

P O R T
HEE EUN JANG
F O L
I O

PROJECT

Family Communication

F.E.C.

Individual Project

Optimal Ageing

TRACE

Team Project

Cooperate with Scottish Governement

Hospice

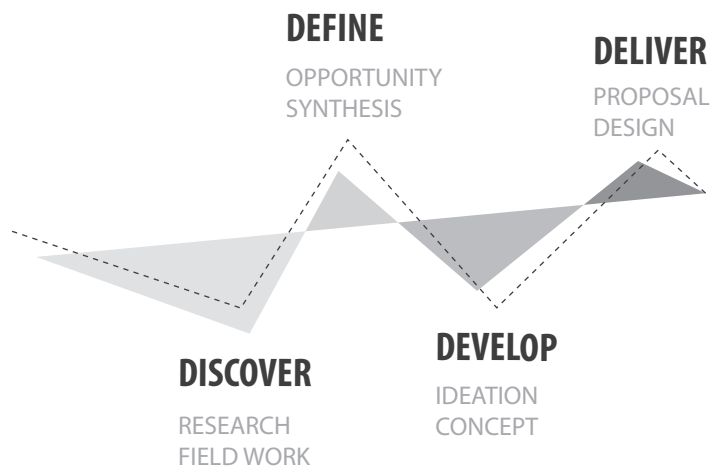
PRESENCE

Team Project

Cooperate with Chiba University, Japan
Sponsored by Fujitsu Company

DESIGN INNOVATION PROCESS

From Research to Prototype



Family Communication

F.E.C.



Project Aim

The project is about the enhancement of a healthy family communication and their relationships during the long distance and when encountering time difference.

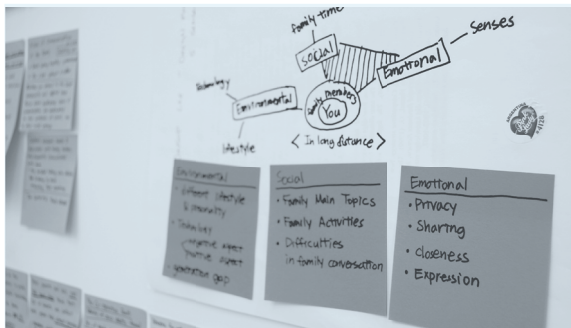
In order to have more meaningful communication within the family, this project explores the meaning of family in the current society that keeps evolving. It provides a new platform of service for healthy family communication.

DISCOVER: RESEARCH

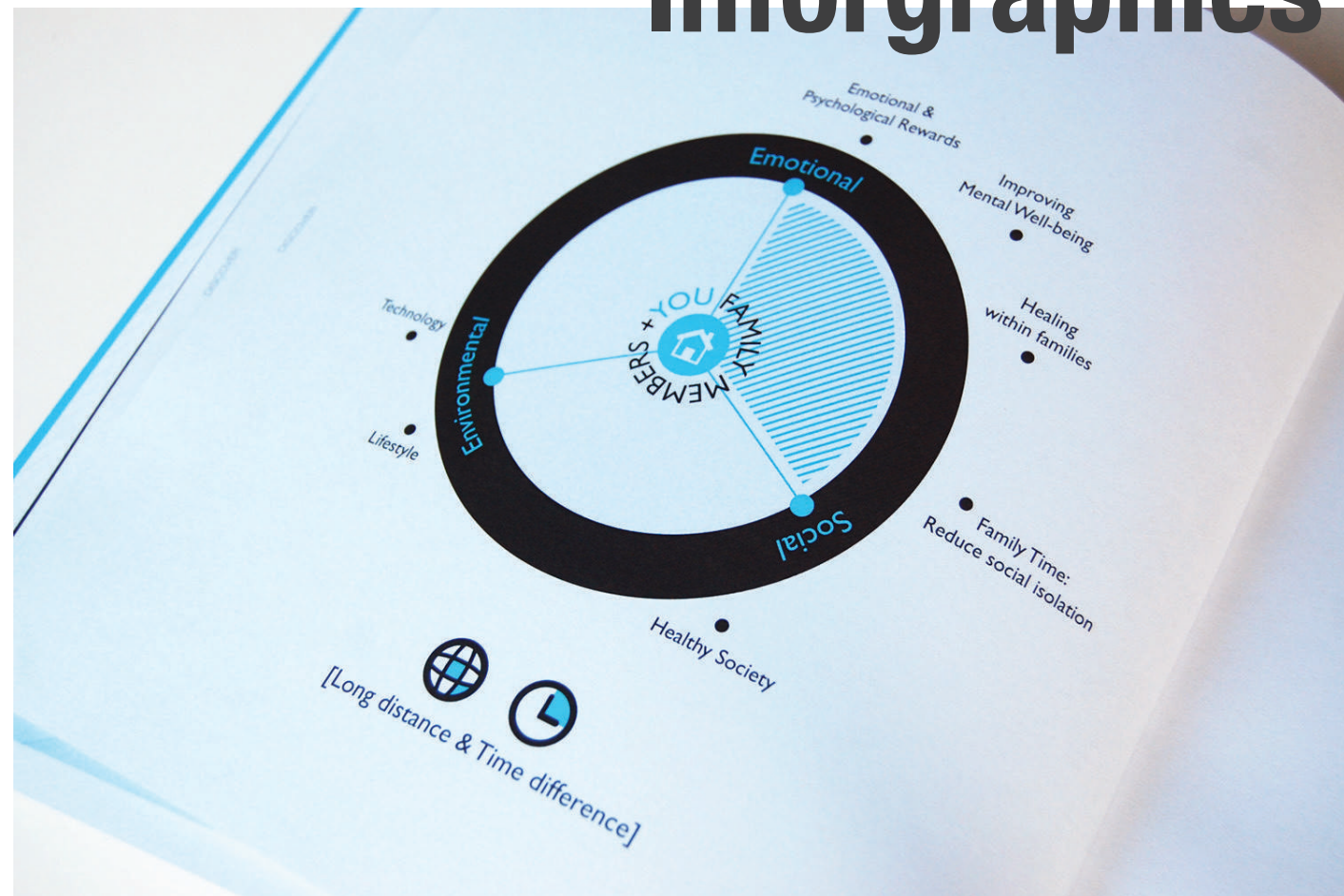


Desk Research

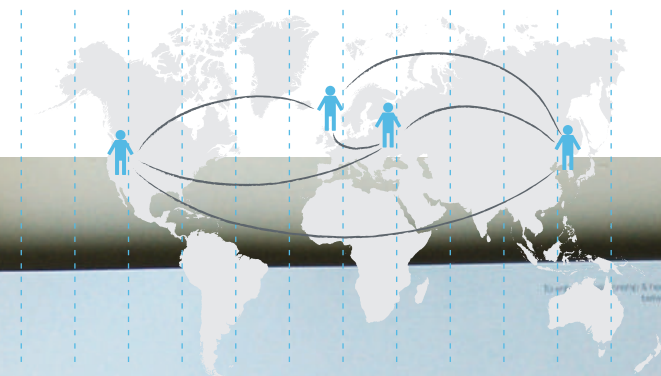
Based on desk research I categorised information into three aspects, social, environmental and emotional, in order to make focus area. In addition I made data infographics to show a visual language.



Infographics



DISCOVER: RESEARCH



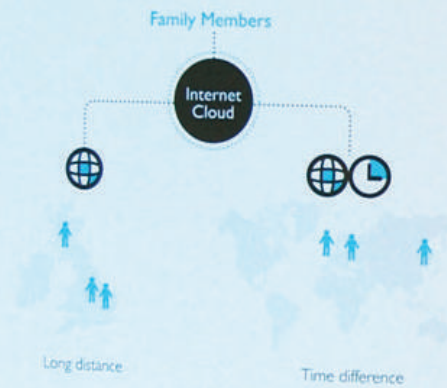
Long distance  &  Time difference

USERS

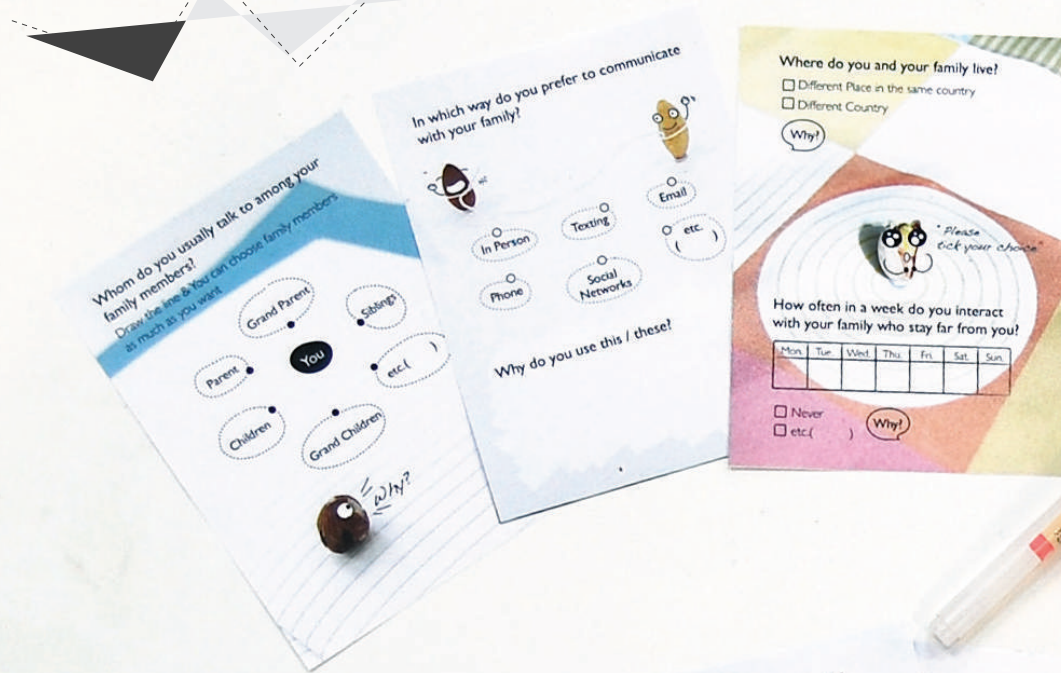
I decided to 'listen more' towards the users' voices rather than the quantitative data, because I wanted to understand the various thoughts and perspectives from their different backgrounds.

I divided the users into two groups, in order to know how different time zones and long distances impacts the users. The first is that family members live in different places of the same country. The other is the members live in different countries.

I started to think how the Internet Cloud can help family members to communicate socially and emotionally in these situations.



DISCOVER: FEILD WORK



Engagement Tool

These engagement tools are to know the users' thoughts and mind-set about family communication.

The engagement tools were designed to look like a picture from a fairy tale, to attract the interests of other people. I also wanted users to feel comfortable and free when they fill out engagement tool.



DISCOVER: FEILD WORK



Meet Users & Stakeholders

Field work aimed to discover the user's needs. The opinions of specialists who are related to my project were also collected, through informal conversations, interviews and implementation engagement tools.



DEFINE: SYNTHESIS



Evidence Wall

I placed information that I gathered during desk research and field work on the wall, to look at them with a wider perspective.

Insights

I took out important evidences from the wall and rewrote them in simpler words, to make them clear and get insights.

Opportunities

I categorized my insights and created opportunities in order to come up with initial concepts.

