

SOUND SCAPE

Grant Neubauer

Garrick Li

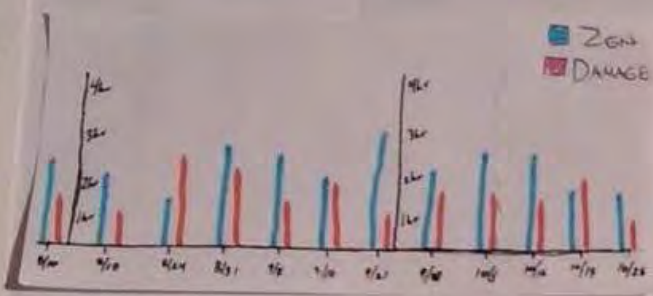
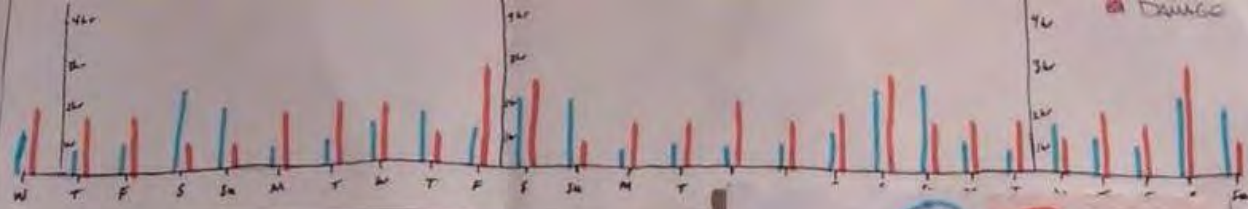
Chris Jung

Luyi Lu

Overall Problem

A lack of awareness of the health implications of noise exposure

Initial Paper Prototype



34 min
28 min

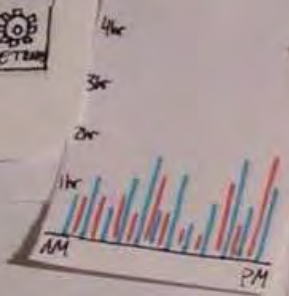
GREAT JOB! YOU ARE EXCEEDING THE RECOMMENDED AMOUNT OF ZEN TIME PER DAY. LOOK FORWARD TO INCREASES IN MEMORY AND ATTENTION!

CAREFUL! 28 MINUTES OF HIGH EXPOSURE SEEMS LOW BUT YOUR NOISE LEVELS ARE HIGH. SHORT EXPOSURE CAN STILL BE HARMFUL AT HIGH INTENSITY.

DAY WEEK MONTH YEAR

SOUND HISTORY ANALYSIS SETTINGS

SOUND HISTORY ANALYSIS SETTINGS



SOUNDSCAPE HISTORY

52 dB ZEN

36 mins TIME IN ZEN

SOUNDSCAPE HISTORY

85 dB INDICATE

4 hrs, 20 mins SAFE EXPOSURE REMAINING

SOUNDSCAPE HISTORY

105 dB HIGH

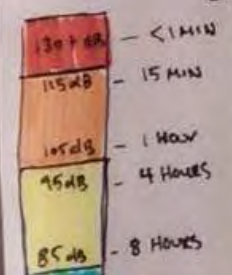
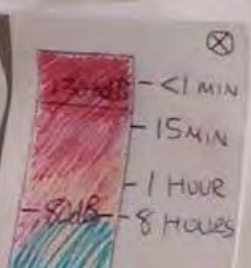
40 mins SAFE EXPOSURE REMAINING

150 dB

20 mins OVER EXPOSURE LIMIT

⚠ AT HIGH EXPOSURE YOU CAN SUSTAIN PERMANENT HEARING LOSS!

YOU HAVE EXCEEDED THE SAFE EXPOSURE LIMIT!
- 8 MINS AGO GOT IT



DAY WEEK MONTH YEAR

SOUND HISTORY ANALYSIS SETTINGS

Task 1

**Perform Soundscape analysis
on the current environment**

SOUNDSCAPE | HISTORY

52 dB

ZEN

~~36 mins~~

TIME IN ZEN

?

SOUNDSCAPE | HISTORY

85 dB

MODERATE

~~4 hrs 20 mins.~~

SAFE EXPOSURE REMAINING

?

SOUNDSCAPE | HISTORY

105 dB

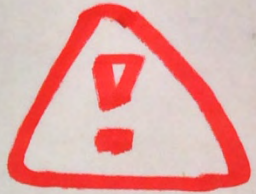
HIGH

~~40 mins~~

SAFE EXPOSURE REMAINING

?

150 dB



20 mins

OVER EXPOSURE
LIMIT

?

!

