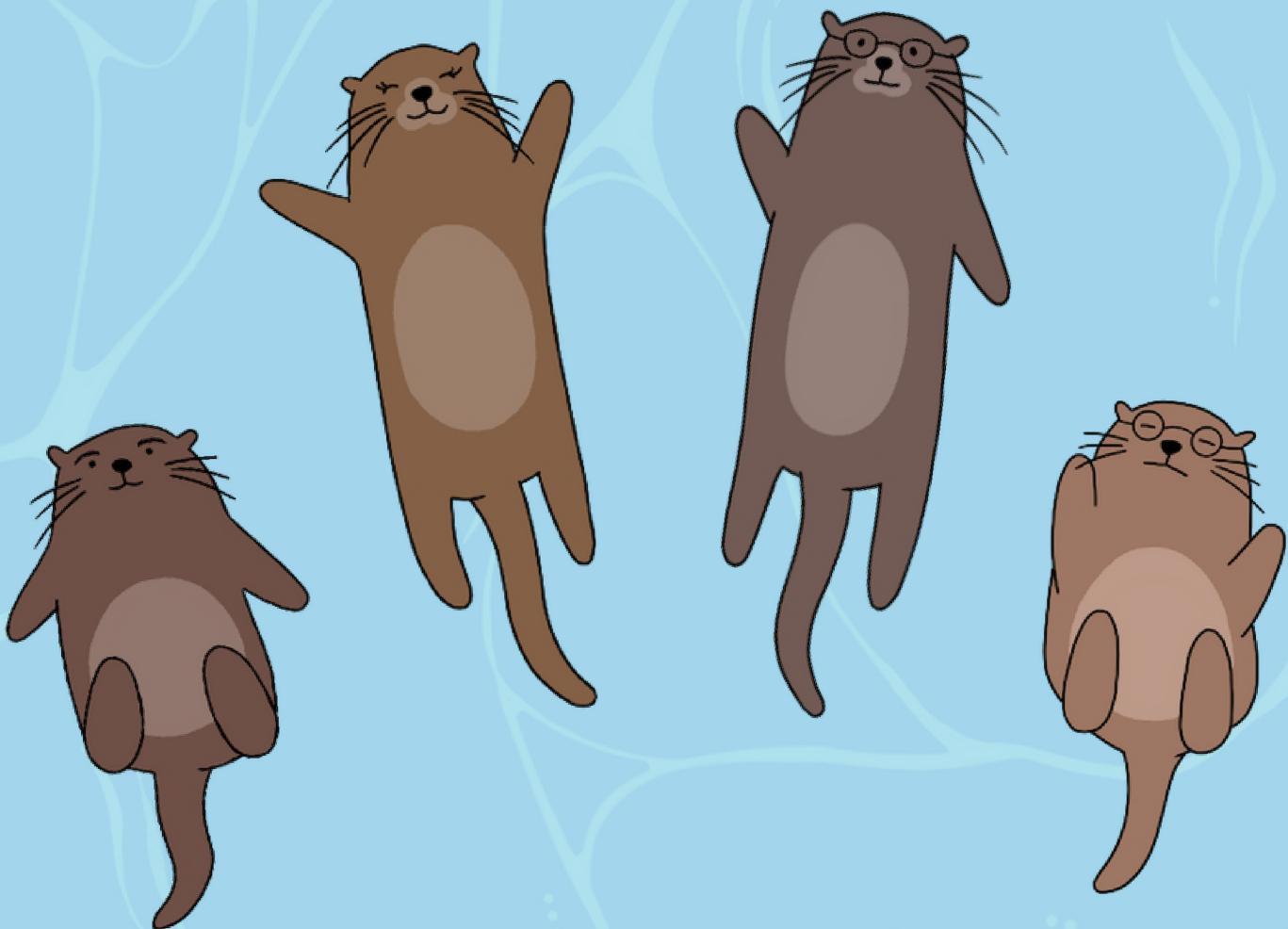


take the



otter+unity.

Human-Centered Design Portfolio

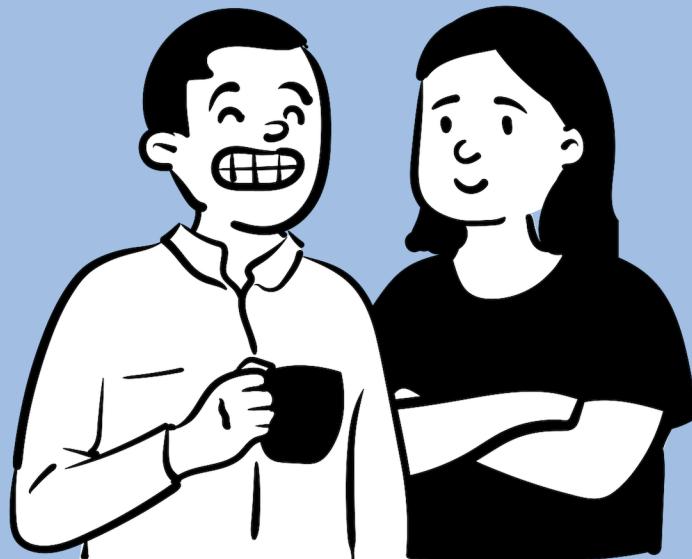


DRP12

Meet the Zhang Family

John, 45

Amy, 46



Lacie, 16



Lucas, 21

Family Members

Lucas

An international medical student on hospital rotation, his busy schedule means that he is **always tired**. With the little free time he has, he **enjoys playing video games** with his friends. Very family oriented.

