

# SOUND SCAPE

Grant Neubauer

Garrick Li

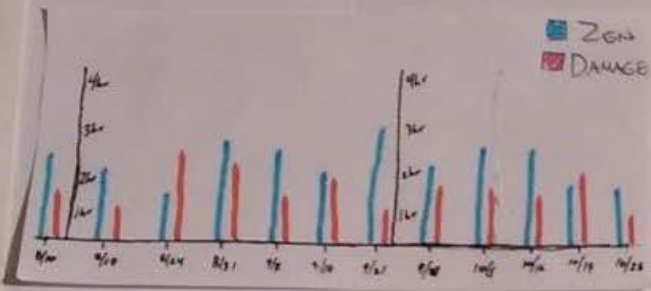
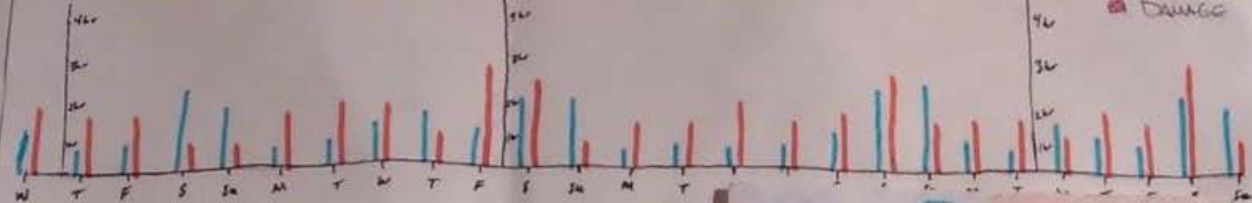
Chris Jung

Luyi Lu

# Overall Problem

A lack of awareness of the health implications of noise exposure

# Initial Paper Prototype



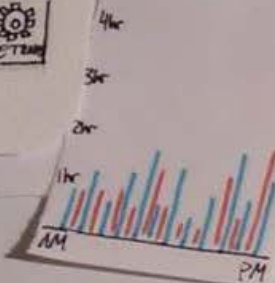
GREAT JOB! YOU  
ARE EXCEEDING THE  
RECOMMENDED AMOUNT  
OF ZEN TIME PER  
DAY. LOOK FORWARD  
TO INCREASES IN MEMORY  
AND ATTENTION!

CAREFUL! 28 MINUTES  
OF HIGH EXPOSURE SEEMS  
LOW BUT YOUR NOISE  
LEVELS ARE HIGH.  
SHORT EXPOSURES 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  
MODERATE

4 hrs. 20 mins.

SAFE EXPOSURE REMAINING

SOUNDSCAPE HISTORY

105 dB  
HIGH

40 mins

SAFE EXPOSURE REMAINING

150 dB



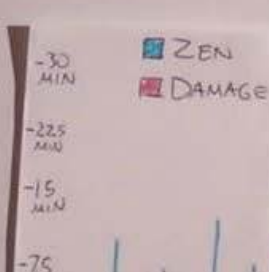
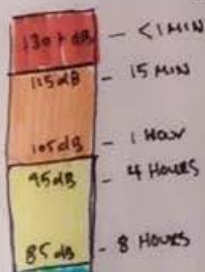
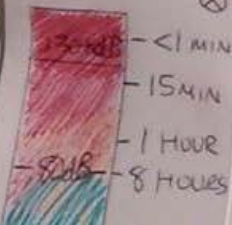
20 mins  
OVER EXPOSURE  
LIMIT



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

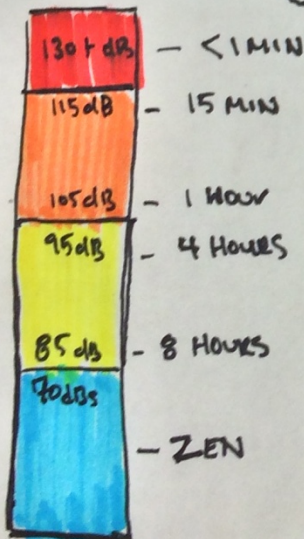
105 dB

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

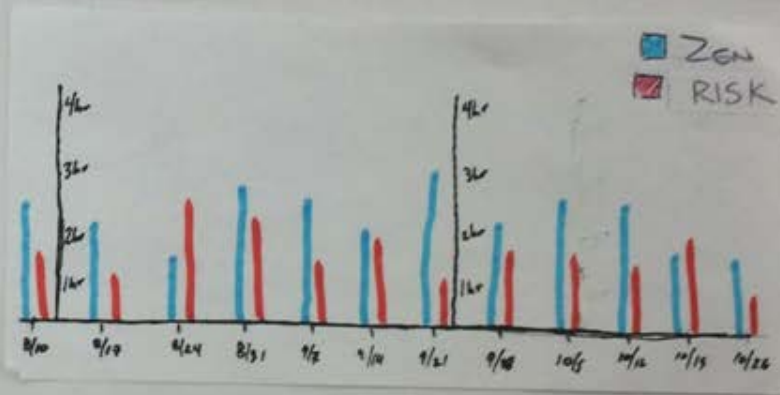
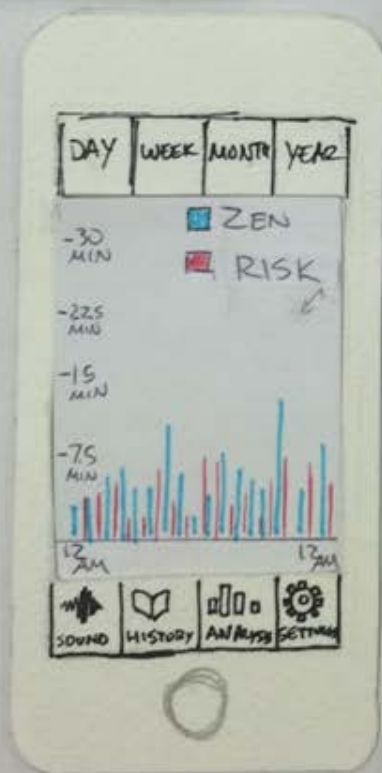
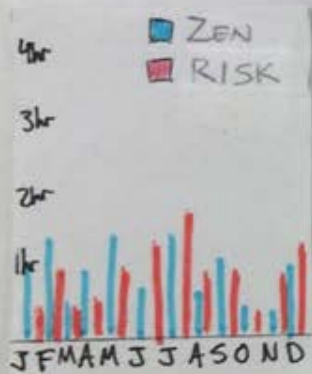
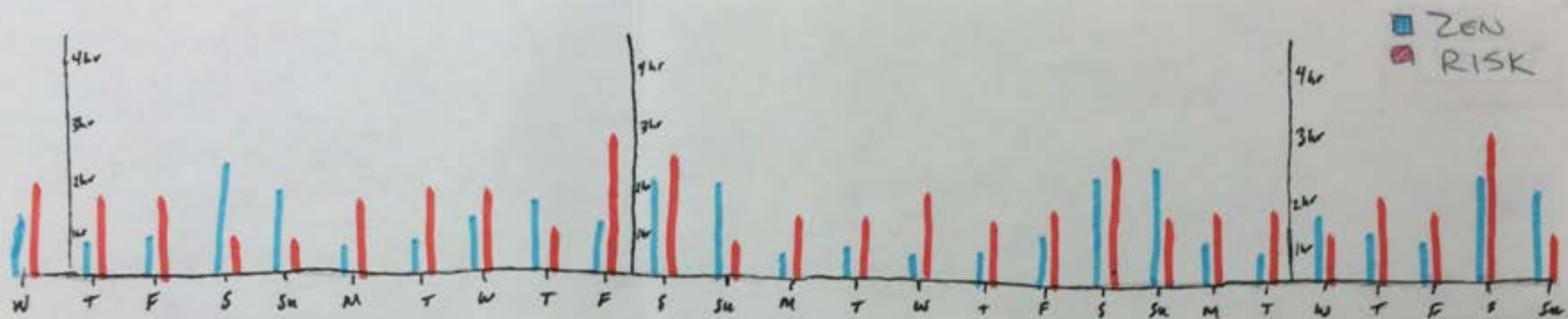