SOUNDSCAPE HISTORY

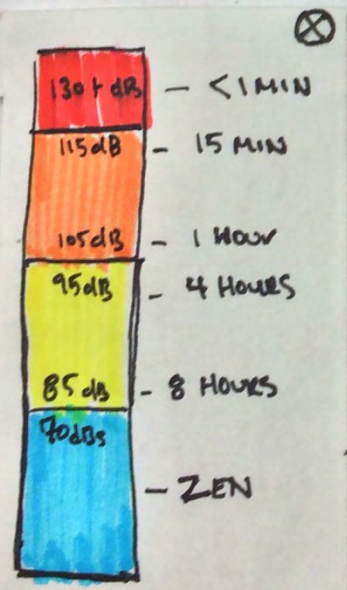
105 dB

HIGH

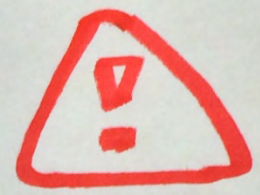


40 mins

SAFE EXPOSURE REMAINING



150 dB




20 mins

OVER EXPOSURE LIMIT



YOU HAVE EXCEEDED THE SAFE EXPOSURE LIMIT!
- 8 MINS AGO GOT IT



AT HIGH EXPOSURE YOU CAN SUSTAIN PERMANENT HEARING LOSS!

~~~~~

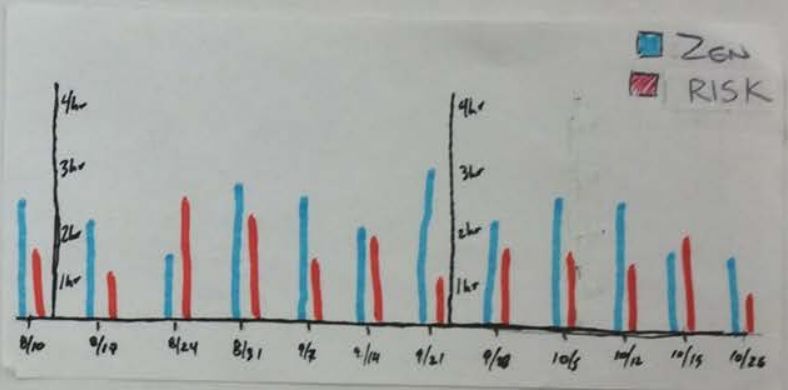
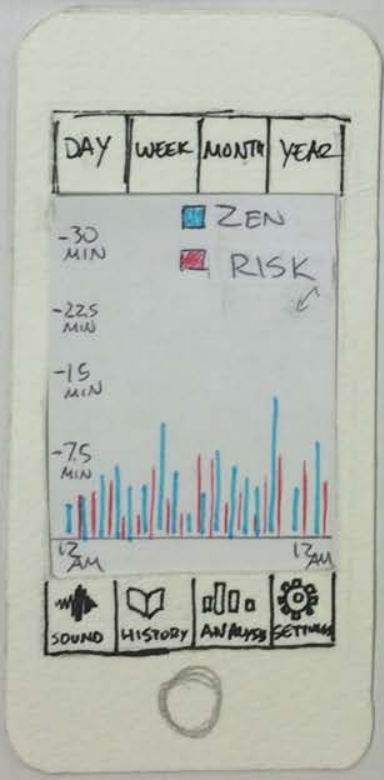
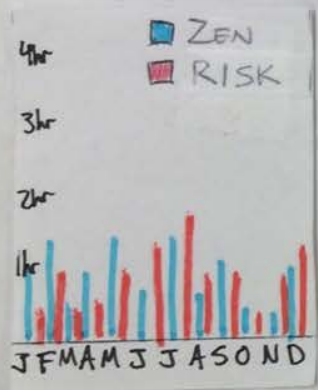
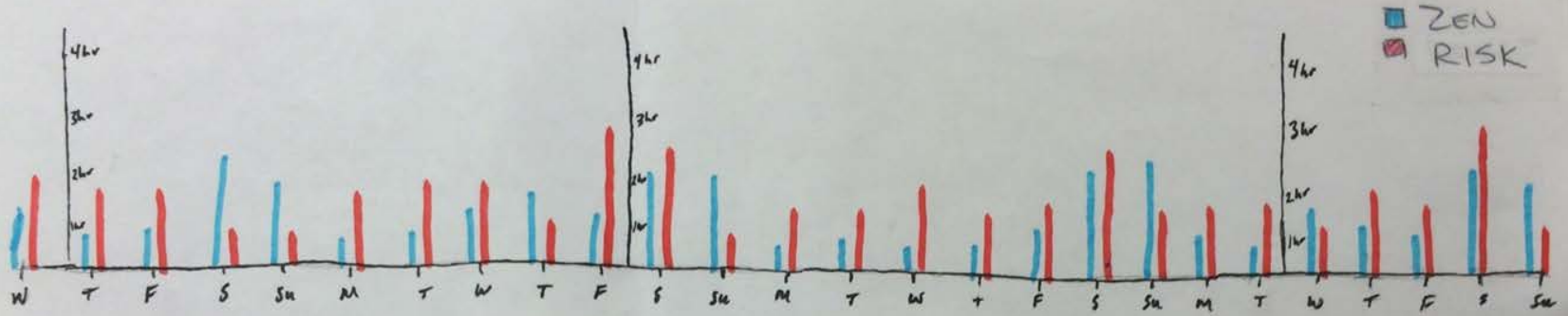
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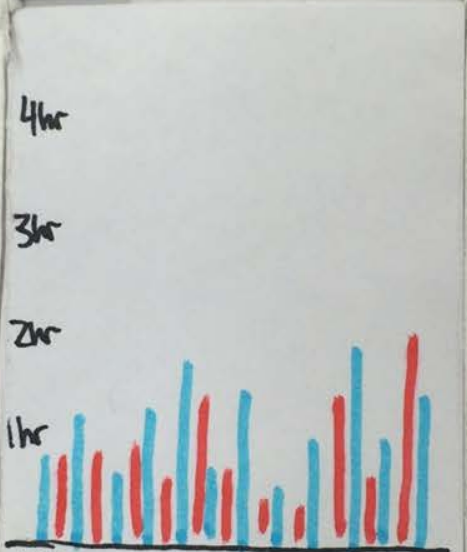
# Task 2





**View past noise exposure & analysis**





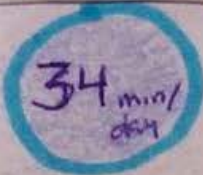






|     |      |       |      |
|-----|------|-------|------|
| DAY | WEEK | MONTH | YEAR |
|-----|------|-------|------|