Frustrations

8 hour time difference with parents, so they call on his lunch break, doesn't know what to talk about during calls.

Desires

Wishes to maintain connection without having to give up his limited free time



Lacie

A high school student living with her parents in Malaysia. She's obsessed with social media and **spends most of her time at home texting her boyfriend** in her room. Doesn't share anything with her parents.

Frustrations

Parents disapproves of her boyfriend, feels misunderstood at home

Desires

Wishes she can just do what she wants without her parents nagging all the time

Family Members

John

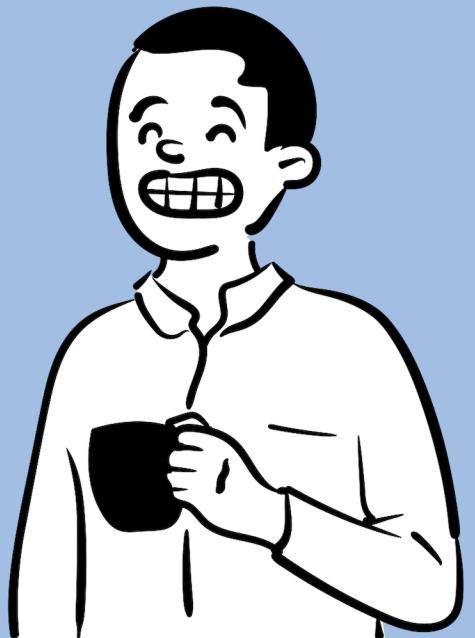
A **full-time lawyer** at a large law firm. He often has to **work late**, and **leaves for the office early in the morning** to beat the rush hour traffic.

Frustrations

Can't connect with Lacie beneath the surface despite living in the same house.

Desires

To be an emotionally present figure in his childrens' lives



Amy

A **half-retired lawyer**. Since she only needs to be in office 2 days a week, she **spends most of her time at home**, nurturing her garden. Drives Lacie to school every day.

Frustrations

Tries very hard to connect with both her children but neither try to reciprocate.

Desires

Wishes to be more involved in her children's lives, and vice versa

Their Story



The Zhang family has a **relatively distant relationship**, with each member leading **independent lives**. They live in a suburban neighbourhood and share a comfortable home. Their family relationship has been **stagnant** ever since Lucas left for university.

Desires

The **children** desire a level of independence whilst the parents are afraid of letting go. The **parents** wishes they could connect better with their children.

Frustrations

Limited
Quality Time

Balance of
Responsibilities

Communication
Gaps

Stakeholder Map

Grandparents

Important figures in many families, but may have difficulty consistently connecting with their grandchildren, especially due to unfamiliarity with technology or **unmet accessibility needs**.

"I wish that they [my grandkids] would talk to me more about their lives, but I only see them a few times a year."

Teachers

Important points of contact for children especially in younger/teenage years, and provide parents with valuable insights about their children. Are helpful in fostering a habit of empathetic sharing.

Family counsellors

Provide important perspectives about the causes of parent-child detachment and how to approach it in different families. May also be interested in our solution as a new way of helping families get closer.

"Different families have different dynamics, but often pride and stubbornness cause disagreements — nobody wants to be proven wrong."

Parents

Want their children to stay connected and share more about their lives, especially as they get older. The need to care for their children never goes away.

"I just can't help but give advice sometimes, although it's unsolicited."

Children

Love and miss their parents, but often find it difficult to consistently share insights into their lives as they grow older.

"I often feel that, as a university student, I don't have enough time to talk to my parents."

Other parents

Act as influence and support for parents. They may discuss how they stay try to connect with their own children and the challenges surrounding this.

Cousins

Similar to friends, but have shared family bonds. Children may want to become closer to their cousins, which could act as a starting point leading to connecting more closely with their parents.

