



Smart  
Efficiency

# SMART EFFICIENCY

The history of the company has always borne a close relationship to public lighting and has provided SICE with the knowledge and experience that allows it to provide all the engineering, consultancy, auditing, installation supply, monitoring, maintenance and integration services for Smart Cities, and monitoring the measurements and verification needed to offer clients the best technological option possible.

Public lighting implies a high electric consumption, since this system operates for long periods of time. In energetic terms, it implies between 40% and 60% of the local electricity bill. Therefore, any improvement, in the components or the management of the system could imply great savings, both in terms of energy and money.

Likewise, monitoring electric panels in municipal buildings, allows to gain knowledge on the consumption of different areas, in order to define policies for smart consumption that will ultimately impact savings in energy and money.

In regard to the photovoltaic energy systems, it is a revolution since it makes possible to obtain 100% of the energy consumed from renewable sources. To achieve the best benefits, it is essential to control its operation to avoid losing energy, something that is efficiently achieved thanks to SICE's smart solution.

Lastly, the growing logical concern for air quality, especially in cities, has fostered a peak in sales of electric or hybrid vehicles, which implies the deployment of a network of recharging points throughout Spain.

All of these solutions are integrated in **KALIOPE**, the integrated management platform for all the smart systems of a territory designed by SICE, based on Quality of Service (QoS) indicators that are easily measured and support the decision-making process, which is capable of establishing active communication channels with the citizen and enables the improvement of the coordination and efficiency of the services rendered.

**KALIOPE** thus becomes the core and fundamental piece that integrates all the services and systems of each project.

## SMART CONCEPT BY SICE

SICE's new SMART CONCEPT seeks to break down the barriers of smart cities and commit to a broader concept, providing this same intelligence to a group of municipalities, a region, a community or even, in the future, a country. In short, regions or territories sharing common characteristics, their own identity, or certain elements or ties that bring them together somehow. These ties could be tourism, a shared natural environment, the same social strategy or structure, etc.

Many of the proposals included in SICE's **Smart Concept** have been implemented and have been providing services to citizens for a long time. The current goal is to provide these services with more intelligence and, above all, interconnect them with the goal of achieving sustainable development.

SICE has been developing an applying these technologies for years, thus becoming a benchmark pioneering company in the Smart concept.

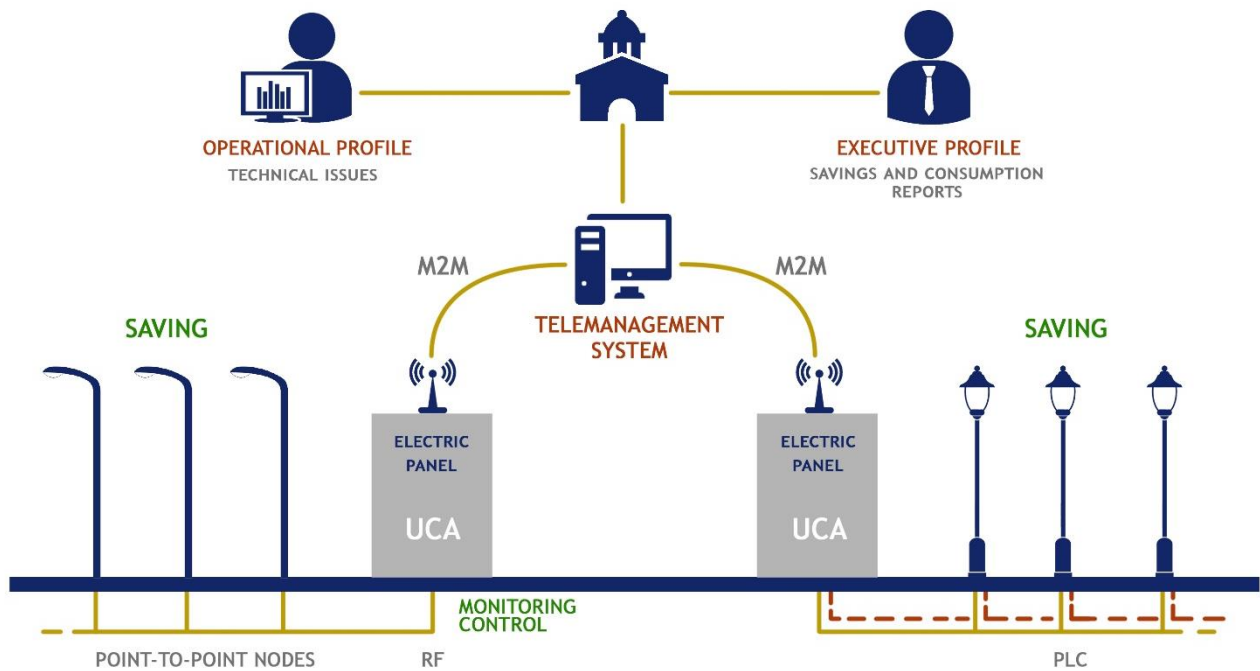
## ENERGY AND LIGHTING EFFICIENCY

SICE accumulates over 15 years of experience providing energy services, developing a large range of tasks, such as assessment for hiring utilities (electricity, gas, etc.), guaranteeing always the lowest costs and their correct contracting or monitoring of the control of the consumption of installations by drafting reports.

SICE has a proprietary remote management system that can acquire the necessary information to develop control the installation, particularly, in everything related to energy consumption.

SICE's Remote Management System allows:

- To act and verify the status of Control Centers in real time.
- Improve energetic control by measuring electricity consumptions and comparing the invoice with the supplier company.
- Analyze the data of the installation.
- Reduce response time in case of breakdowns.
- Daily, weekly and monthly reports.
- Control switching on and off.
- Manage the maintenance and monitor incidents.
- Integration of different manufacturers.



## ENERGY EFFICIENCY AND BUILDINGS

The Energy Efficiency Monitoring System monitors and controls the energy consumption of municipal buildings.

The system takes advantage of natural light through the installation and use of control and regulation systems in areas where the amount of natural light allows it, resulting in lower consumption levels and lower CO<sub>2</sub> emissions.

## PHOTOVOLTAIC SYSTEMS

A smart solution consisting of solar systems, a method of photovoltaic self-consumption for both single-family homes and large buildings, obtaining 100% renewable energy.

Module-level monitoring allows you to monitor the operation so that incidents can be identified and resolved quickly, minimizing power losses and enabling efficient use of the resource.

## ELECTRIC VEHICLES CHARGING

Integral solution for electric charging of vehicles consisting of recharging equipment (continuous, alternating and with different power outputs), the management and control system, and auxiliary elements such as video surveillance, lighting and telecommunications network.

The management platform allows, among other functionalities, the operation and monitoring of the infrastructure, management of the pricing module, billing and payments, and use of user applications such as WEB and App.

