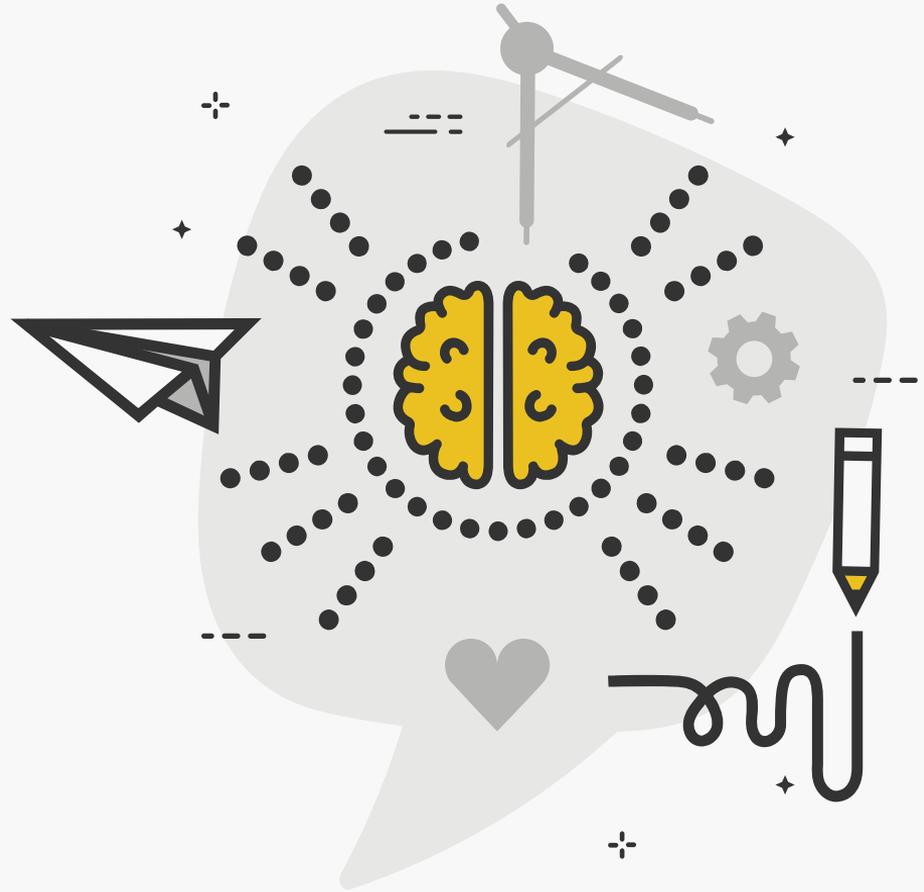


Needfinding for Older Adults

Team 2: Eliza Bazakas, Hera Lasseau,
Ngoc Tran, Renn Su



Meet Our Team



Hera Lasseau

Computer Science '25
Motueka, NZ



Renn Su

Computer Science '26
Vancouver, Canada



Ngoc Tran

Computer Science '26
Austin, TX



Eliza Bazakas

Computer Science MS '26
ChemE B.S. (MIT)
Berkeley, CA



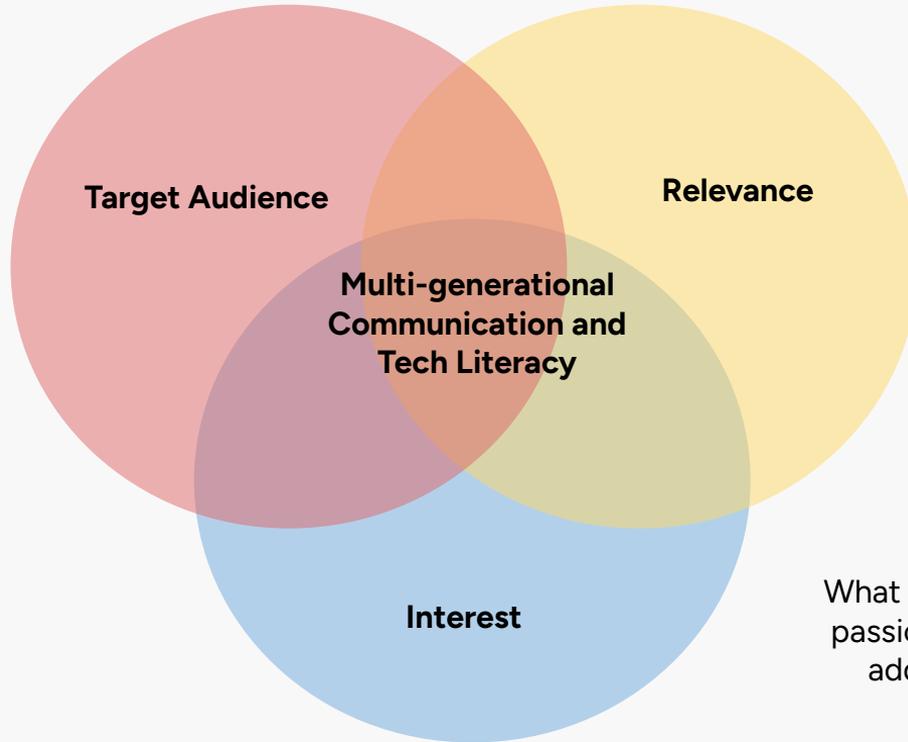