Friends

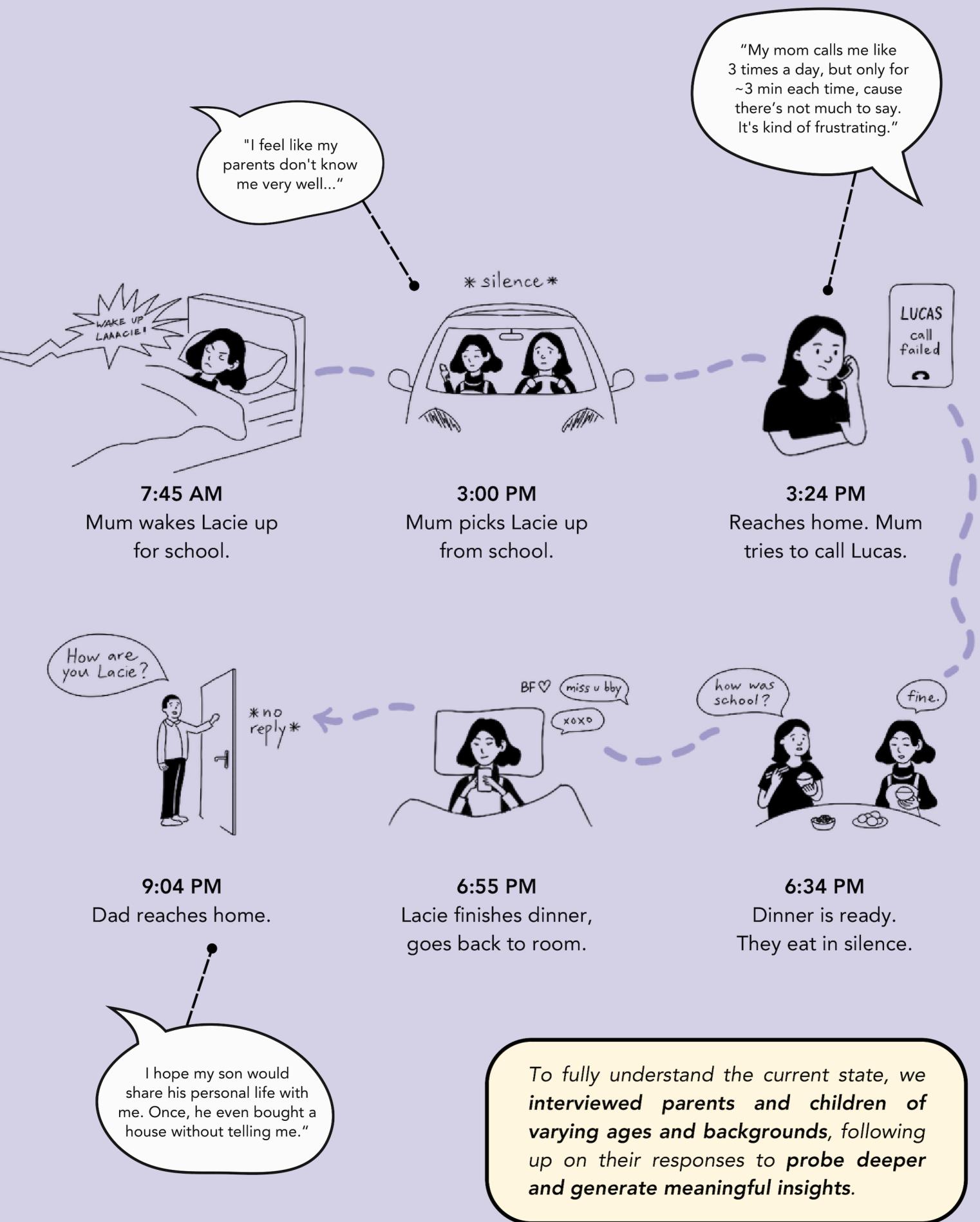
Act as influence and support for children. Children observe and compare their friends' interactions with their parents to their own experiences.

Key

Primary stakeholder

Secondary stakeholder

Current State



Affinity Map

"I share quite often with my parents, but they are just too busy to respond. There's simply no easy way for us to share our thoughts."

Student wellbeing counsellor: "Different families have different dynamics, hence some students may find hard to initiate conversation with their parents."

"I often feel that, as a university student, I don't have enough time to talk to my parents."

"I guess it's just that I don't have a habit of sharing since I grew up, and I tend to just share with my friends."

"My family share pictures all the time! We shared everything since my childhood, so I just kept that habit as I grow up."

"I'm not afraid to have disagreements with my parents. It's an important step towards mutual understanding."

"I just can't help but give advice to my children sometimes, though unsolicited."

"There's a part of my life that I feel that I can't share with my parents. I don't want them to be worried"

"My parents and I fought a lot, but we learned to agree to disagree... I began to think about their lives, how they raised me, and their life choices."

"My mom calls me like three times a day, but only for like three minutes each time, because there's really not much to talk about. It's kind of frustrating"

"I hope that my son would share more of his personal life with me. Once, he even bought a house without telling me."

"It's hard to connect with my grandchildren. They just play with their technology all the time."

Insights

Insight #1: Difficulty Starting Conversations

Family members often find it **difficult or inconvenient** to share their thoughts with parents. This may be caused by their busy schedule, fear of judgement, or unspoken tension in their relationship.

Insight #2: Agree to Disagree

People believe that an ideal family relationship involves **mutual understanding**. People often don't mind family arguments, but they do wish to respect for an understanding and respect for different opinions.

Insight #3: Habit of Sharing

Habit of sharing since childhood is an important factor for the frequency of family conversations. Family members who developed such habit often have a more frequent and consistent family connection.

Insight #4: The Invisible Wall

Parents are frustrated that their children **won't share more of their lives** to them. As children get older, they tend to open up and communicate less. Some parents also blame technology as the cause of such detachment.

Insight #5: Stressful Conversations

People often **feel some extent of stress** during family discussions. These pressures may originate from unsolicited advice from parents, disruptive conversations, or the pressure to maintain a perfect image to family members.

Opportunity Statement

Insight #1

How might we provide a platform for families to easily participate in meaningful family conversations?

Insight #2

How might we develop familial relationships involving mutual and empathetic understanding?

Insight #3

How might we cultivate a habit of sharing among family members, to strengthen the family connection?

Insight #4

How might we bridge the communication gap among family members and encourage children to share more of their lives to their parents?

Insight #5

How might we create a supportive and inclusive environment during family discussions?

How might we provide a **safe space** for parents and children to comfortably share meaningful insights into their lives, in order to foster mutual and empathetic understanding?

