

Together

Intergenerational interaction tool

Building intergenerational relationships through interaction design in order to enrich retired people's social lives in the near future

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Interaction Design

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Executive summary

What is this project

This project is about building an intergenerational interaction tool in order to enrich retired people's social lives in the near future.

Context

The world's population is aging, with many elderly people aged 65 or over living alone. It will cause them to have less opportunities to have social contact. Meanwhile, areas of the world with access to the internet are quickly expanding.

After 5-10 years, almost everyone in the new elder generation will be internet users. Using the technology trend to increase intergenerational interaction can be one of the solutions to enhance retirees' social life quality. Therefore, **my solution for this project is set in 5-10 years.**

Findings

During the research phase of the project, I made the following findings:

1. Physical meeting is necessary to motivate the older people to have intergenerational interaction.
2. The older people like to offer help to others rather than receive help from others.
3. The older people like to take the first action during social interaction, the feeling that they can decide and control the interaction is important.
4. Spontaneity, without too many rules and regulations.
5. There are diversities between every older individual.

Design proposal

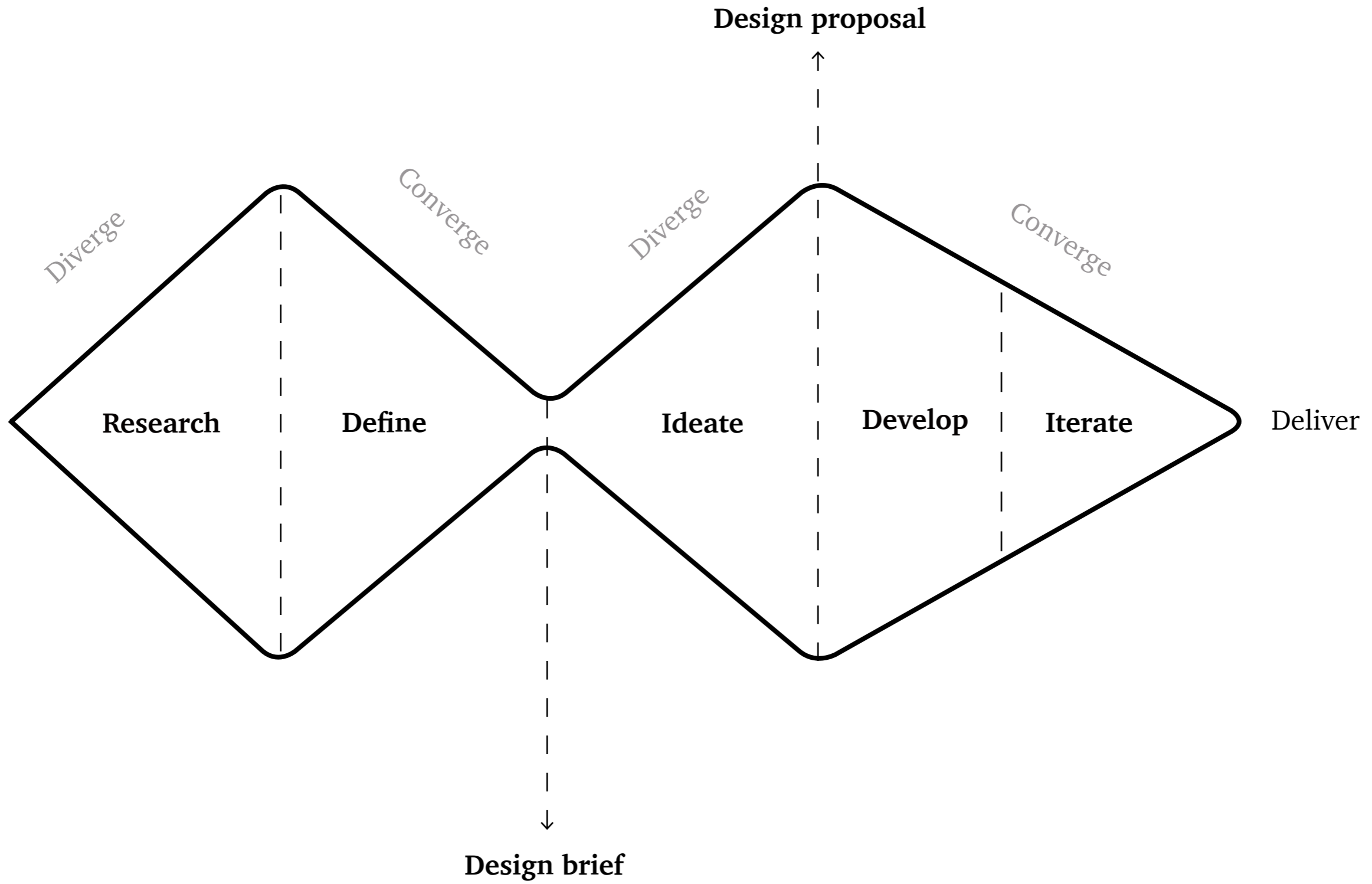
Based on the findings from my research, I found that retirees have a diverse range of interests, physical meetings are necessary and that the elderly like to take initiative.

My design proposal therefore is using "same interest" as the connection between old people and young, creating a digital tool for retirees to hold their preferred activities for the younger people to join, in order to increase the opportunities of intergenerational interaction.

Design process

As a solution to the design proposal, I've chosen to design and develop one of the ideas that I named "Together". The development process is mainly focused on simplification. I intended to build a simpler interface, therefore I eliminated and combined functions during every iteration according to the core needs of users. Then I made a discussable prototype for presenting the concept and discussing the potential.

Process overview



1. Introduction

This chapter will present why I chose intergenerational interaction as a topic and my personal motivation.

Why I chose intergenerational interaction as topic?

Coming from an Asian country, I noticed the differences between Western and Eastern culture. Living with grandparents and taking care of their daily lives is a common family structure in Taiwan. In Norway, the older people are expected to be more independent. A Norwegian Governmental Reform called <Leve hele livet— En kvalitetsreform for eldre> was ratified on 21st November 2018^[1], which is about the life quality of older citizens. It indicated that older Norwegian are facing the challenges of lack of social, cultural and existential interaction. Besides, Norwegian society is having the problem of generation gaps. The following are quotes from in the reform:

“There are too few places where we(the older people) can meet the youth.”

“All friends with common interests died, it’s a problem to maintain networks(for the older people).”

“Lack of variation in activities for the elderly in nursing homes was also mentioned.” **One of the solutions suggested in the reform is**

actually increasing intergenerational meetings.

Therefore, I believe intergenerational interaction is a valuable area to work on.

Personal motivation

After studying in Norway, I was involved in several elderly-related projects.

During interviews and interaction with Norwegian elderly people, I found loneliness and isolation occurring in their lives. Whether in Taiwan or Norway, in the past or present, the social lives of people who are retired aren't much different.

As an interaction and service designer, I am eager to explore how appropriate design could contribute to the aging society, especially in terms of social needs after retirement.

I believe appropriate design can make a difference to human beings' elder lives.

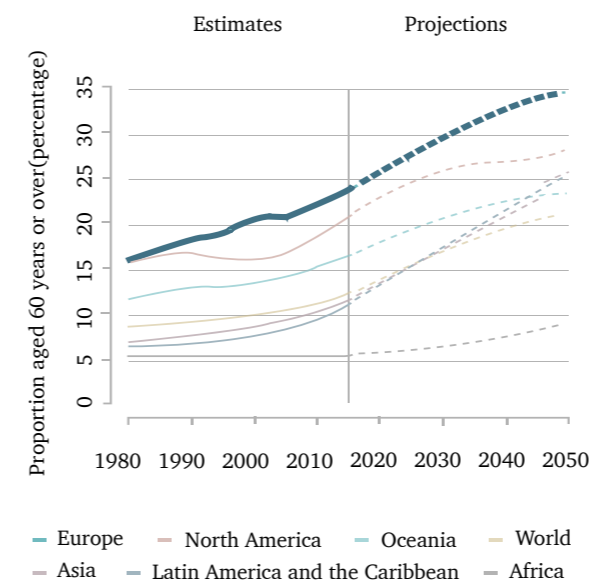
Resources

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www.regjeringen.no/no/dokumenter/meld.-st.-15-20172018/id2599850/sec5

2. Context

This chapter will present the context and how the technology trend can be an opportunity

The situation of the aging society



Percentage of population aged 60 years or over by region

The world's population is aging. In the near future, older persons are expected to account for 35 percent of the population in Europe^[1]. However many elderly aged 65 or over are living alone^[2]. Norway has a higher percentage of older people living alone than the Europe average, especially in Oslo, the city with the most elderly people living alone compared to other Norwegian cities.^[3]

Living alone will cause the older people have less opportunities to have social contact, which leads to the result of isolation and loneliness^[4].

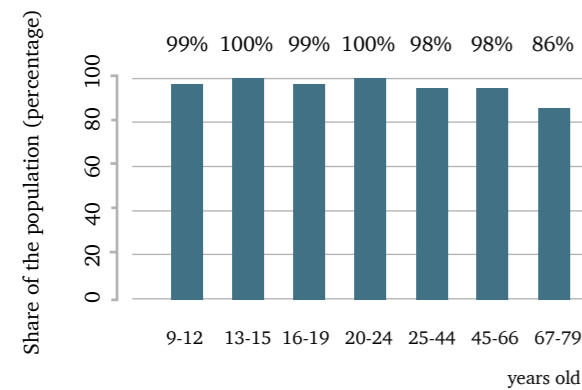
What's intergenerational interaction?

A research paper by of Oxford Institute of Aging named <Intergenerational Learning and the Contributions of Older People>^[5] explained intergenerational interaction as “Systematic transfer of knowledge, skills, competencies, norms, and values between generations –and is as old as mankind”. However, in modern, more complex societies, intergenerational learning is no longer transmitted by the family alone and, increasingly, is occurring outside the family.

The needs of intergenerational learning, meaningful relationships and social growth could happen between non-biologically connected children, youth and older adults.

Another research piece from University of Florida^[6] shows that developing connections with a younger generation can help older adults feel a greater sense of fulfillment, and the youth get knowledge from experienced people, which provides advantages for both groups.

Technology development



The share of the population who used the internet in Norway in 2016

Around the world, the number of people with access to the internet is rapidly increasing. It covers different countries and different age groups^[7]. For example, in Norway, the 45-66 years group will become the new elder generation in 5-10 years^[8]. At that time almost everyone will be an internet user, so the young and old can be closer than ever.

Therefore, **my solution for this project is set in 5-10 years, so that we can prepare now for the new aging generation**, and can be regarded as an answer to the Norwegian Governmental Reform <Leve hele livet— En kvalitetsreform for eldre> , which was ratified on 21st November 2018.

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[4] The influence of living alone on depression in elderly persons (1992), Alfred Dean, PhD, Bohdan Kolody, PhD, Patricia Wood, MPH, Georg E. Matt, PhD, Sage journals

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[7] Digital in 2018: world's internet users pass the 4 billion mark (2018), We are social
wearesocial.com/us/blog/2018/01/global-digital-report-2018

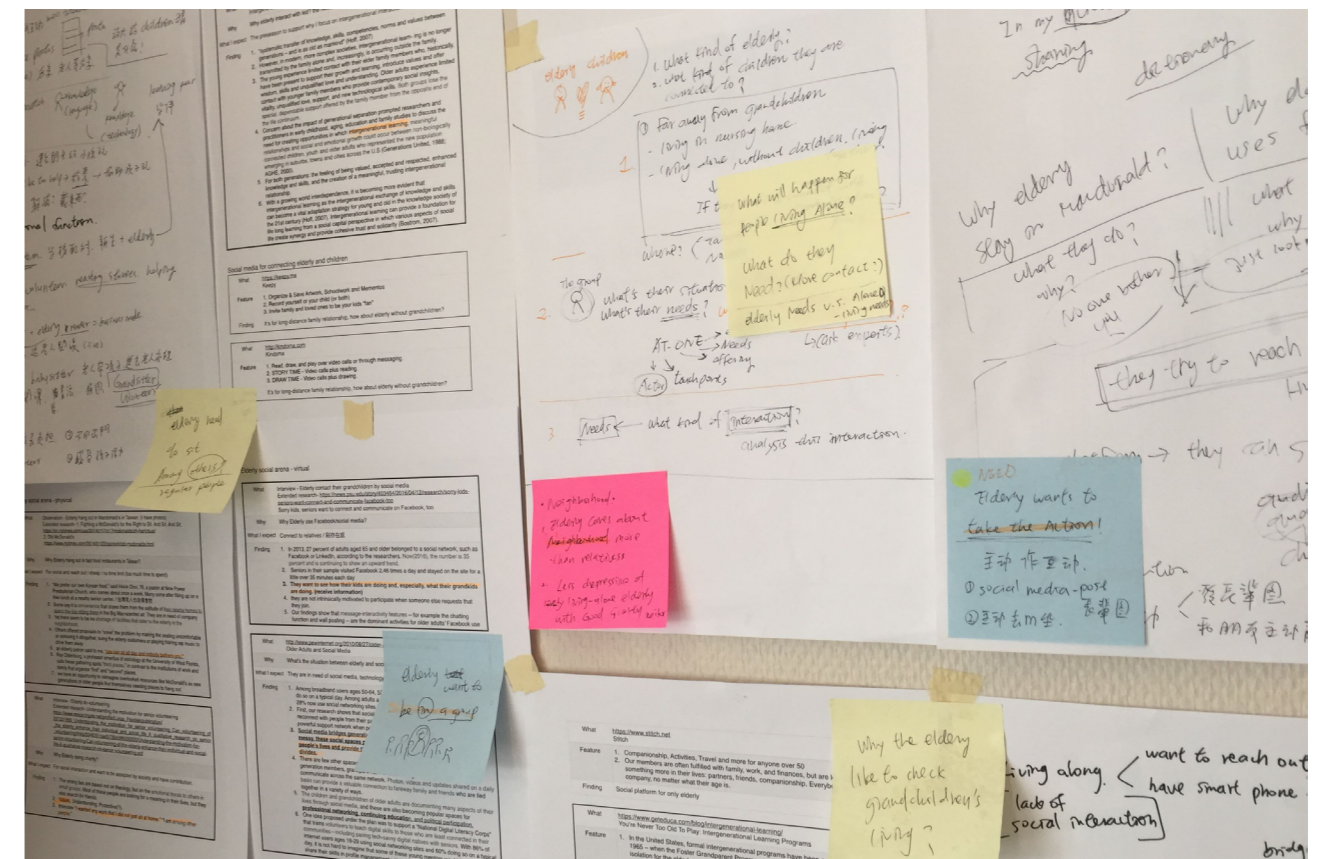
[8] Share of internet users in Norway in 2016, by age group (2016), The Statistics Portal
www.statista.com/statistics/631953/internet-users-in-norway-by-age-group/

3. Research

I used a service design approach during the research phase, meaning I started with broad research to understand the current intergeneration interaction, then narrowed it down to a design brief.

Desk research

Secondary research was the first step to gather insights on the topic. I read different articles from psychological, biological and community perspectives to learn about the broader context of intergenerational interaction. This helped me to build certain knowledge for the next steps - observation.



Observation

In this project, I will focus on people who are retired. There are various retirement ages depending on the country. However, most retirees will face the same challenge, which is having more free time to themselves.

To understand where retirees like to spend time, I went to four physical places where retirees usually visited: Public squares, hospitals, public libraries and fast food restaurants. I observed their behavior and how they interacted with other people, listened to what they said, and validated certain findings from the desk research phase.

For digging into why retirees like to spend time in those places, I went back to desk research. There was a news story which inspired me a lot from The New York Times with title <Fighting a McDonald's in Queens for the Right to Sit. And Sit. And Sit.>^[1]

In it, the writer interviewed retirees who like to stay in McDonald's. Following is a quote from this survey, which reveals the reason:

“ Unlike civic centers or community centers where there are only the elderly, fast food restaurants are an intergenerational environment.”



Case study

In order to explore the intergenerational interaction opportunities created by governments or other organizations, I started to search for related cases all over the world to study.

Nightingale House in Wandsworth^[2]

Nightingale House in Wandsworth is the first of its kind in the UK to integrate both older residents and children into the delivery of the curriculum and elderly care. This case presents an opportunity to make children and elder people have each other as company.



Xinzhuang Culture and Arts Center^[3]

Xinzhuang Culture and Arts Center in Taiwan promoted a senior volunteer program that focused on reading books or telling stories to children aged 0-3 years. This case combined volunteering and intergenerational learning.



Playgrounds for senior citizens^[4]

In Spain, senior-citizen playgrounds have been popping up for a while. It's starting to catch on in the United States too. This case is not providing direct interaction, but provides a place for different generations to meet.