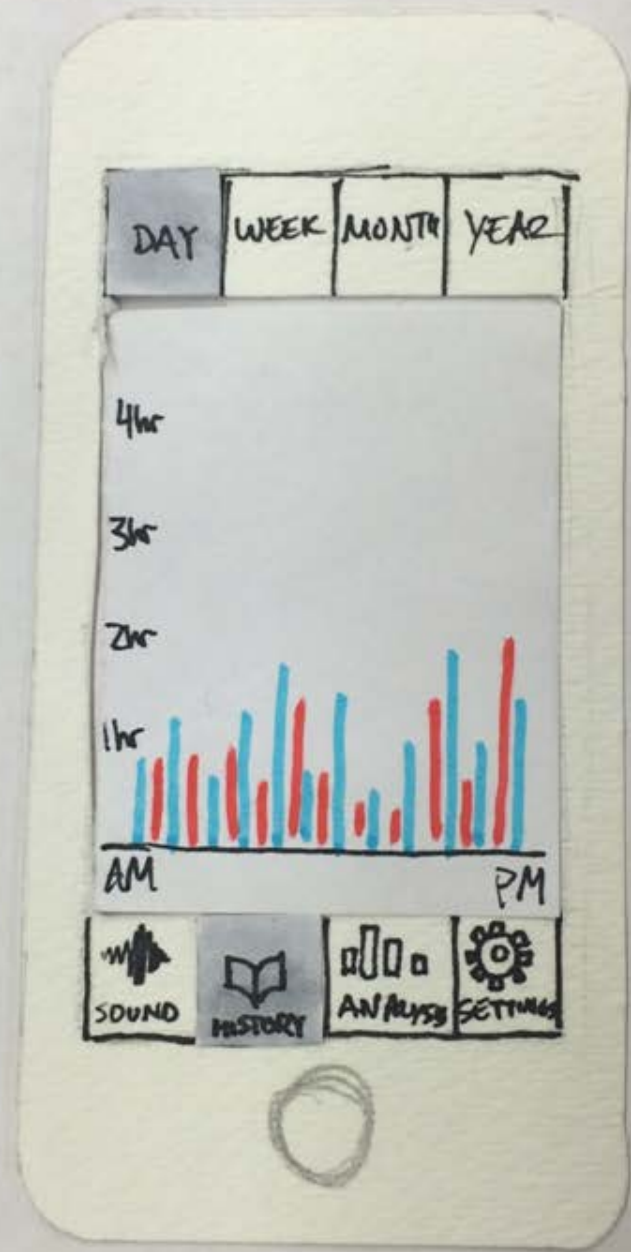
AT HIGH EXPOSURE  
YOU CAN SUSTAIN  
PERMANENT HEARING  
LOSS!

# Task 2

**View past noise exposure & analysis**







GREAT J  
ARE EXCE  
RECOMMEN  
OF ZEN  
DAY. LOOK  
TO INCREASE  
AND ATTE


34 min/day


28 min/day


<>


YOU  
THE  
AMOUNT  
PER  
REWARD  
N MEMORY  
N!

CAREFUL!  
OF HIGH  
LOW BUT  
LEVELS ARE  
SHORT EXPO  
BE HARMF  
INTENSITY

SOUND

HISTORY

ANALYTICS

SETTINGS

MINUTES  
KE SEEMS  
NOISE  
IGH.  
CAN STILL  
T HIGH

# Testing Process



# Usability Tests



UW Student

*Frequents loud environments*



Middle-aged User

*Lacks technological expertise*



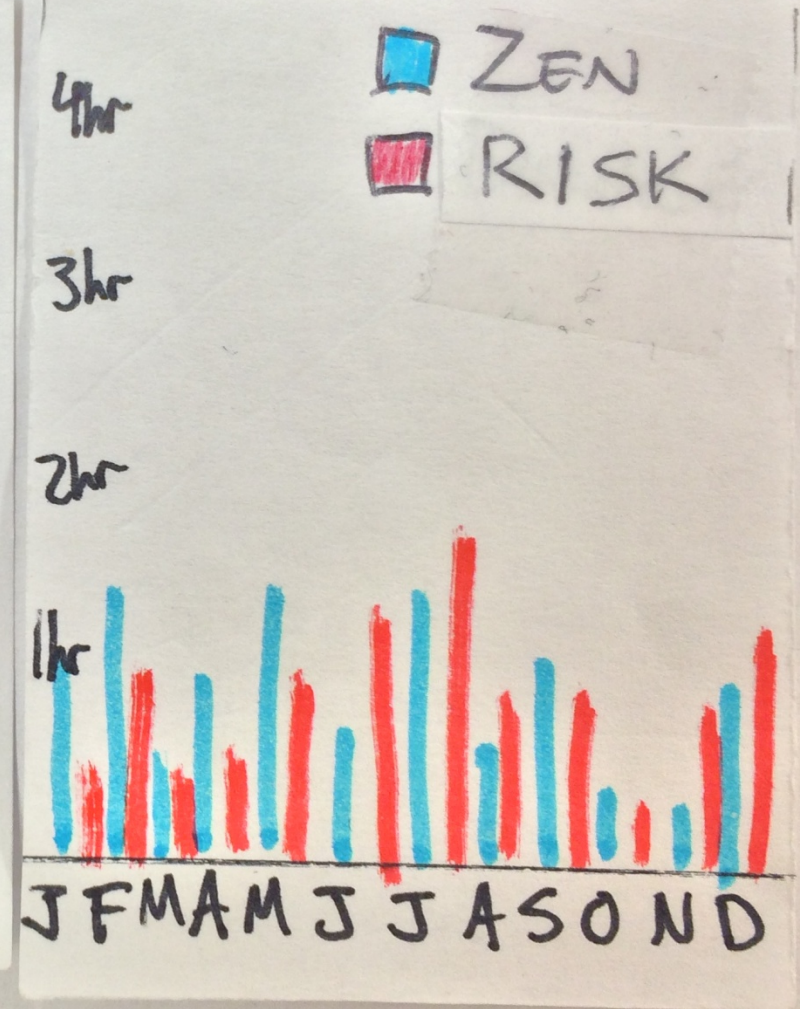
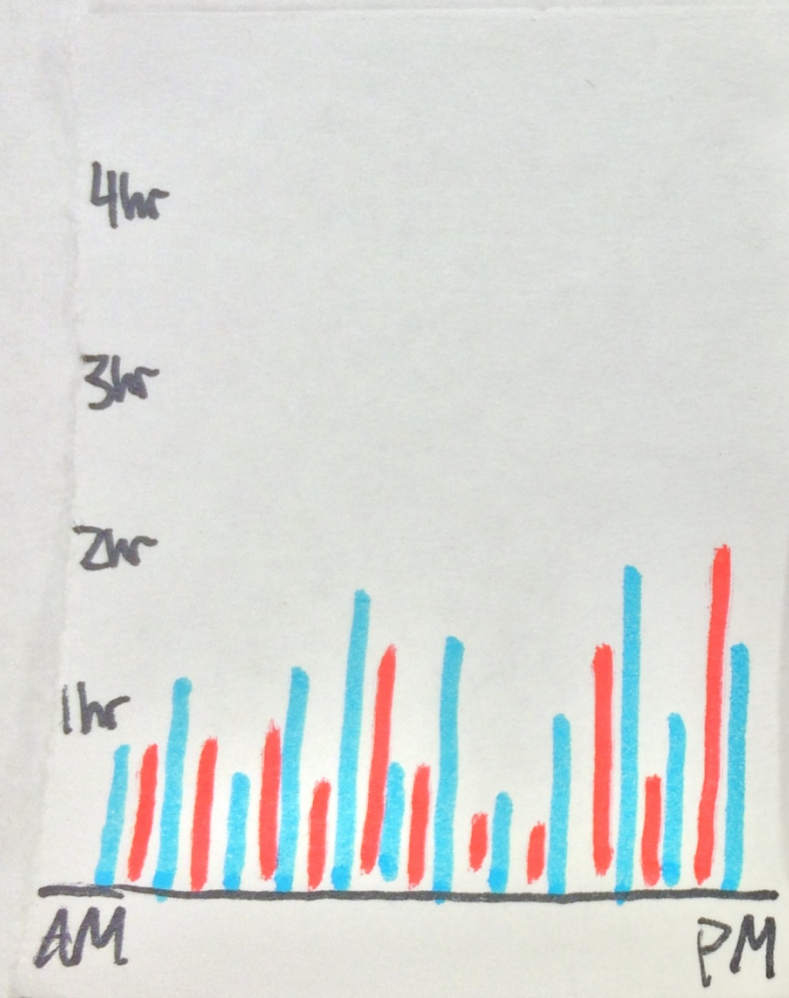
Doctor (Radiologist)

