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TOPIC:

Helping people keep away from insomnia

Personal
Project
Journey

INTRODUCTION

Sleep is an important component in everyday life and plays a key role in keep people healthy. Most people experience problems with sleep in their life. According to the NHS third of Brits will have episodes of insomnia at some point. Additionally, the World Health Organization claimed that a third of people in the world have sleep problems. In conclusion, sleep problems need to be solved without delay.

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BACKGROUND

What is the current study

Current treatments for insomnia include medical treatment (take melatonin), Listening white noise before going to bed, psychological treatment in the hospital even ask a psychologist for help.

As a common problem, there are many papers and books that talk about sleep problems to date. This project aims to explore the issue of sleep and this project is prompted by my experiences, I always feel love for insomnia, when I lied in bed, ideas always mess after another. I asked my friends who at the same age, they also have sleep problems, and sometimes insomnia will affect normal life and work.

Matthew (2018) claims that lacking sleep will cause diseases, and a decline productivity and quality of life. Insomnia is endemic worldwide. The problem will affect families, society and public health.

Therefore, the reason for conducting this project could be summarised as sleep problems are extremely common and sleep problems are particularly urgent for attention.

DESKRESEARCH

Organization

The first step in the project is doing desk research. I found there were much related organizations. The first organization is World sleep society, more than 20 countries join to this society. This society provide a platform for scientists, physicians, psychologists, nurses, physician assistants, technologists, and other medical and research personnel interested in the sleep field but it not appropriate for the general public. The aim of this organization is building a bridge between different countries sleep society, support and encouragement research related to sleep medicine. As a result, both British sleep society, and European sleep research society is member of world sleep society. (See next page)



British Sleep Society



The Sleep Charity



World Sleep Society



European Sleep
research Society

INSOMENIA

Sleep Foundation

- AIM: help people take preventative measures stop sleep issues developing into bigger problems
- funded by the National Bed Federation
- Provide sleep tools
- Published The Sleep Disorders

- Provide sleep products compare, review and information
- No-profit

- AIM: promote research on sleep area, facilitate the dissemination of information regarding sleep research and sleep medicine.

The Sleep Council

World Sleep Society

British Sleep Society

European sleep research Society

- AIM: Bridge between different countries Sleep society, support and encouragement research related to sleep medicine.

British Charity

BSS membership area

- publish Journal Of Sleep Research
- Published dealing with sleep problems during home confinement due to the COVID - 19 outbreak
- Provide sleep training courses

DESKRESEARCH

In fact, World sleep organizations, British Sleep society and European Research Society are serving for people working in the sleep field, but for people out of sleep studies field it is only a website and has nothing to do with their everyday life. Besides, there are two more organizations may appropriate for the public or people who have sleep problems.

The third organization is Sleep foundation, in this website have related topics about insomnia, sleep health, sleep disease and so on. The aim of this organization is helping people take preventative measures, stop sleep issues developing into bigger problems as a consequence people who have sleep problems can find utilizable articles on it.

The last organization is The sleep council. I choose this organization as my stakeholder. In this platform, we can find sleep tools including 30 days sleep plan, the stress test, NODCASTS, and so on.

DESKRESEARCH

Stakeholder introduction



The stakeholder in this project is The sleep council, it is a non-profit organization. It is a platform that provides advice for people who have sleep problems. The aim of this organization is

“working hard to raise awareness about the importance of sleep and the lack of support available” . This organization helping people take preventative measures to look after their sleep health and to stop sleep issues developing into bigger problems since 1995.

As my key stakeholder in this project, their aim has an important impact on our design directions. After analyzing their website and their services, I think I had a deeper understanding of how to make people fall asleep more easily than before and how to make people avoid insomnia. I expected to challenge the existing preconceptions and products in the market of dealing with sleep problems, and explore alternative and sustainable ways to improve public understanding and relieving of insomnia.

DESKRESEARCH

Refllction

According to my research and engagements with stakeholders, I found that there are two problems. First is there are many sleep products on the market include melatonin, pillow spray, and other sleeping machines, product innovation will be affected by them. The second problem is many factors will cause sleep problems but, it all depends on the individual, to meet the different demands of users is formidable. In order to solve the problems, I took some young adults as samples to research, engage, ideate, test. In the end, I expect my result is conducive for people who have sleep problems. Meanwhile, the final result can utilize for my stakeholder.

DESK RESEARCH

About Document

Besides, I found many documents is completely fascinating, such as: Sleep Environment Standard. This standard is formulated by Chinese Sleep Society. The sleep environment standards have two parts: sleep environment standards and sleep home standards. The former includes architectural patterns, community environment, room layout, indoor environment, and other factors. The latter includes bedding, electrical appliances, lighting, home textiles, and so on.

