



Intelligent Light Control System

Transforming Human Lives through **Smart Lighting**



LIGHTING. FOR PEOPLE.

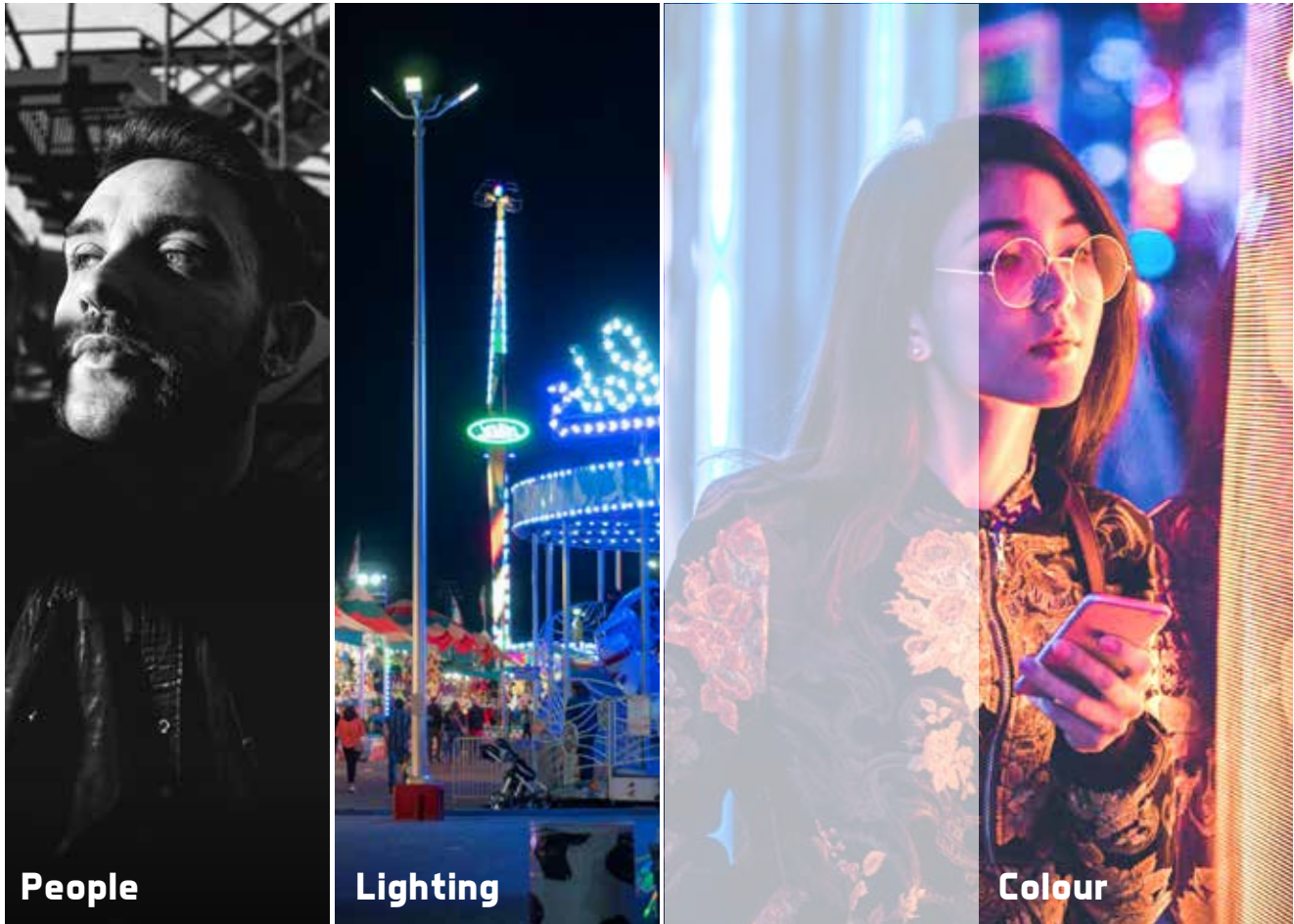


Human Centric Lighting

Human centric lighting (HCL) focuses on people and their benefits. It enhances and balances visuals, regulates mood, improves movement and individual performance in an environment. Human psychology and physiology are influenced by non-visual effects triggered by light exposure. It has a profound effect on how our body experiences and adapts to natural environments.