*Provides a medical background*

# Results

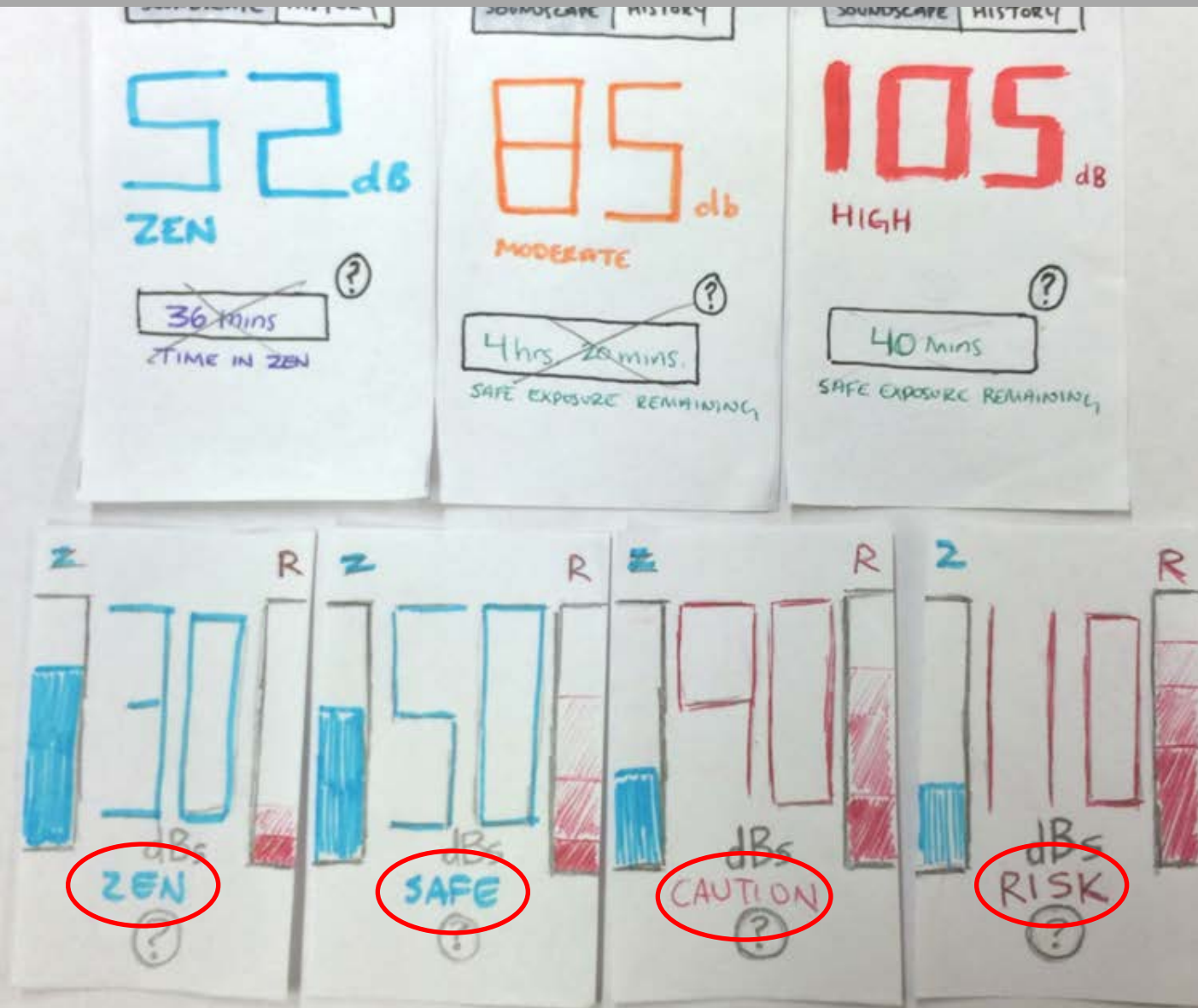
# Syntax

# Recognition Rather than Recall



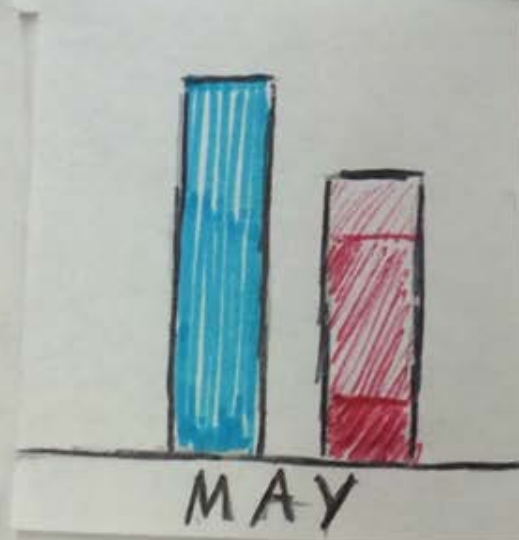


# Visibility of System Status

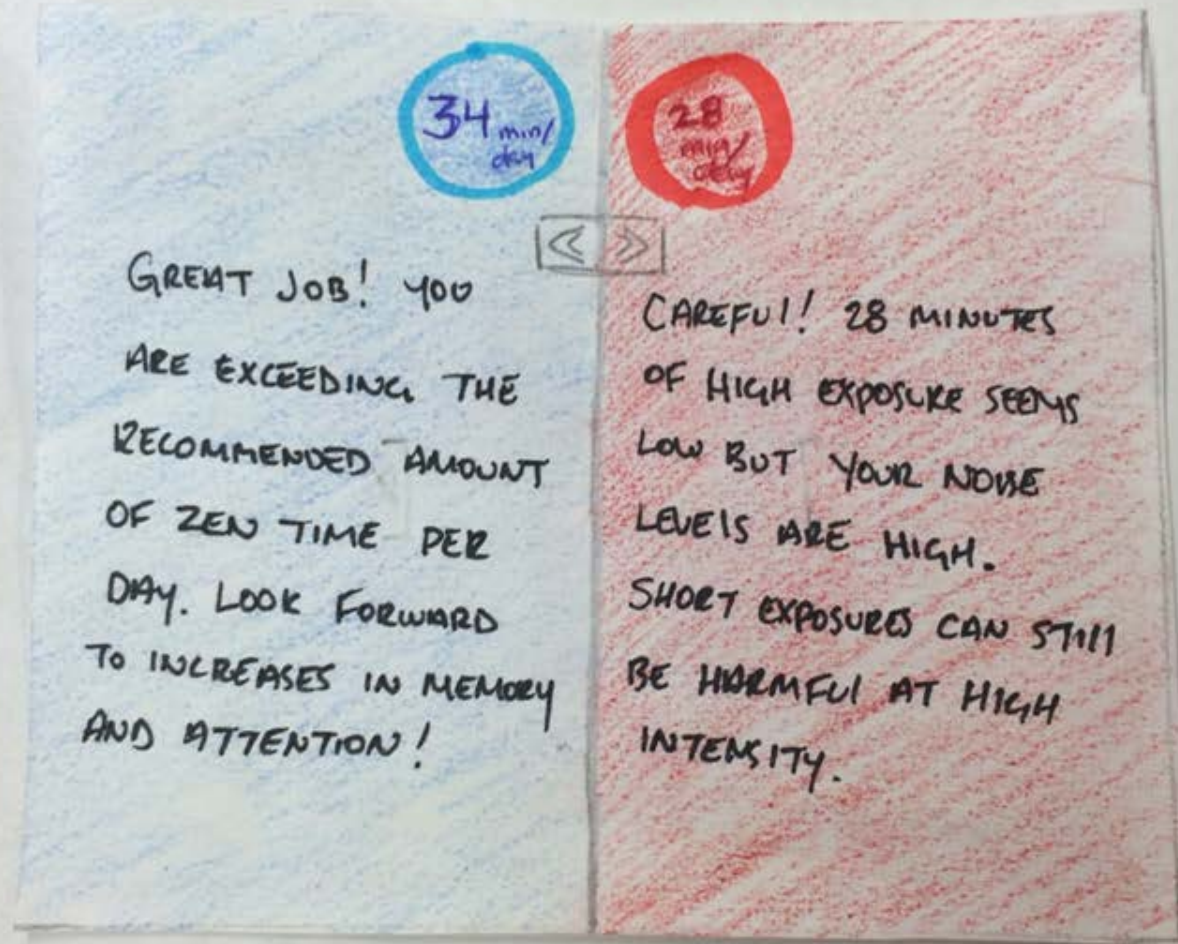


# Affordances

# Flexibility and Efficiency of Use



# User Control and Freedom

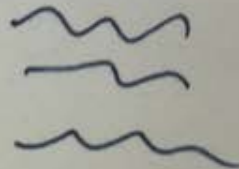
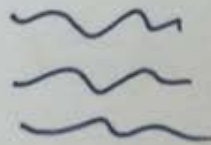
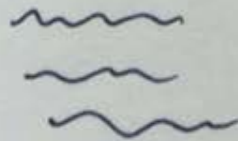




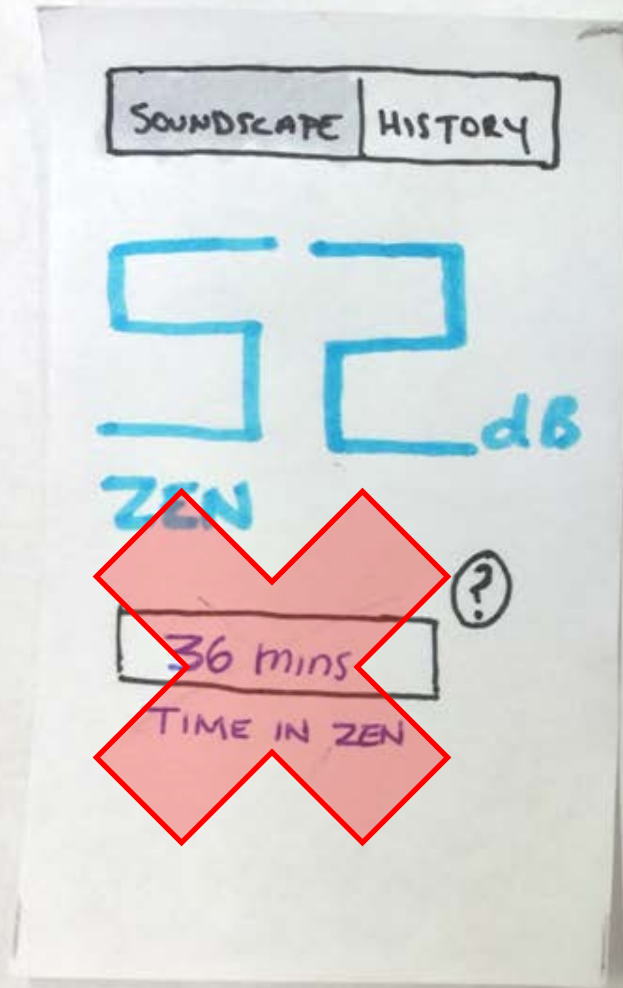
