



Plan of action

Internship  
Université de Bordeaux

## Mesh Network of Environmental Sensors



1. The team
2. Université de Bordeaux
3. Cause & goal
4. Schedule
5. Reporting
6. Project definition
7. Business case
8. Risk analysis

M e s h   N e t w o r k   o f   E n v i r o n m e n t a l   S e n s o r s

# Our Team



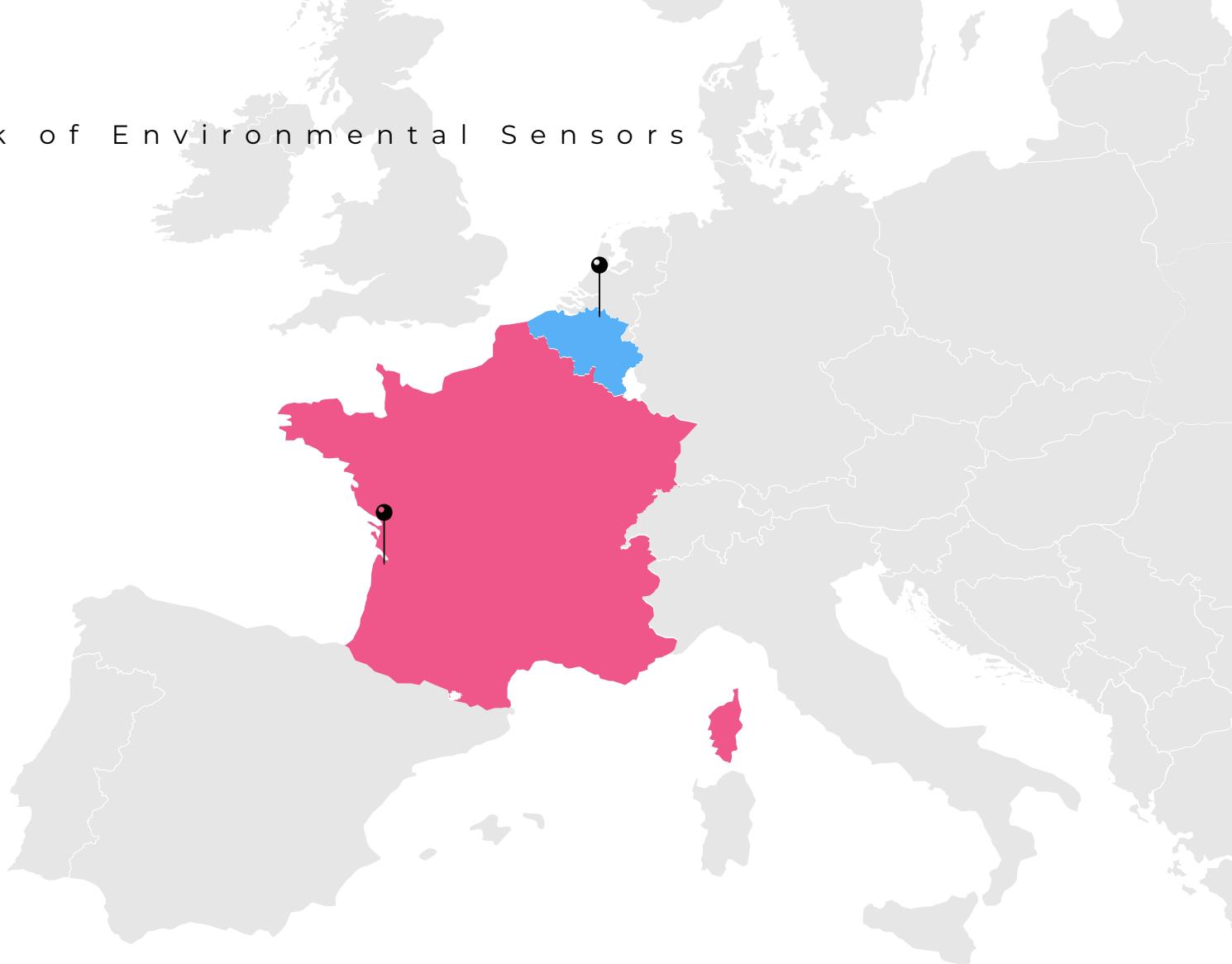
Jeroen Weber



Lian Aarts

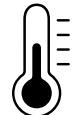
# Université de Bordeaux

- 12% international
- 56 000+ students
- Institute of technology
  - Over 4600 students
- Internship mentors
  - Vincent Autefage
  - Sophie Cartier (international coordinator)