We can know that many factors will affect sleep, this article provided me inspiration for the first engagement tool.

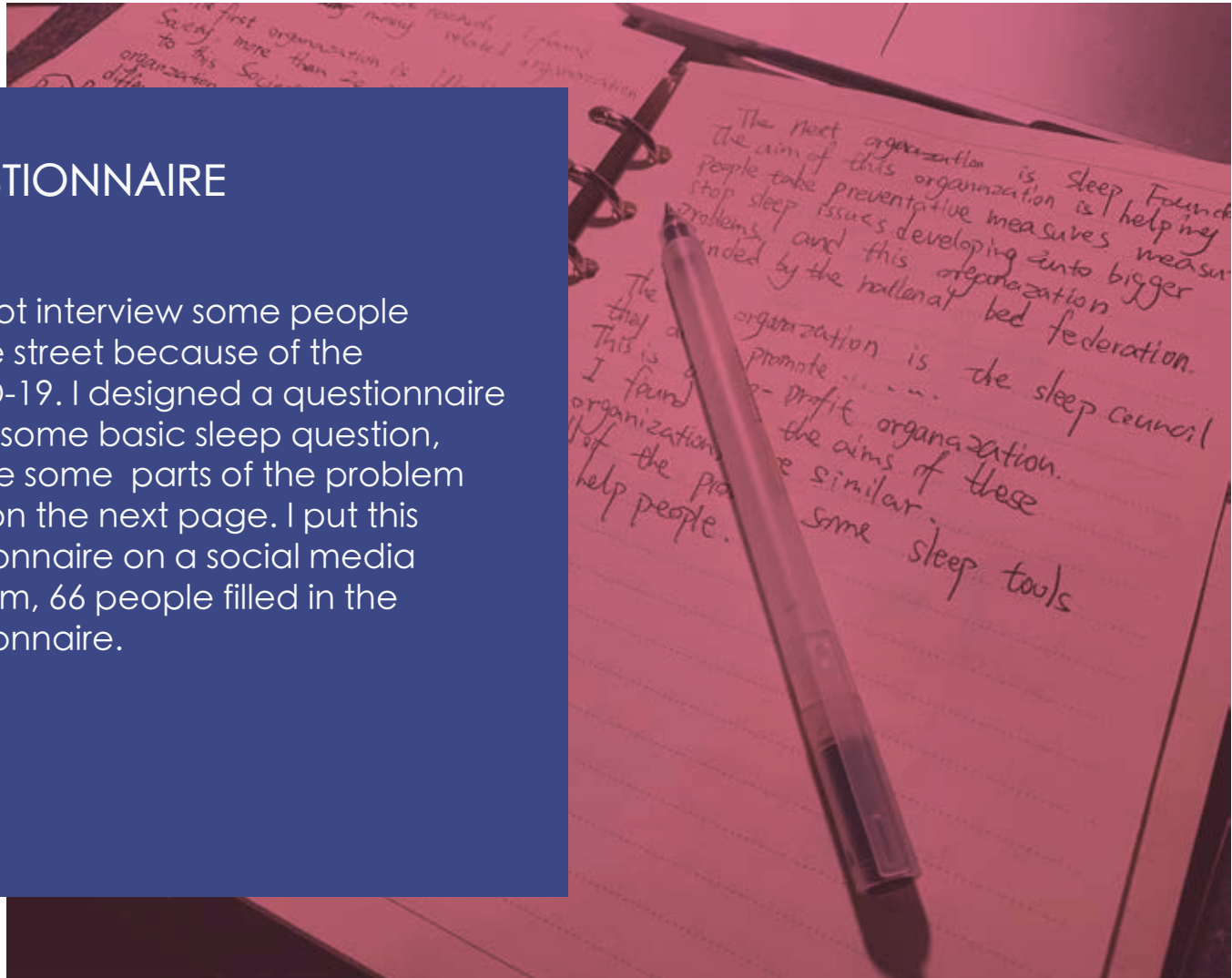


Reflection

In my view, this desk research still at surface level, there are many surveys about insomnia, even have more organizations to research sleep field, from 2017 to 2018 the eye mask is still the most popular product in the market, last on the list is melatonin, but in recent years, technology products are more popular. There are many same products in the market, users always get confusing is because they do not know if the product will be useful. In the desk research stage, I found a lot of products, organizations, but the articles or papers mentioned about combining technology with sleep products is uncommon. I think at later stages I need to think more about this aspect.

QUESTIONNAIRE

I cannot interview some people on the street because of the COVID-19. I designed a questionnaire about some basic sleep question, I chose some parts of the problem show on the next page. I put this questionnaire on a social media platform, 66 people filled in the questionnaire.