# Features

# Help and Documentation

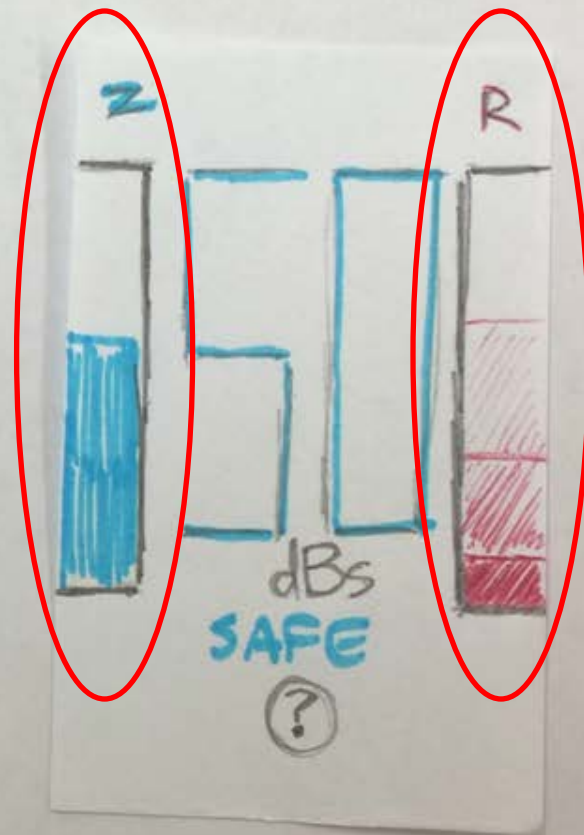
TUTORIAL



# Aesthetic and Minimalist Design

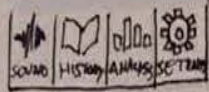


# Visibility of System Status





# Final Paper Prototype



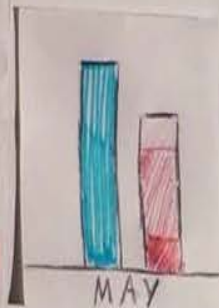
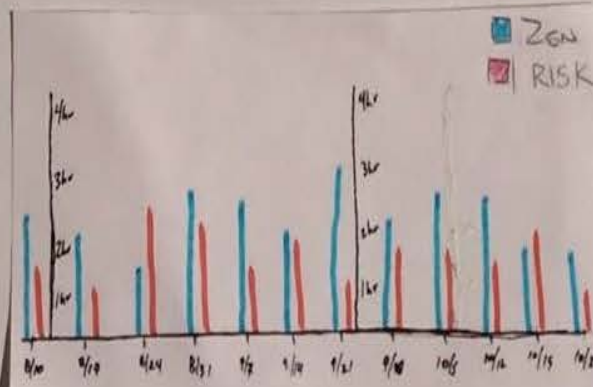
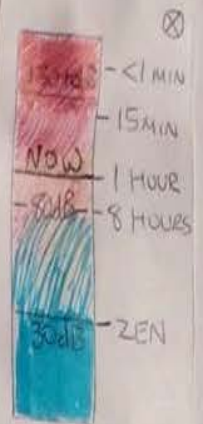
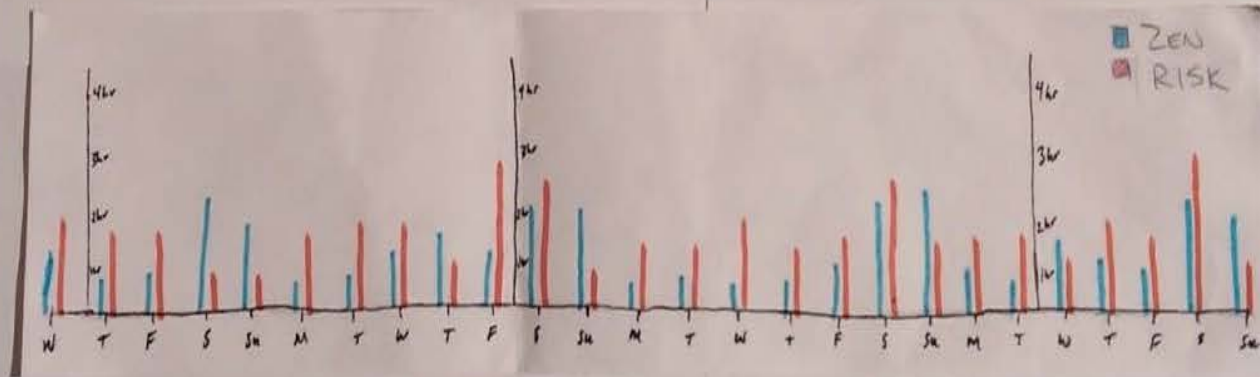
GREAT JOB! YOU ARE EXCEEDING THE RECOMMENDED AMOUNT OF ZEN TIME PER DAY. LOOK FORWARD TO INCREASES IN MEMORY AND ATTENTION!

