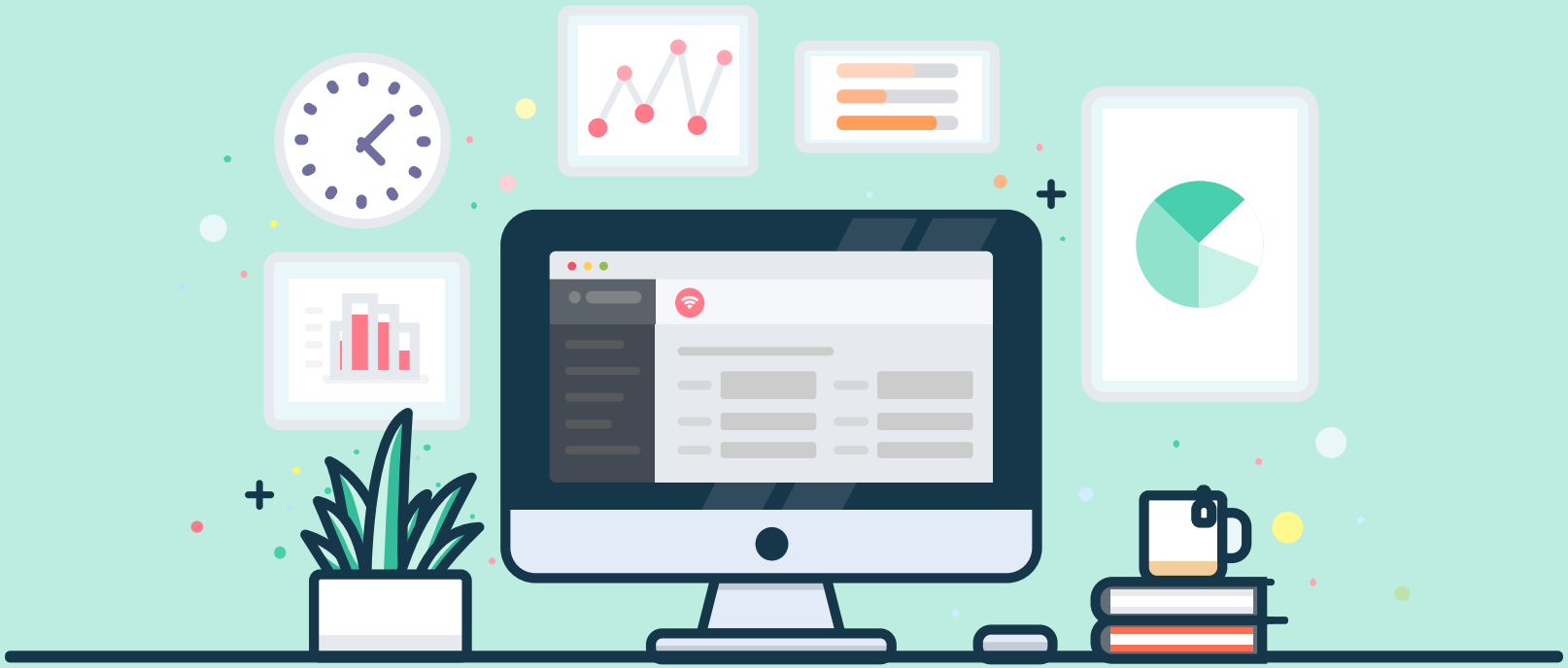
Portfolio

Liangyi Wang 470219180



Introduction

Music Bubbles

Problem

- According to our research, many pedestrians like to **play their mobile phones** while **waiting for traffic lights**.
- However, the behavior of playing their phones will cause them to **miss the traffic lights**.
- We aim to improve pedestrians' **waiting experience**, let pedestrians use our product to replace the behaviors of playing mobile phones in the traffic light waiting area and **remind them of the change of traffic lights**.

Final Concept

- A **decompression game** for pedestrians who are waiting for the traffic lights.
- Using a **countdown** to remind pedestrians to cross the road.
- We want to use this product to **reduce** the behavior of pedestrians playing phones and **remind** them to cross the road.