QUESTIONNAIRE

Why I choose this questions



Questionnaire

first edition of questionnaire and first interim review feedback

After submitting the first Interim review, tutors gave me some feedback, the first problem is questionnaire always provided surface information, it may not gave me the reasons to confirm target group. I need to show deeper questions. Therefore, I add some question in the questionnaire and according to the questionnaire information, I designed my first engagement tool to follow up with in-depth research.

QUESTIONNAIRE

Data analyze

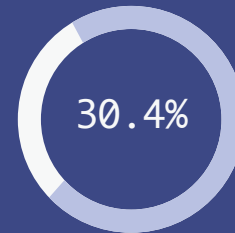
> 60

Participant

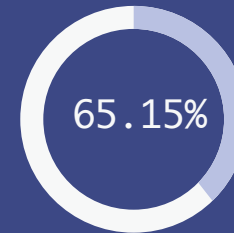
87.88%

Using electronic products
before go to bed

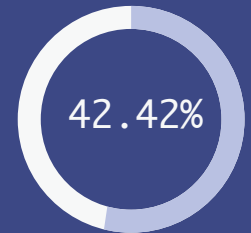
Reason participants got insomnia



Sleep quality



Stress



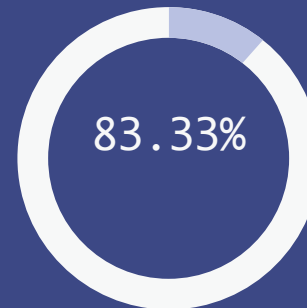
Sleep habits

80.30%

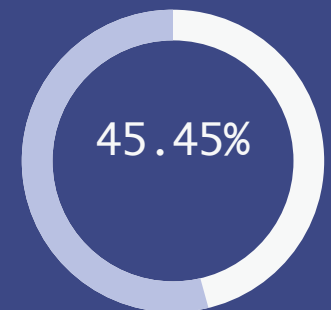
Never try to treat insomnia

77.27%

Will insomnia under stress



Aged between
15 and 35



Drinking caffeinated
drinks

INSPIRATION FROM THE QUESTIONNAIRE

Some information is not showing on the previous page, but it shows some particular phenomenon. For example, 42 percent of people choose sleep habits. Besides, 23 people choose sleep habits at the same time they choose to use electronic products before go to bed. It means some people realize use electronic products will affect sleep quality but they cannot change sleep habits. The total number of people who use electronic products before go to bed is 58 people. Nearly half of people think that using electronic products before bed is the cause of their insomnia. Additionally, only 21 percent of people choose the sleep environment as a reason. Actually, this aspect of the research suggested that people should pay attention to their sleep environment. These two points inspired me to make an engagement tool.?

First engagement tool

When I interview people who have insomnia problems, I found that only a third of people choose sleep environments, but sleep environment is a very important factor for insomniac. This is a sketch map, I want to design an interactive web page and in this page I can set up a room including environment factors which affect sleep, and then asked participants to choose, which part in this virtual room will affect sleep quality.

How it work



When people begin to use this, they will receive the question ‘Which part of the room do you think will affect sleep ?’ , after that people can move their mouse to choose the product in this picture. In the picture, different products represent different factors. For example, when people choose the table lamp and then click it, the factor will appear. The table lamp means light, light is one factor that affects sleep. People can choose more than one product in this picture. It means they think these factors will affect sleep.