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

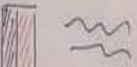
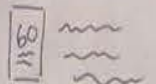
34 min/day

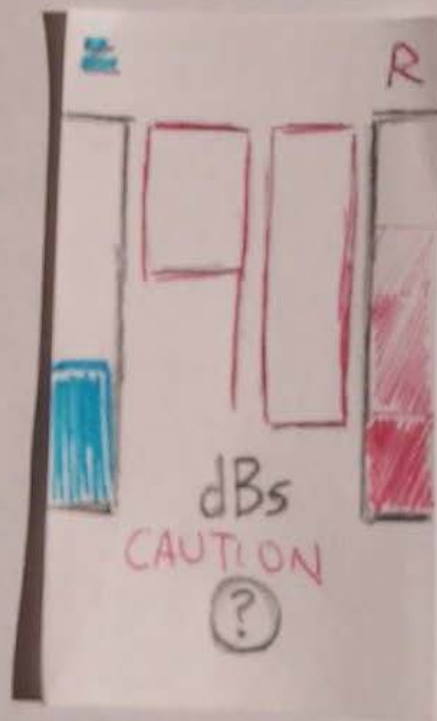
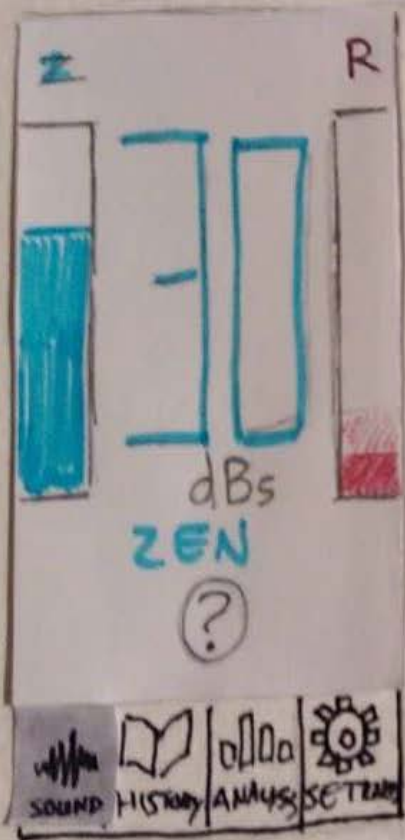
28 min/day

DAY WEEK MONTH YEAR

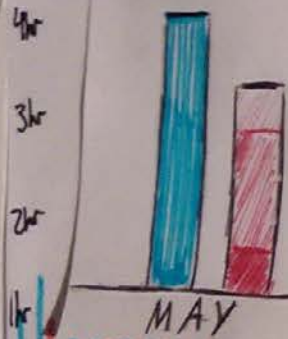


TUTORIAL



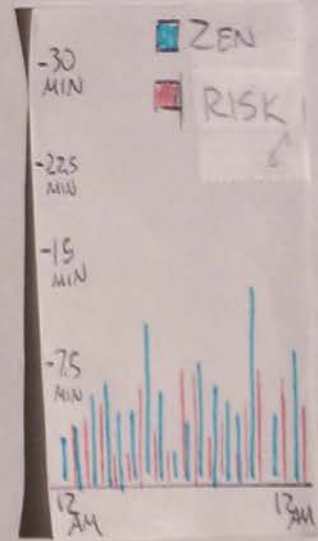
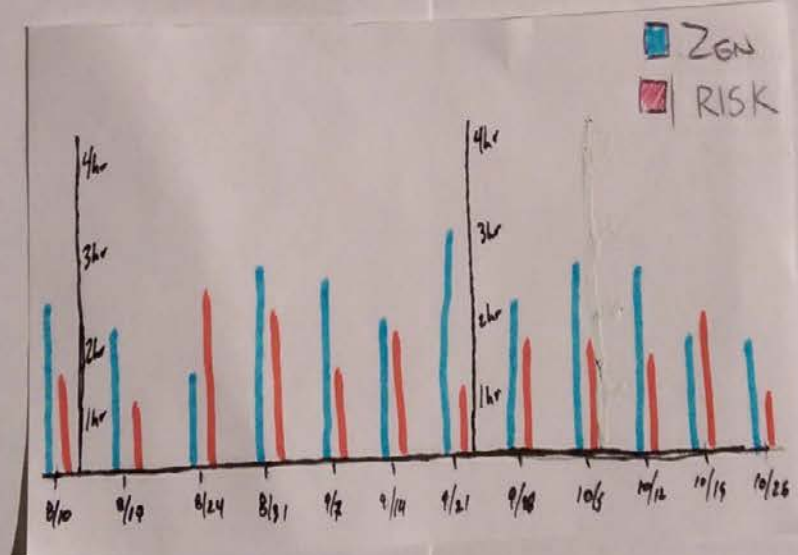
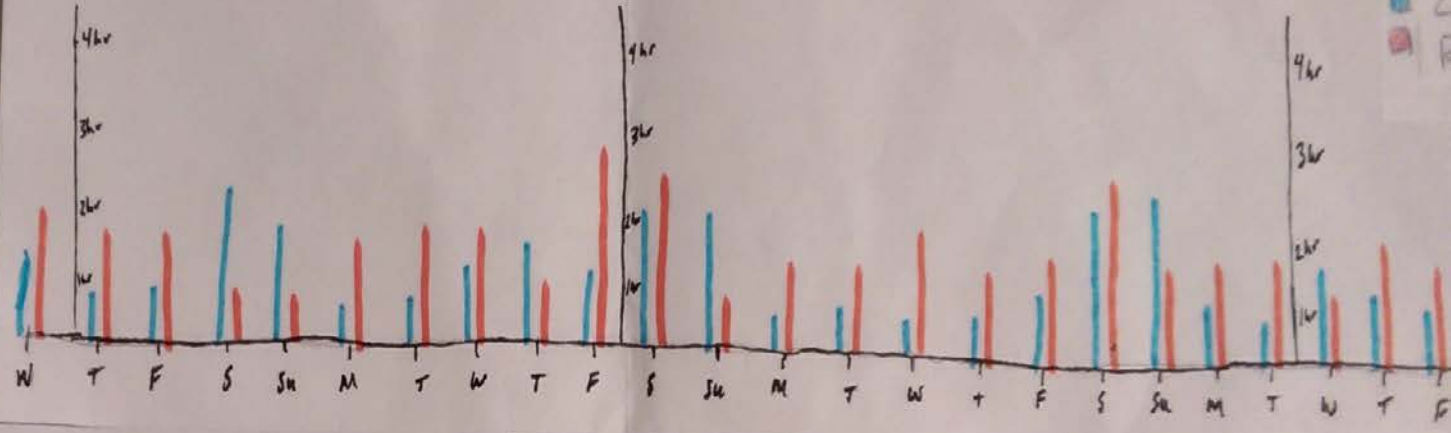


DAY WEEK MONTH YEAR



JFMAMJJASOND

SOUND HISTORY ANALYSIS SETTINGS





GREAT J  
ARE EXCE  
RECOMME  
OF ZEN  
DAY. LOO  
TO INCREA  
AND ATTE

34 min/day

28 min/day

< >

YOU CAREFUL!

