

# Smart Parking

solution powered by Softech

A **simple** solution for the **smart** management of the parking in urban areas

For the management and monitoring of car parks in the city, Softech has developed an innovative and simple system ideal for perimeter and non-perimeter parking areas.



## Who is it for

- City administration
- Parking area managers
- Traffic wardens
- Citizens and non-technical users



## How does it work

A network of IoT magnetic sensors with **LoRaWAN** interface collects and transmits data to the management software for processing and returning differentiated outputs depending on the end user



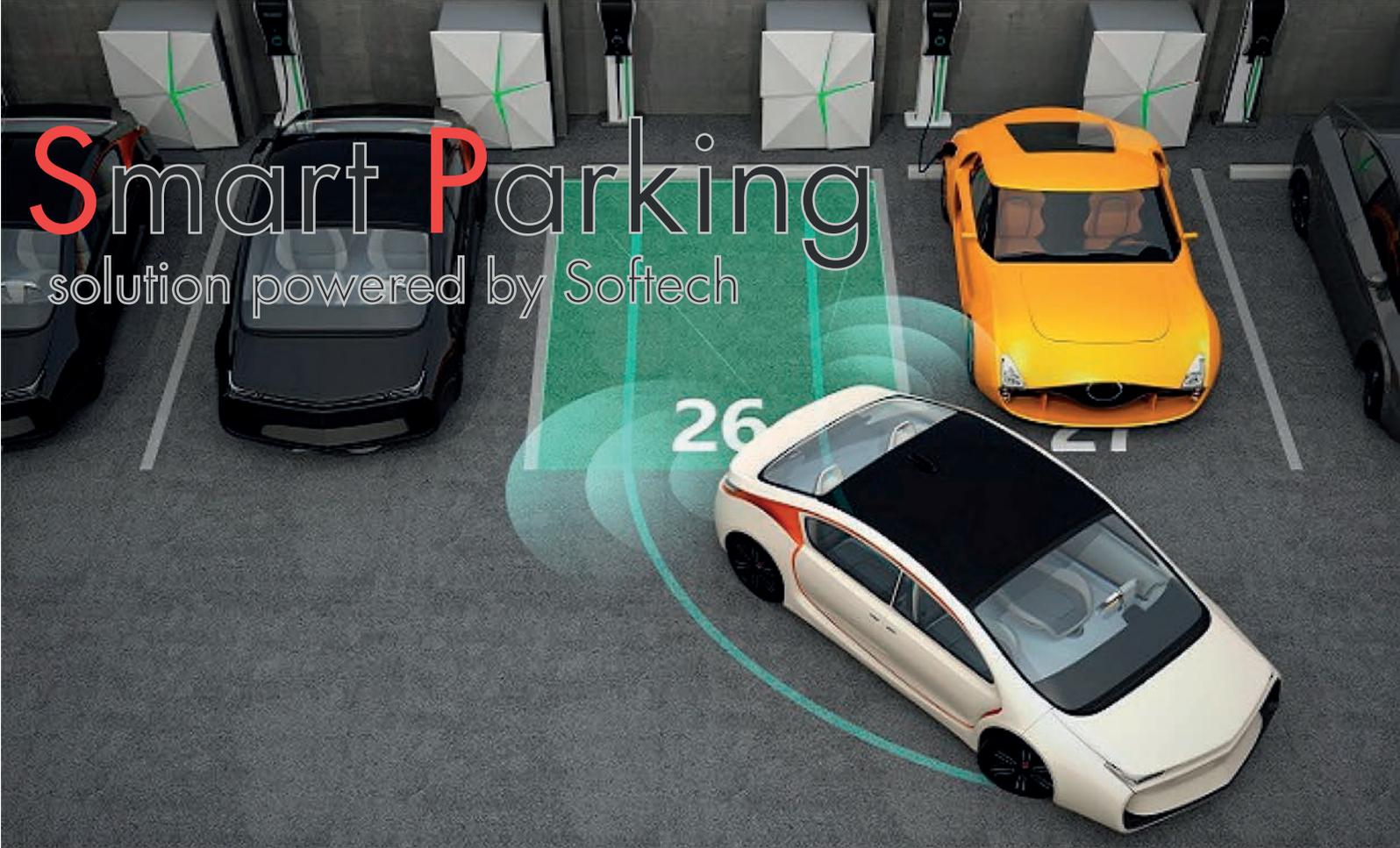
## Third party systems

The system is open and can be integrated with third-party hardware and software (video cameras, VMPs, etc)



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## VEHICLE DETECTION WITH A THREE-AXIS XYZ MAGNETIC SENSOR

Unlike optical and / or ultrasonic sensors, it has no obstruction or dirt problems above the sensor.

