TECNIVIAL

Innovation on a safe way

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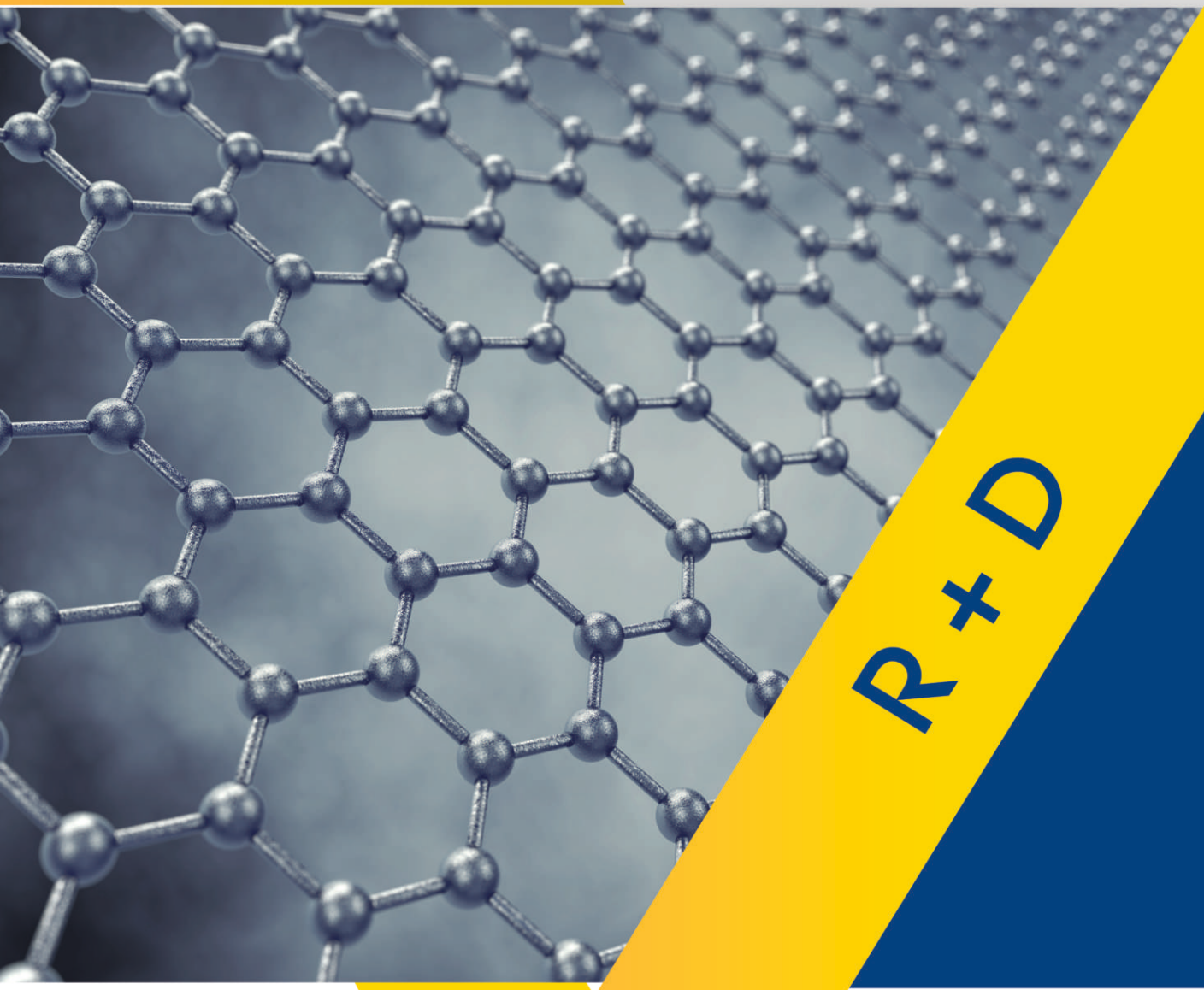