DEFINE: SYNTHESIS

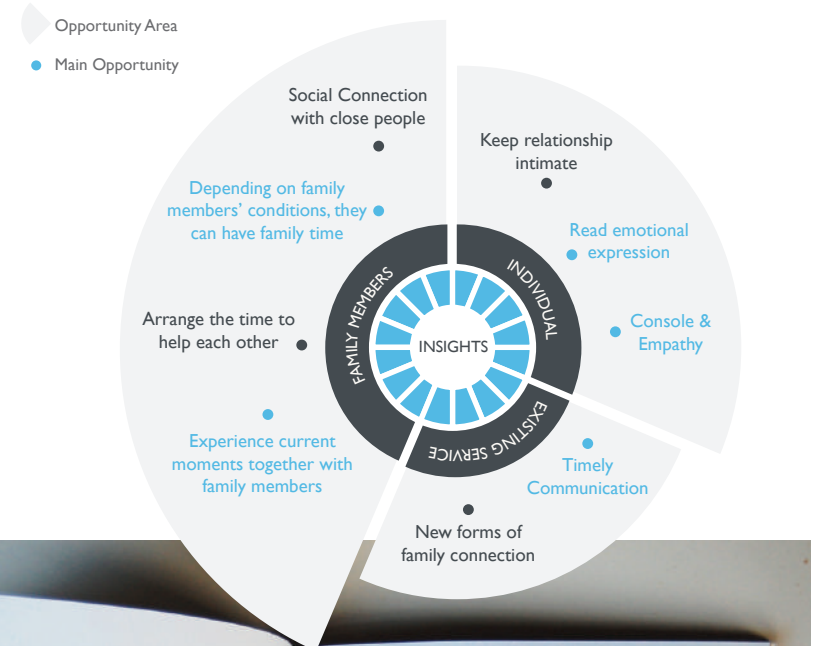
Synthesis Mapping

From desk research to field work, I visualised the information and the synthesis map showed where opportunities came from.

Sixteen insights were gathered, including the needs of individuals and family members, and points of existing service which should be improved.



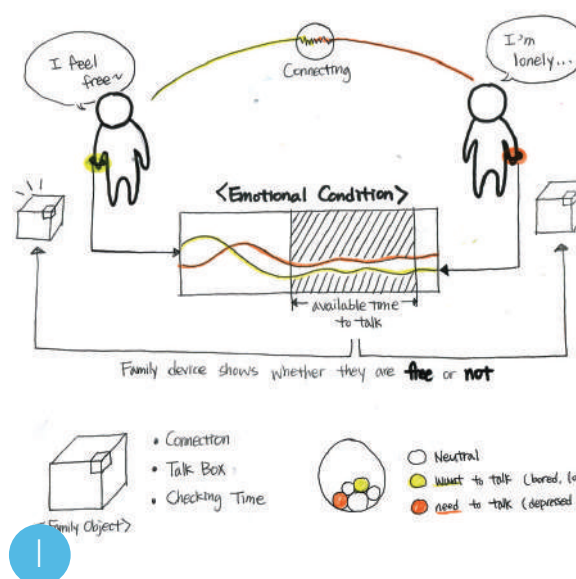
Synthesis



DEVELOP: IDEATION

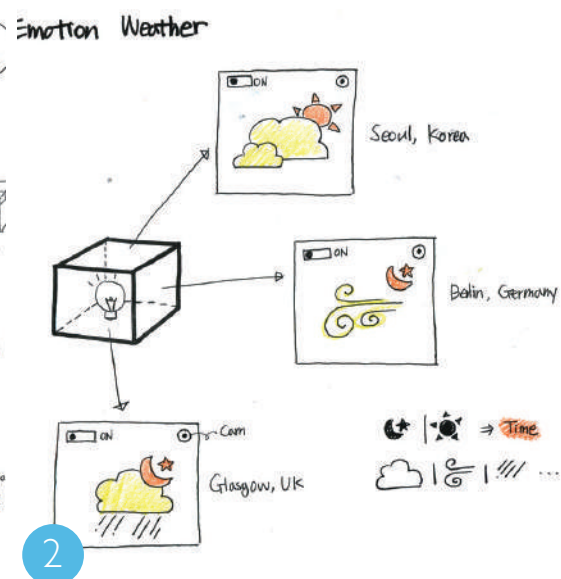
Initial Concepts

I developed initial concepts and focused on family emotional communication.



Emotional Time

- Match suitable time
- Check emotional states
- Different moods to talk
- Synchronize conversation

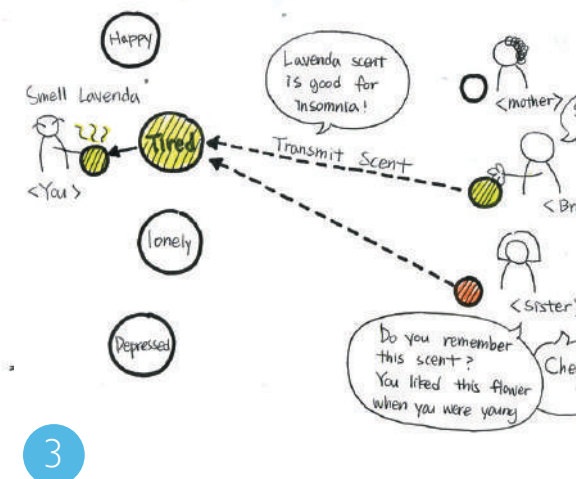


Emotional Weather

- Indirect communication
- See local time
- Express emotional moods
- Connect all the time

Scent Therapy

A season checks family members' condition (Body & feeling)



Scent Therapy

- Take care of each other
- Emotional empathy
- Scents links to emotion
- Interesting experience

DEVELOP: SECONDARY RESEARCH

Case Studies

These case studies helped me to further develop my idea and allowed me to know how my concept could work. I researched three parts; a sensor, a device and a service.



DELIVER: PROPOSAL

Proposal

**Emotional Time**

Checking
emotional
conditions and
suitable time to
talk

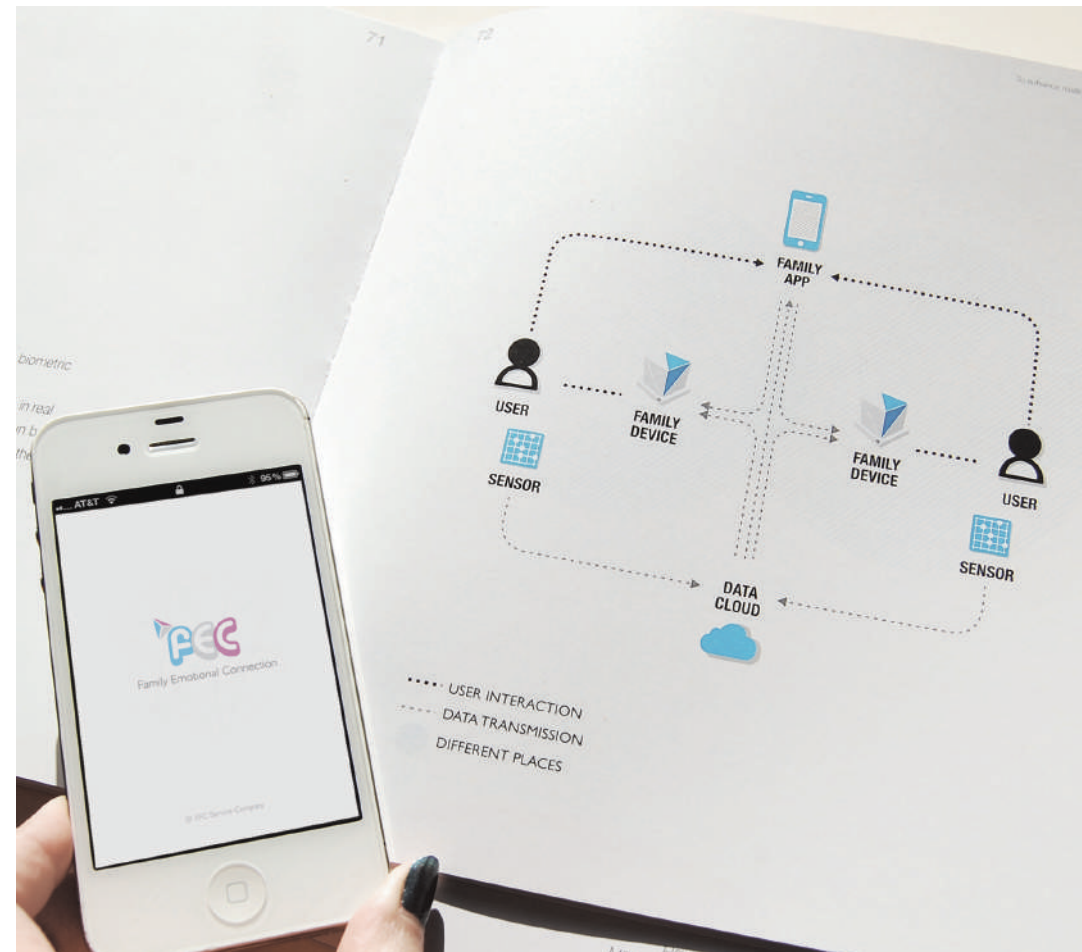
Emotional Weather

Monitoring
emotional
conditions
of family
members but
keeping privacy

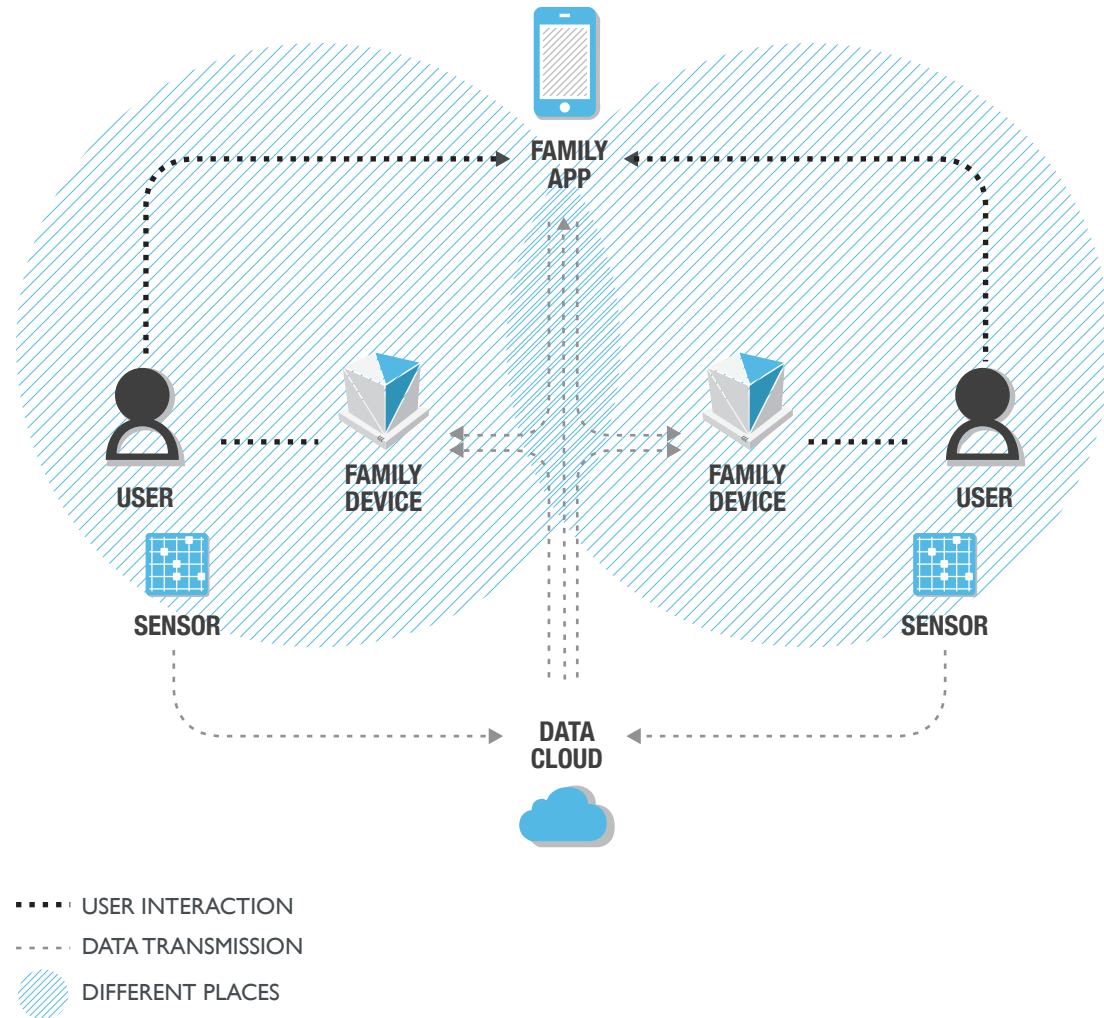
Scent Therapy

Emotional healing
from family' care
and refresh
feelings

Family Emotional Connection, FEC, is the service which shows available time to talk with family members and help family members to express their love and affection through scent therapy depending on emotional and body condition of family members even though they are away physically.



