



**SICE**

## COMPANY PROFILE

2021

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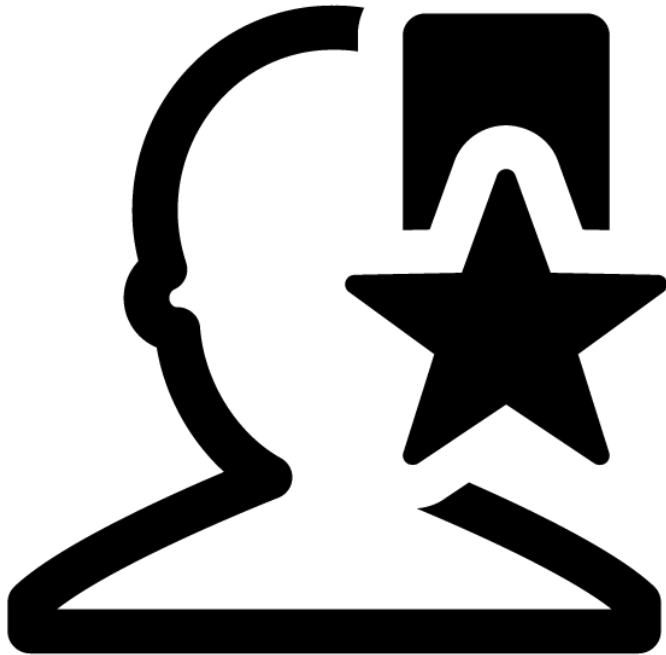
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# I. ABOUT SICE

Sociedad Ibérica de Construcciones Eléctricas, S.A. (SICE) is a multinational technology integration company, which mainly focuses on providing **added value services** through the integration of in-house and third party technologies and systems. The company always aims at offering **the best tailored solution to every customer** and at supplying:



Technological capacity

Experience

Customized solutions

Systems integration

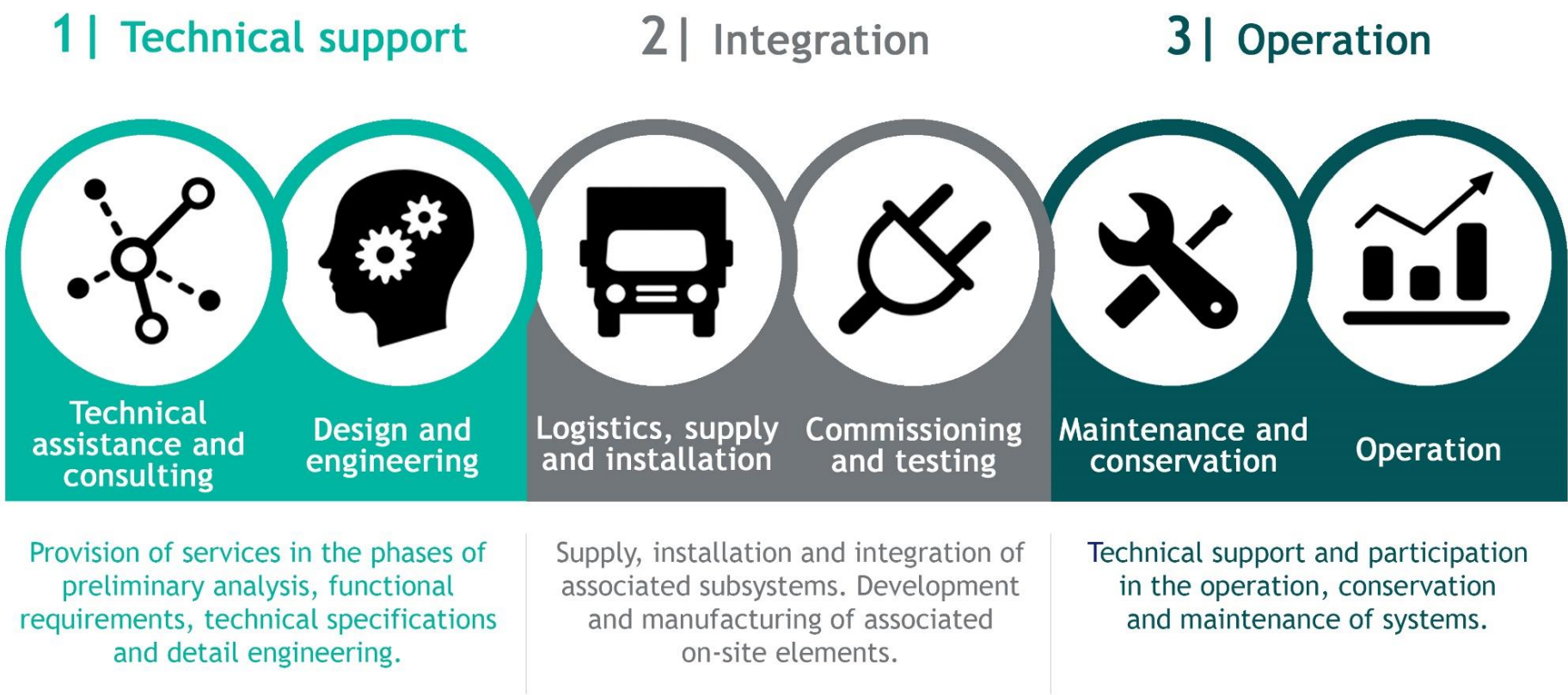
Open Systems

**SICE Tecnología y Sistemas** carries out its activities within the ACS Group's industrial services area, one of the largest references in the world regarding the applied industrial engineering sector.

The diversity and expertise of 5 companies guarantees the solidity of the SICE TyS group. Its wide-ranging experience in product and services development at multinational level strengthens the group's position as a **world leader** in the industrial engineering sector.



SICE works on all project phases, from consultancy to operation.



SICE has survived until the present day with a consolidated group of solutions and systems and a wide range of services thanks to the professionalism of its human resources.

