SOUNDSCAPE

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Chris Jung
Luyi Lu

Overall Problem

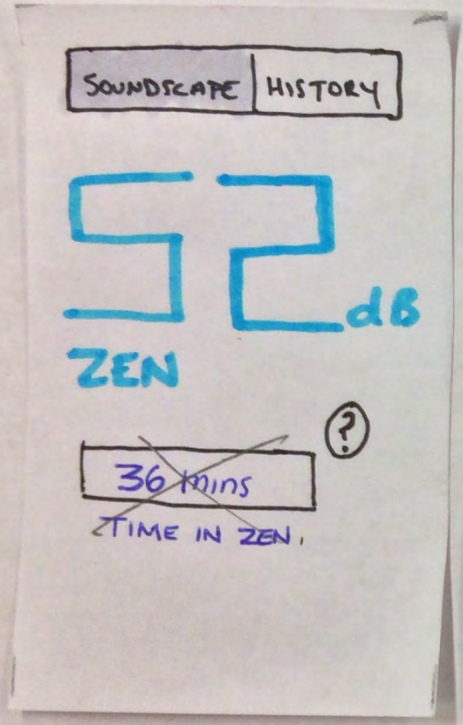
A lack of awareness of the health implications of noise exposure

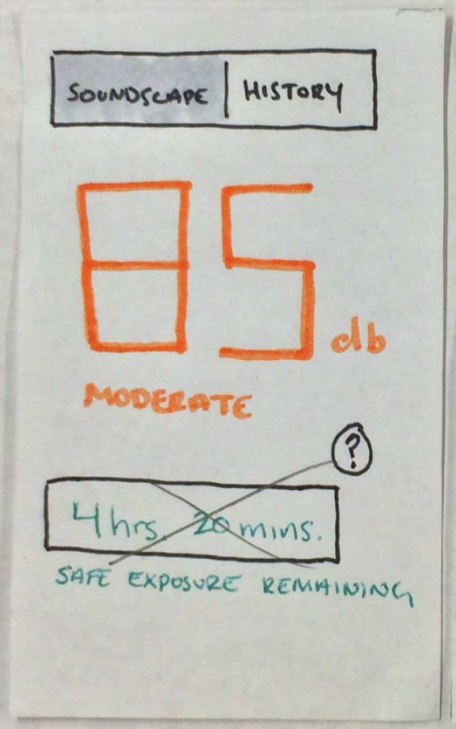
Initial Paper Prototype

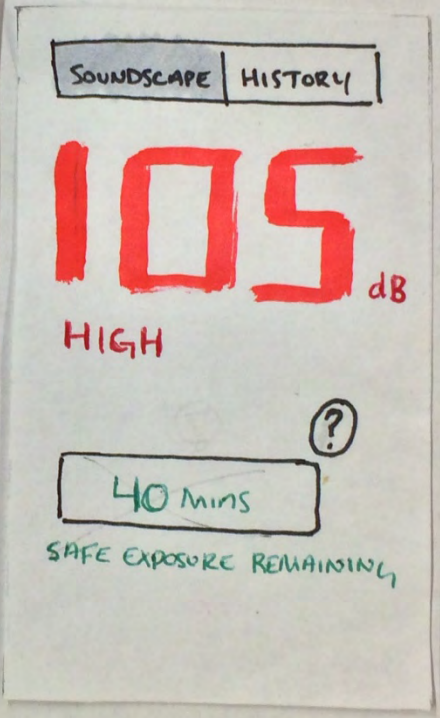
ZEN
DAMAGE
34
2.8
GREAT JOB! YOU ARE EXCEEDING THE RECOMMENDED AMOUNT OF ZEN TIME PER DAY. LOOK FORWARD TO INCREASES IN MEMORY AND ATTENTION!
CAREFUL! 28 MINUTES OF HIGH EXPOSURE SEEMS LOW BUT YOUR NOISE LEVELS ARE HIGH. SHORT EXPOSURES CAN STILL BE HARMFUL AT HIGH INTENSITY.
DAY
WEEK
MONTH
YEAR
SOUNDSCAPE
HISTORY
52 dB
ZEN
36 mins
TIME IN ZEN
85 dB
4 hrs. 20 mins.
105 dB
HIGH
40 mins
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!
130+ dB - <1 MIN
115dB - 15 MIN
105dB - 1 HOUR
95dB - 4 HOURS
85 dB - 8 HOURS
-30 MIN
-22.5 MIN
-15 MIN
DAY
WEEK
MONTH
YEAR
SOUND
HISTORY
AWARDS
SETTINGS

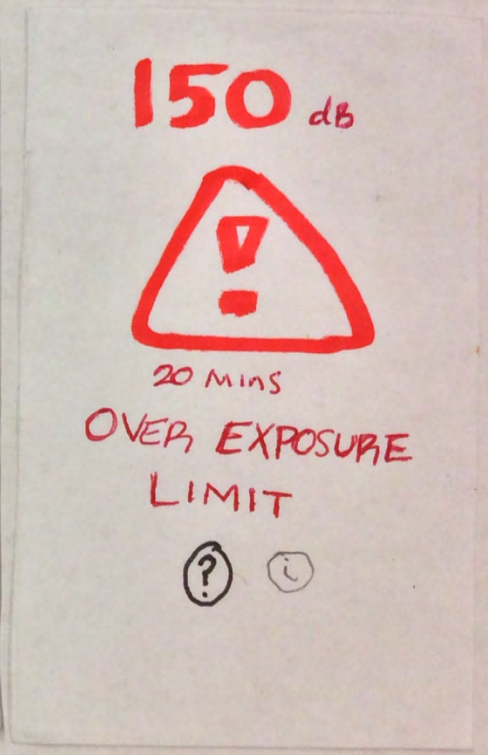
Task 1

Perform Soundscape analysis on the current environment


SOUNDSCAPE
HISTORY
52 dB
ZEN
36 mins
TIME IN ZEN.
?


SOUNDSCAPE
HISTORY
85 db
MODERATE
4hrs. 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

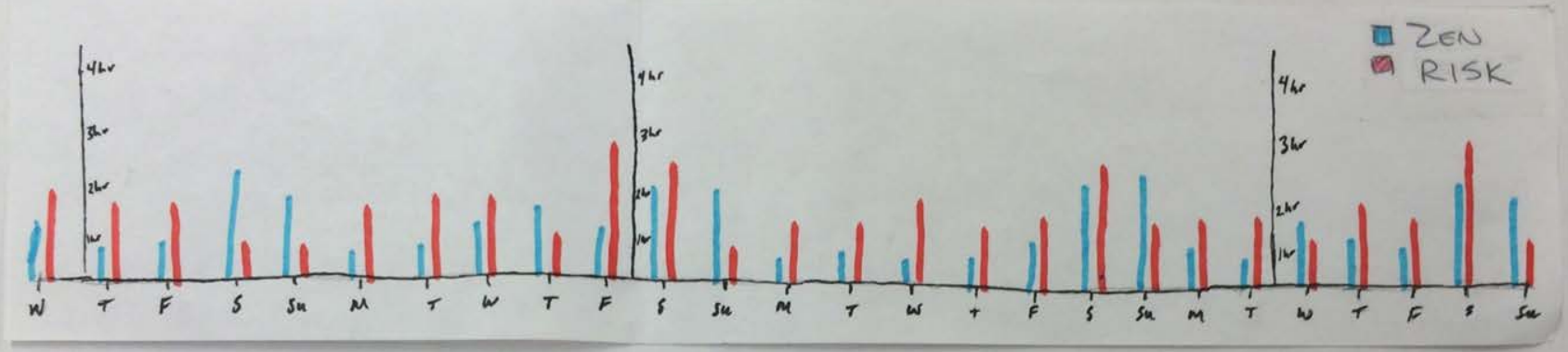
AT HIGH EXPOSURE YOU CAN SUSTAIN PERMANENT HEARING LOSS!

YOU HAVE EXCEEDED THE SAFE EXPOSURE LIMIT!

