

Step Saver

Reducing Caregiver Tech Burden

Shannon Bell

UX Design Capstone



Problem Statement

Caregiver Fatigue

Caregivers often find themselves serving as the “tech support line” for their aging parents, frequently at inconvenient times and with little backup. This leads to frustration, guilt, and repeated interruptions to their own work and family life.

How does this problem impact Elder users?

- Elder users experience frustration and anxiety when they can't complete digital tasks independently.
- Loss of confidence and avoidance of technology, limiting access to health, financial, and social services.
- Increased dependency on family members, which can affect their sense of autonomy and dignity.

Research Methods

Desk Research

Reviewed academic literature, reports, and existing apps addressing tech challenges for older adults and caregivers.

Purpose: Establish baseline understanding and identify gaps/opportunities.

User Interviews

Conducted with older adults (to understand digital task struggles) and caregivers (to capture their support experience).

Purpose: Gather empathy-driven insights, identify pain points, and uncover real-life contexts and most importantly understand how the experiences impact one another.

Usability Testing

Tested mid-fidelity prototypes.

Purpose: Validate design decisions, uncover friction points, and iterate based on feedback.

Desk Research and Competitive Analysis

| Product / Service | Description | Strengths | Limitations | StepSaver Opportunity |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Techboomers  | <p>Web-based tutorials that teach older adults how to use websites like Facebook, Netflix, YouTube, with large fonts and drop-down menus (arXiv, Wikipedia).</p> | <p>Clear, accessible tutorials for common online apps. No registration required.</p> | <p>Passive; often outdated. Requires switching context from learning to task.</p> | <p>Editable step-by-step on-demand guides, shareable personalization, integrated into device UI.</p> |
| GrandPad  | <p>A tablet built specifically for older users, featuring simplified interface to support video chats, news, messaging (Wikipedia).</p> | <p>User-friendly hardware with caregiver setup options. Excellent UI design for seniors.</p> | <p>Requires dedicated device, limited to pre-installed apps. Expensive.</p> | <p>App-agnostic, works across devices—including caregivers' downloads or smart TVs.</p> |
| Circle of  | <p>Family caregiving coordination: tasks, volunteers, communication</p> | <p>Builds a shared care management hub — “it takes a village” approach</p> | <p>Doesn't provide task tutorials or tech step-by-steps</p> | <p>builds off the community aspect of elder needs but with more detailed guides for completing tasks, fostering independence</p> |
| StepSaver  | <p>Enables caregivers to record step-by-step screen guides (voice + visuals), share with older users, and optionally integrate with smart TVs for better visibility.</p> | <p>Personalized, reusable guides; sharable; supports remote help and TV playback.</p> | <p>New solution, may not be a trusted brand with some users.</p> | <p>Fills mentorship gap with scalable, low-lift solution—makes support intentional and repeatable.</p> |

User Interviews

Participant Demographics

- Total Interviews: 6
- Age Range: 30-69
- Gender Distribution: Male 30%, Female 70%,
- Caregiver 50% , Elder User 50%

Audience Selection Rationale

- A 50/50 split ensures that both perspectives are equally represented. Caregivers provide insights into the burden, guilt, and friction of tech support, while older adults highlight the barriers and anxieties that drive this burden in the first place.
- Though the participant set is skewed slightly toward female, this is mainly due to participant availability.

Affinity Map Analysis

Capability/Need for guides

Lack of Tech Confidence-
"I wish I knew more about
(t technology)"

"I dont feel confident at all
using apps"

"It would help if there was
something that said "this
is how you do this"

"I usually call my daughter
for help"

User Guides- "I wish there
was some type of step by
step guide to help me with
some of the apps... they
seem cool"

It would be amazing if I
could just see what she
sees and guide her screen
like customer service
does

Trying to help over the
phone is exhausting. She
says, "I don't see that
button," and I'm like... I
have no idea what screen
she's on.

2 out of 3 users mentioned wanting a visual guide or more detailed onboarding or step by step guides during troubleshooting.

2 out of 3 users mentioned they weren't very confident using technology. though 1 out of 3 mentioned feeling somewhat comfortable they still relied on their children for assistance with certain tasks.

3 out of 3 users mentioned relying on their children to assist with technical tasks they have trouble with.

Television Apps



Television Apps Exploration

"When Im using the
firestick, and things are
not working.....I
sometimes try to find
things on a new "network"

When Im using the remote
, sometimes it doesn't
seem to do what I want it
to do.

2 out of 3 ppt express
frustration with TV apps.

Sometimes on the TV I
just close it out(app) and
restart. Sometimes that
does the trick.

I gave my mom a firestick
that she wont use unless
Im there. She misses out
on so much entertainment
because she is afraid to
explore it on her own.

2 out of 3 ppt mentioned issues with TV applications, or general operation. From add-ons like firestick to the remote and smart TV apps.

