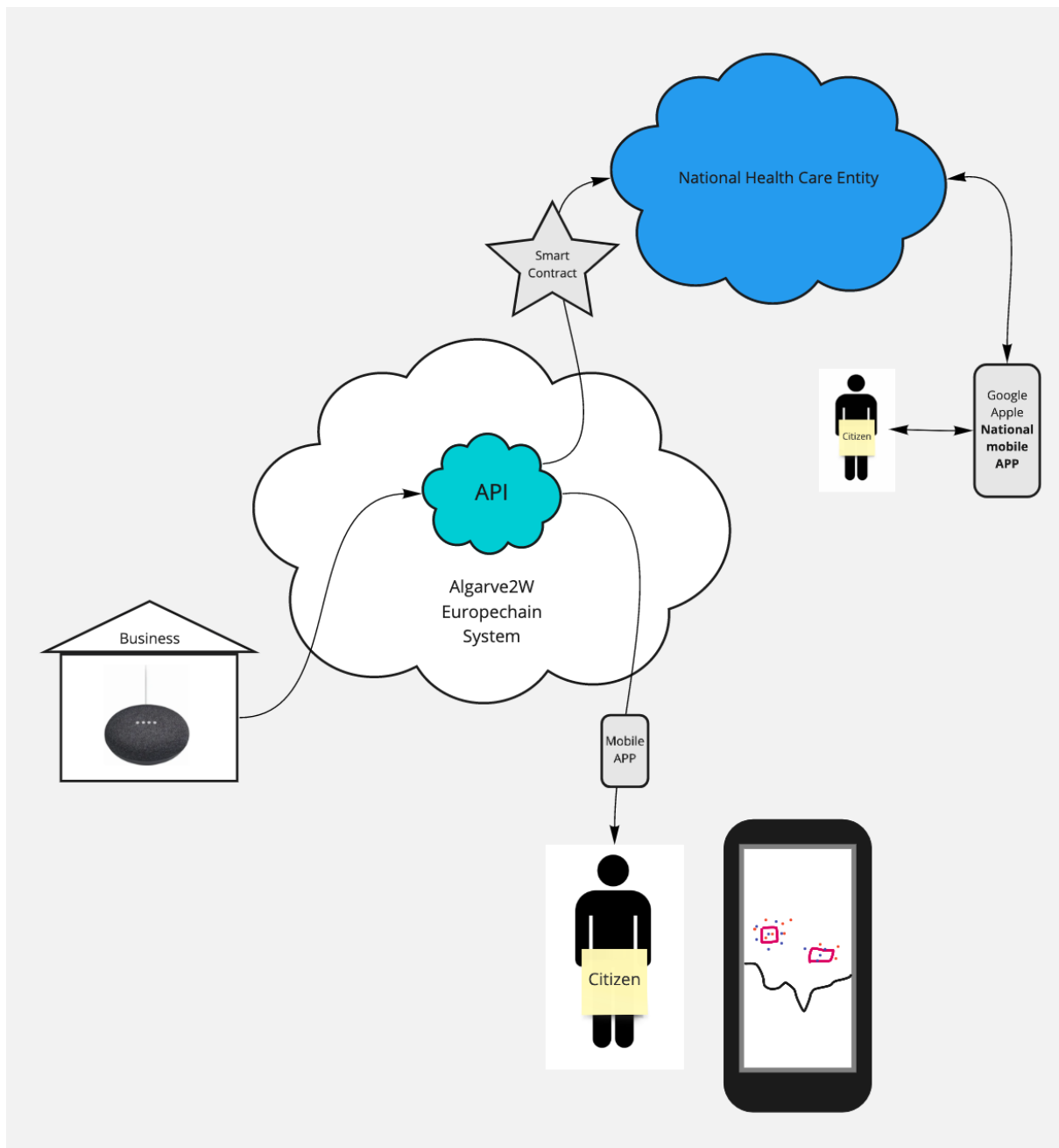


## Algarve2W

Empower social and health trust by an open-source modular sensor system & a secure data layer that enable people to make a decision before visiting public spaces/ tourist destinations.



### A2W Europechain Backend development:

The A2W Europechain back-office for admin purposes should be built to manage and control all the B2B stakeholders and the subscription system.

Connectivity to secure public clouds/blockchain should be managed here as well.

Data sent from pod to Europechain:

- Geolocation
- PAX Counter
- Air Humidity
- Number of Thermal cases
- Timestamp

Europechain can handle 10.000 requests per second. We will balance the amount and periodicity of the transfers to maintain system stability.

Programming Stack for intermediary database:

- Python and Django

### **Database and data encryption:**

Data is anonymous but authenticated and validated, with the blockchain and the cryptographic proof that the information is stamped at a specific time and place.

Europechain - <https://europechain.io> / Blockchain

### **API**

Secure connection from the pods to Europechain, from Europechain to apps and national healthcare database.

### **National Healthcare and Contact tracing( Apple / Google ) connectivity:**

This connection will be done through a secure channel via Europechain and the national healthcare database.

Considering National Services Mobile App, if connected to Google and Apple contact tracing database could warn people that would be in the proximity of the pods that someone infected was at the same place at same time.

### **Mobile App Development**

The Mobile app should inform and empower citizens to make educated decisions about population density and high temperature cases in a map and decide how and where to go.

- Flutter
- Maps Solution
  - ArcGIS ( open source )
  - Wizzimaps

### **Hardware Prototype:**

Hardware connects to the cloud via our AW2 OS, this system is built on top of RaspbianOS and with preset configurations for Arduino and the necessary sensors.