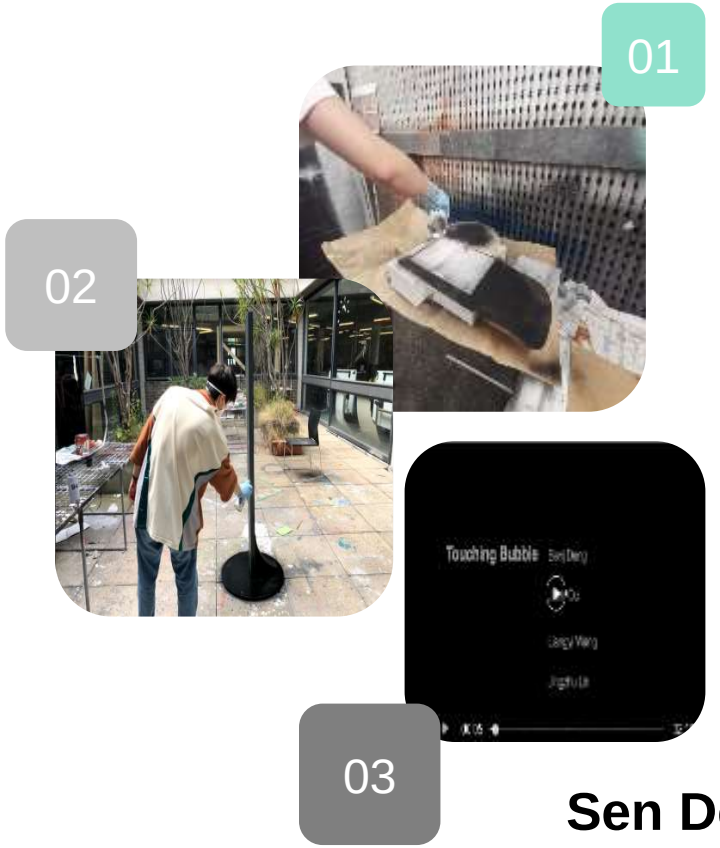
Team Structure – Group Member

Yangsong Ou

Programmer

Making Traffic Lights

Booking & Material



Jingzhu Lin

Text Editor

Modeling

Making Product Shell

Photographer

Writing Documentation

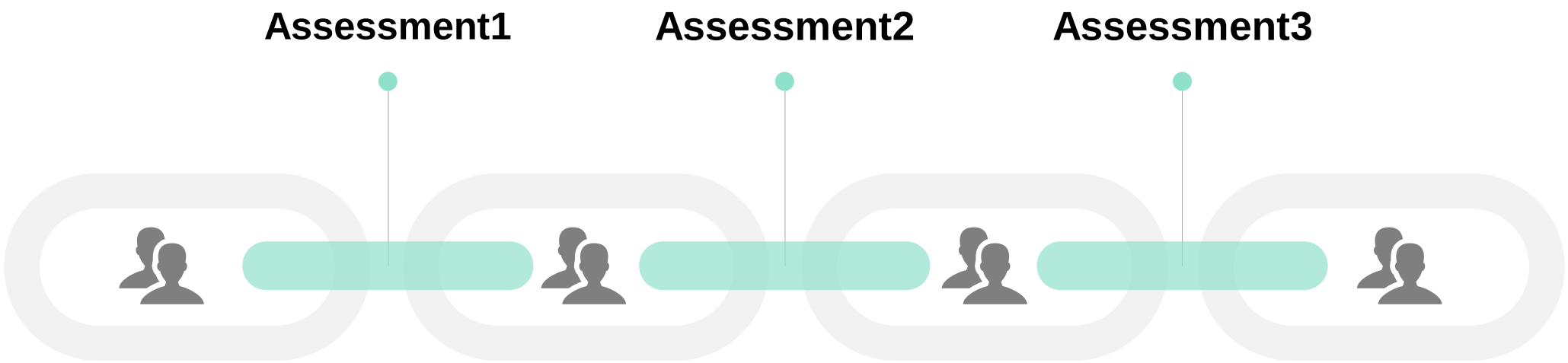
Sen Deng

Photographer

Edit Video

Making Traffic Lights

Team Structure – Liangyi Wang



Thinking concepts for the product
Background Research
Bibliographic Search

Thinking concepts for the product
User Testing
Layout Design
Significance of Methods
Bibliographic Search

Modeling
Making Product Shell
Layout Design
Photographer
Booking & Material
Writing documentation

Contributions – Assessment1

Background Research

I have searched a lot of literature and data to prove why we chose to study the behavior of pedestrians playing their phones when they are waiting for the traffic lights. And research on the existing product.