01

Needfinding methodology

Finding participants, guiding questions, types of users /
demographics, team roles, apparatus

Domain Selection

How can we more effectively help older adults in particular?

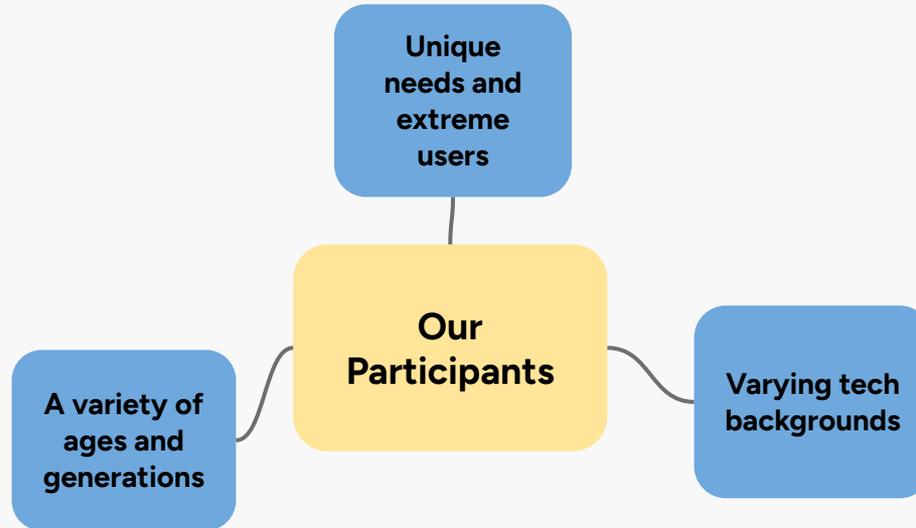


What types of ideas do we find relevant to our lives and to those around us?

What are we most passionate about addressing?

