

Logbook

Weekly Report

1st Week Report (17.02 - 23.02.2020)

Welcome session, teambuilding exercises, presentation of the possible proposals and our selection. Swift arrival at a team name that everyone liked - BIS, Beautiful International Students. In the first project management classes the team was given an introduction to the Waterfall and the SCRUM management methods, their advantages and disadvantages.

2nd Week Report (24.02 - 01.03.2020)

In the second week the team had it's first meeting with the coordinators and clarified a few doubts and advice about the best way to proceed with the project. In the Energy and Sustainability Class we had introduction and a small exercise in Sustainability and Sustainable Development. In the report we started the first two chapters - Introduction and State of the Art - and a few other chapters as well. We had a brief introduction to what Marketing is and we will be doing during the semester and in Project Management we delve into Agile Concepts, what a successful project is and how to use SCRUM to elaborate a Product and Sprint Backlog.

3rd Week Report (02.03 - 08.03.2020)

In the third week, our team started the Design Thinking Course where certain steps have been taken to develop a scenario for our product and for the people we are addressing and to establish some problems and the purpose towards which we are heading. Also, the first Technology Course class where we had a thorough introduction to Python.

A video for the Design Thinking Course is shown here:

<https://www.youtube.com/watch?v=eUOtLtr2P7g&feature=youtu.be>

[time_is_precious.mp4](#)

4th Week Report (09.03 - 15.03.2020)

This week was a difficult time for progress because of the quick escalation of the COVID-19 outbreak that lead to the suspension of all classes from Thursday, the 12th, until at least the end of the month. Despite those setbacks the group managed to go forward and conclude the state of the art and start the structural sketches for the shelter. A Project Backlog and the Initial Sprint Plan were also created.

5th Week Report (16.03 - 22.03.2020)

In the 5th week we debated some topics regarding the possible folding mechanisms for disaster shelter, we did a research to choose a suitable name for the product and we created the first draft for flyer and leaflet.



Figure 1: Brochure BeeSafe Shelter



Figure 2: Flyer BeeSafe Shelter

6th Week Report (23.03 - 29.03.2020)

A brainstorm was done to search for a new brand name. Besides the name, the logo changed. We tried to make the logo more 'remarkable' and a more reflective of what our brand wants to offer. During this week a lot of research was done to define the shelter design and to find the best mechanisms to work with. The sustainability - and ethical chapter was written.

7th Week Report (30.03 - 05.04.2020)

During the 7th week our team focussed again on finding the best mechanisms for our shelters in general. The final design and mechanisms were defined. After deciding the final design, a cardboard model was made of the shelter. Our team started with the material research for all the elements. We started writing the Project Management chapter of the report, we also continued the Marketing chapter.

8th Week Report (06.04 - 12.04.2020)

The first of our CAD model was made during this week. We continued the material research and made up a list of materials. Little elements (hinges, screws...) were defined. We improved the design of the leaflet and flyer. The chapters Marketing, Sustainability and Project Management were supplemented

or updated.

9th Week Report (13.04 - 19.04.2020)

The 16th of April we had to do the interim presentation. Some more research done about the ventilation system, the doors, the way of connecting the shelters and the way to fix the shelters to the ground. Every member of our team prepared their part for the presentation, on the 15th of April, one day before the interim, we practiced the presentation with our communication teacher Ana Barata. During this week a presentation about the sustainability of SafeBIS and a presentation about the Batterygate of Apple (ethical scandal) were given.

10th Week Report (20.04 - 26.04.2020)

During this week our team focussed on solving the equatorial climate problem. A construction to lift the shelter up from the wet ground was developed. A way to let no rain come inside the shelter was found as well. One of the members worked hard on the CAD model, it was important that all the mechanisms and types of connectors were added in the model. Besides improving the design and some mechanisms, a video about SafeBIS shelters was edited, the marketing - and project management chapter were supplemented and updated. Two team meetings were done during this week to talk about the tasks and our team spirit.

11th Week Report (27.04 - 03.05.2020)

During this week the video was updated and uploaded. The team started to write the paper, a first version of the abstract and introduction was written. A general repost check was done to see what was still missing. Chapter 7, project development, was supplemented. The marketing chapter was finished and one of the members started to design the poster.

12th Week Report (04.05 - 10.05.2020)

The paper of the report is supplemented with the state of art (as a first part of the 'background') and with a first version of the project development part. The team focused on trying to find the final mechanisms/components for the shelter design. One of the members continued working on the poster, another member made a website for the shelter. The CAD model is finished and some simulations tests were done in Solidworks. The report is adapted/refined according to the comments of the teachers.