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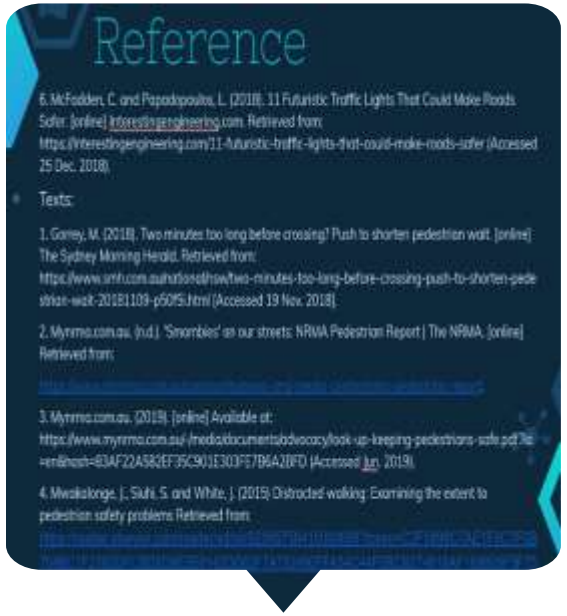
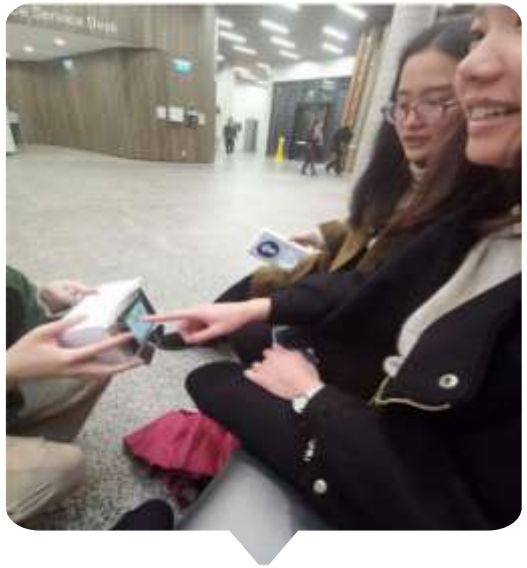


Bibliographic Search

I found a lot of literature and data to prove our research, such as Problem, Background research, and existing product

……

Contributions – Assessment2



User Testing

I did an interview with users based on our interview questions and took some photos when users were testing our product.

……

0 - 5

Criteria	Weight (1-5)	Scratch Ticket (score)	Scratch Ticket (total)	Talking Minions (score)	Talking Minions (total)	Counting Bubble (score)	Counting Bubble (total)
Pre-judgment	2	3	6	2	4	4	8
Visual Reminder	4	3	12	0	0	4	16
Audio Reminder	4	0	0	4	16	2	8
Level of attraction	5	3	15	5	25	4	20
Multiple users	2	2	4	3	6	2	4
Environment adaption	2	2	4	3	6	2	4
level of interaction	4	3	12	2	8	4	16
Affordance	4	2	8	3	12	2	8
Usability	5	3	15	3	15	4	20
Time counting	3	4	12	1	3	4	12
Duration	4	2	8	1	4	2	8
			Total: 96		Total: 99		Total: 124

Decision Matrix

I had written the basic version of the decision matrix.

……

Recognizing this potential to highlight difficulties and strong points in a design's early versions is a vital part of a designer's thought process. The broader the testing and the greater the number of matters raised, the stronger the likelihood that designers can craft more successful products.

Foggia, I. (2018). Usability testing: what is it and how to do it?. Retrieved 21 September 2019, from https://uxdesign.cc/usability-testing-what-is-it-how-to-do-it-51356e6de5b

The power of this qualitative technique is that it focus on what the user do and not what the user say.