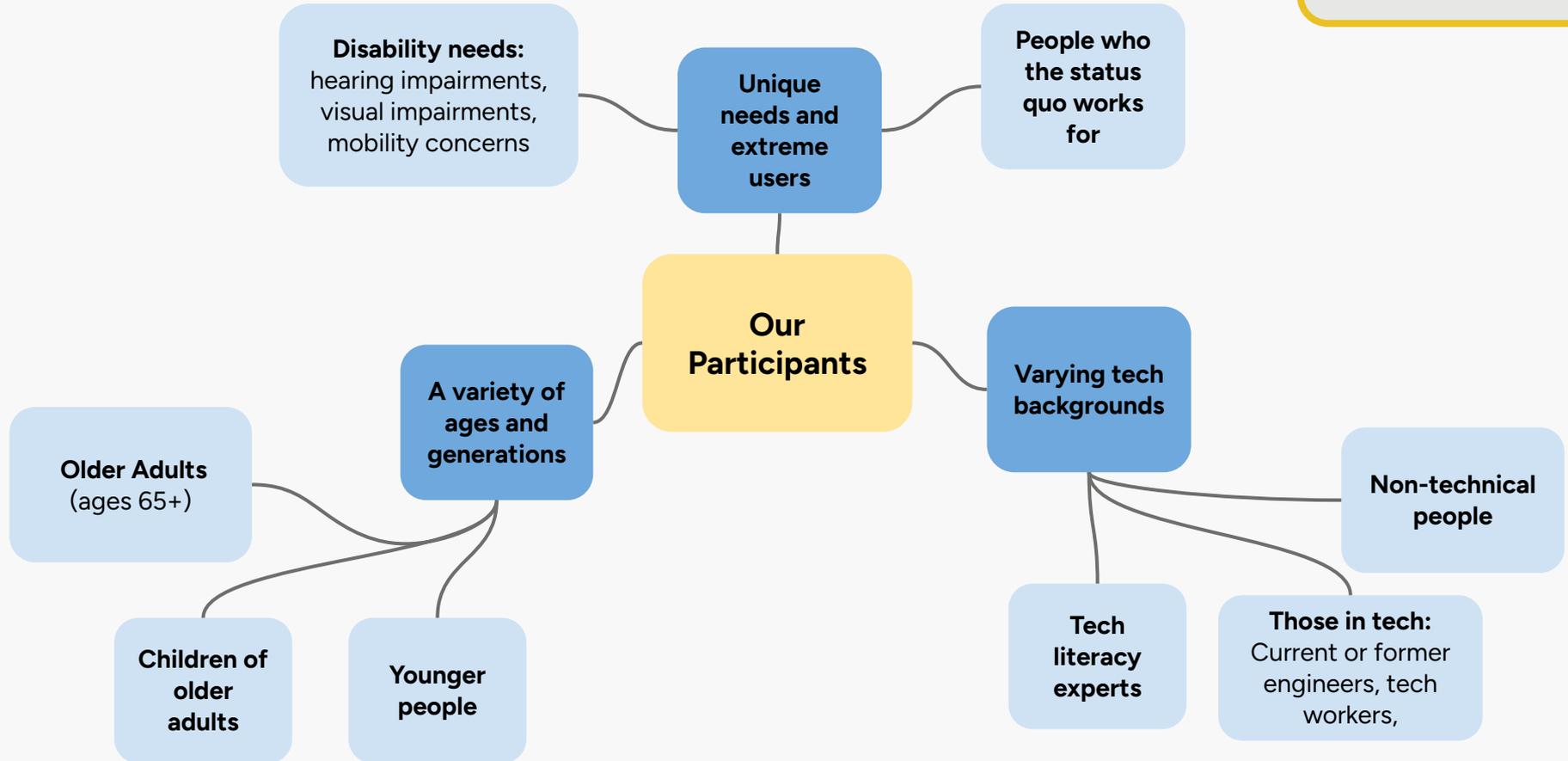


Finding Participants



Finding Participants

Location of Interviews:
in-person, Bay Area-based



Guiding Questions

Connection through Tech

How do you use technology to connect with your generation or other generations?

Tech Experiences

What specific types of technology do you feel confident using, and which ones do you avoid?

Desires in Tech

Are there any technological devices or features that you wish existed?

Personal Experiences

What are the most challenging parts about trying to communicate with older relatives? What is the easiest part?

Tech Difficulties

What are the most common complaints about technology from older people?



Our Participants / Interviewees



“Isabella” (avg. / non-user)

21 y/o woman who does a tech literacy project @ Veterans Affair (VA) Hospital



“Harold” (extreme user)

65+ y/o man who works in teaching, wears hearing aids and has vision problems



“Jane” (avg. user)

74 y/o woman who volunteers at the United Effort Organization* for Hope’s Corner



“Helen” (avg. user)

65+ y/o woman who is a retired engineer

* Non-profit organization that helps with homelessness and housing



We also talked to...