HCL caters to the essential requirements of human comfort, health and happiness. The appropriate level of illumination serves as a driving force for meeting individual demands and successfully completing tasks. These fundamental needs are deeply ingrained in human biology, mirroring the stability and necessities found in nature.





Impacts of Light and Colour on Emotion and Human Behaviour

Adequate illumination brings favourable outcomes for both mental and physiological well-being. It heightens people's attentiveness and mindfulness when crossing paths. Additionally, it serves as a catalyst for improving individual mood and vitality. It promotes coordination and enhances the overall well-being of individuals with physical challenges, senior citizens and children in public spaces.

The harmonious and aesthetically pleasing effects produced by the lighting infrastructure in the urban landscape possess a distinct allure, captivating the attention of both shoppers and retailers alike. This episode leads to the creation of new revenue sources.

LIGHTING TECHNOLOGY HAS EVOLVE



SMART CITY VISION

The vision of a smart city is centered on harnessing technology, data and innovation to enhance urban operations, address the complexity and challenges of city life and promoting sustainable development. Within the context of a smart city, various interconnected systems and technologies are integrated to optimize urban infrastructure, services and resources.

These cities seamlessly integrate an array of cutting-edge technologies, including the Internet of Things (IoT), motion sensors, data analytics and real-time monitoring. Through the collection and processing of data, these technologies synergize to markedly improve operational efficiency and effectiveness. The goal is to create a more efficient, responsive and livable urban environment.



iLCS Service & System Benefits



**Infrastructure
Connectivity**



**Smart
Sustainable City**



**Improved City
Services**



**Economic
Growth**



Efficient Mobility



Energy Savings



Public Security



Quality of Life

CHANGE FOR BETTER TOMORROW

To enhance city infrastructure

ENLIVEN THE
CITY WITH

iLCS[®]

Intelligent Light Control System



ADDING TOUCH
TO HUMAN
EXPERIENCE

VIBRANT COLOURFUL CITY



SURVEILLANCE DEMAND

WHY CHOOSE iLCS?

1. SMART FLEXIBLE



iLCS provides municipalities with the flexibility to manage data, obtain valuable insights and remotely control luminaires. City operators can manage traffic flow and optimize maintenance schedules to ensure that lights are only illuminated when required, with dimmable controls further reducing energy consumption.

iLCS streamlines the process of automating your lighting, providing a user-friendly approach that offers convenience and flexibility from any location and at any time.



Real-time monitoring



Notification & alerts



Remote diagnostics



Customize setting for luminaires



Advanced analytics



iLCS Cloud

Web-based remote control management dashboard

2. iLCS RELIABILITY AND ROBUSTNESS



• Cloud Vision

Friendly web-based interface to monitor and configure deployed applications.



• Data Control Unit (DCU)

The DCU monitors, controls and manages all connected LCUs, and acts as the gateway for the connected LCUs to the IT world.