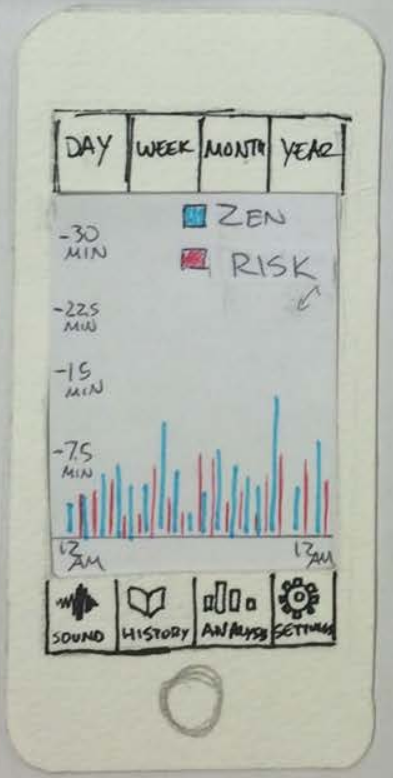
– 8 MINS AGO GOT IT

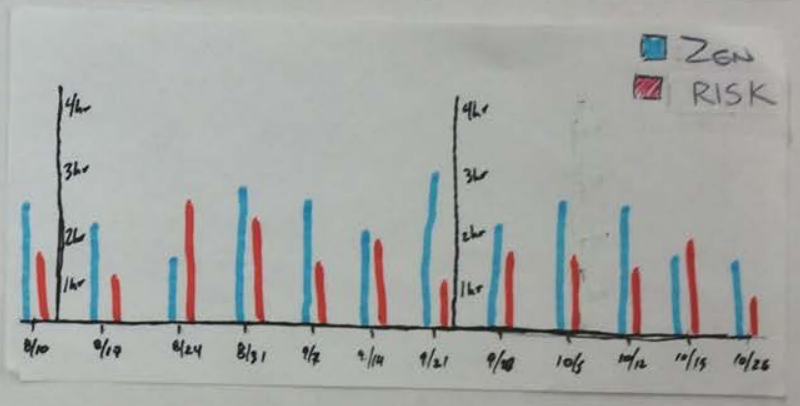
Task 2

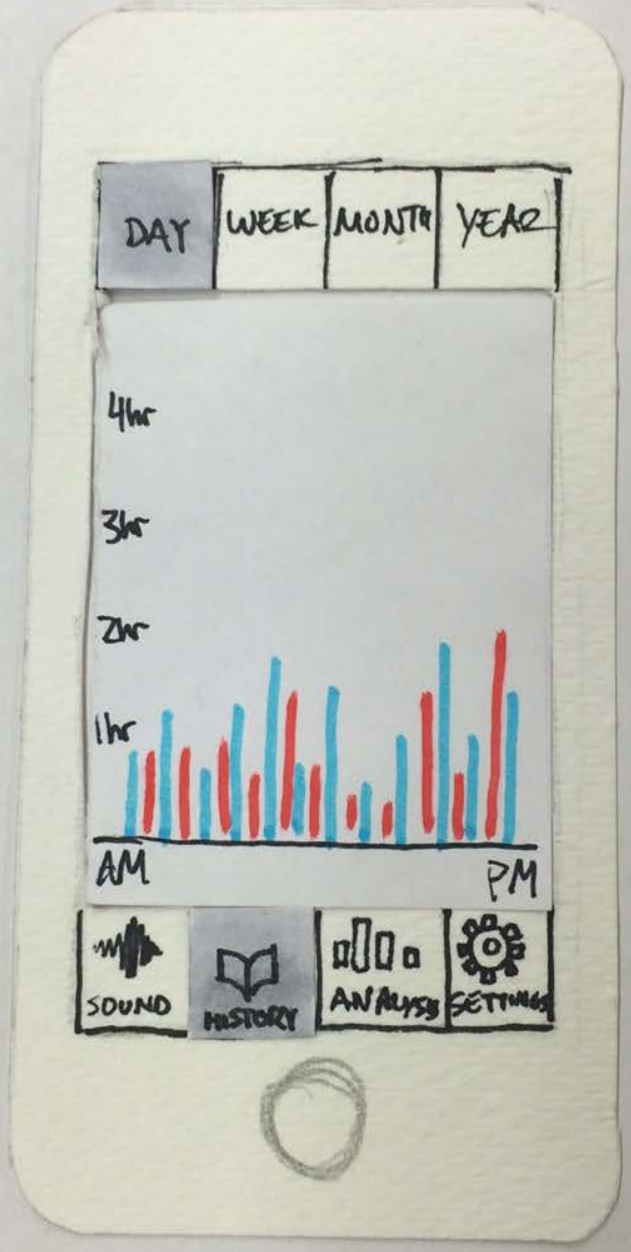
View past noise exposure & analysis

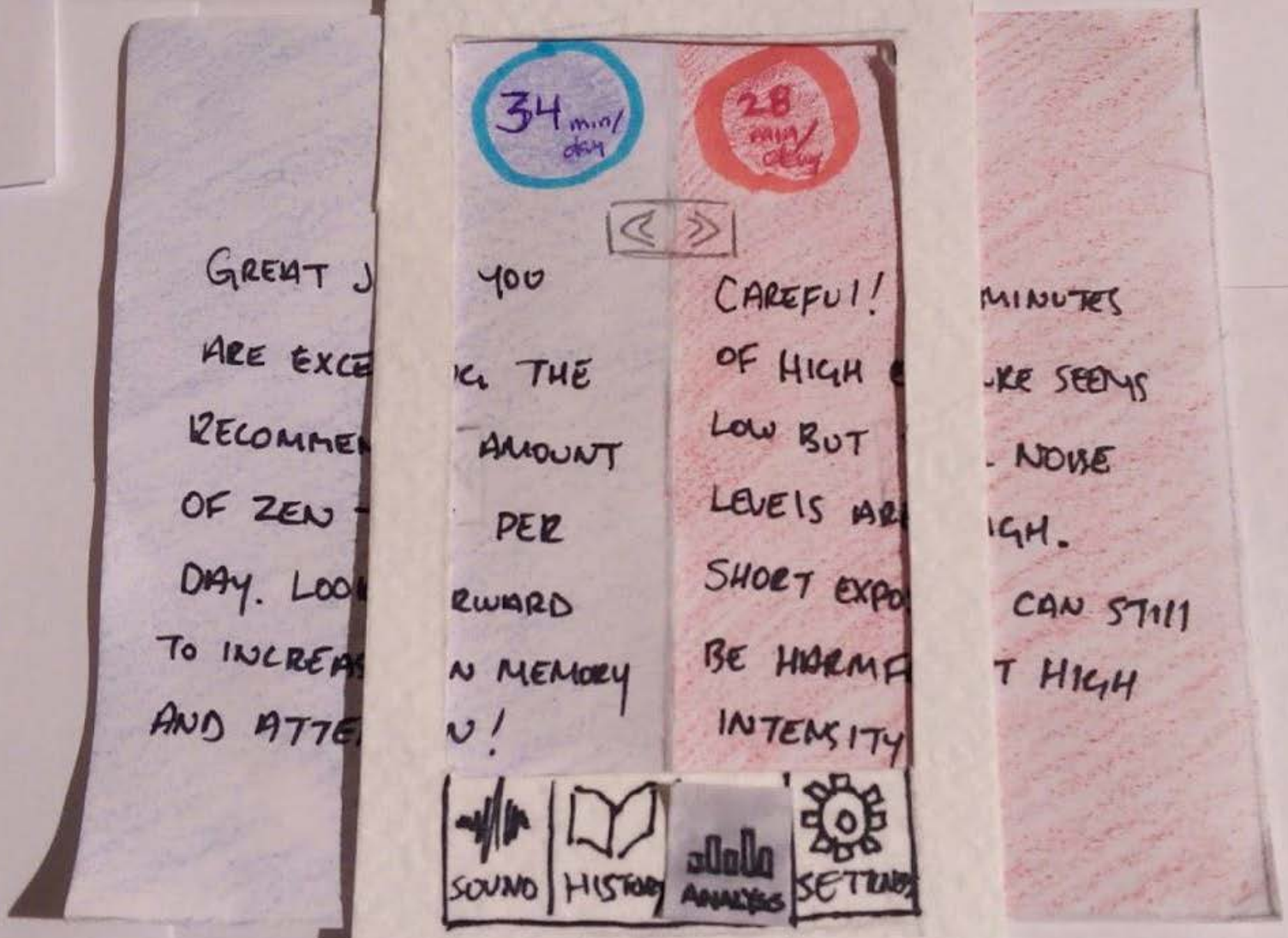

ZEN
RISK
4hr
3hr
2hr
1hr
W T F S Su M T W T F S Su M T W T F S Su M T W T F S Su

ZEN
RISK
4hr
3hr
2hr
1hr
J F M A M J J A S O N D


DAY
WEEK
MONTH
YEAR
ZEN
RISK
-30 MIN
-22.5 MIN
-15 MIN
-7.5 MIN
12 AM
12 AM
SOUND
HISTORY
ANALYSIS
SETTINGS


ZEN
RISK
4hr
3hr
2hr
1hr
8/10 8/17 8/24 8/31 9/7 9/14 9/21 9/28 10/5 10/12 10/19 10/26


DAY
WEEK
MONTH
YEAR
4hr
3hr
2hr
1hr
AM
PM
SOUND
HISTORY
ANALYSIS
SETTINGS


34 min/ day
28 min/ day
SOUND
HISTORY
ANALYSIS
SETTINGS

Testing Process

Usability Tests

UW Student

Frequents loud environments

Middle-aged User

Lacks technological expertise

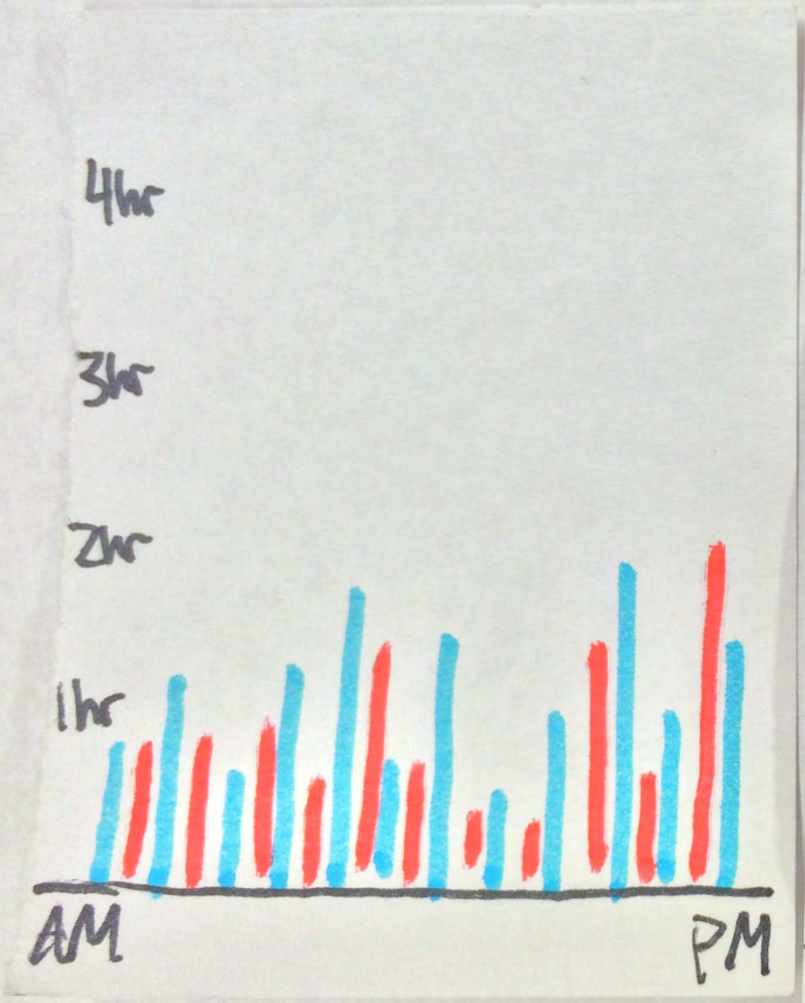
Doctor (Radiologist)