This code should be open source and with the ability to connect to Europechain.



Hardware specs & costs:

Board:

- Raspberry Pi 4 mod B, 2GB - **39.99 €**
  - Wifi( count mac address for ppl counter PAXCOUNTER)
  - Can connect to powerbank
- Arduino Uno R3 - **19.99€**

Sensors:

- Light
  - LED - 0.90€
- Humidity
  - Sensor Temperatura E Humidade DHT11 - **4€**
- Movement/ ppl density
  - HC-SR04 Ultrasonic Ranging Module - **3€**
- Temperature sensor / Camera
  - Sensor IR Gravity: Non-contact IR Temperature Sensor For Arduino - **23.00 €**
- Motor/serv
  - Motor micro servo 4.8V..6V DC SG90 - Tower Pro - **3 €**
- Speaker
  - Speaker - 1.60€

### Assemblage:

- We estimate that the cost per casing plus assemblage should be **10,00€** per unit.

**Estimated Total Cost per pod: 99,00€** Shipping costs need to be calculated.

SAAS cost per Pod:

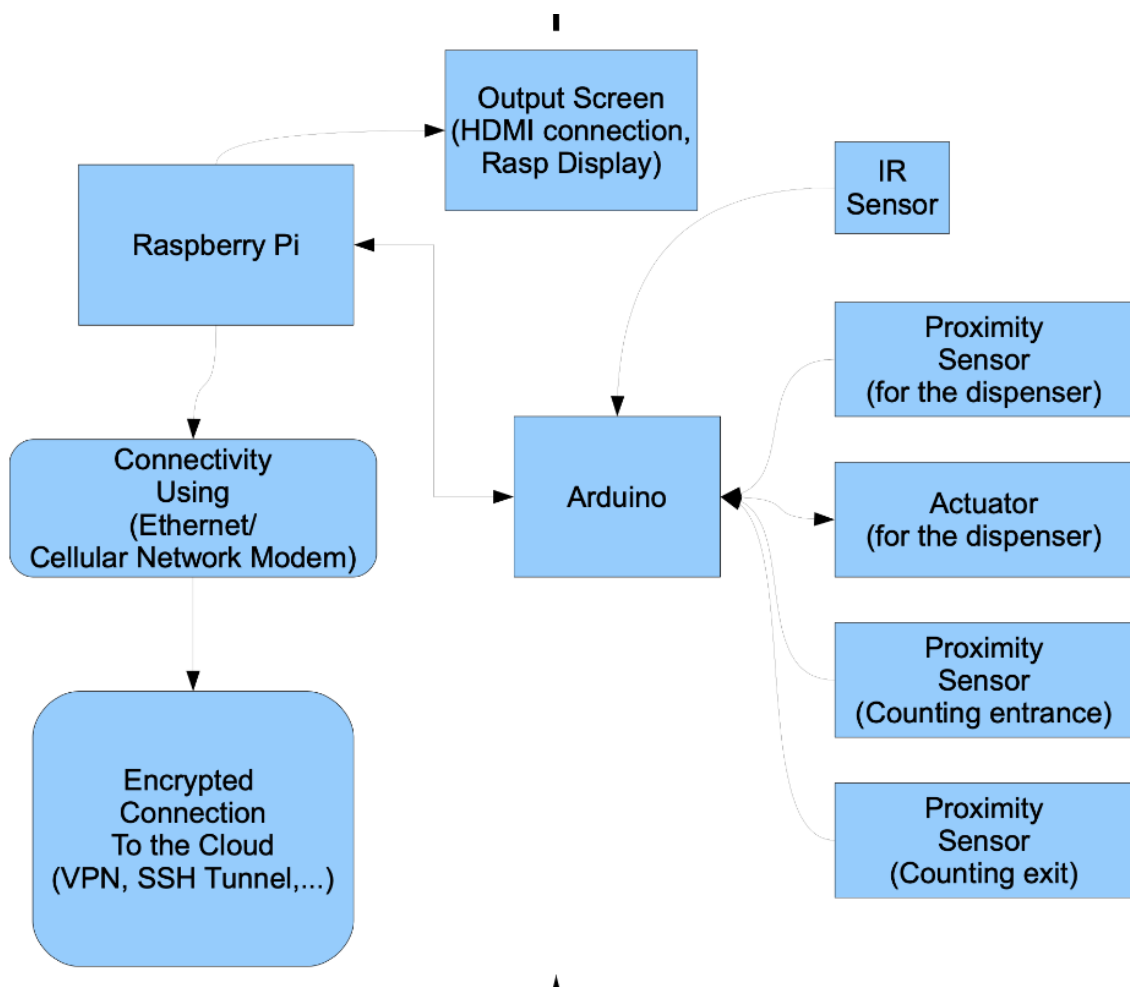
- **3€ per Month**

Software Development , hardware configuration : **€100k**

Marketing and go to market strategy: **100k**

Server infrastructure and ongoing support and development **€20k mes**

\*All costs are estimated



Ideas:

- Shops that have the device installed could incentivize the user/citizen to leave their contact details resulting in more services like: real-time downtime notification, discount on products, notification on protective equipment
- Municipalities can offer Social Coins to citizens that comply with policy not to visit crowded areas

[https://developers.eos.io/manuals/eos/latest/nodeos/plugins/chain\\_api\\_plugin/api-reference/index](https://developers.eos.io/manuals/eos/latest/nodeos/plugins/chain_api_plugin/api-reference/index)