The FEC, Family Emotional Connection, includes a biometric sensor, family device, application and data cloud.



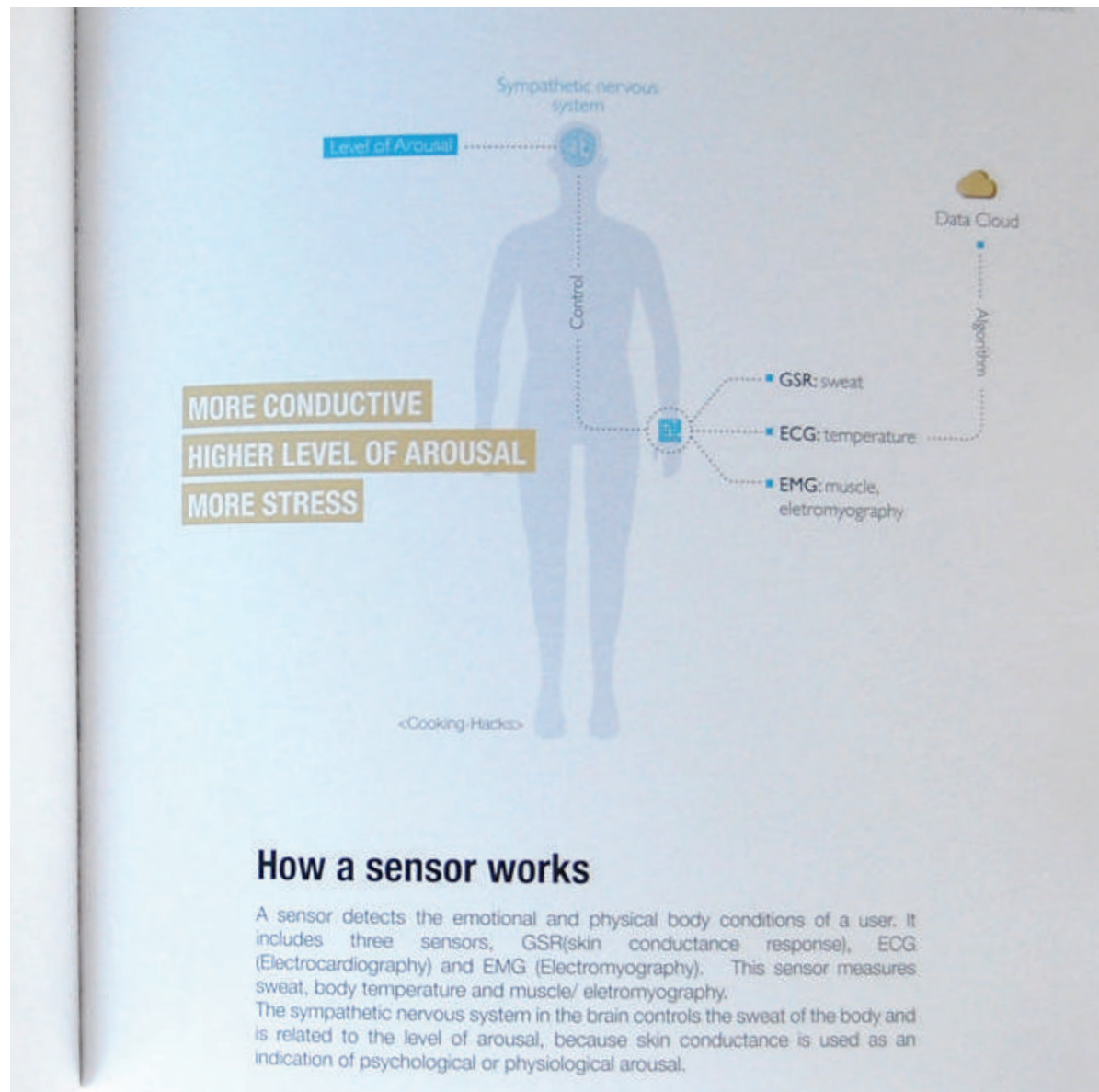
DELIVER: SENSOR

1

Biometric Sensor



A sensor detects the emotional condition of family members in real time and this data is transmitted to the data cloud.



DELIVER: DATA CLOUD

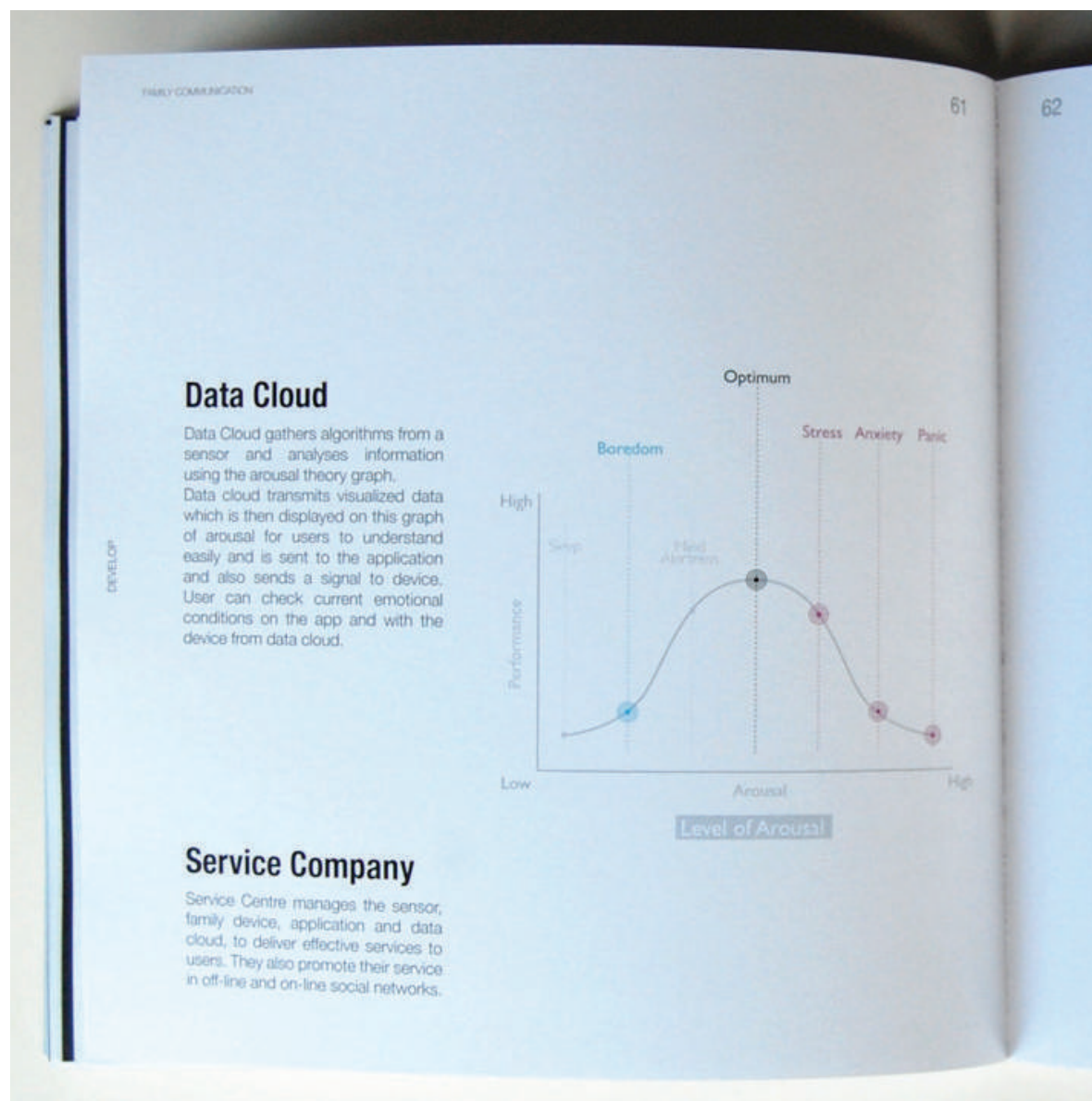


2

Data Cloud & Service Company



Analyzed data will be sent to the application and family device.



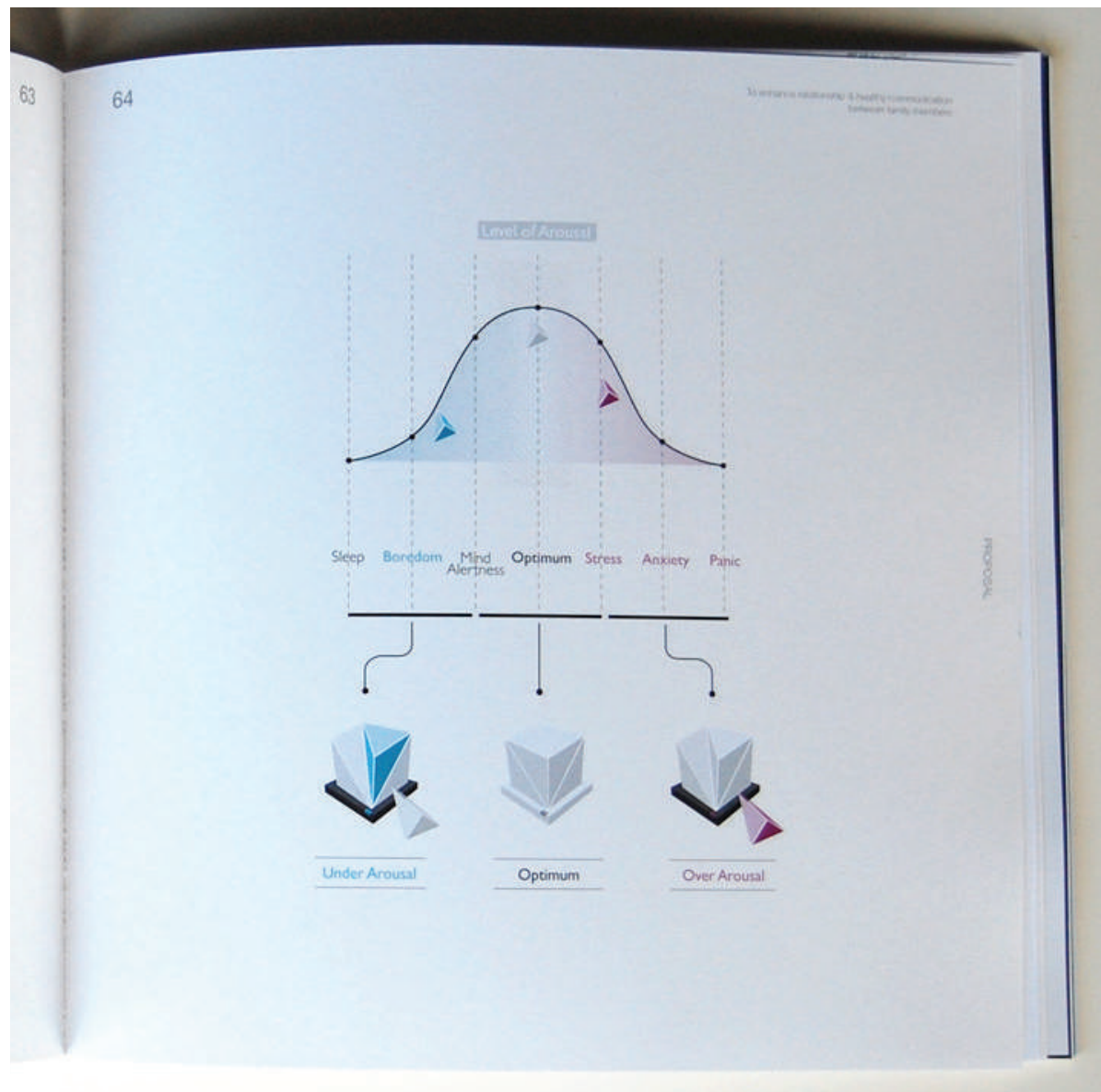
DELIVER: FAMILY DEVICE

3

Family Device



The family device shows current conditions of members in three colours; blue, white and purple, depending on their moods.