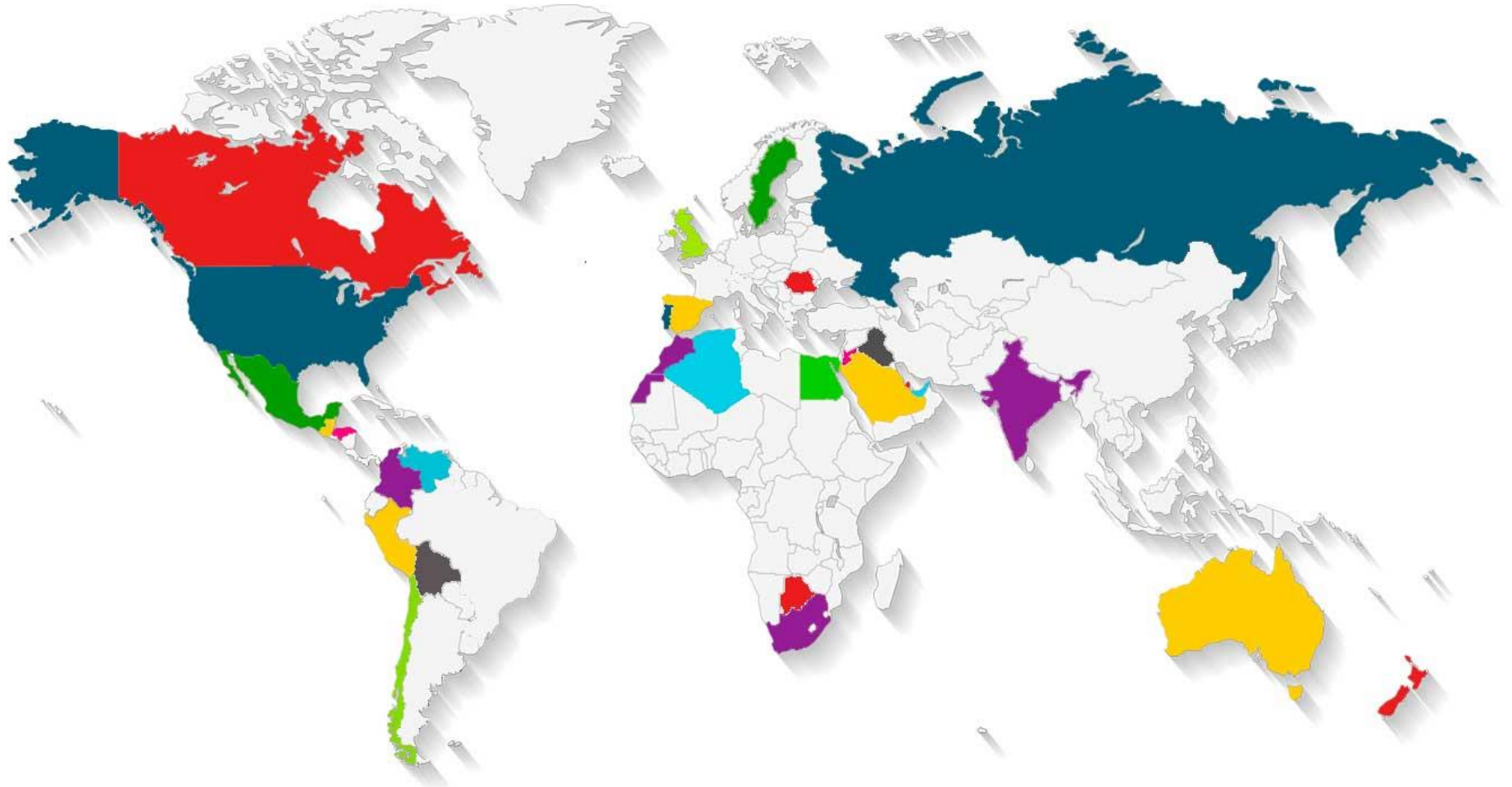


During the course of its long existence **SICE** has successfully delivered and maintained thousands of projects for public and private customers in a wide range of sectors and business areas





SICE Tecnología y Sistemas Group is present in over **30** countries across 5 continents.

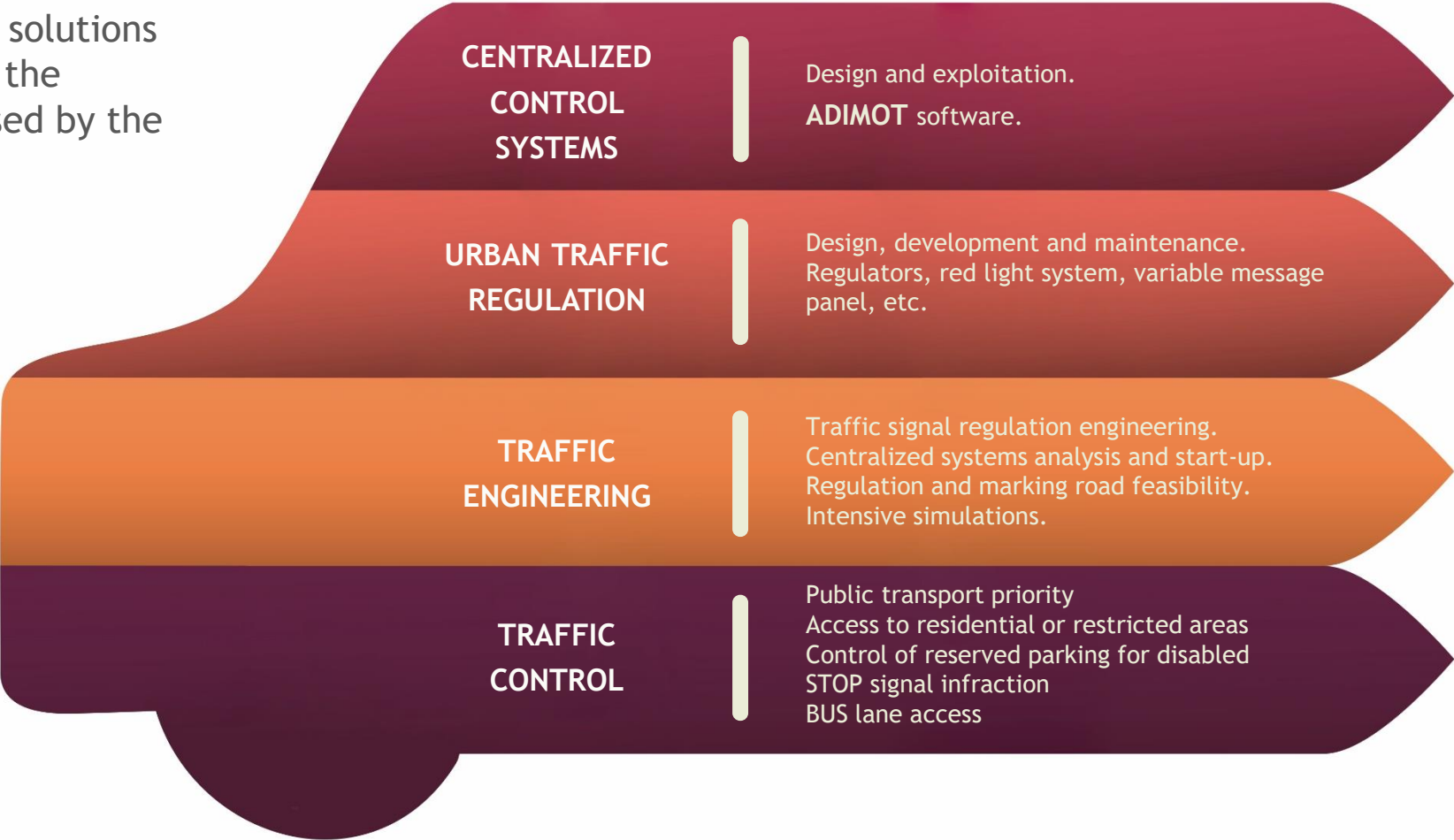


## II. INTELLIGENT TRAFFIC SYSTEMS - URBAN TRAFFIC



# Urban Traffic

SICE offers support and solutions to customers regarding the problematic issues caused by the urban traffic.



