# Define

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# Most valuable insights from the focus group

Question: What are the most valuable insights from the focus group?

Method: Sorting insights

Why: It facilitates the integration of input and perspectives from a group of individuals, enabling the synthesis of diverse viewpoints, identification of significant insights, and prioritization of key points. Engaging peers in the process allows for the utilization of their expertise and collective wisdom, leading to a more well-informed and consensus-driven outcome.

How: By going through the document analysis that was previously done by one of my group members, we decided to pick the most important insights as a group.

## Results:

Employers are legally obligated to prevent hearing damage among their staff and provide hearing protection for exposures exceeding certain thresholds. Physical education teachers frequently experience symptoms like fatigue, headaches, irritability, reduced focus, and vertigo due to noise exposure in sports facilities. A significant portion of participants in a study (30% of the sample) could identify specific hearing complaints they face during work and in daily life. The organization of lesson plans can greatly impact noise pollution and improve working conditions for physical education teachers. Mitigating noise-related issues can be achieved by limiting noise sources, adapting the environment, and implementing protective measures. Creating awareness about noise exposure and its effects in sports facilities is crucial, and informative materials should be developed to educate teachers, employers, municipalities, and children. Further research is recommended to understand the specific needs of physical education teachers regarding necessary adjustments in sports facilities.
(Read more)

## Conclusion and recommendation

The focus group discussions yielded valuable perspectives on the challenges and complaints voiced by physical education teachers concerning noise pollution in sports facilities. It is crucial to increase awareness about the impact of noise exposure in such settings and develop informative materials to educate physical education teachers, employers, municipalities, and children. By addressing these concerns, we can strive to create solutions that enhance the overall welfare of physical education teachers and establish an environment that is conducive to effective learning and physical exercise.

## Watch apps

Question: How can physical education teachers in primary schools get more insights into the sound levels and stress during their classes?

Method: Competitive analysis

Why: It provides a thorough understanding of the applications within this market domain, encompassing the identification of key players, examination of their strengths and weaknesses, and gaining insights into their product offerings and strategies.

How: I selected and evaluated the Apple watch (built-in) application which measures decibels in the background.

Results:

The Noise app measures the ambient sound levels in the environment using the microphone and duration of exposure. When Apple Watch detects that the decibel level has risen to a point where hearing could be affected, it can notify you with a tap on the wrist. (Figure 1)

Is the Apple Watch sound level accurate?

Anecdotally, when out and about on noise assessments, the Apple Watch noise meter app is usually fairly close to the reading on the proper noise meter but **when noise levels are varying and the Apple Watch decibel levels are moving around a lot, it is hard to be accurate**. (Figure 2)

You can also click on the info button, redirecting you to another page explaining more about db levels.


(Figure 1) App measures the db.

(Figure 2) Info section of the application explaining hazard sound levels.

### Conclusion and recommendation:

In conclusion, the Noise app on Apple Watch provides a convenient means to measure ambient sound levels and duration of exposure using the device's microphone. When the decibel level reaches a point that could potentially impact hearing, the app alerts the user with a gentle tap on the wrist. While the Apple Watch noise meter app generally offers readings that are fairly close to those obtained from proper noise meters during noise assessments, it may face challenges in accurately capturing fluctuating noise levels. However, users can access additional information about decibel levels by clicking on the info button, which redirects them to a separate page with more detailed explanations. Overall, the Noise app on Apple Watch serves as a useful tool for monitoring sound levels and promoting awareness of potential hearing risks.

