

Revolutionizing Urban Parking Solutions

IntelliPark

Smart Street Parking System

Catarina Sebastião Daniel Borges Francisco Santos
Guilherme Garcia Guilherme Santos João Coutinho
Team 36



1. Introduction

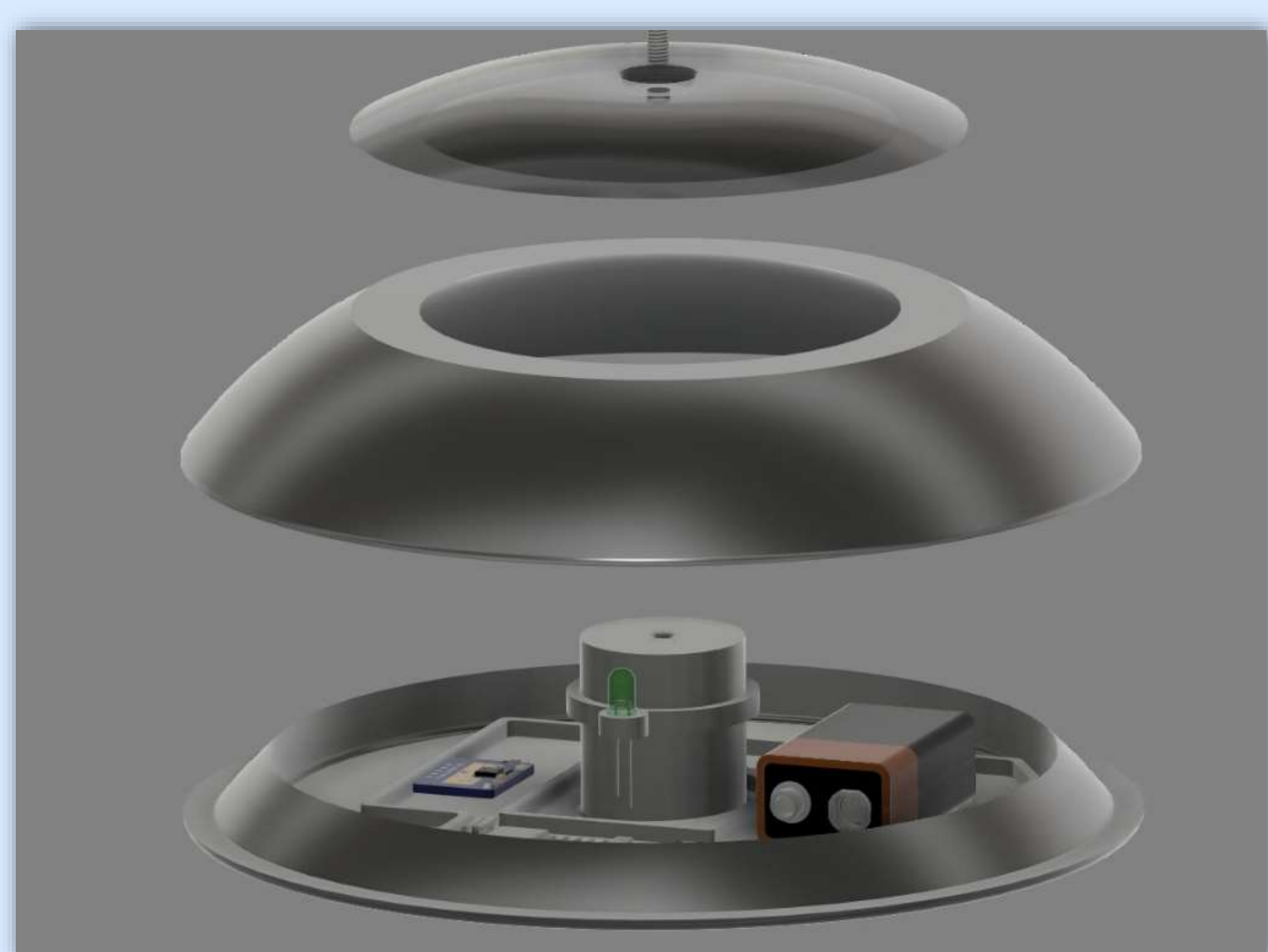
- Parking in busy cities is often chaotic taking into account the number of limited parking spots available
- Urban drivers spend a lot of time trying to find a spot to park their car
- Coming across this reality our team developed a solution to solve these problems