## RBG PUBLIC TRANSPORT PRIORITY

Integral solution allowing **smart wireless communications** between **priority vehicles** and traffic signal regulation components aimed at achieving the **optimization of these vehicles**.

## MFU TRAFFIC SIGNAL CONTROLLERS

The **MFU 3000** traffic signal regulator is a **modular, compact, flexible, powerful, secure** and **reliable** tool that controls traffic lights located at a traffic junction or intersection.

## SMART MOBILITY MANAGEMENT- ADIMOT

**ADIMOT** is a **Centralized Traffic Management System** within the urban area based on a multi-algorithm that aims at providing sustainable and comprehensive solutions to the overall concept **Smart Mobility Management**

## REDUCED MOBILITY

The **SAFECROSS** platform is a smart pedestrian crossing that applies **artificial vision equipment** to detect if the crossing is occupied and to partially extend the assigned green light time to ensure that pedestrians can cross safely.

## ENFORCEMENT

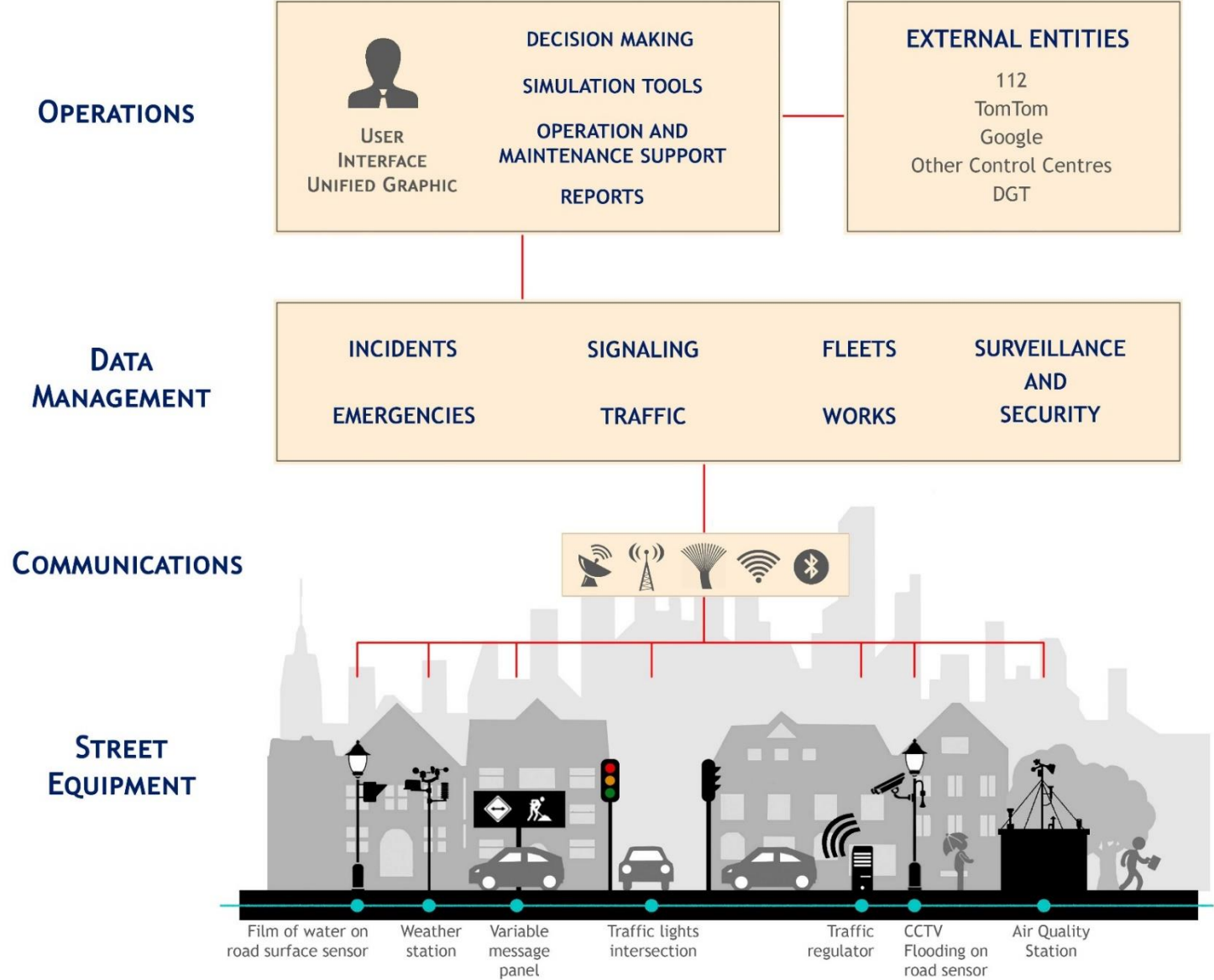
**Auditing** systems that help to improve road safety in cities, (**red light photo equipment**, prohibited turns verification, license plate management).

## PARKINGS

SICE and SUMIPAR develop **“smart parking”** projects that are able to apply the latest technologies to the transport infrastructures of the current Smart Cities.