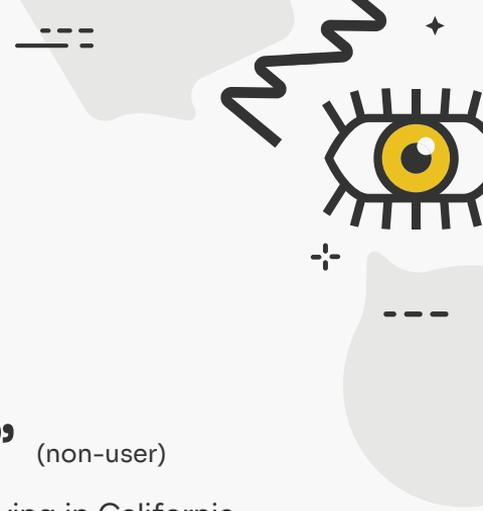
“William” (avg. user)

80 y/o man from South Carolina,
father of David, 10 minute
interview



“David” (non-user)

48 y/o man living in California,
son of William, 10 minute
interview



02

Interview results & Analysis

Results: Pictures, relevant artifacts, key quotes, and surprises

Analysis: Empathy maps, highlights, observations, and inferences

“

“You can make the text larger, but that doesn’t always apply to every app on the iPad. For the keyboard it’s hard, because **it’s really hard to increase the size of the keyboard**. It’s really hard for them to see the text, and so if they’re able to find **the microphone button**, that’s what we try to do, but sometimes they have trouble speaking as well.”

“I mean, even if you look at Facebook... like the UI here is flawed. Even I struggled with like finding Facebook marketplace. Like what are all these symbols? ... Like how do I find my messages? ... Like I have to dig around the app just to find that. **Even for me, who doesn’t struggle with technology, I was confused. So the people I try to help are even more confused.** They don’t even know what the messages are suppose to look like, let alone what they’re not suppose to look like.”



“Isabella”

in-person, 35 mins
21 y/o, tech literacy expert
(avg. / non-user)

Technology Difficulties

"technology is a struggle for them for various reasons, not just because they are old"

Opinion on Elders

older adults have more past time and entertainment on iPads can help with loneliness and boredom

frustrated with inaccessibility of some apps and poor UI/UX

Technology Difficulties "technology is a struggle for them for various reasons, not just because they are old"	Technology Difficulties - "prefer calls, typing is difficult" - "even calls, they might struggle with who called them, who called me"	Main Usage "all of them like music or Youtube" using the internet to look at the news, maps, email	Interfaces email is easier for people who have experience, but texting is easier in general due to easy UI depends on previous experiences	Teaching Tech - swiping exercises: "they were able to retain how to swipe, that motor memory stayed"
Technology Difficulties - "they don't know how hard to tap [the screen]" - "how big the text is" -> some apps don't have accessible text sizes - "typing is really difficult for them"	Technology Difficulties signing into things is a big limitation for older adults when using applications	Main Usage - keep in contact with family / friends, many are lonely - "in a more private session, it would have been possible to teach about Facetime"	Interfaces "the concept of Facebook is a little difficult" (they use Facebook marketplace)	AI and Tech - a patient used AI to translate their spoken language - AI bots sometimes don't understand or give what you need
Technology Difficulties - "A lot of what they struggle with is that they don't know how hard they have to tap" - keyboard hard due to size, microphone might be better	Interfaces - "The UI at Facebook is flawed" lots of digging around - some icons are not intuitive	Interfaces - "Hidden in layers" makes things difficult - With email, boxes and folders can make finding mail hard	Teaching Tech - "give them the paper and they can follow the steps" - step-by-step to teach	

Says
Does



"Isabella"
21 y/o who does a tech literacy project at the Veterans Affairs (VA) Hospital

Thinks
Feels

UI/UX some UI, even from large companies fail to be accessible and overly complex	UI/UX some icons that are understandable to youth may be hard to decipher for other audiences	Opinion on Elders older adults have more past time and entertainment on iPads can help with loneliness and boredom	Memory muscle memory build up is important for dementia and memory-loss impacted patients
Memory too many sign ins is hard due to memory issues, prominent in older adults	Opinion on Elders physicality is easier for older adults to understand (i.e. they like map apps)	Opinion on Apps some apps might just be redundant, too much coding energy expended for no reason (like an AI bot to practice writing emails to)	UI/UX if the UI is bad for even her, then its even worse for older adults to use
	UI/UX a majority of apps aren't built for older adults, but rather different audiences	UI/UX many different moving parts that can become confusing (call-> contacts, navigating buttons, etc.)	