|                                                                                              |                                                                                                |                                                                                                  |                                                                                                   |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>SOUND | <br>HISTORY | <br>ANALYSIS | <br>SETTINGS |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|



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TO INCREASE  
AND ATTE

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|         |                                                                                             |                                                                                                |                                                                                                |
| YOU<br>THE<br>AMOUNT<br>PER<br>REWARD<br>N MEMORY<br>N!                                   | CAREFUL!<br>OF HIGH<br>LOW BUT<br>LEVELS ARE<br>SHORT EXPO<br>BE HARMF<br>INTENSITY         |                                                                                                |                                                                                                |
|  SOUND |  HISTORY |  ANALYTICS |  SETTINGS |

MINUTES  
LIKE SEEMS  
NOISE  
IGH.  
CAN STILL  
T HIGH

# Testing Process

# Usability Tests



UW Student

*Frequents loud environments*



Middle-aged User

*Lacks technological expertise*



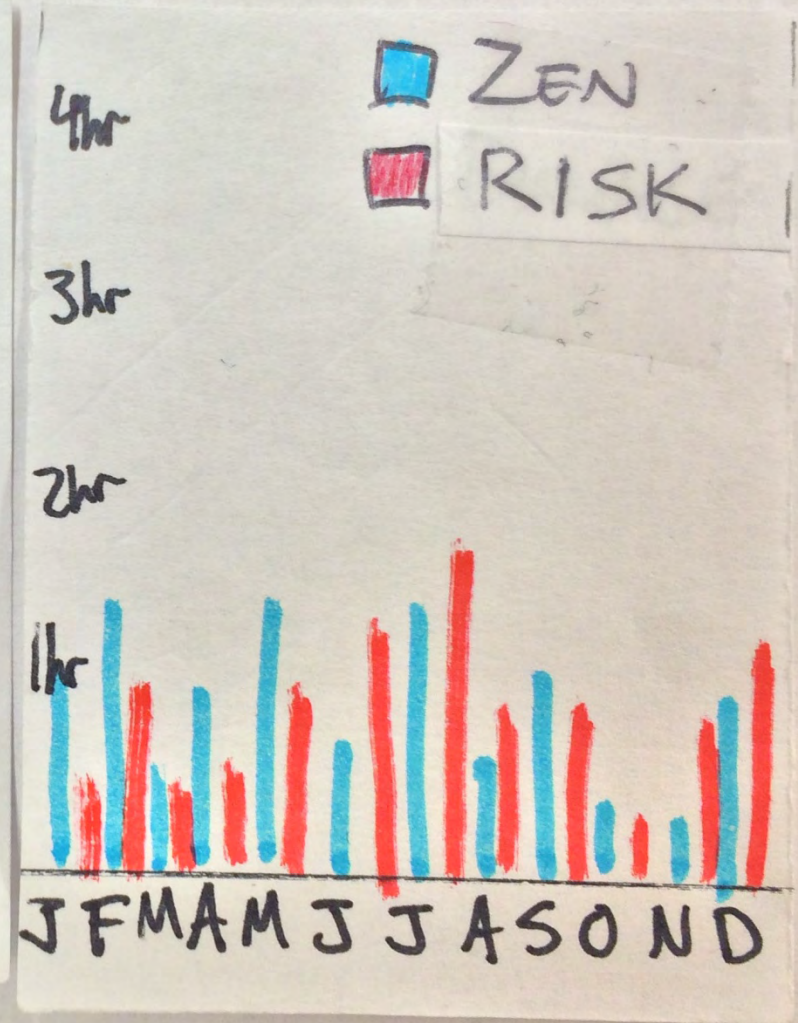
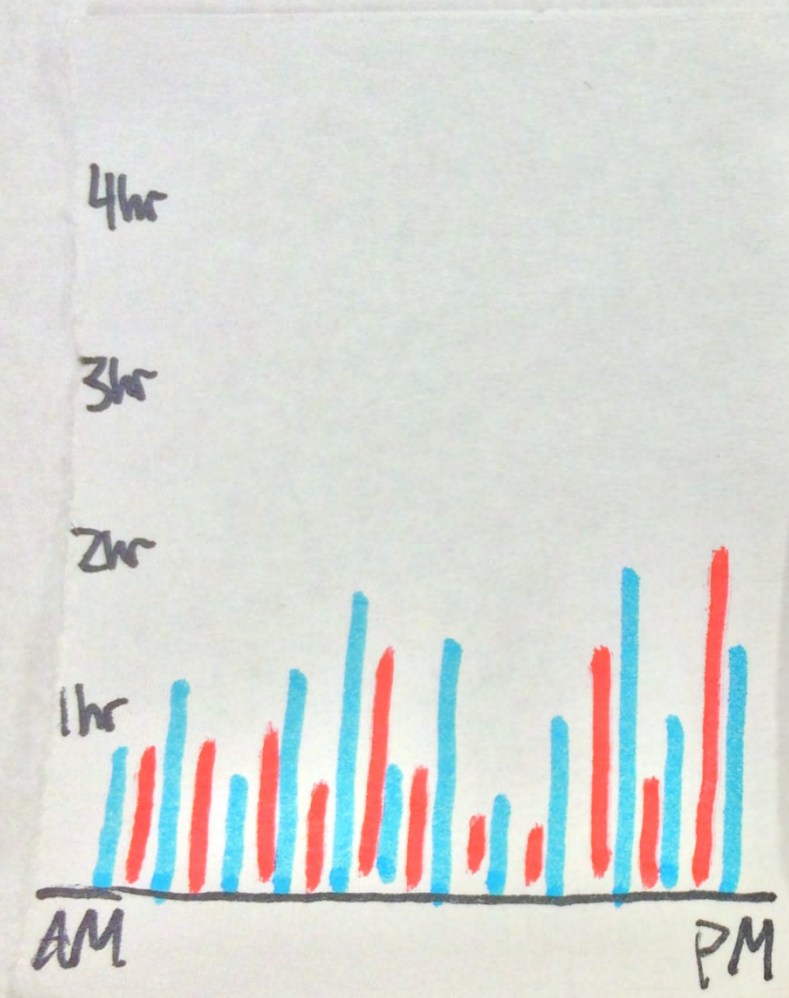