OF HIGH


LOW BUT


LEVELS ARE


SHORT EXP


BE HARME

INTENSIT

SOUND

HISTORY

ANALYSIS

SETTINGS

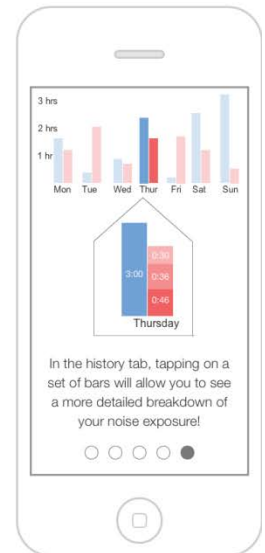
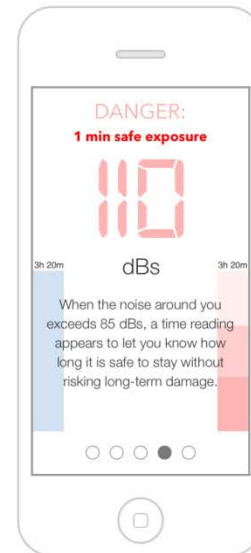
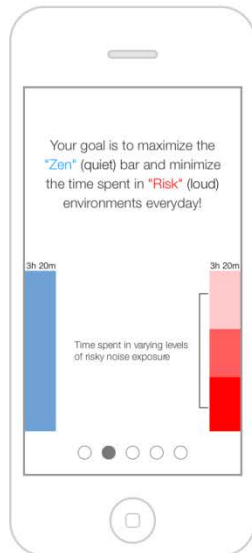
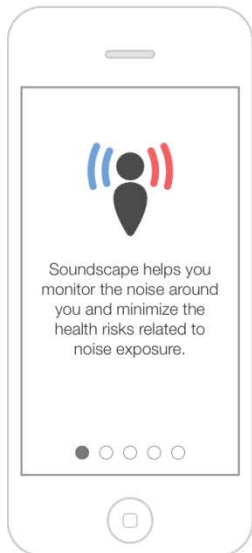
MINUTES  
LIKE SEEMS  
L NOISE  
HIGH.  
S CAN STILL  
AT HIGH



# Digital Mockups



# Tutorial

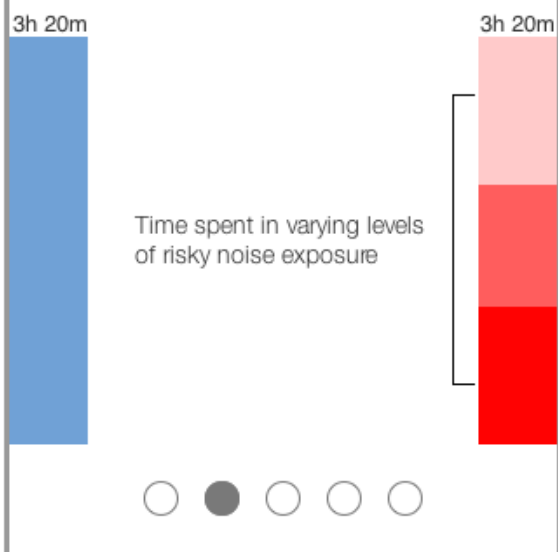




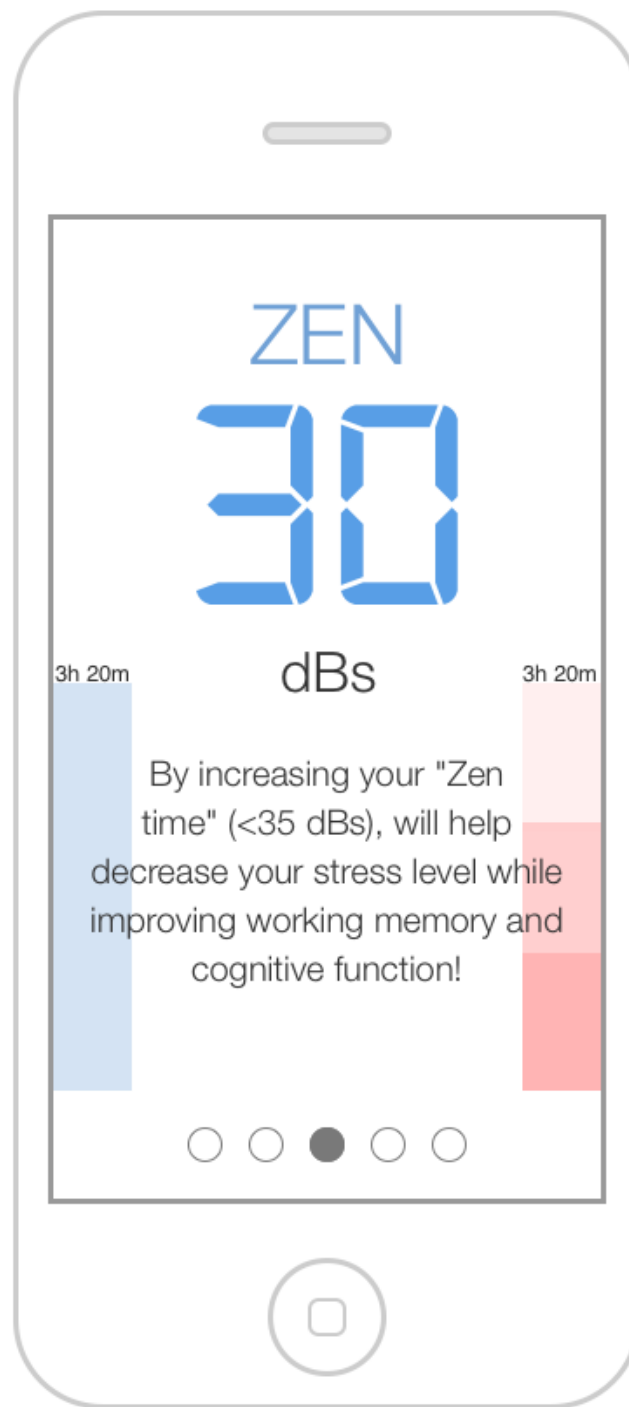
Soundscape helps you  
monitor the noise around  
you and minimize the  
health risks related to  
noise exposure.

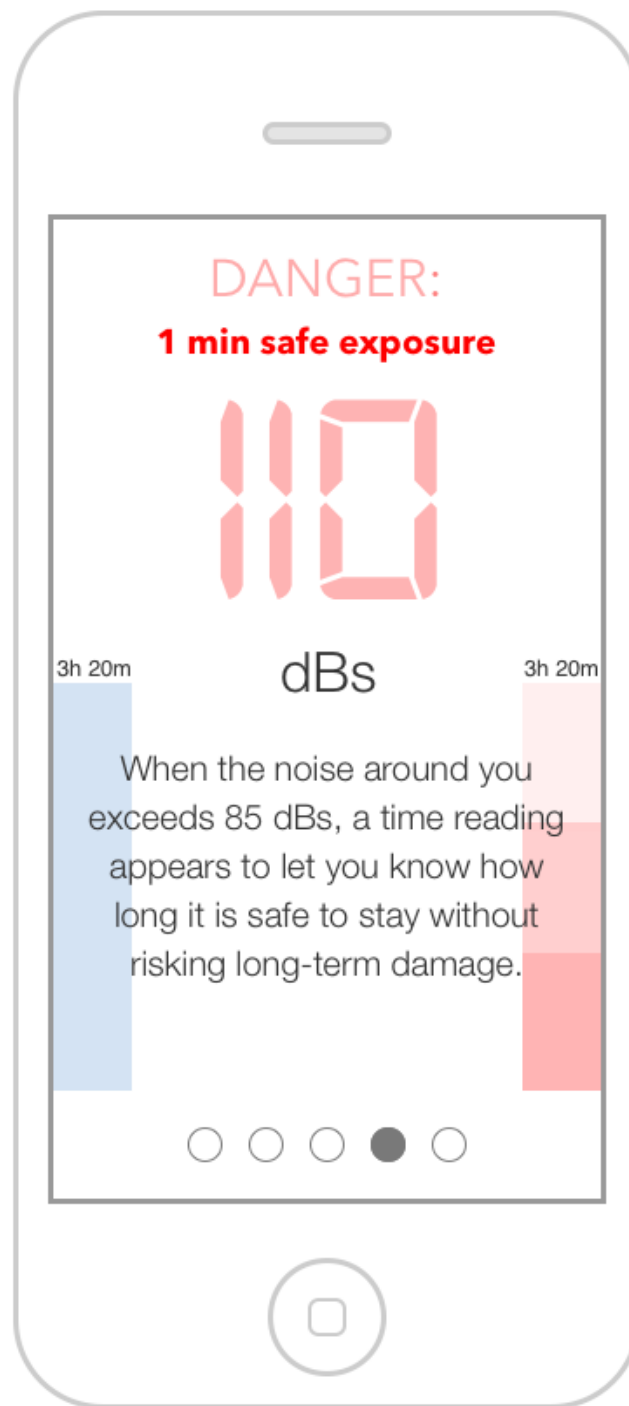


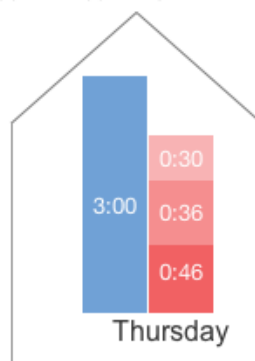
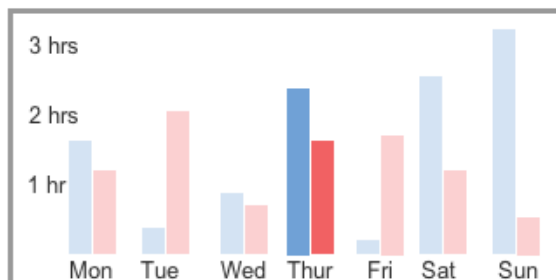
Your goal is to maximize the  
"Zen" (quiet) bar and minimize  
the time spent in "Risk" (loud)  
environments everyday!