# INTELLIGENT TRAFFIC SYSTEMS - URBAN TRAFFIC



### III. INTELLIGENT TRAFFIC SYSTEMS - INTERURBAN TRAFFIC



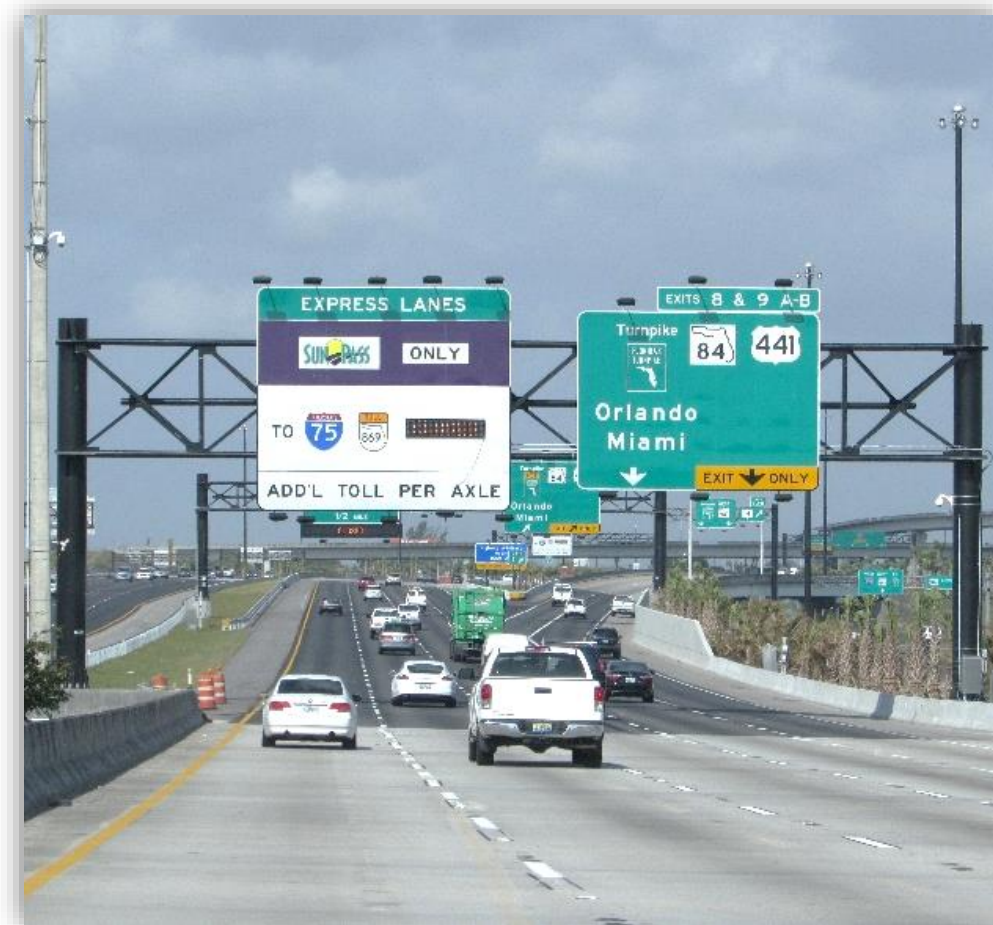
## Interurban Traffic

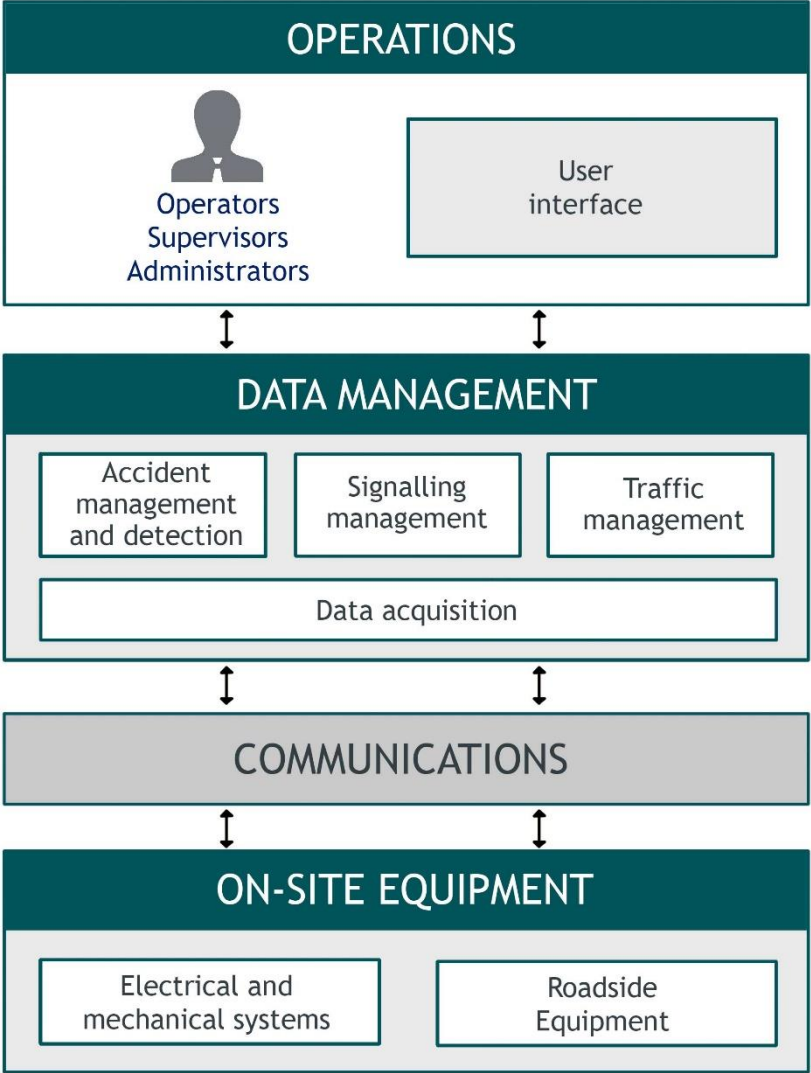
Intelligent transport systems (ITS) can be described as a collection of advanced applications, **aiming at improving mobility, security, maintenance and productivity of transport** within the computer technology, electronics and telecommunications field.

SICE is a company specializing in the integration of the different subsystems that make up an ITS, including **management, maintenance and control** of interurban traffic on the same platform, as well as existing environmental conditions.



SICE has completed **more than 30 major** interurban traffic management projects, with **more than 2,500 kilometers** of monitored and controlled road and more than 20 years of experience in this sector.





## Interurban Traffic management capabilities



**Traffic engineering**, responsible for the development and implementation of traffic engineering modules on in-house and third party systems.



**Traffic infraction systems** (red light detection, license plate reading, section average speed, etc.)



CCTV video monitoring and video images handling (**automatic accident detection**, etc.).



BUS-VAO systems and reversible lanes.



Automatic algorithms and systems for **real time signaling** of the current traffic situation.



**Information** systems (variable message signs, online, social networks, radio broadcast...).



Remote Stations (ERU), Weighing in Motion (WIM) Stations, Data Terminal Equipment (DTE), Weather Stations and SOS Systems.