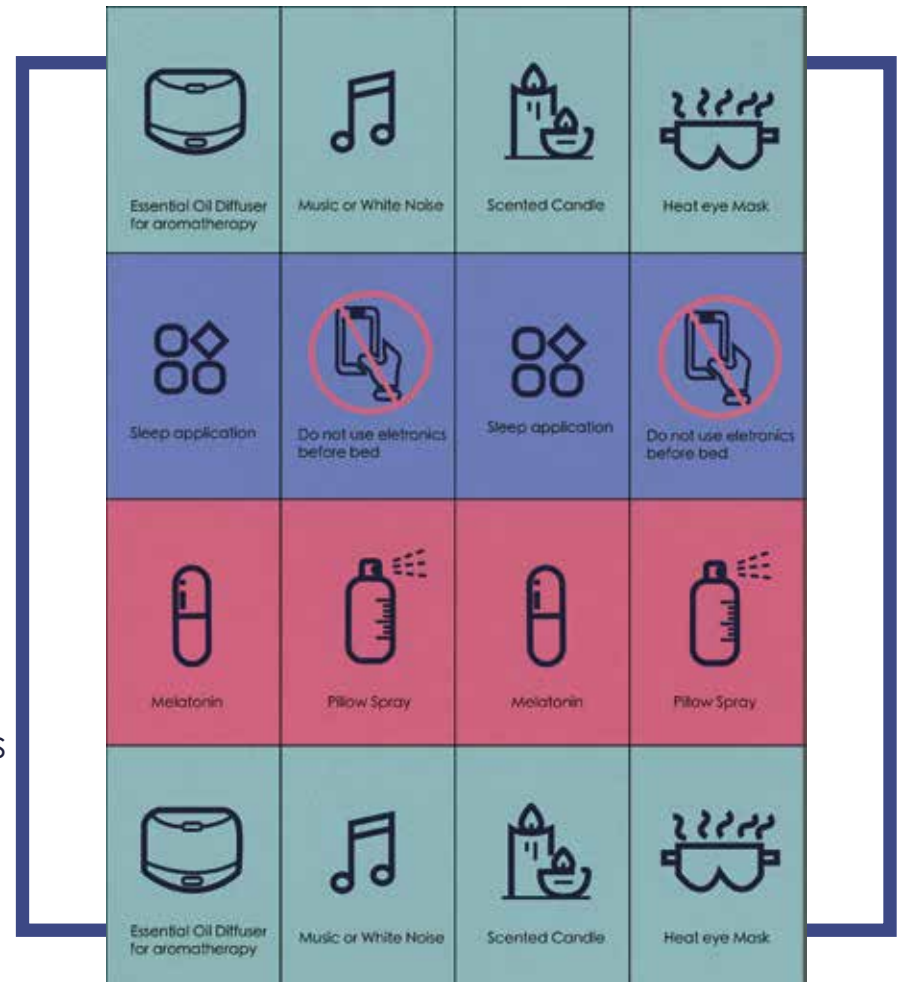
Interview and Feedback



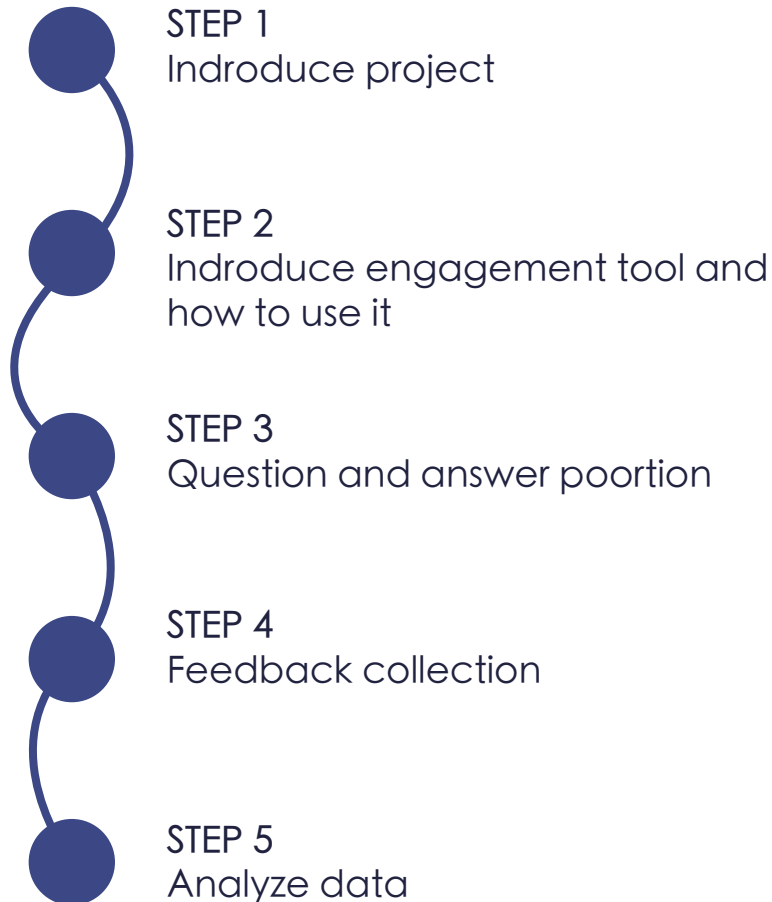
When I asked participants to use this tool, their answers were mostly correct, and they also told me that the sleep environment is important but the feeling of stress is a more important factor than the sleep environment. After this interview, I want to design a new engagement tool to hold a workshop.

Second engagement tool

Last time my participants offer a few more ideas that are my second engagement tool's inspiration. As a result, participants focus more on how to relieve the pressure, so I changed the direction of solving the problem. Maybe I can choose the direction of pressure. This engagement tool show many cases on the market, all of them can help people relief insomnia or improve the sleep environment. I want to know the attitudes of participants about these sleep products.