Interview Action smiles when we introduce that we are building an app to help older adults with tech literacy	Interview Action hand motions to try to explain things to us		
Interview Action scowls when talking about personal experience with Slack combining workspaces (less organized)	Interview Action becomes less tense when talking about personal experiences and views (Roblox UI, Slack, Instagram), more jokes and expressive movement	Outside of Interview helps with swiping exercises	Outside of Interview wrote / writes curriculum for tech literacy program
Interview Action generally curious about the entire conversation, straight face most of the time	Outside of Interview teaches older adults how to use iPads, mostly for email and entertainment	Outside of Interview writes notes to explain step-by-step instructions on how to use apps	Outside of Interview utilizes the microphone when possible when helping older adults

	empathetic with loneliness of older adults	frustrated with inaccessibility of some apps and poor UI/UX	
thoughtful of older adults' and what they might be going through	disconnect with older adults due to generational differences	annoyed at poor UI changes that make things require nested folders	happy about the potential for new technology that can help older adults
said that some older, homeless adults might not have a place to shower or sleep	feels the need to be patient with the older adults she works with	tired of small text or inaccessibility in some core aspects of technology	serious / passionate about the work she does

Insight

The key issues older adults have with technology are: font size, screen-responsiveness, and navigating apps. These issues stem from vision impairment, mobility and able-bodiedness, memory-loss, and confusing UI.

Need

Interfaces must cater to needs of older adults that may suffer from any of the listed issues by having bigger fonts, more intuitive UI (less buttons, not nested functionality), and flexibility with microphone options.



“Isabella”

in-person, 35 mins
21 y/o, tech literacy expert
(avg. / non-user)

“

Do you find it frustrating? “Oh constantly, so constantly... different companies are better or worse at making their websites user-friendly but [during an automatic payment experience]... they gave me **all these different options and none of them gave me the [correct one].**”

Everything wants you to create an account, even if you’re going to do just one transaction or something. How many usernames and passwords can you possibly create? Why do I need an account just to do this?



“Jane”

in-person, 60 mins

74 y/o, volunteer at United Effort Organization
(avg. user)

Says
even just sending an email or filling out a form would be easier than logging in, getting 2FA, sending a verification text, etc

Does
Avoid giving out her personally identifying information when possible

Thinks
That modern services have an unnecessary reliance on complex login flows

Says
even just sending an email or filling out a form would be easier than logging in, getting 2FA, sending a verification text, etc

Says
She would prefer to fill out and mail a physical form

Says
There's not 400 people you need to stay in touch with

Says
She texts everybody she actually wants to communicate with

Says
It's increasingly the case that she can't just call companies for stuff

Says
She's worried text will become like email, overwhelmed by spam

Says
She doesn't really feel the need for security for non-essential accounts

Says
Who cares about acquaintances oversharing?

Says
she wishes she could just talk to a human when trying to get things done online

Says
She found out what one of her nephews was doing from her daughter, who when asked said she found out on Facebook

Says
She doesn't like giving out her phone number

Says
She prefers text to voice or video calls

Says
Everything wants you to create an account these days

Says
It seems impossible to get certain things done online

Does
Works to help tech illiterate people do online paperwork

Does
Avoids using social media

Does
Communicates through texts where possible

Does
Stick with challenging digital flows for hours before giving up

Does
Avoid giving out her personally identifying information when possible

Does
Keep in touch with her loved ones through others who use social media

Does
Use the camera on her phone, but not much else

Does
Put up with the things that frustrate her because she has to

Does
Use online banking and other services regularly

Does
Have an awareness of the profit incentives behind bad UI/UX



Says

Does

Thinks

Feels

Thinks
That she shouldn't need to make an account for every website

Thinks
Companies give her unnecessarily difficult hoops to jump through

Thinks
Getting things done would be easier if she could use more direct technology