13th Week Report (11.05 - 17.05.2020)

During this week the CAD file was updated as the shelter got defined more precisely. A first simulation was done to calculate if the floor and bottom construction are strong enough to carry 3 men (+ maybe extra furniture) in a shelter. The simulation wasn't finished so during next week the focus will also be on this. One member of the team did research to develop a database website for all the data we have. Another member finished a first version of the poster. For the report in general, a lot of

updates were done to redefine the report.

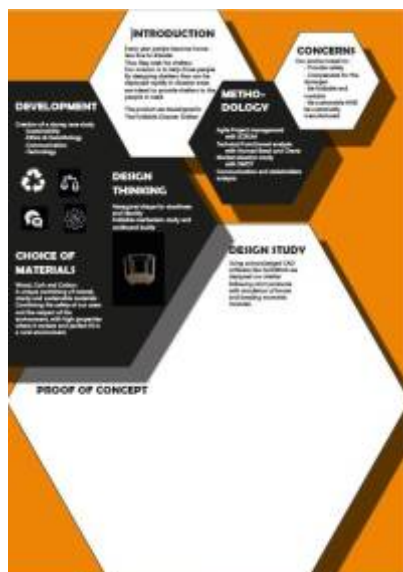


Figure 3: Poster SafeBIS Shelters

14th Week Report (18.05 - 24.05.2020)

This week the team focused on trying to make the simulations in solidworks and refining the CAD model. As the model is almost done, only little updates need to be made next week, for the simulation some more hours will be needed next week. The report got refined more, the poster and flyer were updated, the chapters sustainability and marketing got their final improvements, one member started to make the maquette.

15th Week Report (25.05 - 31.05.2020)

The time of this week was spent on doing the simulations in solidworks, analyzing the results of it and searching for solutions to make the shelter better. There is worked on the maquette, the final video and poster were finished, the marketing chapter was improved, the final version of the leaflet and flyer were uploaded, a final conclusion was written about the project and the paper was edited.

16th Week Report (01.06 - 07.06.2020)

The time of this week is used to finish the manual and poster, to add the last details to the CAD file, to make the last simulations and to describe the results of it. The new results were analyzed, and the limitations of our model were discussed. Also solutions and future research were defined. The scale model was finished, such as the paper. A full check was done on the report to check if everything was finished and correct. We started to make the final presentation. A meeting was done with the communication teacher to get feedback about our poster and manual.

17th Week Report (08.06 - 14.06.2020)

This week finalized the last things and made the presentation. All deliverables were uploaded and the final presentation was done.

Meetings

1st Meeting (2020-02-20)

Agenda:

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

Minute:

A presentation was given informing us of the general characteristics of EPS and how we would be working during the semester. Around sixteen different proposals were shown and we were given detailed information about each one as well as examples on how/where we could apply those proposals.

At the end of the meeting the team sat down and choose the top three proposals that each member rated with a number system and the resulting choice was submitted.

2nd Meeting (2020-02-27)

Agenda:

1. Define "foldable", what "disaster" and what kind of "shelter"
2. Brainstorming
3. List of requirements
4. Miniature or full scale prototype?
5. Does the miniature model need to be made with the final materials that the prototype will use?
6. Specific deadline involving the base concept of the shelter?
7. Does it need to be unique?
8. What enquires should we bring to the weekly meetings?
9. Learn how to work with DokuWiki?
10. Preferred ways of work, directions and what to avoid.
11. What are the deliverables for this project.
12. How soon should the tasks be assigned to the team members?

Minute:

During the reunion the coordinators clarified any doubts the team had about the project and gave some advice on how to proceed forwards.

3rd Meeting (2020-03-05)

Agenda:

1. Explain the next objective in planning
2. Explain the time section?
3. How to integrate design workshops into the report
4. Is there a material library around in ISEP?
5. Do we need to make a full-size shelter? Or can it be a 1/2 or 1/4 scale?

Powerpoint about what we did this week:

ppt_meeting_3.pptx

Minute:

Uncertainties about the time section got cleared. It was indicated that the price/m², the dimensions, and the materials had to be discussed for every type of shelter in the State of Art. Another point of criticism was to take care of the right references for all the used sources.

4th Meeting (2020-03-12)

Agenda:

1. We did the BlackBox this week, what needs to be changed about the structure in the next week;
2. Discussions about the BlackBox;
3. How to add sub-sub-sections to the report table of contents.
4. Is it important to define the shape of the shelter + is there a final date for it?
5. What is the final date for the materials?

