

NOISE CONTROL MEDIA





MEET THE TEAM MEMBERS



OLIVER

Programmer & UI / UX Designer



YUSMEN

Programmer & UI/UX Designer



WOLF

UI/UX Designer



TANMAY

UI/UX Designer



PRAKASA

Programmer



MAJID

UX Researcher

PROBLEM

What needs to be solved?



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:

What are the factors affecting noise levels in primary school gyms, and what are their impacts on teachers and students?



ABOUT THE PROJECT

Working with sound

Project objectives

- Raising awareness for P.E teachers on problems due to noise pollution
- Helping schools create a healthy environment for teachers and students
- Successful communication and collaboration across teams

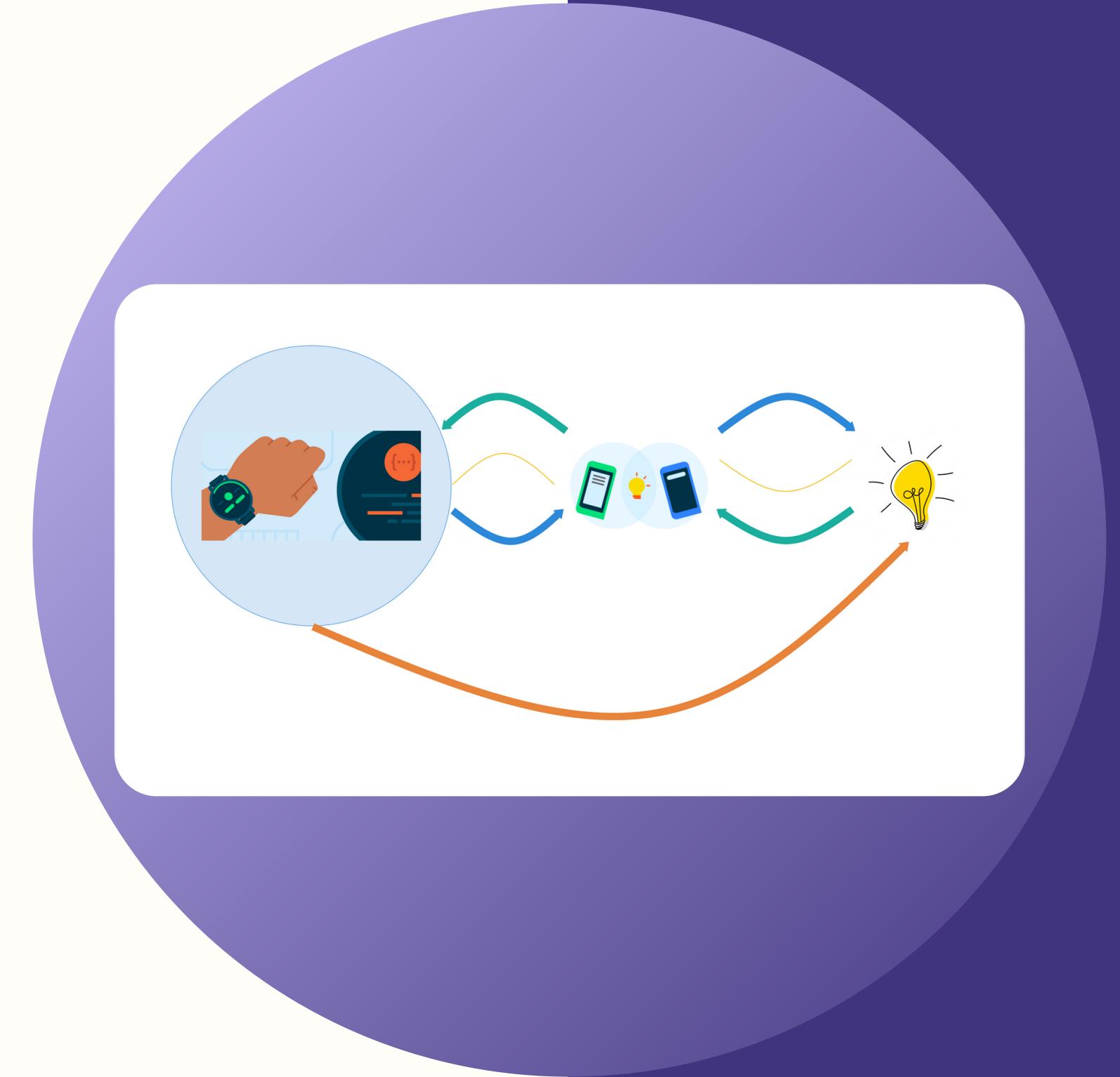
Goals

- Stakeholder satisfaction
- High-quality concept
- Concept that can be turned into a working product