Humanitas^[5]

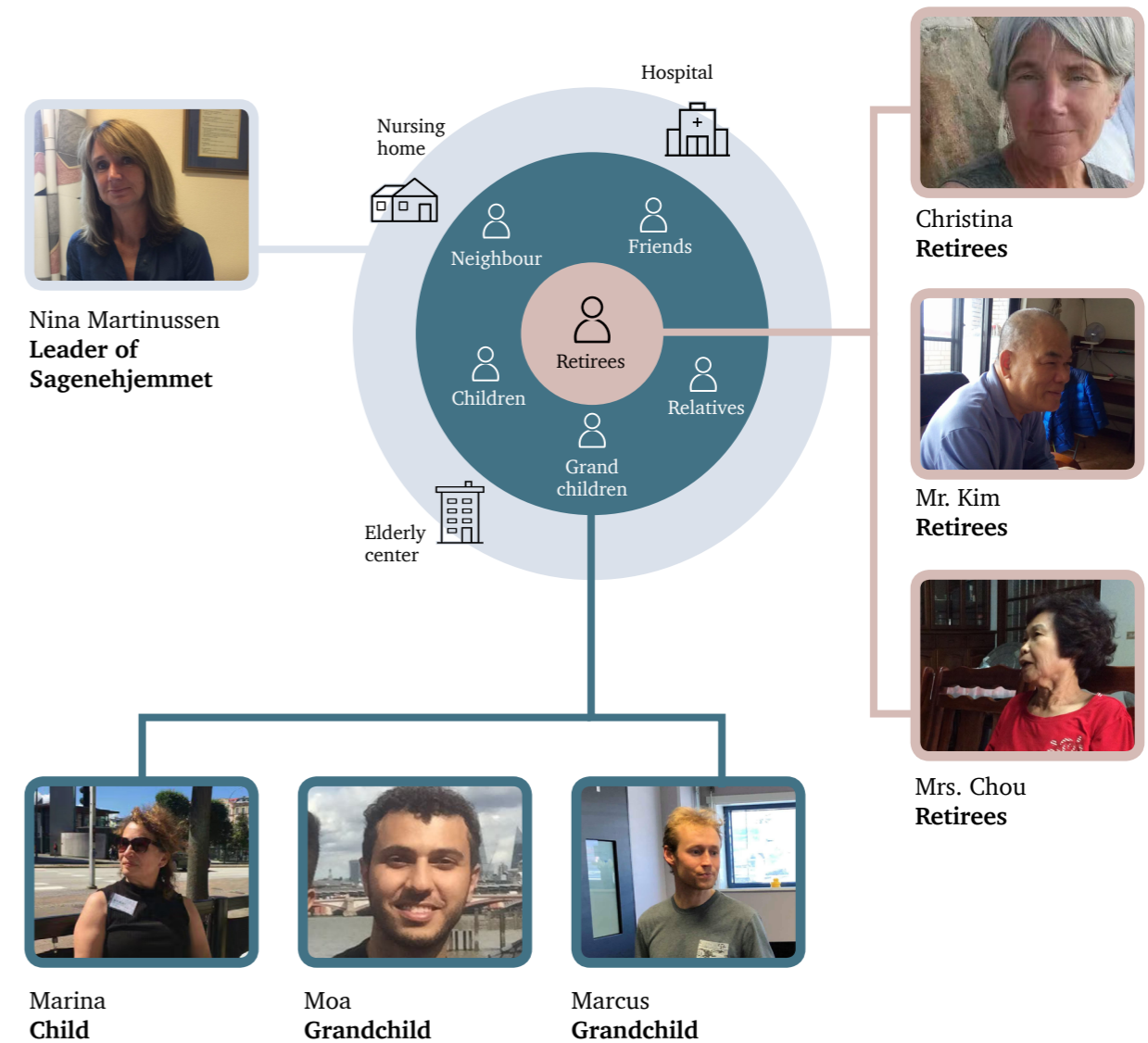
Humanitas, which is a Dutch nursing home, has established a program providing free rent to university students in exchange for 30 hours a month of their time “acting as neighbours” with their aged residents – an unusual practice. As part of their volunteer agreement, the students also spend time teaching residents new skills – like how to email or use social media.



These four cases acted as inspiration during my ideation phase. They all include physical meetings and both generations have positive experiences. To build a deeper understanding of intergenerational interaction in real lives, I started to move to the next step - interviews.

Interviews

To understand the lives of the retirees and the interaction between them and people around them, I made a map of the main actors in retirees’ social lives, and conducted several interviews with the main actors. During the interviews, I discussed the insights I got from previous research with them and sought to understand the deeper meaning behind those insights. The following are significant quotes from the interviews:



- **The retirees are seeking for interaction with the younger generation.**

“I do volunteering work so that I can be among other people.” -Christina, retiree

“We have many young volunteers, the elderly are happy to see young people around them. I couldn't see any negative effect from it.” - Nina, Leader of Sagenehjemmet

- **There is a lack of common topics between grandchildren and grandparents.**

“I contact my grandchildren by FaceTime every 2-3 days, but we actually don't have common topics to talk about.”- Mrs. Chou, retiree

“The older person I usually get in touch is my grandmother. But I don't think we have any interests in common.” - Marcus, grandchildren

- **Younger people have positive attitude towards interaction with older people.**

“One day I was drinking beer alone in a bar, an old man sat next to me. We somehow started to chat. He had so many interesting experiences, we ended up talking for 2 hours.” -Moa, grandchild

“Once I contacted an older client on the phone, he suddenly started to share his business knowledge with me. I learned a lot from the conversation.” -Marcus, grandchild

The findings of interviews concur with some of my previous research.

For example, Marcus may not have much to talk about with his grandmother, but he would like to have a longer conversation with the older client who knew business. It reflects that **the needs of intergenerational learning, meaningful relationships could happen between non-biologically connected children, youth and older adults**^[6].

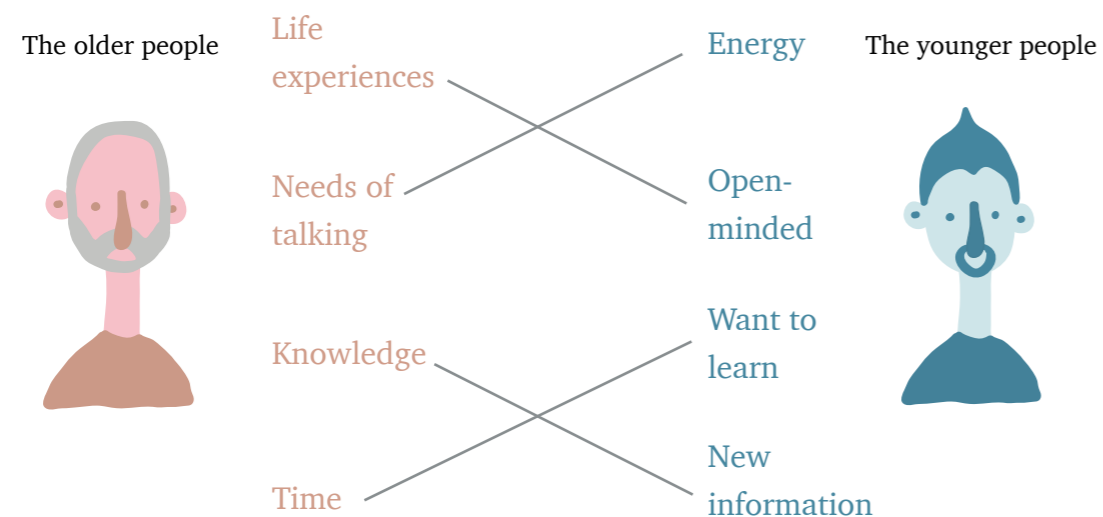
Summary

Based on the findings from the research phase, I found intergenerational interaction is needed for the retirees. The intention behind volunteering^[7] and choosing a place to spend time at, is related to the eagerness to interact with other generations.

Additionally, research done by psychologists at the Universities of Cologne and Chicago^[8] has shown that loneliness isn't something only older people experience but is equally likely to affect any age-group. And what's noticeable is that the study found that loneliness hits a peak for twenty-somethings.

There are many advantages for younger people to make elderly friends. They can learn from the life experiences of elderly people and listen to advice. Intergenerational interaction indeed benefits both generations.^[9]

I believe that the generation gap doesn't necessarily have anything to do with age. It's more about people unable to find a connection between each other.



Different generations' needs and features can support or match each other

Design brief

After summarising the findings from the research phase, I made a design brief by framing the goals:

Create a digital platform to connect retirees and younger generations.

The primary aim is to increase the opportunities of intergenerational interaction in order to enrich retirees' social lives in the near future. The additional value is that it benefits the younger generations' lives as well.

Resources

[1] Fighting a McDonald's for the Right to Sit. And Sit. And Sit. (2014), Sarah Maslin Nir, Jiha Ham, The New York Times

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[2] 'It's a lovely awakening': Elderly people and children sing and dance together in UK's first intergenerational care home (2018), May Bulman, Helen Hoddinott, Independent

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[4] The rise of urban playgrounds for the elderly (2016), The Guardian

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[7] Understanding the motivation for senior volunteering (2013), Lukas Pavelek, Department of Health and Social Work University of Trnava Trnava, Slovak Republic

[8] Loneliness in midlife - the risk of becoming lonely is not limited to old age (2016), Luhmann, M., & Hawkley, L. C., University of Cologne

[9] Mixing young and old people can extend lives (2015), Ruth Wood, The Telegraph

www.telegraph.co.uk/lifestyle/wellbeing/11812307/Mixing-young-and-old-people-can-extend-lives.html

4. Ideation

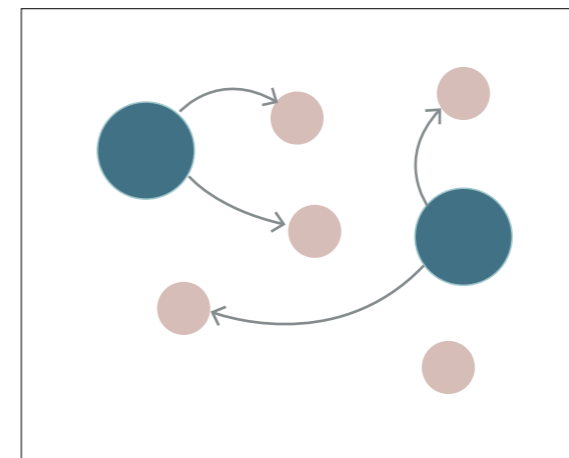
This section will present how I define the design proposal and generate concepts. I will then scope the project and decide on the positioning of the solution.

Intergenerational interaction mode

To understand the possibility of intergenerational interaction mode, I reviewed the cases I studied, and analyzed the interaction structures. The following mappings present 3 different intergenerational interaction modes.

How to read the mapping:

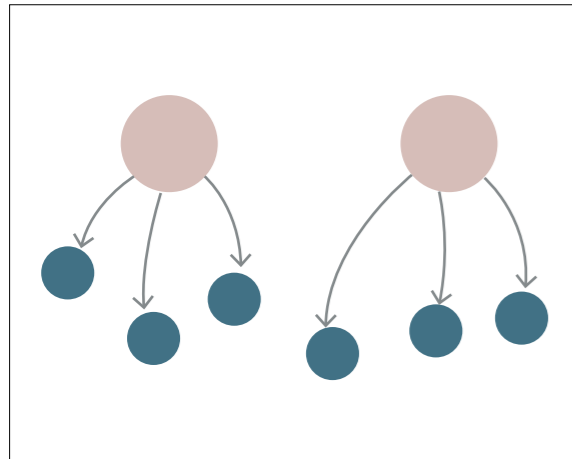
- **The sizes of circles represent giving help or receiving help. The bigger circles mean givers(offering help) in the relationships.**
- The colors represent generations: blue/green is younger generation; pink is older generation.



Cases: Humanitas

- : College students
- : Aged residents in Humanitas
- : Accompanying, assistance daily lives, teaching how to email, use social media

Case of Nightingale House in Wandsworth is also similar to this mode



Cases: Xinzhuang Culture and Arts

Center

- : Childern
- : Senior volunteers
- : Story telling, caring

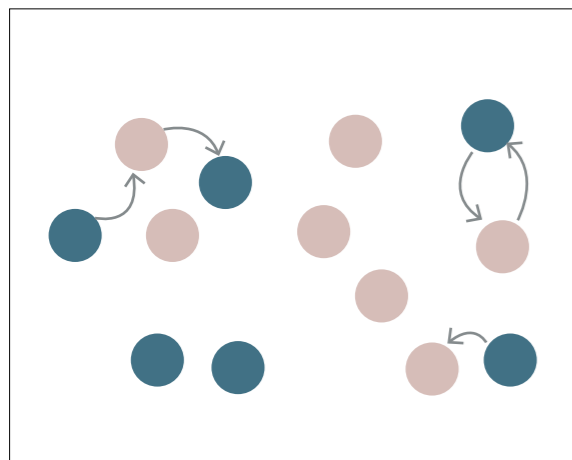
According to findings from my research phase, there are four main insights from the intergenerational interaction that the retirees would prefer.

1. Physical meeting is necessary to motivate the older people to have intergenerational interaction.
2. The older people like to offer help to others rather than receive help from others.
3. The older people like to take the first action during social interaction. The feeling that they can decide and control the interaction is important.
4. Spontaneity, without too many rules and regulations.

The interaction mode of this project should provide the older people the opportunity to give help and share their knowledge and experience to the younger people.

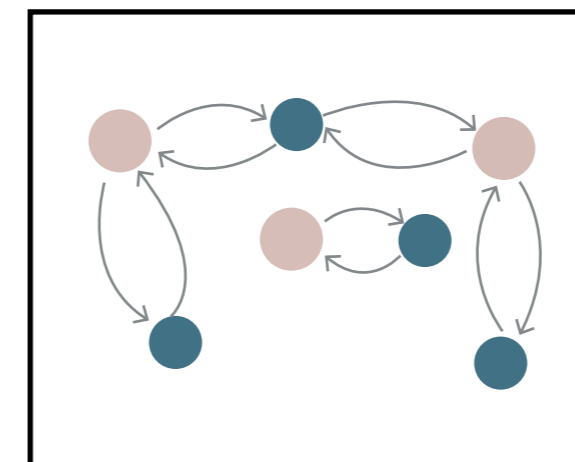
However, according to an academic book <New directions in helping> mentioned, a relationship without obvious helpers or givers would develop more equally and stably^[1].

Therefore, I will set the older people as the role of mentor or team leader in the relationship, but both sides can equally interact with spontaneity.



Cases: Playgrounds for senior citizens

- : Younger people
- : Older people
- : Greeting, small talking



Ideal interaction mode of this project

- : Younger people
- : Older people
- : To be decided

Concept

Based on the main insights, I tried to identify a specific activity as the connection between both generations. Whilst doing the same activity, the young and the old will grow closer. I considered several options for what the activity should be, then I selected three proper options that most closely matched the ideal interaction mode I mapped based on observations from the case studies.

Option 1



The local retirees lead travelers to go hiking:

The older people can share their experience of hiking and deliver knowledge of local culture. The younger travelers can have a free and nice local guide.

Option 2



Cooperative Augmented Reality game:

An Augmented Reality game requires meeting in person and co-operation with senior players in order to finish the missions. The younger generation will target children and teenagers.

Option3



Cooking with the older people:

Cooking is a necessary skill as old as human history. Many older people maintain tradition in their cooking style and share other traditional food related knowledge, for example, how to make jam. The younger generation can learn a lot from them.

Interviews

After selecting the three options, I turned to experts to discuss which one will be the best option to keep working on. Also, I presented my previous works and findings to them for advice and suggestions.



Ida Pedersen
Leader of Majorstuen
Seniorsenter



Nina Martinussen
Leader of
Sagenehjemmet



I contacted Nina again, the leader of Sagenehjemmet. I had interviewed her in the research phase. Meanwhile, I met Ida Pedersen, who works as a leader of Majorstuen Seniorsenter. Her job is leading young volunteers to hold activities for the senior citizens. I also took the chance to talk to some young volunteers in Majorstuen Seniorsenter.

They shared their opinions based on my findings, and we discussed what kind of activities would be the best means of connecting different generations. Below are some significant quotes from our discussion.

- **There are diversities between all of the older individuals.**

“We invited children here to play with the elderly as well, but not everyone likes kids. Some of the elderly prefer to read in their rooms.” - Nina

“I am actually not sure what kind of activities will be popular among the elderly. I can only do and try.”- Ida

“If people see two eighty-year olds standing there, they will assume those two individuals like to do the same thing, but usually the only thing in common between them is the age.” - Ida

- **Learning from the older people is a good idea.**

“I worked here because of a school program at the beginning. I keep coming here after the program closed. I like to interact with the elderly. I can always learn a lot from their thoughts.” - Young volunteers

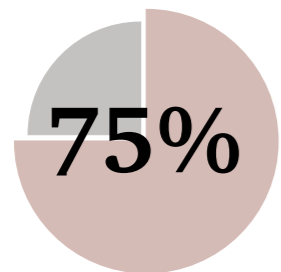
“When I was a child, I loved old people. I frequented old people more than the young. Because from the old people I learned wisdom.” - Young volunteers

Regarding these three concepts, Ida mentioned they are good because all of them involve physical meetings, which is a crucial principle for connecting the old and the young.

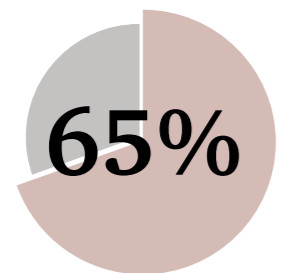
However, **she thought each concept can only fit a small portion of users**, since not every retiree likes to hike or play games. Nina gave similar feedback as well, advising me to be aware that most retirees probably like to stay at or near to their home to their home for physical convenience.

Survey

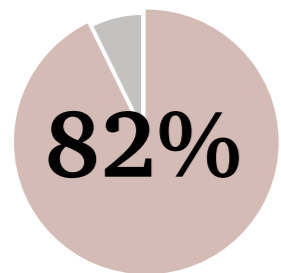
Meanwhile, I started to conduct an online survey^[2] to understand what kind of activities would the old and young like to do together. I posted questionnaires on Oslo-based social media groups, and received 54 pieces of feedback in total. Some feedback validated the insights I got from the previous research phase. The following are significant results from this survey:



75% of people answered that the activity they do with another generation is just talking.



65% of younger people would like to have more contact with the older generation.



82% of people prefer to physically meet another generation in person, in terms of interaction.

However, according to what kind of activities they would like to do together, all categories have a certain amount of supporters, so there is no obvious most popular activities in the survey.

Insights

After interviews with experts and receiving the survey result, I added diversity as one of the crucial insights. Following are five main useful insights:

1. Physical meeting is necessary.
2. The older people like to offer help to others rather than receive help from others.
3. The older people like to take the first action during social interaction, having the feeling that they can decide and control the interaction is important.
4. Spontaneity, without too many rules and regulations.
5. There are diversities between all older individuals.

