



HC TECHNOLOGIES PRODUCTS USE CASES

1. Smart cities:

1.1 Water meter reading: Example: Cali, Bogotá, Pereira (Colombia), Pradoluengo (Spain), Piedrahita de Juarros (rural installation, Spain), Sydney (Australia), Colombia, Singapore etc.



1.2. Dirty water level into manholes detection. Our devices are also used to detect when the dirty water is in a high level into manholes. With our devices and a firmware we have to alarms, we can read up to 2 different level sensors to inform the water companies that something is wrong into the manholes.





2. Factories:

Our devices are also used in factories to monitor the water, gas, vaporized liquids, etc.... flow and consumption. We are working in Spain, Estonia, Singapore, Colombia and some other countries. Also we are using our devices to send alarms from sensors or digital signals such as power in a signal detecting, machine used, switch opened, door opened, security door close, etc.



3. Farms:

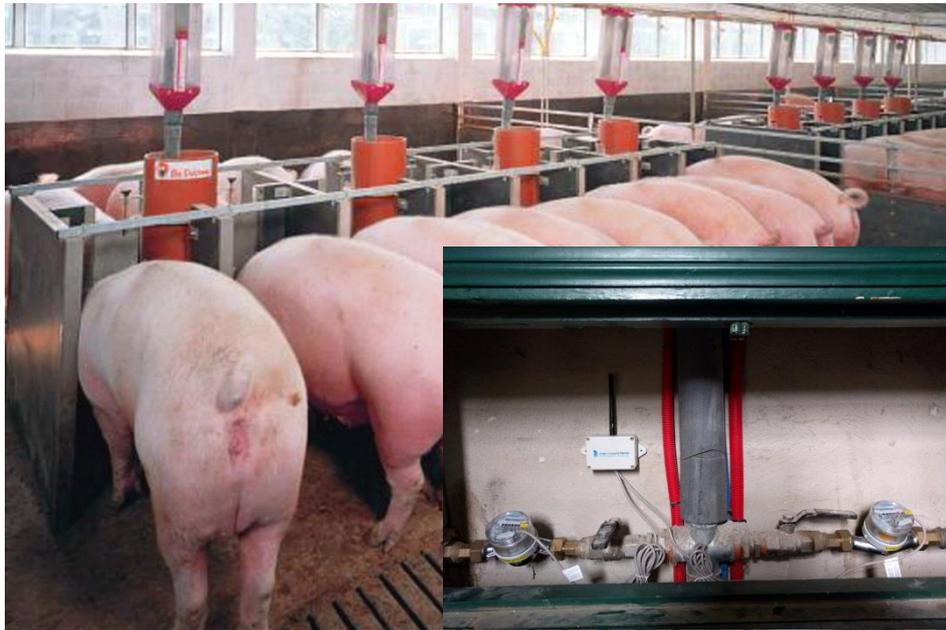
We have devices working in farms in Spain, New Zealand etc. They are used to check how much water the animals consume but also to detect the level of water tanks to be sure that they have water enough for the animals. In Spain for example we have made a project to detect different diseases that pigs can have and also to detect how they are growing. With it, now in the same facts where 17 pigs dead last year, during 2017, 0 pigs has dead. And they are growing about a 3% more.

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4. Agriculture:

4.1. Irrigation: Our customers are using our devices to know the water consumption in agriculture projects. With it, the groups of irrigators have information to make the irrigations to pay for the water they use without has to go to the field to read the meters. But HC TECHNOLOGIES also have devices to control the valves and irrigate when the user wants, during the time they want, or with the water quantity they want. With the irrigation control devices, users can also get data from sensors, alarms, etc.

4.2. Water level. Customers are also using the water level devices to detect when they have so much water, or not enough water. They are also using our devices to read manholes door opened, alarms for know if any person has opened the door of where they have their tools, etc.

4.3 Pump control: Our devices also can control the pumps with our platform.



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5. Insurance:

1. Leak detection: Our customers are using our devices for leak and floods detection. We are making a new firmware to detect the leak directly with the device and not with the platform as we are now making. So, insurances companies will start to work with us also for leak and flood detection.

2. Alarms. As our devices can send alarms when for example a door is opened or any digital signal arrives to the device, our customers in Australia, Hong Kong, Spain, etc... are also using our devices to send alarms when any digital signal is detected.

6. Smart Buildings:

In many countries, the council just place one meter in a building and then the internal neighbors have also meters that should be read by the building managers. For these types of projects we have different solutions by using Sigfox devices. But we also read the electricity meters of the buildings, let them the customer to calculate the electricity consumption in the building, count people entering, air quality sensor, detect motions (people into rooms), read the temperature, illumination, moisture, etc...