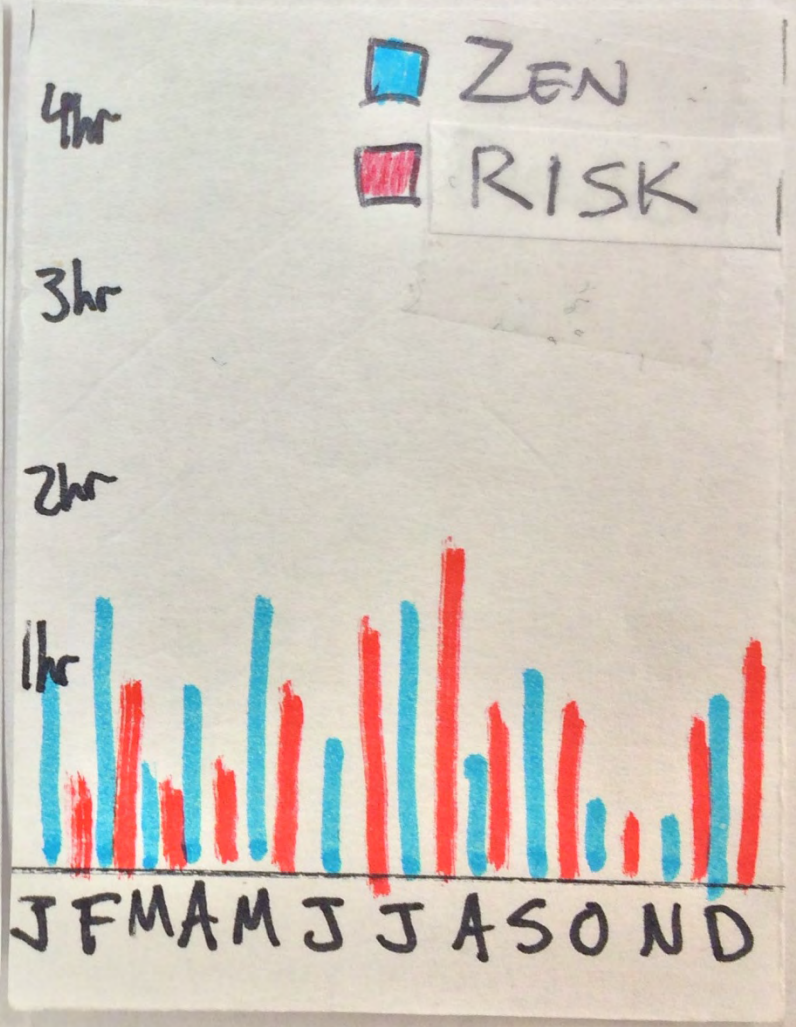
Provides a medical background

Results

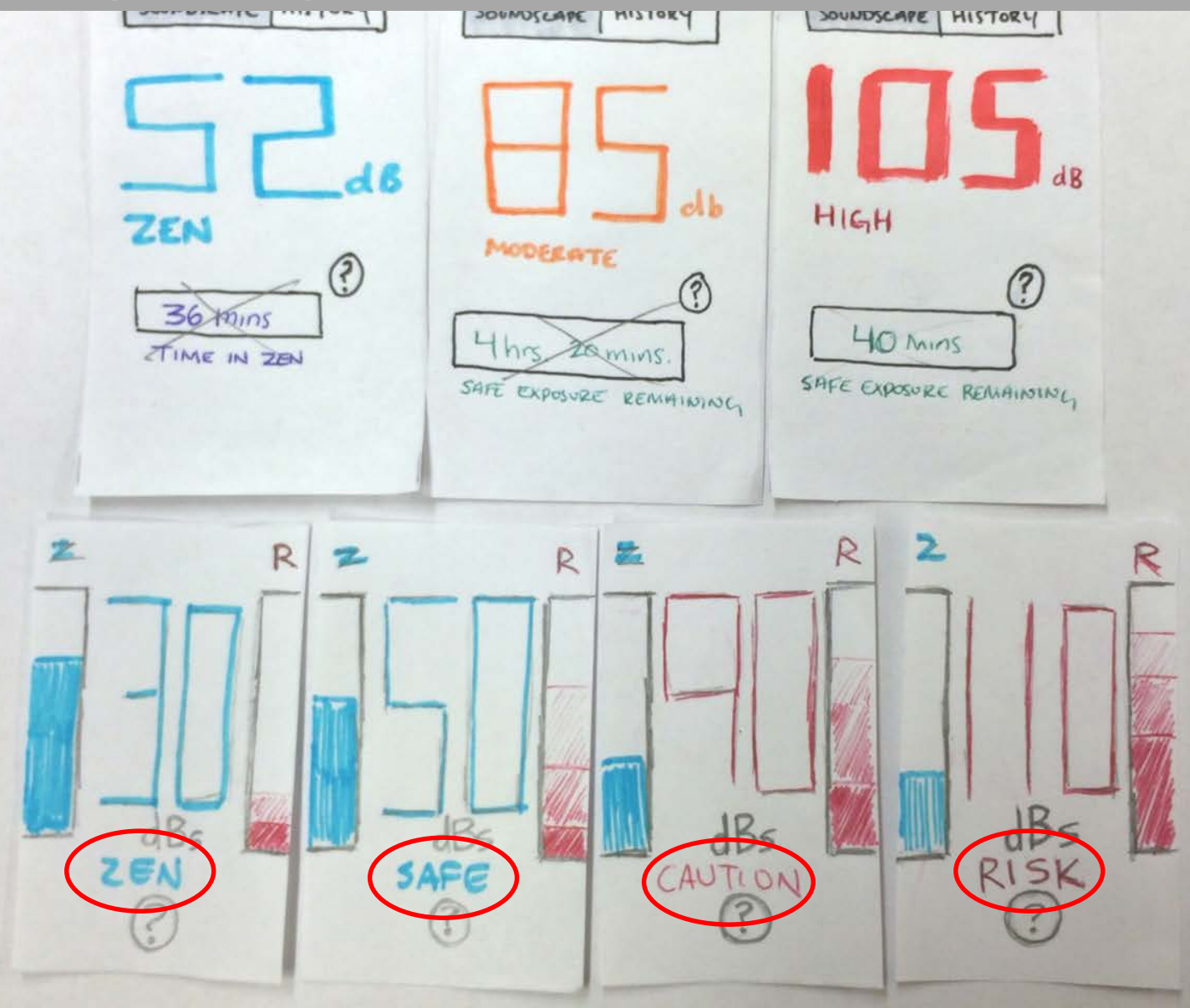
Syntax

Recognition Rather than Recall



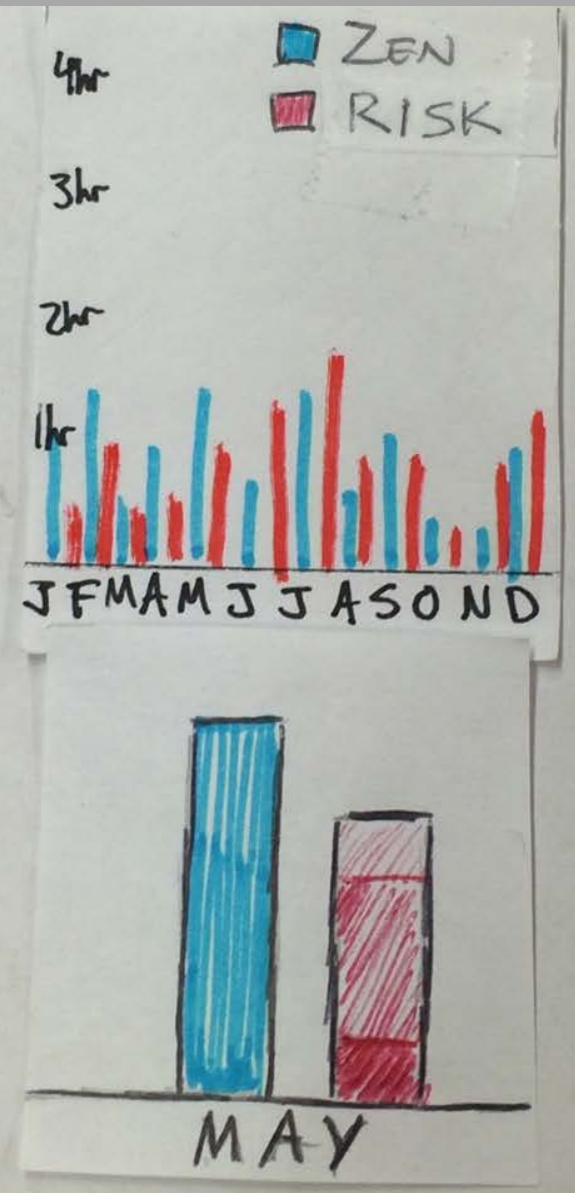


Visibility of System Status

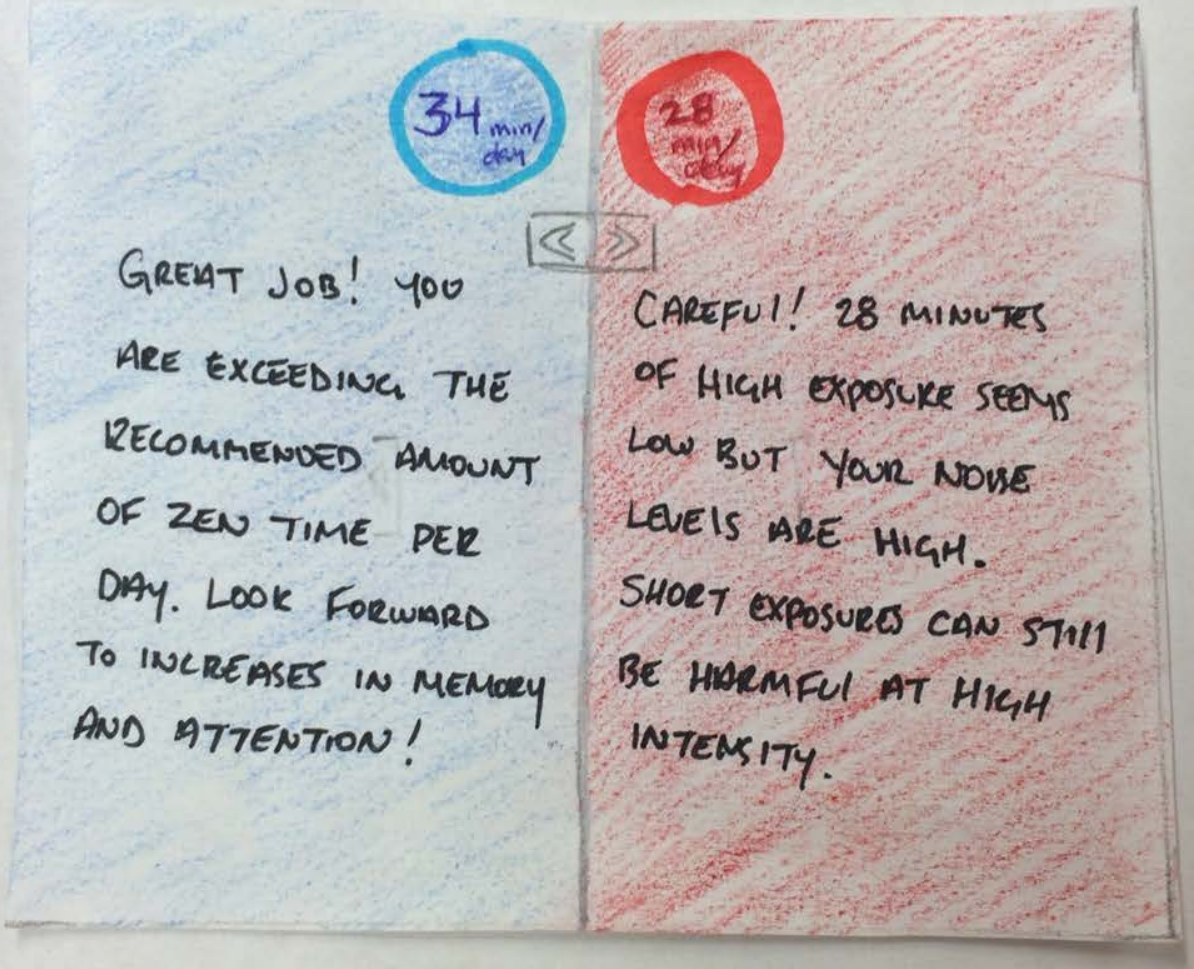


Affordances

Flexibility and Efficiency of Use

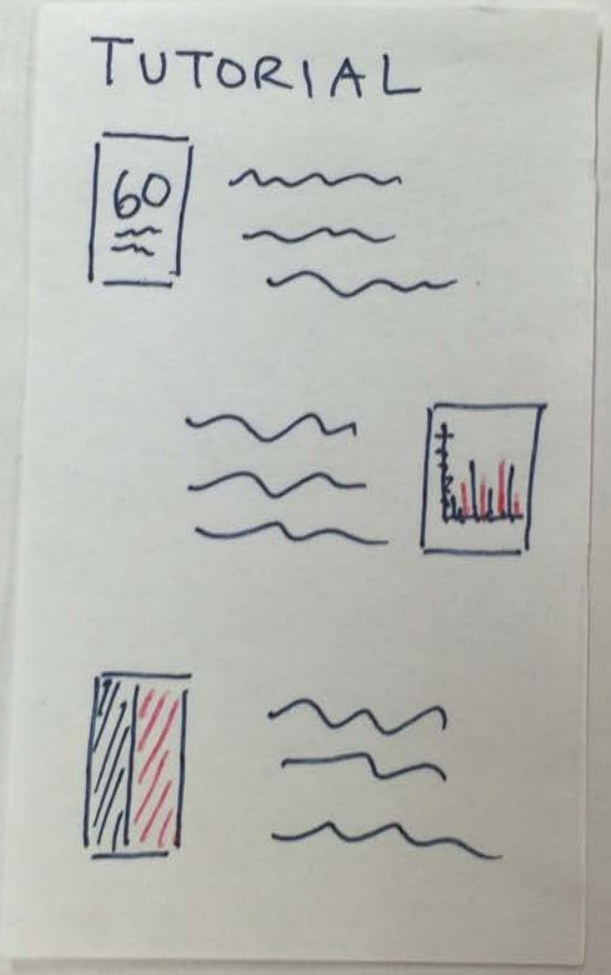


User Control and Freedom