Doctor (Radiologist)

*Provides a medical background*

# Results

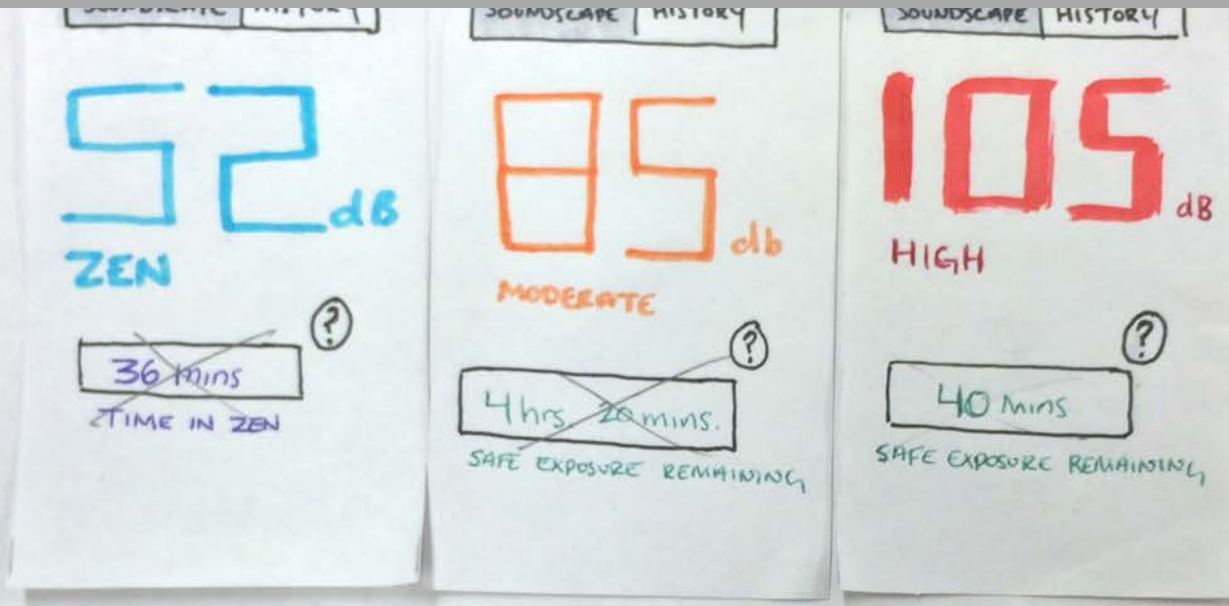
**Syntax**

# Recognition Rather than Recall



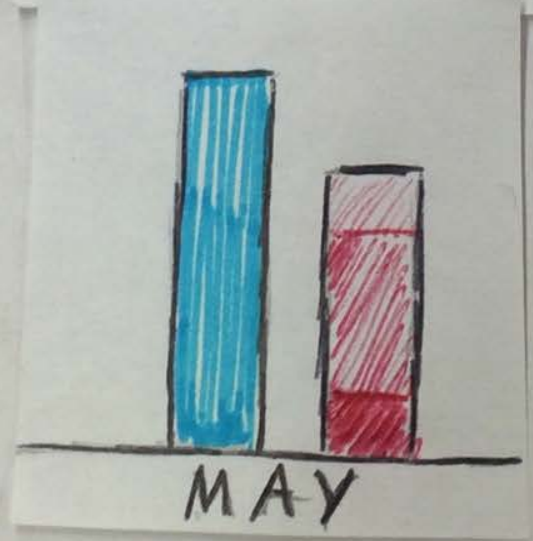


# Visibility of System Status



# Affordances

# Flexibility and Efficiency of Use



# User Control and Freedom

34 min/day



GREAT JOB! YOU ARE EXCEEDING THE RECOMMENDED AMOUNT OF ZEN TIME PER DAY. LOOK FORWARD TO INCREASES IN MEMORY AND ATTENTION!

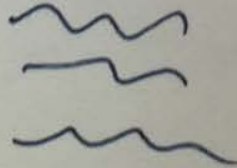
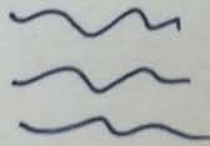
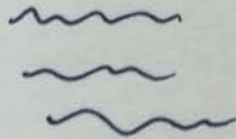
28 min/day

CAREFUL! 28 MINUTES OF HIGH EXPOSURE SEEMS LOW BUT YOUR NOISE LEVELS ARE HIGH. SHORT EXPOSURES CAN STILL BE HARMFUL AT HIGH INTENSITY.

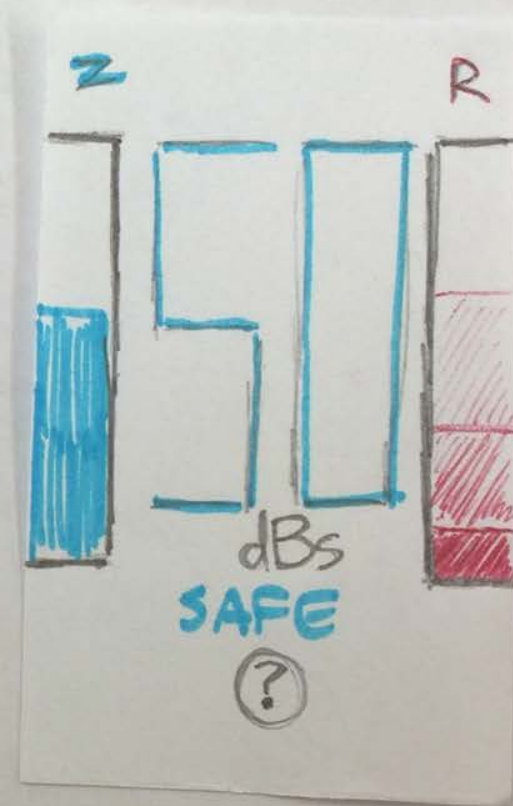
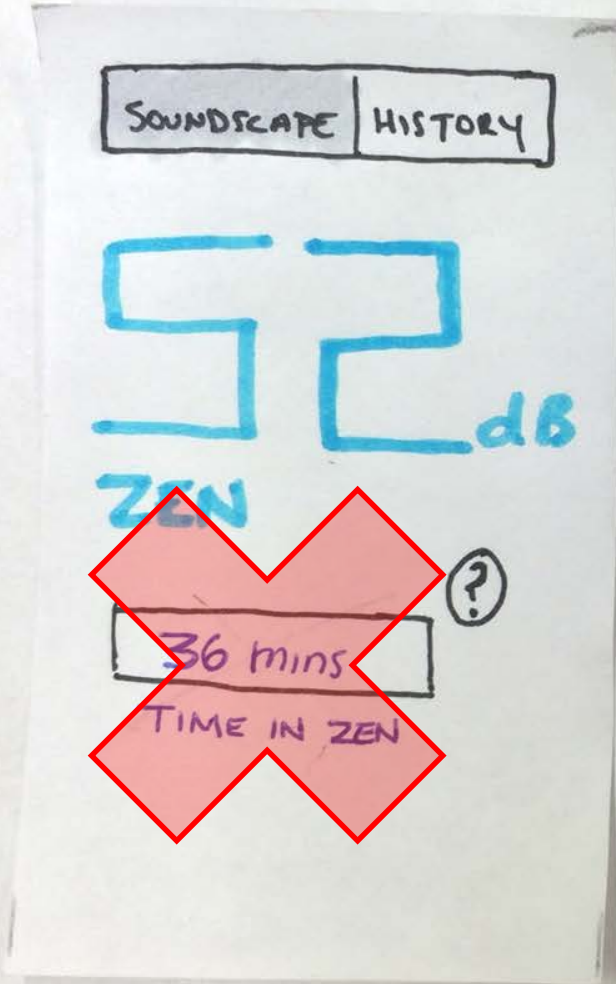