Workshop and Interview



How to use it

Green card means some products can help sleep
Blue card means the application can help sleep
Red card means drugs can help sleep

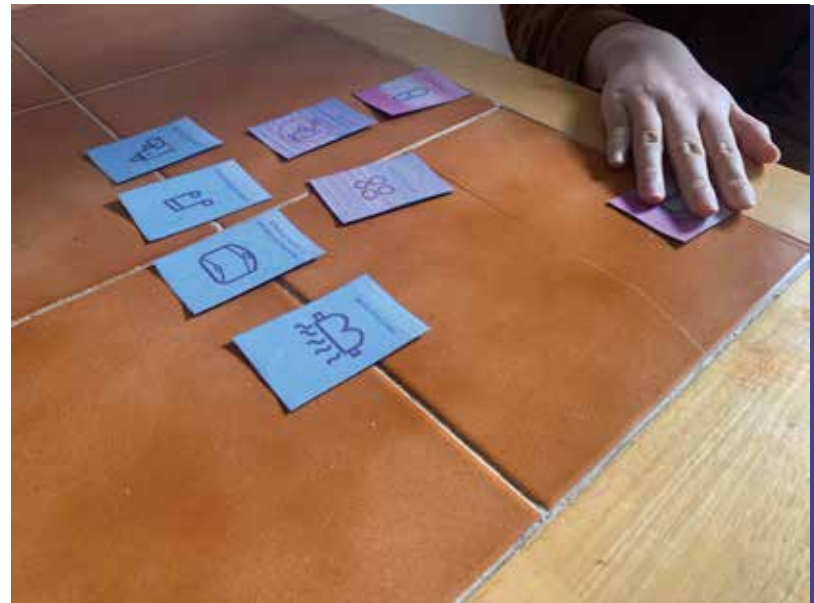
Basic question

1. Which products you use before
2. Which products do you think is useful
3. Which products are you interested in

(According to the answer can ask some deeper questions)

Second survey

I invited several participants to join this interview. The aim of this interview is trying to combine participant' s ideas. One of the participant' s answer is interesting, she told me that she prefers to try biological products such as pillow spray, and she always does self-hypnosis when she can not fall asleep, the method repeats the lyrics in her mind.





NAME Alice Frauer

AGE 25

JOB Student

LOCATION Scotland UK

I am study Banking and Finance in Glasgow University. Our courses are very difficult, I need to stay up late looking out for review lessons. During the final exam period, I cannot go to bed early and I feel stressed when I go to sleep that makes me hard to fall asleep.

pressure



Sleep habits



Affected by the environment



About Insomnia

I have insomnia once a week but more often when I am under pressure.

Before I go to bed I always use my phone to chat with my friends or use Instagram.













Persona

I designed a persona for my project, because after collected information I can use them to describe several users.

The age I choose the median of insomnia group and she is a student that always under pressure. The student group is very representative, many students cannot sleep before the exam period. According to the persona, I designed an user journey map to show Alice' s one day. Analyzing pain points and the user' s expectations can give me some inspirations to help me get the result.

Persona: Alice Frauer AGE: 25 Position: Student

SCENARIO: A school day

STAGE		Wake up		Go To School		During School Hour		Going Home	
ACTIVITIES		Dressing and washing	Check the schedule	Buying breakfast	Taking public transportation	Taking finance course	Tutorial	Revision	Cooking dinner and drinking coffee to keep a clear head
FEELINGS	very happy								
	satisfied								
	unhappy								
TOUCH POINTS		Towel, toothbrush, bed, key, schedule, clothes		Door, Bread, coffee, public transportation card, wallet, seat		Book, class room, pen, notebook, tutors		Door, book, notebook, pen, light, computer, phone, bed, food, pillow	
PAIN POINTS		1. Difficult to choose clothes 2. Course is difficult		1 Traffic jam 2 Weather is terrible 3 Maybe late for class		course content is hard		Caffeine causes insomnia Can not sleep May get sore eyes	
EXPECTATIONS		Can wake up in a good mood		Need schedule reminder		Relieve the pressure Concentrate in class		Avoid using phone before go to bed	

project direction

I got many insights during the research and interview period. According to the user journey map, we know that many behaviors cause sleep problems. I want to use 'How Might We' to identify my project direction.

How Might We

How might we change sleep environment to help people improve the quality of sleep



How might we relieve pressure when people want to fall asleep

How might we make people think less before they go to bed.

Vent ball



Pinched.
different colour change



Touch
breath

How might we correct sleep habits or establish good sleep habits

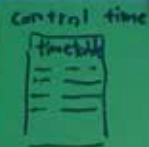


reminding



clock
time management

How might we treat insomnia without drugs



control time

Sleep organization need more action
How might we

raise awareness of sleep problems.

booklet.
information
Publicity

1. How might we change environment to help people improve the quality of sleep?
2. How might we relieve pressure when people want to fall asleep?
3. How might we correct sleep habits or establish good sleep habits?
4. How might we treat insomnia without drugs?
5. How might we make people think less before they go to bed?

idea 1

The market is full of various sleep machine which function is singleness. I want to design a new sleep machine which can combine different function but I give up this idea because of the new technological development and smart home system.

idea 2

I found many cases to study how to relieve the pressure. For example: meditation, venting ball or some applications, and so on.