DELIVER: FAMILY DEVICE



4

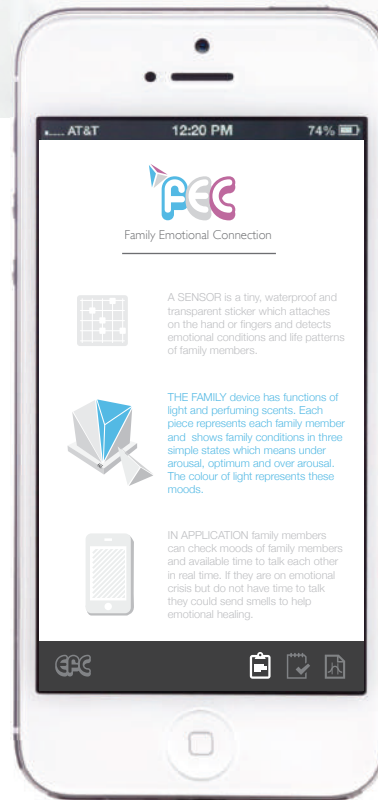
Application



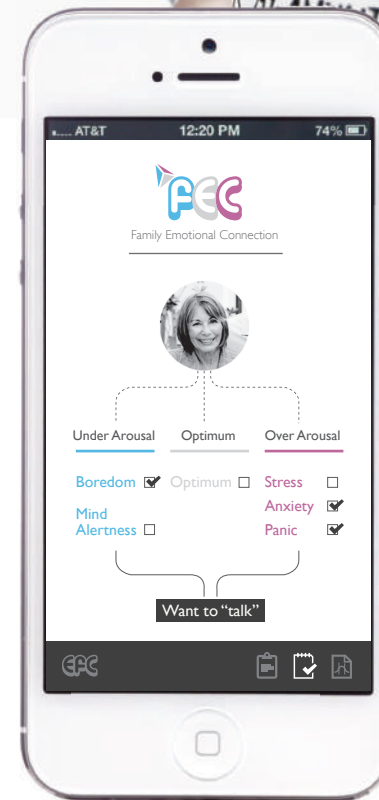
On the application, user can check emotional conditions of family members and match their suitable times to talk using visualized data.



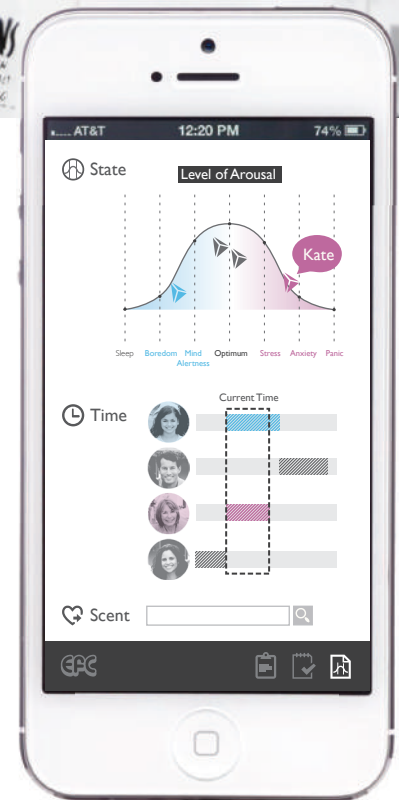
INTRO



DESCRIPTION



OPTIONS

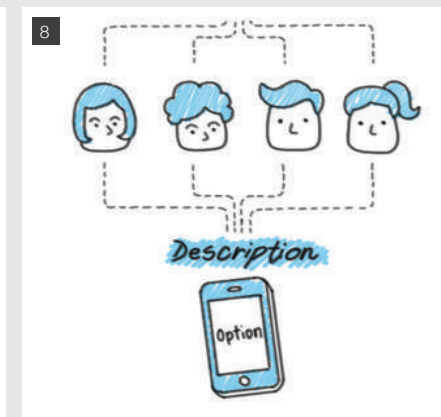
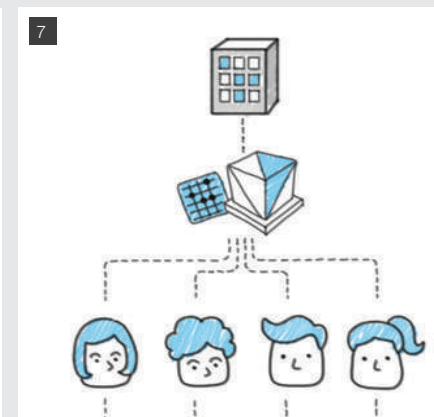
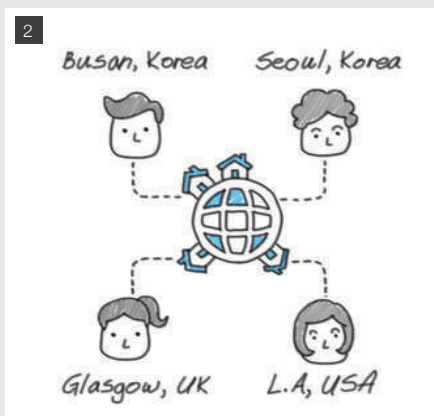


STATE



DELIVER: USER SCENARIO

User scenario shows how service works and how user's interact with the service through the illustrations.

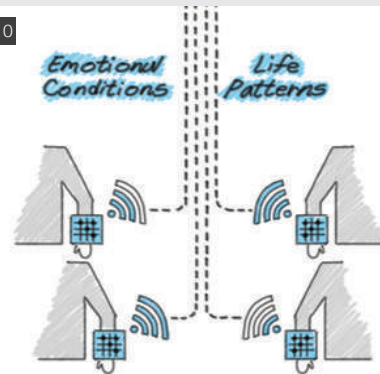


DELIVER: ANIMATION

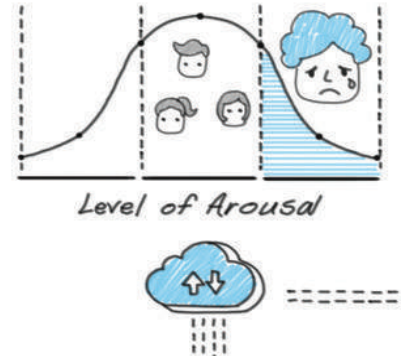
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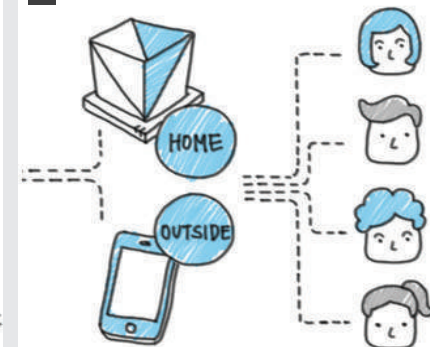
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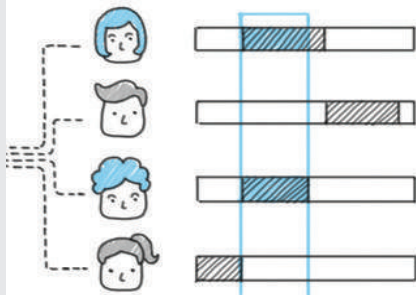
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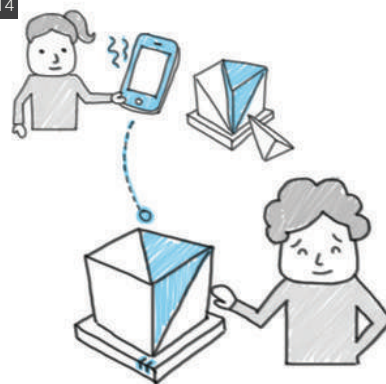
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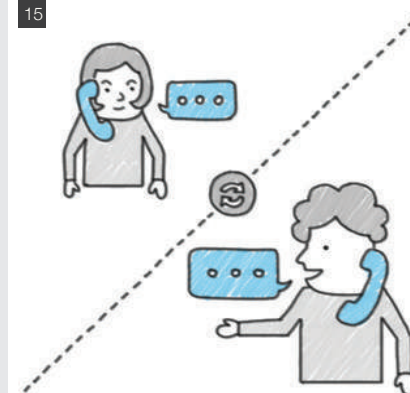
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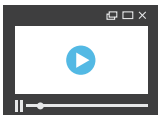
14



15



16



Based on this user scenario I made an animation to show audience service process effectively.

Please visit this website to watch this animation
<http://nmwv37.wix.com/heeeun>

Optimal Ageing

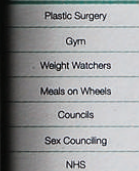
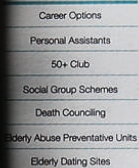
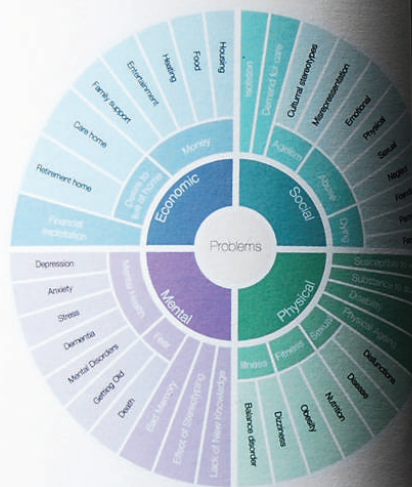
TRACE



Project Aim

The project is to design for a hypothetical yet feasible ageing future, ensuring older people continue to be socially, intellectually, physically and economically active as they enjoy a longer lifespan.

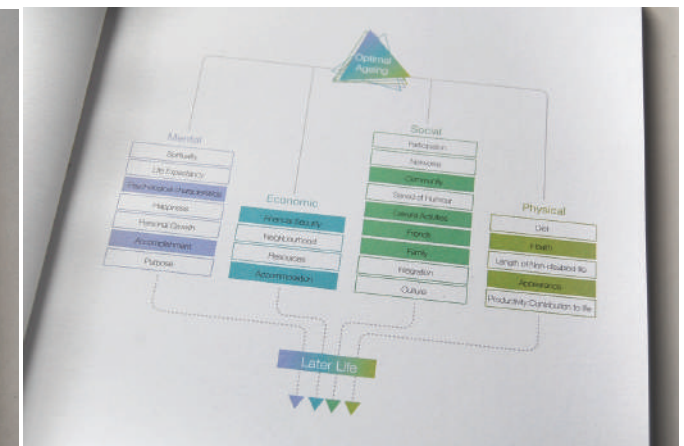
Problem Map, Categorising Research



We mapped many of the problems associated with ageing that had emerged from our desk research in this graphic. We also explored existing services that catered for these issues.

This pushed us to venture deeper into our research, as it was apparent that many of these could be considered surface problems that are easily identifiable and subsequently already well catered for. This map brought us to the realisation that our future solution could be very likely to address a problem that we do not currently face.

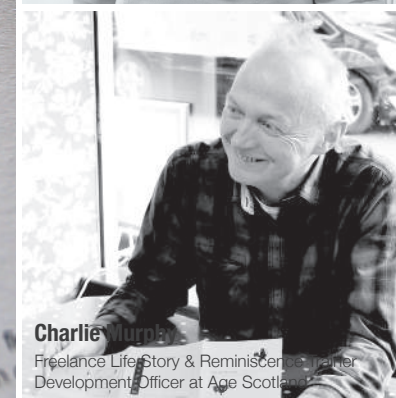
I organised and visualised information that we gathered using a unified design style in order to identify this brand.