CONCEPT

- An Android smartwatch app accompanied by a supplementary mobile app which provides real-time noise level insights, alerts wearers to peak sound levels, and suggests safe spaces with haptic feedback and vibrations.
- The mobile app also records and visualises sound data, offers health insights, and provides information on potential health risks due to noise pollution.



RESEARCH QUESTION & SUB-QUESTIONS

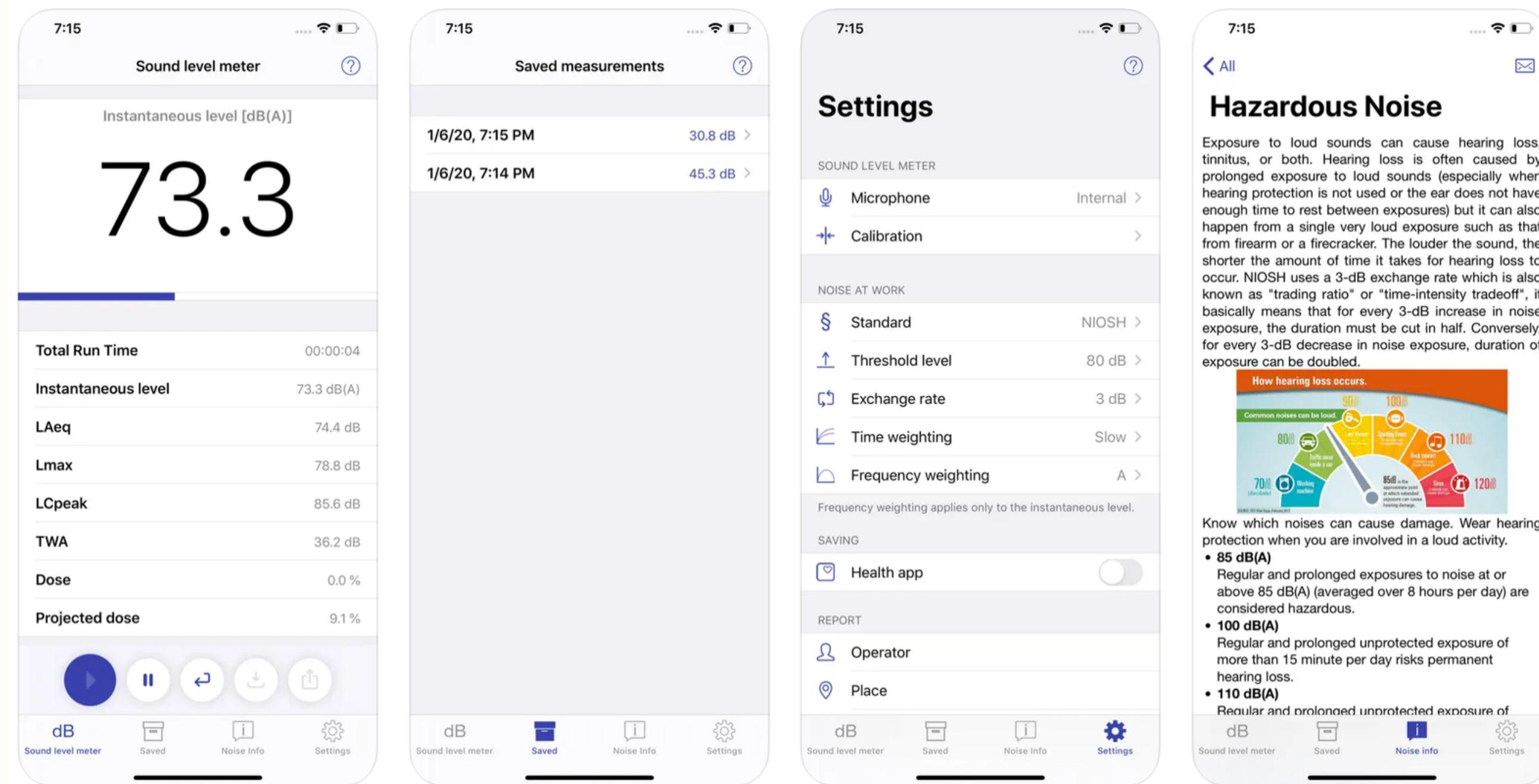
- What insights are valuable to teachers?
- How do P.E. classes' sound levels differ according to the daily schedule?
- How are gyms in primary schools designed in terms of size, equipment, and location?
- Are there any existing measures for noise control in primary schools?
- What are the short-term impacts of high sound levels on hearing and stress?
- What medium is best to present the visual solutions for the end users? a. How can the principles of human factors and ergonomics be integrated to create products and services that are usable, safe, and comfortable for a diverse range of users?
- How can valuable gained insights be presented to the end users?