Thinks
Digital technology is inadvertently gatekept from certain people

Thinks
Most people care more than her about social media

Thinks
That digital communications make it too easy to send spam

Thinks
That she should have the option of doing things on paper

Thinks
That people shouldn't use calls where text suffices

Thinks
That modern services have an unnecessary reliance on complex login flows

Thinks
That use of tech has been made necessary to get by in the modern world

Thinks
That technological literacy is closely tied to education

Feels
Frustrated (several times per week when using tech)

Feels
Exasperation with overly complex login flows

Feels
Dismissal of the oversharing of social media users

Feels
Exhaustion over the constant need to make new accounts

Feels
Annoyed (that people are still using Zoom so much now that the pandemic is over)

Feels
Pity for her clients who are trying to navigate legal procedures without technological literacy

Feels
Concern about the future of communication technologies

Feels
Petrol (metaphorically, dealing with passwords, account creation, verification, and other security procedures)

Feels
Disdain for people who continue to use Zoom unnecessarily

Feels
Reluctance to share her personal details with more websites

Insight

Complex digital procedures like login and sign up flows are often exclusionary and frustrating, especially as there are so many different websites / apps that require them.

Need

Digital flows should be simplified to the greatest extent possible.



“Jane”

in-person, 60 mins

74 y/o, volunteer at United Effort Organization
(avg. user)

“

“**Things are designed now for cell phones, for children who have grown up on them.** And have little fingers and lots of practice... and lots of time to go exploring... I’m not living in a dorm, I’m not in school where I have people around me all the time [to help with my tech problems].”

“Can you see this button on your screen? No I cannot... yes we can try but **I can’t see what you’re seeing.**”



“**Harold**”

in-person, 30 minutes

65+ y/o man who works in teaching, wears hearing aids and has vision problems (extreme user)

Interview Action

Points at hearing aid when explaining reasons for being frustrated by modern tech

- "I'm trying to do my job, not trying to play with the computer" (3:16)
- "UI sucks!" (5:15)
- Does not like "smart tech" i.e. car hearing aids connecting to phone apps
- Things are designed for "children who have grown up using phones" (6:21)
- Was "furious" due to tech inconsistency (7:09)
- It's hearing aid makes some technologies hard to use
- "My phone doesn't tell me [when there's an update]"
- "there's not enough context switch given... not enough context to be conversation" (for older people) "In the office, in the classroom, you have more context."
- "Can you see this button on your screen [he] cannot... yes we can try but I can't see what you're seeing."
- "There's no way for me to touch"
- "Since COVID I have called my mother every single night."
- "Oh... interesting... you can't hear me? Is there background noise?"

Positive of Tech

Being able to connect with other people (whether through phone, text, etc.) is empowering

- Outside of Interview: Zoom call his students despite confusion
- Interview Action: Points at hearing aid when explaining reasons for being frustrated by modern tech
- Interview Action: Winces when the loud noises of a water moving a chair against concrete occurred
- Interview Action: Frowns when bringing up frustrating UI changes
- Interview Action: Sighs when asked to give his opinions about smart technology
- Outside of Interview: Helps his older mother navigate technology when she is confused
- Outside of Interview: His husband sometimes needs to assist him in navigating things that are difficult to use
- Interview Action: Looks at Helen when unsure how to answer questions
- Outside of Interview: Calls his mother frequently and wants to keep in touch with her
- Interview Action: His husband sometimes needs to assist him in navigating things that are difficult to use

Stressed when confusing UI/UX prevents him from effectively doing his work and connecting with others



"Harold"
65+ y/o man who works in teaching, wears hearing aids and has vision problems