Among other advantages:

- Quick calibration
- Low consumption

## SMART CITY TECHNOLOGY

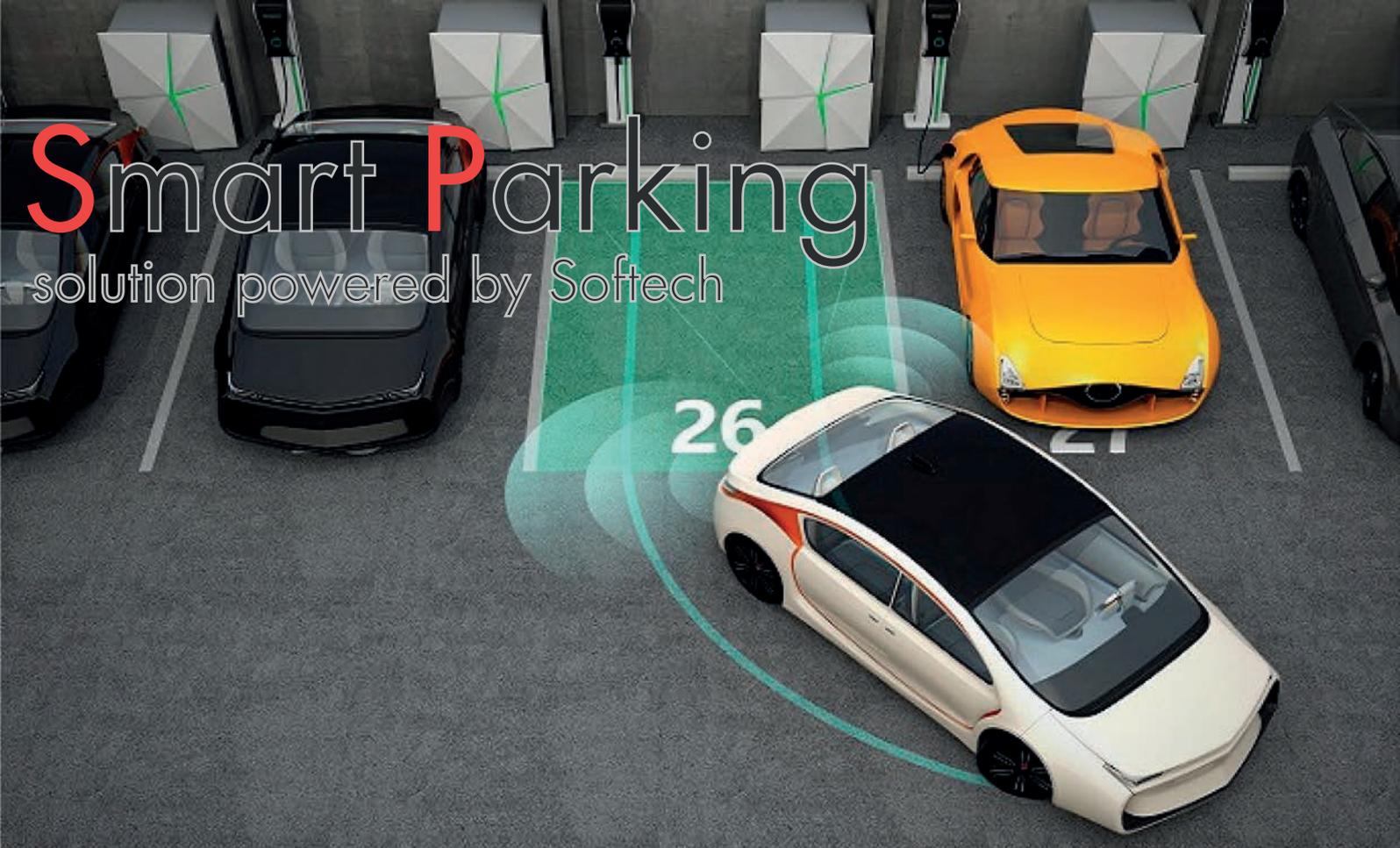


LoRaWAN is a Low Power Wide Area (LPWA) network protocol characterized by a wide coverage range and very low power consumption. It is the most chosen technology for Smart City solutions

## DATA TRANSMISSION BASED ON LORAWAN TECHNOLOGY

- **LOW RANGE:** Coverage of several hundred meters per single gateway
- **LOW POWER:** Up to 4 years of duration without the need for connection to the mains
- **LOW COST:** Low consumption and maintenance costs. No license fees or concession costs are required
- **SECURITY:** LoRa technology guarantees privacy and data protection through a reputation system (Embedded end-to-end AES-128 encryption)





**INDUSTRIAL OPERATING TEMPERATURE**

- 40 C° to + 85 C°

**PLASTIC CONTAINER (ABS O NYLON)**

Resistant to mechanical stress and erosion due to environmental factors

IP68 protection guaranteed by o-ring seals and circuitry embedded in epoxy resin

Replacing the battery without compromising its solidity and sealing

Small size (bottom diameter 8-10 cm, max depth 8 cm)

**LLI-SOCL2 BATTERY**

Can be used at very low temperatures

Very low energy dispersion

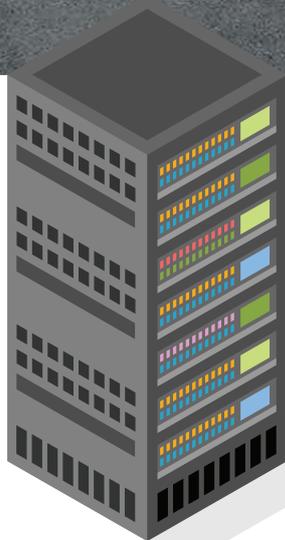


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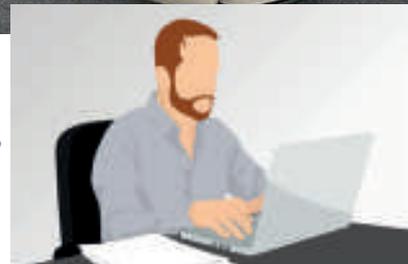
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**SENSOR**



**CENTRAL SERVER**



**TECHNICAL USER**



**USER**

## SYSTEM COMPONENTS

### SENSOR

Collects data on the occupancy status of the parking area and transfers them in real time to the central server