DISCOVER: FEILD WORK



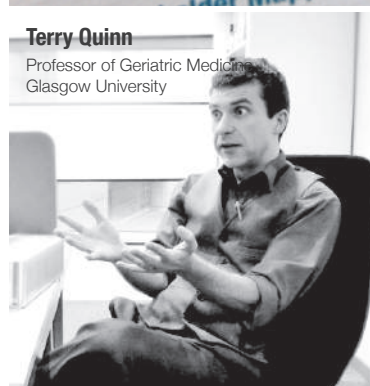
Dawn Skelton
Professor in Ageing
Glasgow Caledonian University



Charlie Murphy
Freelance Life Story & Reminiscence Trainer
Development Officer at Age Scotland

Interview

In this project we met stakeholders from diverse backgrounds, government, businesses, academics and professionals. We could get a wide range of insights from them.



Terry Quinn
Professor of Geriatric Medicine
Glasgow University



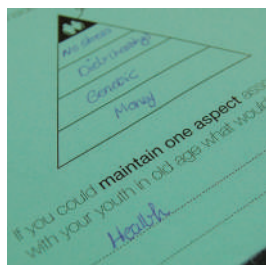
Jeroen Spijker
Sociology Professor
Edinburgh University

DISCOVER: FEILD WORK

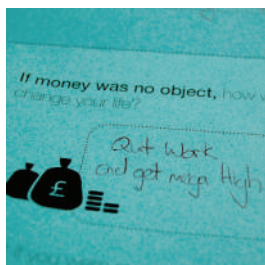


Engagement Tool

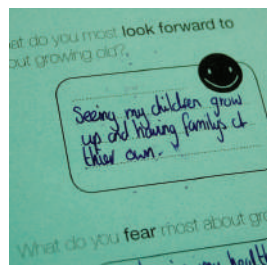
Our team made questions for engagement tools to know what optimal ageing is to various ages. We analysed data from implement engagement tools and took three opportunities to develop new service.



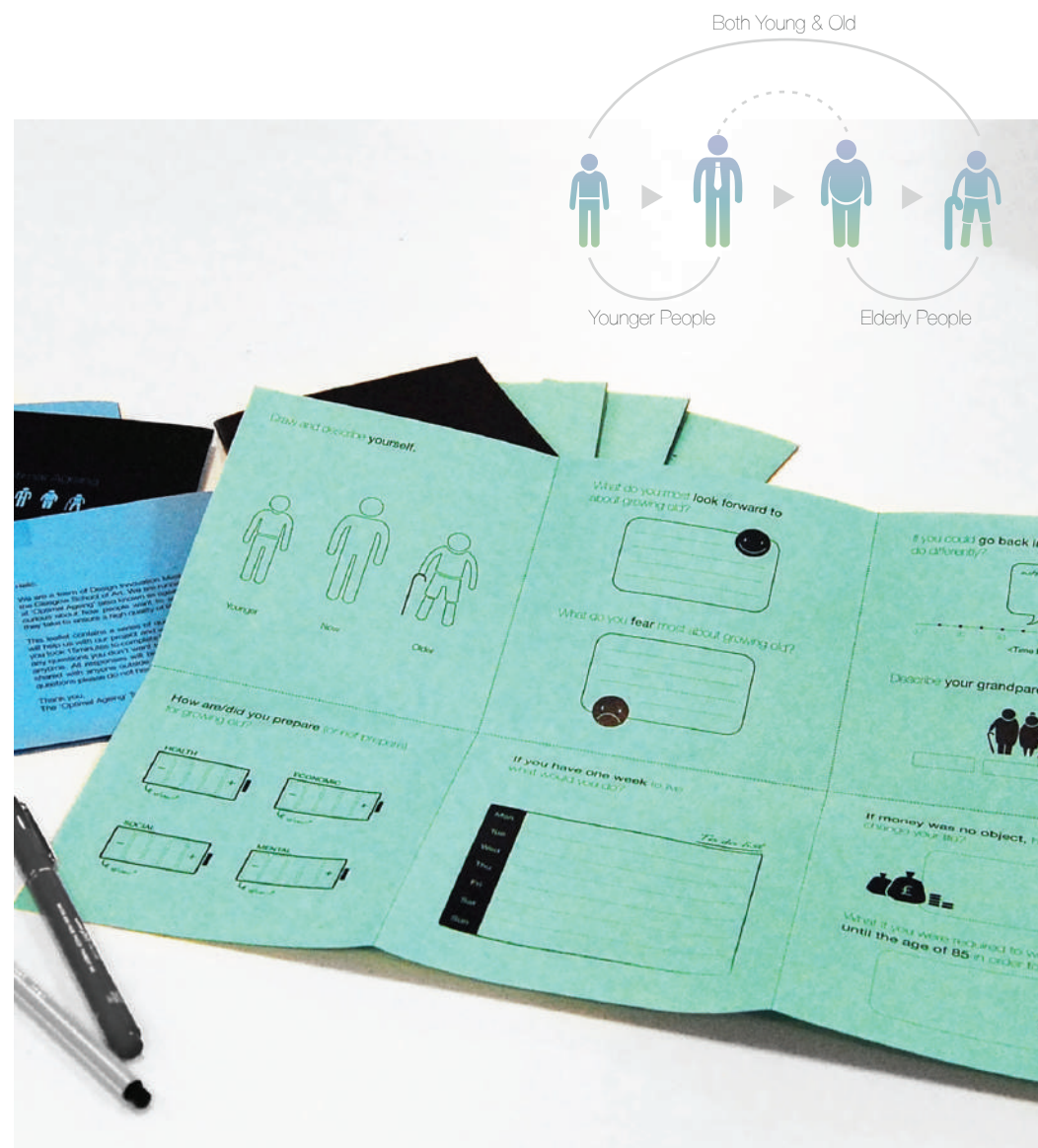
Keeps you **healthy**



Keeps you **responsible**



Keeps you **social**

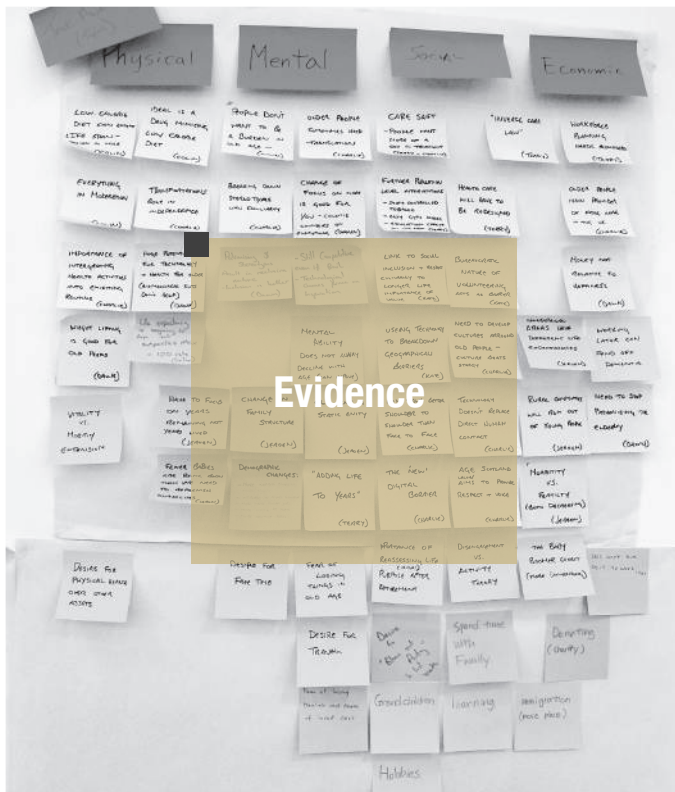


DEFINE: IDEATION

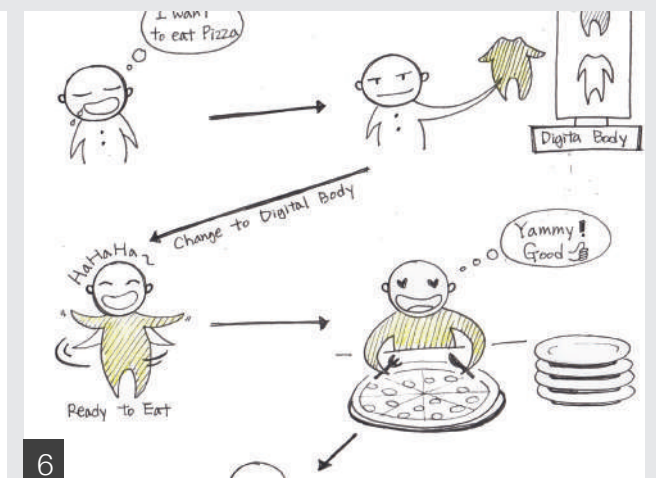
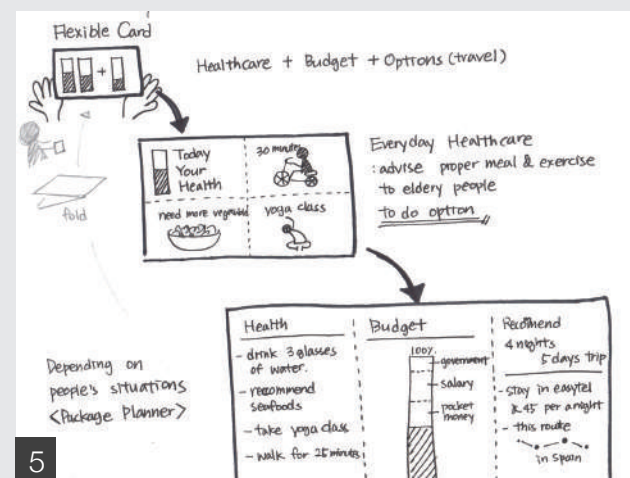
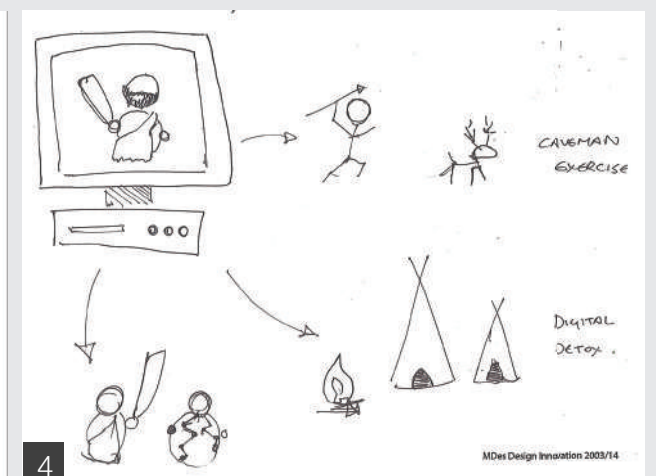
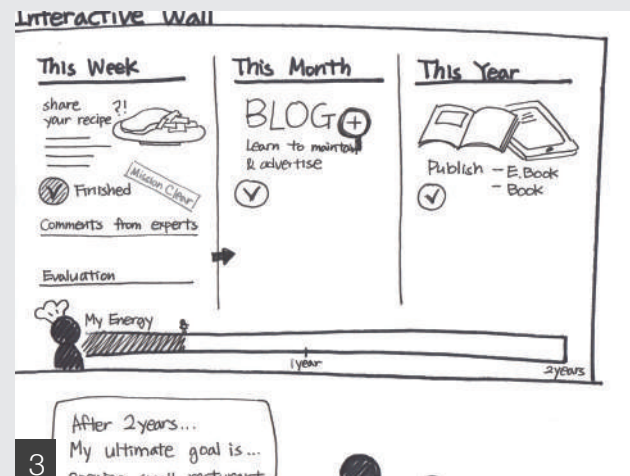
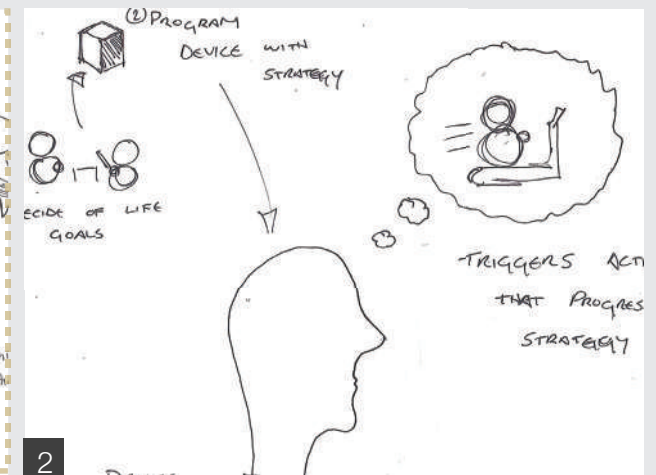
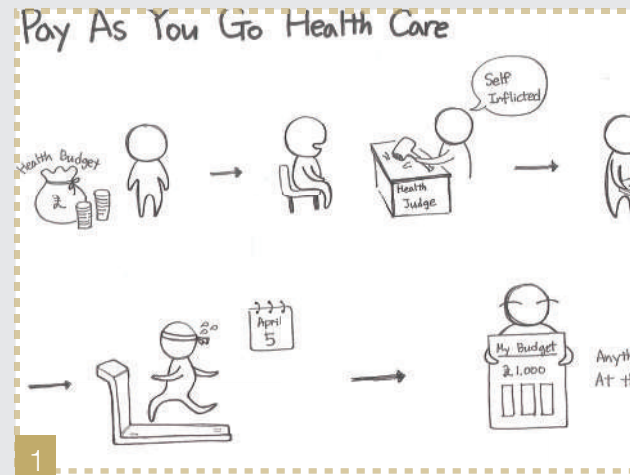


Process

In this phase we discussed deeply and listened opinions of our team members. We also thought together to get opportunities and find solutions.