# Features

# Help and Documentation

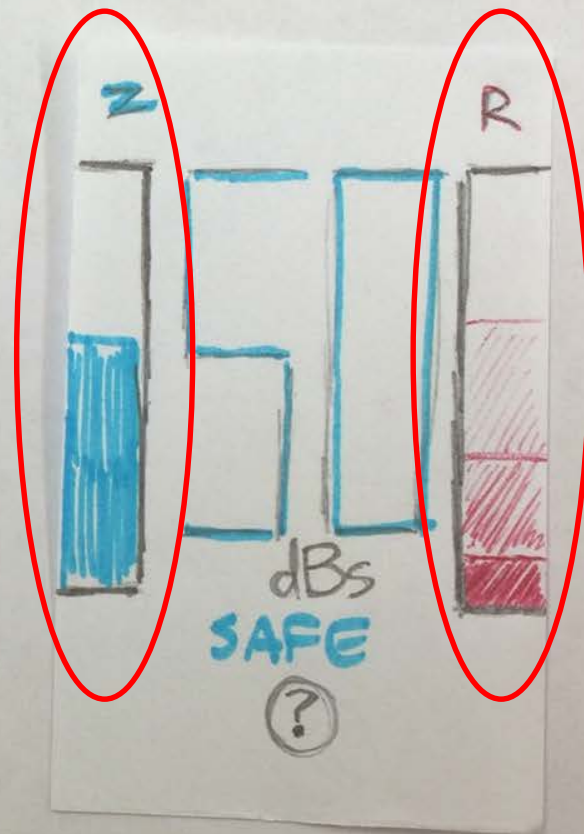
TUTORIAL



# Aesthetic and Minimalist Design

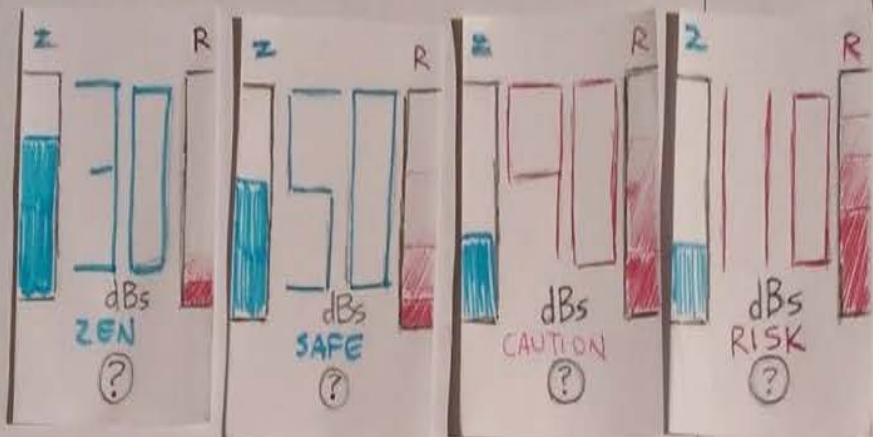


# Visibility of System Status





# Final Paper Prototype



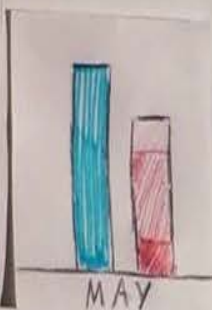
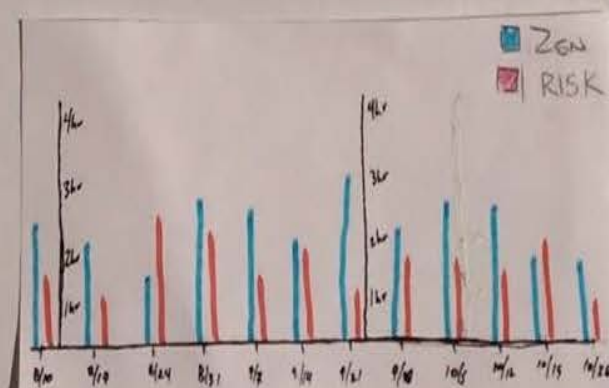
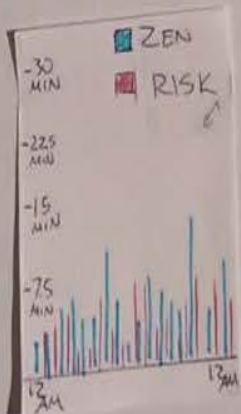
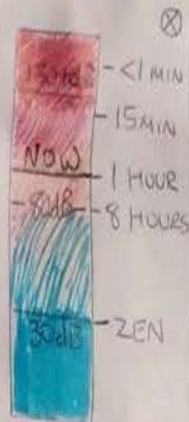
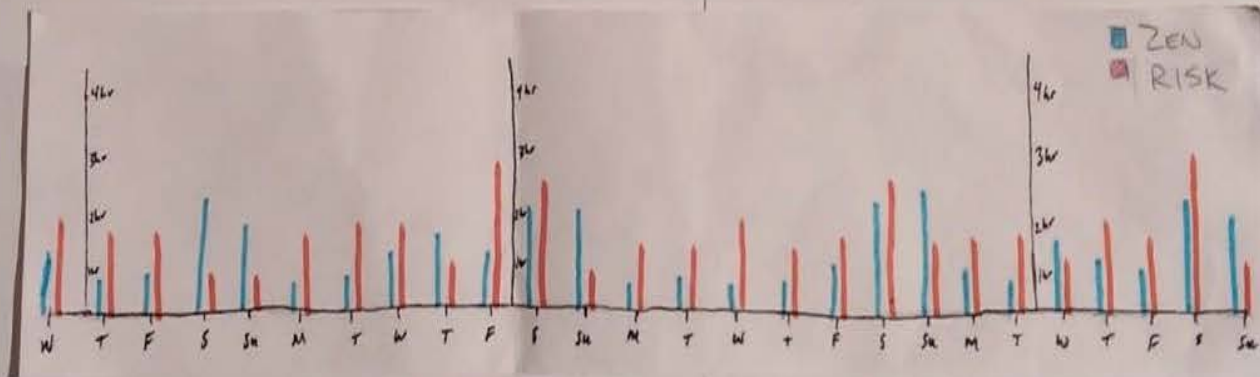
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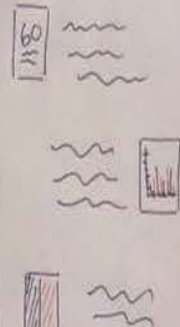
34 min/day

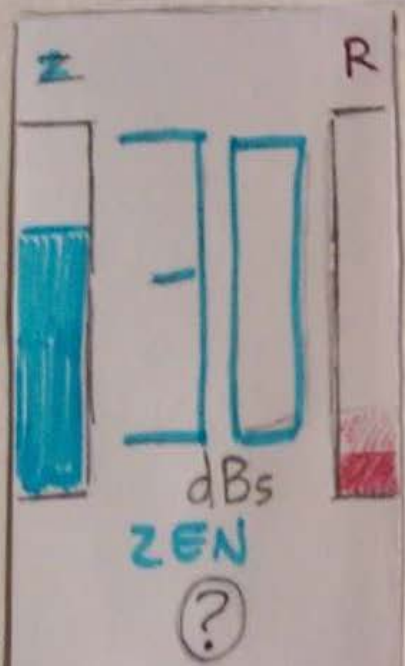
28 min/day

DAY WEEK MONTH YEAR

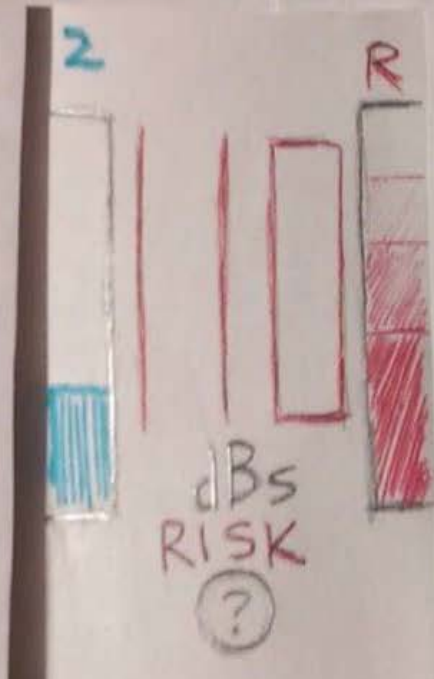
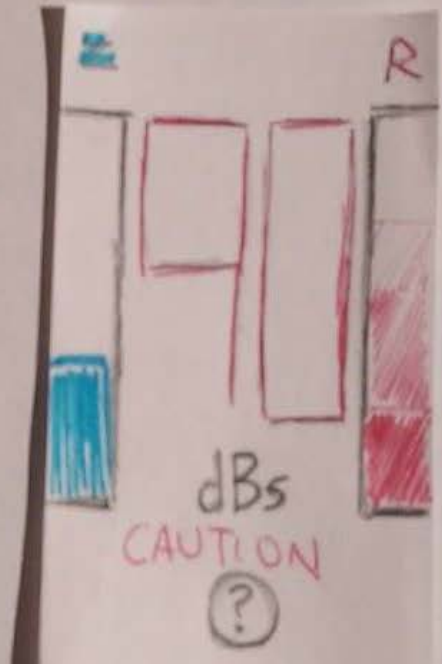
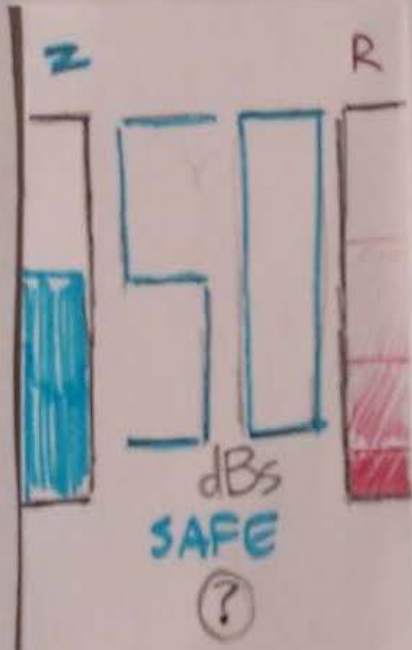


TUTORIAL

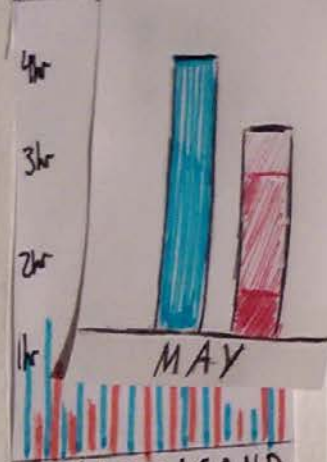




SOUND HISTORY ANALYSIS SETTING

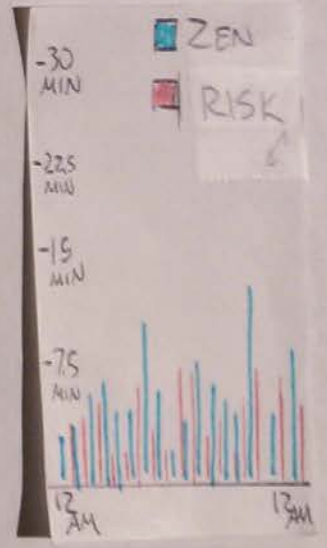