One of the application named antistress is very amusing, this is a mobile phone game, users can experience relaxation toys on it and this game production team claimed that they will update with new antistress toys every 2 weeks, to help users calm down their anxiety with always fresh contents, like finger spinner, finger cube, slime and a bunch of anxiety free toys.

Considering my project, I imagined using shadow to imitate some relaxation toys, users can interact with shadow on the wall but this idea is too costly for users or organizations to produce in fact.

idea 3

My last idea is to design a new phone shell, there is a time lock on the shell when people set time, people cannot open it until the next morning. The new phone shell compares with other application which can help users staying focused may be more complex and cost more.

Why choose HMW

‘How might we’ help me go deep in the research question and help me explore more reasonable results for my stakeholder. My target group needs have five aspects. The first is about sleep environment and the second is about taking the pressure off. The third is about manage time and remind target users to avoid insomnia. The fourth is to treat insomnia without the drug, and the last one is more tend to stakeholder, we hope the public can pay attention to sleep health issues.

In this period, I prefer ‘How might we correct sleep habits or establish good sleep habits’. Meanwhile, I want to combine some ideas together, such as the imitates the clock, use touch technology and using the booklet to introduce information about insomnia.

Low prototype

I used paper cardboard to make this low prototype, the shape is like a clock, because clock always remind time, I hope this product can remind target users keep good sleep habits.



The top part has a gap and the size is one hour. I want this product can show some tips on the basic part surface. I divide the bottom part into two parts: day and night. Different parts have different content to remind.



High prototype

I used 3D modeling software to build this product, the middle part can shine, because some target users need suitable light to help sleep. If target user do not use this function they can turn it off.

Product pictures



Product introduction

This product has two parts, the top part can move as time goes by. There is a light device in it. There are numbers on the bottom part and it is also a screen that can show some words on it. The shape of this product looks like a clock. Meanwhile, this product needs to contact with the exclusive application, the application can set product reminder time, and it needs users to fill their personal routines. When the users complete the application the product is ready to work.^{rk}.

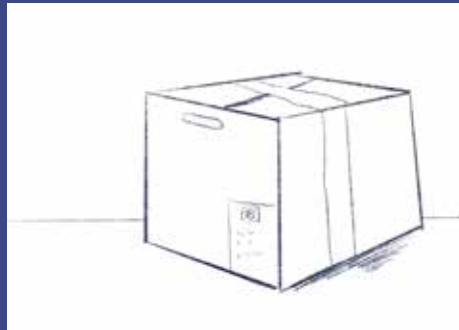
Instruction

Firstly, User need to turn it on, Bluetooth will make this product contact with user' s phone, this product has exclusive application, user can fill them living habits in the application and then the program will judge: could the habit affect your sleep or not. The system will give users different tips based on their different living habits.

Storyboard



Step 1 order product



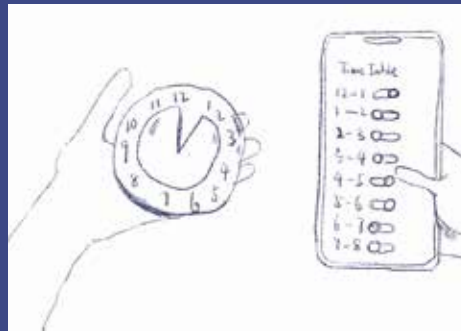
Step 2 receive the product



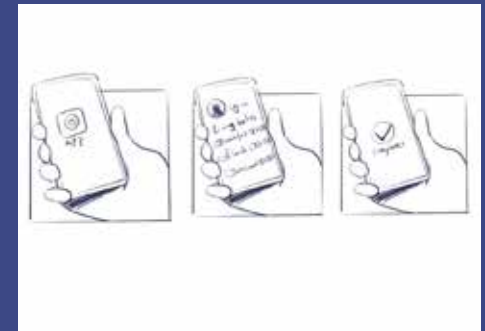
Step 3 open the product



Step 4 reading instructions



Step 5 contact app with phone



Step 6 Setting up



Step 7 at the momont you set



Step 8 remind user



Step 9 put it beside you

Testing

Beacuse of COVID-19 outbreak reason, some sleep organizations are not returning to work, I emailed them many times, only can leave a message. Every time I call them and try to find the organization on social media platforms such as Instagram, Twitter, and Facebook, none of them responded to my messages, so I can not test with professionals. For this reason, I only can invite the target users to participate in this testing.