The objectives of this technique are:

Gain insights from our users

See if we meet user's expectations

Check if the design is matching business decision to real world use

Check if the user can perform the tasks we proposed

Find out if we're on the right track

Get user reactions and feedback

Usability testing it's not to prove yourself that you make the right decisions but to learn how your users perceive and use your product.

think aloud protocol

Nielsen, J. (2012). Thinking Aloud: The #1 Usability Tool. Retrieved 21 September 2019, from https://www.nngroup.com/articles/thinking-aloud-the-1-usability-tool/

In a thinking aloud test, you ask test participants to use the system while continuously thinking out loud — that is, simply verbalizing their thoughts as they move through the user interface.

letting you discover what users really think about your design. In particular, you hear

Bibliographic Search

I looked for 22 documents to help us find the meaning of these methods. finding the most suitable user group for us and use the data and the literature to prove why we chose this user group. I used 13 pages to document the highlights of these documents.

……

METHODS

INTERVIEW

Interviews give insights into what users think about a site, an application, a product, or a process. They can point out what site content is memorable, what people feel is important on the site, and what ideas for improvement they may have.

DECISION MATRIX

A decision matrix can help you not only make complex decisions but also prioritize tasks, solve problems and craft arguments to defend a decision you've already made. The decision matrix process is best used when you're deciding on something that does not require a sense of emotion, as it is a logical tool in nature.

USABILITY TESTING

Usability testing is the practice of testing how easy a design is to use on a group of representative users. It usually involves observing users as they attempt to complete tasks and can be done for different types of designs, from user interfaces to physical products.

THINK ALOUD PROTOCOL

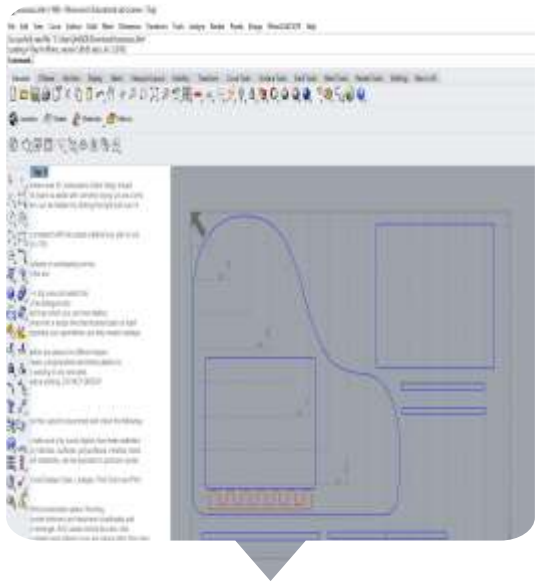
We ask test participants to use the system while continuously thinking out loud – that is, simply verbalizing their thoughts as they move through the user interface.

Significance of Methods

I wrote the meaning of these methods and used literature to prove why we choose these methods.

……

Contributions – Assessment3



Modeling

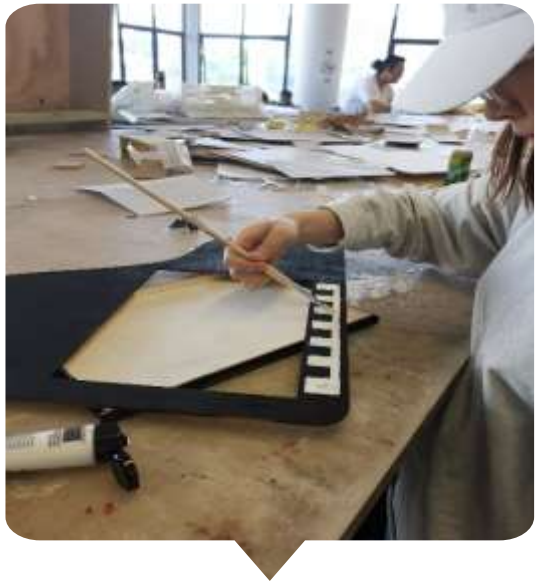
We used 3ds max to make the product shell, and our games are related to music, we chose the modeling of the piano.

