Project plan
Grip on Sound

Snorkelkat Research Group Inc.
Eindhoven

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Author	**:**	**Group 2** (Snorkelkat Research Group Inc.)

Version

Version	Date	Author(s)	Status
1.0	11-10-2023	Group 2	First draft
1.1	30-10-2023	Group 2	Changed according to feedback from Bardt

Communication

Version	Date	To
1.0	11-20-2023	Bardt van der Dennen
1.1	30-10-2023	Bardt van der Dennen

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1.   Project Assignment

1.1   Context

From the beginning of 2023, a new law in the Netherlands requires primary school children to have at least two hours of physical education per week. This means physical education teachers will have to spend more time in gymnasiums.

However, noise levels in gymnasiums often exceed 90 dB(A) during an eight-hour working day. This is equivalent to the constant decibel level of a leaf blower or an underground train. Even before the new law, many physical education teachers were experiencing the effects of high noise levels in these gymnasiums.

Exposure to high decibel levels can cause concentration problems, hearing loss, headaches and even tinnitus (tinnitus). We want to help them better understand the problem and take control of the noise level in the gymnasium by using technology.

1.2   Goal of the project

Design Challenge
From our stakeholders:
How can physical exercise teachers in primary school get more insight into the sound levels and stress during the class?

What problem are we solving?
PE/Gym teachers need to be aware of the negative effect of loud sounds because they can affect their hearing and stress levels.

Desired situation
If the project is executed well, the result (desired situation) would be that PE/Gym teachers are able to be easily made aware of noise levels in gym halls.

1.3   The assignment

The assignment is to design and create a prototype of a mobile smartphone app that can show important data to PE/Gym teachers to raise awareness in a user-friendly way.

The result should be, at minimum, a clickable prototype of the designed app, validated by user tests and research.

1.4   **Scope**

The project includes:	The project does not include:
UX/UI (smartphone) research document	High-fidelity native mobile application in Swift/Kotlin
Dashboard UI research document	
Low-fidelity UI wireframe design (Figma)	
High-fidelity UI clickable prototype (Figma)	
(Possibly) App demo prototype (PWA)	

1.5   **Conditions**
- Designs should be made in Figma and delivered as Figma files.
- Coded prototype (if applicable) should be hosted online with a preview and production environment, and the code should be made available to stakeholders on GitHub in a private repository.

1.6   **Finished products**
- UX/UI (smartphone) research document
  - o Document on UX for smartphone designs, lay-outs, understanding mobile users
- Dashboard UI research document
  - o Document researching dashboard design possibilities, lay-outs, how to properly provide data to the user in a user-friendly overview
- Low-fidelity UI wireframe design (Figma)
  - o Wireframes for lay-out of the final prototype
- High-fidelity UI clickable prototype (Figma)
  - o Final Hi-Fi prototype, validated by user tests
- (Possibly) App demo prototype (PWA)
  - o (If applicable) a PWA demonstration of the UI prototype with increased interactivity that isn't possible in Figma

1.7   **Research questions**

Main Research Question from Stakeholder:
How can physical exercise teachers in primary school get more insight into the sound levels and stress during the class?

Our Main Research Question/Problem Statement:

- How can we use a smartphone app to make young exercise teachers aware of hearing damage caused by loud noises during PE lessons?

Sub questions:

- Where does most of the noise pollution come from?

- In what way can we visualize data in order to make sure it is insightful for our target audience?

- What type of data will help the user become completely aware of potential hearing damage?

- Are there specific in-app features that can help teachers to organize PE classes with behavioural changes to decrease noise levels?

- How can the awareness of potential hearing damage be measured?

- How can we test the UI/UX of the app?

- How can we create a unified corporate identity to ensure a better user experience?

- How can the app's UI/UX be optimised for both Apple and Android users?

2.   Approach and Planning

2.1   Approach

During the project, we will use the Scrum method. The project takes twelve weeks and is divided into six two-week sprints. A new scrum master will be selected for each sprint. Every Tuesday morning, a stand-up will be held together. At the end of each sprint, we will have retrospectives.

2.1.2   Test approach

The test will be conducted with users from the target group, through a usability test. The results will be reviewed and iterations on the design will be carried out.

2.2   Research methods

Where does most of the noise pollution come from?

- o   **Field:** Noise measurements

- o   **Field:** Interview; Interview a gym teacher and see how to perceive it

- o   **Library:** See if other people already did noise measurements and obtain results

- o   **Library:** Literature study

In what way can we visualize data in order to make sure it is insightful for our target audience?

- o   **Lab:** A/B Testing

- o   **Lab:** Usability test

- o   **Library:** Ways to visualize data

What type of data will help the user become completely aware of potential hearing damage?

- o   **Field:** Explore user requirements

- o   **Field:** User interview: get to know the user.

- o   **Library:** Expert Interview with a hearing specialist.

- o   **Field:** Survey among potential users

- o   **Field:** Focus group: get users to conversate about the subject matter and see if they are on the same line.