## Finalize Concept

### Question:

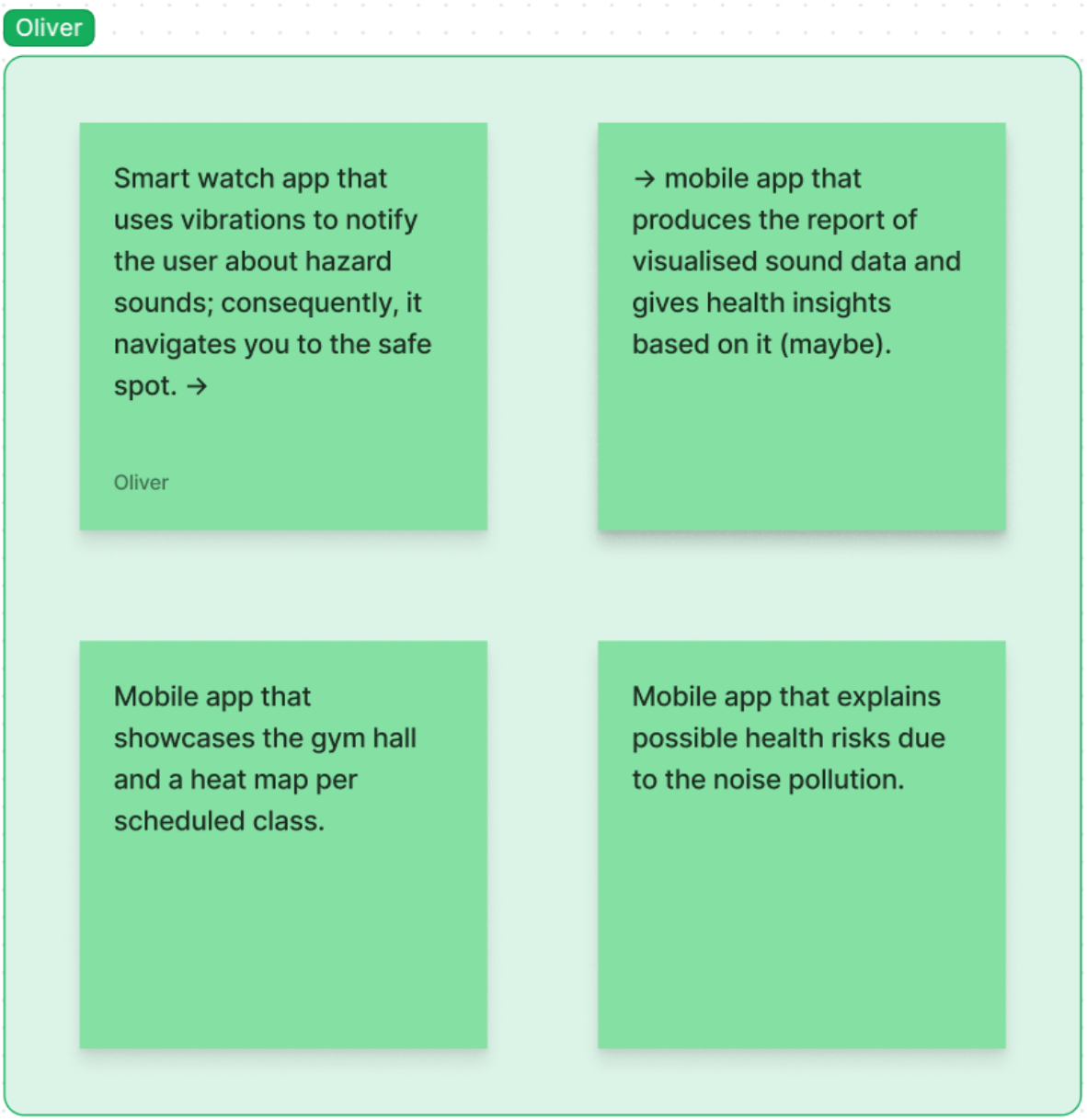
What is the final concept before going on to the Prototype phase?

What medium is best to present the visual solutions for the end users?

Method: Ideation, Stakeholder feedback

Why: To generate and develop new ideas

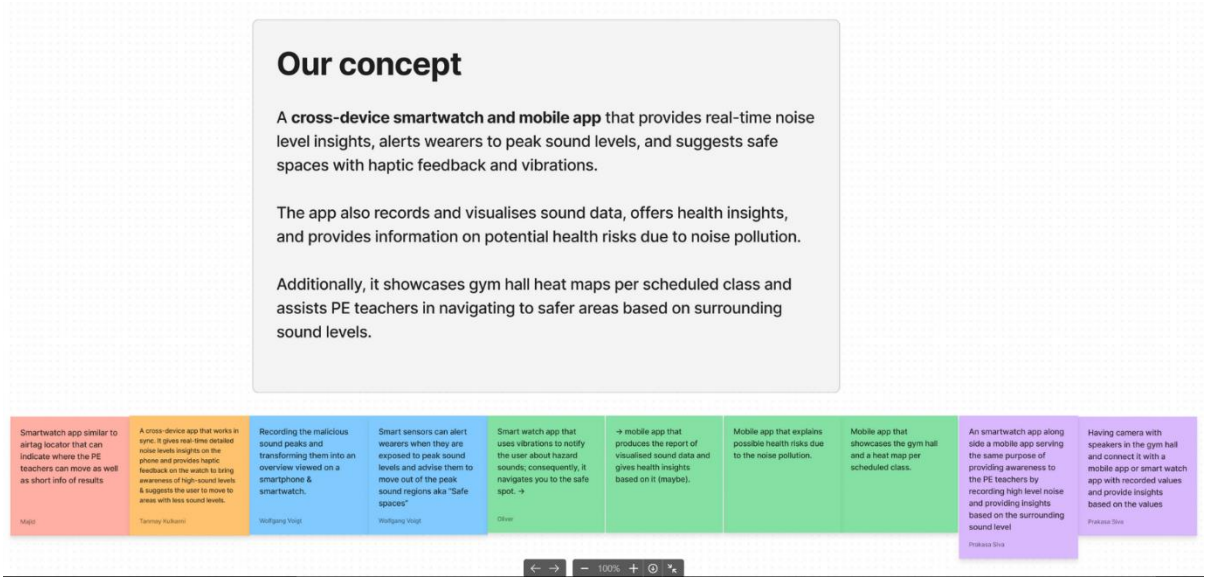
How: Beginning with the "Ecosystem" sticky notes that presented potential solutions during the empathize phase, our team collaborated to brainstorm and determine the optimal definition for the final concept. The following are my contributions during the session. (Figure 1)




(Figure 1) Contribution during the session

## Results:

Once all the notes were explained it was time to finalize the concept. (Figure 2)




(Figure 2) Final concept

## Conclusion and recommendation:

In conclusion, the Noise app on Apple Watch provides a convenient means to measure ambient sound levels and duration of exposure using the device's microphone. When the decibel level reaches a point that could potentially impact hearing, the app alerts the user with a gentle tap on the wrist. While the Apple Watch noise meter app generally offers readings that are fairly close to those obtained from proper noise meters during noise assessments, it may face challenges in accurately capturing fluctuating noise levels. However, users can access additional information about decibel levels by clicking on the info button, which redirects them to a separate page with more detailed explanations. Overall, the Noise app on Apple Watch serves as a useful tool for monitoring sound levels and promoting awareness of potential hearing risks.