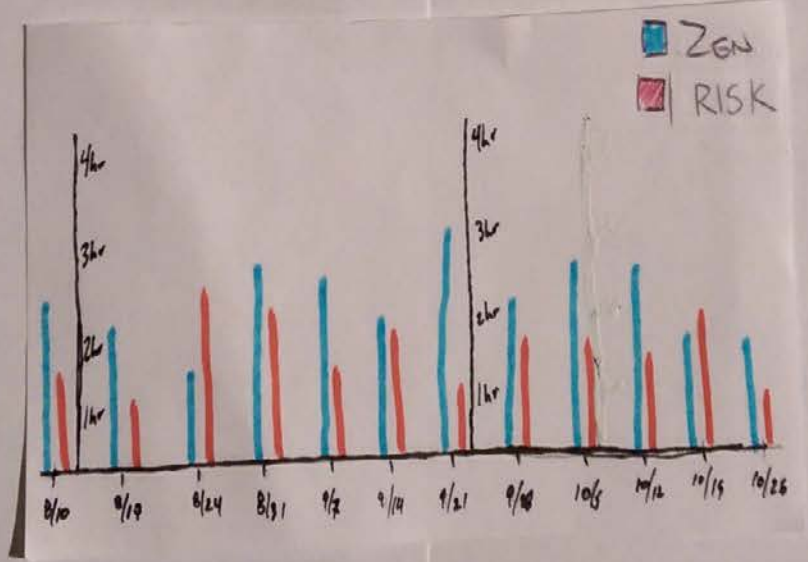
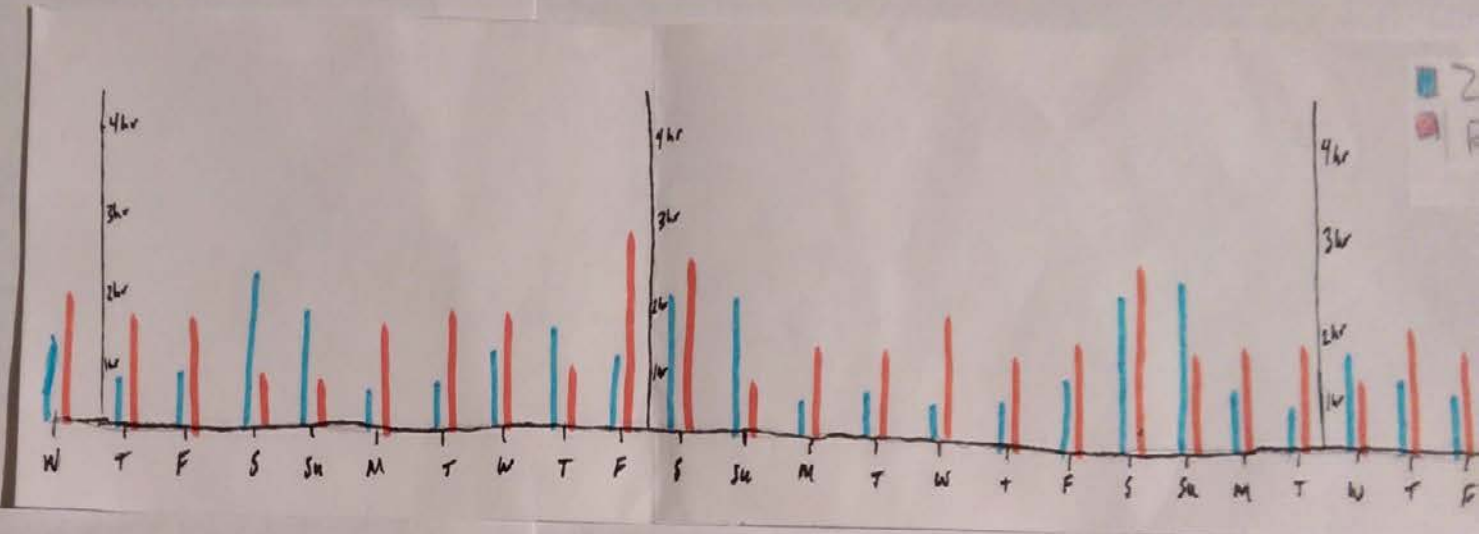


DAY WEEK MONTH YEAR



JFMAMJJASOND

SOUND   
 HISTORY   
 ANALYSIS   
 SETTINGS



GREAT J  
ARE EXCE  
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DAY. LOO  
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AND ATTE

34 min/day

28 min/day



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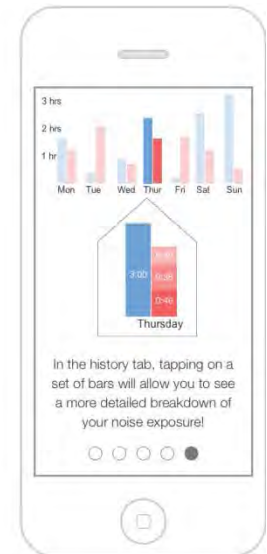
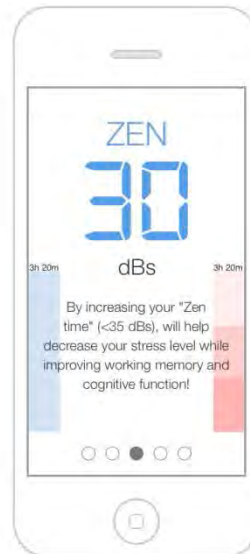
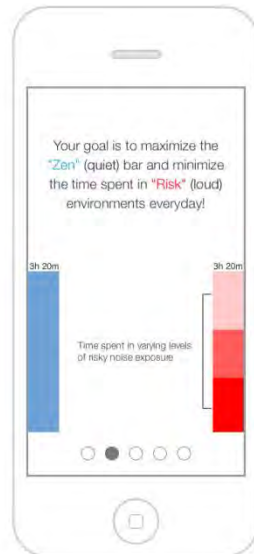
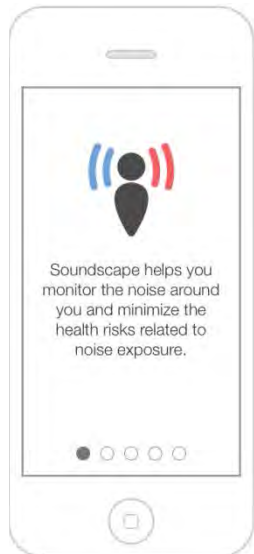
MINUTES  
LIKE SEEMS  
L NOISE  
HIGH.  
S CAN STILL  
AT HIGH

SOUND HISTORY ANALYSIS SETTINGS

# Digital Mockups



# Tutorial



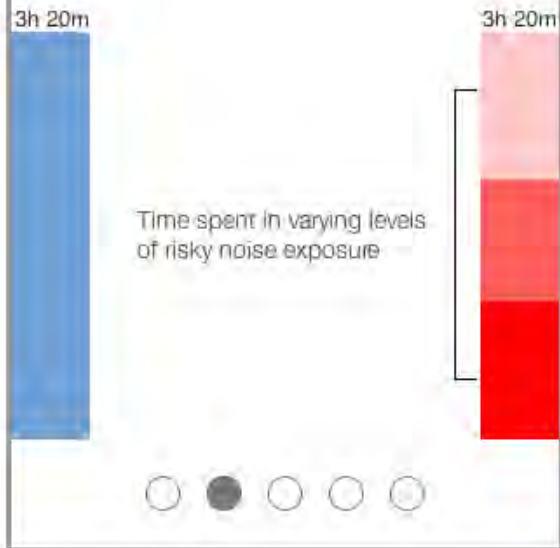




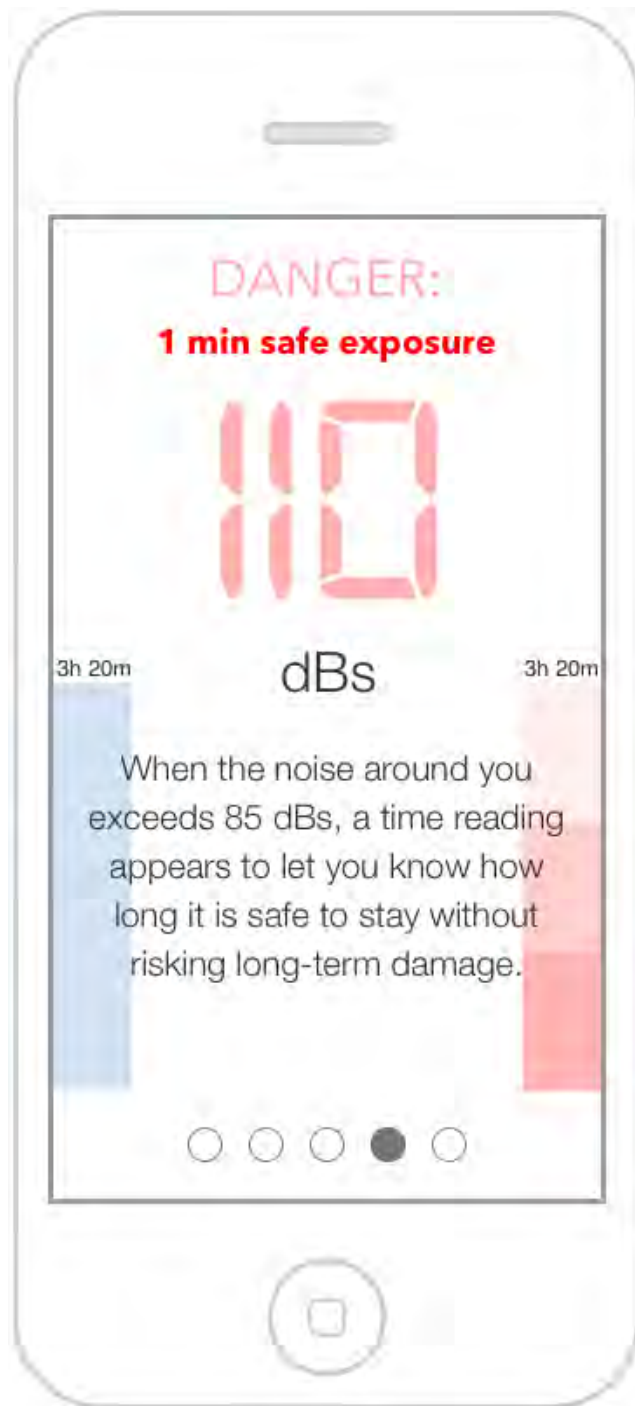