……

Documentation

I wrote some content in the documentation, such as background research and further version. Moreover, I am responsible for the design and layout of the documentation.

……



Product Shell

After cutting the product shell with laser cutting, we painted the product shell to the black and painted piano keys to the white.

……

Challenges

Problem

01

In the beginning, we don't know to choose which traffic problem.

Observation

We used the method of observation, and we found that many pedestrians like to play mobile phones when they were waiting for traffic lights.

Initial Concept

02

We don't know which concepts can solve our problems better.

Perception

We use different perceptions to divide concepts, one is a visual reminder, and the other is an audio reminder.

Challenges

Interview

01

We did a user test with our low fidelity model, and we found that there was polarization. Some users liked it very much, but others not.

Interation

We combine three concepts into one and combine the favorite parts of user feedback into a new concept.

User Group

02

After the user testing, we are increasingly unclear about our user positioning. There are many user feedbacks that this concept may only be suitable for young people.

User Group

We use young people for our user group, and we specify our user group that the product is not suitable for the elderly and children.

Challenges

Concept

01

Based on user feedback from the final product, some users said that the game is too simple and lacks interactive.

we have added a choice bar for pedestrians to choose instrument for different instrument sound effects.

Instrument

Product Shell

02

At first, we were thinking about what shell should we do. We even had the idea of not making a shell. Besides, laser cutting is reserved by many people, and we can not order laser cutting at all.

Since we added instrumental elements to our product, we thought we could use the modeling of a piano as a product shell.

Piano

Final Reflection

After Assessment 3, I reflect our final product from user feedback.

Mainly from three aspects to reflect.

- Personal Performance
- Differently Things
- Future Version

Personal Performance

I tried to think about some concepts to solve our research problems more effectively.
I reviewed a lot of literature and data in the early stage.

At the end of the period, we didn't need a literature search, so I focused on the design.

Differently Things

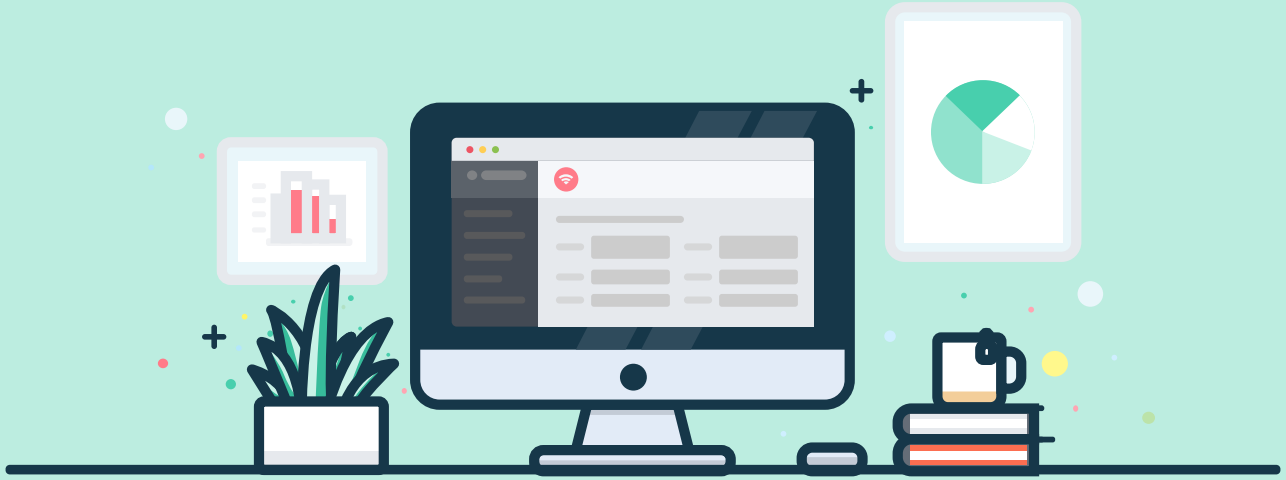
We are too easy to compromise. Our concept has a lot of things to improve, but we still to get the final product and product shell, but the final product and product shell are not as good as I expected.

Due to the lack of consideration in the user group, we were forced to delete some elements that I think are good.