R+D

INNOVATIVE SME

Valid until Dec 31st 2018

ISO 9001 BUREAU VERITAS Certification

ISO 14001 BUREAU VERITAS Certification

1 SMART CROSSINGS

In High Accident Points

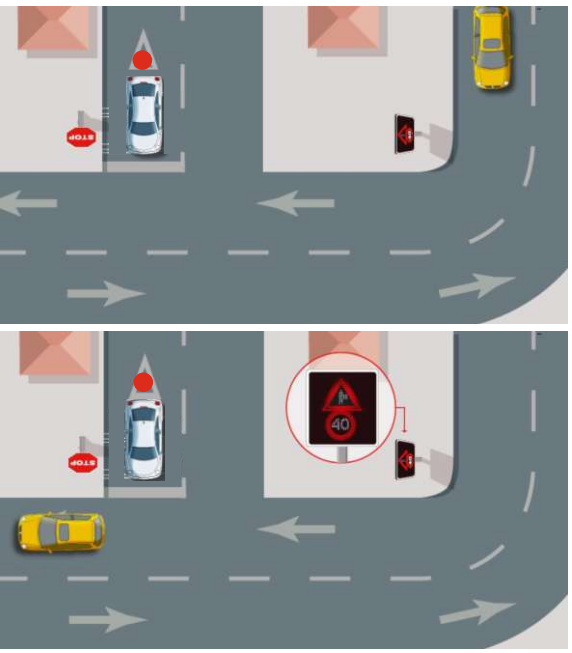
It is a **dynamic warning system located at dangerous intersections that uses V2I technology**, i.e., information exchange between vehicle and infrastructure. Its goal is to warn of the proximity of cars to the crossing. It is a warning to drivers to take extreme caution, moderate speed and avoid a possible accident.

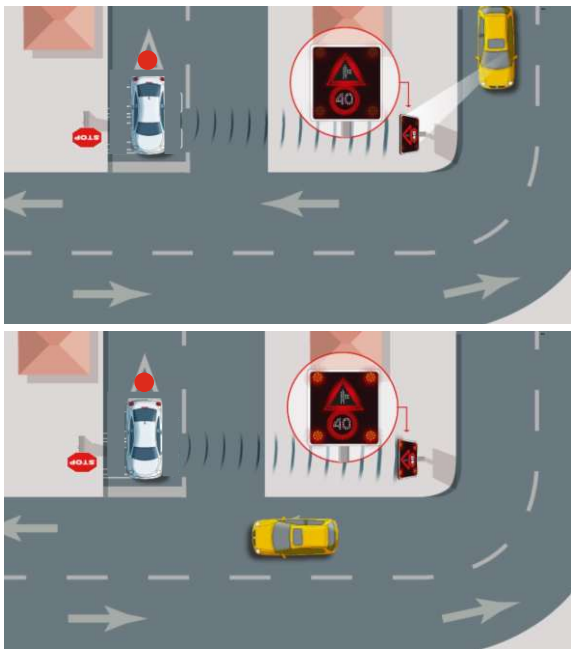
The **DGT** (Directorate-General for Traffic) has relied on the **Tecnivial - Sensefields** joint venture for the manufacture and installation of this modern technology on **km 20 of the M 505** that will provide greater safety in this junction and in the Ex-370 Caceres.

How It Works

1. A few "presence detectors" located on the secondary road activate the danger sign located on the main road.
2. When the vehicle approaches the crossing by the secondary road, the system is activated.
3. Warning drivers from the main road, by means of a light signal, of the presence of a vehicle at the intersection.

DEMOSTRATION VIDEOS





SENSOR SIGNS

2 SWIP

Smart Wireless Parking

The perfect solution to manage and optimize the mobility in problematic parking areas.

SWIP is a system based on the detection of vehicles by wireless and small sensors which are really easy to install.

SWIP allows counting the vehicles in entrances/exits of problematic parking roads to send data in real time to the **variable messaging panels** (PMV).

In addition to the data record, get by the own system, it can be analyze to understand the parking behaviour and to improve the services for users and area management.