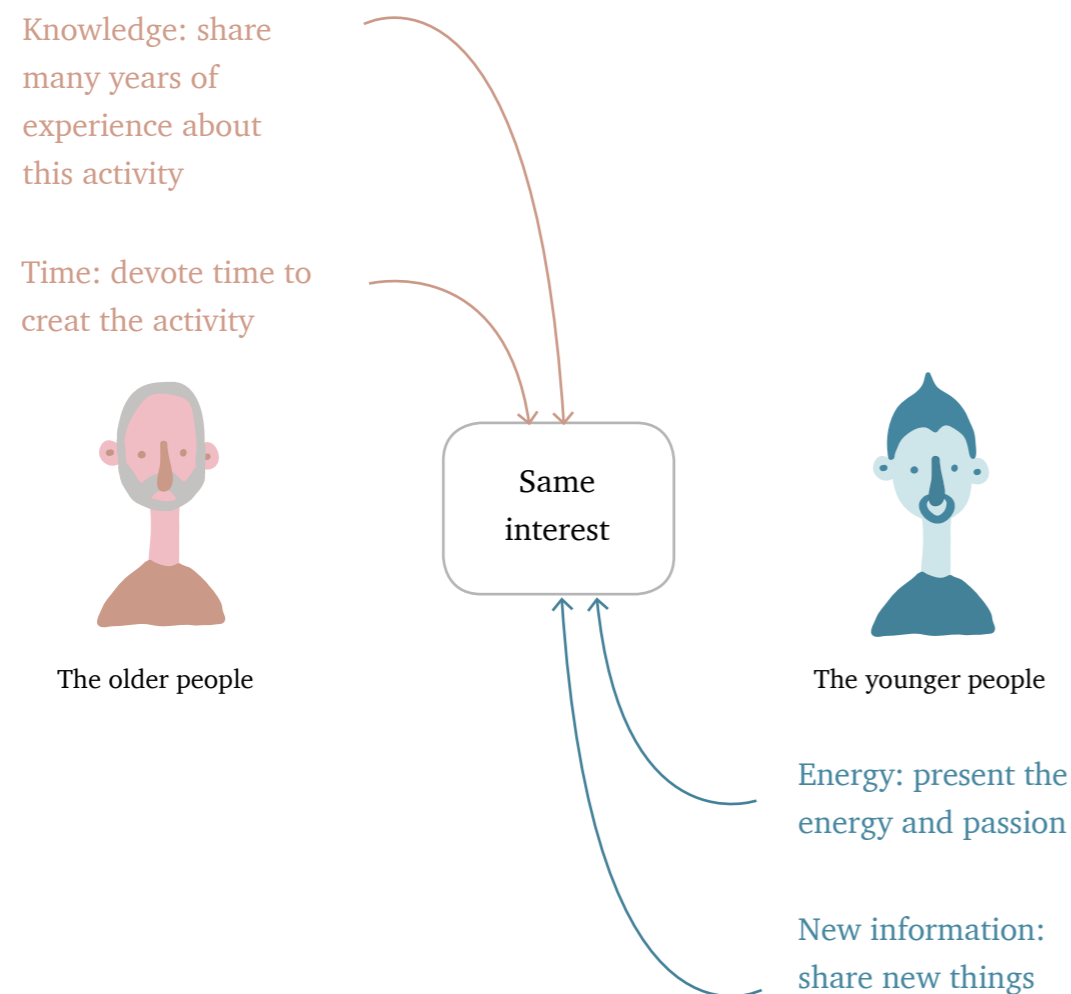
I had to decide what solution can respect individuals' diversities whilst providing the opportunities of intergenerational interaction to the retirees.



Design proposal

After brainstorming, I generated a new concept and made the design proposal.

Using “same interest” as the connection between old and young, create a digital tool for retirees to hold their preferred activities for the younger people to join, in order to increase the opportunities of intergenerational interaction.



User persona

I built up user personas to package those findings into an easy to understand format. Personas will help me to maintain focus on the needs of the users at the further development stages.

Primary user persona



Sophia Age 65

Occupation
Retired School Teacher

Status Widow with
1 son and 1 grandchild

Living situation
Alone

Technology device
1 smart phone, 1 tablet

Personality
Open-minded, giving

Location
Oslo, Norway

“I like to share the skills of cooking and baking, but people around me prefer to enjoy the food.”

About

Sophia's husband passed away five years ago. She lives alone in the surroundings of Oslo. Her son visits her around twice per month. Sophia loves cooking and baking. However, she gets less opportunities to share her baking with others after retirement.

Pain points

- . Her friends and family members are not interested in cooking and baking.
- . She feels isolated except during the visits from her son.
- . She can't finish the food she made by herself, so it will eventually go bad in the fridge.

Primary user persona



Larry Age 67

Occupation
Retired company employee

Status Divorce

Living situation
Alone

Technology device
1 smart phone, 1 tablet,
1 laptop

Personality
Friendly, knowledgeable

Location
Stavanger, Norway

“I spend most of time working in my farm after retirement . It will be good to have a companion.”

About

Larry loves nature and outdoor activities. After retirement, he put a lot of effort into growing different vegetables in his small farm, and keeps a few animals. He likes kids as well, but he doesn't have one. He once dreamed to be a teacher, guiding children to learn from nature.

Pain points

- . He has a lack of physical social interaction.
- . He wants to share with others the joy of harvest from his farming.
- . He has the passion to teach others gardening, especially children.

Secondary user persona



Emma Age 27

Occupation
New employee

Status Single

Living situation
With 2 flatmates

Technology device
1 smart phone, 1 laptop

Personality
Open-minded, positive

Location
Oslo, Norway

“It's hard to make new friends since I spend most time on working. It will be great to have local friends who share the same interest.”

About

Emma just relocated to Oslo for a new job. She hopes there is someone who can tell her how to live easier and have more fun in the city. Maybe they could also go to a classical music concert together, which is her greatest joy.

Pain points

- . She has a hard time to find a friend who likes classical music as she does.
- . Working for a small startup, she has a narrow social circle and finds it difficult to extend.
- . She wants to make new friends in a more spontaneous way.

Scope

After defining the design proposal and building personas, I started to scope down the project. For this service, a promotional website is necessary. Besides, an impactful advert to push users to take action and experience intergenerational interaction is important as well. However, due to the time constraints, in the diploma project I will focus on the application.

I will use 5W1H, which is a thinking method of asking why, what, how, where, when and who, in order to explain the scale of the project:

Why?

To increase the opportunities of intergenerational interaction

What?

An application named -"Together". Because it is easier to include different functions in one package, and it will be an icon presented on a desktop, so is easier to find and manage.

How?

The older people create the activity on the application, the younger can join them if they feel interested in.

Where?

The users contact each other through Together on their phones or tablets, and meet in person to do the activity together.

When?

In 5-10 years. By then, almost everyone will be an internet user in the new aging generation.

Who?

1. Senior users: I defined the primary users as people over 55. According to older-people oriented dating websites, most users are above the age of 55. Also, 55 is the general retired age among Eastern countries, and expanding the user range can benefit more people.

2. Younger users: above 18, so that users can take their own responsibility. Children are allowed to join with parents' accompaniment.

One rule: Only the older users can create an activity

According to previous research, this one rule is necessary to set up. There are two reasons for this:

1. **The older people will be more active and engaging if it is at the older people's initiative to start and plan the activity**, Also, it could encourage them to adopt the app as their exclusive platform.

2. The older people have relatively low self-esteem and retreat very easily. If younger people can post activities, there are possibilities that the youth will dominate the platform and the dynamic will overwhelm the older people. Eventually, the platform will become another hangout social media only for the young people.

The senior users can create and attend activities created by other senior users. Meanwhile, the youth can only be participants not organizers.

Existing services

After scoping down, I needed to understand if there are alternatives on the market for senior users to hold activities. I analyzed four main social media platforms which have the function.

Facebook

- **Privacy issue:**

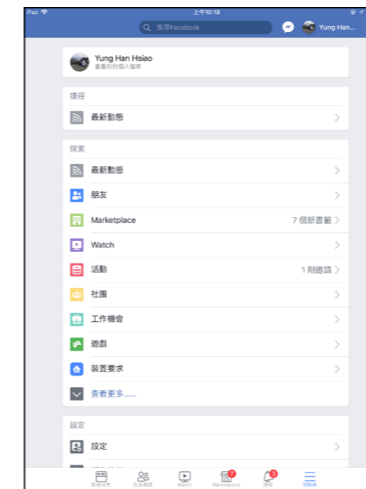
A study in 2018 found that 47% of Facebook users were very concerned about the invasion of privacy, so that they're sharing less content with friends and followers on social media*1. The older people are cautious toward invitation and requests on Facebook, and are not intrinsically motivated to participate when someone else requests that they join^[3].

- **Too complicated:**

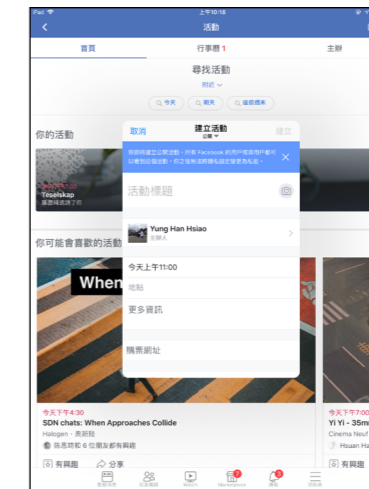
Facebook is a relatively complicated social media platform. Massive social nets, advertising, reposting. It is difficult to predict and control the consequence after you make a move on this platform. As such, the “like” button and chatting function are the dominant activities for older Facebook users^[3].

- **It's hard to be found:**

I tried to post an event on Facebook, the “create an event” function is hidden among submenus. After I created one, it was quickly overwhelmed by massive events created by big organizations. If I don't promote it and invite friends to join, people will rarely be able to find it.



The “create an event” function is hidden among submenus



I created one event



My event was overwhelmed by massive events, hardly be found

Couchsurfing/Airbnb

There are about 4500 members in the 50+ age group on Couchsurfing.^[4] Senior users can provide help (accommodations or local guides) to the travelers and have social interaction. However, it is not very suitable for building deeper connections.

- **Traveler oriented:**

Couchsurfing and Airbnb are both traveler oriented platforms. Creating activities related to experiencing the city or local culture is the main purpose of the feature, not just sharing the same interests.

- **Hard to keep in touch:**

Øyvind, an experienced senior Couchsurfing user I met whilst traveling said “*I met over 100 travelers, I took them hiking in the woods and mountains. However, I don't think I've had contact with any of them after they left Norway. Travelers come and go, I have grown tired of it.*”

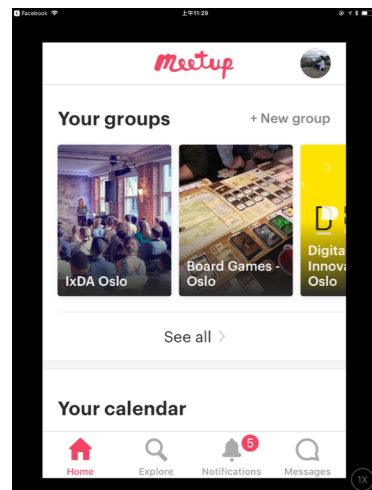
Meetup

- **Need to pay to create a group before creating an activity:**

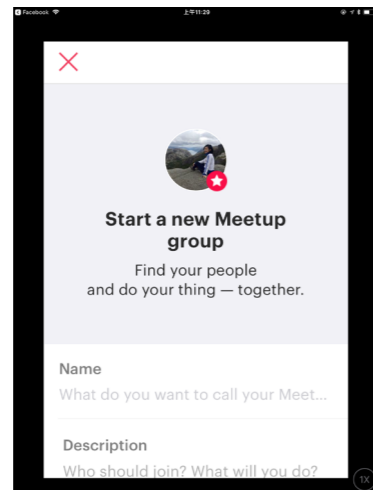
The users need to have enough strong motivation to pay for creating a group, and maintain the group afterwards.

- **Not spontaneous:**

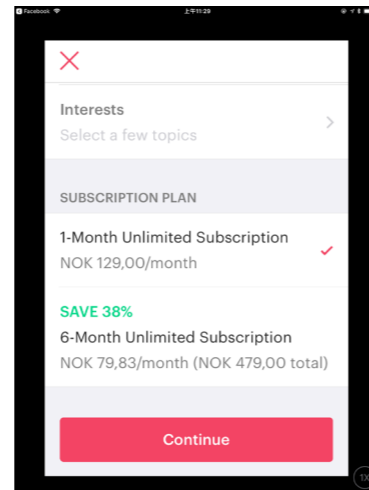
People who want to join the events need to be a member of the group. It will usually cause the users to meet the same bunch of people, reducing the chance to extend their social circles. The event is bound to the group, so if the user would like to hold a different genre of event, he or she needs to create a new group. It's restrictive and not spontaneous.



Need to create a group before create an activity



I tried to create a group



Need to pay to create a group

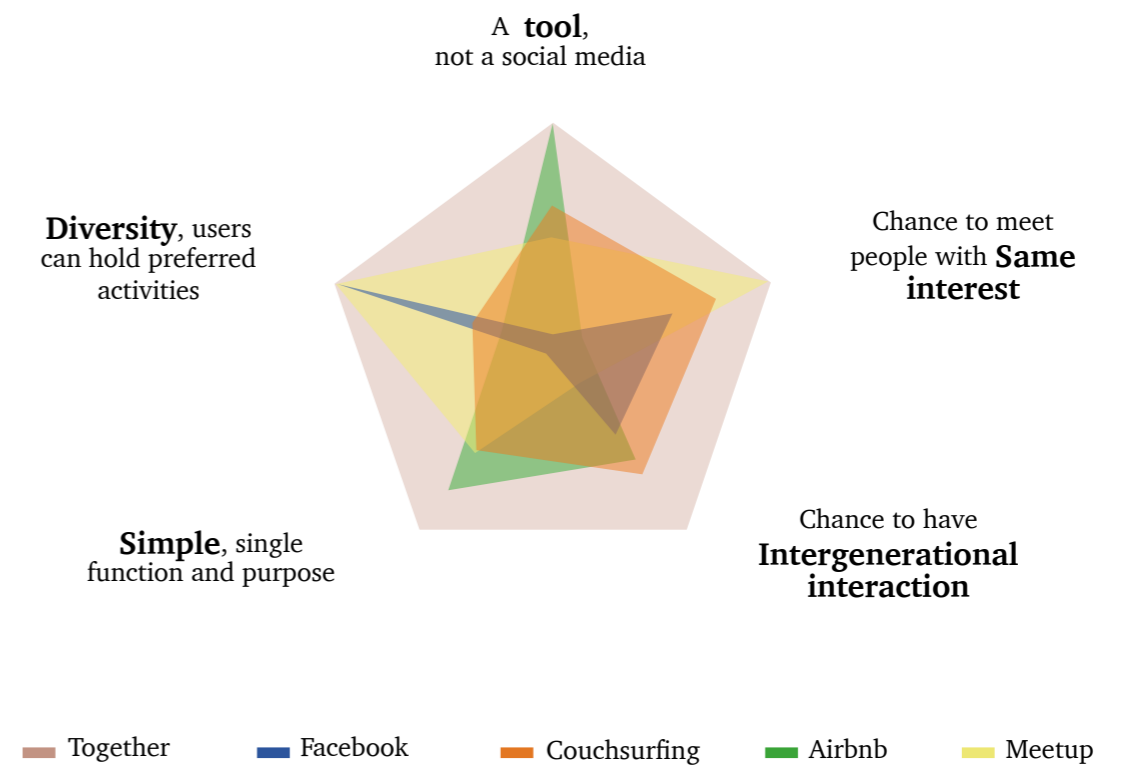
Why Together is different?

The main reasons for why there is a need for creating this application are as follows:

1. **Providing a specific arena for the retirees to hold activities is necessary.** It will give the authority and comfortable scenario to encourage senior users to do so.
2. **It's a specific platform for finding "same interest" and "different generations".** Users have the needs will know where to go to fulfill their needs.
3. The rules and interface will take senior users' needs into consideration.

The application should be simple to use. Therefore, I've defined Together as a simple tool, instead of a social media platform. It won't involve social networking features, followers etc., as this could cause social stress or emotional burden.

I used a radar chart to compare the features of Together with those of the existing services I studied.



Resources

[1] New Directions in Helping: Recipient Reactions to Aid (1983), Jeffery D. Fisher, Arie Nadler, Bella M. DePaulo, United Kingdom Edition published by Academic Press Inc. Ltd.

[2] The survey was conducted on SurveyMonkey
zh.surveymonkey.com

[3] Many Facebook users are sharing less content (2018), Rimma Kats, eMarketer
www.emarketer.com/content/many-facebook-users-are-sharing-less-content-because-of-privacy-concerns

[4] Couchsurfing for seniors: much more than a free place to stay (2013), Dianne Lang, Senior Planet
seniorplanet.org/couchsurfing-for-grownups-much-more-than-a-place-to-stay

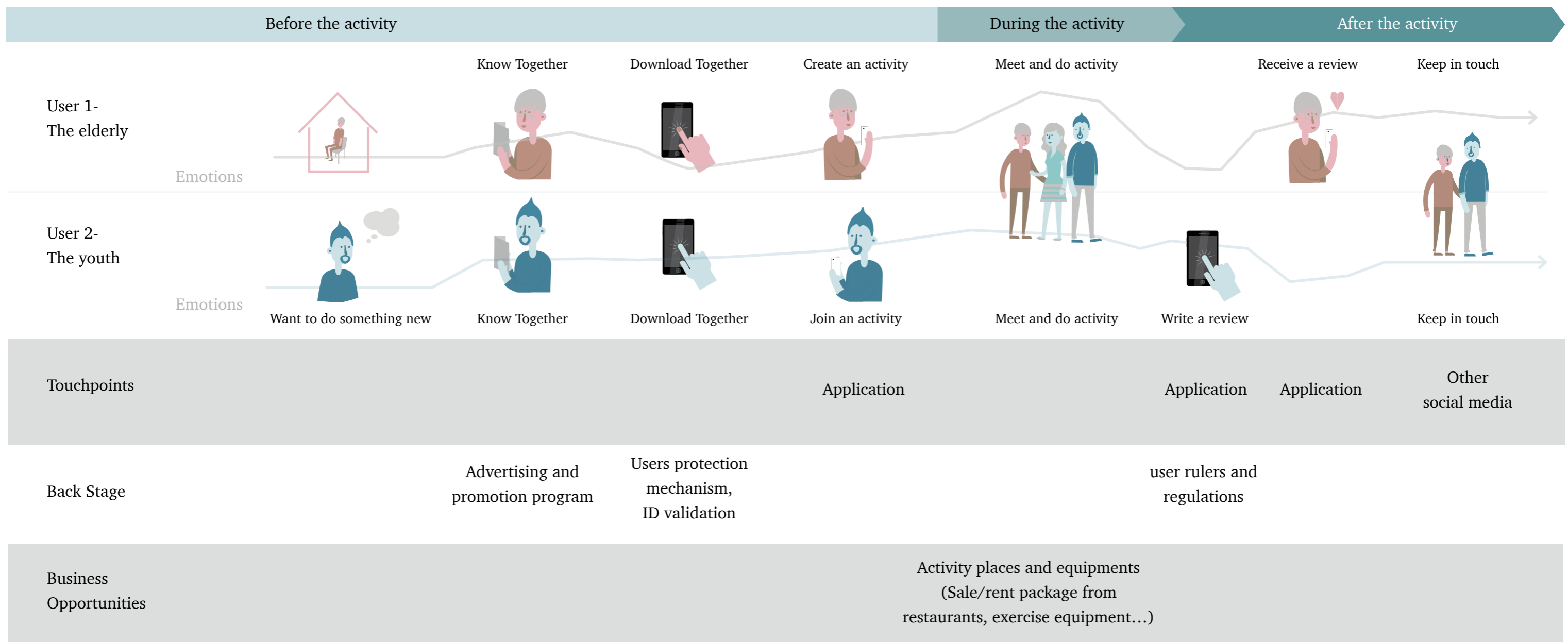
* Pictures of personas are from free pictures resource: Pixabay

5. Develop

After defining a clear design proposal, I started to develop the application: Together. This section will frame the application and present the phases of development.

