



## Press release

### ‘Smart Cities’ and car parks for people with reduced mobility

- ▶▶ *A pilot project was implemented in September 2015 in San Sebastian that provides an interconnected system that is used to optimise the management of parking spaces specifically allocated to people with reduced mobility*
- ▶▶ *Specifically, it will allow users to consult the availability of parking spaces and reserve them several days in advance in real time via a mobile phone app*
- ▶▶ *IK4-TEKNIKER and Dinycon have jointly developed a solution that incorporates sensors and devices based on technologies known as the Internet of things (IoT)*

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(Eibar, Basque Country. 23 November, 2015).- Finding a space to park your car is a tedious and sometimes nearly impossible task when somebody with reduced mobility needs a space close to their destination. The initiatives available until now, such as parking cards for people with reduced mobility, have not constituted an efficient solution for this problem due to a shortage of parking spaces, a lack of harmonisation in the model used and sometimes because of the incivility of other drivers.

This is why the San Sebastian-based company [Dinycon](#) and the Basque [IK4-TEKNIKER](#) technology centre have designed a novel parking space management system for people with mobility difficulties that is based on recent technological developments linked to the Internet of Things (IoT) and the “Smart Cities” approach.

The service, called DinyPARK-PMR, was implemented in the city of San Sebastian last September in the form of a pilot project that will end in June 2016. The project forms part of a number of initiatives that apply Smart Lab Gipuzkoa smart solutions and has been supported by the Department for Innovation, Rural Development and Tourism of the Provincial Council of Gipuzkoa. The San Sebastian town council, moreover, has provided the parking spaces and human resources (traffic wardens) needed to supervise the system.

The system features a circuit made up of interconnected sensors and devices allowing for the management of parking spaces allocated to people with reduced mobility.

The technical experts in charge of the project have installed magnetic sensors in all of these parking spaces to ascertain whether the space is empty or already taken. All vehicles involved in this initiative were fitted with an electronic TAG device that identifies both the drivers and their vehicles. These devices are monitored by a third element installed in the parking area that intercommunicates with a cloud server via a GPRS/3G connection.

Thanks to an interaction with all system components, the server receives real time information indicating whether the space is being used or if there is a situation of unauthorised parking.

### **Operation**

Users can book their parking space up to one week in advance to guarantee four hours of parking time to deal with pre-arranged commitments. The service also allows users to consult parking space availability on a real time basis from mobile phones should they be looking for non-booked parking spaces.

To facilitate this process, the service lists available parking spaces via the mobile app and offers users the possibility of reserving a parking space at that very moment. After availability has been confirmed, the user has 15 minutes to occupy the booked parking space.

In this service, the TAG device installed aboard the vehicle is one of the key components as a voice message and a flashing light indicate whether the user is allowed to park and, if so, for how long.

### **Communication platform and magnetic sensors**

Within this scope of this project, IK4-TEKNIKER has supplied its know how in terms of micromechanics, metrology and electronics to develop the hardware and software used in

parking areas. It has also executed the communications platform linking the different parking areas and the central server of the DinyPARK-PMR service.

“This project is clear proof of how recent technological developments can be incorporated to devices used on a daily basis in order to offer solutions that improve people’s lives”, says project coordinator at IK4-TEKNIKER, Eugenio Cartagena.

**About DINYCON SISTEMAS**

With a track record of 15 years of experience, Dinycon Sistemas, is an engineering firm that designs innovative solutions in Smart City environments, specifically focused on three lines; DINYPARK, mobility and traffic solutions; DINYCONT, person counting and tracking and occupation control; and DINYENER, energy saving.

**About IK4-TEKNIKER**

With experience spanning over 30 years in research into applied technology and its transfer to companies, IK4-TEKNIKER has achieved a high degree of expertise in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs), which enables it to put its state-of-the-art technology at the service of any kind of task.

**Further information**

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