# Comprehensive tunnel management system

SICE develops and implements **integral solutions for tunnel management and control**, working on both the security and control and electromechanical aspects, the company manages **maintenance and operation**. The system's objectives are:

Improved user **safety** in tunnels.

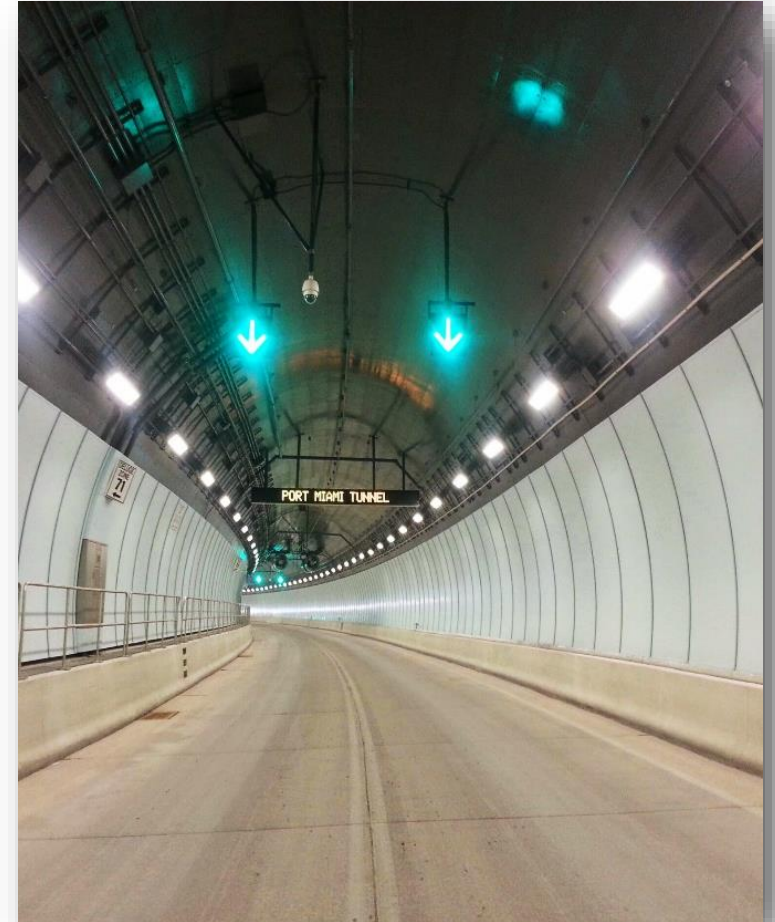
**Reduction** in operating and maintenance **costs**.

**Intelligent accident management** and equipment maintenance.

Improved system and infrastructure **reliability**.

**E**fficient control of integrated system equipment.

SICE offers a **comprehensive tunnel management system** based on centralized monitoring and distributed control of installed systems and equipment.



## Toll systems

SICE **develops, manufactures, installs** and integrates all the subsystems associated with a toll system. In addition, it maintains and provides technical support and participates in system **operations**.

Among the solutions offered by SICE to the usual requirements in this area are:

**Traditional toll**

**Multi-Lane Free-Flow toll**

**Shadow toll**

**BackOffice System**

**Mixed Toll**



## IV. INTELLIGENT TRANSPORT SYSTEMS





## Transport

SICE's activities are focused on meeting the needs of users, operators and transport operation concessionaires within the transport sector.

As a systems integration and supply company it offers unique **technological solutions tailored** to these types of installations, conceiving a **centralized management of all services that complement any form of public or private transport** and integrating different solutions and systems.





## Buses, metros and railways

SICE provides **security and communications solutions** to Metro and Railway lines that integrate a set of **functionalities and systems** required in railway operations:

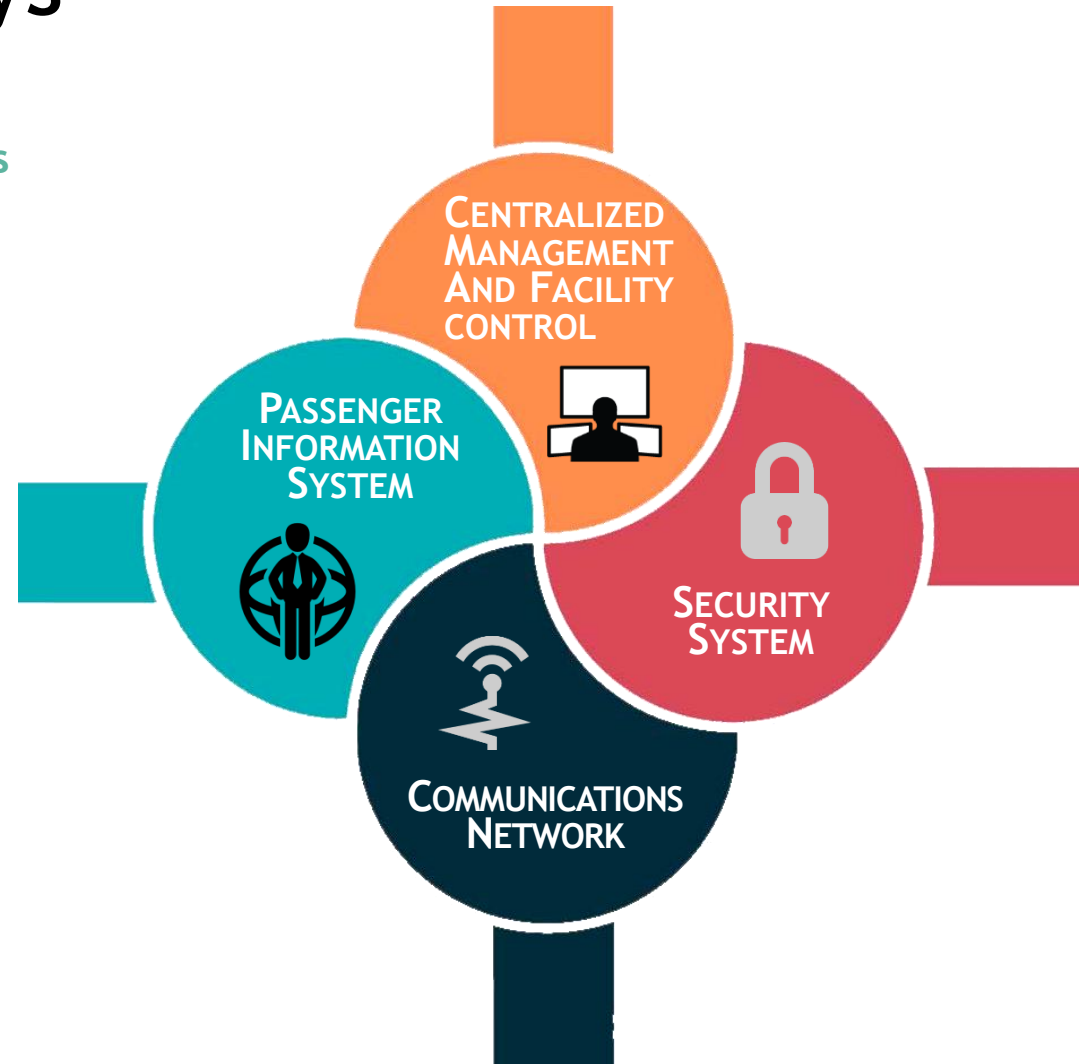
**Flexible, scalable and configurable** systems to fit every railway operator.

