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# Logbook

*This is your logbook. Insert here all relevant information regarding the evolution of your project*

## Weekly Report

### 1st Week Report

We had to choose a topic and area from the options provided. To help with this, we attended a presentation where projects from previous years were showcased, introducing possible directions for our own project. We found it challenging to decide on a project, as many of the topics were broad and vague, making it hard to develop concrete ideas. Our goal was to select a project that would be interesting and relevant for the whole team. After considering our options, we chose the area "Smartification of Buildings" (Smart Cities). Within this area, we brainstormed several ideas and are now exploring the development of a dehumidifier system that reuses collected water for watering plants or supporting a small indoor garden.

### 2nd Week Report

In week 2, we focused on developing our idea within "Smartification of Buildings." We had several brainstorming sessions and had good dialogue within the team. During the team-building class on Tuesday, we got to know each other better, including which members of the team are highly competitive.

On Thursday, we had our first project meeting with all the professors. We left the meeting with some overall topics that we explored in our first Design Thinking workshop Friday.

At the moment, we are exploring an idea for a capsule that is meant for mini breaks to address the increasing number of mental health problems, such as burnout, which are often caused by challenging work environments.

### 3rd Week Report

During the third week, we participated in a Design Thinking workshop that focused on developing the design of our solution. In the previous week, we had already defined the main problem and identified our target group. Based on this, the goal of the workshop was to generate different ideas that could solve the problem and finally select one main solution.

In addition, we created a one-minute video explaining the problem and presenting our proposed solution. We also developed our first black box diagram and initial structural drafts of the product. This process was somewhat challenging because we had only recently decided on the project topic. Therefore, we needed to find a balance between explaining the concept in enough detail while keeping the design flexible, since some aspects may still change or be further developed later in the project.

Furthermore, we gave a presentation in the Communication class to practice how to present our problem and solution in a way that is clear and appropriate for our target group. We also prepared a presentation for Marketing, where we focused on our problem statement and our value proposition, including the elevator pitch.

For the report, we divided the chapters and tasks among all team members. Everyone can contribute ideas and content to each chapter; however, one person is assigned as the main responsible member for each chapter.

## **4th Week Report**

Week 4 was a busy one, mostly focused on getting our branding and presentations together. In Marketing we presented our updated problem statement and elevator pitch and we have already started the groundwork for the case study presentation.

In our teambuilding class we spent time reflecting on our team dynamic through some short essays. It's clear that our bonding activities have paid off as some of us needed a timeout from the group to stay productive.

We also had a presentation in Communication where we showed off our first logo and flyer draft. It didn't go exactly as planned because we had just decided to change our project's name. Presenting an outdated flyer definitely wasn't our best look but it was a good reality check on how fast things are moving.

## **5th Week Report**

In week 5, we focused on the project development chapter as well as on Jira. During this time, we planned in more detail which tasks need to be completed before the interim deadline in April. In addition, we created detailed schematics. However, we still need to continue working on how we want to implement all the electrical components. On the other hand, we also completed more detailed structural drawings. Based on these, we were able to decide on a more final shape for the capsule, as well as define the material layers and what should be included. Beside of that, we worked on a presentation about an ethical scandal, as well as a joint presentation summarizing all the work completed so far for the marketing and communication courses.

## **6 + 7th Week Report**

During the Easter break, we focused on preparing the interim presentation. We discussed which aspects are most important and how to present them effectively, given that we only have 10 minutes. In addition, we finalized the interim report and revised several sections. In particular, we completed the ethics, project management and design solution chapters. For the next steps, we identified the need to work on the software side by developing an app and outlining how the prototype will be built. Furthermore, we will need to define the functionalities in more detail and determine how they will be implemented in the app. Finally we also enjoyed the break :)

# Meetings

## 1st Meeting (2026-02-26)

### Agenda:

1. Presentation
2. Modus operandi
3. Project proposals
4. Electronic logbook (Wiki)

### Minute:

*Different kind of projects were introduced to us during the session as well as the objectives. In addition, the projects from the past years have been explained and helped to get an idea about the EPS. After that we were free to discuss the project options in our team.*

## 2nd Meeting (2026-03-05)

### Agenda:

1. Our Project Topic
2. Team Collaboration
3. Which Project Idea?
4. Topics for next week

### Minute:

When making decisions in the project, we must consider ethics and sustainability. When choosing components, we should be able to justify our decisions. For example, when selecting a microcontroller, we will consider factors such as power consumption, available functions, communication types, etc. As we develop our idea, we must always consider the market and conduct a market analysis. For the next meeting, we need to create a black box diagram (an overview of the subcomponents that our system consists of).

We should consider:

1. What is the most important part of our product?
2. What makes our product different?

There is a difference between the prototype (POC - Proof of Concept) and the product intended for the market. We presented our idea of a humidifier to the EPS Professors and talks about possible ways to build it. Biggest problem is on how to create a unique way on storing water from the air. We discussed things as value of the idea. Here the Professors advised to go again into Ideation. Brainstorm of other ideas for "Smartification of Buildings" could be like Air quality, Natural light, Room structure (e.g., a

main wall that can move), Energy optimization, Sound, Heat (or how can we cool buildings?), Problems with moisture, Airflow in buildings, Look at old buildings and assess how we can optimize them. Our biggest task for this week is to go again into ideation and find a suitable idea.