LAN Connection
to backbone

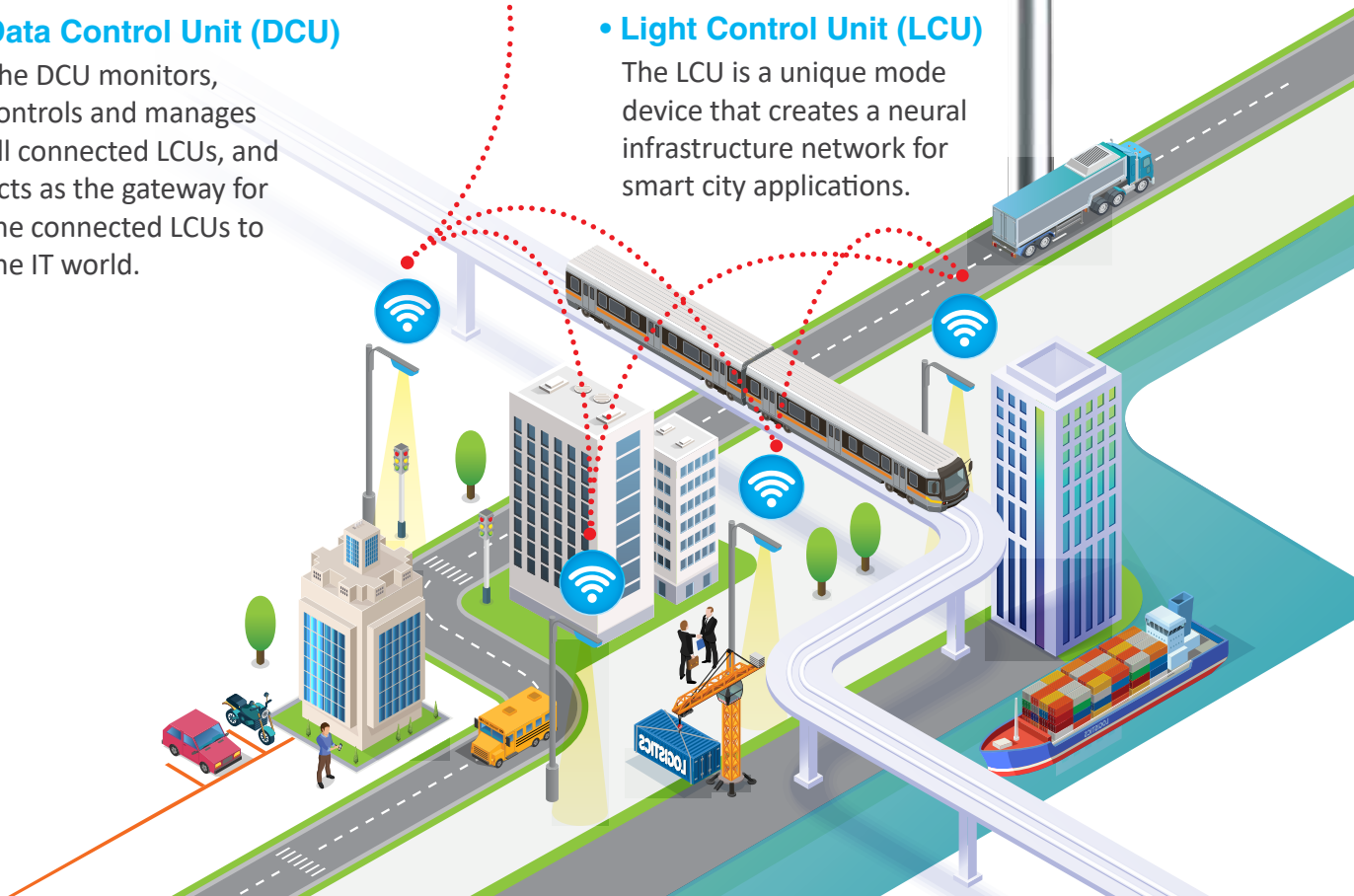
GPRS, WLAN,
Ethernet, Fibre

Light Control Unit (LCU) - Each node of the network is embedded with a GPS receiver and an astronomic clock. This enables the node to continuously function independently based on the last profile settings when it is completely isolated (standalone) or if the network is under maintenance. The semi-transparent nature of the enclosure allows an embedded photocell to sense daylight intensity to autonomously turn on the luminaire if there are unpredictable weather patterns during the daytime.



• Light Control Unit (LCU)

The LCU is a unique mode device that creates a neural infrastructure network for smart city applications.



3. APPLICATION MODULES

The iLCS platform is a distributed architecture composed of various modules designed to establish network coverage for managing solutions and real-time data display. Through numerous technology partnerships, the platform serves as a hub for collecting and displaying data, optimizing the management of information from all major urban communication sites.