**Efficient, safe, and reliable** systems.

**Affordable** systems for the operator **and easy to understand** for users.

**Provision** of an environment-friendly and engaging journey.

**Extensions** to ease the **interconnection and interoperability** with adjacent intelligent transport systems.



## Ticketing

SICE designs and delivers fare collection solutions able to integrate **contactless validators and/or magnetic card readers** in a wide range of **turnstiles, totems, gates** and **corridors** for access control.

The integrated tariff management system is **flexible, scalable** and **configurable** to suit every city or region, allowing future extensions to ease the interconnection and interoperability with adjacent intelligent transport systems.



## Turnkey BRT solutions

The **BRT (Bus Rapid Transit)** transportation solution by SICE is able to provide an attractive infrastructure and efficient transport in order to boost the local economy and quality of life of the commuters.

For its start-up, it is required to: identify the needs, calculate the transport demand, design the best solution to provide enough **transport capacity** and to define the **operational and exploitation models**.



## Railway signaling

Through the company (belonging to the SICE TyS Group), Enclavamientos y Señalización Ferroviaria ENYSE, SICE offers integral railway line management solutions designed and certified under the maximum safety SIL-4 level.

These systems are manufactured and configured in ENYSE facilities. They have been tested through operationalization processes demonstrating its robustness, availability and easy maintenance.

**Centralized Traffic Control (CTC)**

**Electronic Interlocking (EiS23)**

**Level crossings protective systems**





## V. ENVIRONMENT AND ENERGY EFFICIENCY



# Environment and energy efficiency

Energy and environment are an indispensable part of sustainable development representing a fundamental part of SICE's activities.

The company provides solutions to all customer requirements and offers **customized technological solutions** applied to fields as diverse as **hydrology, meteorology, water and air quality and hydraulic installations**. The company covers the entire water cycle, from its natural source to distribution, purification and return to the environment.

SICE commits to renewable energies through solutions such as isolated power plants, photovoltaic systems, etc.

SICE has evolved its traditional public lighting activity since 1921 and is currently incorporated as **an Energy Services Company**.



# Hydrology and water resources

The Automatic Water Information and Water Quality Systems allow **real-time surveillance** of a wide data range involving water status and quality management and analysis.

These systems are composed of on-site sensors, remote data collection stations, communication systems, databases, exploitation models, etc. which are installed along the river course, on river sections considered as critical.

The collected data allows to examine and analyze the parameters related to water quality, behavior, flood warnings and dam security, etc.

**AHIS** - AUTOMATIC HYDROLOGICAL INFORMATION SYSTEM

**AWQIS** - AUTOMATIC WATER QUALITY INFORMATION SYSTEM

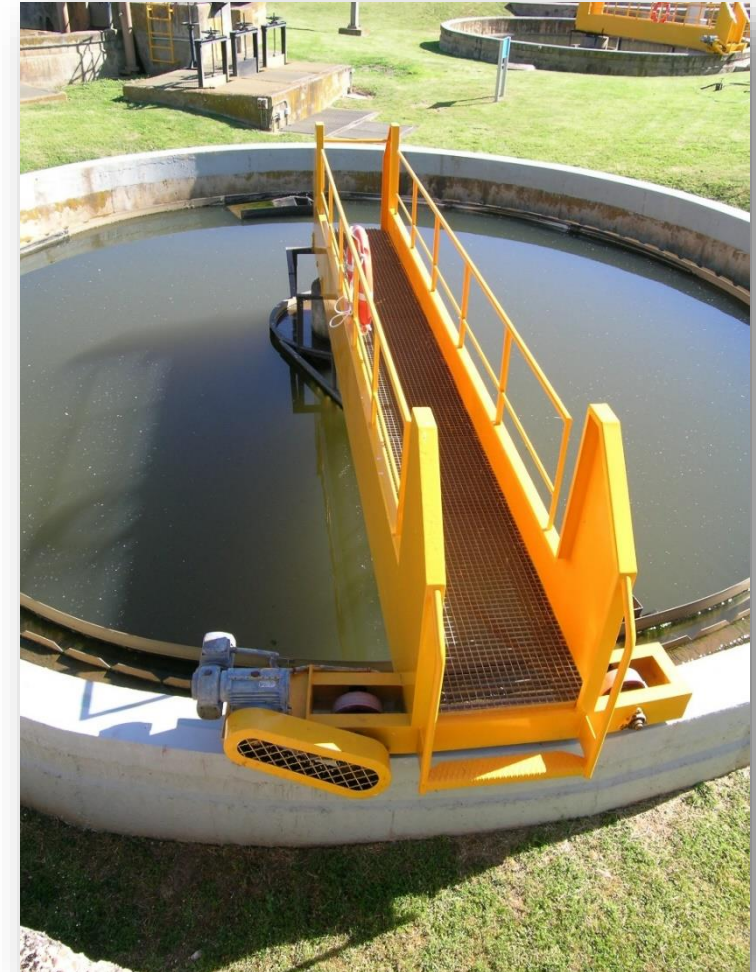




# Hydraulic infrastructure

SICE focuses its activity on everything from major infrastructure, such as dams and distribution and irrigation channels, to urban ornamental fountains, as well as supply systems (drinking water treatment plants, pipes), sewerage (waste water treatment plants, collectors, drains, effluent reuse) and desalination.

SICE develops engineering, construction, conservation, operation and maintenance services for all these systems, as well as other highly qualified services resulting from **extensive knowledge of these systems** and long-lasting presence in these markets. SICE's activity is based on providing a **full service, including water collection, treatment and purification, before finally returning it to its natural environment.**





# ENVIRONMENT AND ENERGY EFFICIENCY

## DAMS

Maintenance, conservation, auscultation and implementation of dam emergency plans.

