



Intermediate

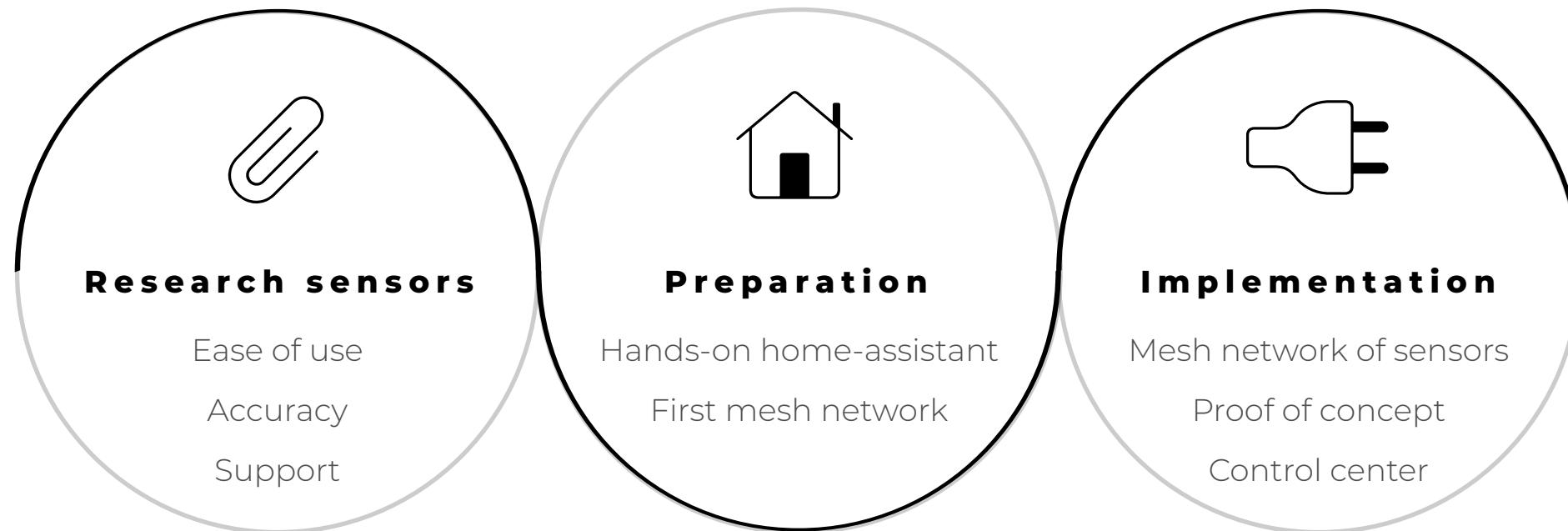
Update

Mesh Network of Environmental Sensors

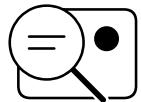


1. Schedule
2. Progress
3. Our exhibits
4. Next steps

Schedule



Sensor research



Research paper

Comparison of the sensors



Library

Reading the sensor data



Selected sensor

We chose to use the BME680



Home Assistant

Supervised install

- Debian Buster

Access point

- For mesh network
- Isolated from external users

Alerts

- Mail
- Problem with firewall



Mesh network

Setup

- Setup via AP
- Saved in EEPROM

Root selection

- Best connection to HA
- Self-healing
- Api POST

Messaging

- JSON format based on SenML
- At set intervals



Overview of our progress



R e s e a r c h t h e s e n s o r s

Full document

Still needs to be expanded



M a k e t h e m e s h n e t w o r k

Code is as good as complete

Still need to implement TinyML if we can

Large scale test next week



H o m e A s s i s t a n t

The basic setup is done

Make a integration/add on

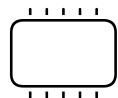
Automate updates with cronjob

Our exhibits

- Sensor research
 - PDF document
- Documentation mesh
 - Markdown language
 - General explanation
 - security
- Tutorial Home Assistant
 - Markdown
 - How to setup HA on a Linux machine

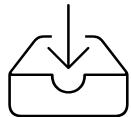


Next steps



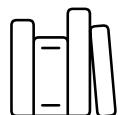
Make a PCB

Research components



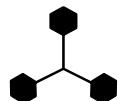
Automate updates

Because we are using a supervised install



Final documentation

Combine and finalise all the documentation



Large scale test

Test with twenty sensors next week





Internship
U-Bordeaux
2021-2022

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Thanks for listening!

X X

Overview