Says
Does

Thinks
Feels

- UI/UX: UI is very inconsistent across platforms and apps
- UI/UX: UI/UX is actively getting less accessible and less intuitive
- Accessibility: Many companies fail to consider the needs to older adults
- Accessibility: Subtle indicators relying on sound and sight don't work for everyone
- UI/UX: A lot of design is focused on younger people
- UI/UX: It can be very hard to type messages on a small screen
- Positive of Tech: Being able to connect with other people (whether through phone, text, etc.) is empowering
- Positive of Tech: Tech empowers him to continue working his job
- UI/UX: Sometimes UI/UX no longer prioritizes intuitiveness
- Accessibility: Some people prefer spoken input rather than typed
- UI/UX: Finds that some of his devices do a poor job communicating information to him
- UI/UX: Different generations have different technological needs

- Pessimistic of new changes and developments in tech
- Confused by constantly changing features
- Frustrated that his disabilities limit tech access
- Interested by those who design with older people + those with disabilities in mind
- Tired of adverts and updates for phone, car, hearing aids
- Concerned for other people who cannot use technology well
- Happy when technology is inclusive and not just catered around younger people
- Stressed when confusing UI/UX prevents him from effectively doing his work and connecting with others
- Curious about whether there would be better ways to reduce his concerns
- Annoyed by unpredictability and fickle nature of messaging email
- Relieved when technology works well for him and adapts to his needs
- Fearful of smart technology being invasive in his day to day life
- Joyful when he finds solutions to tech-related problems
- Angry when his hearing aids can play active roles

Insight

Accessible design can empower those with disabilities to feel more capable of seeking connection and community. Older adults and those with disabilities may feel that technology is not designed with them in mind.

Need

Older adults with disabilities want reassurance that the technology they use supports their needs, and that there are support systems in place for their questions and concerns.



“Harold”

in-person, 30 minutes

65+ y/o man who works in teaching, wears hearing aids and has vision problems (extreme user)

“

“I don't have challenges with other folks [who have different] tech backgrounds... **sometimes [it's] a lot faster to just talk.** There's too much press to not pick up the phone and just talk... With family meetings we'll do Zoom... **it's nice to see a face.**”



“Helen”

in-person, 30 mins

65+ y/o woman who is a retired engineer
(avg. user)

Accessibility

Easy to feel out of the loop after new features and updates

Hopeful that people across generations and geographical locations can communicate with each other digitally

Nostalgic for times when younger people were not scared to use the phone and talk to people verbally

A lot faster to "just talk" (19:38)	8 vs 10 inch tablets completely different	Worked in cybersecurity and open source compliance	Search engines such as Google are not good for learning tech	Wants app update logs to be more transparent
Used dual system to help mother + those older than her with tech	"Dark colours and [lack of] contrast" are big issues (5:39)	"Platform" depends on who I'm talking to" (16:34)	"Gen Z prefers quick turnarounds" but text is similar to email in that you don't need an immediate response... it's not a real time conversation. Date and time... is very strange.	"Things are so different between PC vs tablet vs phone"
"I don't have challenges with other folks [who have different] tech backgrounds... sometimes a lot faster to just talk. There's too much stress to not pick up the phone and just talk."	"If it's trying to just communicate more than a two sentence, I don't want to [use texting]."	"With family meetings we'll do Zoom... it's nice to see a face."		

UI/UX Some technology is actively getting worse	UI/UX Disagrees with a lot of new features	Accessibility Many companies fail to consider the needs of older adults	Accessibility Easy to feel out of the loop after new features and updates	UI/UX She used to work as an engineering but current tech confuses her
UI/UX People with accessibility needs such as Harold and her mother often do not get the technology adaptations they need	Positive of Tech Does not find technology overall to be a negative just the way it is used	Positive of Tech Technology is helpful when it is consistent and reliable	UI/UX Finds that technology both connects and alienates people	Accessibility Some people prefer spoken input rather than typed
			UI/UX Not everyone has the mobility to type on small keyboards	UI/UX It is not helpful for designers to just assume what older people want