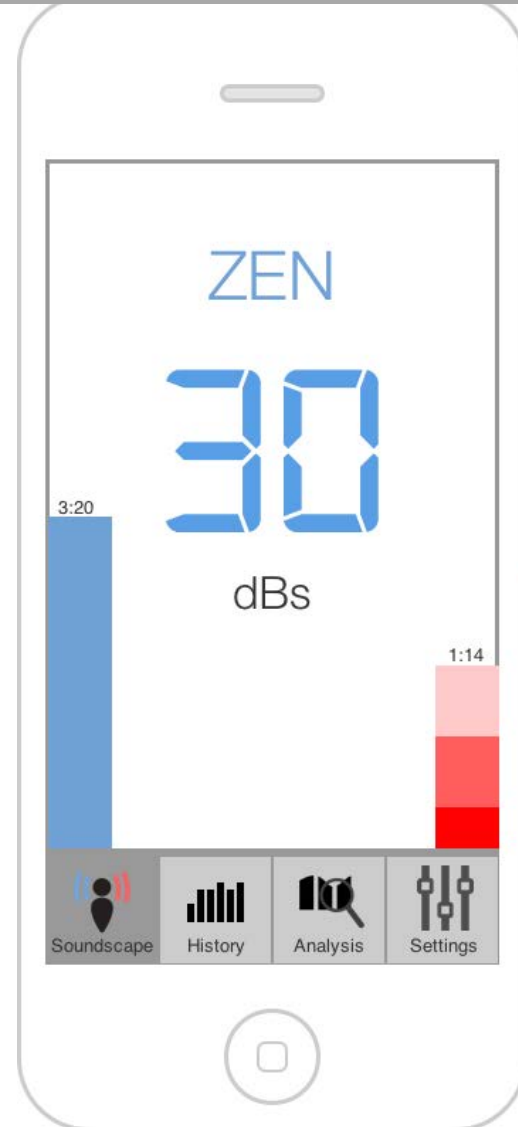
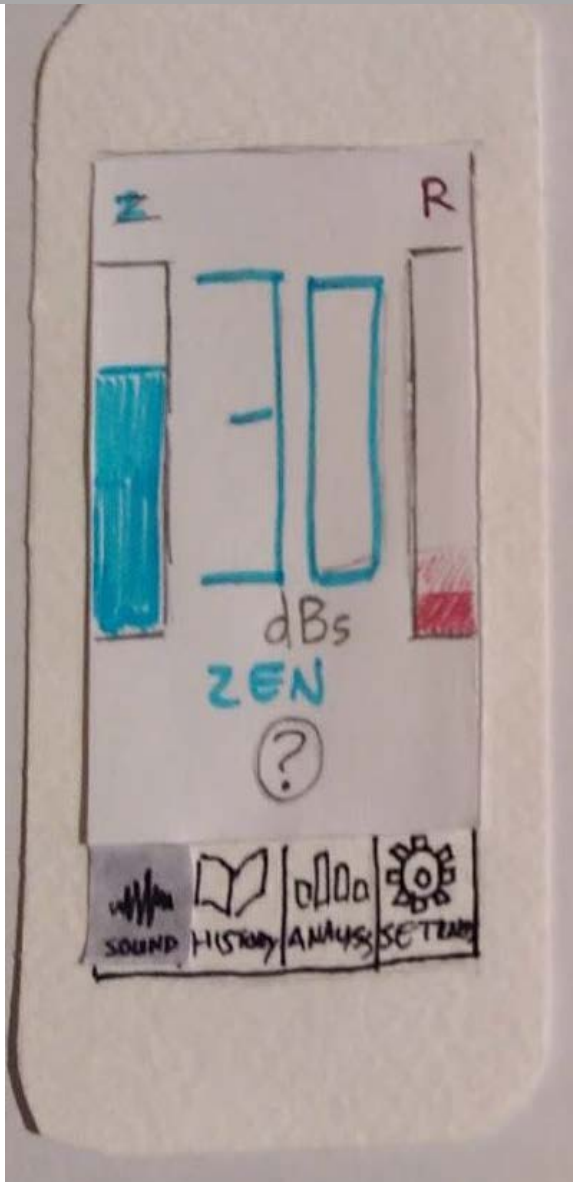




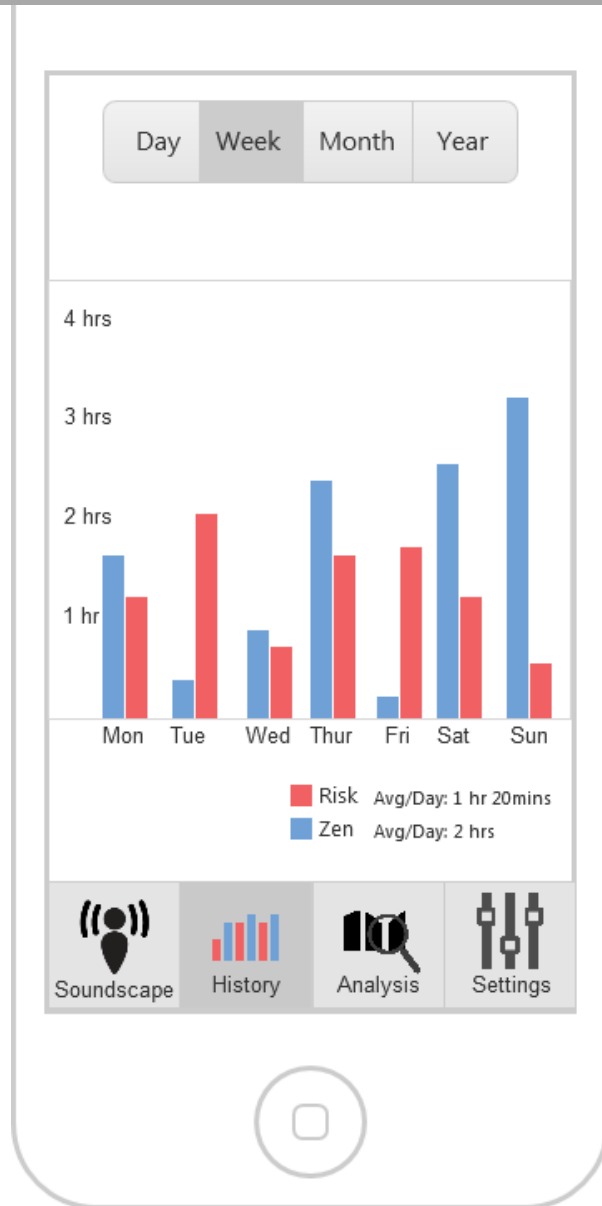
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!