HIGHLIGHTS OF THE RESEARCH



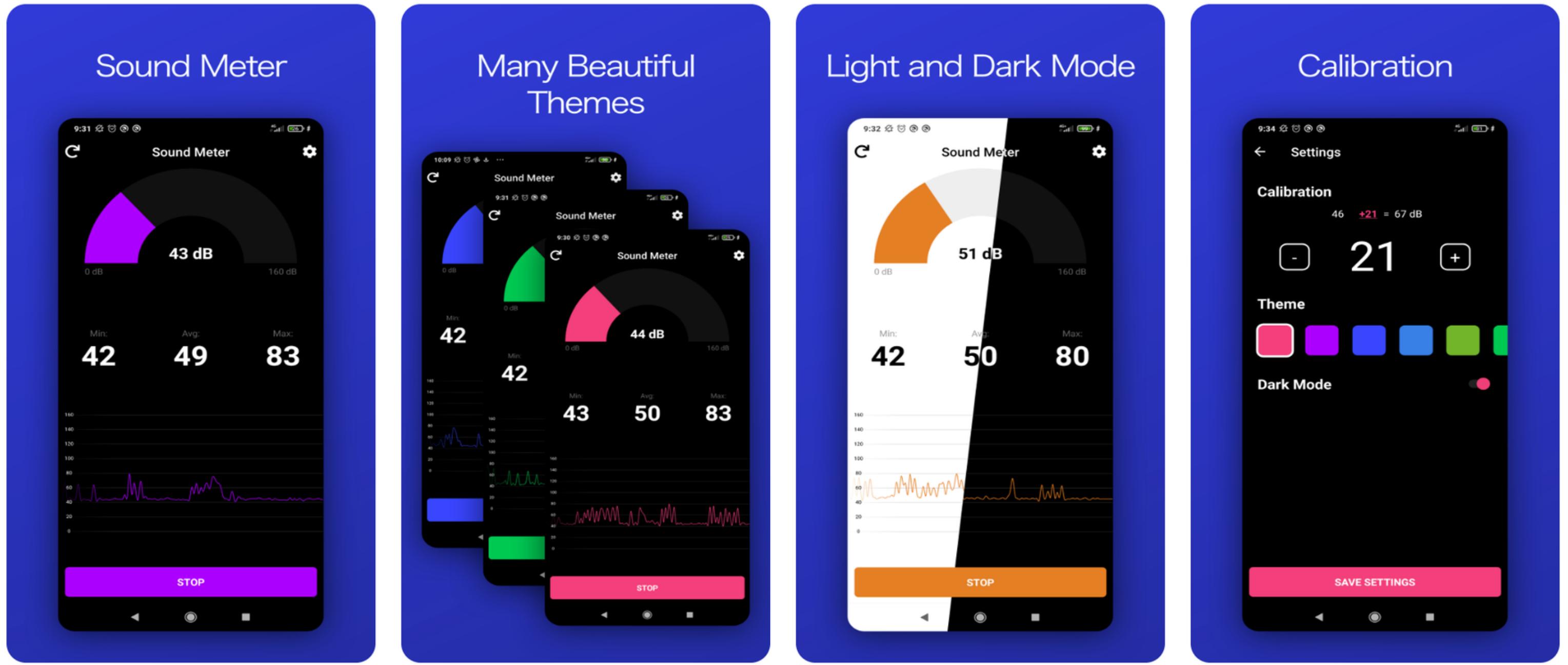
- To prevent (hearing) damage, employers are required to provide hearing protection when exposing employees to a daily dose above 80 dB(A) or daily exposure to a dose above 85 dB(A).
- **Fatigue, headaches, irritability, reduced focus, and vertigo** are among the complaints that physical education teachers experience as a result of exposure to noise in sports facilities.
- **Six of the nineteen [30%]** participants were able to identify hearing complaints that they suffer from during work and in daily life.
- **The organization of the lesson plan** can lead to lower noise pollution and better working conditions for physical education teachers.
- Improving working conditions with regard to noise can be tackled by limiting the source, adapting the environment, or protecting humans.
- It is **important to create awareness about the exposure and impact of noise in sports facilities** and to **develop information material to educate and inform** physical education teachers, employers, municipalities, and children.
- Further research is recommended to **identify the needs that physical education teachers** have with regard to adjustments in sports facilities.