Says
Does



"HeLen"
65+ y/o woman who is a retired engineer

Thinks
Feels

Outside of Interview Helps her mother and those even older than her with technology	Interview Action Gestures when comparing dimensions between two hypothetical screens to explain UI/UX doesn't work across screens			
Interview Action Points to her glasses when mentioning how low contrast and small text brings difficulty	Interview Action Shakes head when bringing up frustrating UI changes	Outside of Interview Tries to use the same interfaces to show people how to use technology	Interview Action Paces back and forth	
Interview Action Points at Harold's hearing aids when talking about accessibility needs	Outside of Interview Uses technology to connect with younger people an older people alike	Outside of Interview Prefers to hear the voices of people she's talking to rather than text her thoughts	Interview Action Crosses arms when talking about how UI/UX is actively getting worse	Interview Action Nods enthusiastically when asked to bring up opinions for our interview

	Disappointed by recent developments in UI/UX	Disillusioned that her engineering background doesn't help her understand modern tech	Tired of updates and releases that are non-transparent to users
Fearful of security risks, data leaks, and other risks incurred by using tech	Nostalgic for times when younger people were not scared to use the phone and talk to people verbally	Concerned on the behalf of those with more specific needs	Joyful when she can empower people to connect with one another better
Interested in finding better ways to help those with tech literacy issues	Scared that UI/UX is going to continue de-prioritizing older adults	Angry that there is inaccessibility in some apps	Anxious that she would not be able to see some tech as well as before
			Hopeful that people across generations and geographical locations can communicate with each other digitally
			Outpaced by young people with more digital familiarity

Insight

Conventional forms of communication among younger people such as texting or emailing can feel impersonal and alienating to older generations. There is more connection and fulfillment when hearing a voice and seeing a face.

Need

Older adults want ways to see and hear people when interacting with them.



“Helen”

in-person, 30 mins

65+ y/o woman who is a retired engineer
(avg. user)

“

1. Current technology makes it easy to **stay in touch w/his son**
2. “More bang for [his] buck” to use video call vs phone or text
3. Feels that **existing options “work for [him]”** (e.g. Zoom)



“William” (avg. user)

80 y/o man from South Carolina, father of David, 10 minute interview

1. **Able to help with his father’s technology concerns** despite living far away from him
2. Believes **clear instructions** to be important for older users



“David” (non-user)

48 y/o man living in California, son of William, 10 minute interview

Week 1 Findings

- 1 Accessible UI should include microphone options, bigger fonts, and less nested folders / less clicks to do a task.
- 2 Older adults like physicality– the physical presence of things – for not only human interactions, but also for things like papers and documents.
- 3 Older adults with disabilities want to be heard and considered when technology is being designed.
- 4 Overly complex digital flows are difficult and exclusionary for older adults, especially for those who may not have their own devices.



What's Next? – Future Steps

- 1 Expand our scope to consider different demographics of older adults, with different needs (language barriers, other forms of disabilities, etc.)
- 2 Narrow down the direction of our app and how it can fit the needs we found this week.
- 3 Generate HMW statements and begin the next steps towards experience prototyping.



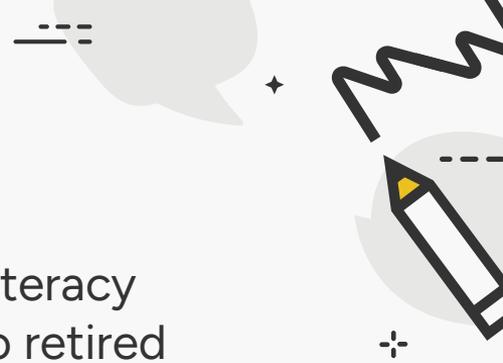
03

Summary

Key learnings and future steps

Summary of This Week

- We had **three longer interviews** with a young tech literacy expert, an older tech literacy volunteer, and with two retired engineers.
- We had **two shorter interviews** with an older adult and his son.
- We learned **what older adults need** in technology and **what they find difficult**.
- We identified ways we can **address these needs**.



04

Appendix

Sources

Additional Assign 1 Deliverables

Consent Forms

[Link](#)

Empathy Maps Folder

[Link](#)

Image and Graphic References

Placeholder Images for Interviewees: [Figma Notion-Style Drawkit](#)

Slide Theme: [Design Thinking Workshop Slides - SlidesGo](#)

Team member photos provided by team

Interviewee photos provided by interviewees and used with permission