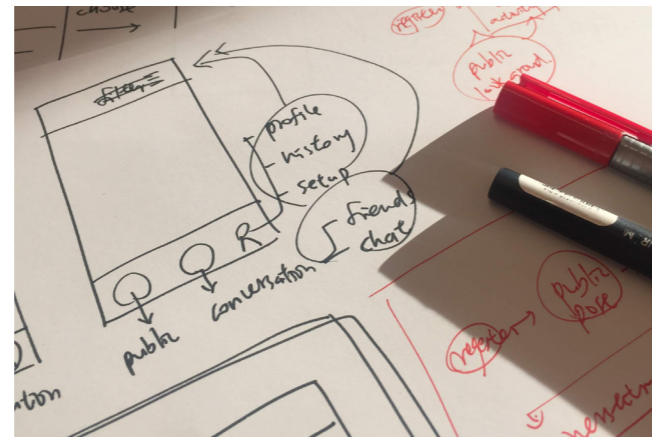
The service blueprint

I built the service blueprint to present the project in a whole view. At the first point, there are touch points for promoting Together and encouraging users to download it. For the diploma period, I will focus on the application.

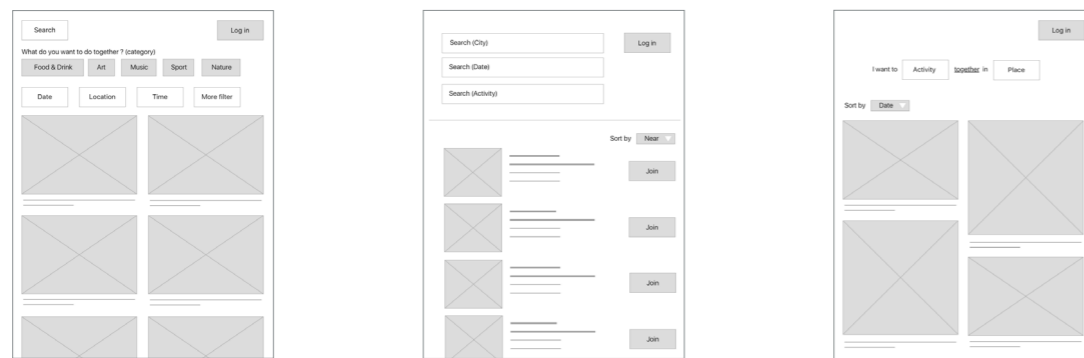


Wireframe ideation

For making decisions on the main layouts of the high fidelity prototype, I explored the possibilities as wireframes. Then I chose several potential wireframes to make fast digital prototypes in order to gather feedback and suggestions.



Home: Main list



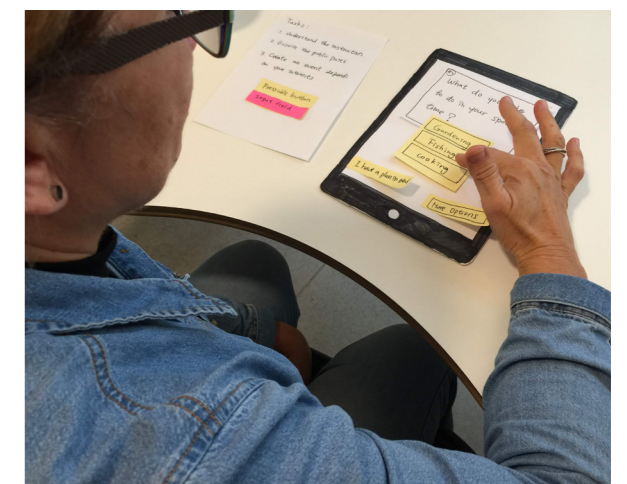
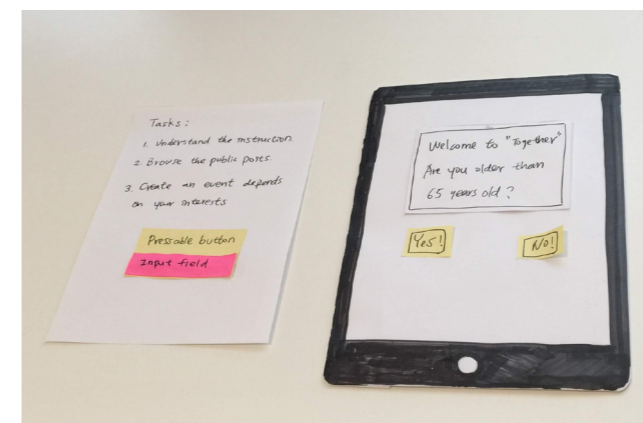
Activity page



Paper prototype

Before starting digital prototyping, I made a rapid paper prototype in order to demonstrate different concepts quickly. The testing of the paper prototypes focuses on the following points:

1. On boarding and tutoring mode: Can the users follow the lead to finish on boarding and creating a new activity?
2. Function: What kind of functions and features are necessary for the users?



Feedbacks

I invited a senior user and a younger user to test the paper prototype. Through observation and an interview after the prototype testing, the main feedback I received is shown below:

- **Tutoring mode is necessary but shouldn't take too long**

In the beginning, the users expect to learn about Together through a tutorial or step-by-step instructions, but it should be just a starting point. The users would like to click around and explore.

- **Reference system is important**

Before joining an activity, the users would like to see how were others' experiences with the activity creator. To make sure they have a good experience, the users would check the activity creator's profile to know the person better as well.

Iteration

My approach is based on quick iterations with testing and feedback driving the process. Those clickable prototypes are not only for testing layouts, but also using flows, icons, colors, and how much content and functions should be presented.

Six iterations were conducted to settle the main functions of Together. The three main iterations are explained as follows:

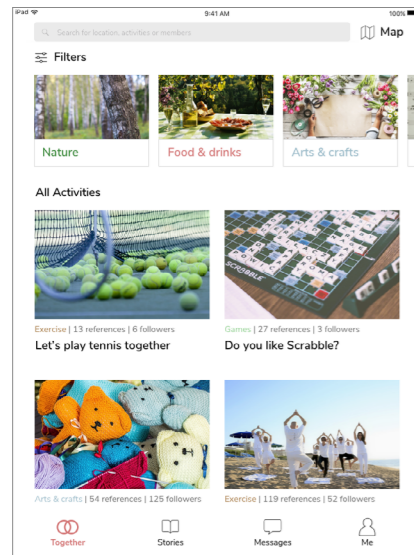
First iteration

Structure

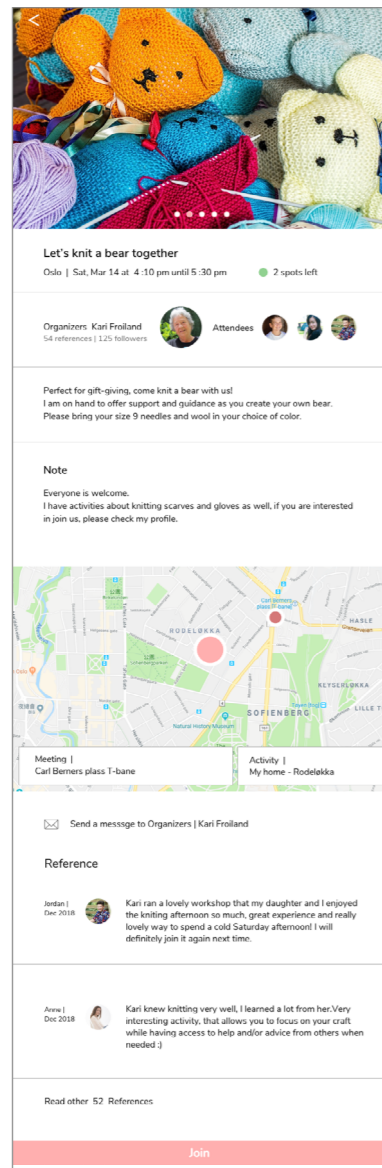
Home	Stories	Messages	My Page
Main list of activities	Diaries to record users' stories about Together	For discussing the details about the activities	Manage old activities and profile

First iteration is a digital prototype which was created based on feedback from a paper prototype. It was a general test to evaluate every aspect of the application. The screen size is fitted tablets.

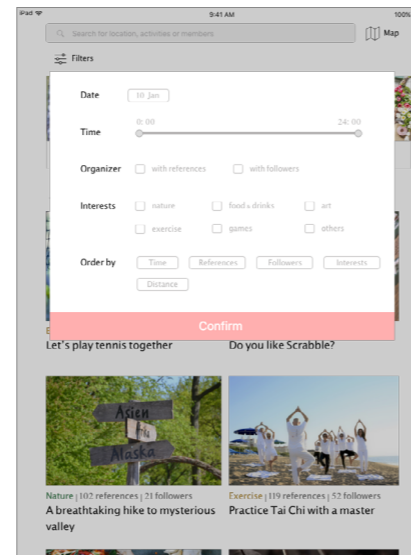
Home: main list



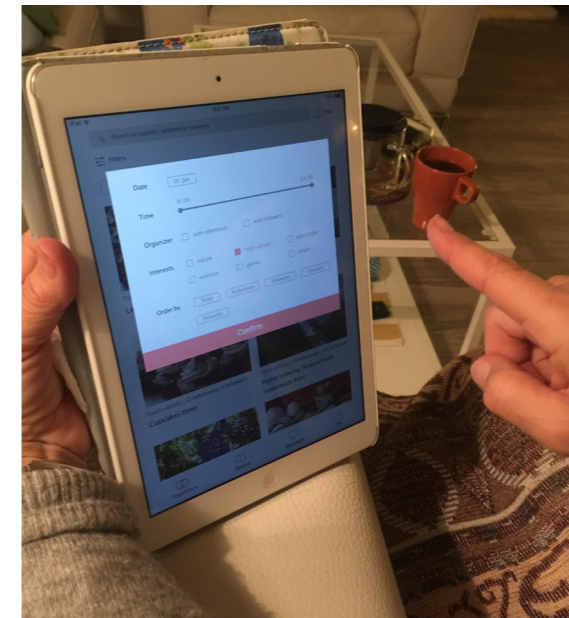
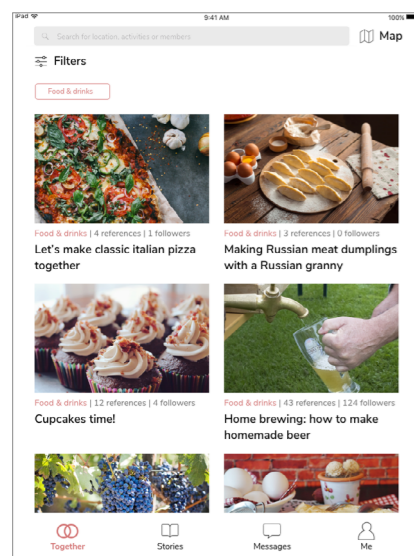
Activity page



Filter



After Filter



Feedback

The first clickable prototype was evaluated by two senior users and one younger user. The feedback was mainly focused on two points below:

- **Too complicated**

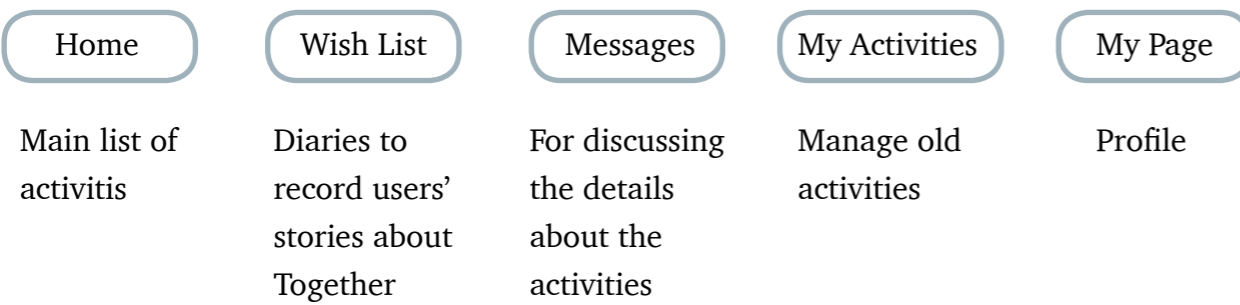
Whilst observing users' operation, I found they were hesitant whilst navigating the slide area at the top, which is meant to be a shortcut for selecting an interest category. However, the users were not sure about the intention of this section.

- **Hidden function is confusing**

Users mentioned there were some hidden functions which drove them to click around and go back and forth in order to achieve one common action.

Second iteration

Structure



I agreed with the feedback from the first iteration, that this version was overwhelming, yet it is supposed to be simple to approach.

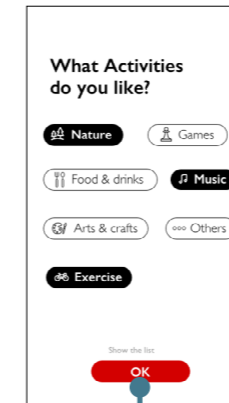
In the second iteration, the screen size is fitted to mobile phones. Below I will present the three main features I modified:

1. **User flow: I found actually users' interests were stable, they are not options which need to be chosen every time.** Therefore, I deleted the slide area on the top, which was a shortcut for choosing an interest category. It turns out that users only needed to select their interest once in the beginning, then it will be default information in their profile.

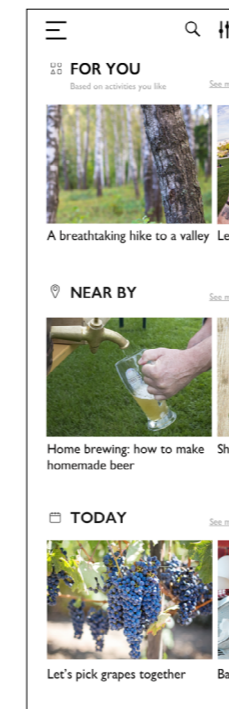
2. More organized: I intended to make the interface simpler and clearer, so I decided to use a hamburger menu. Also, I hoped to enhance user experience by preselected activities sections.

3. Set the identity: Previous colors and icons in the first version didn't receive good feedback. After several iterations, I decided the color would be red.

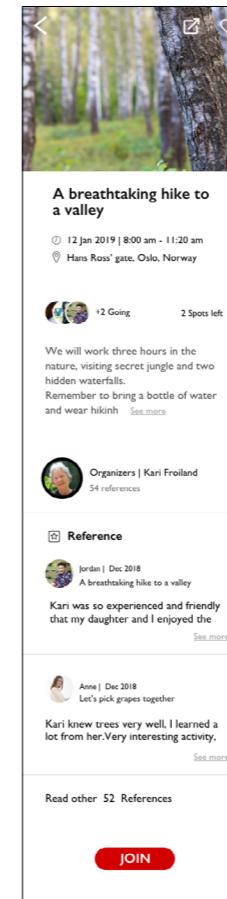
Choose preferred activities



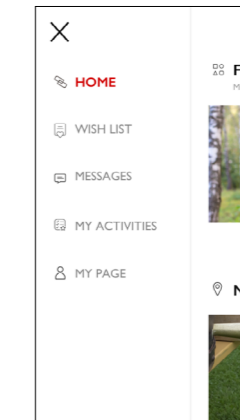
Home: main list



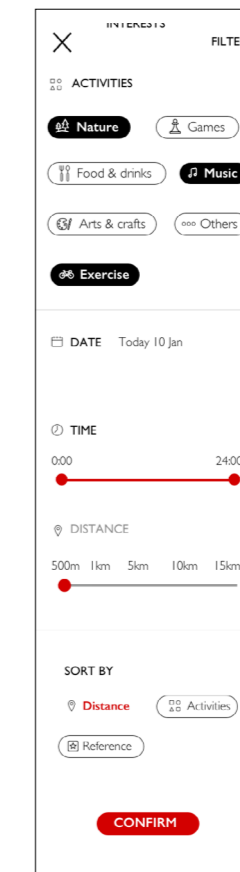
Activity page



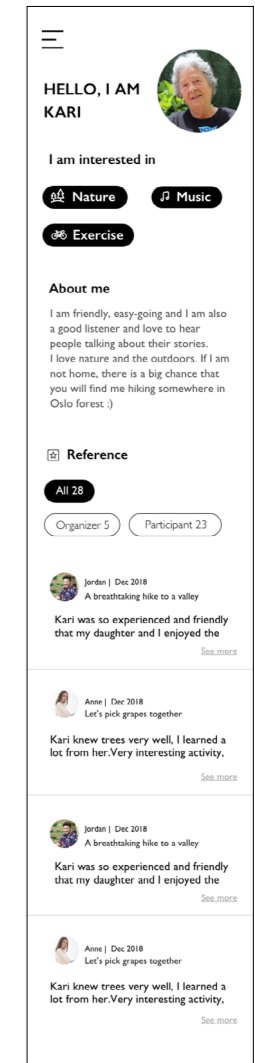
Menu

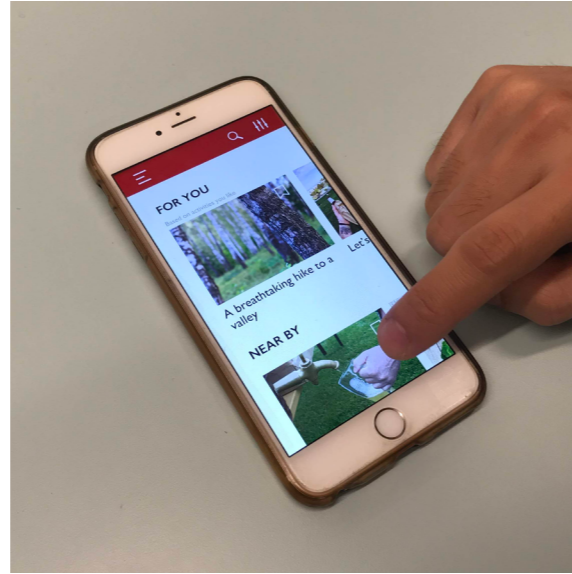


Filter



My page





- **Information sections**

The users couldn't distinguish between different sections of information. Even though there was a line, it could still be misunderstood.

