



Our Team

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Hardware

Simon Muscatello

Backend

Andrea Esposito

Computer Vision Engineer

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Frontend

Technologies Used

Vite

Used to develop the **frontend** in combination with **react**.

ESP32

Used to **collect** data from the **camera** and also the **RFID** reader

Flask

Used as an **API** to **collect and distribute** the **data** coming from both ESP32s

RFID Tags

Used to **identify** the **user** that is filling the cart or using it

Assessed Approaches

RFID tags on textiles

Economically unfeasible

QR Code on labels

Impractical

Weight Sensor

Imprecise

Advantages

Cost Effective

The Packaged hardware, will have a price of **4.50€**

Non Intrusive

Can be added and removed from existing utilities without changing the infrastructure

Privacy Friendly

No installation required on company or personal device. No employee tracking

Durable

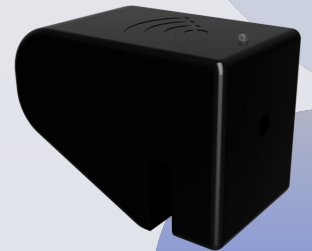
No washing cycles stress, therefore more durable hardware

Scalable

New units can be added and swapped between carts

Network Independent

ESP32 operates offline, and can cache data on bad network



How does it work?

- 01** Admin logs in and fills bucket
- 02** Admin logs out
- 03** Cleaning personnel takes bucket and logs in
- 04** Cleaning personnel uses mops
- 05** Cleaning personnel logs out

Thanks

Let's mop responsibly