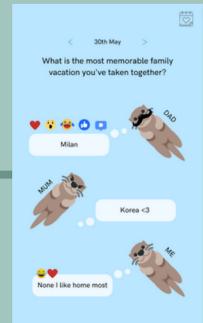
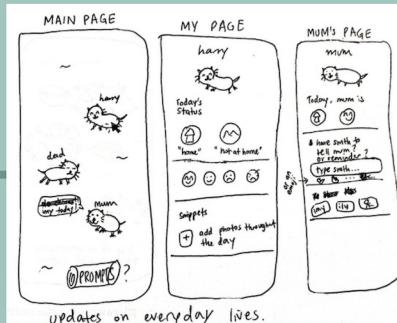
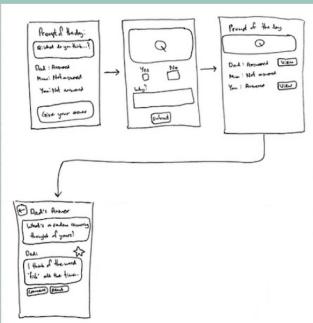
Touchpoint Evolution Overview

not family-oriented enough

interaction lacks depth

not concrete enough

final high-fidelity mockup

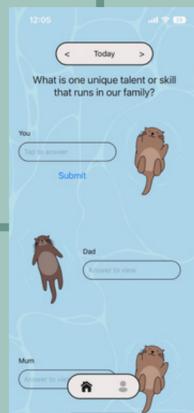


reactions aren't meaningful enough

better UI, but interaction should be taken further

want to choose prompts

UI + layout unclear

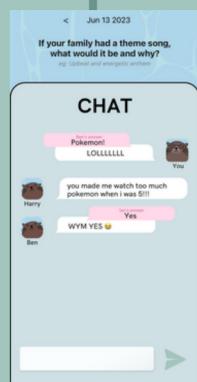


chosen chat mockup promotes inclusivity

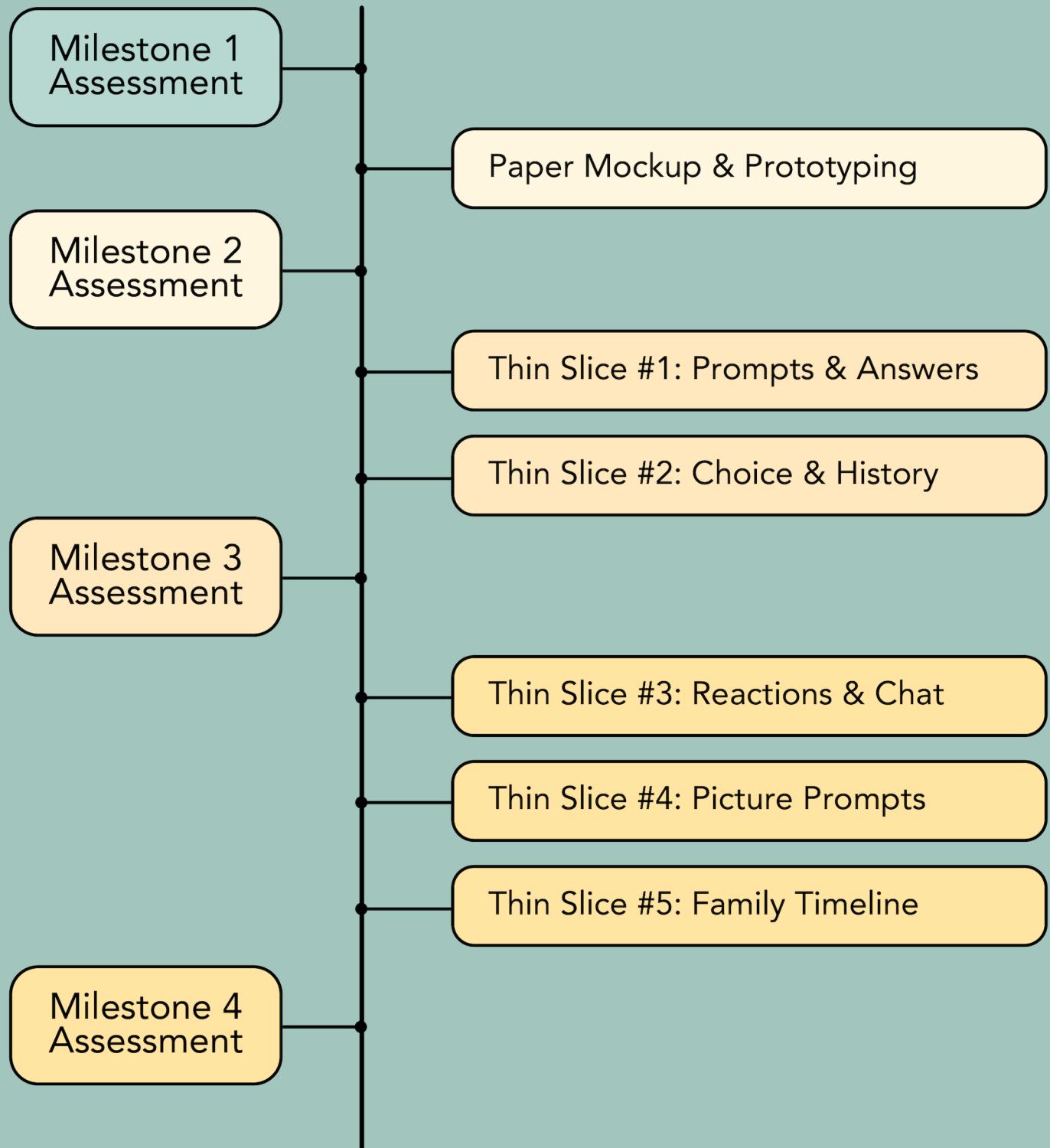
pictures provide richer experience

want convenient, spontaneous sharing

daily family timeline



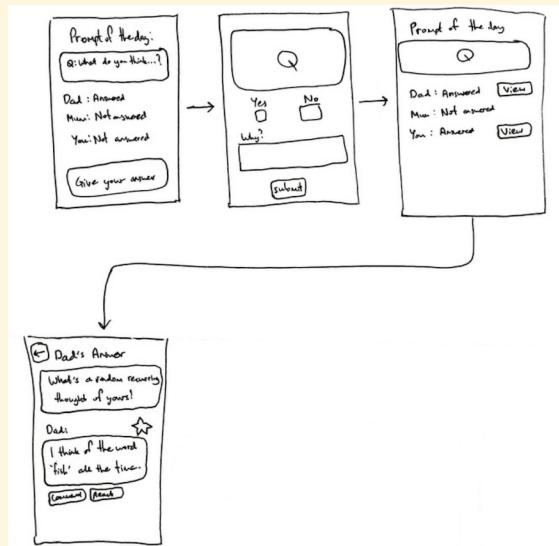
Testing & Validation



Milestone 2 in Detail

Rapid prototyping using mockups to pivot in the right direction

Iteration #1



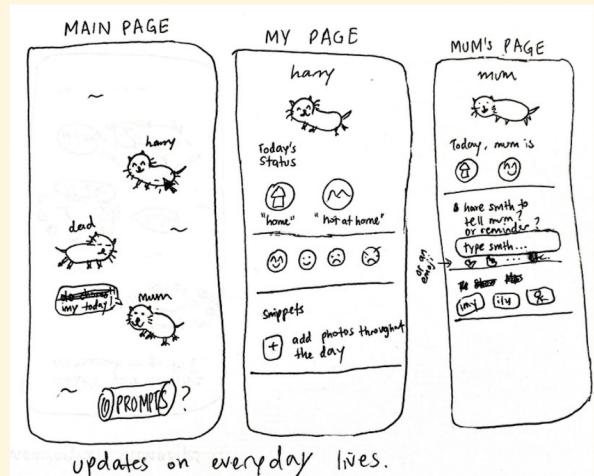
Simple prompt-and-answer as the core interaction, as it is the easiest way to initiate a conversation. However, interviewees suggested that it's not family-oriented and lacked depth of conversation.