Future Version

We made some improvements to our products based on user feedback from the final product.

We created a model diagram for our future version and put all the new elements into the model.



Thanks

Reference

Illustration:
51template. Retrieved from: http://www.51pptmoban.com/shangwu/8633.html

Appendix


Future Version
0 minutes 31 seconds
left to cross
01
Recording
02
Interface
03
Download


Touching Bubble
Benj Deng
Ou
Liangyi Wang
Jingzhu Lin
00:05
-02:18

Appendix

Recognizing this potential to highlight difficulties and strong points in a design's early versions is a vital part of a designer's thought process. The broader the testing and the greater the number of matters raised, the stronger the likelihood that designers can craft more successful products.

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In a thinking aloud test, you ask test participants to use the system while continuously thinking out loud — that is, simply verbalizing their thoughts as they move through the user interface.

letting you discover what users really think about your design. In particular, you hear their misconceptions, which usually turn into actionable redesign recommendations: when users misinterpret design elements, you need to change them. Even better, you

0 - 5

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Document of Bibliographic Search:

https://docs.google.com/document/d/1gt4ympLW8qWr0SfnfbYsnQq8aU96lxjGgoSm2ivFLv4/edit?usp=sharing

Appendix

Reference

6. McFadden, C. and Papadopoulos, L. (2018). 11 Futuristic Traffic Lights That Could Make Roads Safer. [online] Interestingengineering.com. Retrieved from: https://interestingengineering.com/11-futuristic-traffic-lights-that-could-make-roads-safer (Accessed 25 Dec. 2018).

- Texts:

1. Gorrey, M. (2018). Two minutes too long before crossing? Push to shorten pedestrian wait. [online] The Sydney Morning Herald. Retrieved from: https://www.smh.com.au/national/nsw/two-minutes-too-long-before-crossing-push-to-shorten-pedestrian-wait-20181109-p50f5i.html [Accessed 19 Nov. 2018].

2. Mynrma.com.au. (n.d.). 'Smombies' on our streets: NRMA Pedestrian Report | The NRMA. [online] Retrieved from:

3. Mynrma.com.au. (2019). [online] Available at: https://www.mynrma.com.au/-/media/documents/advocacy/look-up-keeping-pedestrians-safe.pdf?la=en&hash=83AF22A582EF35C901E303FE7B6A2BFD [Accessed Jun. 2019].

4. Mwakalonge, J., Siuhi, S. and White, J. (2015) Distracted walking: Examining the extent to pedestrian safety problems Retrieved from:

Background Research

1. Pedestrian fatalities and matched serious injuries from 2008 to 2018 (as at 1 January 2019)
Source: Centre for Road Safety

Why do we choose pedestrians?

According to the survey, "The City of Sydney's pedestrian counts show that more than [redacted] people walk along George Street near Wynyard each day, and nearly [redacted] walk around Railway Square and along Park Street and Market Street," Cr Moore said in the letter. (Two minutes too long before crossing?, 2018)

Pedestrian trauma accounts for [redacted] of all deaths on NSW roads and [redacted] of serious injuries. More than [redacted] pedestrians are killed or hospitalised from road traffic crashes each year. And in 2018, 67 pedestrians lost their lives. (Keeping Pedestrians Safe, 2019)

METHODS

INTERVIEW
Interviews give insights into what users think about a site, an application, a product, or a process. They can point out what site content is memorable, what people feel is important on the site, and what ideas for improvement they may have. (Kara Pernice, 2018)

DECISION MATRIX
A decision matrix can help you not only make complex decisions but also prioritize tasks, solve problems and craft arguments to defend a decision you've already made. The decision matrix process is best used when you're deciding on something that does not require a sense of emotion, as it is a logical tool in nature. (Skype Schooles, 2019)

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Usability testing is the practice of testing how easy a design is to use on a group of representative users. It usually involves observing users as they attempt to complete tasks and can be done for different types of designs, from user interfaces to physical products. (Interaction Design Foundation)

THINK ALOUD PROTOCOL
We ask test participants to use the system while continuously thinking out loud — that is, simply verbalizing their thoughts as they move through the user interface. (Jakob Nielsen, 2012)