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Logbook

Weekly Report

1st Week Report

During the first week, our group had an initial meeting where we discussed possible directions for the project and shared ideas. The session was mainly focused on brainstorming and identifying themes that interest the group. Many different concepts were proposed, especially around interactive experiences, smart cities, and the use of technology to connect people.

Project Wishlist

- Creating an innovative city experience that combines digital art with public spaces.
- Developing a system that counts how many people walk across a bridge.
- Designing reusable graffiti walls for public interaction.
- Bringing people together through collaborative art installations.
- Smart scooters and bikes that communicate with tourists when passing monuments (smartification of tourism).

Then we planed that the next meeting is about figuring out what our project is going to be, with the pains and gains diagram to figure out the best idea.

2nd Week Report

Activities during this week:

- After a comparative analysis of our previous ideas, our group officially confirmed the project theme as “Sustainable Fish Habitat.” This shift was made to simultaneously address environmental sustainability and data-driven, efficient ecosystem monitoring.
- Preliminary Feasibility Study: We conducted abstract research on the technical feasibility of the project. This included investigating whether eco-friendly materials can withstand underwater conditions and identifying the necessary hardware required for data collection.
- Administrative: To ensure efficient teamwork, we assigned roles for weekly tasks and documentation, such as Wiki management and report drafting. (Note: Specific technical roles for the project execution are currently under discussion.)

3rd Week Report

Research:

1. Similar projects : Research on projects similar to the current one (e.g., Korea’s Sea Forest, Portugal’s Artificial Reefs) and investigation of structures suitable for the local marine environment by referencing local coastal artificial reef network cases.
2. Which endangered species? European Eel, Humphead wrasse, Nassau grouper, Atlantic Goliath Grouper, Smalltooth Sawfish

3. Materials : Eco-friendly Concrete, Bio-Rock
4. Ideal structures/patterns : Modular Hexagon System, Cavities of various sizes, Textured Surfaces

Wiki:

1. Eco-efficiency Measures for sustainability

1. Structure & Black-box diagram

Ethics & Deontology:

1. Elevator pitch
2. Ethics analysis

4th Week Report

Research

1. Materials
2. Sensors
3. Concepts
4. Other projects
5. Osborne reef scandal (ethics scandal presentation)

Presentation

1. Ethics scandal powerpoint
2. Pitch

Communication

1. Flyer
2. Product name
3. Brand logo and name

The blackbox diagram is also been changed to a more clear and readable diagram. We also started to design a modular structure for the fish habitats.

5th Week Report

Wiki

1. Cleaning up
2. Working on the Marketing Plan and Related Works

Sprint

1. Daily scrum meeting
2. Reviewing this week's work and assigning tasks for next week

Presentation

1. Communication (revised brand book)
2. Ethical & Deontological Concerns

6th Week Report

Wiki

- Organized Wiki
- Fixed some mistakes

Sprint

- Daily scrum meetings
- Retrospective of last week

Ethics & deontology

- Osbourne reef presentation

Marketing & communication

- Presentation

Project

- 2 meetings with Manuel and Jorge discussing material and sensors etc.

9th Week Report

Wiki

- Update the wiki based on MSS's feedback

Project

- Start writing the paper
- Finalize the 3D model video
- Work on the poster
- Present the leaflet

Prototype

- Receive the prototype components

13th Week Report

Wiki

- Update “smart block” to “smartlogger”
- Revise typos

Project

- Submit the scientific paper
- Work on the team video

Prototype

- Receive our final 3D-print mold
- Test the prototype's sensors

Meetings

1st Meeting (2026-02-26)

Agenda:

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

Minute:

2nd Meeting (2026-03-05)

Agenda:

1.Review of Project Ideas

- Brief recap of the ideas from the brainstorming session.

2.Evaluation of Ideas (Gains and Pains)

- Discuss the main benefits and challenges of each idea.

3.Selection of Project Idea

- Compare the ideas

4.Project Feasibility

- Discuss the required technology and whether the project is realistic within the timeframe.

5.Next Steps

- Team roles

Minute:

Last meeting we changed the theme to Smart Marine Habitats. From here we present the little idea we had to the teachers and they gave us green light to the project. We also ensured the group roles, for them rotating each week.

3rd Meeting (2026-03-12)

Agenda:

1. Changing our project topic to a smart marine habitat structure

2. Continue with the information researching in following areas:

- Similar previous projects
- Material condition
- Ideal structures/patterns
- Endangered fish species

3. Go through what is technically realistic to achieve

- economically
- in terms of skills/knowledge in our group

4. Review of blackbox diagram

5. Next steps?

Minute:

In the last minute we had some reviews to our Black Box Diagram. We also recieved some tips on working more in the 2nd chapter of the wiki, about looking for references of similar projects, background and related work.