Soundscape helps you monitor the noise around you and minimize the health risks related to noise exposure.



Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday!







DANGER:

**1 min safe exposure**

110

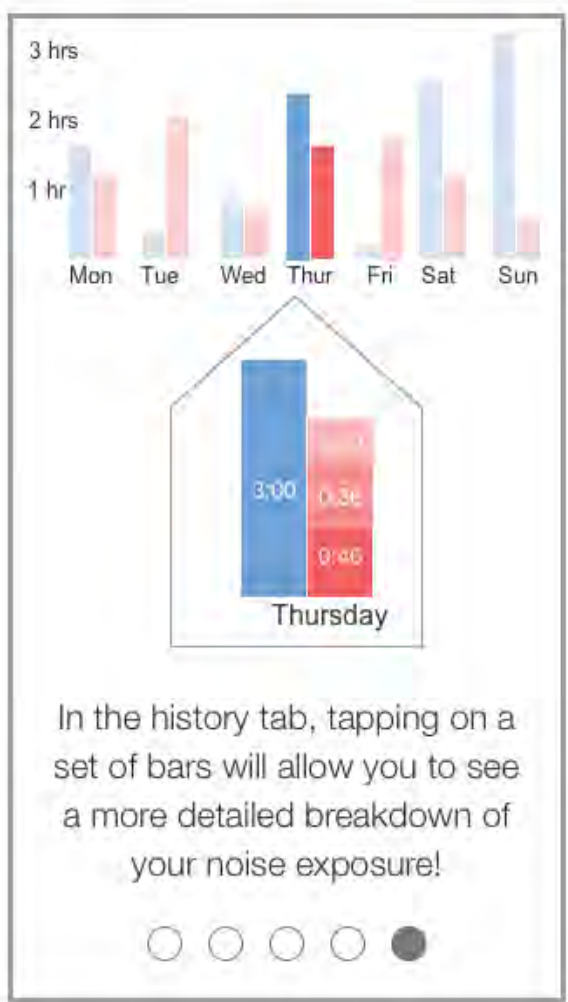
dBs

3h 20m

3h 20m

When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.

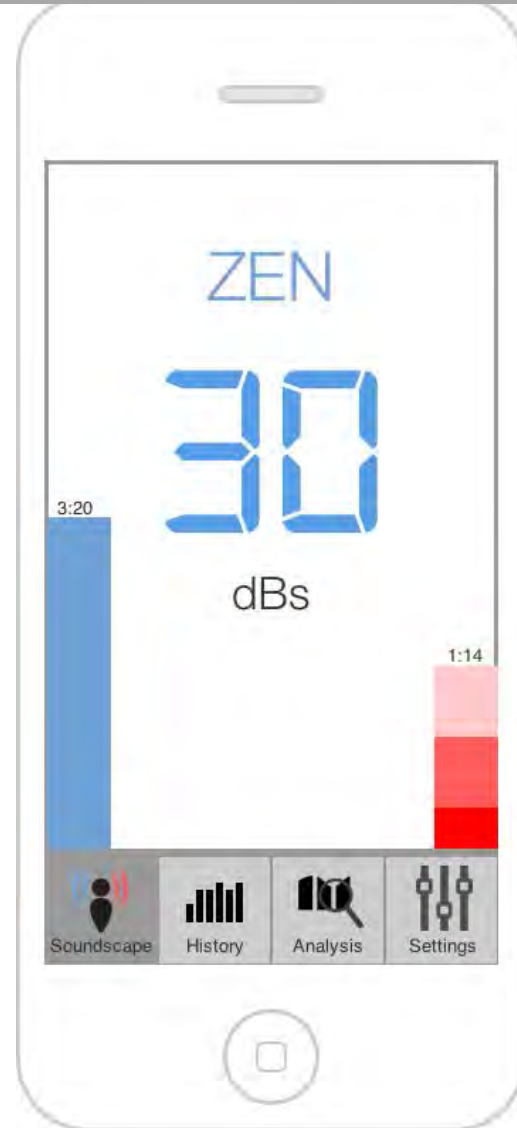
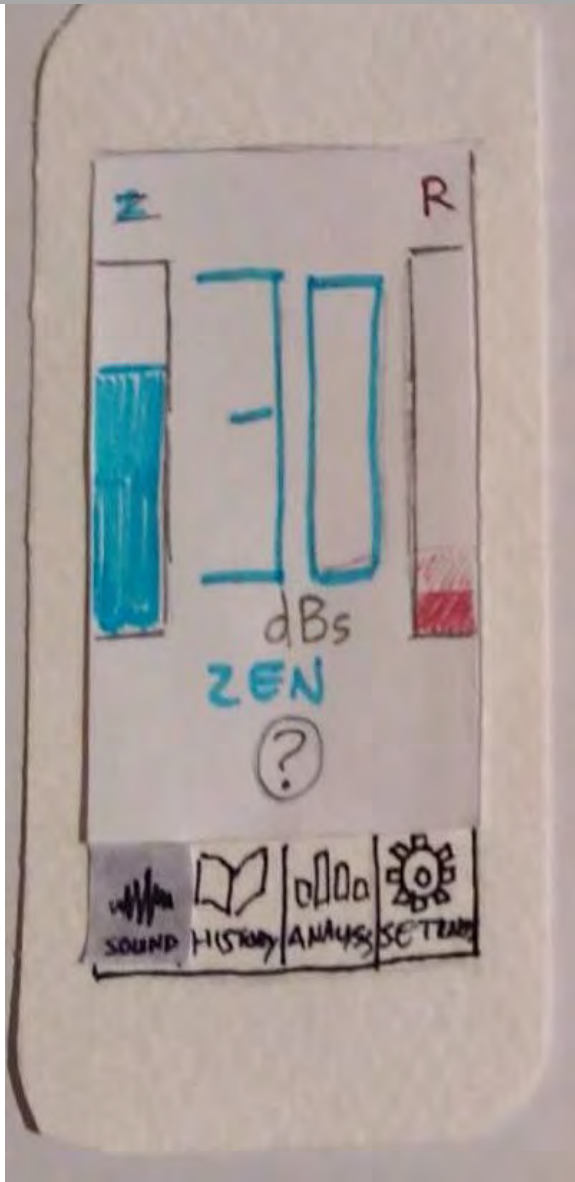




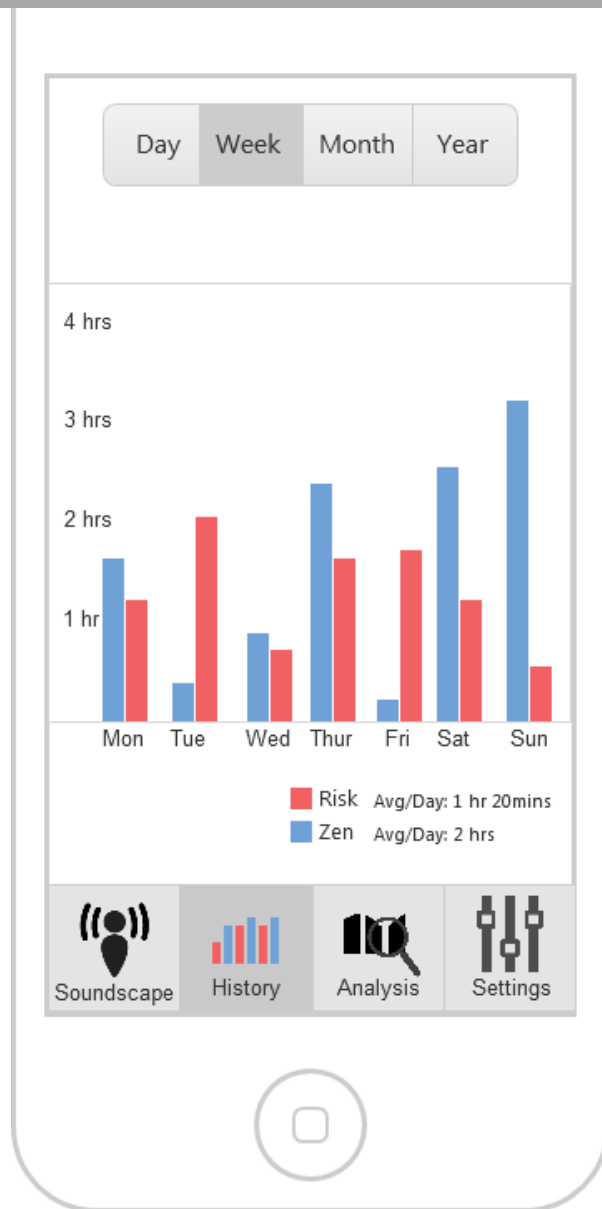
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!



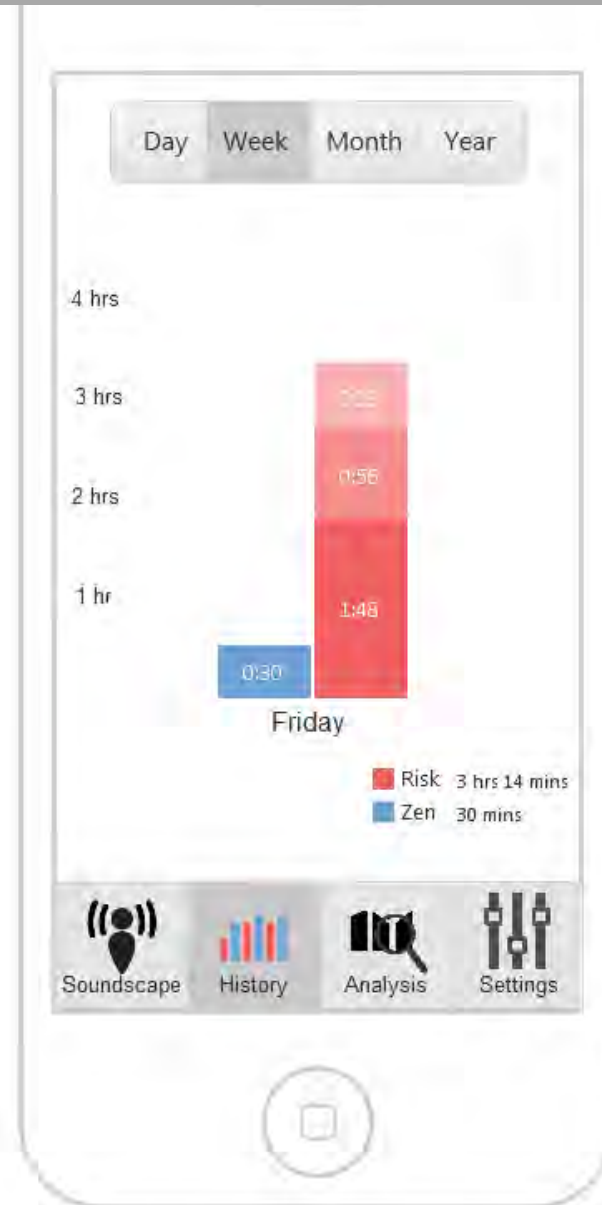
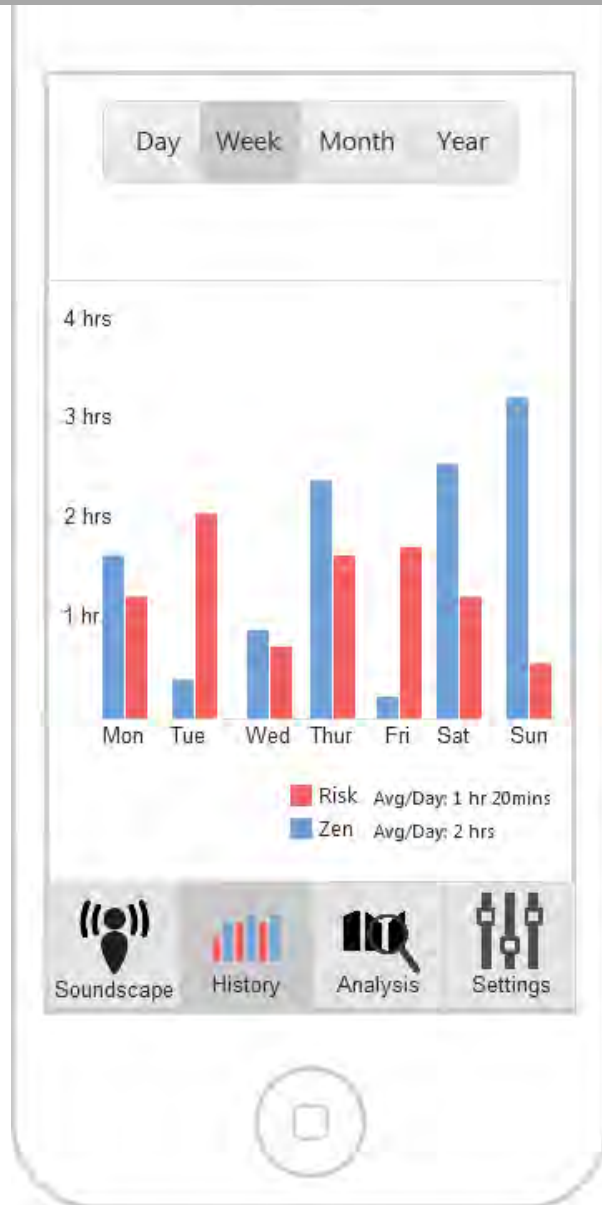
# Task 1: Soundscape Analysis



# Task 2: History & Analysis



# Task 2: History & Analysis





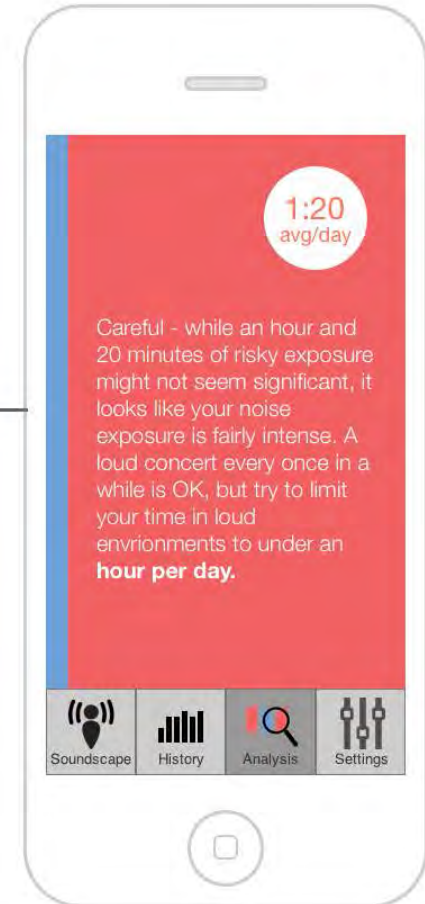
# Task 2: History & Analysis

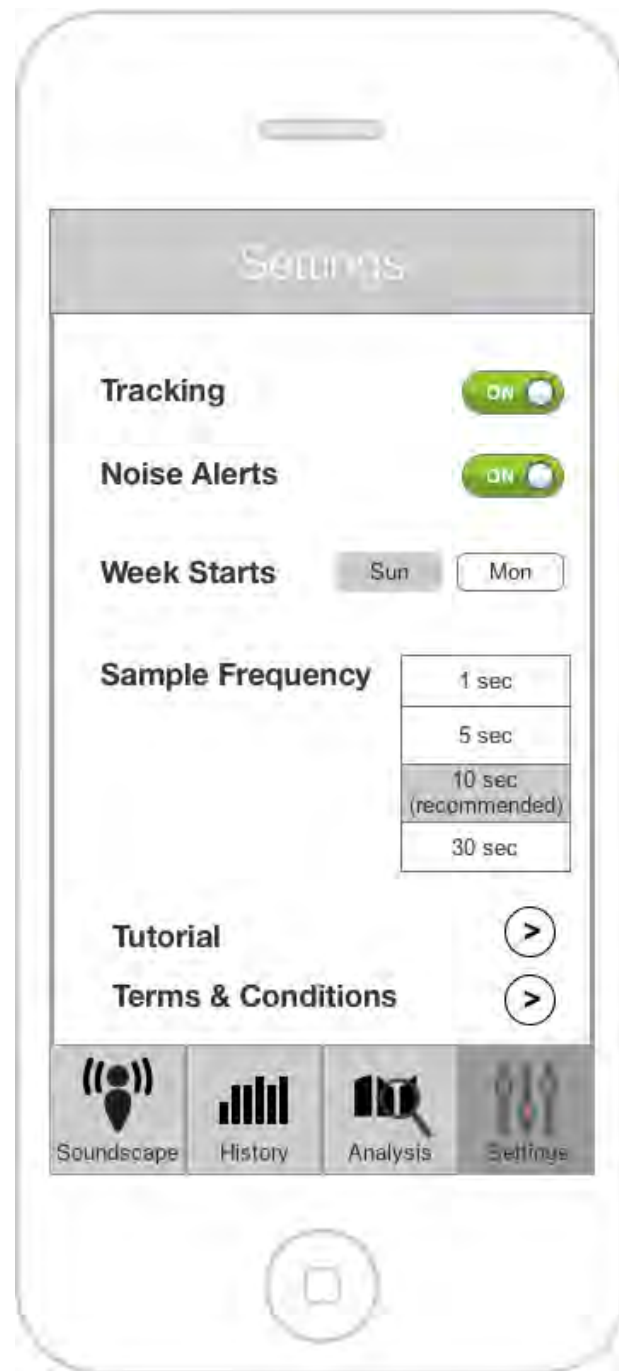


Swipe right



Swipe left





# Summary

# SOUND SCAPE

Questions?