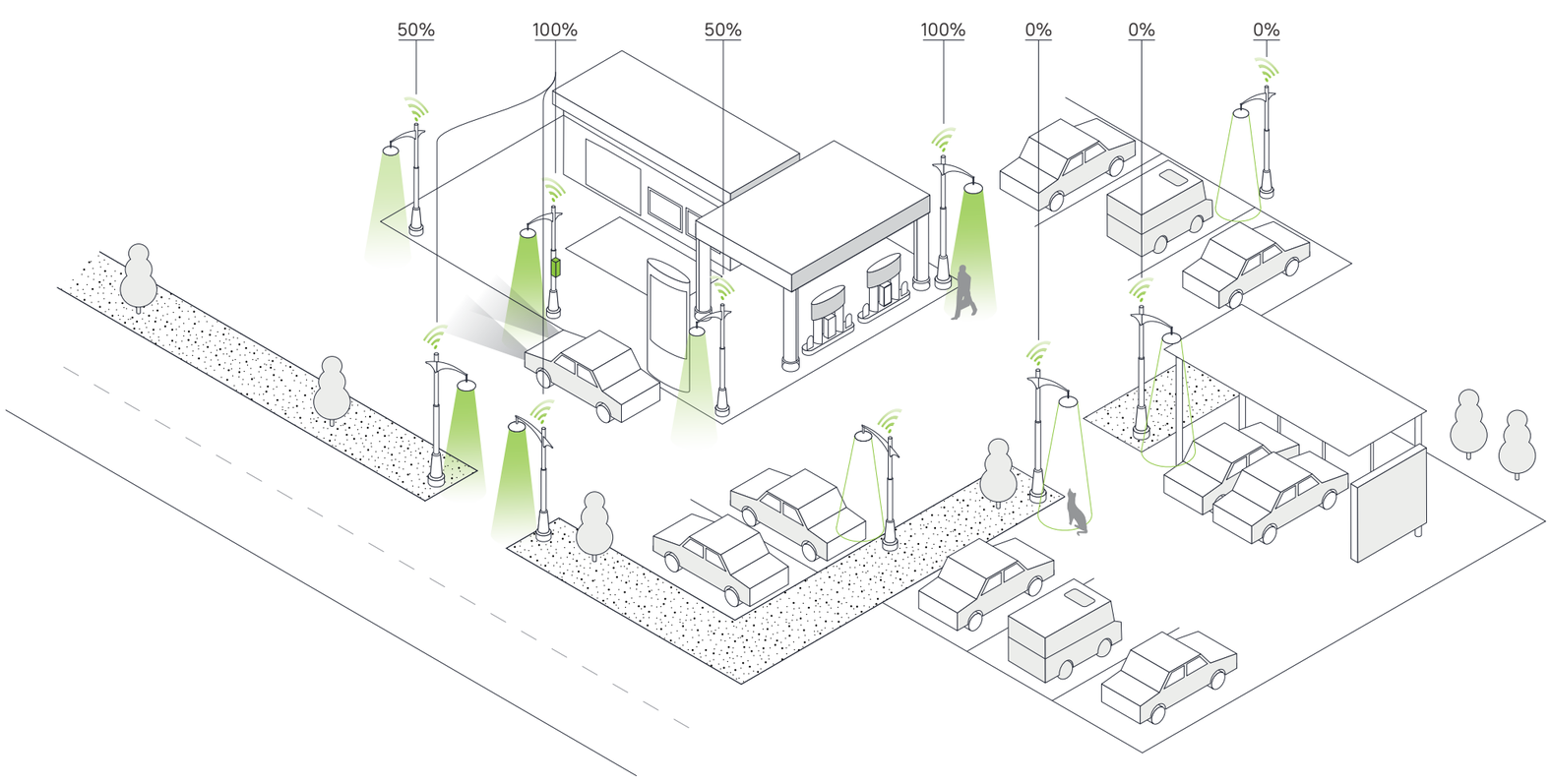
Light on Demand

Convenience and energy savings

Motion sensors detect occupancy and communicate with the controller. When no activity is present, lighting dims to a preset level. Lighting intensity can be programmed based on daylight or weather conditions, ensuring consistent brightness throughout the day according to natural light.

Special Situations

Lighting automatically turns on or increases in areas such as car parks, underpasses, or bus stops as soon as people are present. For monuments, sacred buildings, or special events, lighting can be programmed to create a tailored atmosphere, enhancing the experience while saving energy.



Zhaga Controller

SLC-Hub203 with or without Cellular

The SLC-Hub203 is a smart, flexible, and cost-effective controller, available with an optional eSIM. Installation is simple and plug-and-play. With the optionally integrated eSIM and gateway function, an SLC-Hub203-C can connect to the SL-Control web platform while maintaining a network with all nearby esave-enabled luminaires (e.g., SLC-Hub203).
The intuitive and user-friendly SL-Control web platform enables remote configuration, control, and monitoring of any esave lighting system.

SLC-Enviro203-C (Cellular)

The SLC-Enviro203-C builds on the SLC-Hub203-C platform. With its integrated eSIM, it functions as a gateway, while also measuring key air quality parameters, monitoring luminaire status, and providing efficient energy tracking.

