

Aquaponic I-Greenhouse

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S8 Project - RICM4

I-Greenhouse : the concept

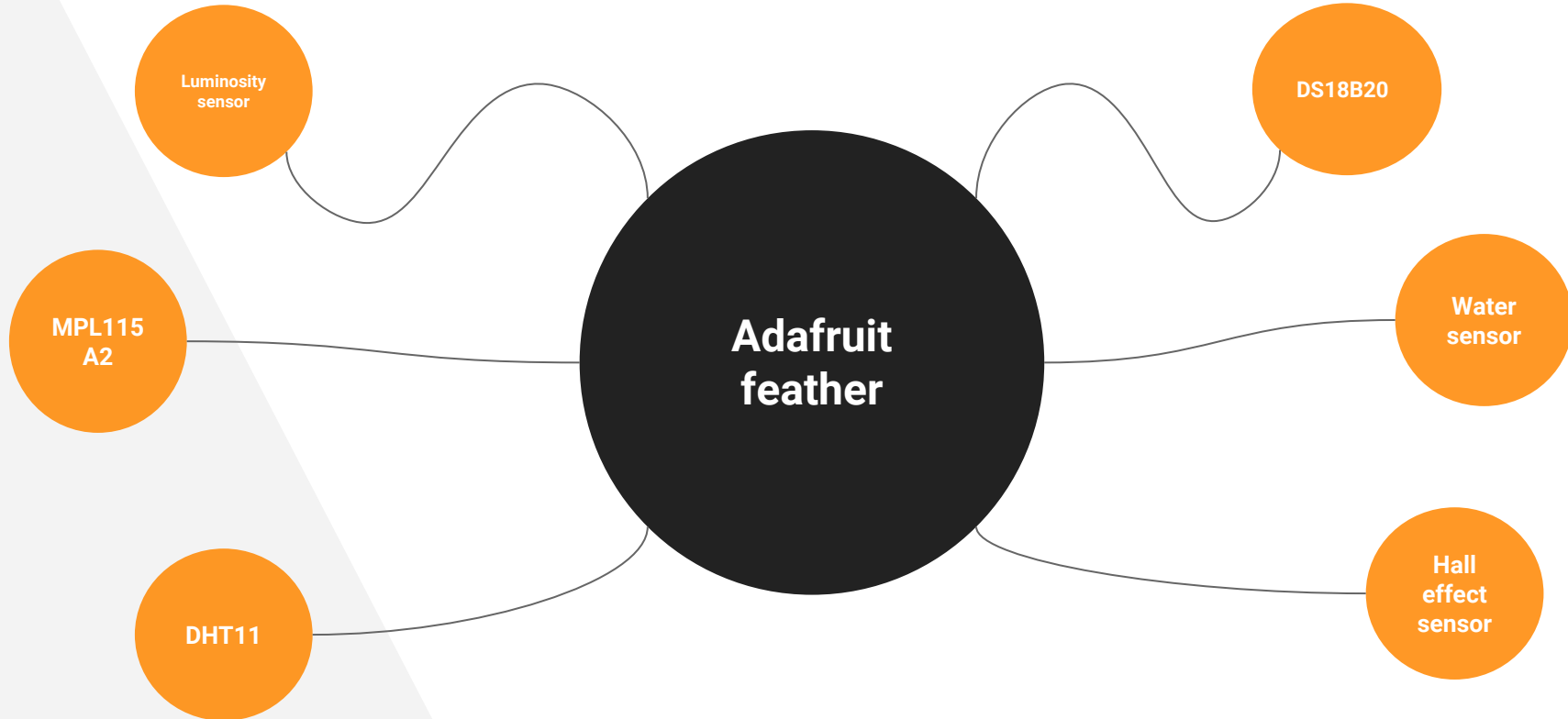
- ▶ Retrieve measurements
- ▶ Send measurements to a server
- ▶ Display with Grafana

1.

Retrieve measurements

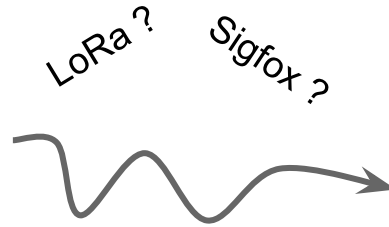
“And with the right sensors please”

The “embedded system”



“The” radio protocol

**Embedded
system**



Control center



LoRa!