COMPETITOR ANALYSIS



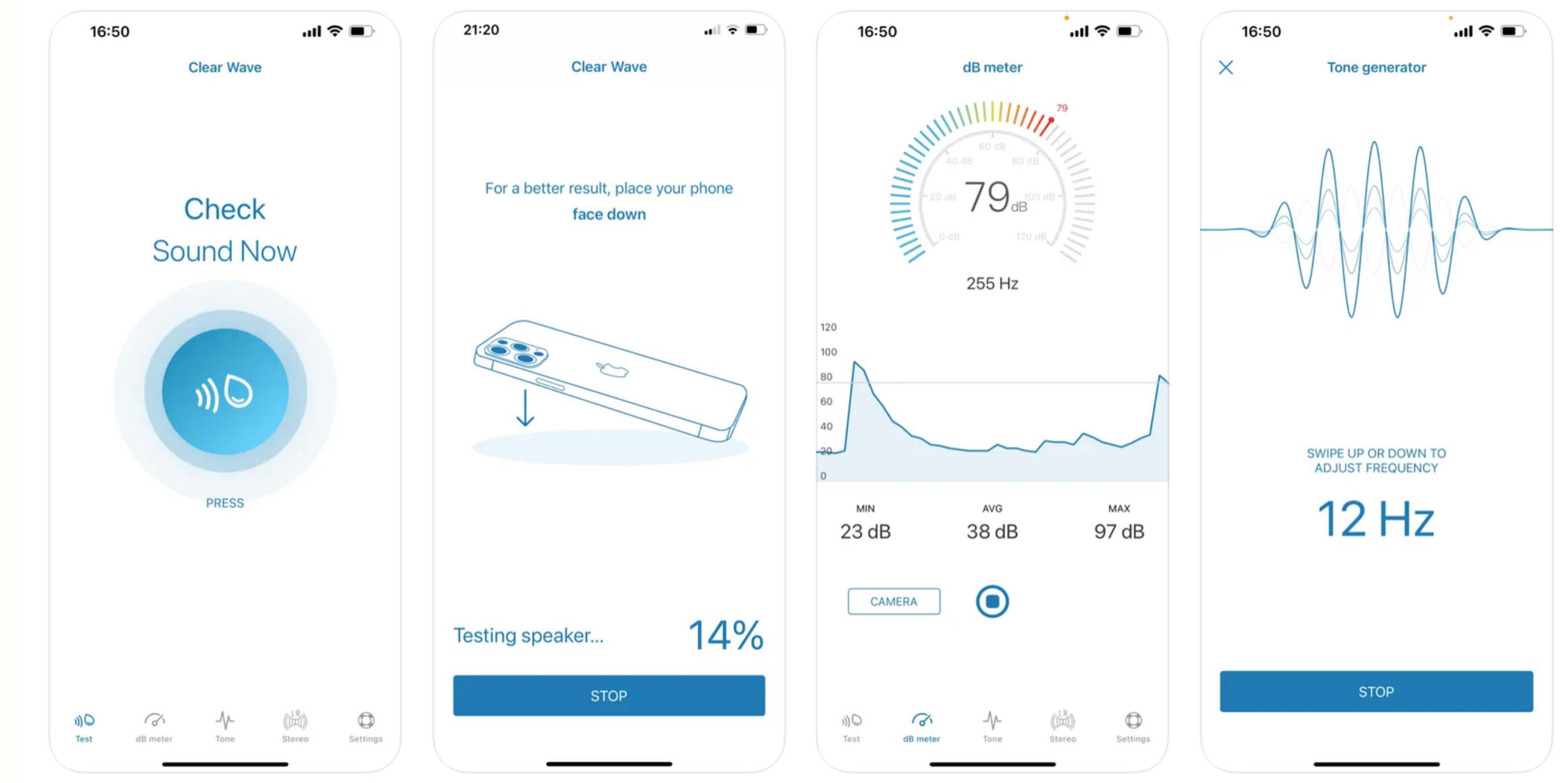
NIOSH apple app

COMPETITOR ANALYSIS