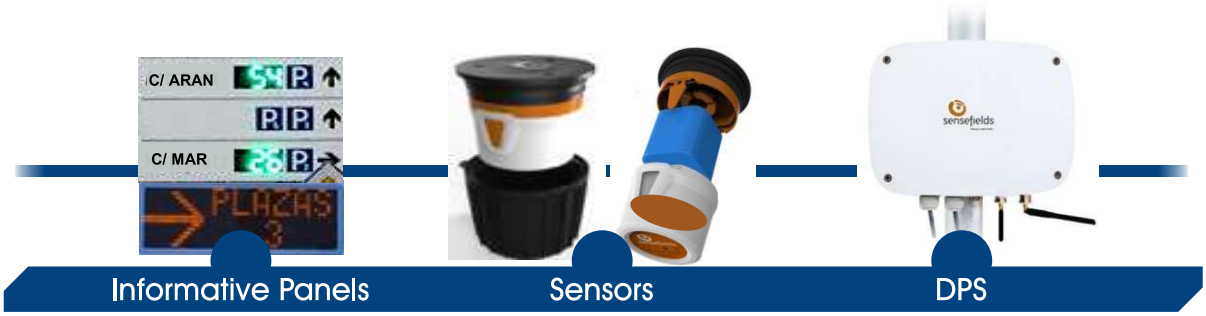
APLICATIONS

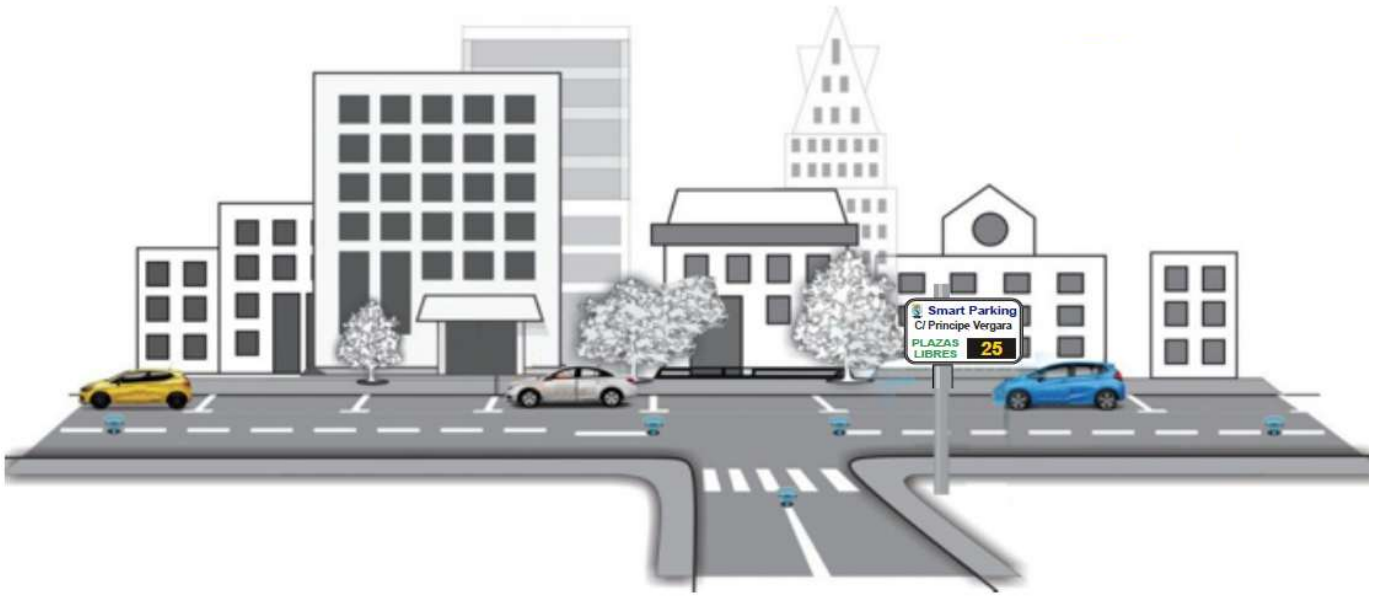
Informing the drivers about the available lots in mobility in problematic parking areas with traffic jams and parking problem areas: city entres, shopping centres, airports, hospitals, universities...

Analysis of the traffic flow to manage the maintenance, improvement of communication between different areas and possibilities of expansion.

MAIN FEATURES

- Real time connection with PMV management.
- Connection by WIFI and 3G systems.
- Easy integration to parking management system, using open softwares.
- Configuration and management by web (remote control).
- Cloud storage, making studies, grafts and reports.