Feedback

The second iteration was evaluated by two senior users and three younger users. The feedback was mainly focused on two points below:

- **Still too complicated**

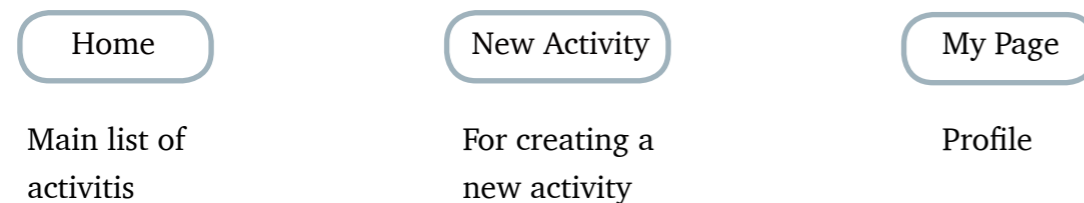
Users were distracted by the hamburger menu and the long filter list made them impatient. They took too much time to explore the application and were confused with the icons and the tags presented after filtering.

- **User flow is confusing**

Users didn't understand why they needed to choose the interests at the beginning, and they couldn't figure out some functions listed on the menu. For example, messages and my activities.

Third iteration

Structure



After receiving feedback on the second iteration, I decided to take a step back to rethink the context in which the platform is likely to be used. It would help me to rethink the user's need. The crucial factor which caused the complications was not layout or user flow, but neglecting to consider if the users really needed so many functions?

I went back to review the data I collected, it reminded me three important insights as following:

1. The older people seldom go far from their accommodation

Rethinking this insight, I decided it's unnecessary to present activities far away. By presenting activities nearby as the priority, **it doesn't need to have the long filter list to select "date", "sort by" or "distance"**.

2. The senior users have much time

Time in this case won't be a priority consideration. **The senior users can arrange their daily schedule spontaneously**. The application should focus on what is going on in the next hour, today, maximum tomorrow, instead of scheduling for the future.

3. Interest should not be limited

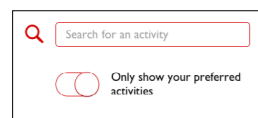
People are connected by the same interest on Together, but they can also explore new interests through Together, as long as they are interested.

After self reflection, I decided to only keep "Home" and "My page" as basic functions. Meanwhile, I emphasized creating "New activity" as one of the main functions on the fixed menu, which would make it much easier to create a new activity spontaneously.

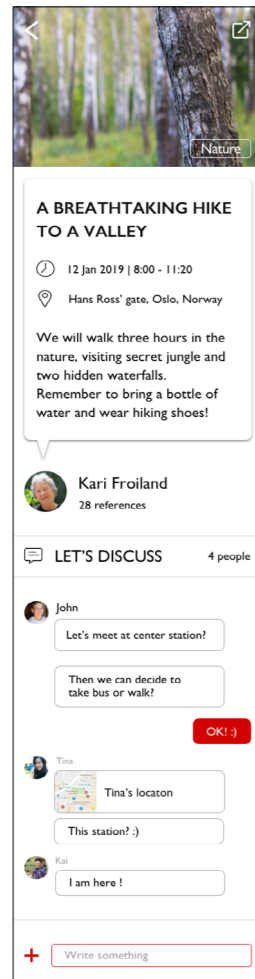
Home: main list



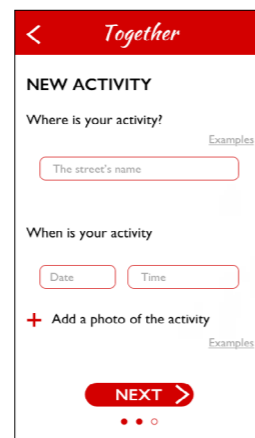
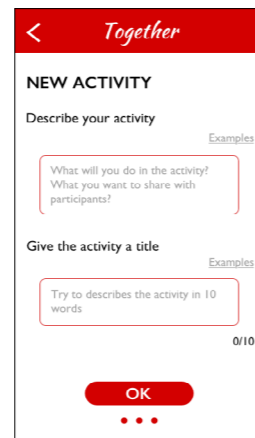
Filter



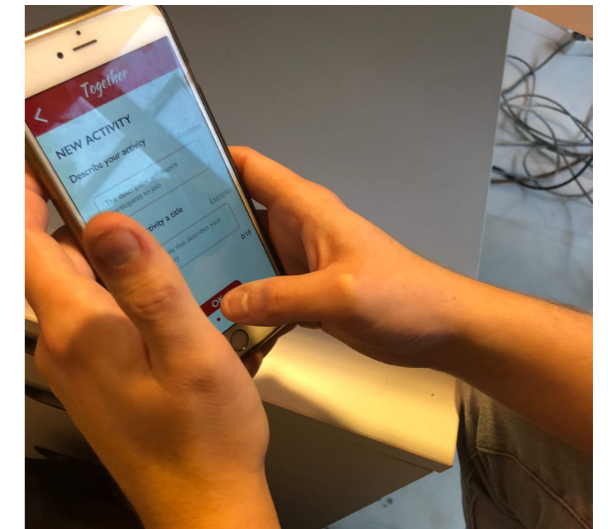
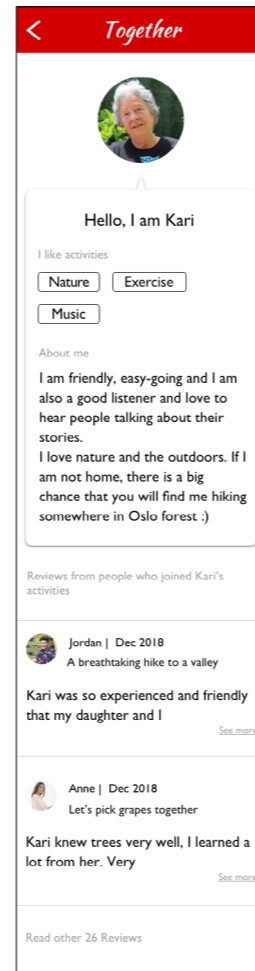
Activity page



New activity



My page



Feedback

This prototype was shown to two senior users and four younger users. **The feedback was mostly positive.** They said it is simple and easy to use. One senior user had seen the previous version, and was very impressed with this version I developed. She said this time I made a lot of changes, and all of them were good changes. But there are some parts which still need to be improved:

- The filter was enough?

I combined search and filter, some users expected to see more clickable options on the filter list. They had doubts if there was something they missed.

- The tags of interests were not obvious

Senior users mentioned the tags were white words with white frame, and placed on a picture background, making them difficult to see.

- **Interests category**

Some users said it would be better if they could recognize activities by interest category on the main list.

Buttons/icons evolution

I created several iterations of buttons and icons in order to determine the best visual interface. The following is the map of buttons/icons variation by time.

Action button



Interest options



Color selections

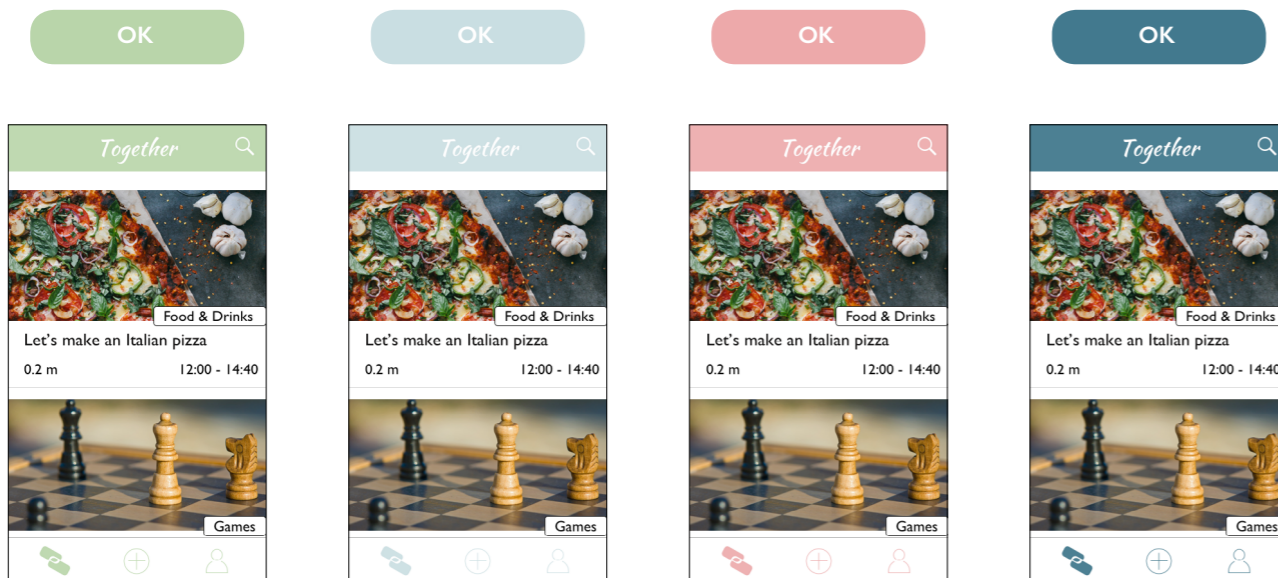
Different colors were tested before I defined the red color. I used soft colors to present the friendly and easy to approach feeling.

However, after user testing, I found soft colors were difficult to be notice and didn't trigger the motivation to take actions. Then I started to change to red, which represents passion and love, also easy for reading.

Final version



Test versions

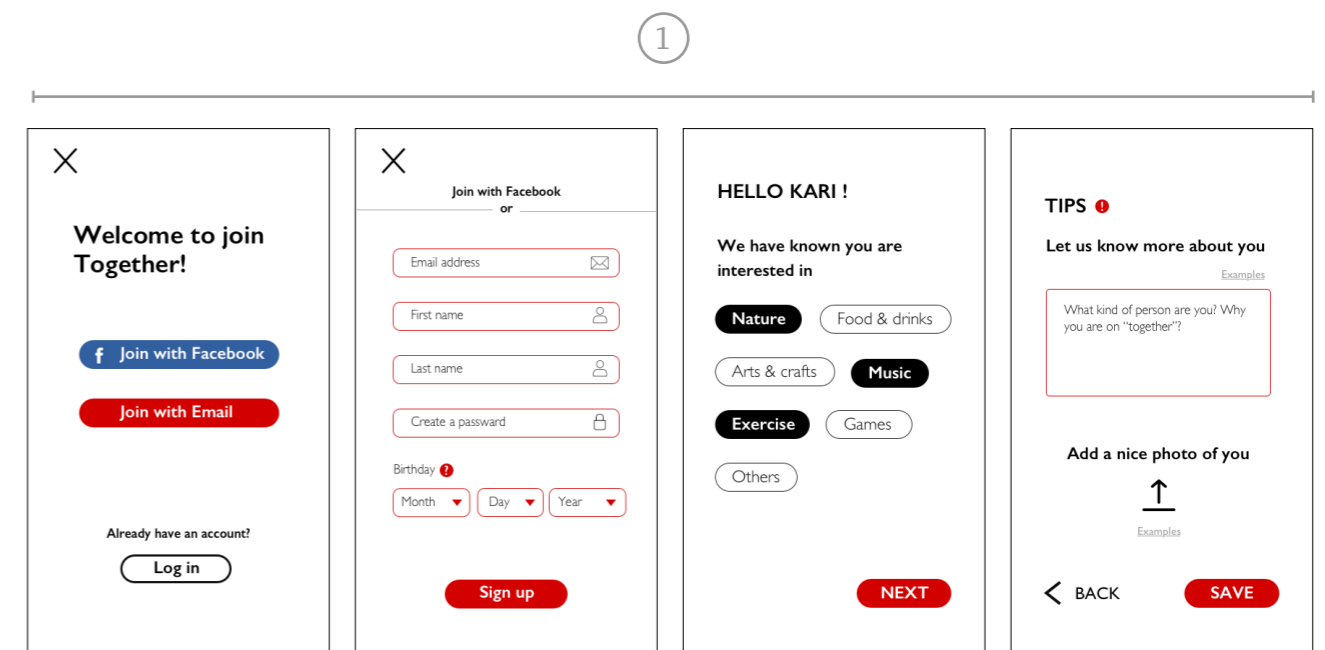


Guided tutorial evolution

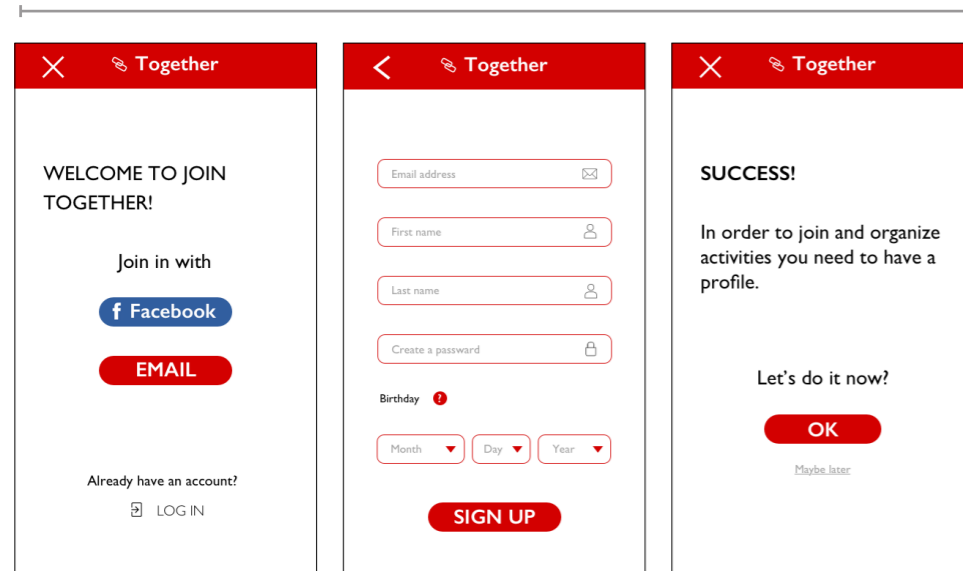
"On boarding" and "Creating a new activity" are two main sections where users need to input information. To lead them through this process in an easier and simpler way is the goal of tutoring modes. The iterations of guided tutorials are as shown:

On boarding

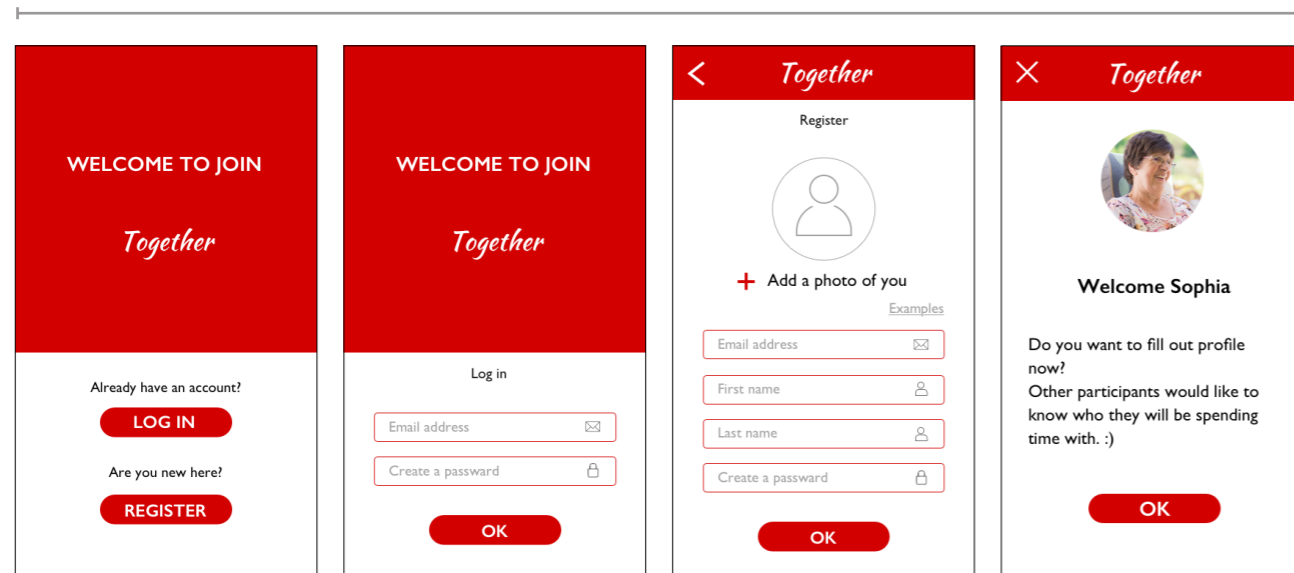
The main iterations of "On boarding" tutoring mode focus on what kind of information should be requested during this process. The three different significant iterations are as follows.



2



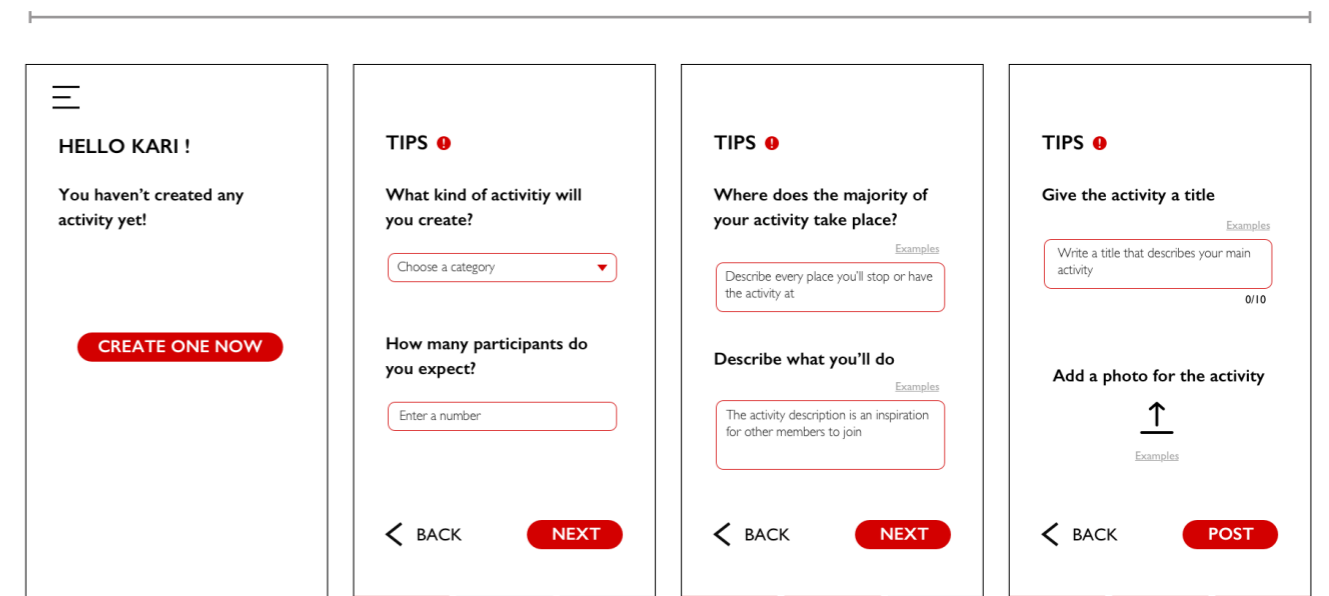
3



Creating a new activity

The main iterations of “Creating a new activity” tutoring mode focus on what kind of layout users will find easiest and least frustrating whilst completing the input process. The three different significant iterations are as follows.