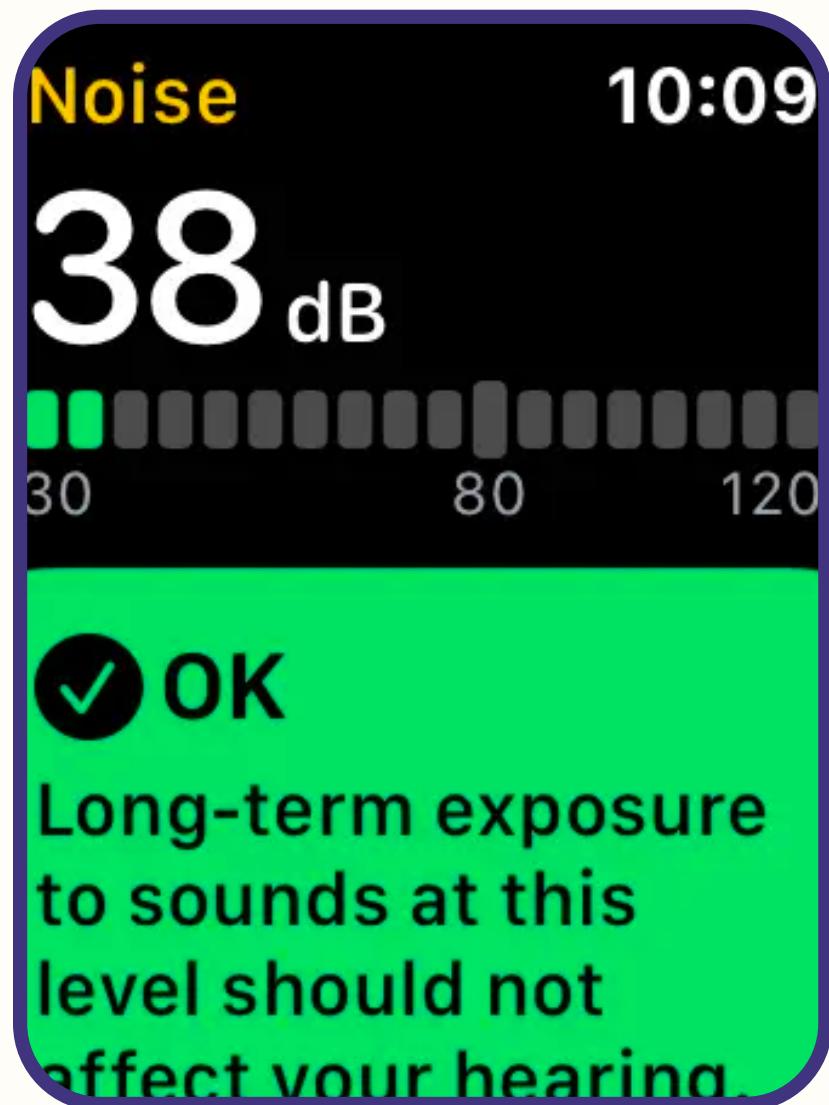
Sound meter – Huawei store

COMPETITOR ANALYSIS



Clearwave app