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3 EXCESS GAUGE DETECTOR

Electronic System

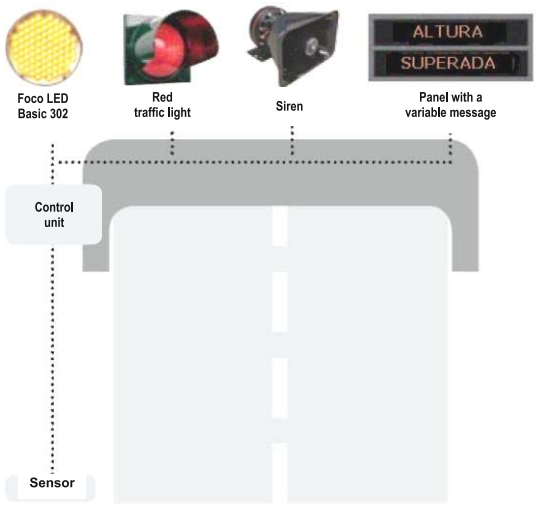
The **electronic system** detects the height of the vehicles using only a sensor located on the side of the road. It is possible to set the length and width of the detection area and even the minimum size of the object to be detected. Programmable by remote control.

If a vehicle exceeds the maximum clearance, the system activates two flashing lights + a siren, a traffic light or a panel with a variable message.

It is ideal for roads or streets in works, tunnels, overpasses or in any other situation in which the excess of gauge causes danger.

Example of installation in an underground bridge.

Complements



The easy installation of the few elements that are needed makes the system very attractive in addition to its efficiency.

DEMOSTRATION VIDEOS

We study each project advising on the most appropriate

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4 NANOTEC COMPOSITE

Cutting-edge Signaling

LIGHT, ELASTIC AND SAFE

CORROSION-FREE

LOW ENVIRONMENTAL IMPACT

RESISTANT TO LOADS

SNOW-RESISTANT

WIND-RESISTANT

LOW RESIDUAL VALUE

LOW MAINTENANCE

LOW INSTALLATION AND TRANSPORTATION COST

NANOTEC signs incorporate **carbon nanoparticles** into the fiber/resin composite, thereby increasing the mechanical features of the sign optimizing the use of raw materials.

The optimization of materials provides the sign with greater lightness compared to steel or aluminum signs and makes it very competitive in technical and economic terms.

The **NANOTEC** signs have been subjected to demanding tensile strength, breakage, elasticity and durability and wind tunnel tests overcoming wind efforts equivalent to the passage of a train through a tunnel at more than 310 km/h, complying with European regulations **EN 12899-1**, and obtaining the **CE MARKING**.

Main Advantages

01 Signs made with cutting-edge Composite.

02 Its lightness and high durability offer cost savings.

03 100% resistant to aggressive environments, corrosion-free.

04 Excellent behavior with moisture.

05 Easy installation and low maintenance.

MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD

CDTI Centro para el Desarrollo Tecnológico Industrial

UNIÓN EUROPEA
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Una manera de hacer Europa

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5 SPM COMPOSITEC

Protection System for Motorcyclists

The **SPM COMPOSITEC** is an element that protects the motorcyclist against impacts against vehicle containment systems.

It consists of a glass fiber barrier that is fixed to the conventional containment system by means of metal anchors and shock-absorbing discs to dissipate the impact energy.

It is certified according to **UNE 135900-1; 2:2008.**

DEMOSTRATION VIDEOS

DESCRIPTION

- Made of flexible material, GRP, reduces the impact injuries of motorcyclists to the maximum.
- HIC36* 44% lower than metallic systems.
- Easy installation and handling. Fits any containment system.

BENEFITS

- Protects the motorcyclist from impact against the poles and the lower part of the conventional barrier.
- It does not allow the motorcyclist to pass under the barrier, avoiding the impact against an obstacle located behind.
- It manages to absorb a large part of the impact energy, minimizing the impact forces.
- It picks up and brings back the injured person in the direction of travel, avoiding the rebound effect.

Madrid, Spain

Tel Aviv, Israel

Sardinia, Italy

COMPARATIVE OF THE SYSTEM IN CASE OF IMPACT

SPM fiber system

Metallic system

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