For next week: Prepare a presentation, investigate existing projects, define a search string, use AI, but be clear about our search string.

### **3rd Meeting (2026-03-12)**

#### **Agenda:**

1. Final Project idea
2. Blackbox diagram
3. Structural drafts
4. Defining materials

#### **Minute:**

The professors explained to the team that we should already start filling the report chapters we have worked on, especially the chapters Introduction and Background & Related Work (our project as well as existing similar projects and products). If we create tables, it is important to refer to them in the text before the table appears.

In addition, we should already begin working on the Project Development chapter by including a picture or image of the solution, as well as describing its features and components. For now, only the Introduction and Ideation part of the Project Development chapter is required.

The black box diagram can be further developed during the next weeks by adding more details about the power supply and the components that use it, as well as how they are connected.

Regarding the product itself, the professors advised us to think about the airflow system. For example, whether the airflow should start at the bottom and move upwards to the top, or whether a fan-based solution would be more appropriate. In addition, we need to examine the size of the capsule and the materials that will be used.

After the interim presentation, we can focus more on developing the prototype of the product.

### **4th Meeting (2026-03-19)**

#### **Agenda:**

1. Material list
2. Logo
3. Branding guidelines
4. Plans for next week

**Minute:**

The professors provided guidance on key areas to focus on in the report:

1. Format the bibliography using BibTeX
2. The "List of Materials" must include local suppliers (a list has been uploaded in Teams for reference)
3. Material prices must include VAT and transportation costs
4. Use correct unit formatting (value + space + unit symbol), e.g., 23 %, 10.8 kg, 33 €
5. Be mindful of copyright regarding logos and names (this can be addressed in the ethics section)
6. Include a list of acronyms

Considerations for our product:

1. Frame: Consider screw-free joints (e.g., traditional Japanese joinery methods)
2. Investigate whether it is possible to avoid using metal and screws entirely
3. Functionality: Ensure the product is easy to clean
4. Evaluate how light will enter the structure
5. The buck converter and relay module can be removed from the materials list if no components require more than 12 V

By next week, we will begin writing the "Project Development" section and ensure that all references to tables are correct and consistent.

**5th Meeting (2026-03-26)****Agenda:**

1. Detailed Schematics
2. Structural Drawings
3. Cardboard Model
4. Plans for next week

**Minute:**

Minute:

The professors provided guidance on the interim presentation and report requirements:

1. Interim Presentation: Max 10 minutes and 10 slides. All team members must speak for an equal amount of time. The focus should be on the "design journey."
2. Report Formatting: Describe every image and table in the text before they appear. Remove all titles/captions from inside the images themselves.
3. Terminology: Standardize all text to Bloem and ensure "Bloemshell" is completely removed.
4. Glossary: Complete the list of acronyms and technical terms.

Considerations for our product:

1. Structure: Use heat to bend the wooden beams for the shell. Continue investigating screw-free

Japanese joinery methods.

2. Airflow: Use a quiet 12V fan (will require a voltage drop circuit). Consider regulated openings at the bottom for natural airflow, as high noise cancellation and high airflow are difficult to achieve together.
3. Smart System: The microcontroller needs WiFi to sync the mobile app with the lighting and music.
4. Audio: The speaker should be a standalone WiFi/Bluetooth unit connected to power.
5. Power: LED strips

## 6th Meeting (2026-04-01)

### Agenda:

1. Brand Identity: Final Logo
2. Software Development Idea
3. Plans for next week

### Minute:

The professors provided more feedback on the detailed schematics, they also suggested the usage Raspberry Pi because it supports more features

1. Reference in the report table figures
2. The materials voltage matching voltages and detailed schematics power supply

## 7th Meeting (2026-04-16)

### Agenda:

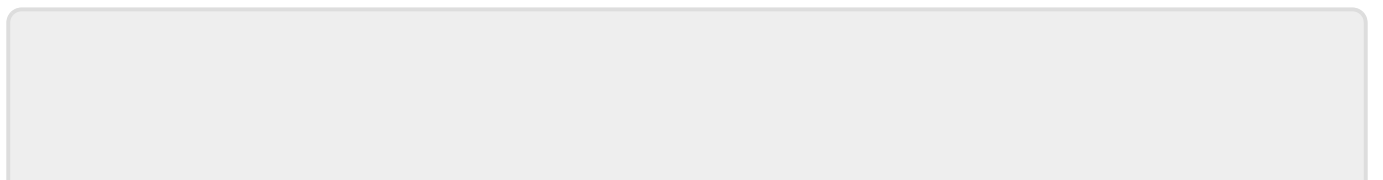
1. Interim Presentation

### Minute:

## Activities

*Please register here all accomplished project activities*

Start	End	Task	Description	Who



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