# Hydrosens

# Management monitoring

## Context

The client Ms Mouton makes a lot of experiments testing different products from her subject study. She follows a protocol, and she takes pictures of the results. She visualizes the absorption of the water on a treat piece of paper regarding the duration. The point is today, everything is made by hand. These experiments require a lot of precious time of Ms Mouton. The main point of this project is to automatize these steps following the same protocol. The project is spliced in two parts. The first part concerns the physical tools necessary to automatically take pictures in repeatable environment. The second part treats the development of the software to detect when the product fails.

## Objectives

Criteria of Ms Mouton:

* Easy user interface
* Gain some times.

Criteria for the consistency and the usage of the project:

* Make the experiment repeatable, same samples, same results:
  + Same environment
  + Fixed position of the camera and same lighting condition
  + Fixed position of the sample
* Usage guide

Functionalities:

1. Acquire picture every defined time.
2. Once the absorption is detected:
3. Visualize experiment result: at which time absorption occurred.
4. Visualize the flow rate of absorption.
5. Store the results.

## Management tools

* Github
* Teams
* Roadmap and Backlog

## First meeting – Story mapping 02/02/2023.

1. Understand the project of the client.
2. Understand the need of the client.
3. The steps of the project: Design a prototype, create a data processing tool, test and improve.
4. Create something simple of usage.
5. Functionalities:
   * Data output: absorption or not, amount of water, time at which absorption occurred, flow rate.
   * Let the user choose the duration between pictures.
   * Export a csv file with results.
   * Stop the experiment when all samples absorbed.
6. To contact Ms Mouton, use Teams or in face to face at school.

## Second meeting – Monitoring 02/10/2023.

1. Budget:

* Camera 2k: over 15€
* Use the camera giving but the teacher, Logitech 720p.
* Light: circular light or led -> we can test both.
* Check for wood if we build the box or buy a folding box.
* A budget can be assigned by the school.

1. The box:

* Number of samples: between 4-8 samples.
* Looking for a hydrophobic floor.

1. Program:

* Add a name for the folder of each experiment.

Third meeting – Monitoring 02/17/2023

We had a meeting without Julia

We have decided to share our files via git hub and we practiced using it. We came to the conclusion that we should buy as little as possible and we have a camera

* Create the list of tasks regarding the roadmap
* Search ideas for the floor box
* ask Cyril Durant if we can get the wood to establish the budget
* presentation : why do we want to build the box ourselves ? And budget
* Create a report of last week meeting
* Create the list of tasks regarding the roadmap
* Search ideas for the floor box

## Fourth meeting – Monitoring 02/24/2023.

**What we need to know**

How to put water droplets on all the samples on the same time? (With an acceptable delay of 10 seconds). Maybe we have to try 4 samples.

**conclusions**

We will make the box

**to do**

Email ciril durant