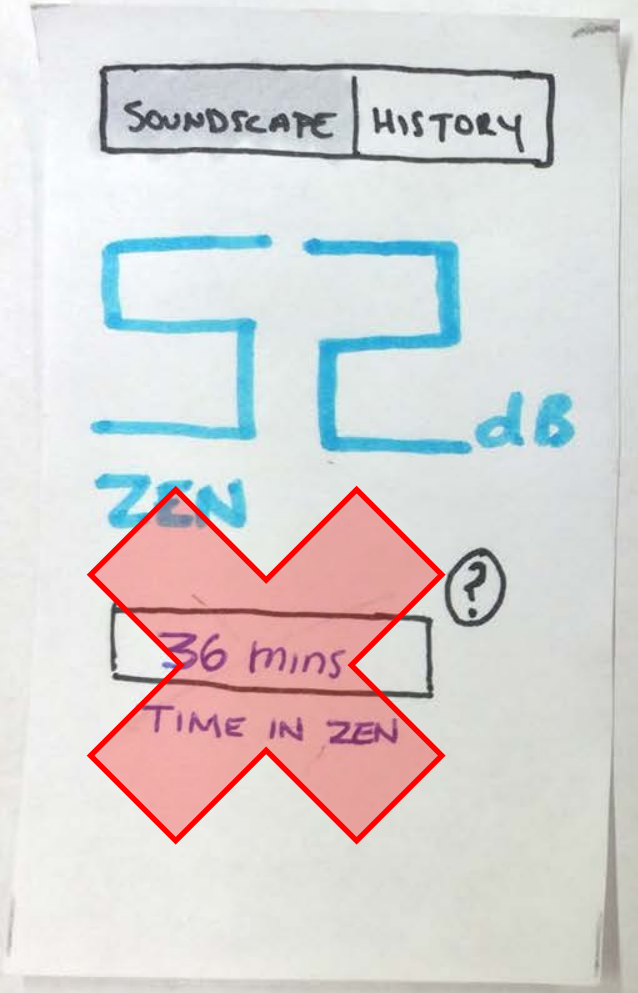


Features

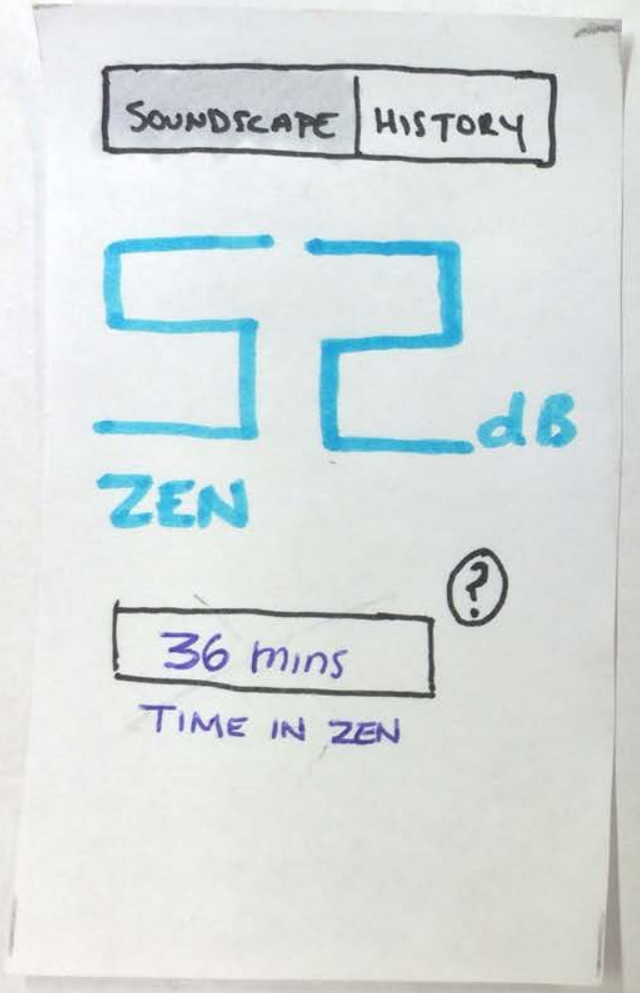
Help and Documentation

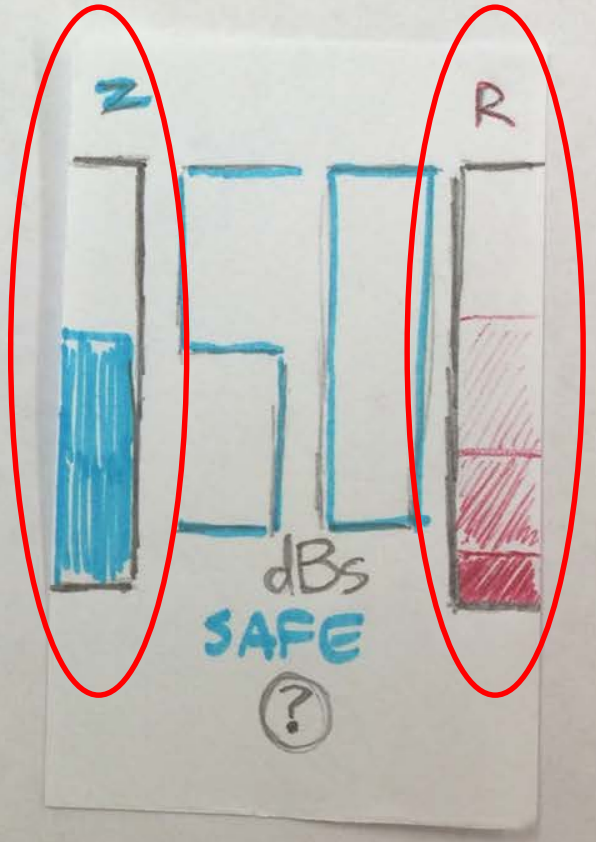


Aesthetic and Minimalist Design



Visibility of System Status

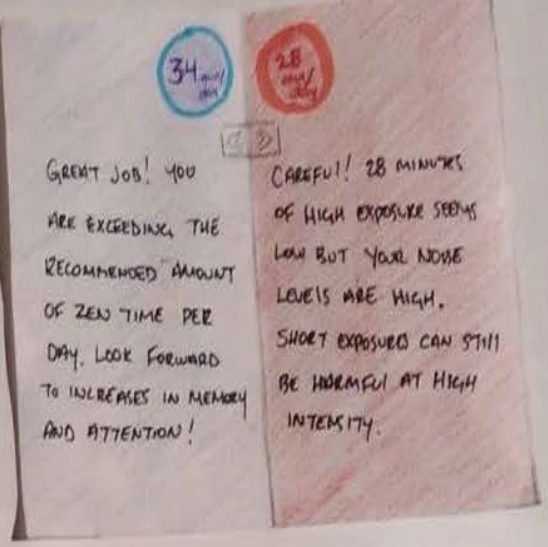




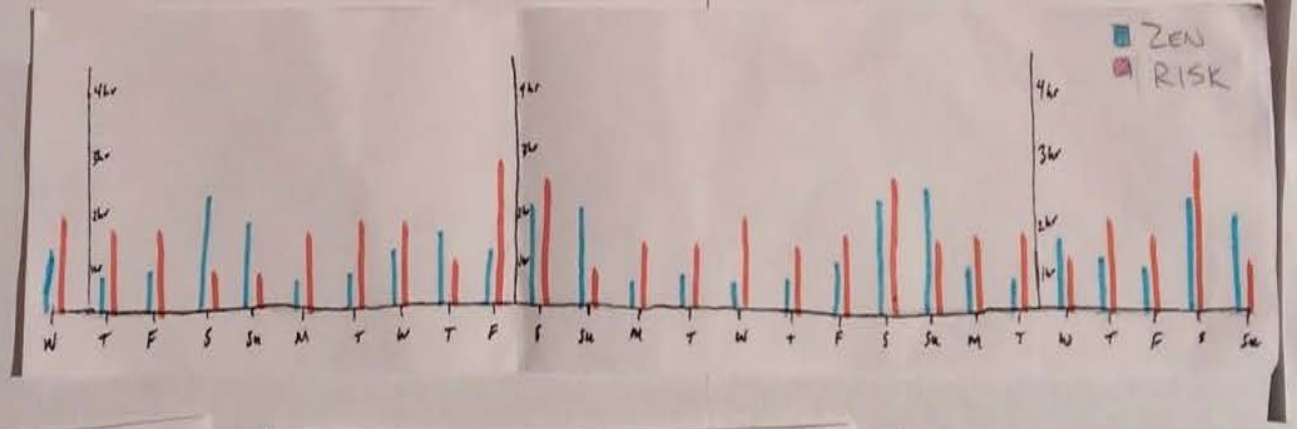
Final Paper Prototype

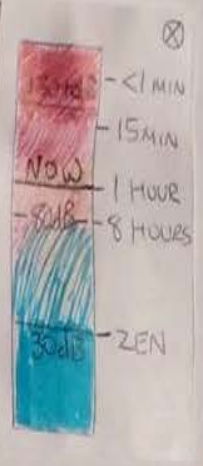
SOUND
HISTORY
ANALYSIS
