



Trust Service Provider

digitalsign✓



2018

SMART CITY - INTELLIGENT OPERATION CENTER



## WHY OUR CITIES NEED TO BECOME SMART?

As the cities strive to be more sustainable and responsive to citizens needs, the development of information and communication technologies allows city's critical infrastructures as well as its services to be more efficient and interactive.

The Smart City technologies bring business and economic opportunities that improve the citizens quality of life, while making city operations more efficient reducing risks and costs. These technologies address some complex challenges brought by urban massification, solving real problems such as floods, traffic congestion or pollution therefore improving safety, sustainability and everyday life through a better supply demand management strategy definition.

## OBJECTIVES OF A SMART CITY

- Reduce public spending on the provision and management of public services
- Increase efficiency and quality of services
- Provide support in decision-making processes by facilitating the identification of the needs of the city and new approaches

Promote information in real time to enhance the awareness of citizens about the environment in which they live by providing information that flows in real time and, at the same time, improves the transparency of the administration

- Promote innovation by building an ideal platform for incubating new business and, in general, promoting social development

### KNOW YOUR CITY

Connecting your city to enable data collection it's the first step for a smart city,

### TURN BIG DATA INTO SMART DATA

Manage all your data sources properly, correlate and clearly define the objectives of your smart city

### CITY SECURE CENTRIC APPROACH

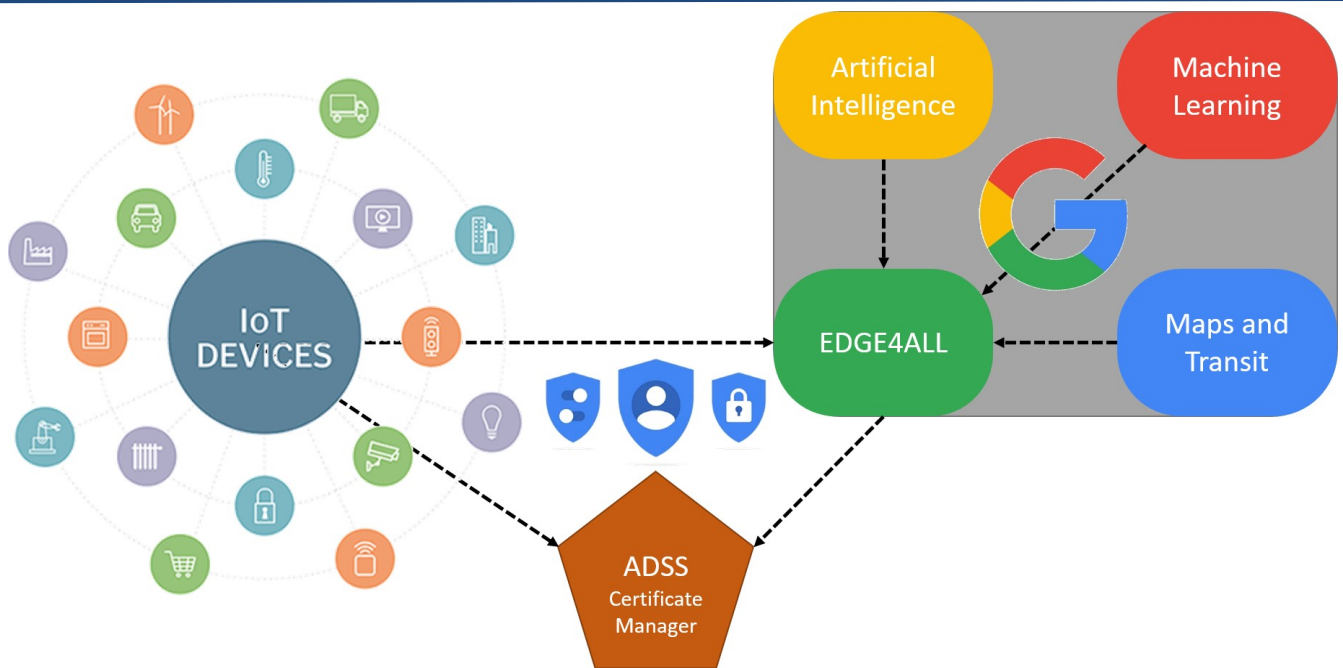
Develop a secure and connected approach by having all the information available in the same platform to avoid silos.

## DIGITALSIGN'S SOLUTION: EDGE4ALL—INTELLIGENT OPERATIONS CENTER

Digitalsign's solution **Edge4All** is an open platform that constitutes a truly integrated solution to meet the smart city requirements designed according with the best **cybersecurity standards**. This platform enables the creation of an **Intelligent Operation Center (IOC)** since it works as the brain of the city, connecting and displaying all the devices (IoT's) strategically spread around the city.

This scalable platform aggregates and monitors all the information collected, besides, it relies on Google's state-of-the art **Artificial Intelligence, Machine and Deep Learning technologies** to carry out cross analysis on the data collected, hence providing an holistic approach towards the Smart City strategy definition, enabling the secure deployment of prediction and simulation tools.

## SOLUTION ARCHITECTURE



### ⇒ DASHBOARD

The solution is based on a configurable and interactive dashboard to enhance the visualization and control by the end user and provide real-time accurate notifications according with the information collected by the IoT devices.

The notification system can be defined according with different useful parameters.

### ⇒ BIG DATA AGGREGATOR

Edge4all handles and processes large amounts of data from IoT devices. Besides, the platform is able to incorporate, through API integrations, pre-existing sensors or devices.

By adopting Google's AI, ML and DL tools the user can explore different correlative functions between different sets of information.

### ⇒ SECURITY BY DESIGN

Leveraging DigitalSign's expertise in cryptography and cybersecurity, we developed a new machine-to-machine communication protocol between the IoT devices and Edge4All,. By using the ADSS digital certificate manager, we enable a risk based approach to maximize the security of communications without losing performance.

## EDGE4ALL VALUE PROPOSITION

The sensors can be used for:

**TEMPERATURE; HUMIDITY; CARBON MONOXIDE; STREET LIGHTS; ULTRAVIOLET RADIATION; GARBAGE CONTAINERS CAPACITY; WATER LEVELS; WATER POLLUTION LEVELS; FLEET MANAGEMENT;**

- Real-time monitoring to identify city trends or problem enhancing and monitoring city resources.
- Predictive analysis's and simulation capacity to test different future scenarios, therefore facilitating and supporting decision making.
- Including citizens since they can interact with the system trough a mobile APP and report real-time incidents.
- Better services for the citizens and business by managing in real time resource's supply/ demand problems.
- Automate and reduce the work load of services by allowing an optimized and automated planning.





ORCHESTRATING A SMARTER FUTURE

**DIGITALSIGN**

Website: [www.digitalsign.pt](http://www.digitalsign.pt)

Email us at: [comercial@digitalsign.pt](mailto:comercial@digitalsign.pt)

Telephone: +351 253 560 650

Largo Pe. Bernardino Ribeiro Fernandes, 26  
4835-489 Nespereira - Guimarães