4th Meeting (2026-03-19)

Agenda

1. Work on the structural model
2. Have more drafts options to work with.
3. Try to start with Gantt Chart on Microsoft Project.
4. Specify more detailed schematics along with structural drawings

Minute

We received feedback to fix issues in the wiki and ensure that all completed work is included in the deliverables. Minor adjustments are needed for the black box. The report should also be revised, cleaned up, and reorganized to improve clarity and consistency.

5th Meeting (2026-03-26)

Agenda

1. Deliver the structural drawings, the Structural Drawings and Cardboard Model
2. Clean up the wiki
3. State of the art research
4. Start on the interim report/presentation

Minute

The professor said the need to clarify the structural integration of the sensor system, as the current connection mechanism remains unclear. It was also emphasized that high deployment costs and system weight may significantly impact market feasibility, making it essential to clearly define the target users. Additionally, packaging should serve a functional purpose beyond protection, and different data communication methods should be evaluated to ensure technical and economic viability.

6th Meeting (2026-04-01)

Agenda

1. Prepare interim presentation & report
2. Complete the marketing analysis and strategy
3. Improve the wiki with the new changes proposed
4. Submit all the changes we have done to the wiki

Minute

We received tips on where to search for suitable sensors, as well as information on who to contact if we have feedback or questions about the electrical schematics. We were also advised to compare different possible solutions before deciding how to proceed.

The teachers did not support Ockham’s Razor’s idea of creating a simple reef without any sensors. We also got feedback on parts of the wiki that should be improved or corrected.

7th Meeting (2026-04-16)

Agenda

- Make the 3D video
- Read wiki-feedback
- Change wiki according to the feedback
- Start looking into making the prototype
- Design the smartblock
- Meeting with Manuel

Minute

8th Meeting (2026-04-29)

Agenda

- Discuss the prototype
    1. Present updated smartblock
    2. Discuss the feedback from experts

Minute

We identified areas where our report could be improved. We should include the conclusions from the discussion with Ana-Paula and Alfredo in the report.

9th Meeting (2026-05-14)

Agenda

- **Packaging solution** Present the proposed packaging solution.
- **Leaflet** Show the leaflet concept, including content, layout, and key messages.
- **3D model** Present the 3D model.

Minute

- We got the sensors and electronics for the prototype, SD-module, SD card and battery is still missing.
- We got instructions for making the paper.
- We should consider a wheelsolution for the packaging of the concreteblocks.
- The smartblock should be rounded on top or have some kind of “roof” over it to prevent some algae growth on the smartblock.
- Leaflet was a bit too dramatic and was still missing some proper text. We should also add a QR code to the wiki.

- 3D model video - we should still add texture to it, and also add some sound / music.

10th Meeting (2026-05-21)

Agenda

Protoype

- The SD module works on 3.3 V logic and microcontroller 5 V. Based on the datasheet a logic level converter is required.
- We have 2 temperature sensors and one of them has a broken contact.
- We need something for the batterycables to connect it to the microcontroller.
- The rest of the sensors and coding seems to be working on the dry testing in the classroom.

Minute

- Got the SD module problem solved → We build a voltage divider with 1k ohm and 2k2 ohm
- Got connections for the batterycables
- Need to do some changes to the paper
- Discussed many different approaches for the building of the concrete block, the end result is that we are going to 3d print 2 pcs 1/4 moldpieces so that we can make the concrete block in 2 halves. We will later on just hold together the 2 blockhalves with something like a screwclamp

11th Meeting (2026-05-28)

Agenda

Tests: Review planned tests, testing goals, responsibilities, timeline, and any issues or risks.

Poster: Discuss poster content, design, layout, required information, and deadlines.

3D mould

Prototype: SD card reader broken? cant get it to detect any cards.

Minute

The team reviewed the test plan, poster content, and 3D mould design with the professors.

The main conclusions were to finalize the mould dimensions, use a half-mould approach for the cement mortar prototype, improve the poster visuals, and solve the SD card reader issue before testing.

12th Meeting (2026-06-02)

Agenda

1. Paper completion and submission status
2. New electrical schematic design & Review
3. Prototype module creation via 3D-Printer

13th Meeting (2026-06-11)

Agenda

1. Present the video
2. Learn more about the concrete prototype
3. Testing of the Smartlogger prototype has been completed

Activities

Please register here all accomplished project activities

Start	End	Task	Description	Who