SETTINGS

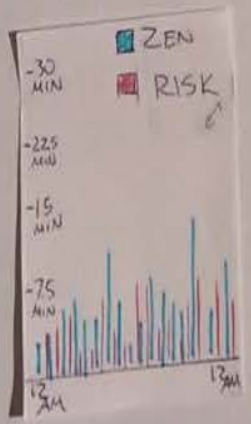
dBs
ZEN
dBs
SAFE
dBs
CAUTION
dBs
RISK

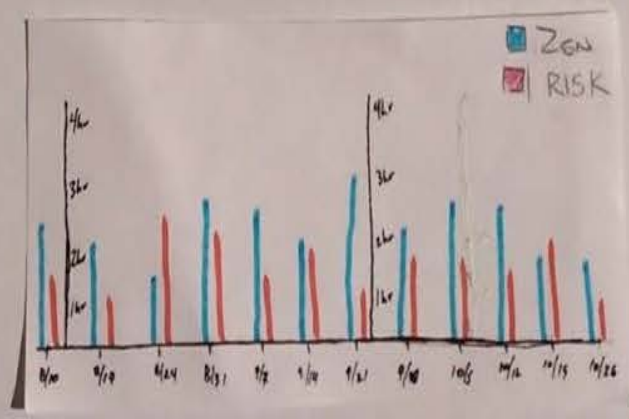

34
28
GREAT JOB! YOU ARE EXCEEDING THE RECOMMENDED AMOUNT OF ZEN TIME PER DAY. LOOK FORWARD TO INCREASES IN MEMORY AND ATTENTION!
CAREFUL! 28 MINUTES OF HIGH EXPOSURE SEEMS LOW BUT YOUR NOISE LEVELS ARE HIGH. SHORT EXPOSURES CAN STILL BE HARMFUL AT HIGH INTENSITY.