- o   **Lab:** Usability test: test out the prototype that is created, and ask the user if it fulfils their needs.

- **Lab:** Biometrics

Are there specific in-app features that can help teachers to organize PE classes with behavioural changes to decrease noise levels?

- **Field:** Explore user requirements
- **Field:** User interview: get to know the user.
- **Library:** Behavioural change
- **Lab:** User testing
- **Lab:** A/B Testing

How can we test the UI/UX of the app?

- **Library:** Testing methods
- **Lab:** A/B Testing
- **Lab:** Usability Testing
- **Showroom:** Peer Review

How can we create a unified corporate identity to ensure a better user experience?

- **Stepping stones:** Mood board
- **Library:** Benchmark creation
- **Lab:** A/B testing
- **Workshop:** Sketching
- **Workshop:** Prototyping
- **Showroom:** Co-reflection

How can the app's UI/UX be optimised for both Apple and Android users?

- **Library:** Trend analysis
- **Library:** Benchmark creation
- **Workshop:** Prototyping
- **Lab:** Usability Testing

2.3 **Breakdown of the project**

We divide the project into six sprints, each lasting two weeks and aligned with a specific phase. Within each phase, there are assigned tasks, and the scrum master oversees their completion, ensuring that team members fulfil their assignments.

2.4 **Time plan**

Phasing	Start	Ready
1 Startup The startup phase serves as the foundation for the project, where initial planning, stakeholder engagement, and the formulation of a design challenge take precedence. It lays the groundwork for subsequent phases by providing a clear direction for the team's efforts.	October 2nd	October 13th
2 Research During the research phase, comprehensive investigations are conducted to answer all research questions. Multiple solutions are explored for each question, involving prototyping when necessary. The feasibility of requirements is evaluated through the development of prototypes.	October 30th	November 10th
3 Design Building upon the insights gained from the research, a detailed product design is created. This phase involves translating the findings into a tangible plan for the product's development.	November 13th	November 21st
4 Testing The design formulated in the previous phase is subjected to validation with end users. This involves practical testing and feedback collection to ensure that the design meets the intended objectives and user expectations.	November 27th	December 8th
5 Iterating Based on the outcomes of the testing phase, a process of iteration begins. This involves revisiting and refining aspects	December 11th	December 22nd

of the project, incorporating feedback, and making necessary adjustments to enhance the product's effectiveness.		
6 Delivering The final phase involves delivering the completed and refined product. This is the culmination of the research, design, testing, and iteration processes, resulting in the deployment of the final product to users or stakeholders.	January 8th	January 19th

3.   Project Organization

3.1   Team members

Name + Phone + e-mail	Role/tasks	Availability
Juliën Verheijen	Researcher, UX/UI designer	Weekdays
Luc Swinkels	Programmer, UX/UI design	Weekdays
Tijn van der Heijden	UX Design, Scrum Master	Weekdays
Mette Ghijsen	Programmer, UX/UI designer	Weekdays
Sef van Halbeek	UX/UI/Product designer	Weekdays
Daan Hurkmans	Contact person, UI/UX designer, front-end developer, UX researcher	Weekdays
Dennis Kirsch	Stakeholder	Tuesdays, Wednesdays and Thursdays
Teague Murray Marshall	Stakeholder	
Bardt van der Dennen	Semester Guide	Tuesdays and Wednesdays

3.2   Communication

We utilize Teams for file sharing within our team. Primary group communication occurs through WhatsApp. When engaging with stakeholders, we employ both Teams and email. We have scheduled meet-ups every Tuesday and Wednesday at school. Generally, on Mondays, Thursdays, and Fridays, we work remotely from home.

3.3   Configuration management

Code will be hosted on GitHub in a private repository. All project members will be invited to this repository. GitHub repository will be split into 2 branches, one for the preview environment and one for the production environment, to ensure no faulty code gets pushed to production.

Dev (preview)
Development branch which will merge into main branch after code review with pull requests.

Main (production)
Production branch with reviewed code from development branches.

4. Finance and Risks

4.1 Cost budget

N/A

4.2 Risks and fall-back activities

Risk	Prevention activities included in plan	Fall-back Activities
1 Dismissal of semester coach (illness, fired etc.)	Stay in contact with the semester coach by having weekly update meetings.	Find a new semester coach who can guide the group throughout the project.
2 Dismissal of stakeholder (illness, fired etc.)	Stay in contact with stakeholders by having weekly/sprint update meetings/retrospectives.	Find someone else who is involved in the Grip on Sound project who can assess the group.
3 Dismissal of group member (illness, drop-out etc.)	Keep the whole group motivated to complete the group project.	Adjust the separation of tasks, which may cause the scope of the project to shift. The stakeholders will be updated immediately if this happens.
4 Misunderstandings within the group	Make sure everybody is updated at all times, and asking whether everybody understands the problem.	Adjust the scope of the project, and update the stakeholders immediately
5 Time constraints	Stick to the plan, and take action immediately if tasks take longer than expected.	Adjust the scope of the project, and update the stakeholders immediately