## SUPPLY

Conservation, operation and maintenance services for both active and disused supply networks.

## SEWAGE AND SEWERAGE

SICE works in the following two areas of activity:

- exploitation, operation and maintenance
- infrastructure execution

## CANALS AND IRRIGATIONS

A wide range of technological services in this area, from telecommunication, remote control and management projects, to the installation of hydraulic components.

## ORNAMENTAL FOUNTAINS

This business unit is a result of synergies with other services provided by SICE, combining tasks such as water treatment, energy optimization and services management.

## AUTOMATION AND CONTROL

EPC (engineering, procurement and construction) projects for remote control and automation of all processes in order to transport and treat drinking, irrigation and waste water.



## Air quality

**SICE provides modern monitoring systems** that guarantee citizens' quality of life and ecosystems allowing to take measures when necessary.

These systems make possible to know **in real time the air quality** thanks to their measures of:



**GASES  
CONCENTRATION**



**PARTICLES**



**NOISE  
LEVELS**



**METEOROLOGICAL  
DATA**



## Renewable energies

SICE provides **from complete EPC** (engineering, procurement and construction) for photovoltaic plants **to any component** necessary for the construction of photovoltaic facilities from the ground up, either as a fixed installation or with single or twin axis solar trackers.

The company provides **services tailored to every customer's needs**, on time and to the required quality, ensuring:

- Quality assurance.

- Search of the last watt available.

- Price and quality balance.

- Safe and protected designs.

- Axis solar trackers with **easy and quick acceptance** by financial institutions.





## Lighting

SICE installs and maintains different lighting centralization systems through on-site integration of different **information storage and sending devices** that allow to analyze the behavior of the installation and make possible to control it.

- urban public lighting
- ornamental public lighting
- lighting of roads and tunnels
- lighting of parks and gardens



SICE operates one of the largest public lighting monitoring installations, with over 2,600 panels and 250,000 light points in a single city. Similarly, SICE is a pioneer in the management and control of point-to-point lighting in tunnels and has equipped more than 45,000 fluorescent light points with DALI regulation in the longest urban tunnels in the world.





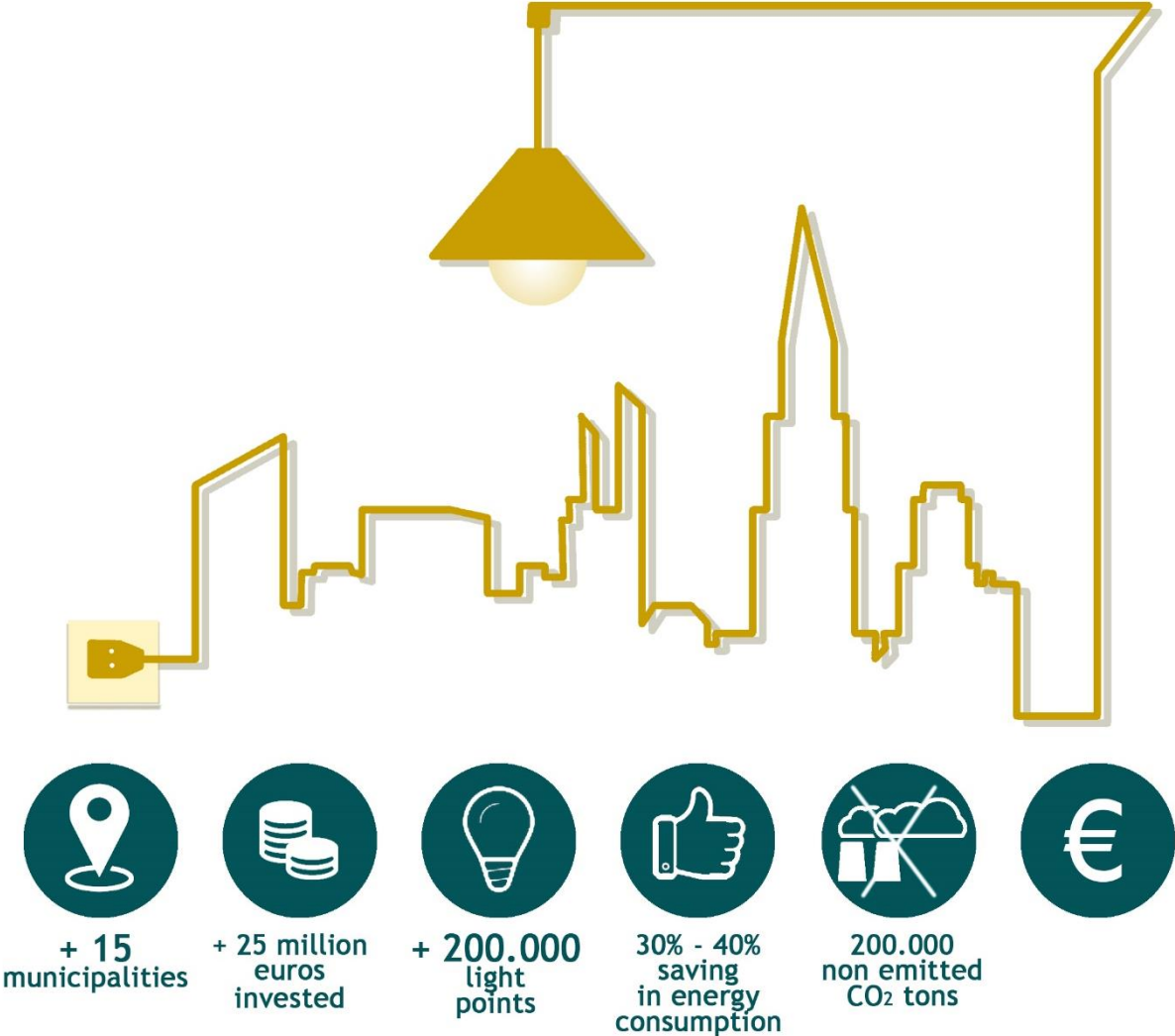
# Energy efficiency

As Public Lighting Energy Services Company, SICE has the knowledge and experience it needs to **offer customers the best technological options.**



**1st** ESCO model contract in Spain (Coín)

**The major** public lighting centralized system (Madrid)



## VI. SMART CITY



# SMART CONCEPT

**Integral management**  
platform for all Smart systems  
of the city.

Based on easily measurable Key Performance Indicator (KPI) and supporting decision making processes, the platform provides active communication channels with citizens and improves coordination and efficiency in service delivery.