DEVELOP: IDEATION



Sketches

Our team developed ideas with opportunities that we found through design process.

1. Health Judges
2. Mind Manipulation Life Planning
3. Goal Wall
4. Caveman Culture
5. Life Tracker
6. Platform Diverse Body

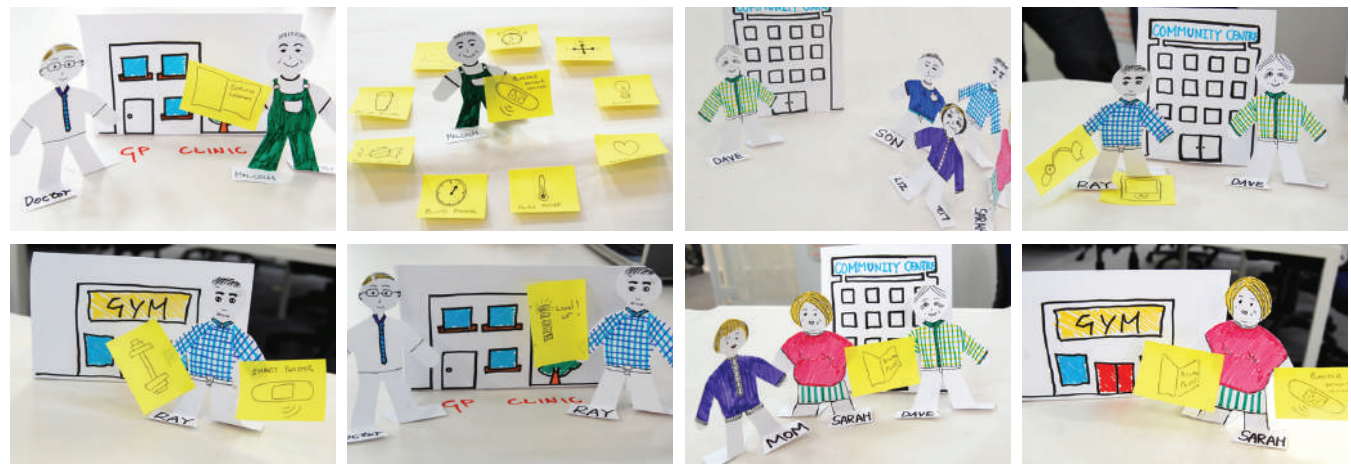
DEVELOP: IDEATION

Through making user profiles and future scenario we could think what users needs as well as consider wide range of cases during our service.

User Profiles



Future Scenario



DELIVER: FINAL CONCEPT

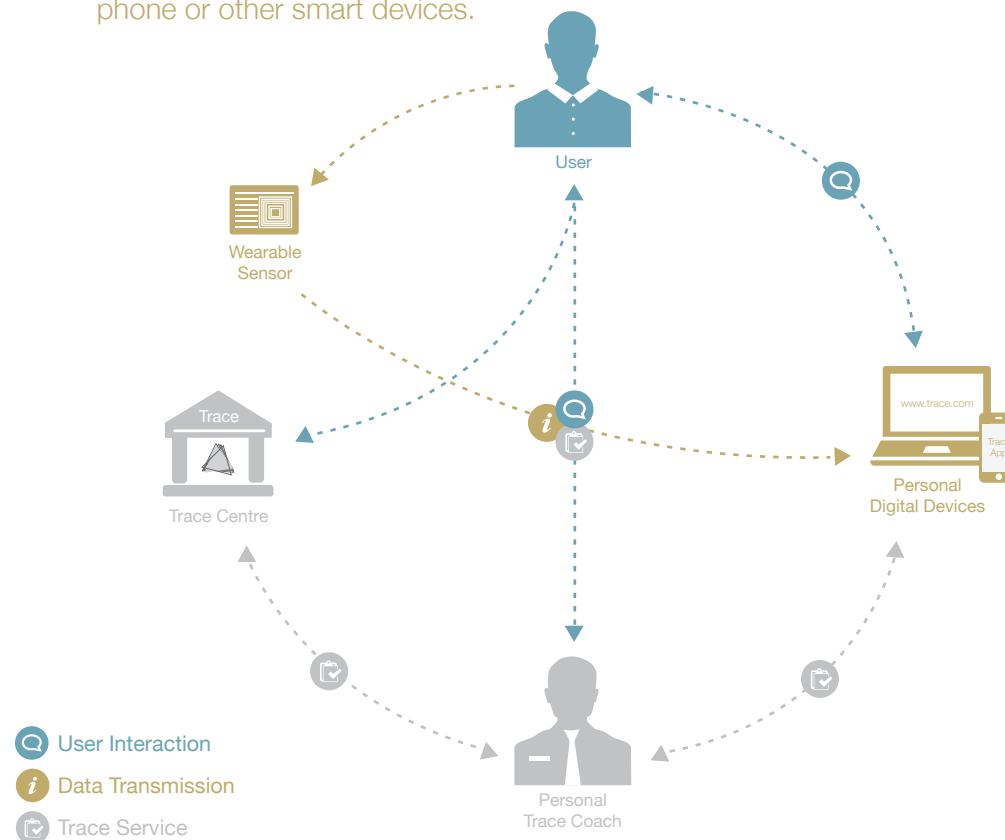
Trace offers individuals the information and support to take responsibility for their own health and wellbeing.

Through adopting positive lifestyle practices in early life individuals are more likely to live longer, more active and fulfilling lives.

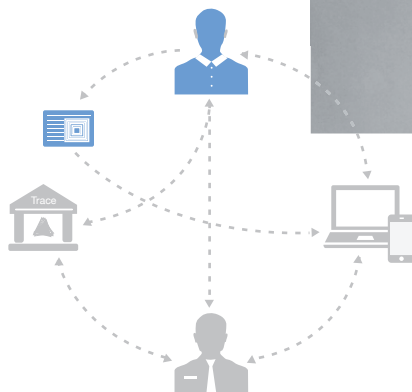
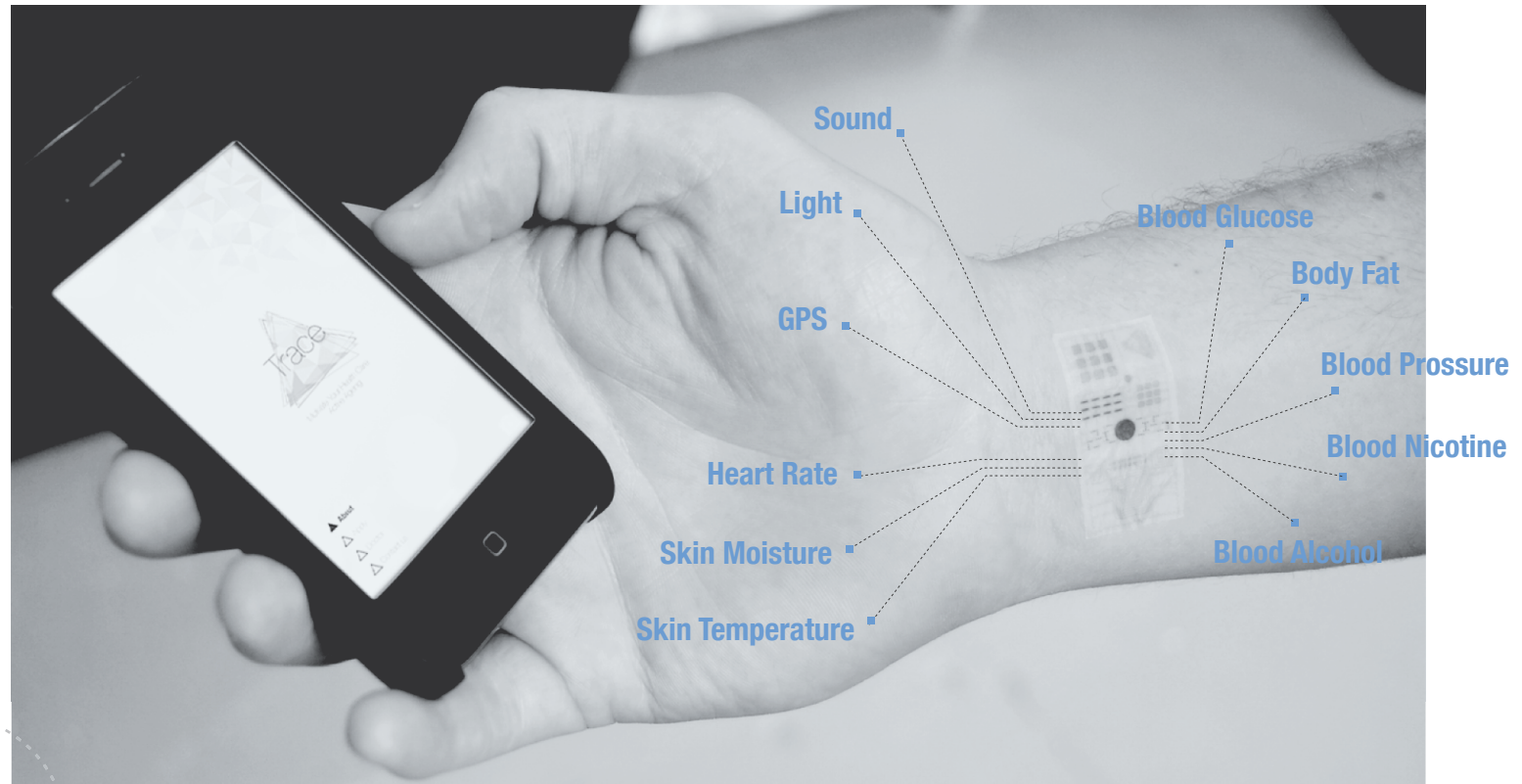
This will reduce the need for medical interventions at a granular level and through mass service uptake should relieve the currently overwhelmed National Health Service. Trace also rewards service users; through active engagement with their lifestyle plan individuals can receive priority non-emergency NHS treatment if needed.

Trace uses biometric sensor Transfers to record personal biometric data in real time, this is securely stored and can be accessed by the user through their computer, smart phone or other smart devices.

Individuals are assigned a personal lifestyle coach, who provides them with lifestyle plans, diet, exercise and social activity advice.



Coaches can also access an individuals data to ensure they are staying on track and enables them to offer support, motivation and revisions to a person following a Trace plan.