- **Smart Lighting**

Lighting control technology involves traffic-adaptive dimming, which adjusts the brightness of streetlights based on real-time traffic conditions.

- **Security & Surveillance**

CCTV AI Edge Analytics utilizes artificial intelligence (AI) algorithms to enable advanced video analysis capabilities such as object recognition, face detection and behaviour analysis.

- **Smart Parking**

A wireless floor sensor system that monitors the availability of parking spaces within the city.

- **Weather Monitoring**

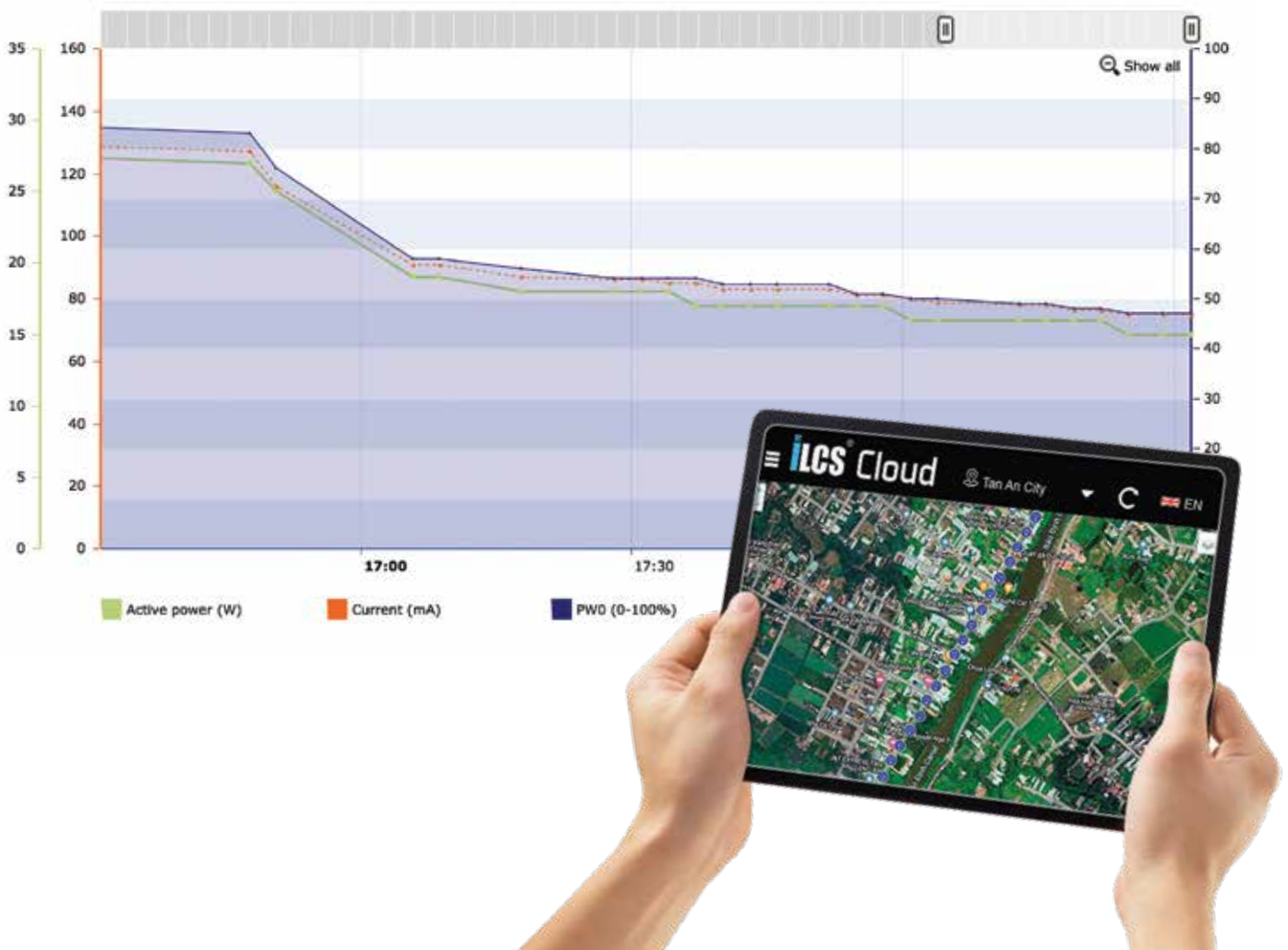
Air quality stations are used to monitor CO₂ emissions from industrial areas, vehicles and toxic gases generated by human activities.