DAY
WEEK
MONTH
YEAR
SOUND
HISTORY
ANALYSIS
SETTINGS

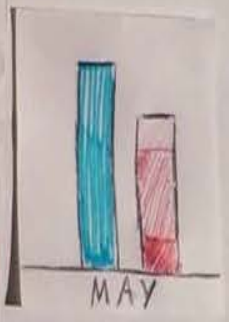

ZEN
RISK
W T F S Su M T W T F S Su M T W T F S Su M T W T F S Su

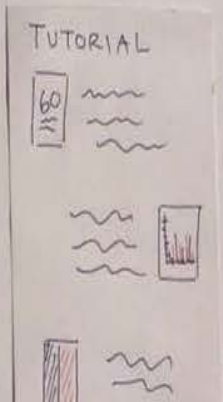

< 1 MIN
15 MIN
1 HOUR
8 HOURS
NOW
ZEN


ZEN
RISK
-30 MIN
-225 MIN
-15 MIN
-75 MIN
12AM
12AM

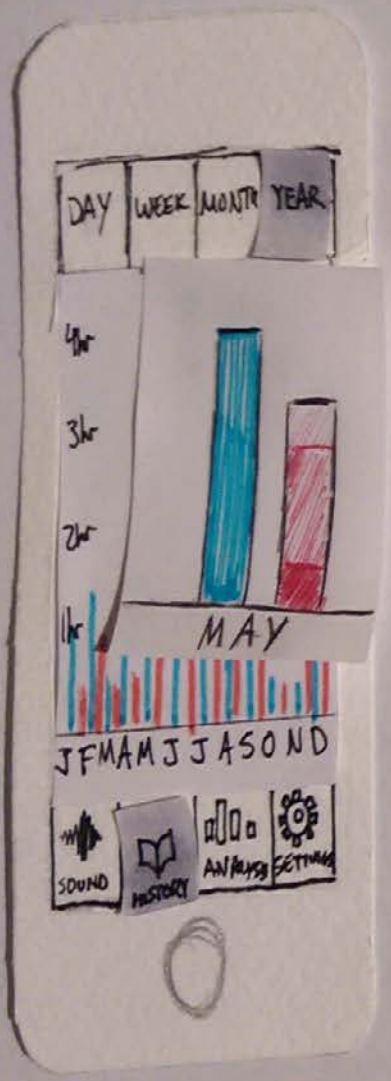

ZEN
RISK

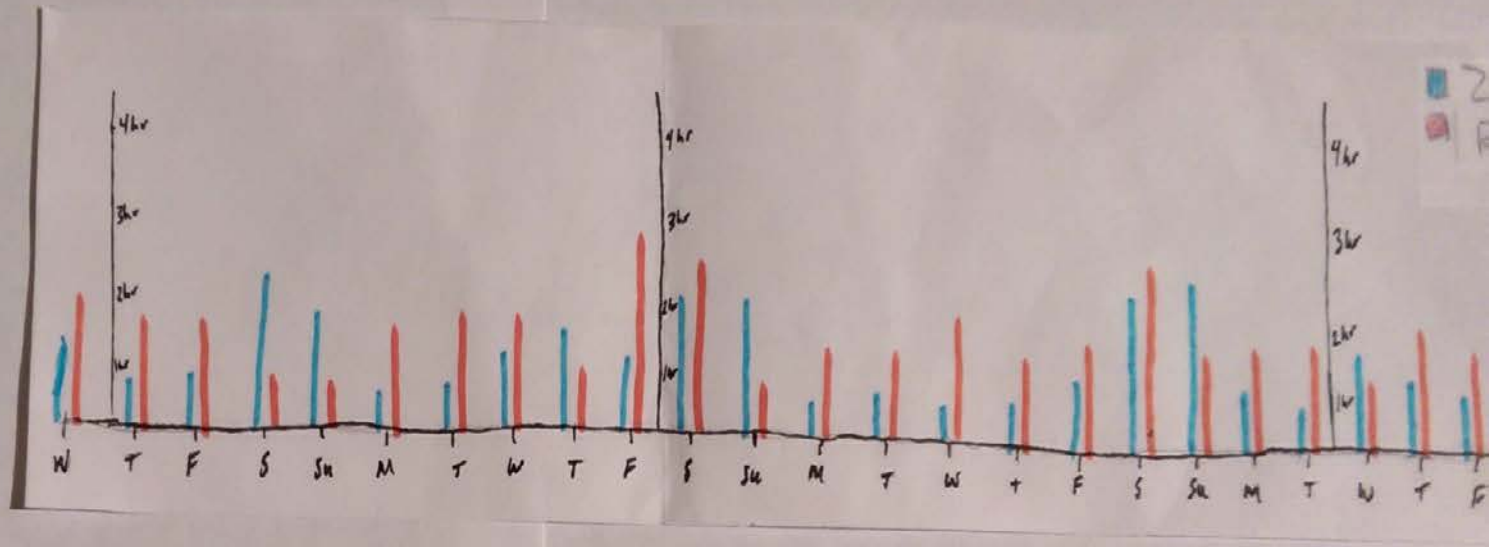
ZEN
RISK
J F M A M J J A S O N D

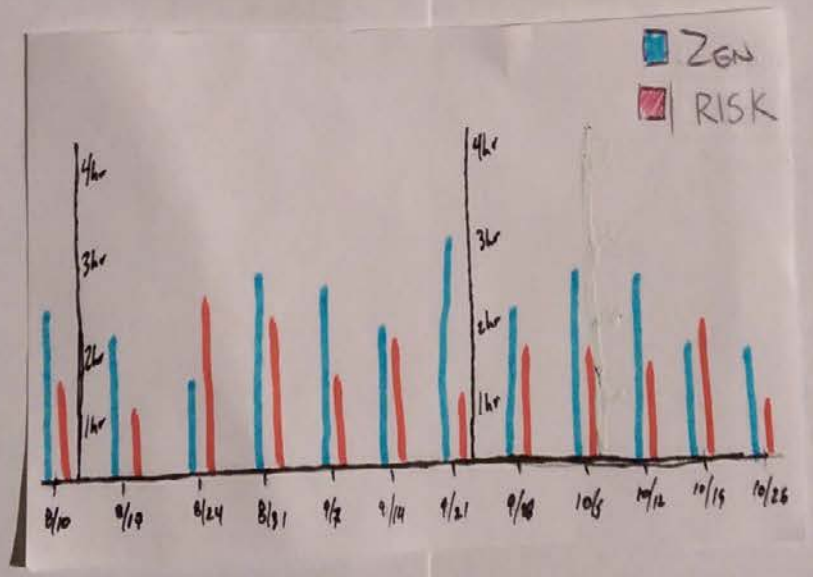

MAY

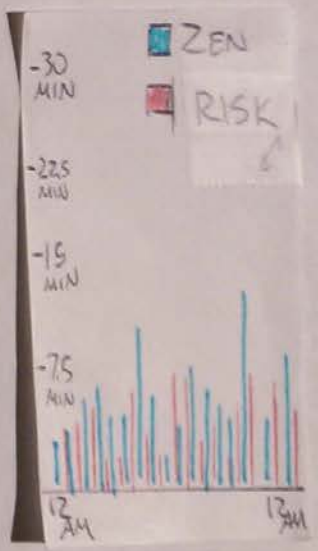

TUTORIAL
60

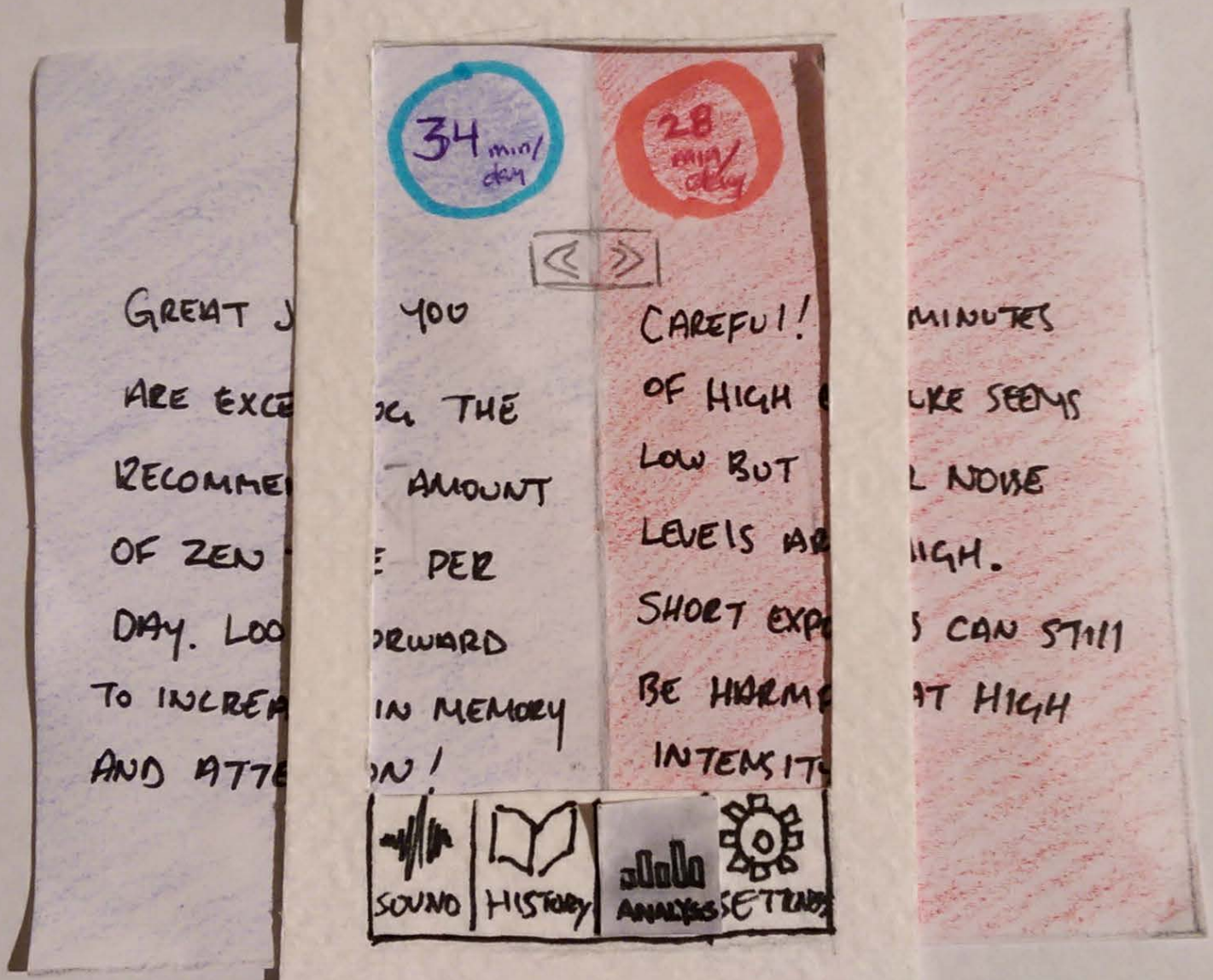
L
R
dBs
ZEN
?
SOUND
HISTORY
ANALYSIS
SETTING
L
R
dBs
SAFE
?
L
R
dBs
CAUTION
?
L
R
dBs
RISK
?


DAY
WEEK
MONTH
YEAR
4hr
3hr
2hr
1hr
MAY
JFMAMJJASOND
SOUND
HISTORY
ANALYSIS
SETTINGS


4hr
3hr
2hr
1hr
W T F S Su M T W T F S Su M T W T F S Su M T W T F


ZEN
RISK
4hr
3hr
2hr
1hr
8/10
8/17
8/24
8/31
9/7
9/14
9/21
9/28
10/5
10/12
10/19
10/26

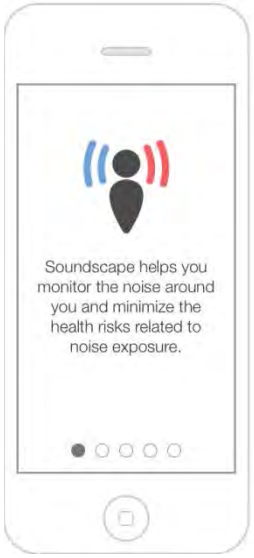

ZEN
RISK
-30 MIN
-22.5 MIN
-15 MIN
-7.5 MIN
12 AM
12 AM

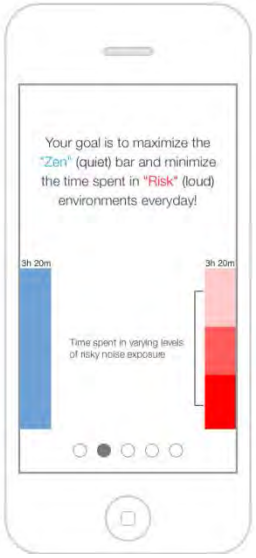

34 min/ day
28 min/ day
GREAT J
ARE EXCE
RECOMME
OF ZEN
DAY. LOO
TO INCREA
AND ATTE
YOU
C. THE
AMOUNT
E PER
ORWARD
IN MEMORY
ON!
CAREFUL!
OF HIGH
LOW BUT
LEVELS AR
SHORT EXP
BE HARM
INTENSIT
MINUTES
KE SEEMS
L NOISE
IGH.
S CAN STILL
AT HIGH
SOUND
HISTORY
ANALYSIS
SETTING