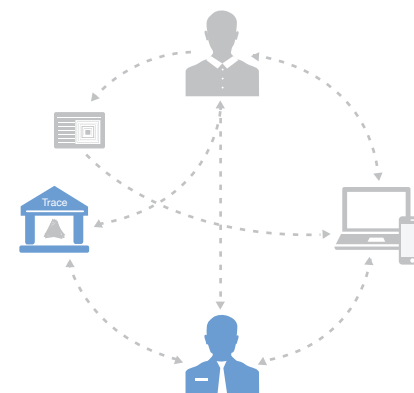
DELIVER: FINAL CONCEPT**Transfer**

We were able to physically prototype how the wearable sensor transfers would look using inkjet decal paper. While this did not communicate the full application and skin moulding experience to be expected, they did communicate well the scale, aesthetic and unobtrusiveness the actual sensors would have.

DELIVER: FINAL CONCEPT**Trace Coach**

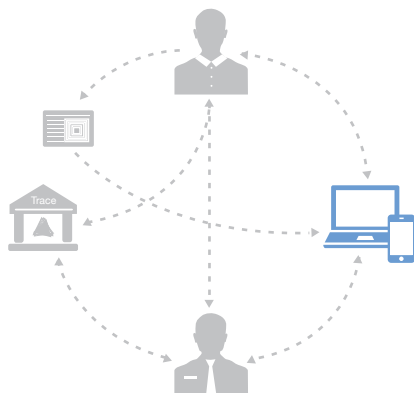
a nurse
 occupational therapist
 a personal trainer

This human support role would need to have a combination of knowledge based around positive lifestyle, motivation and the experience to take into consideration an individual's circumstances; from current health condition to social background and be able to analyse the effect these have on an individual's day to day life.

**Trace Centre**

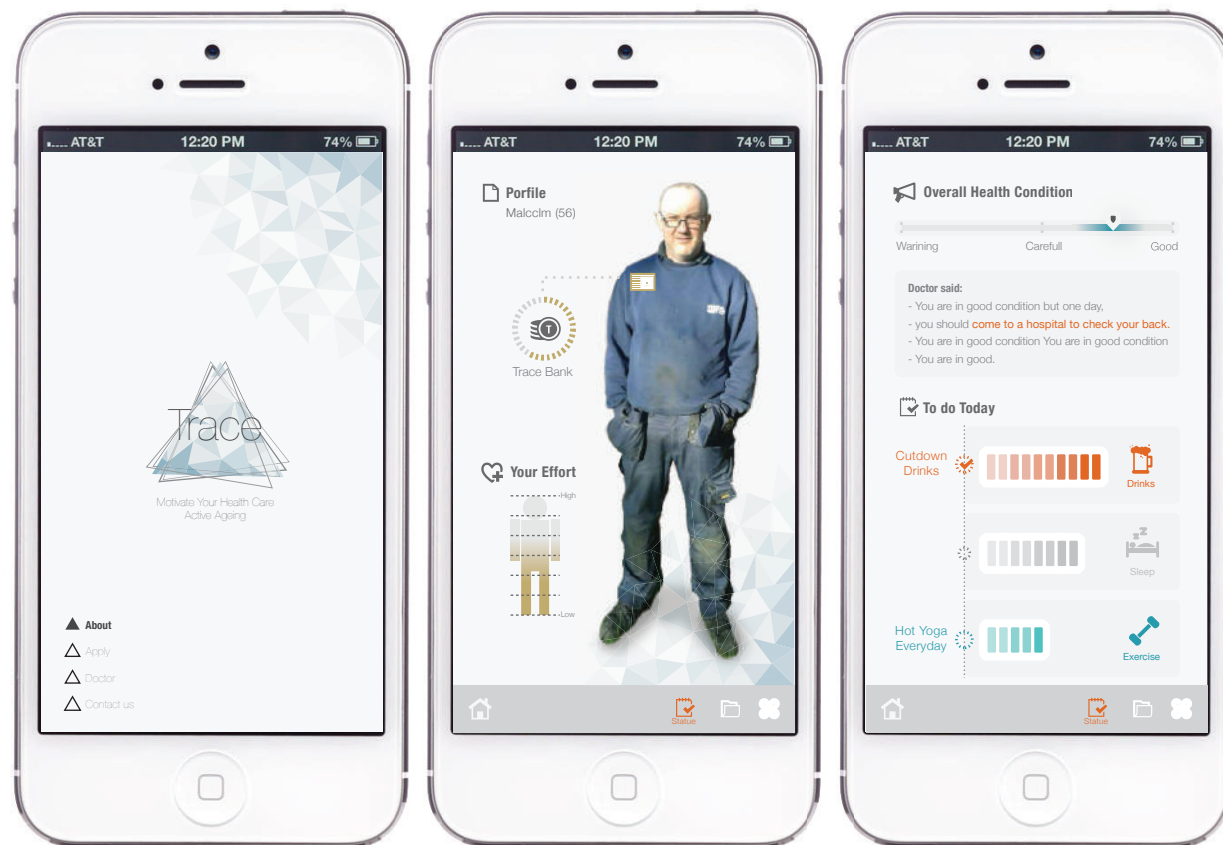
Trace centre is a central service facility that enables people on demand access to the service in their local community, as well as offering a central administration point for the other elements of the service. There would need to be multiple facilities that would exist as small semi-independent establishments catering for individual communities.

DELIVER: FINAL CONCEPT



Website & Application

We were able to create screen stills demonstrating the experience of their aesthetic and the information they enable users to access and visualise.



Users can understand their health condition using visualised data and get some advices for their health on trace website and application.



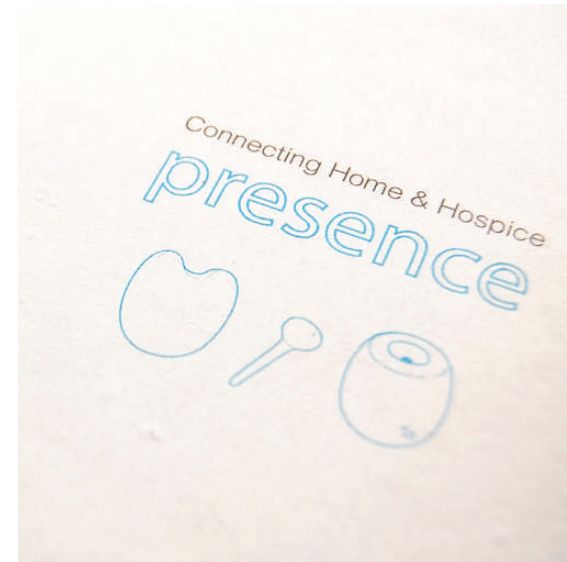
DELIVER: ANIMATION

The animation shows how Trace service works and what benefits are in this project.



Hospice

PRESENCE



Project Aim

As a team we were asked to establish how ICT might foster greater social interaction in the support of general and specific wellbeing for people in a hospice community. We were to explore the challenges posed by palliative care and hospice life, and to see how ICT may potentially fit the needs of hospice patients, their families and the professionals who care for them.

DISCOVER: RESEARCH

Desk Research

During desk research our team did research together and gathered information which was related to our project.

I could know how ICT, Information and Communication Technology, is impacting on modern society. I also categorised information and visualised them to show clearly.



DISCOVER: RESEARCH

Desk Research

I organised information based on opinions and thoughts of team members. Our team could get focus area to further develop and move forward through this process.



DISCOVER: FEILD WORK



Open Day

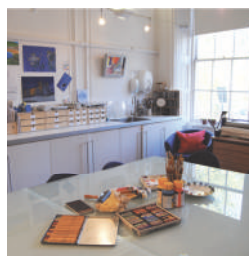
During field work our team visited to the Prince & Princess Of Wales Hospice which is in Glasgow city centre. It was a chance to get close and engage with staff and patients in Hospice. We could have different perspectives from the hospice.



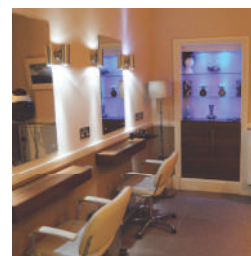
The Prince & Princess Of Wales Hospice



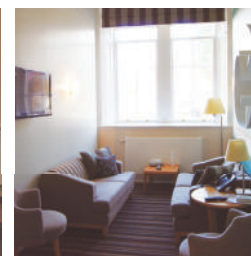
Cafe



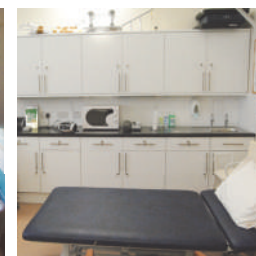
Art Room



Salon



Counselling Room



Treatment Room

DISCOVER: FEILD WORK



Interview

Our team interviewed with specialists from diverse backgrounds and took away main themes through interviews. I could understand how our project helped patients and their families.

LIBBY

Clinical Advisor, Prince & Princess of Wales



BARBARA

Founder, Final Fling



JENI

Associate, The Institute of Design Innovation



- HOPE
- HOLISTIC**
- TIME
- EMOTIONS**
- SOCIABILITY**

- TABOO
- PRAGMATIC
- ROMANTIC NOTIONS**
- DEATH
- CONSUMERS
- TREASURE TROVE**

- UNCERTAINTY**
- SPIRITUALITY
- E-HOSPICE
- CATCHMENT
- JOURNEY**

DISCOVER: FEILD WORK



Observation

Our team went to the hospice three times to observe patients and their life pattern in hospice. We also participated in some programs like therapy with other patients as well as had a chat freely with staff and patients to know what they need and think.



DISCOVER: FIELD WORK

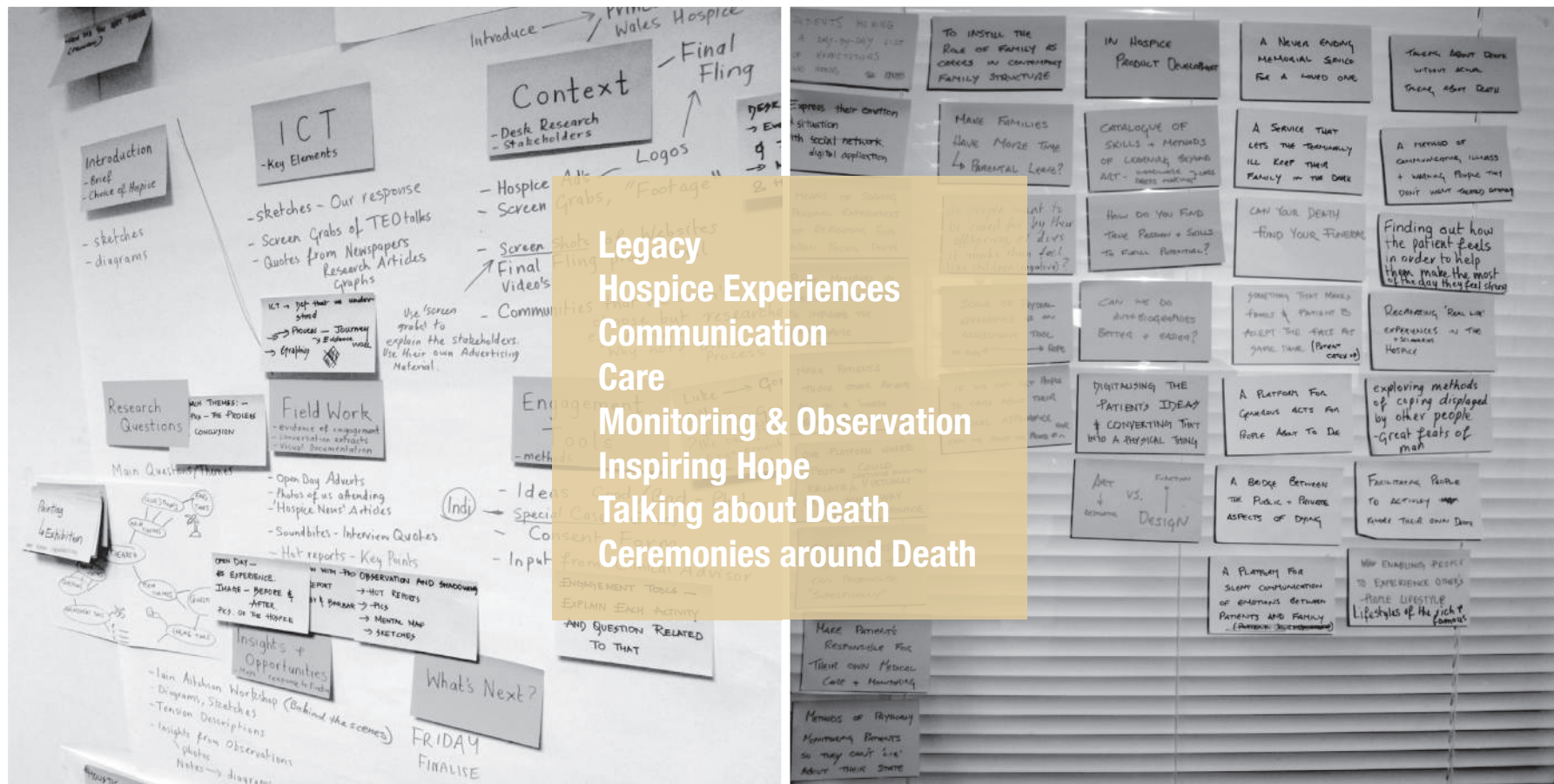


Engagement Tools

Based on our desk research we developed questions for engagement tools. I was in charge of making engagement tools using simple graphics. This tool was very important to listen to opinions and thoughts of patients.