### MANAGEMENT SOFTWARE FOR TECHNICAL

It processes the data and makes them available in the form of reports, graphs and / or statistics that can be customized according to the needs of the end user

### APP

Shows the free parking spaces on the map and guides the user along the path to reach them.  
The user can report dangerous situations from a smartphone (e.g. presence of materials and debris on the stall) or any system errors (e.g. stall occupied even if signaled free)



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## USER INTERFACE

- Locate free parking spaces on the map in real time
- the system locates and guides you on the path to reach the parking spot
- Warnings from the user in case of incorrect operation of the system and situations of potential danger on the parking spot

## TECHNICAL INTERFACE

- Parking spaces display on a map
- Real-time monitoring of the occupation status of the parking spots
- Average spot occupation time
- Charts, statistics and customizable reports on an hourly, daily, weekly basis, etc.
- Heatmap of the areas of greatest occupation
- Optimization of control activities

## SYSTEM ADVANTAGES

- Reduction in traffic levels and traffic jams due to the search for parking
- Reduction of polluting and noisy emissions
- Optimization of irregularity assessment activities with consequent reduction of violations and increase in the speed of intervention
- Optimization of public spaces
- Optimization of the management activities of the institution
- Better reputation of the municipal body
- The profits of commercial activities increase, no longer burdened by the difficulty of finding parking