1



2

☰
✕

HELLO KARI !
You have no activity yet.
Do you want to make one now?

OK

TIPS ⓘ

What kind of activity do you want to invite to?

Choose a category ▾

How many participants do you invite?

Enter a number

Where is your activity?

Examples

Describe every place you'll stop or have the activity at

Describe your activity

Examples

The description will inspire participants to join

Give the activity a title

Examples

Write a title that describes your main activity 0/10

↑ Supply with a photo

Examples

OK

3

<
Together

NEW ACTIVITY

What kind of activity do you want to do?

Nature Art & Crafts

Food & Drinks Music

Exercise Games

Others

NEXT >

● ○ ○

<
Together

NEW ACTIVITY

Where is your activity? Examples

The street's name

When is your activity

Date Time

+ Add a photo of the activity Examples

NEXT >

● ● ○

<
Together

Where is your activity?

📍 Pilestredet 24, Oslo, Norway

Stockfleths
Pinsens gate 6, Oslo

My kitchen (In city center)

Oslo City
Stenersgaten 1, Oslo

Karl Johans gate
Oslo

Pascal AS
Tollbugata 11, Oslo

<
Together

NEW ACTIVITY

Describe your activity Examples

What will you do in the activity?
What you want to share with participants?

Give the activity a title Examples

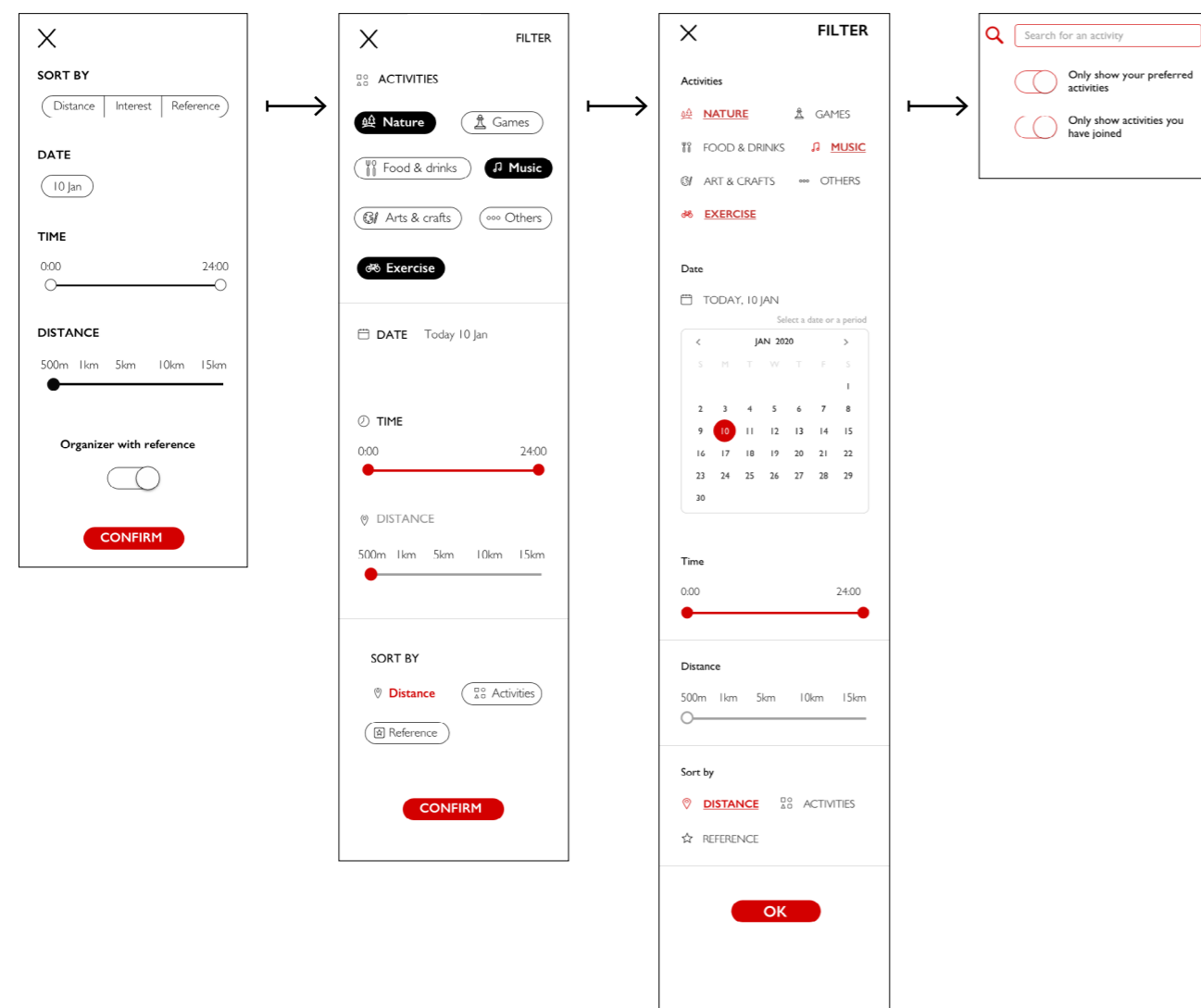
Try to describes the activity in 10 words 0/10

OK

● ● ●

Filter evolution

I created several iterations of the filter function. I was seeking a simple way for the users to search for activities. After taking a step back, I understood that when considering users' needs, the filter shouldn't be so complicated. The four different significant iterations are as follows.



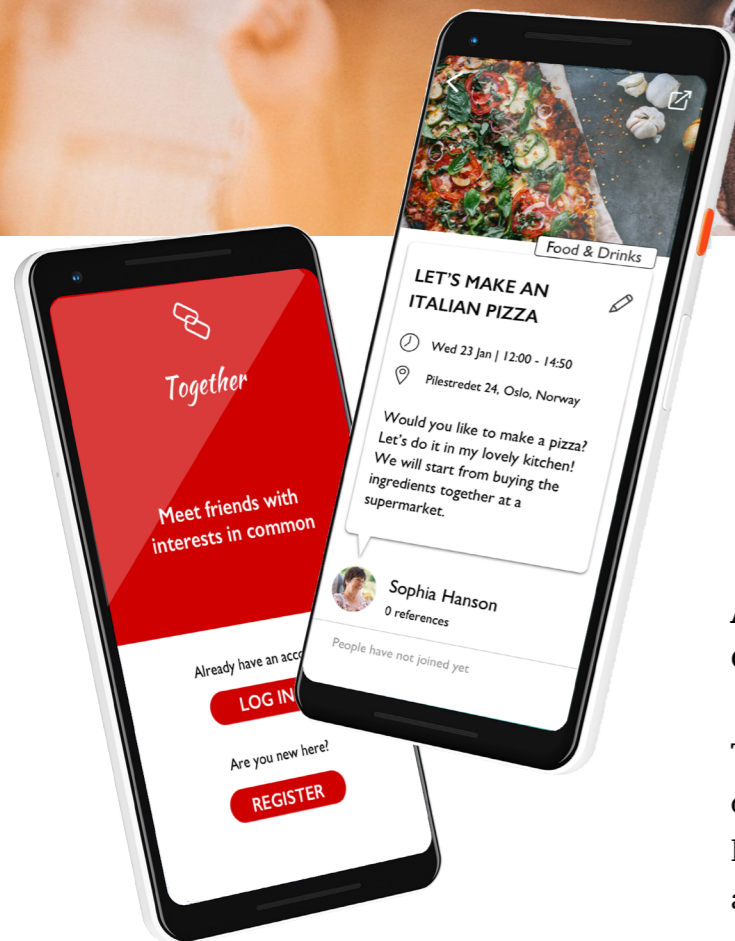
6. Design proposal

This chapter will take you through a description of what Together is, and the technical specifications that describe how Together works.



 *Together*

Meet friends with interests in common
Share experiences and enrich your social life



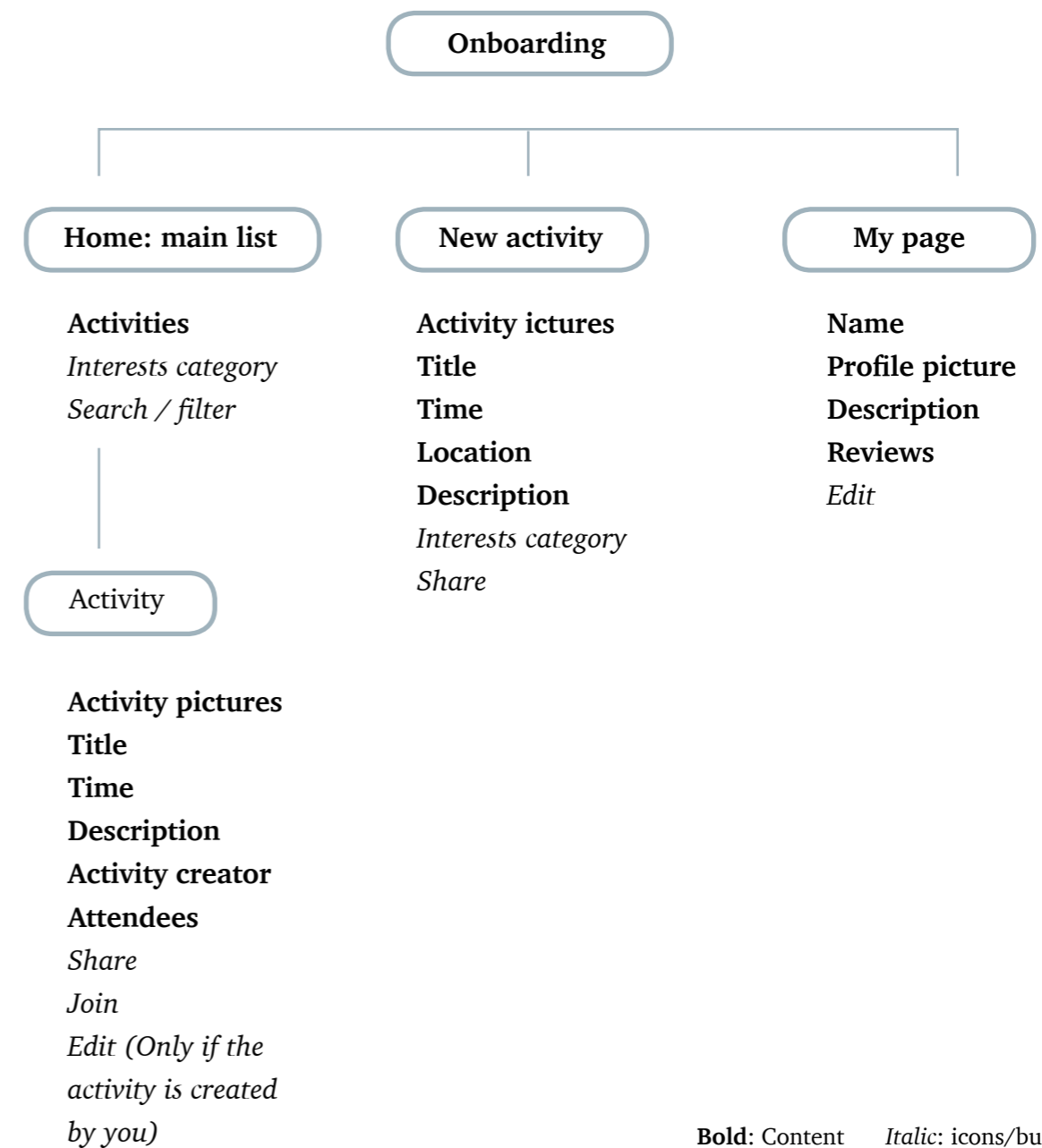
An application that connects old and young

Together is an application for connecting old and young by “same interest”. It locates nearby and recently created activities which users can enjoy together.

Enriches the retirees' social lives by allowing them to host their favorite activities and spending time with younger generations.

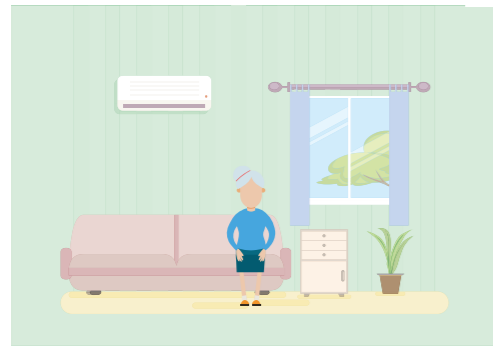
Information architecture

Three main functions on the fixed menu are Home, which means the list of activities; New activity, for creating a new activity; My page, users' profile and reviews from others.



Bold: Content *Italic:* icons/buttons

User scenario



Sophia lives alone. Cooking is her passion, she loves to share cooking skills and homemade food.



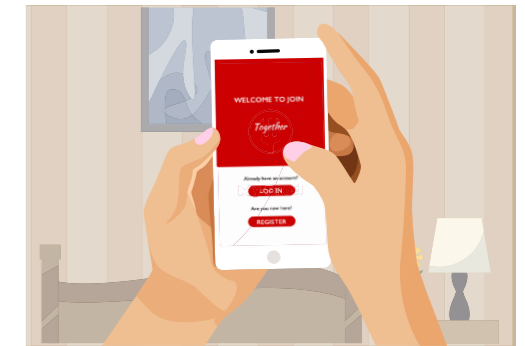
But usually Sophia cooked alone, and ate alone. She felt lonely and wanted have some company.



Sometimes Sophia couldn't finish the food she made, so it eventually went bad in the fridge.



One day, she saw an advert about Together on a magazine at the senior center.



Sophia decided to give it a try, she downloaded the app and posted an activity.



A girl named Lilian joined Sophia's activity. Lilian was eager to learn how to make an Italian pizza.



They met at a supermarket to buy ingredients together.



Sophia and Lilian made Italian food and ate at Sophia's kitchen together.



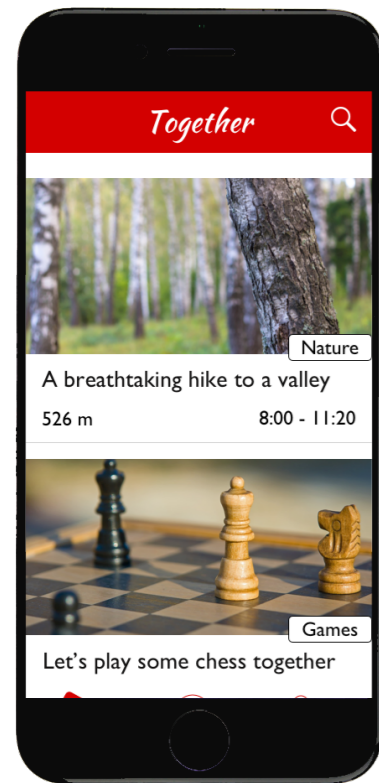
They talked a lot about cooking and food, and found out they had much in common.



Sophia and Lilian became friends, they chatted online and cooked together sometimes

Please check the video: "3. User scenario_Yung Han_Hsiao" in my delivery.

Together overview

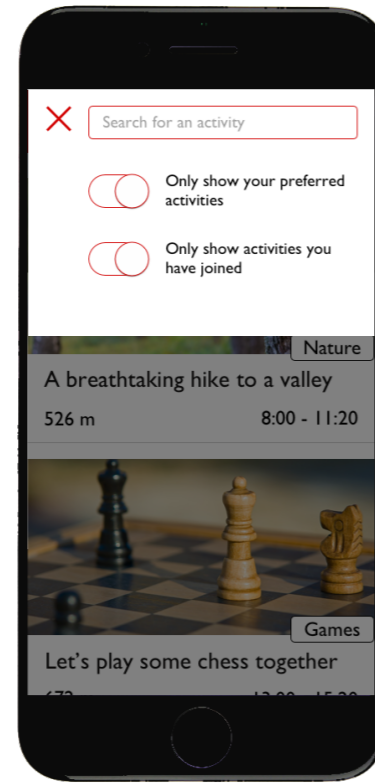


Home: main list

Homepage is the list of activities sorted by distance from the user. The senior users can arrange their daily schedule spontaneously. The distance is crucial to decide if the user would like to join the activity.

The list will present activities of today and the next day as priority.

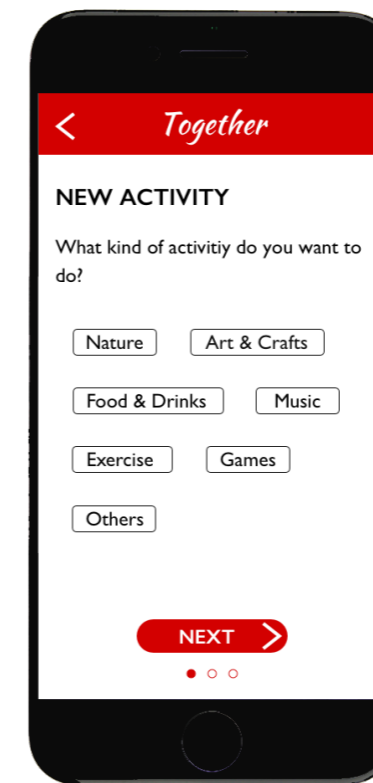
Expired activities will disappear.



Filter

The search function is combined with filter. The users can search for a specific word or turn on the filter of “your preferred activities” and “the activities you have joined”.