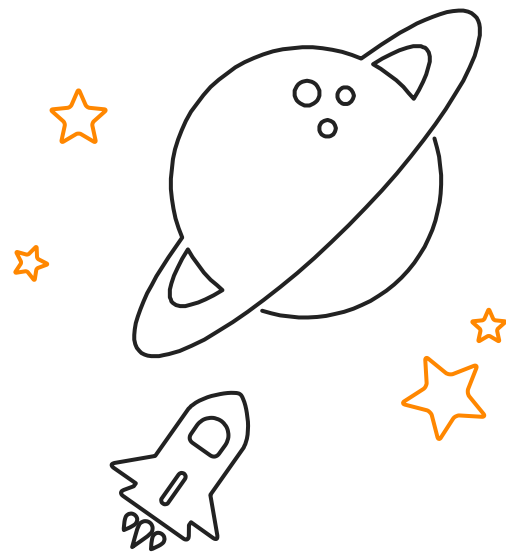
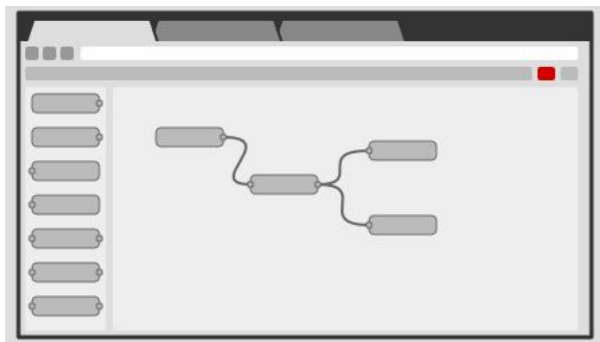
Why ?

- ❑ High range, accurate
- ❑ No SIM / GSM
- ❑ Opportunity to create your own network

2.

Data processing

“The most important thing is not the numbers, but what you make of them...”



Node-RED

The utility to manage flows !

Some tools

Mosquitto

- ▶ MQTT



InfluxDB

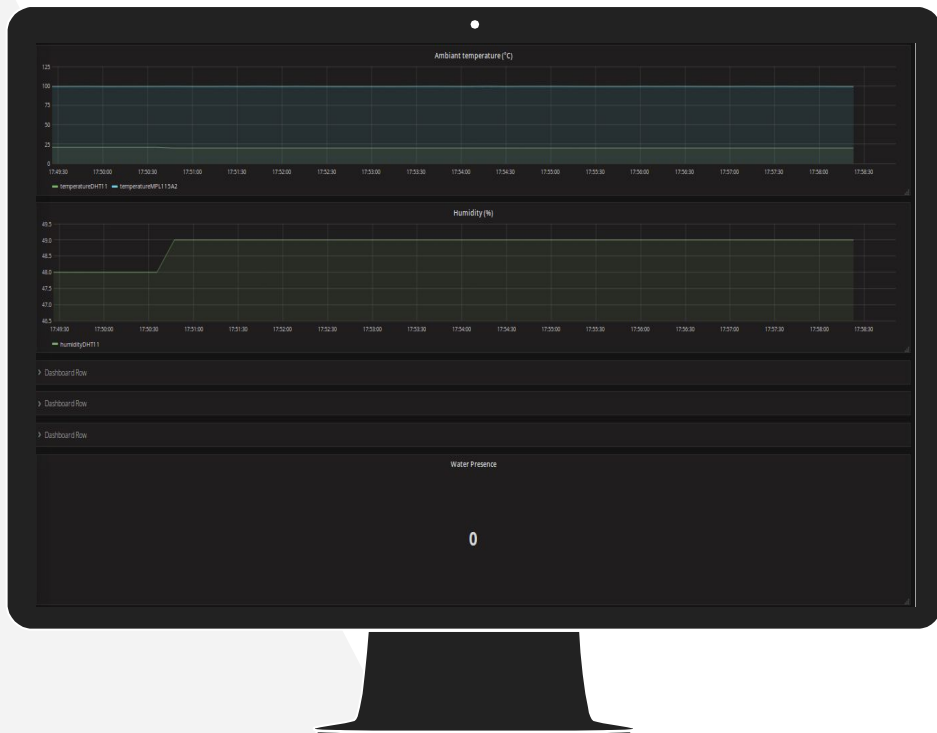
- ▶ Connection to the database



Grafana

- ▶ Graaaaaaphs !





The final display !

When all working...

3.

Using our project ?

What more should be done ?

- ▶ Make the gateway *“plug and play”*
- ▶ Adorn the embedded system
- ▶ Writing an instruction manual

Thank you for your
attention !

Questions ?