# Task 1: Soundscape Analysis

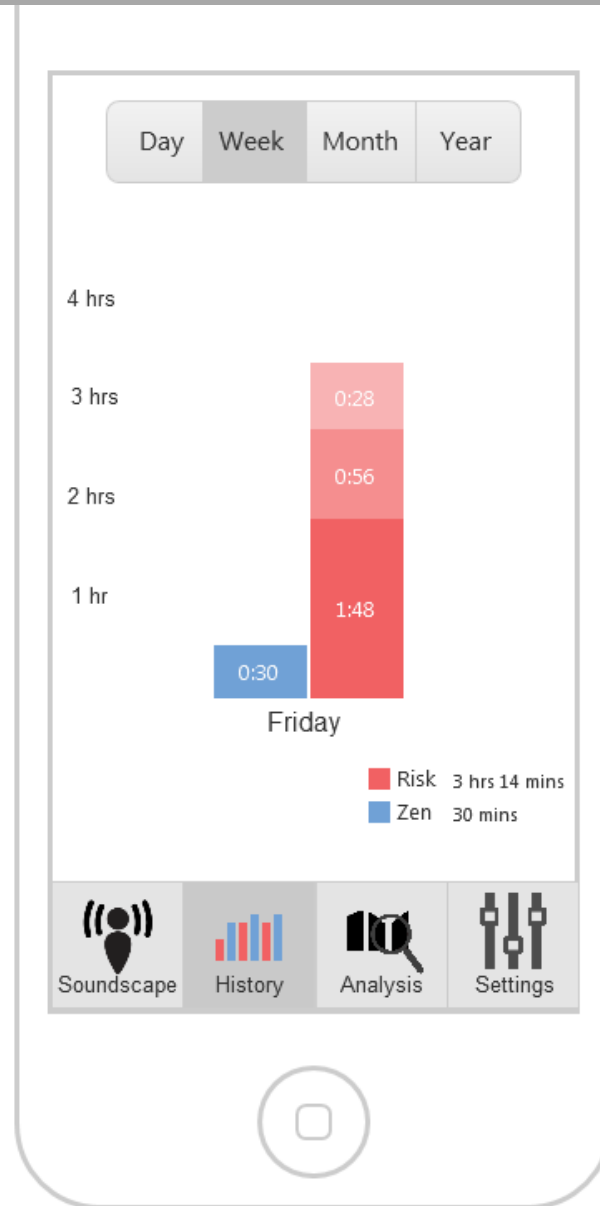
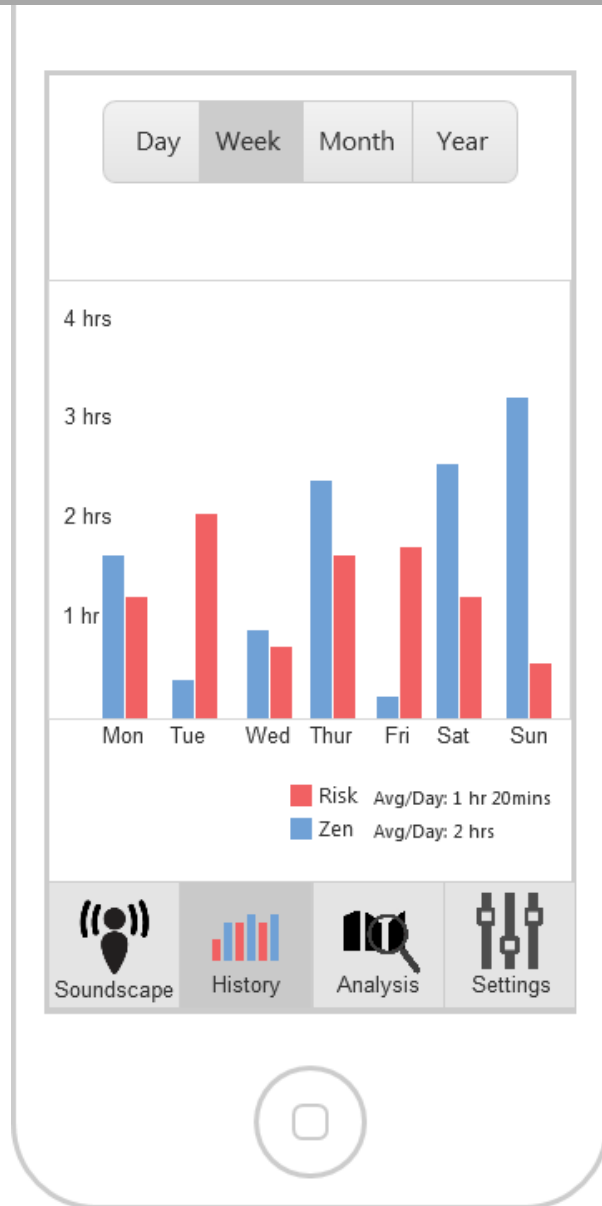


# Task 2: History & Analysis

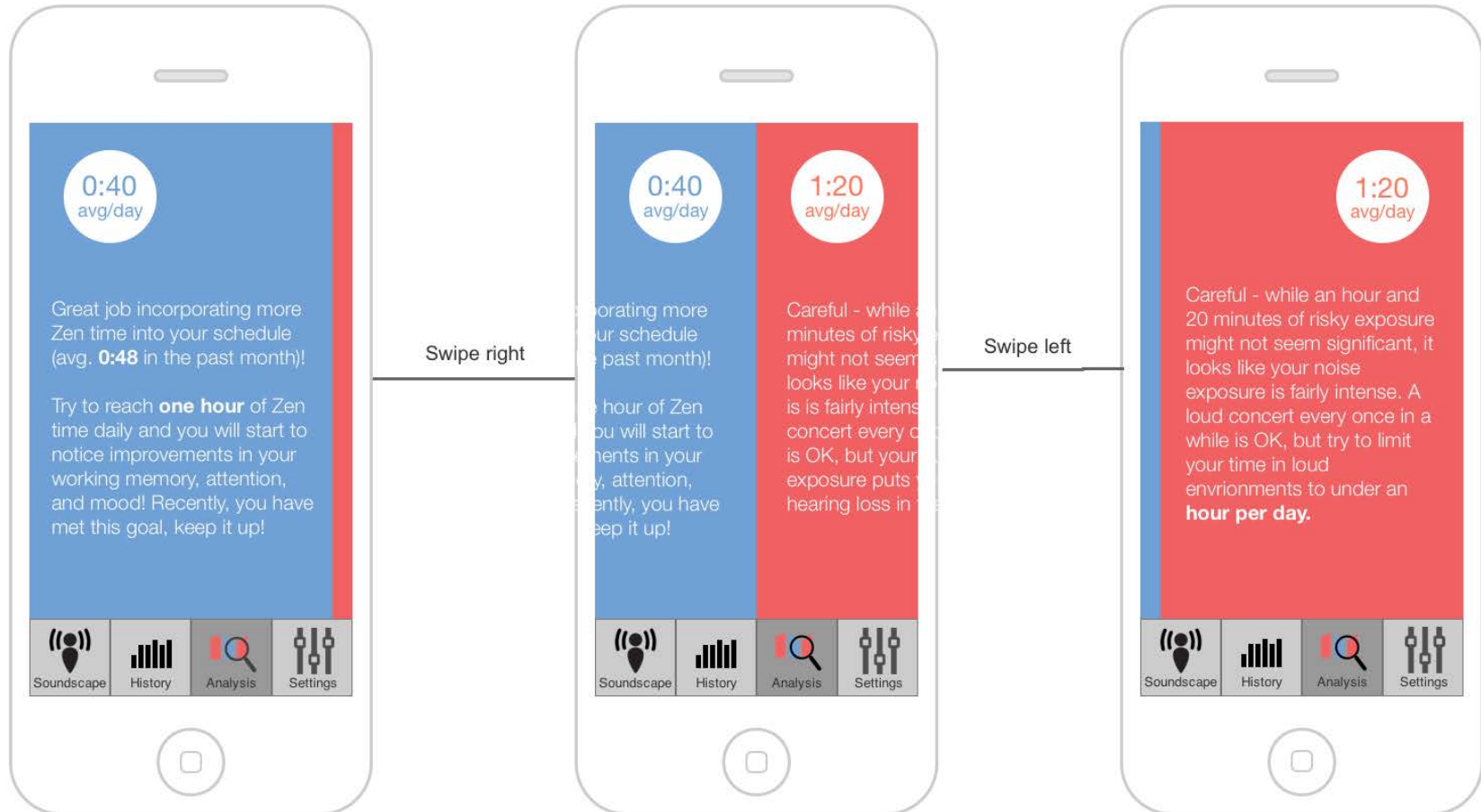




# Task 2: History & Analysis



# Task 2: History & Analysis



## Settings

Tracking

ON

Noise Alerts

ON

Week Starts

Sun

Mon

Sample Frequency

1 sec

5 sec

10 sec  
(recommended)

30 sec

Tutorial



Terms & Conditions



Soundscape



History



Analysis



Settings

# Summary

# SOUND SCAPE

Questions?