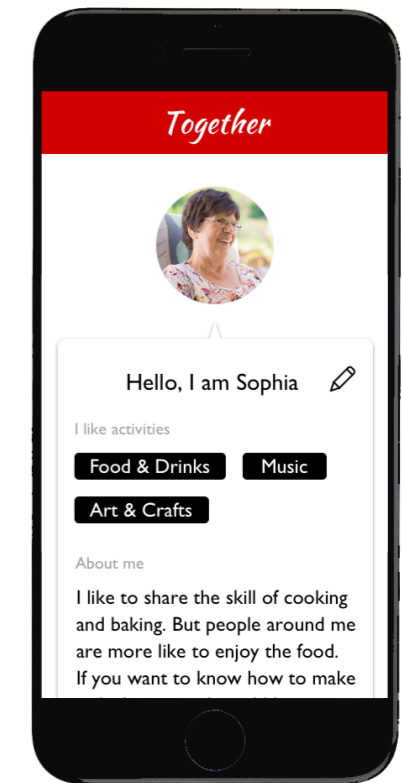
Another filter function is the interest buttons tagged along with the picture of activities.



New activity

The process of creating an activity is like a guided tutorial. The users follow the guide which consists of three pages.

Once the user clicks on the input areas, suggested answers and previous recorded answers will appear in order to reduce the trouble of typing.



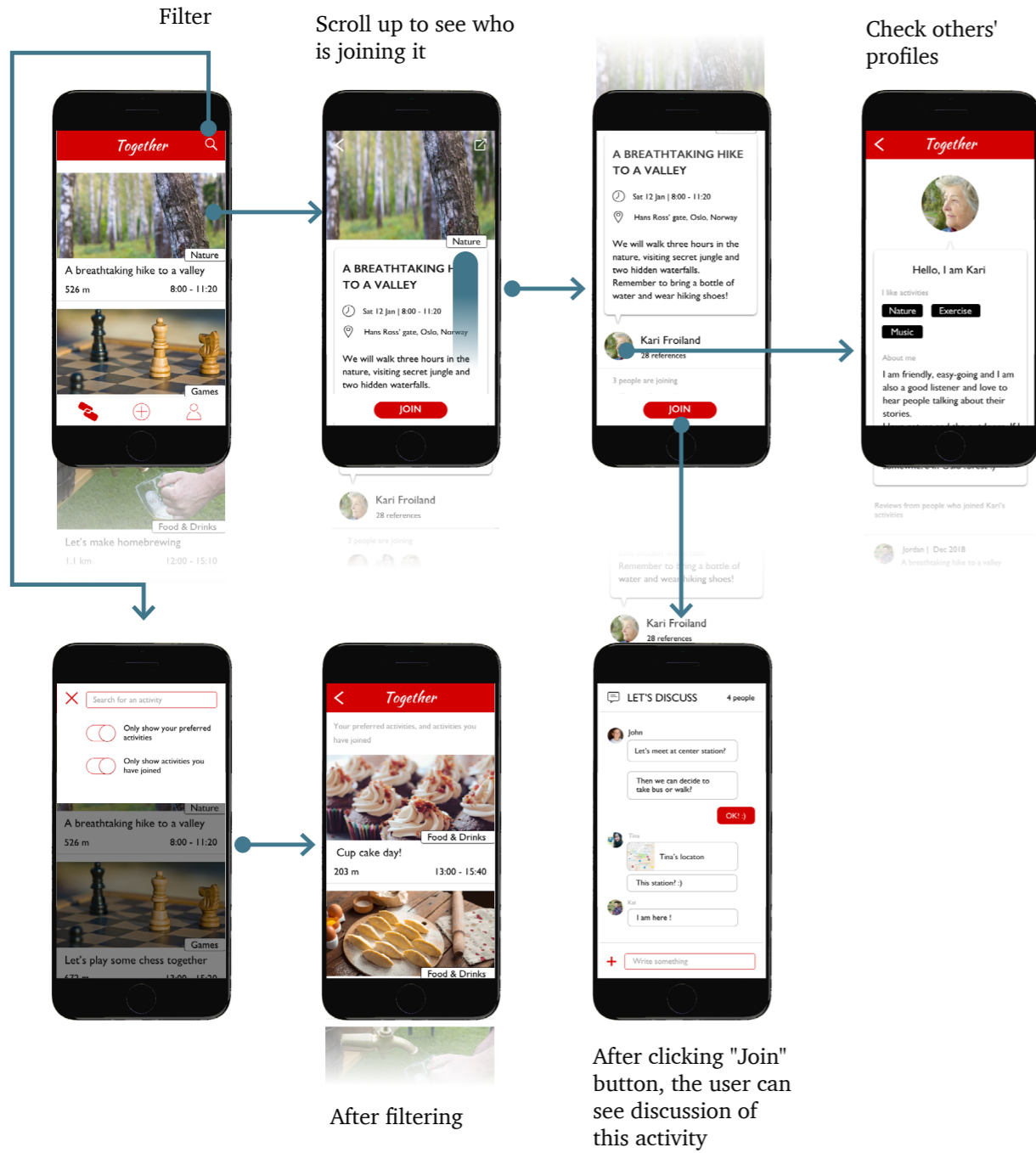
My page

My page is mainly for users to get to know each other a bit before they join the same activities.

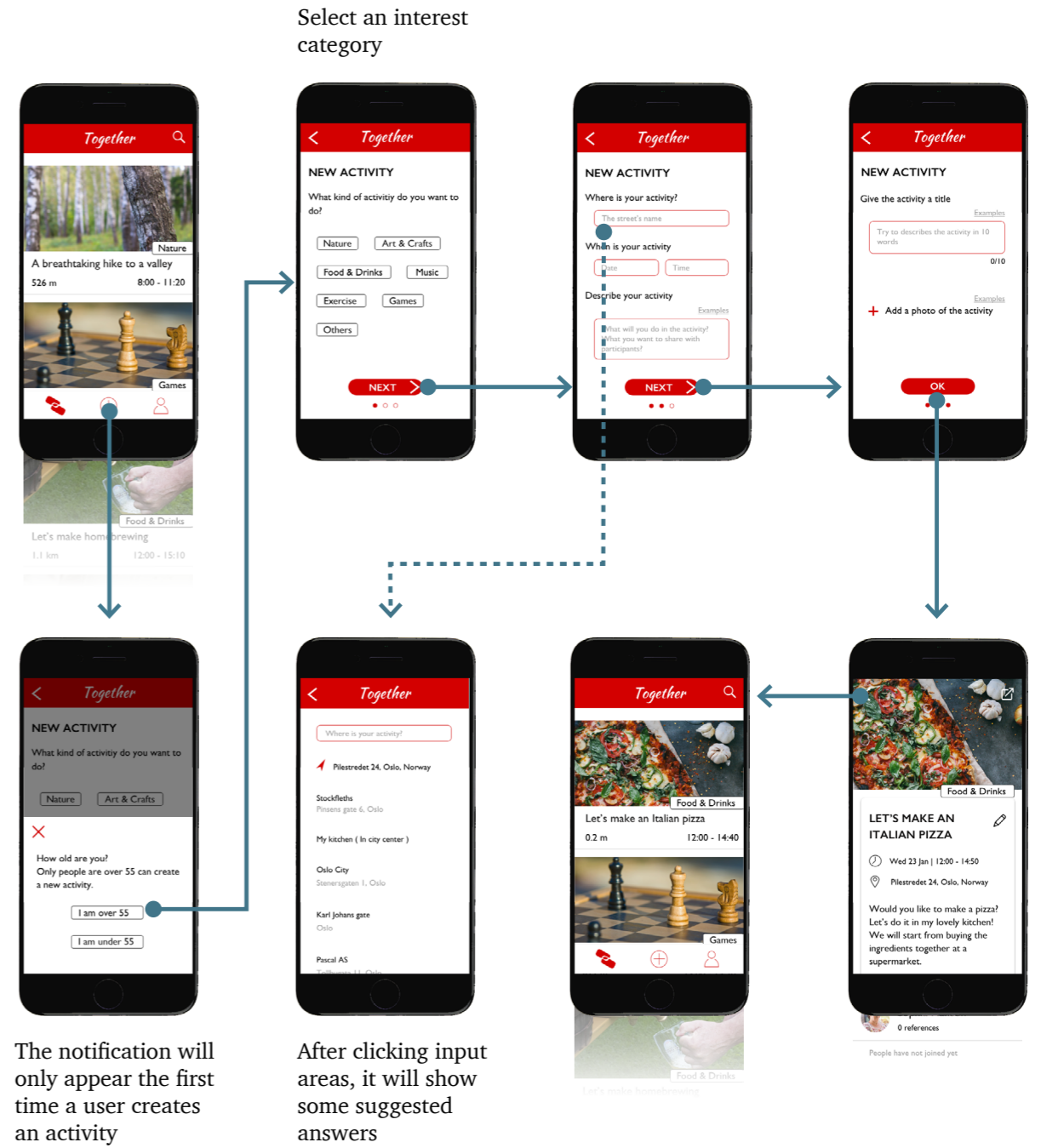
Reviews from others are an important protective mechanism for avoiding bad behavior and as an achievement for collecting a lot of good reviews, and as encouragement for senior users to create activities.

User flow

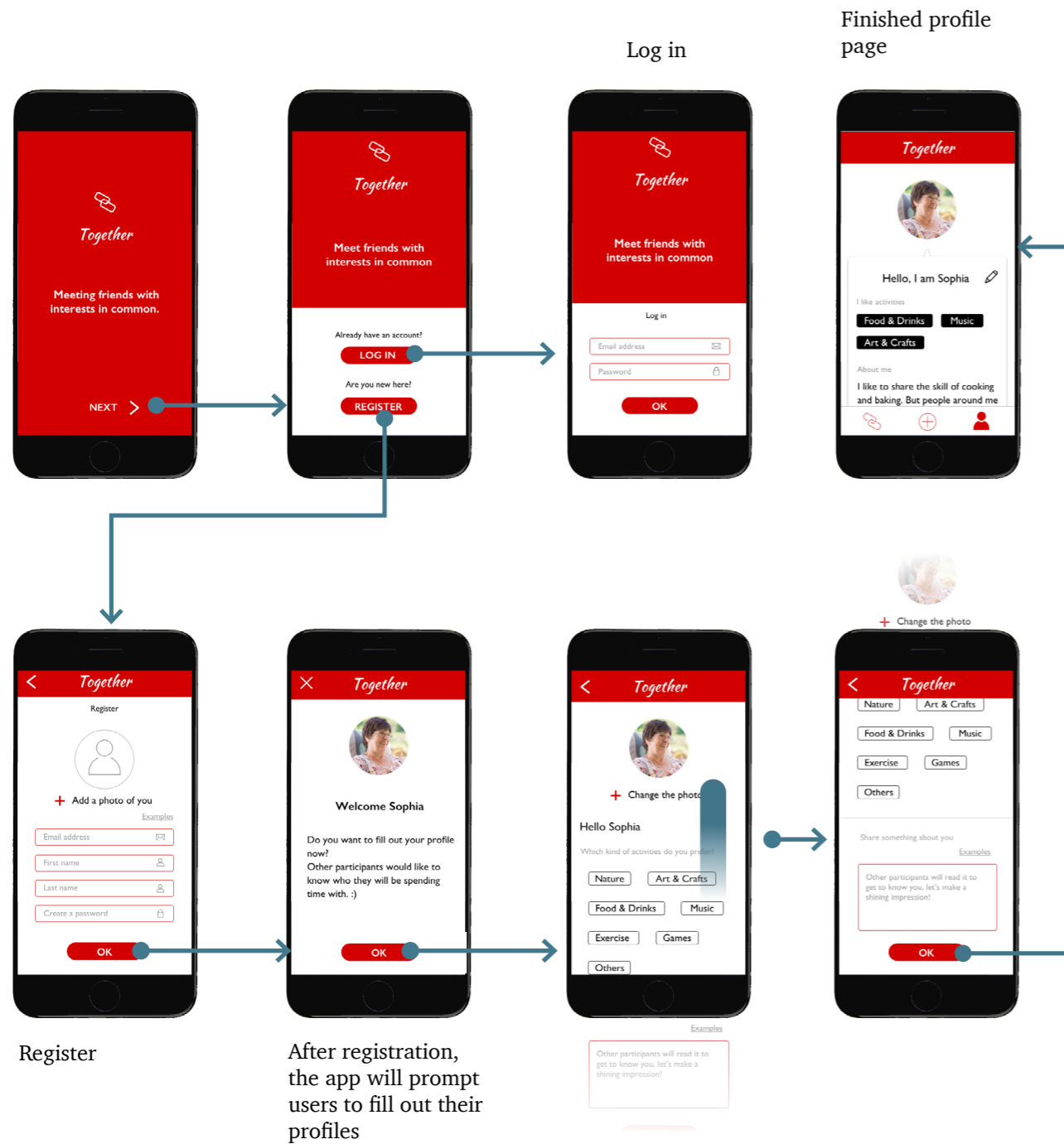
Explore/ Join an activity



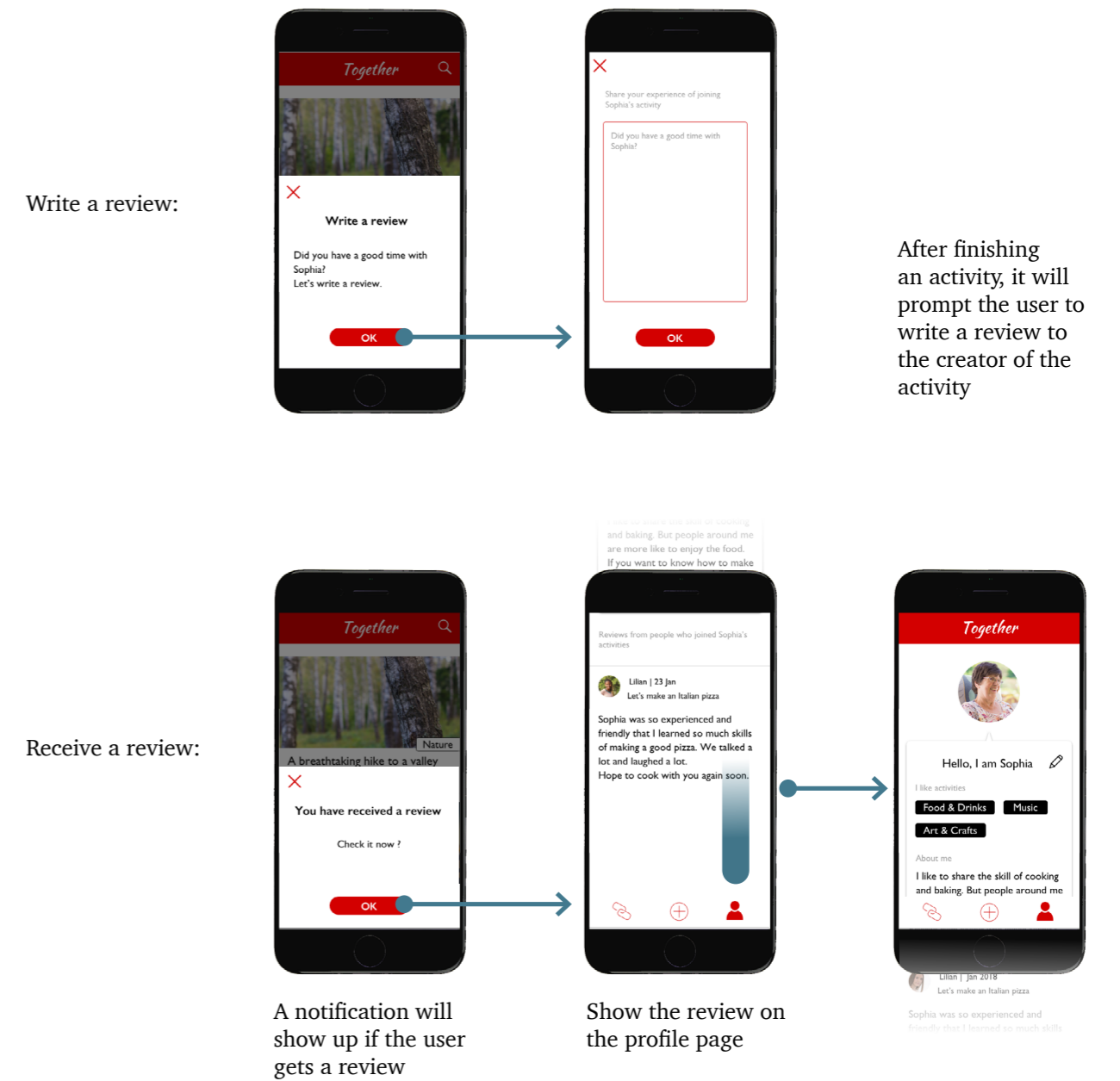
Create a new activity



Log in/ Register



Reviews

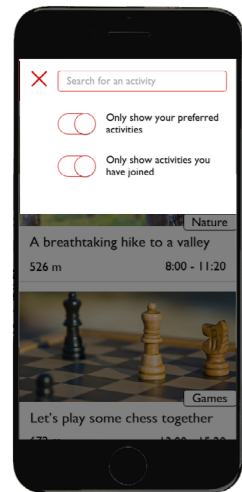


After finishing an activity, it will prompt the user to write a review to the creator of the activity

Technical

For gestures, I only chose the up-and-down scroll and simple tap.

They are the most common gestures for operating an application, users don't need to learn other technical knowledge for a natural navigation.