Our team put post-its which includes from desk research to field works on the wall to see widely. We rearranged them and chose main themes as opportunities and started to develop concepts.



DISCOVER: SYNTHESIS

Synthesis Map

I made synthesis map to show where opportunities come from visually. It showed evidences, insights and opportunities at a time.

Synthesis Table

We used the following format to illustrate the connection and process from insights to opportunities.

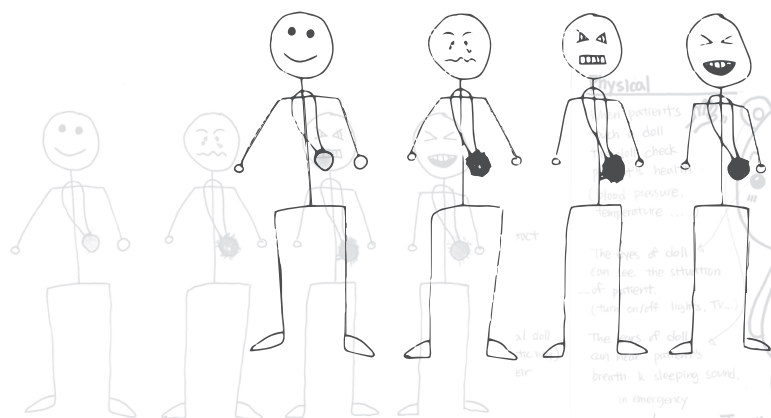
Unfortunately we were not able to present and implement all of our chains from insights to opportunities. The many of the examples we included here contributed to our concept generation and final design proposal.

Intro Discover Define

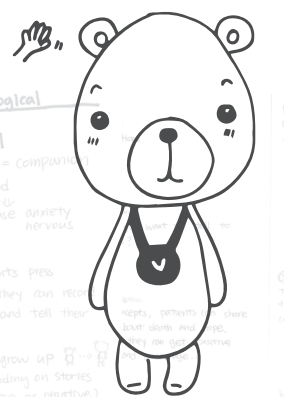


We developed main themes individually and illustrated our ideas freely. Finally we selected these three concepts.

Wordlessly Communication

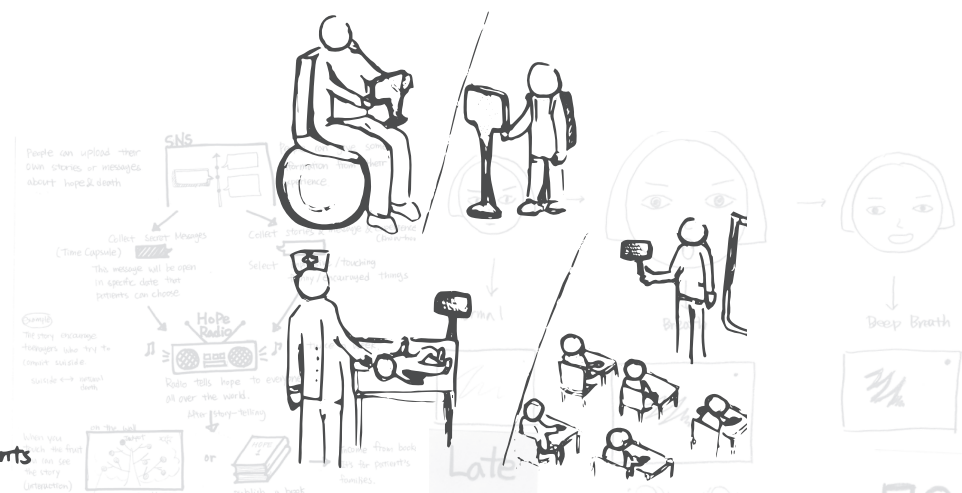


Soft Robot



I will be with patients

Connecting Places





DISCOVER: IDEATION

Conept Function

We finalised functions of devices for family, day-patient and in-patient.

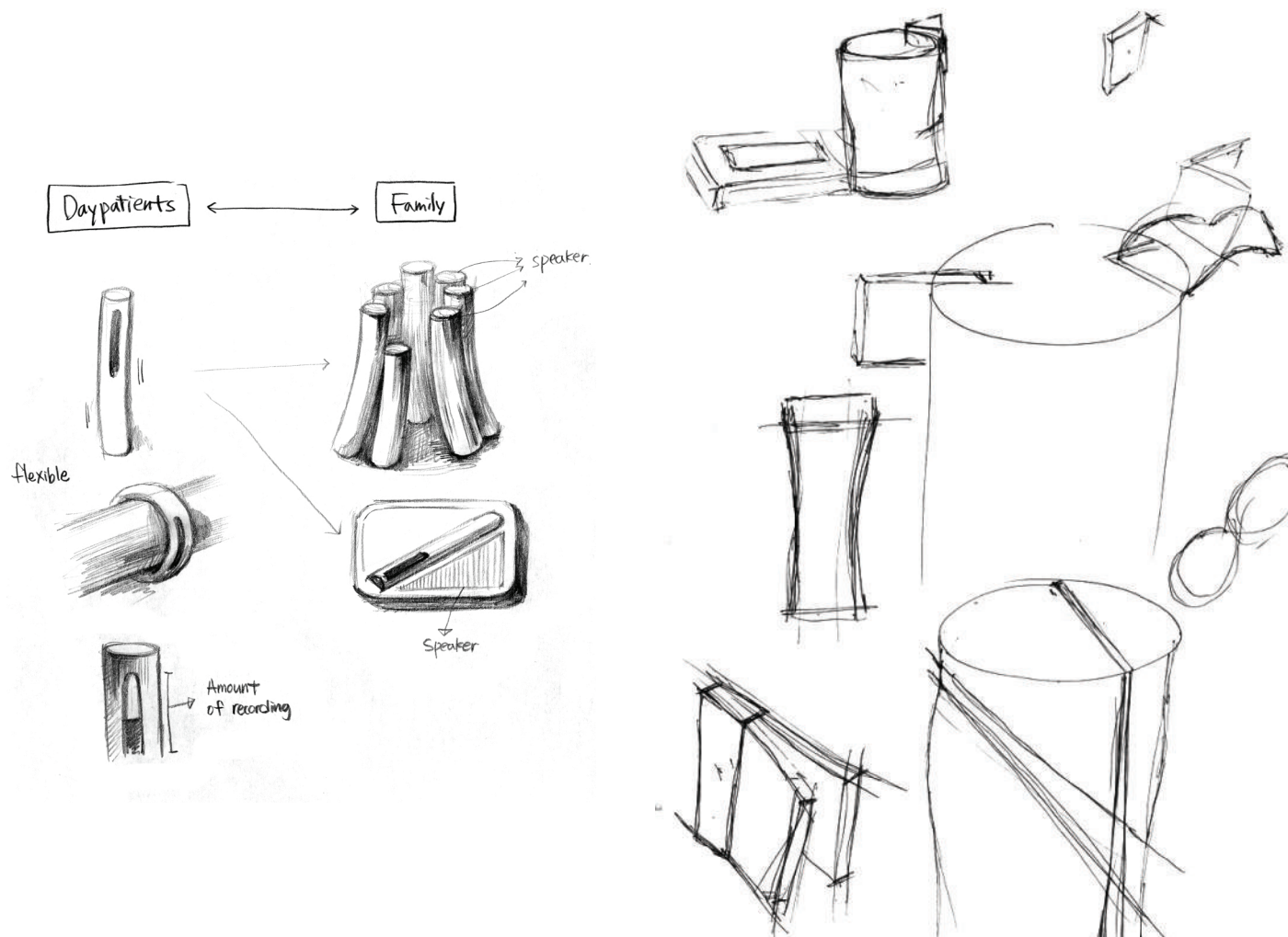
COLOUR CODE DIAGRAM

PERSONAL SEMANTIC

OUTPUTS

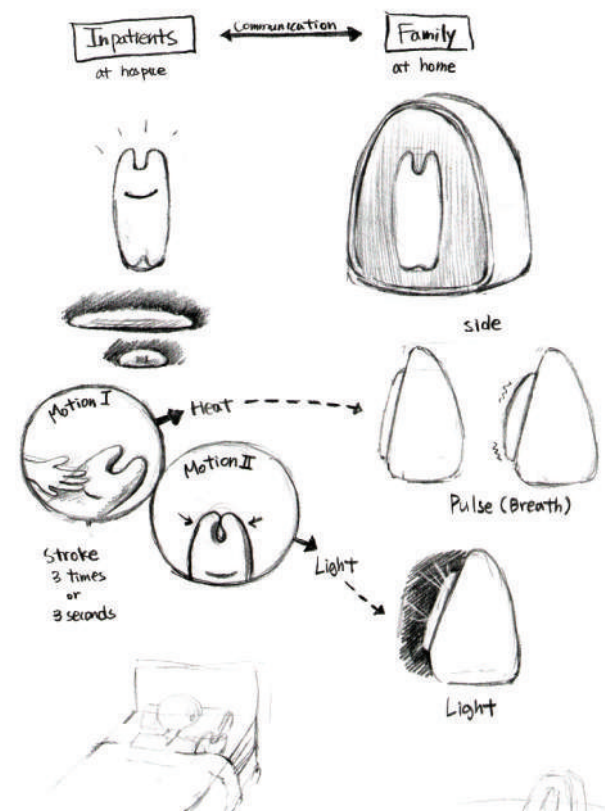
TECHNOLOGIES

DISCOVER: IDEATION



Device Sketches

We considered design of devices in order to make them suitable for patients and family members.



DELIVER: PROPOSAL**Proposal**

The two patient objects are intended to fit into different phases of an individual's hospice journey. The combination of all the objects enables patients to connect and leave a legacy to their family.

Family Device

- Store the patients recorded stories and messages
- Play these messages back to the family after the patient has passed away
- Tells the family when the inpatient is awake
- Allows the family to acknowledge the patient is awake

**Day Patient Device**

- Record audio messages
- Allow them to choose the messages they want to leave behind
- Be able to be carried around easily

**Inpatient Device**

- Allow patients to tell their family if they are awake
- Allow patients to know when their family is home
- Simulate the physical presence of family members for the patient
- Be suitable within the context of a hospice bed

DELIVER: PROTOTYPES



Family Device



This connects families to their loved ones who are in hospice care. Family members interact with devices of day-patient and in-patient through this family device.

Day Patient Device



This allows hospice day patients to record audio messages and stories, so that their memories and experiences can be played back to loved ones after they pass away.

Inpatient Device



This enables patients confined to a bed to be aware of the presence of their family or friends at home. They can communicate that they are awake, thinking of their loved ones or would like someone to get in touch through stroking the object and sending a light signal to the Family Device.