Participants gave me lots of useful feedback. The first suggestion is about the application, t The participant suggested that the application may need a guide, because the user who has sleep problem may not know what he is doing wrong. For example, the metabolic time of caffeine is 5 hours, if users do not know that knowledge the traditional time reminder may not work for some people. these little details are easily overlooked.

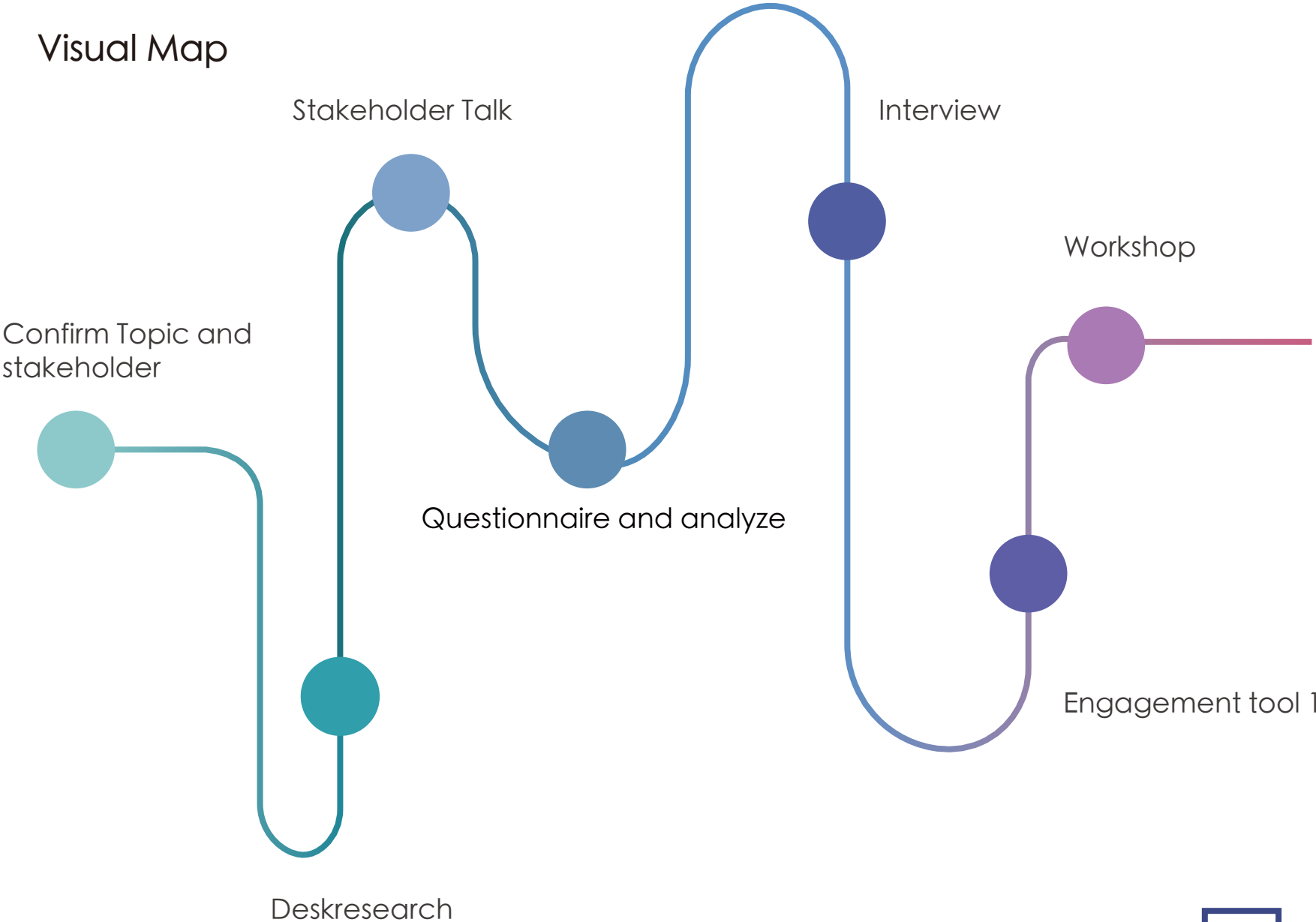
The second suggestion is this product not only can help users establish good sleep habits, but also can provide sleep knowledge to users. This application needs to analyze the user' s problems and then remind users, this reminder is useful than the current design.