"This is probably **better suited for friends than families**. There's no concept of family on display."

Iteration #2

"Homepage" containing all members, represented as otters for family-oriented feel. Also added profile pages, status updates and quick chats for more depth of interaction. Interviewees approved, prompting us to move in this direction.

"Prompts and status updates are good ways for me to **keep my parents updated regularly**."



Milestone 2 in Detail

Rapid prototyping using mockups to pivot in the right direction

Iteration #3



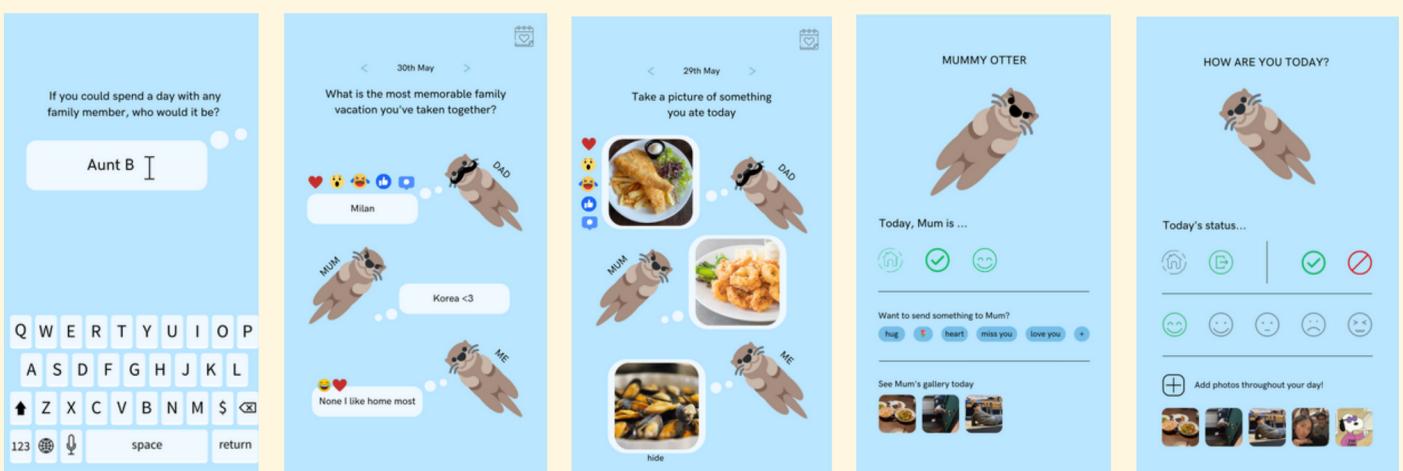
Added new prompt history feature. Interviewees approved the general direction, but commented that the history feature is less important.

"This app makes me feel very relaxed...it's so cute and childlike. It removes a sort of tension when trying to make family conversations."

"I wouldn't regularly use the history feature. I probably won't look at previous answers given my busy schedule."