Accessibility Challenges

User Accessibility Challenges

Challenges with Vision- "I
cant really see some of
the things I need to see."

The Importance of
Simplifying Language- 3
out of 3 ppts had issues
articulating technical
terms.

"I dont know what some of
those words mean"

3 out of 3 participants had trouble articulating technical terms, which may present challenges when exploring or troubleshooting applications.

1 out of 3 ppt mentioned having trouble seeing physical cords and onscreen dialogue.

1 out of 3 ppt brought up vision as an obstacle when using or troubleshooting tech.

I would just try another
"network" What do you
mean by network like
....trying to find another
channel on the firestick.
ppt referring to apps on
firesticks as networks.

Password Issues-
"I have trouble with codes
and remembering
passwords."

I wish i could remember
the steps after they have
been shown to me.

"I keep a handwritten list
of my mom's passwords,
but she still gets locked
out somehow. I'm always
resetting something."

My mom complains about
possibility of her carpal
tunnel interfering with her
touch as it relates to touch
screens and touchpads.

Repetition

...ing, but I
end up explaining the
same thing over and over
—streaming apps, online
check-ins, text settings,
you name it."

"I've shown my dad how to
join a Zoom call at least a
dozen times. Every time,
it's like starting from
scratch."

Sometimes I just do it
myself, to speed things
up. But I know this isn't
helpful in the long run.
And I'll end up doing it
again.

Caregiver guilt and frustration

"She feels bad asking, and
I feel bad when I can't
drop everything to help.
There's always guilt on
both sides."

"Sometimes I get short
with my mom and
instantly regret it. She's
trying, but it's hard to stay
patient after a long day."

"I feel bad rushing through
explanations, but I'm
usually helping during a
lunch break or between
meetings."

3 out of 3 caregivers mentioned having moments of frustration or guilt due to inconveniences tech help may cause during the day

Purpose

Grouping qualitative data

Goal

Identify patterns and themes

Key Interview Insights

Elder & Caregiver Perspectives

Elder User Insights

- All participants relied on someone for technical help.
- Most participants expressed issues with tech language or struggled to explain technical issues.
- Most participants describe smart TVs, and streaming platforms as a source of frustration for them.

Caregiver Insights

- Tech help frequently takes place at inconvenient times
- Helping remotely can be especially challenging
- Caregivers find it easier to do the task for their elder.

Overarching Themes

- Frustration on both sides for different reasons
- Technology adoption varies greatly by individual
- Television being a commonly used technology and area of frustration.

Personas



"I wish there was an easier way to do these things but I always end up calling my daughter"

AGE 38

JOB TITLE Entrepreneur

STATUS Married

LOCATION Atlanta, GA

DEPENDABLE

PATIENT

EMPATHETIC

RESOURCEFUL

Lisa

Lisa is a 38-year-old entrepreneur and dedicated mom who values balancing work and family. She is committed to empowering her mom to confidently handle digital tasks independently, fostering a stress-free routine for both of them.

GOALS

- Help mom in respectful way
- Doesn't want to disrupt her family time
- help mom feel more independent

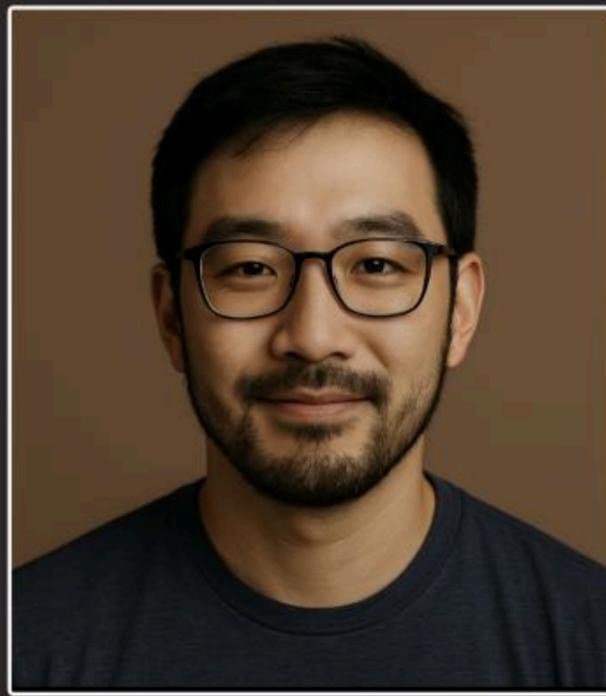
TASKS

- Answer tech-related calls or texts from her mom (often while multitasking)
- Walk her mom through steps to log in, stream TV, check medical records, or reset passwords
- Record or explain instructions over FaceTime or text (usually more than once)
- Keep a shared list of passwords and device instructions updated
- Try to anticipate repeated issues and simplify future tech interactions

PAIN POINTS

- Help requests often arrive at inconvenient times (e.g., during meetings, dinner, or while parenting)
- Feels guilty when she can't respond right away or gives rushed support
- Repeats the same tech support over and over with no lasting solution
- Worries about her mom feeling helpless or frustrated
- No centralized system to provide long-term, repeatable support

Personas



"I just need my mom to feel confident helping the kids with tech when I'm not around—it would make everyone's life easier."