Digital Mockups

SOUND
SCAPE

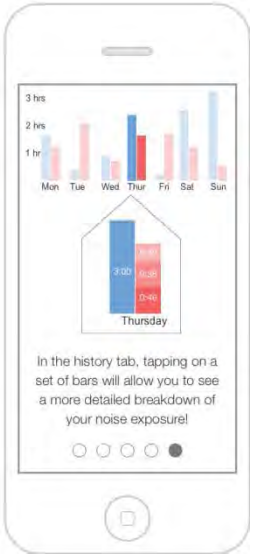
Tutorial

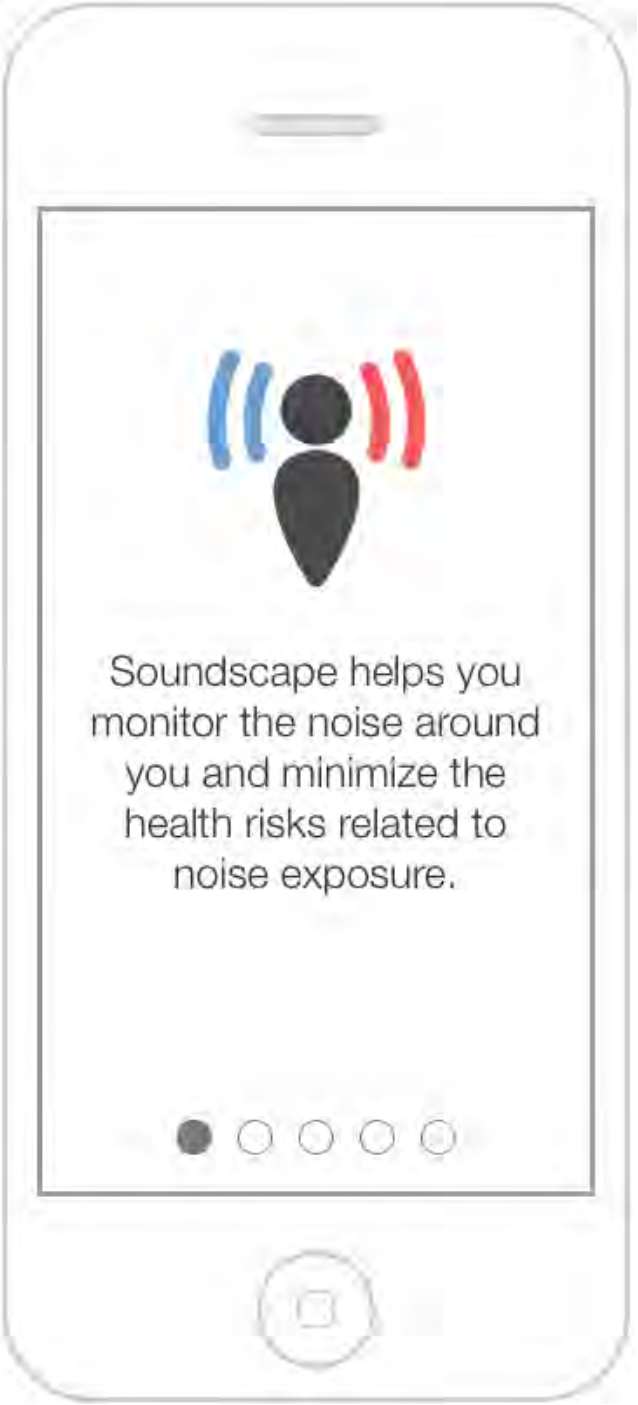

Soundscape helps you monitor the noise around you and minimize the health risks related to noise exposure.


Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday!
3h 20m
3h 20m
Time spent in varying levels of risky noise exposure

ZEN
30
3h 20m
dBs
3h 20m
By increasing your "Zen time" (<35 dBs), will help decrease your stress level while improving working memory and cognitive function!

DANGER:
1 min safe exposure
10
3h 20m
dBs
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.


3 hrs
2 hrs
1 hr
Mon
Tue
Wed
Thur
Fri
Sat
Sun
Thursday
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!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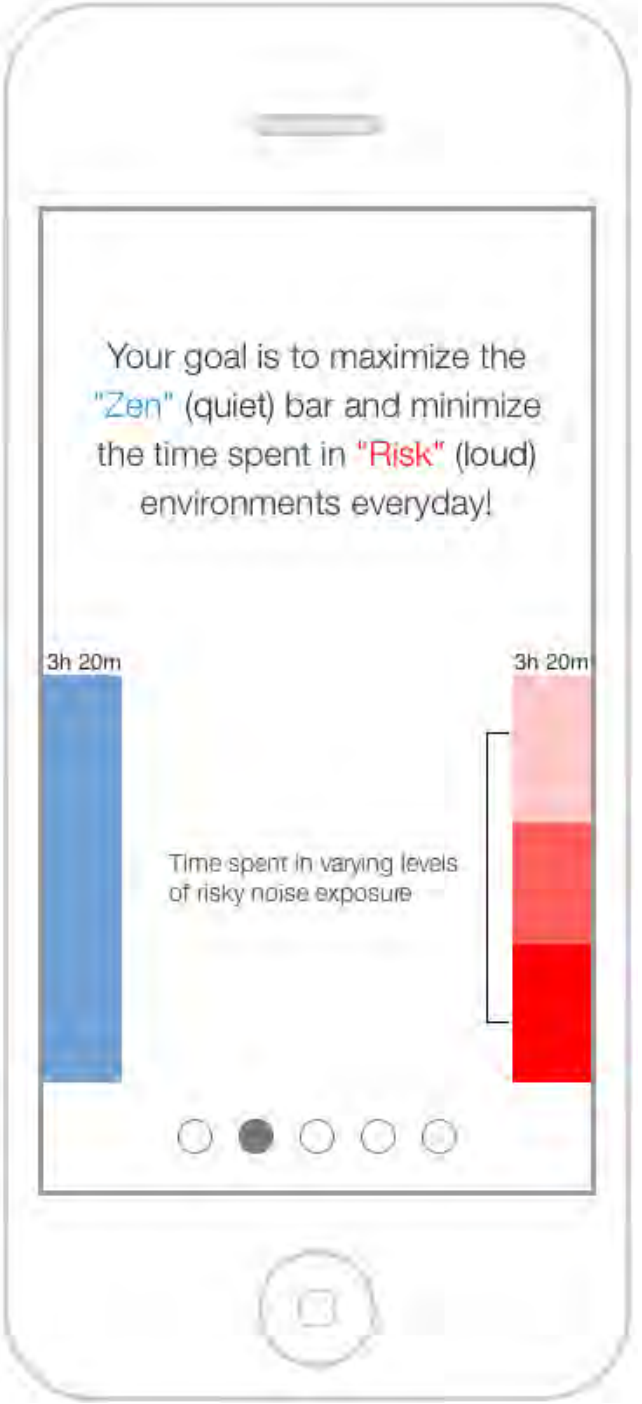
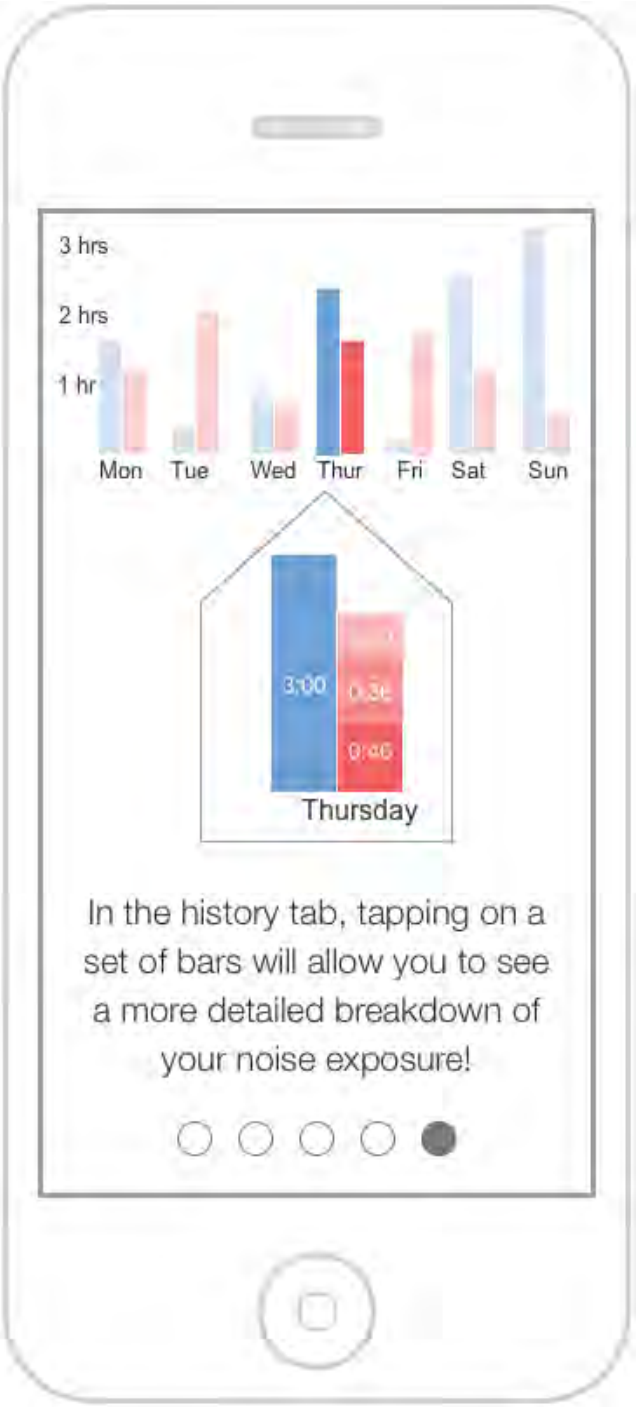
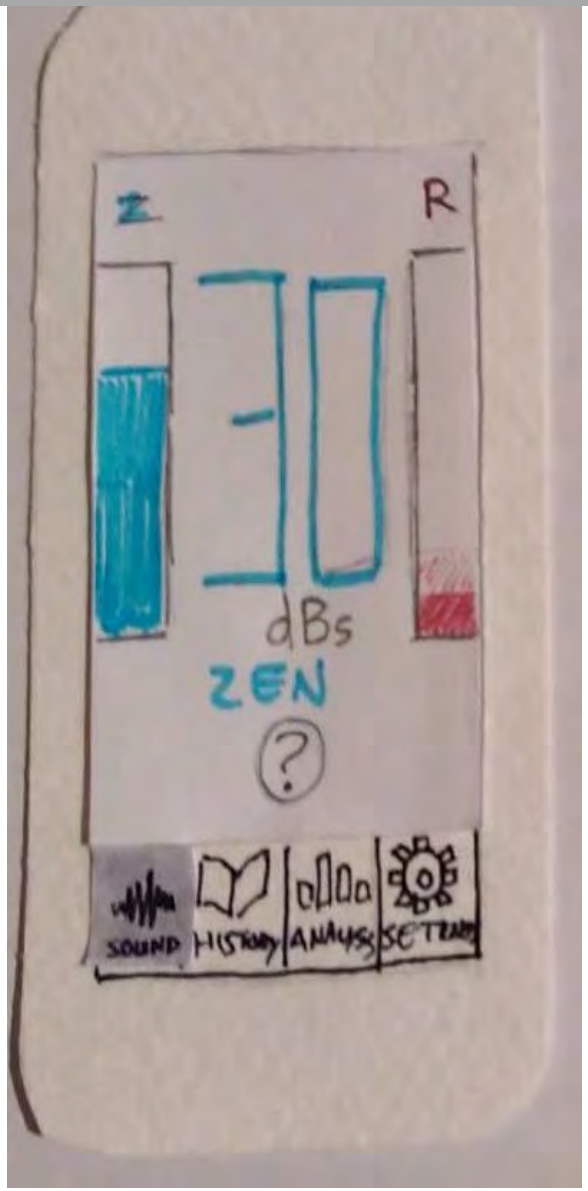

Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday!
3h 20m
3h 20m
Time spent in varying levels of risky noise exposure

ZEN
30
dBs
3h 20m
3h 20m
By increasing your "Zen time" (<35 dBs), will help decrease your stress level while improving working memory and cognitive function!