Iteration #4

Refined the user interface to a high-fidelity version. Includes daily prompts, picture prompts, emoji reactions to prompt answers, and profile pages with status updates and photo galleries. Following previous interviews, we replaced a dedicated history page with a simpler navigation button for viewing past prompts.



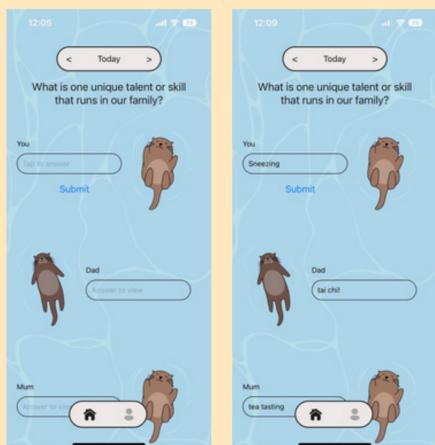
Milestone 3 in Detail

Easy family connection through a prompt system

Thin Slice #1: Prompt & Answers

As a student living abroad, I want to meaningfully interact with my parents without having to make long conversations so that we can remain close without interrupting my busy schedule.

Iteration #1



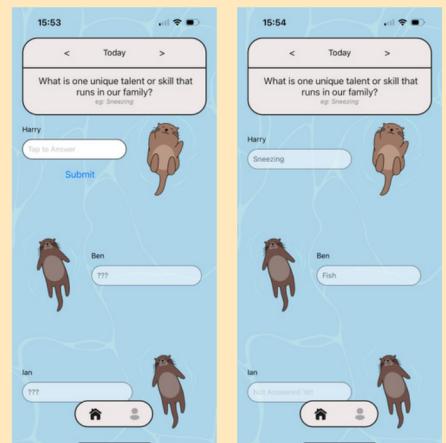
Implemented basic prompt answering interaction with otters. However, many interviewees are confused about our user interface and our prompts.

"All the text boxes look the same... it wasn't clear what I should do first or interact with."

Iteration #2

Highlighted current user's answer box for visual guidance. Added prompt answer examples. Some feedbacks were gathered to the next thin slice: allowing users to choose the daily prompt and to see past prompt responses.

"It would seem intuitive to change to past responses when I swipe the page...and I would want to see past, meaningful answers."



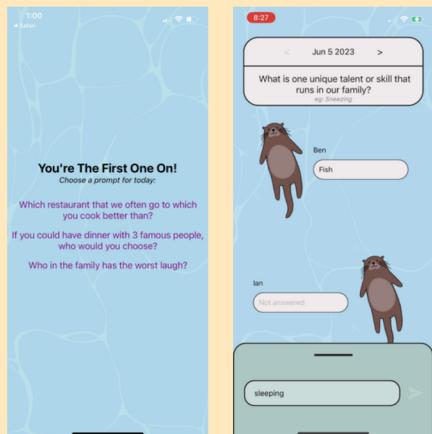
Milestone 3 in Detail

Easy family connection through a prompt system

Thin Slice #2: Choice & History

As a **parent working overseas**, I want to be able to **look back on specific answers** from my family, so that we can **maintain family memories which overcome the long distance.**

Iteration #1



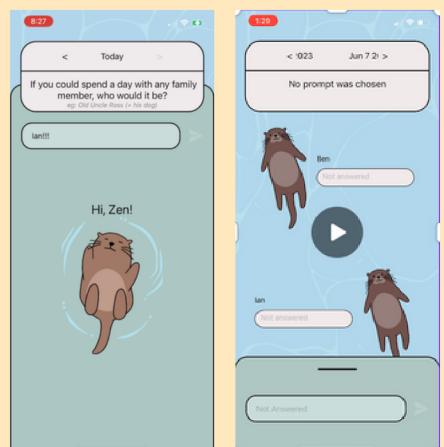
Added **prompt choice** and **prompt history**. Separated the user's answer to avoid confusion. However, prompt history is navigated by swiping the screen, which was found to be confusing.

"If the box here [Date Navigation] would move as I swipe, it should also tell me how much I should swipe. Look, I can't tell how much I need to swipe."

Iteration #2

Added a screen swipe animation as a visual cues for users. However, interviewees suggested that the current **prompt system doesn't allow further interactions** after answers submitted.

*"We need a way to **continue this conversation...** prompts can spark some interesting conversation — things that won't usually be shared on WhatsApp."*



Milestone 4 in Detail

Consistent and convenient interactions build meaningful connections

Thin Slice #3: Reactions & Chat

As a stay-at-home parent whose children are away from home, I want us to consistently engage in inclusive and meaningful discussions so that we can maintain a deep connection despite being physically separated.

Iteration #1



Emoji reactions as a simple way for families to have two-way interaction. Our interviewees approved of this, but wanted a more thorough form of interaction.

"We need a way to continue this conversation. This is a subject that deserves to be spoken about."

Iteration #2

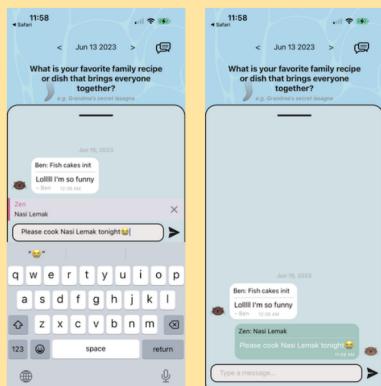
Presented with per-prompt (left) and per-answer (right) chat paper mockups. Interviewees said per-prompt chat was more inclusive.