- **City Infrastructure**

Intelligent highways equipped with warning messages and detours based on climate conditions and unexpected events such as accidents and traffic jams.

- **Traffic Flow Management**

Vehicle detection and counting using CCTV AI Edge Analytics to monitor traffic conditions.



4. PRODUCT SPECIFICATION

1.



DATA CONTROL UNIT (DCU)

The Data Control Unit (DCU) offers a robust construction with a sleek design displaying LED status indicator and external power button.

2.



LCU WiSN (NEMA)

It is designed as a simple plug and play installation into the standard NEMA socket. In addition with GPS, astronomic clock and photocell embedded. It is able to locate and operate based on time zone and weather conditions.

3.



LCU WiC-RMA

It is designed to compactly fit into bay light fittings. In addition, it is also flexible to be installed with other indoor fittings to provide the basic needs of the iLCS.

4.



LCU WiSZ (ZHAGA)

It is designed as a simple plug and play installation into the standard ZHAGA socket. In addition with GPS, astronomic clock and photocell embedded. It is able to locate and operate based on time zone and weather conditions.

PRODUCT SPECIFICATION

5.

ULTRASONIC DISTANCE LEVEL SENSOR

The Ultrasonic Distance Level Sensor is designed to detect the distance or level of objects in harsh environments and it transmits data using LoRaWAN[®] technology.

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6.

TRIMAX AI EDGE ANALYTICS

The iLCS Trimax AI Edge Analytics is a highly versatile modular smart lighting platform, which combines video surveillance with edge computing capabilities.

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7.

REMOTE WEATHER STATION

With the iLCS compact weather station, you can remotely access the weather conditions from multiple stations.

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8.

SMART ENERGY METER

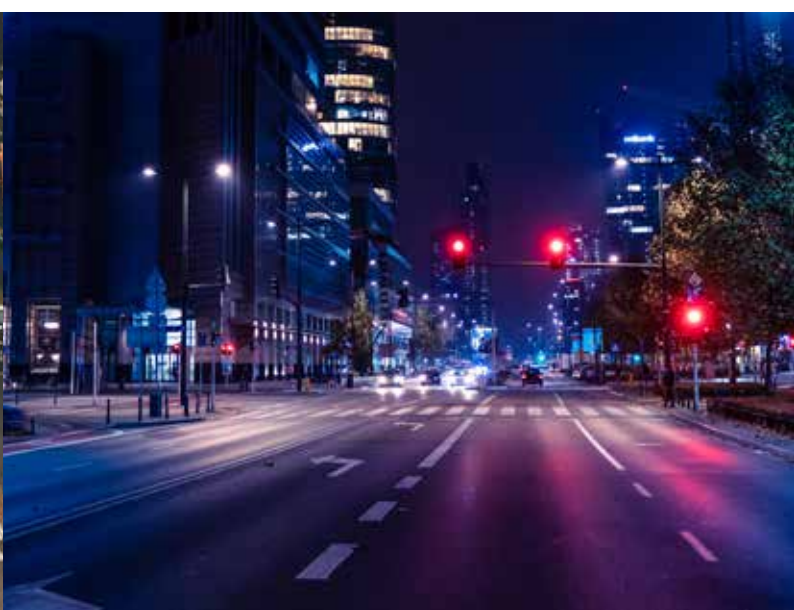
The Smart Energy Meter allows users to remotely measure energy consumption.

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9.

SENSOR BOX

The iLCS sensor remote controller allows users to remotely access any analog or digital sensor.



YOUR **ULTIMATE** CHOICE FOR **SMART** CITY.

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