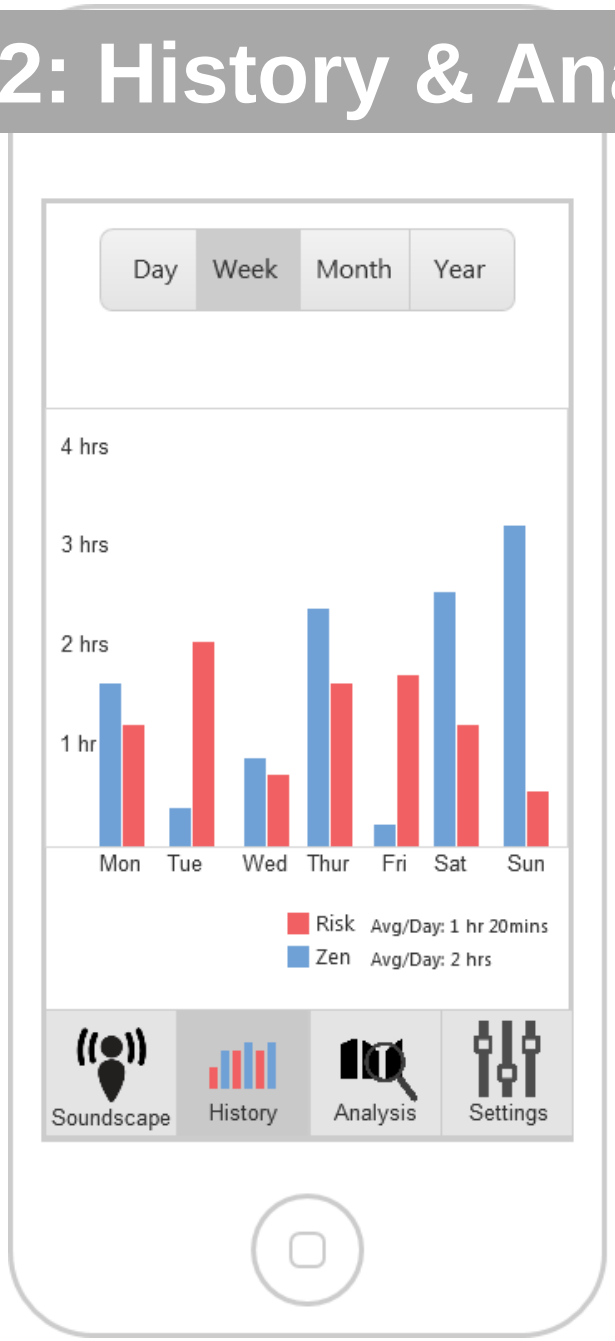
DANGER:
1 min safe exposure
110
3h 20m
dBs
3h 20m
When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.


3 hrs
2 hrs
1 hr
Mon
Tue
Wed
Thur
Fri
Sat
Sun
3:00
0:46
Thursday
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!

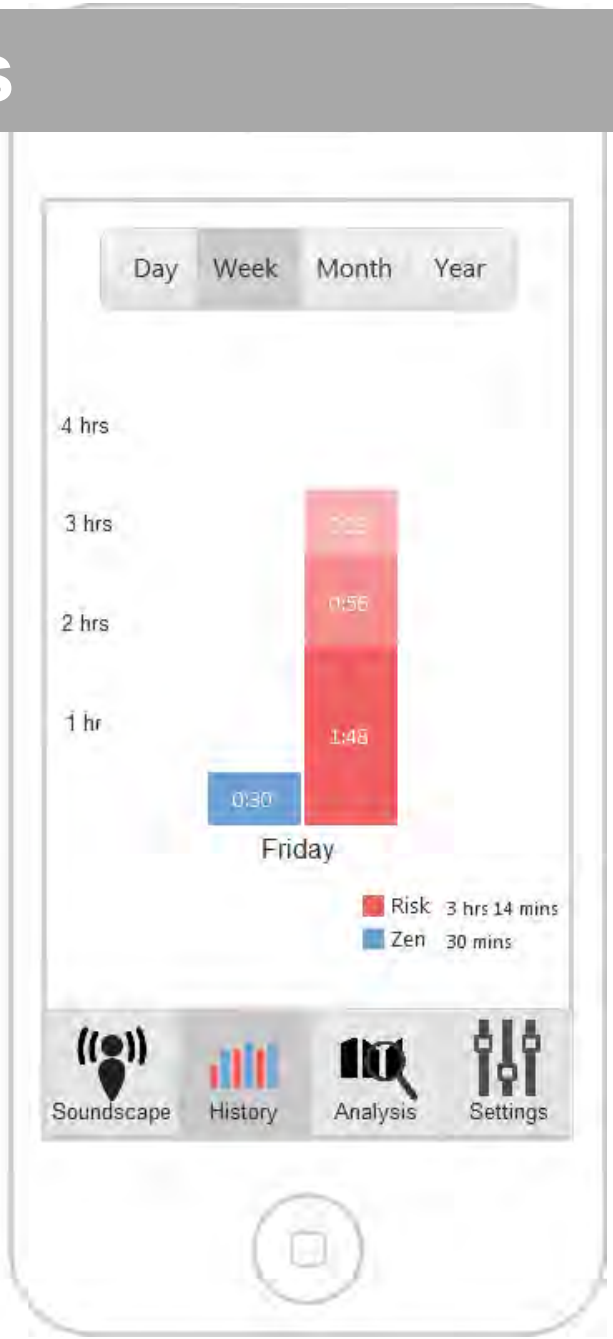
Task 1: Soundscape Analysis



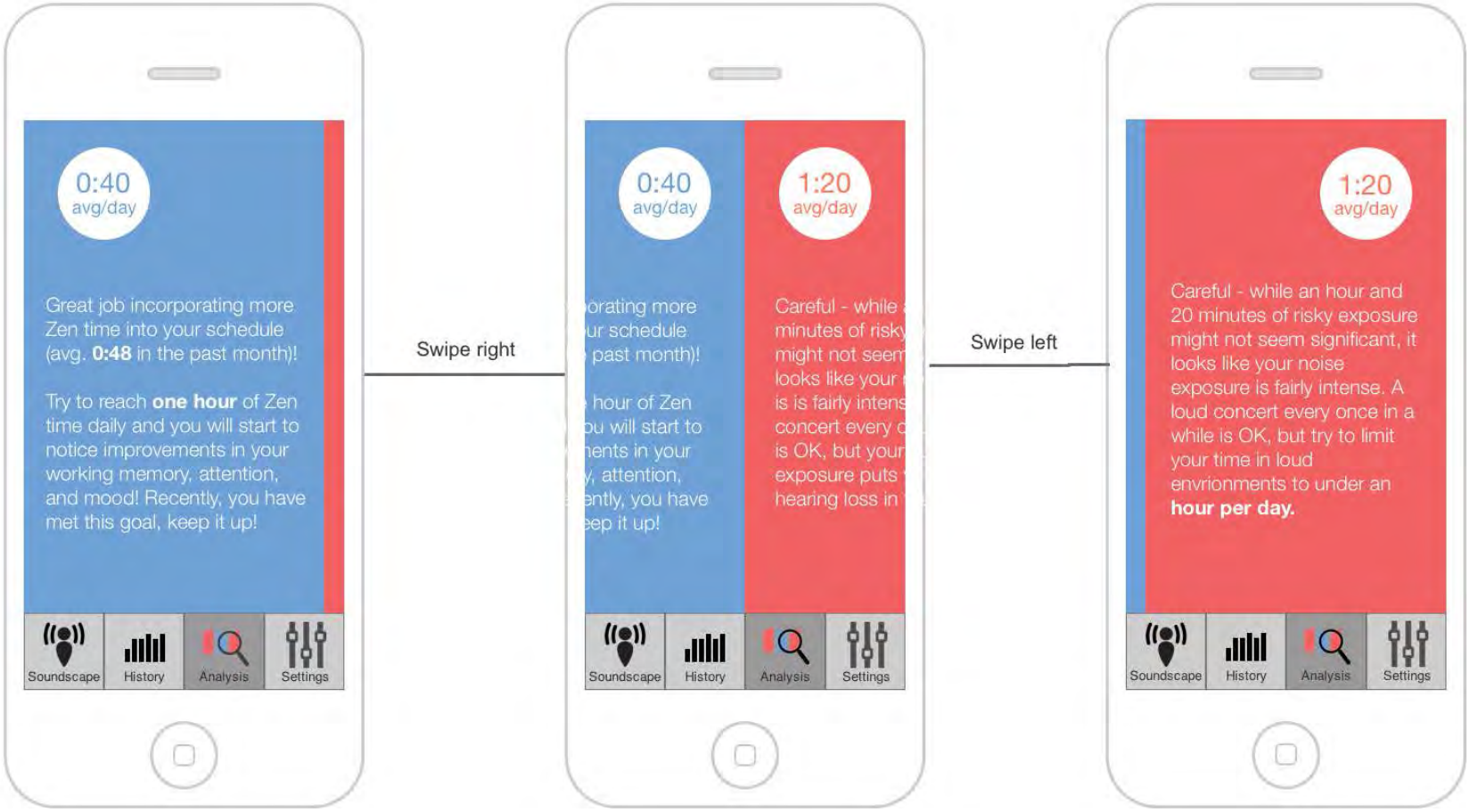
Task 2: History & Analysis



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
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