2. Sensor

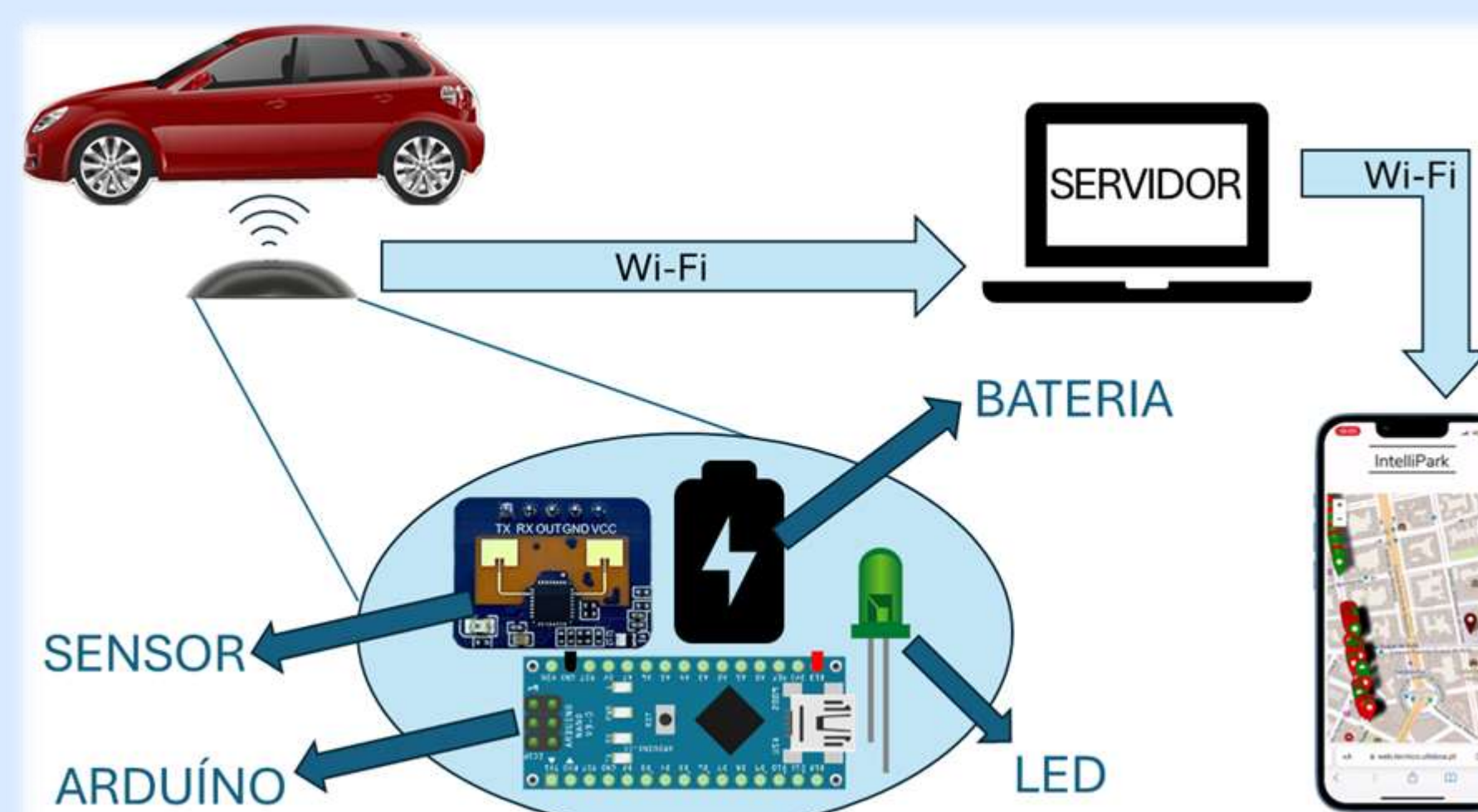
The sensor used for this proof of concept was the HLK – LD2410C (a proximity sensor):

- The sensor has a detection range of 0.1cm to 75cm
- The sensor has an angle of detection of 60°
- The case was built through 3D printing
- The sensor works through battery, as well as, micro-usb
- The size of the sensor is that of 17,5cm of diameter and 4cm of height
- The sensor is connected to an Arduino who then transmits to a network Wi-Fi preconfigured and transmits data do our webapp



3. How does it work?

- As shown in the image, the sensor is connected to an Arduino
- The Arduino communicates with our server through Wi-Fi network
- The server then transmits data to our webapp, allowing it to display dots that symbolizes parking spots



4. Recipients and Beneficiaries

- EMEL - Work reduction
- Drivers in urban environments - accessibility to parking spots
- Urban Planners
- Companies who might need this information
- Locals - easier access to road

5. Webapp

- Presents parking spots showing their availability through a color code: Red occupied or Green when it is free
- By clicking dots more information is shown such as the coordinates of that specific slot



6. Competitors

- Libelium is a company which developed a sensor that provides the information of the availability of the parking slot through Lora wan connection using magnetic technology
- Our sensor has a major difference which consists in communicating via Wi-Fi providing high data rate being the information transmitted quicker with radar technology



7. Costs and Benefits

- The production of the sensor performs a total cost of 45€
- Common urban driver will be able to know the availability of a specific parking slot just by searching it in our webapp with no delay
- No need to download or give personal information in our webapp and it is easy to learn how to use it.
- The users will be able to save time finding a parking slot which will also reduce the fuel consumption, air and noise pollution

8. QR code for our site



9. Contact Information

Intellipark

Av. Rovisco Pais 1,
1049-001 Lisboa

Email:
intellipark.ist@gmail.com