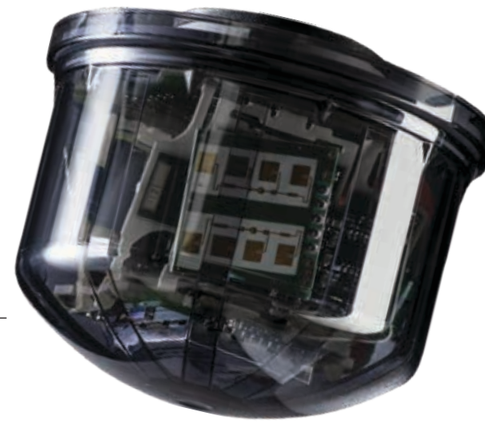
SLC-Noise203-C

The SLC-Noise203-C is equipped with an integrated ambient noise sensor for accurate sound level measurement. Customizable thresholds can be defined and evaluated based on the recorded values. The device also monitors luminaire status and energy consumption. Its built-in 2.4 GHz mesh network allows seamless communication with all controllers within the system.

Works with OSRAM DEXAL®

SLC-Motion203 with or without Cellular

The SLC-Motion203 enables the implementation of smart lighting solutions. It combines the SLC-Hub with a PIR-Zhaga motion sensor, integrating a flexible, cost-effective controller with occupancy detection. Like the SLC-Hub, it is available with or without an eSIM and can also function as a gateway.



Lix.One SLC

Radar sensor designed for roads and traffic areas, offering a wide detection range of up to 80 m in both directions. It detects pedestrians, cyclists, and vehicles early, enabling predictive, demand-based lighting control. If one detection side is deactivated, the sensor can be configured for volume-based lighting.

Lix.Pure SLC with or without Cellular

A compact radar sensor for motion detection in outdoor spaces such as pathways, parking lots, and roads. It supports dynamic dimming and demand-based lighting. The detection angle can be customized to suit specific site requirements.

NEMA Controller

SLC-N203 with or without Cellular

The SLC-N203 is a smart and flexible NEMA-based controller designed for direct installation on luminaires. It allows NEMA luminaires to be integrated into the esave lighting management system and is optionally available with cellular connectivity. Installation is simple and plug-and-play, while the built-in 2.4 GHz mesh network ensures full compatibility with all existing esave controllers.

SLC-N200

Designed for easy integration of NEMA luminaires into the esave lighting management system. It communicates via the built-in 2.4 GHz mesh network and does not include cellular connectivity. Installation is simple and plug-and-play using the NEMA socket.

Switching Devices

SLC-RC Switch 203-C (Cellular)

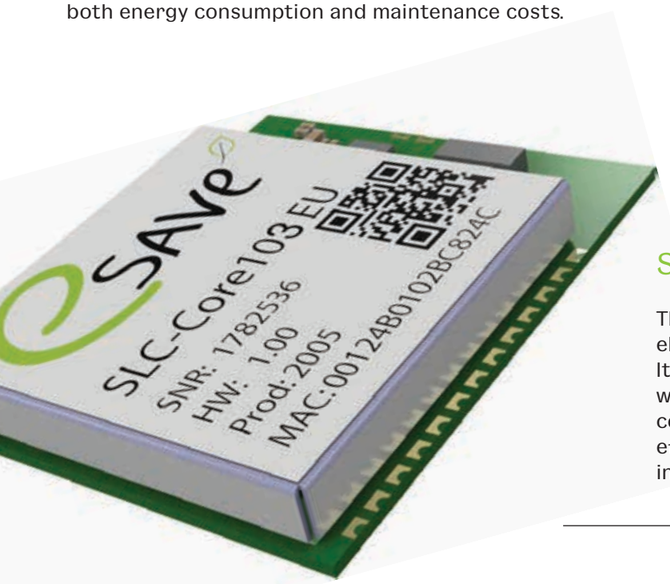
The SLC-RC Switch enables simultaneous on/off control of multiple lights, serving as a replacement for traditional ring controls. Through its integrated cellular connection, it can synchronize current parameters such as ambient brightness via the esave SL-Control platform. The switch manages its three built-in relays as needed and allows remote configuration and control through the cloud. Installation is simple, with the SLC-RC Switch mounted on a DIN rail to replace a ring control within a control cabinet.

SLC-Switch One

A compact controller designed for retrofit applications, allowing existing luminaires to be easily integrated into the esave lighting management system. It enables on/off control of a single luminaire. The built-in smart meter tracks current and energy consumption, providing this data on the web platform for monitoring and analysis.

Integrated Controller

esave street lighting controllers are compatible with any light source and standard driver, helping to minimize both energy consumption and maintenance costs.



SLC-CORE 103

The SLC-Core can be integrated into customer-specific electronics, allowing individual control of luminaires. It unlocks new possibilities for your hardware, and with its built-in mesh network, a variety of lighting control functions can be implemented. The SLC-Core effectively transforms your luminaire or sensor into an intelligent device.

SLC-AC and DC

The SLC-AC and SLC-DC controllers are compact units designed for installation in any LED luminaire. They are compatible with all common electronic drivers (electronic ballasts) and can be easily integrated with a variety of external devices and sensors, making them an ideal foundation for a wide range of smart city applications.

Motion Sensors

Light when needed, as much as needed

Smart street lighting automatically adjusts luminaire brightness according to real-time requirements. Various sensors are used depending on the location, helping to save energy and reduce unwanted light emissions.

PIR-sensor

A PIR motion sensor operates using passive infrared technology. It detects objects when their temperature differs from the surrounding environment by at least 4 °C, triggering a response.

PIR ZHAGA-Sensor

The PIR-Zhaga motion sensor is used in conjunction with an SLC-Hub, enabling connection to the SL-Control web platform for remote configuration and control. Since the PIR-Zhaga sensor is not D4i compatible, pin 4 on the Zhaga socket must be interconnected.

LightRadar-Sensor

The LightRadar sensor uses an object-tracking system based on radar technology to detect movement. It can also differentiate between pedestrians, bicycles, motorcycles, cars, and trucks.

esave
Locations

esave committed to protecting our environment

Minimized light pollution
Preservation of biodiversity
Environmentally sustainable