WISeSat

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# Smart Energy

*Make the best decisions and achieve greater efficiency and sustainability in energy supply with IoT communication*

IoT is an environment that enables the **connection of devices**, sensors, actuators and industrial equipment, generating a **communication** network to collect and use valuable information.

The basic premise of these environments is to **obtain data**, converted through analysis into **relevant information**, which allows detecting problems, even before they occur, and optimizing processes.

The creation of an IoT environment is one of the disciplines that are allowing the advance towards Industry 4.0, along with other technologies such as cloud computing, autonomous robotics, Big Data or Augmented Reality.

Due to its particular characteristics, the **energy industry** is a sector that can benefit enormously from **IoT applications**, since it is at a time of profound changes in the distribution and commercialization models and only through the IoT the sector will be able to face current challenges.

## ADVANTAGES OF IoT IN THE ENERGY INDUSTRY

### 1 Real time monitoring

With IoT, companies can access real-time data on energy generation, transport and consumption.

### 2 Problem detection

IoT allows the development of predictive maintenance strategies, detecting errors and breakdowns before they occur and applying the necessary measures to avoid them.

### 3 Data processing security

To avoid vulnerabilities, you must have secure IoT platforms that guarantee the treatment of confidential data.

### 4 Sustainability

Access to consumption data allows companies to increase efficiency and waste of resources, promoting sustainable practices.

## WHY OUR TECHNOLOGY?

WISeSat is a **picosatellite platform** that provides **dedicated and secure IoT communications** to companies and industries that need to monitor and know **the status of assets in remote locations, where there is no mobile coverage.**

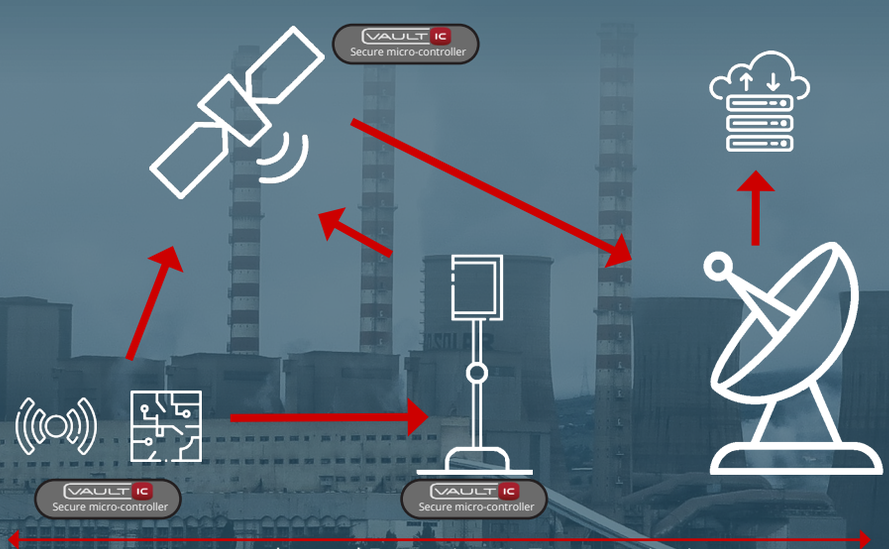
**Reduced size and mass:** The weight, less than 1kg, of our picosatellites, and the development in-house of our sensors, allow us to reduce development and launch costs.

**Standardized platforms:** We reduce integration and manufacturing times due to the homogeneous and standardized of our platforms.

**COTS Components:** COTS (Commercial Off-The-Shelf) components increase performance and allow us to continually innovate.

- Connect anywhere and everywhere on Earth.
- Cost competitive even compared to traditional ground-based solutions.
- FIPS 140-3 CMVP secure elements to secure devices, data & transmission.
- Backward compatibility for “brown-field” deployment on existing ecosystems.
- Seamless integration into ecosystems already using ground-based connectivity.
- Customized and scalable.

## HOW OUR TECHNOLOGY WORKS




The sensors, distributed by the study assets, collect, encrypt and extract the most valid information from the parameters analyzed using predictive algorithms.

These sensors act in a **sustainable and autonomous way**: they do not need batteries for their operation, they are charged with solar energy; and they do not require orders to collect and send data, they work in an automated way.

**The sensors send this encrypted data to the picosatellite.**

Subsequently, these secure and informative data are **sent** by the picosatellite **to a ground station,** where they are collected and sent to our cloud service.

Our cloud service collects and stores all this data and, through an online **dashboard** or through an **API integration**, all the **information** that the farmer needs about the status of his crop is **displayed**.

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