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7. Retail:

We have also made projects for retails. For example in Spain we are working in a project to know if the metal curtains are close by using contacts that switch when they are opened and when they are close. We have also made some project to detect leaks for Retail and to monitor the water consumption.



8. Meter manufacturers

We have a design house to help meter manufacturers to add Sigfox into their meter. Water, electricity, gas, etc... meters can have Sigfox connection with our solutions and designs.



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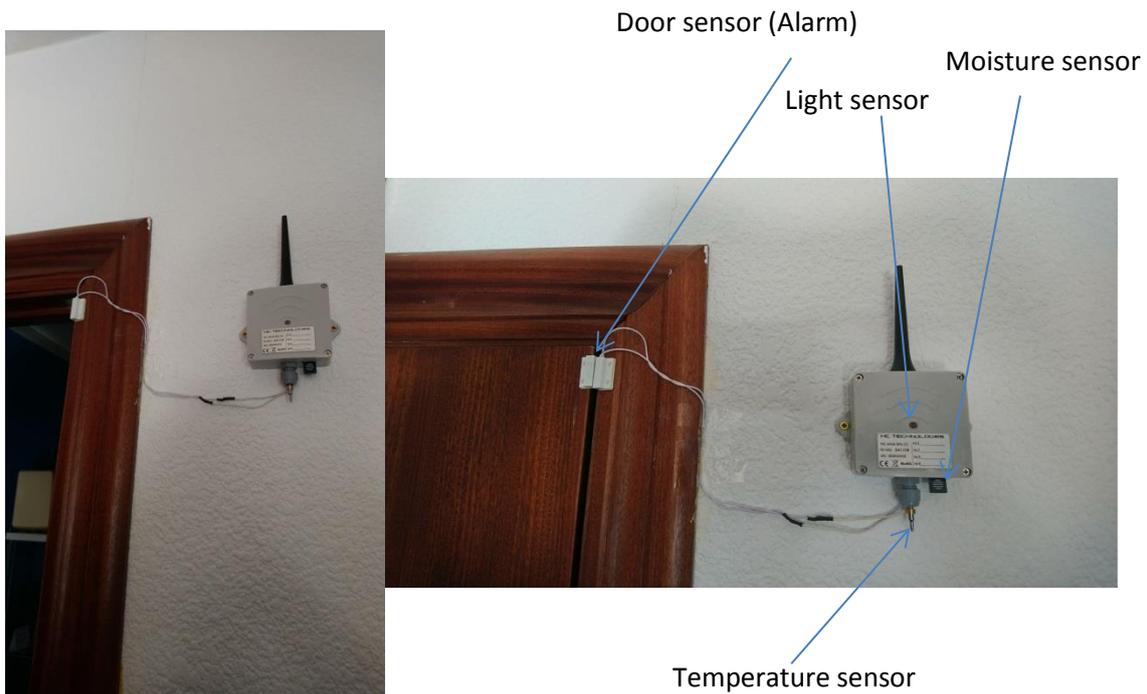
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9. Analog sensors in meeting rooms, cabinets, office, factories, etc.

We use our HC-ANA devices to read sensors. We read temperature, moisture, light, gas quality, etc. sensors. Our device can read up to 3 different analog sensors + 1 digital alarm input. Following you can see a device with light, moisture, temperature and door sensor, what else?????



10. Air quality in toilets, factories, office etc.

Following we show also a device for air quality sensor. We use our HC-ANA-SIG device, so we can also read other 2 sensors such as temperature, light etc. and also a digital sensor such as door open/close sensor. We use them in Toilets, meeting rooms, etc.

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11. Ice-cream cabinets monitoring

Temperature reading, door open/close reading, door open counter and FSR sensors to know the stock into the cabinet. Made with HC-ANA-SIG device with a special firmware.



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12. Telecommunications cabinet temperature and door controlling

Device reading the temperature into telecommunications cabinets and also sending alarms if someone open them. Made with HC-ANA-SIG device.



13. People counter entering in Toilets

The device reads the temperature, light and also counts how many people pass through a corridor going to the toilet to know when it should be cleaned.



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14. People detecting in rooms.

Device that detect people into rooms (motion), and also read the temperature and light sending data with the temperature and light but also if the room is empty or not.



15. ATM power available or not

HC-DIG-SIG with an internal AC relay, to detect when the ATM has not power or when it has power.



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16. Electricity towers inclination sensor

HC-INCL-SIG detects the inclination of towers (electricity towers, antennas, etc) and sends alarms when the inclination is above of what the customer wants.



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