"The left one is way better!.. Otherwise, it might be that someone won't be heard, if no one replies to them."



Iteration #3

Implemented the per-prompt chat feature, interviewees wanted pictures prompts for sharing richer insights.



"On the app, I want to add pictures as well. [Why?] Well, they would put my answer in better context."

Milestone 4 in Detail

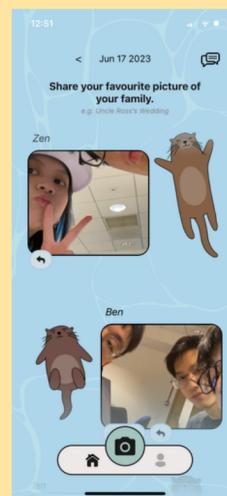
Consistent and convenient interactions build meaningful connections

Thin Slice #4: Picture Prompts

As a **loving child**, I want to **answer prompts with pictures** so that I can easily and intuitively **convey my feelings in a visually expressive way**.

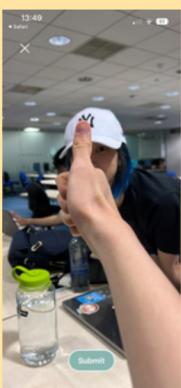
Allowed users to submit pictures as prompt answers. However, interviewees felt that prompt-based interaction is rigid, and wanted something more spontaneous.

"People want to share more...but there isn't an easy and convenient way to do that. Prompts are nice, but I also want something more casual and spontaneous than a daily prompt-and-answer."



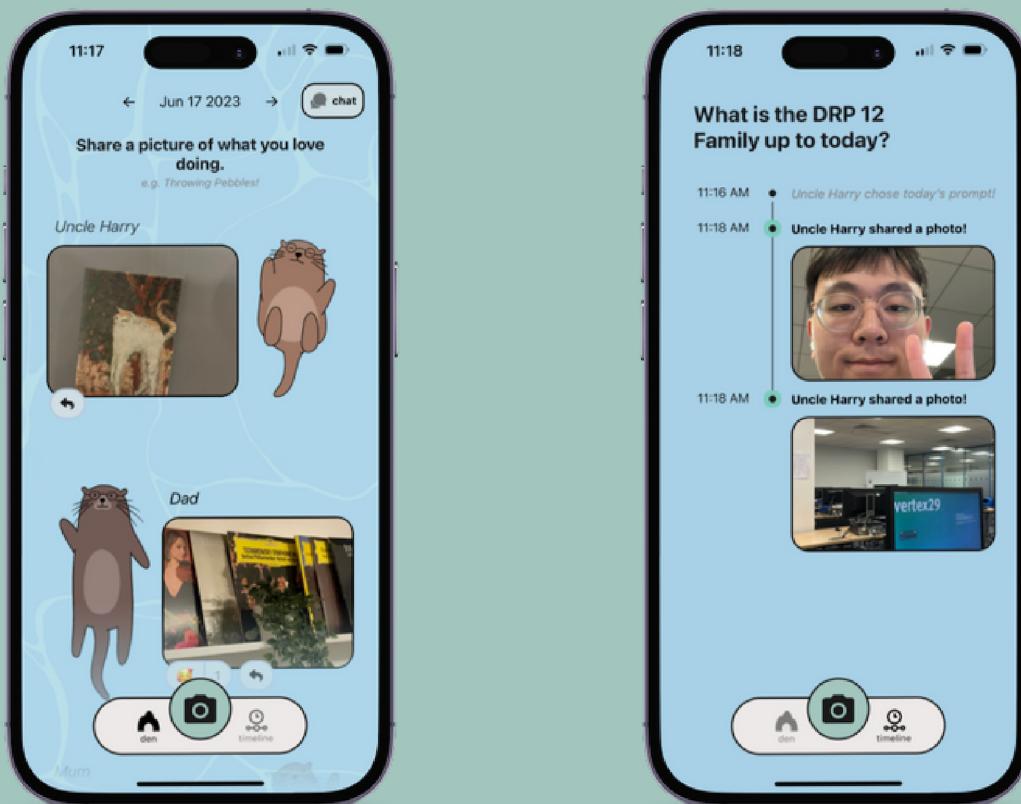
Thin Slice #5: Family Timeline

As a **busy working parent**, I want to be able to **easily share pictures of my daily activities** so that my children can be **updated about what's going on in my life**.



Implemented a family collaborative timeline where members can submit photo snippets casually and spontaneously throughout their days, and see other family members' photos in a timeline format.