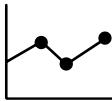
## Mesh Network of Environmental Sensors

# Our vision



### Temperature and air quality

Measure environmental data



### Visualisation

Visualise everything in Home Assistant



### Alerts

Send alerts when windows are left open



# Expected result

## Data

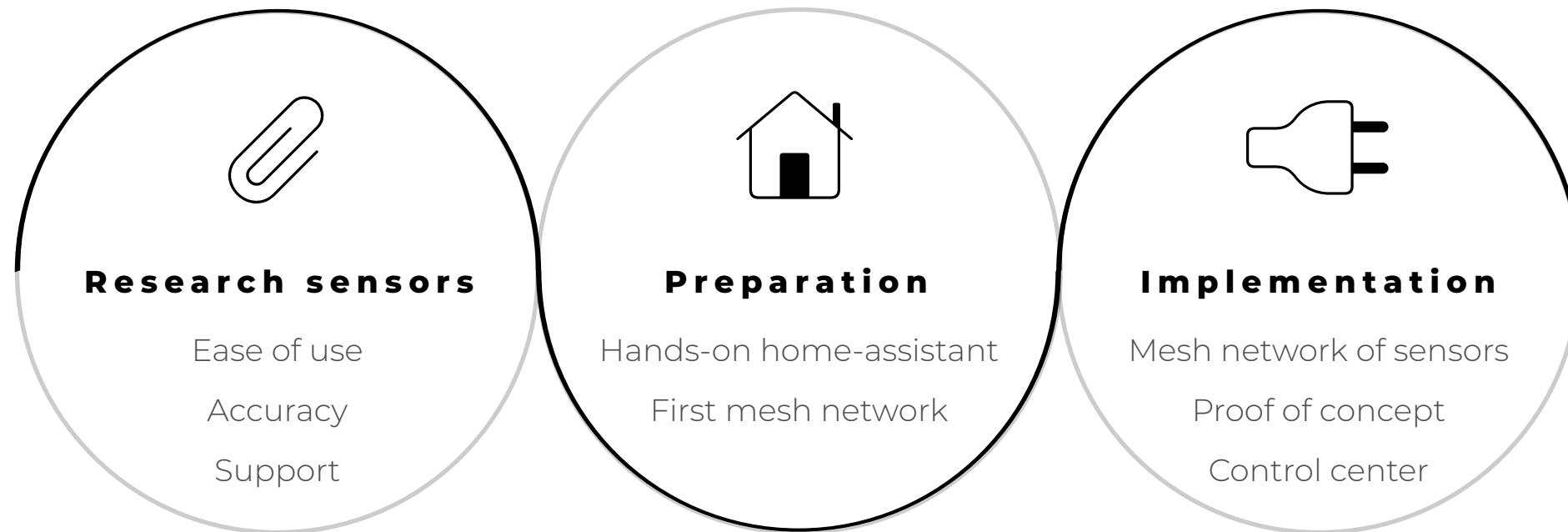
- Read data
- Visualize data
- Security

## Hardware

- Research the sensors
- Mesh network
- Configuration of server



# Schedule



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# Information reporting



## **Weekly report**

Meeting with Vincent

Mail to Maartje and Vincent



## **Evaluation**

Form filled in by Vincent

Intermediate presentation after week 7

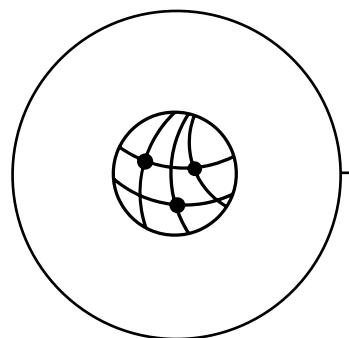


## **Final project handover**

Full report

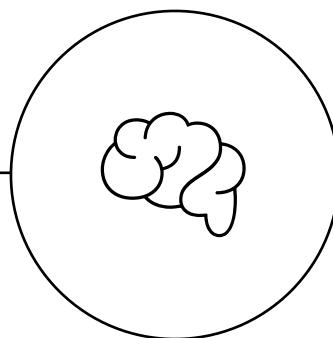
Step by step guide

# Project definition



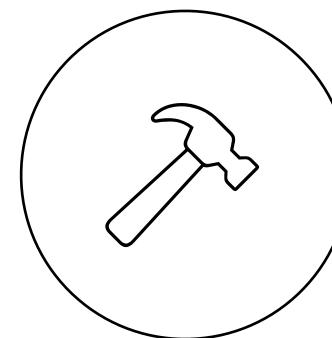
## In scope

Development sensor module  
Setup Home Assistant  
Mesh network



## Nice to have

TinyMI  
PCB  
Enclosure



## Out scope

Physical deployment of the  
network

# Business case

- **Users**
  - Every room
  - Teachers and staff of IUT
  - Students
- **Future**
  - Expandable and scalable
  - Add sensors