Powerpoint about what we did this week:

week_4_presentation.pptx

Minute:

The teachers have clarified to us some specifics about the BlackBox. We discussed some important points and requirements that the shelter must meet and also about the possibility of implementing a system that can realize the maintenance of the shelter. The team presented the first sketches made after researching and analyzing the strengths and weaknesses of each sketch. Thus, 4 design concepts were chosen to be analyzed and compared to finally choose the best option. A strong point, an innovative idea that can keep the product for a long time on the market is the possibility of customizing the tent, so we will consider this and put the method into practice.

5th Meeting (2020-03-19)

Agenda:

1. The deadlines remain the same, except for the interim?
2. What will happen with the cardboard model deadline?
3. Logo for the shelter
4. Flyer and brochure
5. Continue with structural draft
6. Folding mechanism
7. Customizable shelter

Minute:

There have been clarified the concerns regarding the change of the program and the course of the courses, as well as for the following deadlines. We have received some feedback for the flyer, leaflet, and logo, so we will continue to work and change the logo so that it is valid and as representative of the desired product.

Next, we will draw and create some sketches to arrive at the best solution for the folding mechanism and the components of the shelter.

6th Meeting (2020-03-26)**Agenda:**

1. Representing the folding method of the shelter;
2. Maintenance;
3. Is the content of the chapters realized so far ok?
4. Name, Logo, Motto;
5. What to do in our case for schematics, structural drawings, system schematics? (the difference between them)
6. Material to be used for the "cardboard model"

Minute:

Feedback was given about the logo and we were advised to check if the chosen brandname wasn't taken yet. So far the chapters that we realized were alright, for the folding mechanisms we need to keep doing research so we can compare them and choose the best one. The cardboard model can be realised just in normal cardboard, everything you can find at home can be used.

7th Meeting (2020-04-02)**Agenda:**

1. Can we create our own elements of connection between the shelter tubes?
2. Can we create the joints using a 3D printer or something else?
3. Do we need a list of materials for the real product and also for the prototype?

[Powerpoint about what we did this week:](#)

week_7_presentation.pptx

Minute:

During this meeting, the final design of the shelter and mechanisms were presented. The following advice was given to us:

- Integrate a ventilation system in the top of the shelter so there will be an exit for the warm airflow
- think carefully about which sides you will use to connect multiple shelters
- to find good connectors for the roof, check the wiki's of the last years and do research about connectors in dômes
- when decided to 3D-print your own connectors, take into account the print possibilities
- strengthen the roof by connecting opposite corners
- how will the shelter be fixed on the ground?
- complete chapter 7 by adding the whole process of the development
- upload the leaflet, flyer, and list of materials

8th Meeting (2020-04-16)

Agenda:

1. Interim Presentation

[Powerpoint of the Interim Presentation:](#)

Interim_Presentation_Team_3

Minute:

We received feedback for the leaflet, flyer, and PowerPoint presentation. We have to take into account the fact that it can rain on equatorial regions. Provide a way to make sure there will come no rain into the shelters. Approach the Sustainability chapter from the 'shelter' perspective (as a product) and from the 'company' perspective. The team is still working on the wiki chapters and the following tasks.

9th Meeting (2020-04-23)

Agenda:

1. design shelter
2. ventilation system
3. doors/connection
4. ground fixation
5. rain resistant legs

Questions:

1. list of materials
2. prototyping
3. video

[Powerpoint about what we did this week:](#)

Week_9_presentation

Minute:

The rain resistant legs will be necessary in the equatorial climate, putting the shelter of the ground will promote a good ventilation for the shelter. When choosing the zippers of the shelter, make sure you understand the different possible sewing techniques and sew them from the inside so they are fully waterproof. Prototyping won't be possible this year because of the COVID-19. No visits to material companies are allowed. The prototype that has to be made, is constructed out of maquette paper, all systems which are able to make, has to be shown. The update for the list of materials includes only the components for the shelter, not for the prototype anymore because it can't be created out of the real materials.

10th Meeting (2020-04-30)**Agenda:**

1. 'Becoming a better team'
2. CAD model: all defined parts
3. Project Management
4. Video

Questions:

- Feedback on the interim report

[Powerpoint about what we did this week:](#)

Week_10_presentation

Minute:

The supervisors suggested that we could combine the foldable roof and the ventilation, we should search for a way to work this out. An other important thing is to make a simulation with the CAD model. By doing this we can see if the structure is strong enough or if we need to strengthen it more. We need to improve the ceiling structure, maybe by adding more beams. George will keep in contact with us to help.

At the end of the meeting we talked about the paper and the packaging of our shelter. Both topics need to be included in the sprint of the new week. Benedita told us to focus well on the fact that the way of packaging is sustainable.