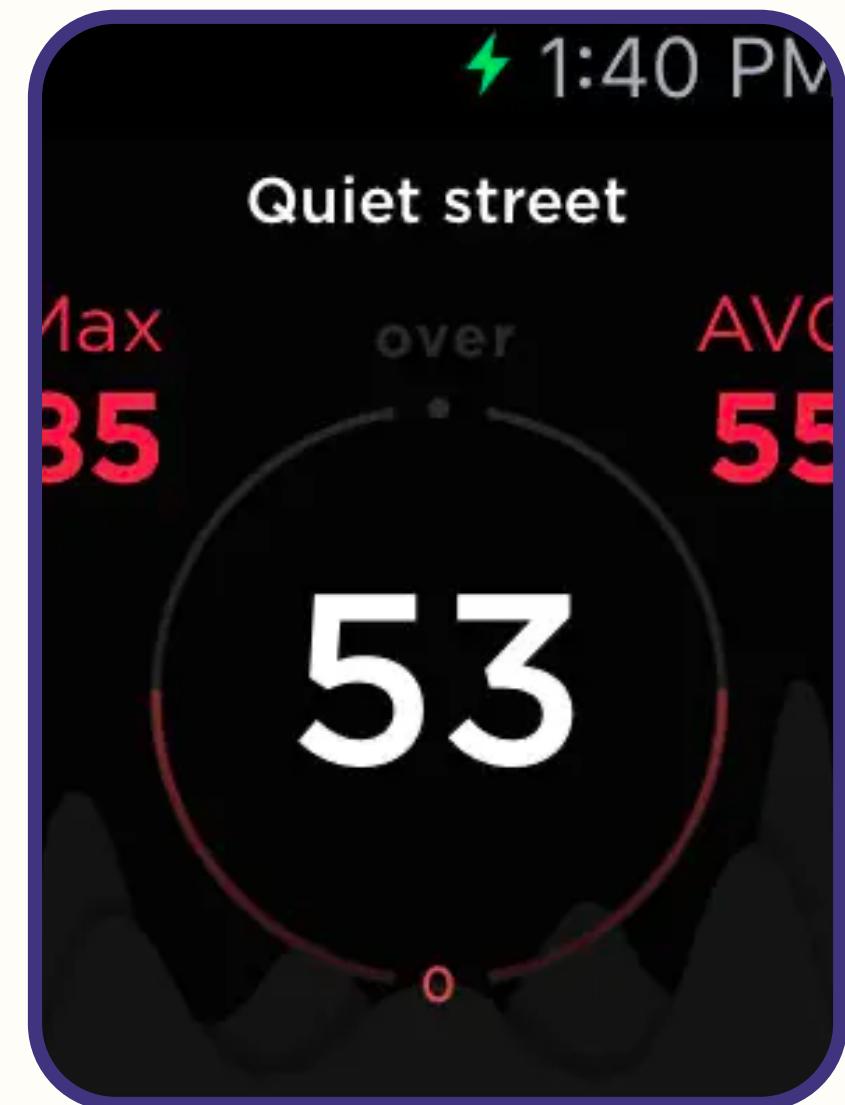
COMPETITOR ANALYSIS



Apple noise app



dB meter app