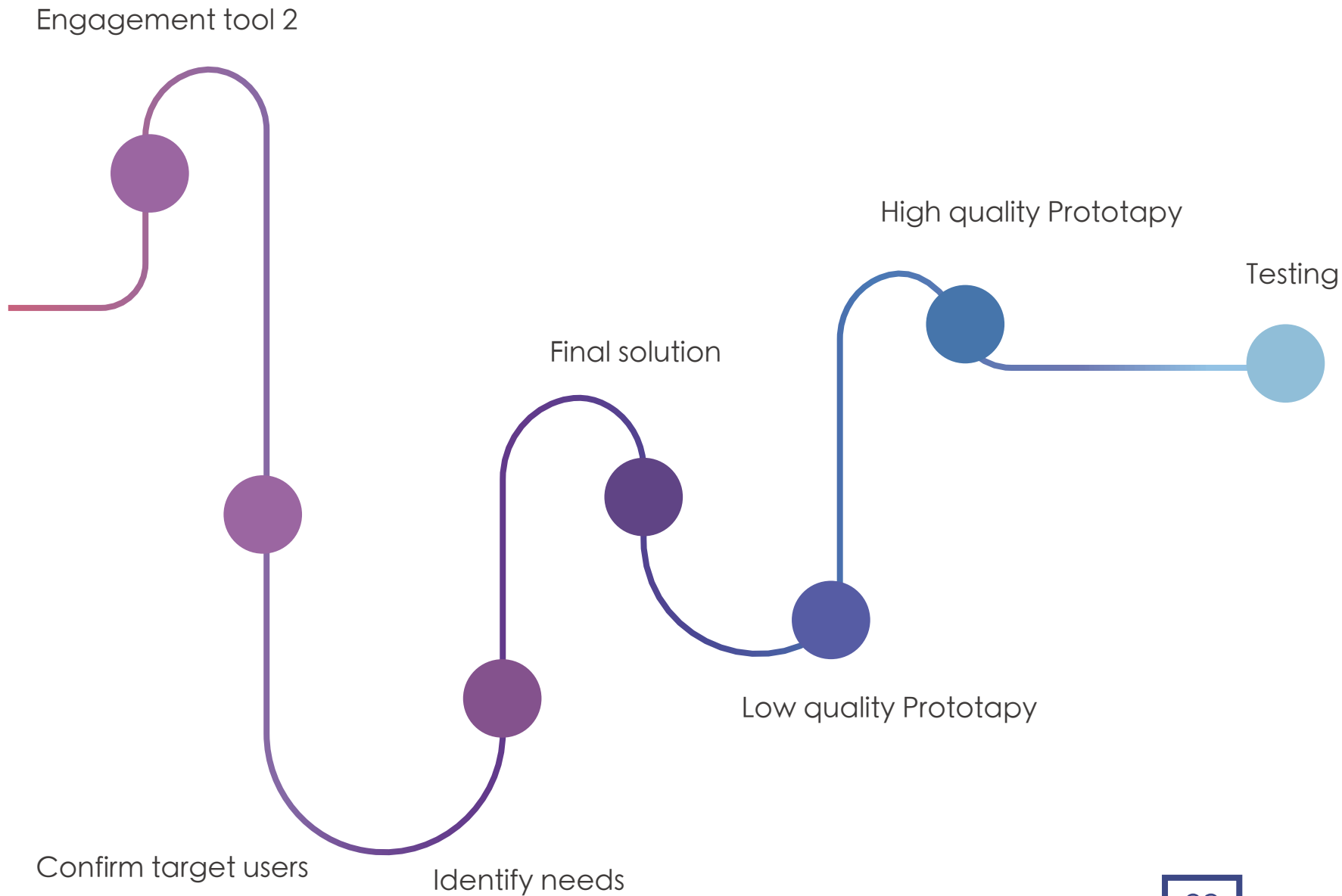
Future work

In conclusion, the biggest problems that the product faces are how to be popularized and combine new technology. Sleep applications are mainstream at this stage, the application of this product needs to be designed. I hope this product can popularize sleep knowledge to the public.

On the other hand, smart home system rapid development may affect future sleep environment. If smart home system has become a standardized and smart home system is becoming more popular that can help people who have sleep problems easier to fall asleep.

Visual Map





Reflection of the project

My project process generally the same as the visual map. After the testing, I found this product needs to improve, but I have no time to finish it in this project, I hope that behind many of the day to make this application complete and testing this project with professional. Although target users gave me many suggestions, the sleep organizations are still a promotion platform.

This project is the last one in my postgraduate stage. I can think of it as a summary of one year. In the research stage, I trying to use what I learned before and put them in this project. I need to manage time and look up materials for myself. Meanwhile, I found doing design work need some partners, when my project reached a deadlock, I always ask my roommate for some suggestions, because we have different majors and different backgrounds so she can give me original ideas.

Thanks

Finally, thanks to my tutor Johnson James, he plays an important role in this project, he always guides me in my direction. Thanks everyone who helped me, you give me a lot of inspiration.

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