11th Meeting (2020-05-07)

Agenda:

1. The extra part of the fabric to make it fixed to the structure and to keep the rain outside
2. Simulation of the CAD model
3. Packaging solution
4. Will we continue only with online classes and meetings? And if so will we still need to make the prototype since we are not together, not even in the same country?

[Powerpoint about what we did this week:](#)

Week_11_presentation

Minute:

We need more details about the total weight of the entire shelter, the windows, the doors, the connections between the shelters, the ventilation, the forces, the packaging.. All details need to be defined so we can start with making the prototype. Start with adding summaries of the report to the paper.

12th Meeting (2020-05-14)

Agenda:

1. Website
2. Packaging
3. Bottom structure shelter
4. Fabric connection to skeleton
5. Ventilation

[Powerpoint about what we did this week:](#)

Week_12_presentation

Minute:

Make a list with the pro & con's for the extra window to see if it's necessary for the ventilation. The website is well done, send the used softwares to the teacher so they can check it and provide us maybe with better software of the school. Make a new chapter in the wiki for the website. It's good that the shelter is refined, right now only the strenght simulations (forces of the nature, weight of people and furniture inside) are missing, also the general dimensions should be showed during next meeting. A tracking app for the shelters is a way to upgrade the project, try to do some research about this and to develop an app. Start creating the manual and poster if possible.

13th Meeting (2020-05-21)

Agenda:

1. Dimensions
2. Simulation
3. Poster
4. Database
5. Packaging solution

Questions:

1. What is the deadline for the maquette?

Powerpoint about what we did this week:

week_13_presentation.pptx

Minute:

We were told that the poster that we had right now was good to represent EPS and the learning experience but not to represent the product/solution. A second poster has to be made to represent this last one as the desired poster has to serve as presentation material for the final product. The team was questioned why we reduced the capacity of people for one shelter from 4 to 3, it is important that the team is able to explain why we made this decision during the final presentation. The supervisors told us that the number of people to put in one shelter has to cohere with our marketing strategy (how can we convince people/the government to buy/finance shelters that serve for 3 people?). The last subject of the minute was that the team has to make sure the roof is fully defined and the fact that the simulations have to be done by next week!

14th Meeting (2020-05-28)

Agenda:

1. Outer fabric layer that provides better ventilation
2. Folding mechanism
3. Simulation
4. Database website

No PowerPoint was made for this week as we shared our screen to show the CAD model and the functionality of the database website.

Minute:

Starting with the database website, Benedita advised us to use the free software that allows us to use it for one month. So we can show it at least during the final presentation. Concerning the outer layer fabric, the supervisors were very excited as this was a good solution for the roof and will work as an

insulation layer. As the simulations still weren't done, the supervisors advised us to try to make the simulations in other software, maybe this way it would be easier. For next week it is really important to show the exact dimensions, volume, maximum load of shelter, the weakest spot of the shelter and the solutions we have to improve the concerns we have (the equatorial area has strong, short winds of 75 km/h, how to make sure the shelter stays where it belongs?). The team also has to focus on finishing all the deliverables.

15th Meeting (2020-06-04)

Agenda:

1. Dimenstions
2. Simulation results
3. Maquette-work in progress

[Powerpoint about what we did this week:](#)

Week_15_Presentation

Minute:

During this meeting all dimensions of the shelter were showed so we could explain clearly which dimensions were important while doing the simulations. The required forces on the shelter were listed up to explain how the simulations were done and the results of the simulations were discussed. According to the simulations, we were advised to do a simulation with the real hinges included. One of the supervisors advised to only focus on the weakest points when trying to improve the shelter.

Regarding the paper, we were advised to include personal outcomes of all our group members. In this outcomes we have to describe our EPS experience and the experience of doing a project on long distance.

16th Meeting (2020-06-09)

Agenda:

1. Video
2. Poster
3. Simulations
4. Tracking Application
5. Are fabrication drawings for the parts required?
6. How long is the final presentation supposed to be?

Minute:

The final video, tracking app and poster were showed. We received some feedback about the volume of the video which we have to improve. The last changes have to be made for the poster, including

change the title to a better position. For the simulations an individual meeting between one of the supervisors and one of the members was scheduled to refine and finalize the tests. Feedback about the paper was given as well.

Activities

Please register here all accomplished project activities

Start	End	Task	Description	Who
2020.02.20	2020.02.20	Project Proposals	After careful consideration and voting the team chose the "Foldable Disaster Shelter". Selecting the team name.	Andreea, Eduardo, Gabriel, Jelte, Lore and Vladimir
2020.02.21	2020.02.21	Project Proposals	The proposal was accepted	EPS at ISEP

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