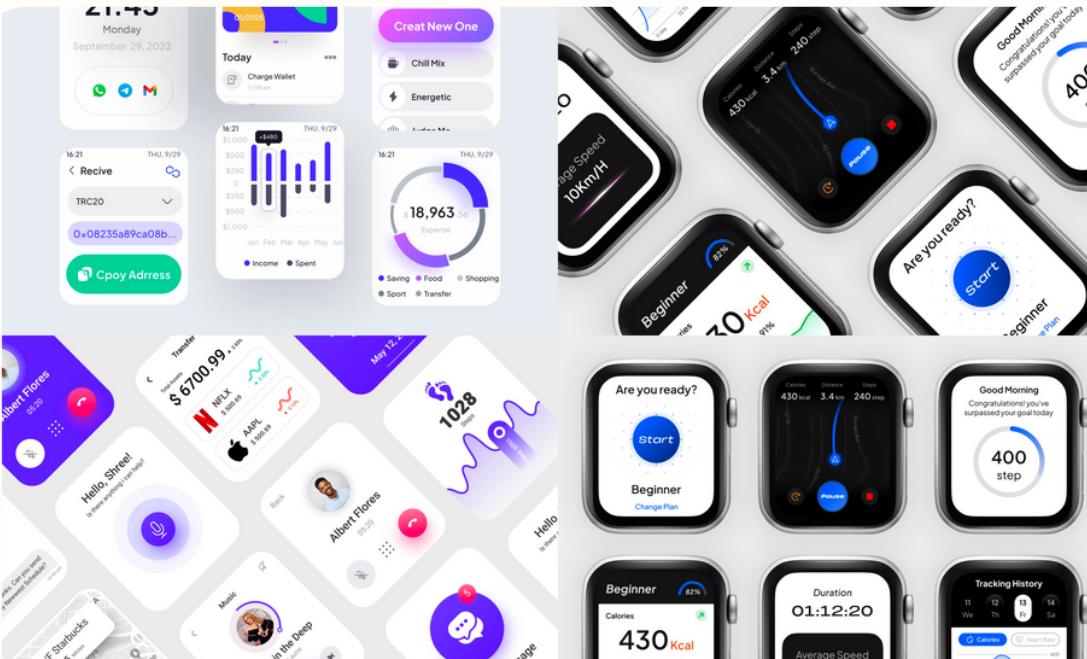
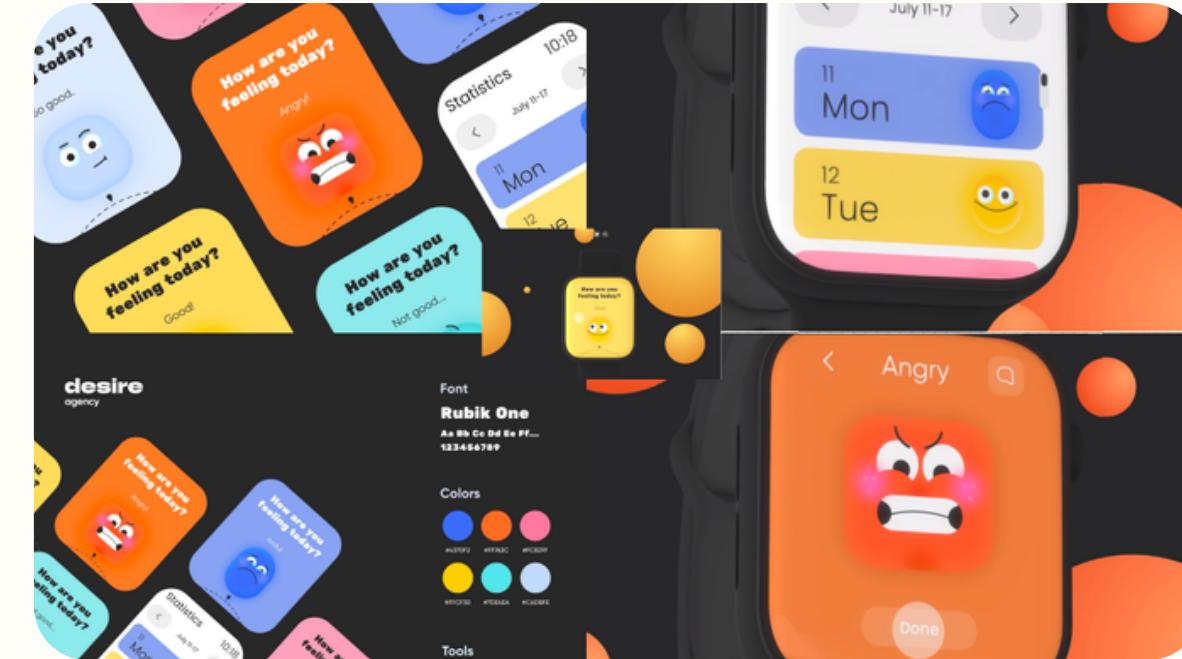
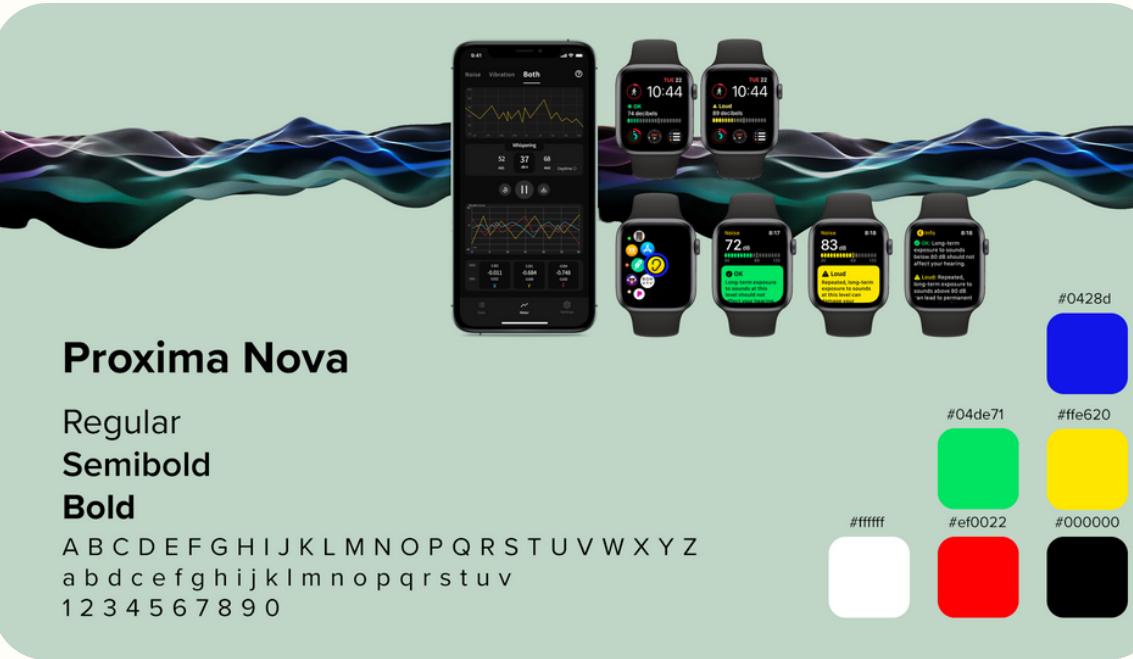