## Smart Mobility



**Optimal and efficient**  
management of city mobility.

It allows to monitor and collect relevant data for real-time management of **traffic** and **environmental conditions** impacting on it, increasing efficiency in city center and peripheries.

Personalized technological  
solutions to monitor  
environmental impact.

It allows to monitor and collect relevant data for the real-time management and control of the city's weather parameters.

## Smart Green



## Smart Water



Assessment and control of the  
condition of water **treatment** and  
**distribution** networks.

It allows to monitor and collect relevant data for the real-time management and control in all areas of the Integral Water Cycle.

**Energy efficiency**  
Control of public management  
systems.

It allows to monitor and collect relevant data for the real-time management of power consumption data.

## Smart Efficiency



## Smart Citizen



Citizen information.

It enables participative processes of people in cities connecting data, citizens and knowledge.

City safety.

It allows to monitor and collect relevant data for the security management in cities and swift actions in emergency cases.

## Smart Safety





## VII. COMMUNICATION INFRASTRUCTURE



# Communications infrastructure

SICE installs and maintains different centralization lighting solutions through the **on-site integration** of information storage and sending devices which enable to control the installation and allow to analyze its behavior.

- Towers (lattice and tubular)
- Camouflaged systems
- Antennas (medium wave, FM, UHF, mobile telephone, special band)
- Emplacements for operators
- Outside plant (FTTH and FTTN networks)



## VIII. SECURITY SYSTEMS

# Security systems

Through the company (belonging to the SICE TyS group), **SICE Seguridad**, SICE offers technical security solutions designed under its **own methodology** for works and project execution ensuring:

High **integration** capacity.

**Approved** and certified solutions and products.

**Customized** security solutions.

Methodology for a professional project management

Commissioning, configuration and training only with **own specialized personnel**

Accreditations and type approvals to manage these facilities.

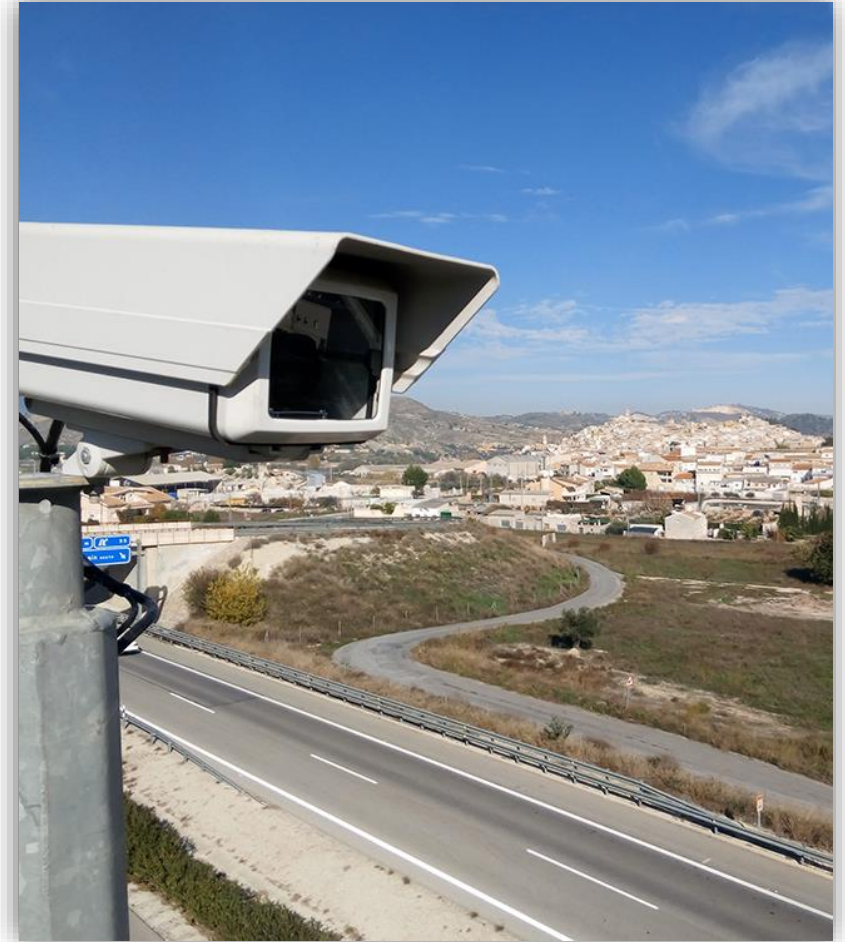




## Safe cities

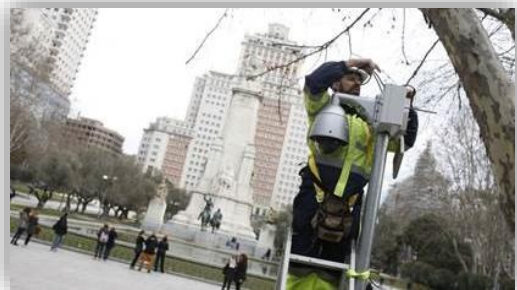
SICE specializes in the innovation, integration and quality of security services required to respond to all requirements included within the protected environment of a public, smart and safe city.

-  Security and monitoring of highway, residential and business/finance areas
-  Security of strategic and emergency zones
-  Security in critical infrastructures
-  Transport and infrastructure security
-  Control, monitoring and integration center
-  Renewable energies security
-  Communication systems and infrastructure for security systems



## INTEGRATED SECURITY SYSTEMS

projects involving technical solutions tailored to the customer's real security requirements are based on approved solutions and products and are developed by in-house specialized personnel.



## CONTROL CENTERS AND SECURITY AND EMERGENCY COORDINATION

"turnkey" solutions for customers, the former involving consultancy, design, construction, operation and maintenance of a range of control and alarm reception centers.



## SECURITY AUDIT AND CONSULTANCY

SICE provides solutions to every requirement through consultancy processes that analyze risks, threats and vulnerabilities that may exist for the purpose of performing troubleshooting and proposing an adequate treatment or solution.



## FIRE PROTECTION

SICE is a company certified in fire protection systems and counts on centralized fire management systems that monitors and controls the installations for the purpose of detecting and extinguishing fires.



## IX. PROCESS CONTROL



## Process control

SICE has experience in EPC (engineering, procurement and construction) projects for the **modernization of infrastructures, plants and processes within the hydrocarbon production chain**, including the various processes involved in refining and transportation.



Hydrocarbon flow metering



Fire and gas systems



Emergency shut down (ESD)



Optimization of processes



Terminals automation



SCADA and distributed control implementation







# THANK YOU

Do you have any questions?

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**SICE**