# Risk analysis



## **Mesh network not possible with Arduino IDE**

Use the Espressif IDE (use C)



## **Home assistant difficult to deploy on Dell Prodesk**

Use Raspberry Pi or alternative

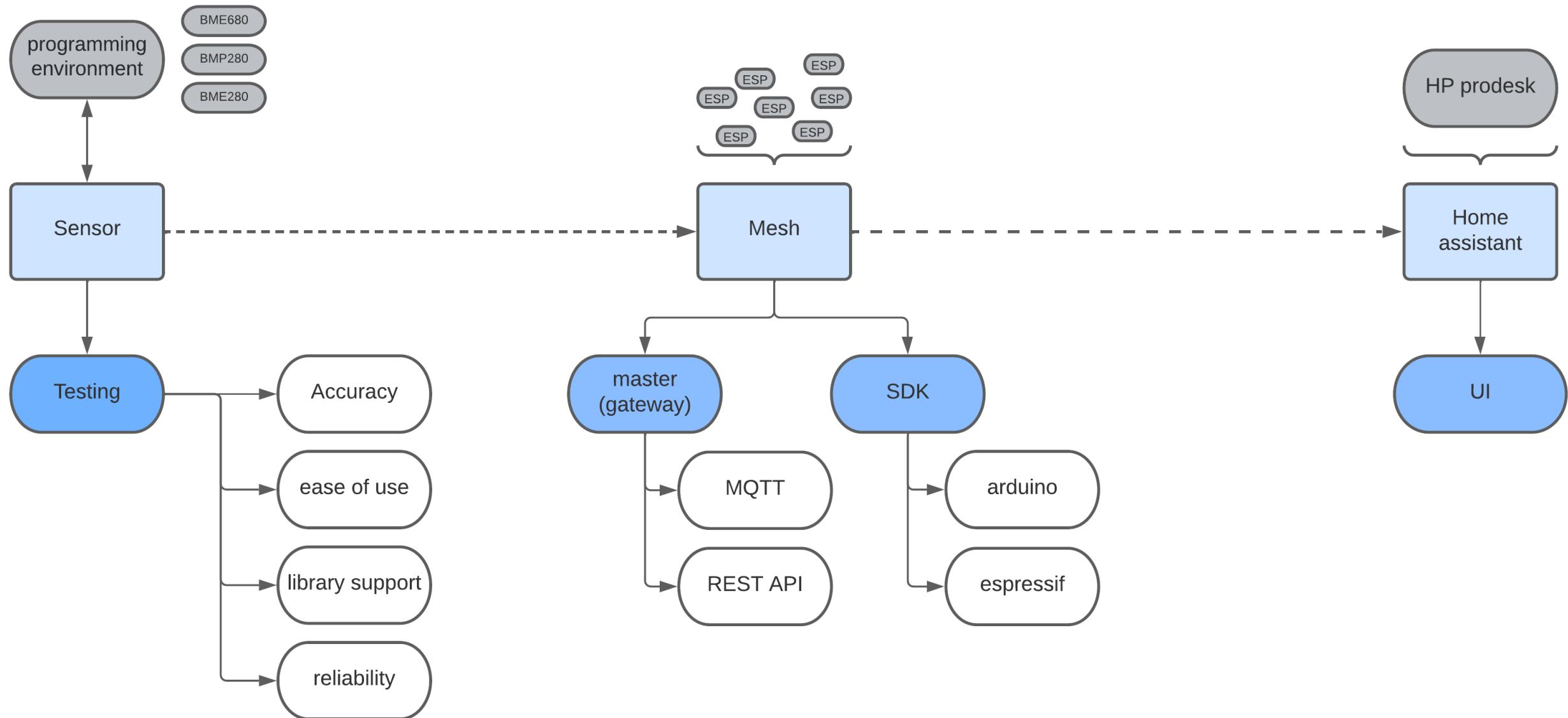


## **No access to hardware during Holidays**

Take hardware home before the break



# Overview





Internship  
U-Bordeaux  
2021-2022

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# Thanks for listening!

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