dB meter app

INSPIRATION



MOODBOARDS



PERSONAS



Michael
PE Teacher in a Primary School

32 Years Old | PE Teacher in a Primary School

Background

Michael is a dedicated and passionate physical education teacher who has been working in a primary school for the past 5 years. He has always loved sports and fitness, and his role as a PE teacher allows him to share his enthusiasm for physical activity with young students. Michael is known for his energetic and engaging teaching style, and he is well-liked by his students and colleagues alike.

Raise awareness about noise reduction in education

Goals

- Incorporate creative and engaging teaching methods.
- Create a positive and inclusive learning environment.
- Raise awareness about noise reduction in education.

Frustrations

- Has noticed that the constant noise and commotion in the school environment has impacted his overall well-being. Often feels fatigued, stressed, and irritable, and struggles to find peace and quiet to relax and recharge after work.
- Has visited an audiologist who confirmed that he has noise-induced hearing loss, likely caused by the prolonged exposure to high noise levels in the school gymnasium and playground.
- Tried to take breaks in quieter areas, but the persistent noise pollution continues to affect his physical and mental health.

PERSONAS



Amanda

A primary school teacher who loves her job.

Background

Meet Amanda, a 42-year-old primary school teacher from Rotterdam, The Netherlands. Amanda has been teaching for 20 years and is passionate about her job. She loves spending time with her students and helping them learn and grow. A typical workday for Amanda starts at 9 am with a short discussion with her students about how they are feeling and if they need anything. This is followed by a series of lessons throughout the day, including math, reading, and writing. She also teaches PE classes once a week, which can be challenging due to high noise levels. She finds it difficult to maintain order and focus during loud group games. Amanda is committed to providing the best possible education to her students, but sometimes feels frustrated by factors outside of her control, such as high noise levels.

Goals

- To create a positive learning environment for her students.
- To make learning fun and engaging for her students.
- To help her students develop a love for learning.

Frustrations

- Feeling like noise levels are preventing her from delivering the highest quality education possible to her students.
- Feeling overwhelmed by the constant noise and struggling to maintain focus during the school day
- Feeling stressed outside of work due to personal responsibilities & obligations

USER STORY

As a PE Teacher

I want an app that helps me understand and brings awareness of high sound levels caused in the gym and the long term impact they have on my hearing & stress levels.

So that I can understand the high-noise areas in the gym and move around to prevent long-term hearing loss.



Next Steps?

- Prototyping
- Testing
- Further recommendations



**Thank you for your
time and attention!**



Questions?

The End