

## Press release

### The intelligent management of waste containers, key in smart cities

- ▶▶ *IK4-TEKNIKER and MASERMIC are collaborating to develop a solution within the framework of the WASTEVOL project*
- ▶▶ *This new multisensor device will imply progress in both logistics and safety when collecting waste*

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(Eibar, Basque Country. 17 September, 2019).- Although mobility, air quality or better services for citizens are some of the challenges already addressed by smart city projects, it is equally important to improve refuse collection services and manage city waste more efficiently. Consequently, smart urban waste management is a key factor for smart cities.

Driving to nearly empty skips and not managing properly those that are already full or fill up quicker, or even overflow, is a reality many cities have to cope with. Likewise, it is difficult to trigger early warnings should a fire break out or if skips have been tipped over due to severe weather conditions or because of acts of vandalism.

It is in this context that, [IK4-TEKNIKER](#) and [MASERMIC](#), a technological firm focused on developing, manufacturing and marketing electronic and mechatronic products, are collaborating with the WASTEVOL project whose aim is to establish a new concept to set up an **integrated, robust and compact multi-sensor IoT (Internet of Things) system to monitor skips**.

All skips will be fitted with this real-time IoT multi-sensor device to check how full they are, verify their location and detect the previously mentioned potential risk situations.

More specifically, IK4-TEKNIKER will provide its expertise with regard to *ad hoc* sensors, products, manufacturing technologies, materials, simulation and calculus to design an extensive solution that covers entire value chain. Ranging from validating the measuring principle by means of ultrasound technology to concept trials and very low consumption electronic designs

to develop a customised solution equipped with the new sensor and other low cost sensors to generate an end product that will be industrialised in the future.

### **Moving towards M2M (machine to machine)**

The added value of this solution is based on several outstanding features such as size reduction as the size of a sensor is related to a number of essential characteristics that can be applied to measure distances by means of ultrasounds (frequency of pulses emitted, maximum distance ranges that can be detected or the size of minimum intrinsic detection zones when this kind of technology used).

The development of a **low consumption multi-sensor platform featuring IoT connectivity** that will not only be equipped with a sensor to establish how full skips are, but also with other sensors to enhance skip logistics and safety.

Likewise, and thanks to the multi-sensor IoT device that **geolocates** all units, it will also be possible to detect any potentially anomalous situations that could be harmful for skips.

And, lastly, in addition to **taking temperature readings**, the device will also feature a **smoke detector** for early fume detection in skips.

This project will generate savings in terms of waste management, improve management actions and significantly lessen environmental and social impacts.

### **Concerning IK4-TEKNIKER**

With more than 35 years of experience in applied technology research that has been transferred to companies, IK4-TEKNIKER has achieved a high degree of specialisation in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs). This means that its cutting edge know-how has been made available to customers to meet their requirements.

#### Further information

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