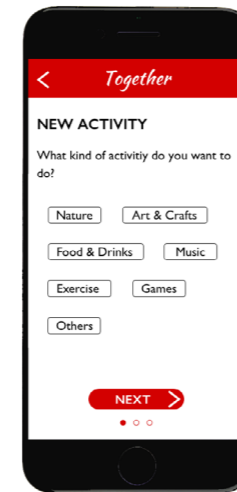
Scroll up, the filter area will disappear



Scroll up



Scroll down



Tap for selecting an option



Identity

Layout

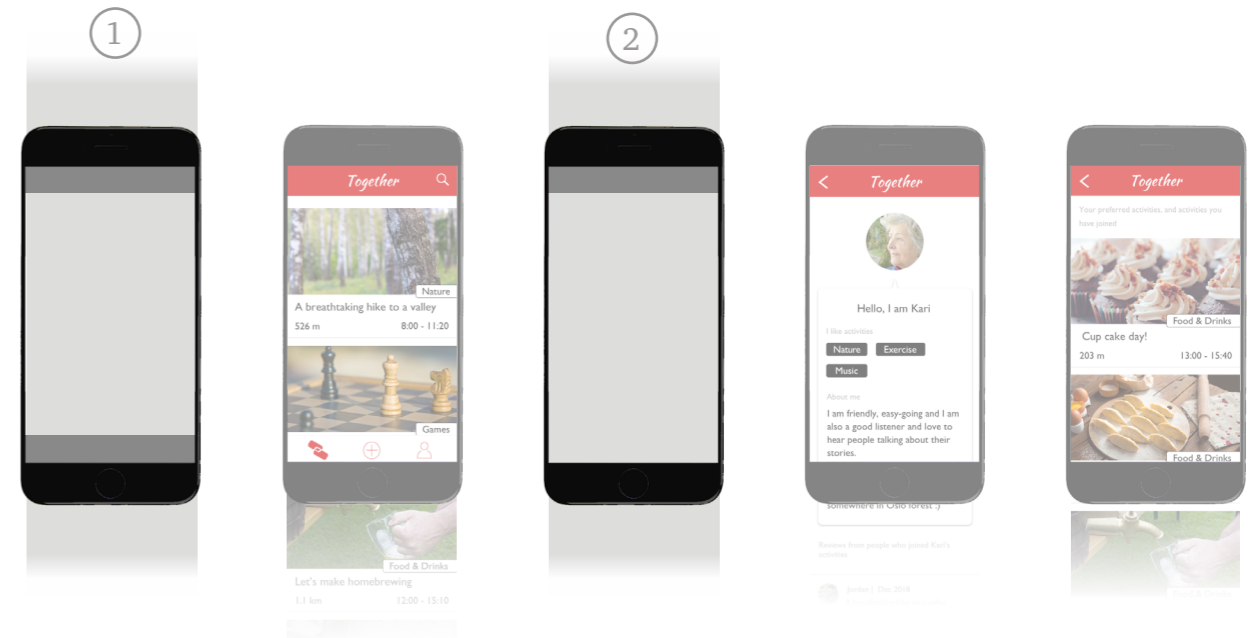
To make the app consistent, there are two main layouts in Together application.

1. Primary layout for first layer

on the top is Together banner with search icon, meanwhile there is a fixed menu presenting three main functions. The middle is content area, users can scroll up and down to access information.

2. Secondary layout for activity page

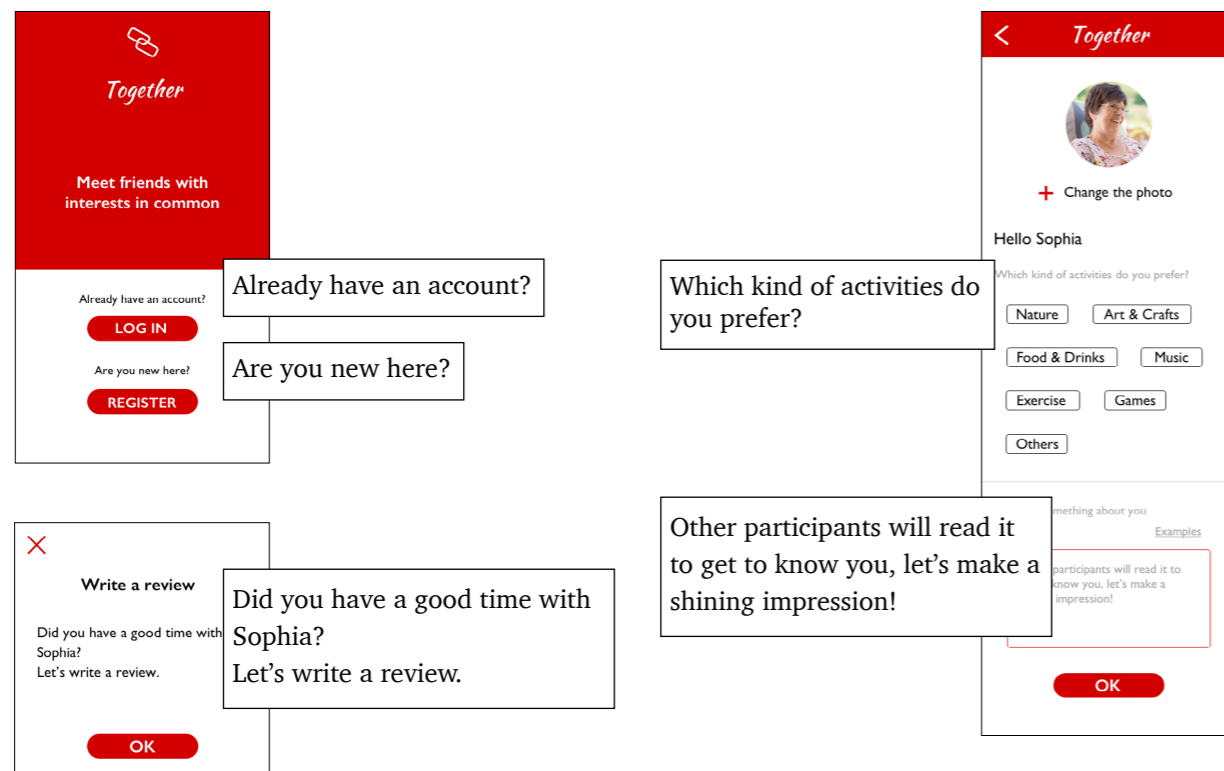
After users utilize the filter function or go into the activities page, they will go to the next page. The layout of this page will be a Together banner at the top with a "back" icon, so that users can return to previous page.



Words

The tone of voice of Together is as a friendly guide to help users understand what to do and provide information. For conveying cheerful and exciting feelings, I used “let’s” as the beginning of many sentences. I also used questions to pique users’ curiosity and motivate them.

Since the main user group is retirees, the font size for contents should be big enough for users to read comfortably. The main font size is 24 point, which makes the content comfortable to read according to the users’ review. The smallest font size won’t be smaller than 20.



Font

I choose the Gill Sans typeface which is easily recognizable. It is the typeface of London and North Eastern Railways, and British Railway, appearing on their signs, engine plates and timetables. Gill Sans fonts are carefully designed to be easy to read in any text size and on any device, which matches the needs for this platform.

Gill Sans typeface

I 234567890
A B C D E F G H I J
K L M N O P Q R
S T U V W X Y Z

a b c d e f g h i j k l m
n o p q r s t u v w x y z

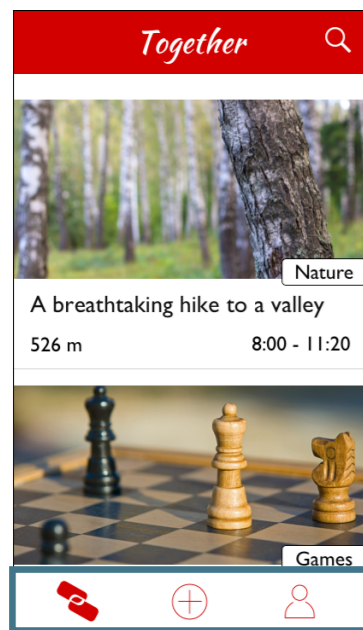
I 234567890
A B C D E F G H I J
K L M N O P Q R
S T U V W X Y Z

a b c d e f g h i j k l m
n o p q r s t u v w x y z

Menu Icons

I kept seeking a simpler interface for Together. The fixed menu is made of three icons.

Home page is represented by the Together logo, creating a new activity is a plus symbol, and my page is a person figure. According to user testing, those three icons are general and easy to understand. I have considered adding text, however there were no requests or requirement to do so.



fixed menu

Before selected



After selected

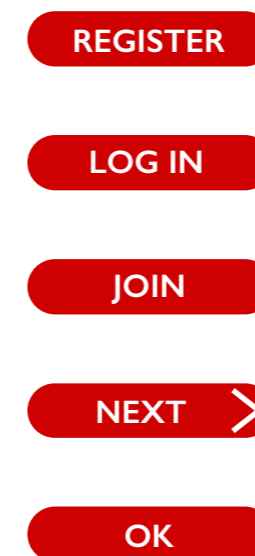


Buttons

I used red frames to emphasize action buttons. "NEXT" only appears on the guided tutorial pages, such as register and create a new activity. Leading users towards the next step is the primary goal, so I purposefully added an arrow to the "NEXT" button.

For option buttons, after several iterations, I decided the shapes and forms of option buttons should be distinguishable from normal text, yet follow a similar system to the action buttons. I used square frames and black/white colors to build option buttons, so that they will look clickable but won't be mistaken for action buttons.

Action buttons



Option buttons



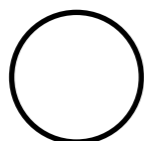
Colors

I created a moodboard to choose the main colors for the design solution. Since Together is aimed at connecting old and young, it should appear friendly; also, the main connection is “same interest”, passion is a crucial emotion to present as well.

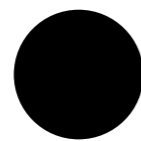
I believe red will be the ideal color which is associated with love, passion, and desire.



#CE0000



#FFFFFF



#000000



#999999

Logo

For the logotype, I used Kaushan Script typeface to show the active and casual spirit of Together. Hand-writing style delivers the idea of spontaneity, but it shouldn't be childish hand-writing style as the main users are older adults. Kaushan Script typeface looks mature and approachable.

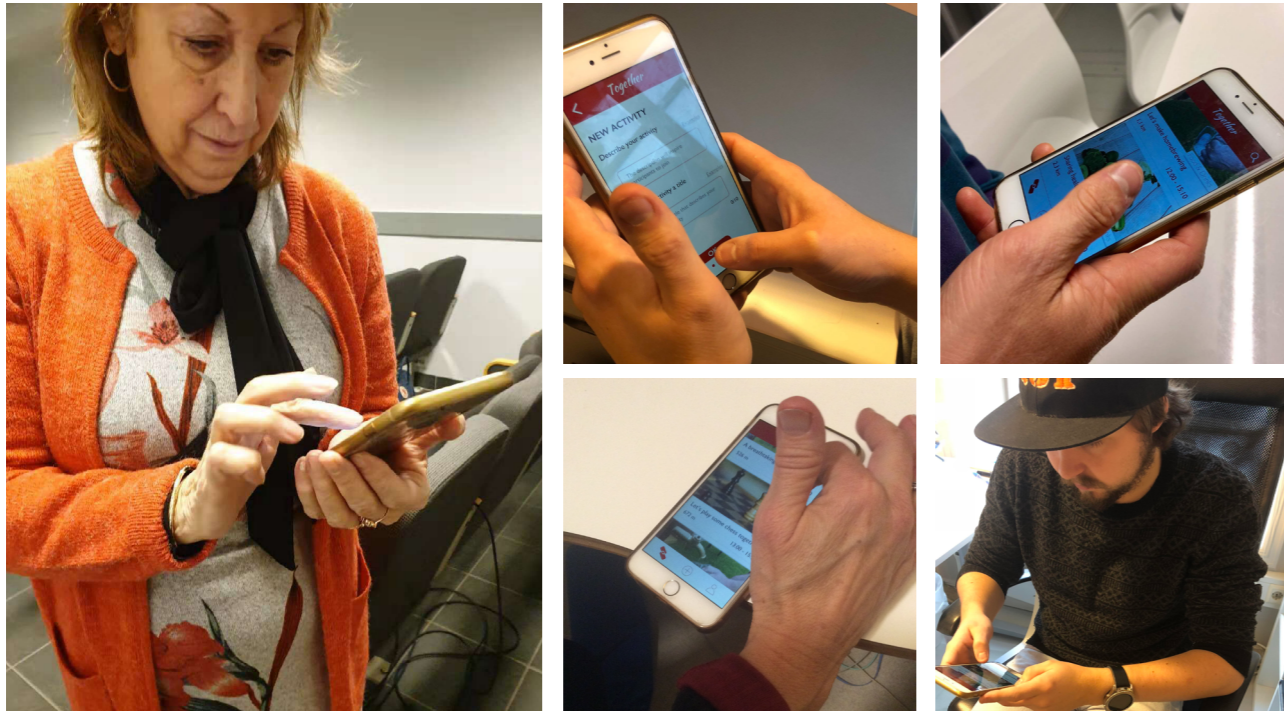
The logomark of “Together” is a symbol of the spirit of the application. The two squares represent various generations, whilst the intersection between the two squares represents the common interest shared by the older and younger generations.

Kaushan Script typeface

1234567890
ABCDEFGHIJ
KLMNOPQR
STUVWXYZ

abcdefghijklm
nopqrstuvwxyz





Feedbacks- General users

I invited 3 senior users and 4 younger users to test the final prototype. I didn't provide much information before they tested the application, but they understood the point of Together as soon as they started to operate it. Some of the significant quotes are as follows:

"It is Minimalism, I feel I like it." - Adriaan, 56 years old

"The typeface makes me think it is between normal people, people that have some things to share, not professionals who want to make money."- Harald, 42 years old

"It's simple. I don't need any instructions to operate it." - Marcus, 28 years old

"If it's for real? I would like to create some activities to invite mothers with children."
- Christina, 65 years old

"I would like to see it really happen, it can warm the society." - May, 29 years old



Feedbacks- Experts on the older people

Besides general users, I contacted experts from the older people in order to seek their opinions. I met Nina, who is the leader of Sagenehjemmet again and Neelam Sharma. Neelam is a unit leader and very experienced in interacting with older people. I received much positive feedback and we discussed the potential to implement this service. The significant quotes are as follows:

" It will be a proper service for residents in Omsorg +, which is an organization that provides flats for people who are older than 67. They will like this application." -Nina

" I would like to see this application completed and people start to use it, it's valuable."
-Nina

" The creating activities tutoring part is clear and easy to operate." -Neelam

" The interface is attractive, I would like to explore more in this app." -Neelam

Prototype

Please check the video: “4. Application demonstration_Yung Han_Hsiao” in my delivery.

* Pictures in the application and related to usage are from the free picture resource: Pixabay

7. Reflection

This chapter will present the reflection of this project. I will explain the next steps and the future potential.

Project Conclusion

The main goal of this project is to increase the opportunities of intergenerational interaction in order to enrich retirees' social life in the near future. I started with broad research, and then narrowed it down to the specific design proposal. Through my design process and methods I developed the digital service Together.

The development process is mainly focused on simplification. I eliminated or combined functions during every iteration according to the core needs of users. When looking back to where I started, I think I have done what I set out to do. The direction and decisions I have taken were affirmative according to positive feedback from users and the expert.

Users' needs

From the beginning, I wanted to create a complete and sophisticated application to meet every aspect of users' needs. As a designer, I felt responsible to consider details and solutions to fit every condition in advance. During the development phase, I was struggling with how to present massive information and functions in an understandable way.

However, after taking a step back, I found the fact is that the users actually don't need so much information and so many functions. Sometimes, a simple application to answer basic needs is the most appropriate solution.

Promote Together

Based on the research from this project, I understood that intergenerational interaction can benefit not only the older people but also the youth. However, how can young people become aware of the advantages of spending time with the older generation?

When I discussed this concern with Ida Pedrsen, who works as a leader of Majorstuen Seniorsenter, she said the volunteers in Majorstuen Seniorsenter are mostly young people. They need experience with older people for school programs or career plans in the future. Ida suggested **Together can co-operate with school programs to promote it to their new students.**

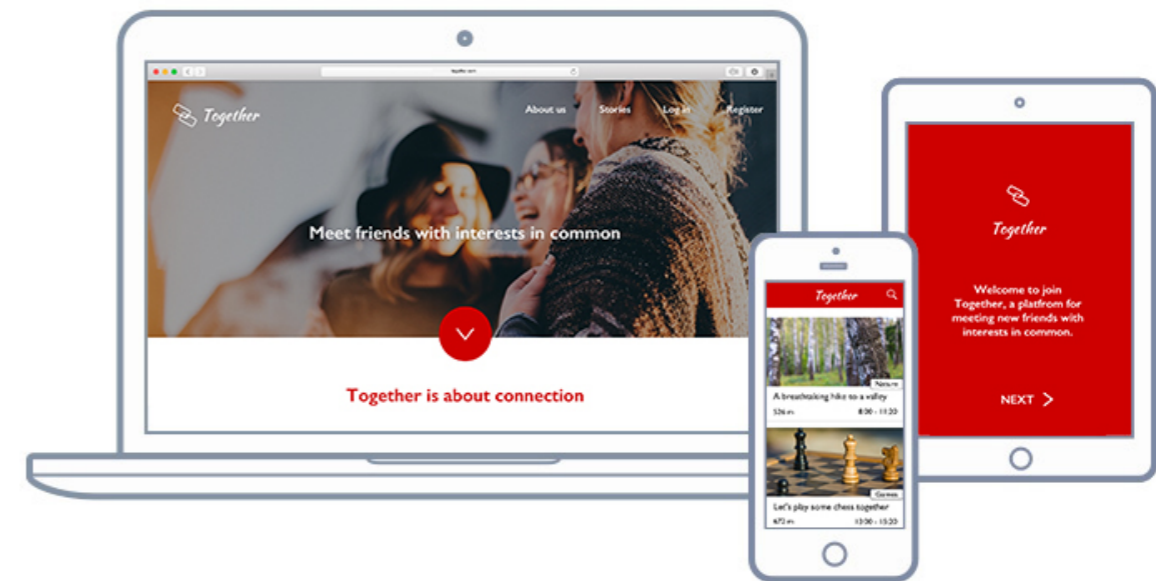
After some younger users have a positive experience of using this application, they will use it as a channel to make older friends and share the application with their friends.

Potential

After Nina, the leader of Sagenehjemmet, tested my final prototype, she said it will be a proper service for residents in Omsorg +. Omsorg + is an organization that provides flats for people who are older than 67. Residents enjoy good healthy conditions and much free time.

If Together is promoted in Omsorg +, it will be very popular.

The residents can meet other residents with the same interests, and as a team, co-create activities for younger people. The application of Together can expand in scale to become a platform between Omsorg + and other organization, for example, schools or volunteering groups, to hold events for more people with matching interests.



Letter of thanks

I would like to especially thank the following people for their help and support during the project:

My main supervisor- Birgitta Cappelen, who led me through the whole project and supported me with positive energy.

Yuan Rui Li, who helped me to review my design thinking and process.

Ryan Parry, who helped me to revise the report and correct my English.

Marian Freeman, who was a good actress in my video and helped me to contact older people for research and user testing during the project.

And thanks to everyone who contributed to my project. This includes the experts I interviewed and the people who participated in interviews and user testing. This also includes my friends who often suggested improvements to my design process and gave me encouragement.