Final Product



Contrast

Lucas's Family Before Our Application



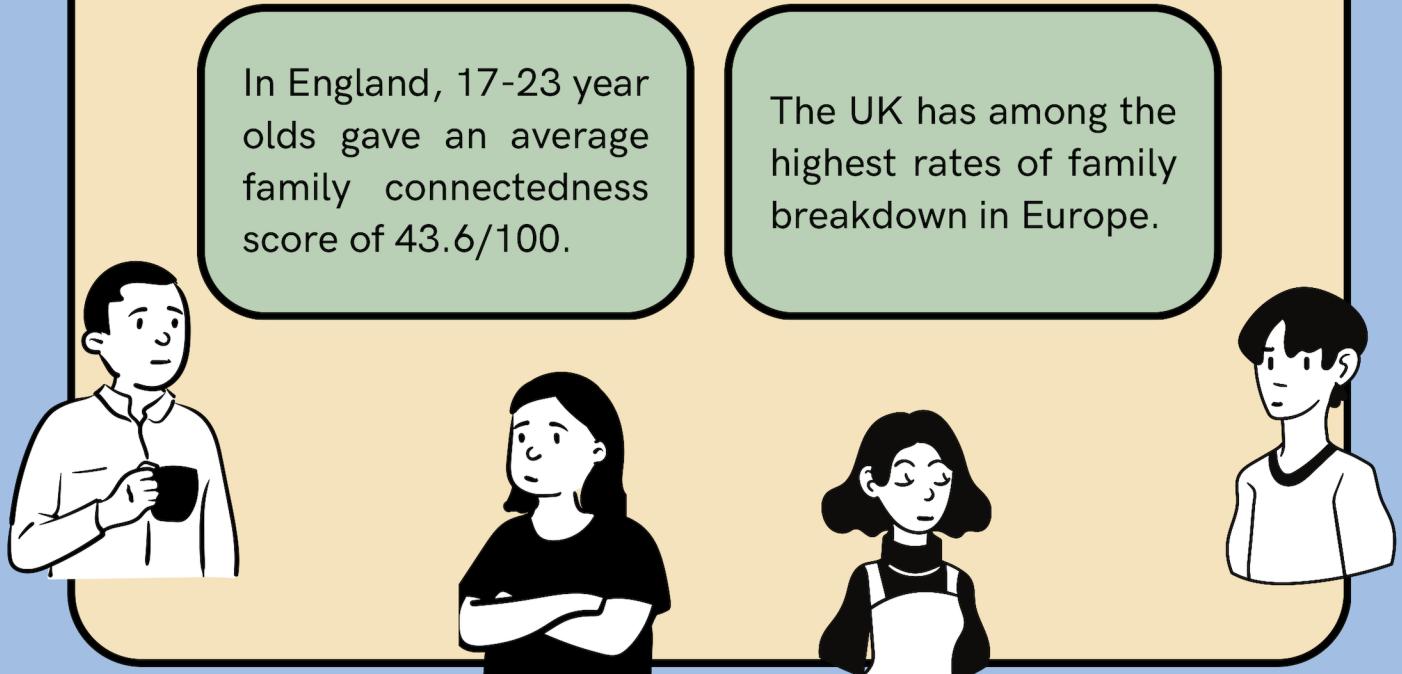
Lucas's Family After Our Application

After all this time, I realised my parents aren't out to get me. I've come to understand their love a little more.



What can we learn?

Lucas's Family Before Our Application



Lucas's Family After Our Application



The main factor of improving family relationships, reported by National Library Of Medicine is the importance of clear communication.

Impact Asset Ottertunity



"Take the Ottertunity: Building Lasting Family Connections through Meaningful Conversations."

"Ottertunity has been a game changer for me. I always struggled with feeling disconnected from my family due to our busy schedules. But this app has transformed our dynamic completely. Now, we have a dedicated space to engage in deep conversations, share our thoughts, and truly understand each other's perspectives. It has brought us closer together, replacing the frustration I felt with a sense of fulfillment and connection. **Ottertunity has truly been a lifeline for our family.**"

- Sarah, mother, family of 6

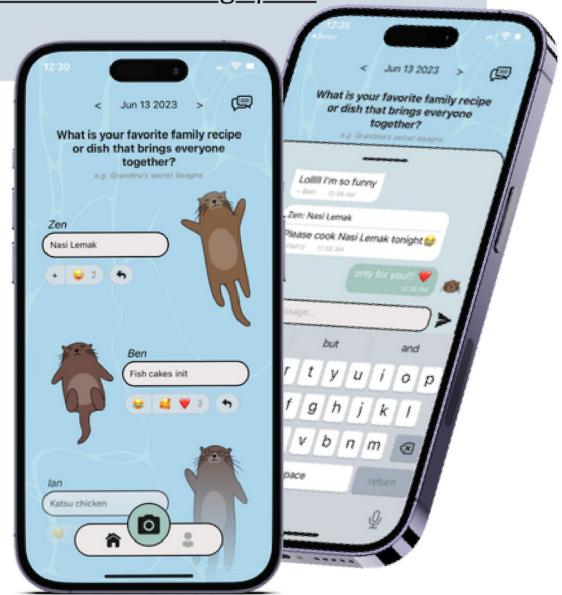
90%

of users found that Ottertunity's collaborative timeline feature encouraged family members to share updates and feel more involved in each other's lives.

I used to worry that my teenage son would never open up to me. But Ottertunity has made it easier for us to share our thoughts, feelings, and experiences. Ottertunity has become our virtual bonding space.

- Tony, working father

Make
technology
work for
your **family**,
not against it.



Technology and [Family] Relationships

A survey revealed that 70% of people reported that technology interrupts family time at least occasionally. In today's digital age, the pervasive presence of technology interferes with familial interactions, resulting in difficulty in the fostering of meaningful connections. However, there is a solution on the horizon. Introducing Ottertunity, the family-centric app specifically designed to counteract the negative effects of technology on family relationships. By providing a dedicated space for families to connect and share, Ottertunity empowers parents and children to reclaim and prioritize quality time together. Ottertunity transforms technology from a disruptor to a catalyst for deepening family bonds, ensuring that every moment spent with loved ones becomes a precious opportunity for connection and growth. Even family counsellors are recommending their clients to try out this new app!