AGE 42

JOB TITLE Project manager

STATUS Married

LOCATION Atlanta, GA

RESPONSIBLE FAMILY-ORIENTED

RESOURCEFUL

Michael

ABOUT

Michael is 42 years old, a father of two, and works full-time in IT project management. His mom often babysits his kids, but her struggles with technology new technology (ie: the kids school apps) create stress for him. He wants to make sure she feels confident using the applications the kids need daily, so he can focus at work and date night without interruptions.

GOALS

- Ensure his mom feels confident managing kids' digital needs while babysitting
- Reduce interruptions during work or date night

TASKS

- Set up apps (e.g., school portals, streaming, video calling) for his mom to use with the kids
- Provide step-by-step instructions for recurring tasks (logging in, joining Zoom, streaming shows)
- Troubleshoot tech problems remotely (via calls, screen share, or sending written guides)
- Create lists of passwords and common troubleshooting steps to avoid repeated issues
- Teach his mom new digital tasks she'll likely need with the kids (e.g., helping with homework apps)

PAIN POINTS

- Gets calls during date night when his mom can't log in or navigate apps with the kids
- Feels guilty or frustrated when he can't help right away and worries his kids' schoolwork or routines suffer
- Constantly repeating the same instructions without lasting solutions
- Mom gets flustered, which makes it harder for him to guide her remotely
- Wishes for a system where his mom could quickly access reliable instructions on her own

Lisa's Journey Map Current State

| Stage | Goal | Action | Task List | Pain Points | Emotions | Opportunities |
|-----------------------------|---------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 1. Receiving the Request | Understand what Darlene needs help with. | Gets a call/text from her mom. | - Pause current work or activity- Ask clarifying questions- Gather device/app details | - Often happens during work or family time- Limited context from Darlene | 😐 Neutral → 😞 Stressed | - "Request Help" alert in StepSaver with context (app name, task) |
| 2. Diagnosing the Problem | Identify the exact barrier Darlene is facing. | Asks Darlene to describe what she sees. | - Listen and visualize the screen- Ask for screenshots or descriptions | - Hard to guide without seeing the screen- Descriptions are vague ("It's not working") | 😞 Confused → 😡 Frustrated | - Live screen share with annotation tools- Pre-recorded guide Darlene can follow |
| 3. Walking Through the Fix | Guide her step-by-step to the solution. | Talks her through the login and navigation. | - Explain each tap and menu- Wait for confirmation before next step | - Repeating instructions multiple times- Connection delays (phone, FaceTime) | 😡 Frustrated → 😞 Guilty (if rushed) | - Step-by-step replayable guide- Shared cursor or highlight on Darlene's screen |
| 4. Confirming Resolution | Make sure Darlene has successfully found results. | Asks her to read or describe what she sees. | - Verify correct page- Ask if she can view/download results | - Uncertainty if she's truly confident- Risk of having to repeat later | 😊 Relieved (if successful) | - End-of-task confirmation from StepSaver- Save guide for future |
| 5. Wrapping Up | Close the interaction without feeling rushed. | Says goodbye, returns to own work. | - Reassure her mom- Resume paused task | - Guilt if time felt rushed- No record of steps for next time | 😊 Relieved → 😞 Guilt (if interruption was disruptive) | - Automated "how-to" record for Darlene to use independently |
| 6. Preventing Repeat Issues | Reduce future calls for the same problem. | Thinks about how to make the task easier for Darlene. | - Consider writing notes- Recommend easier access | - Rarely time to create guides on the spot- Relies on memory for next time | 😞 Resigned → 😊 Hopeful (with StepSaver) | - Ability to create/save guides after helping- Persistent login and shortcuts for common tasks |

Lisa's Journey Map Future State

| Stage | Actions | Tasks | Pain Points (Minimized) | Emotions | Opportunities (StepSaver Features) |
|----------|---------------------------|-------------------------------------|---------------------------------|----------|---------------------------------------------|
| Start | Receives request from mom | Checks StepSaver for pre-made guide | Doesn't need to drop everything | 😊 | Guide library with search and share options |
| Explore | Reviews steps | Shares via text or TV | Avoids long verbal explanations | 😊 | Shareable link/QR code to replay guide |
| Resolve | Monitors progress | Receives completion notification | No uncertainty if mom succeeded | 😊 | "Guide Complete" alert |
| Complete | Returns to her work | Knows mom can replay if needed | No guilt over rushed help | 😊 | Always-available replayable instructions |

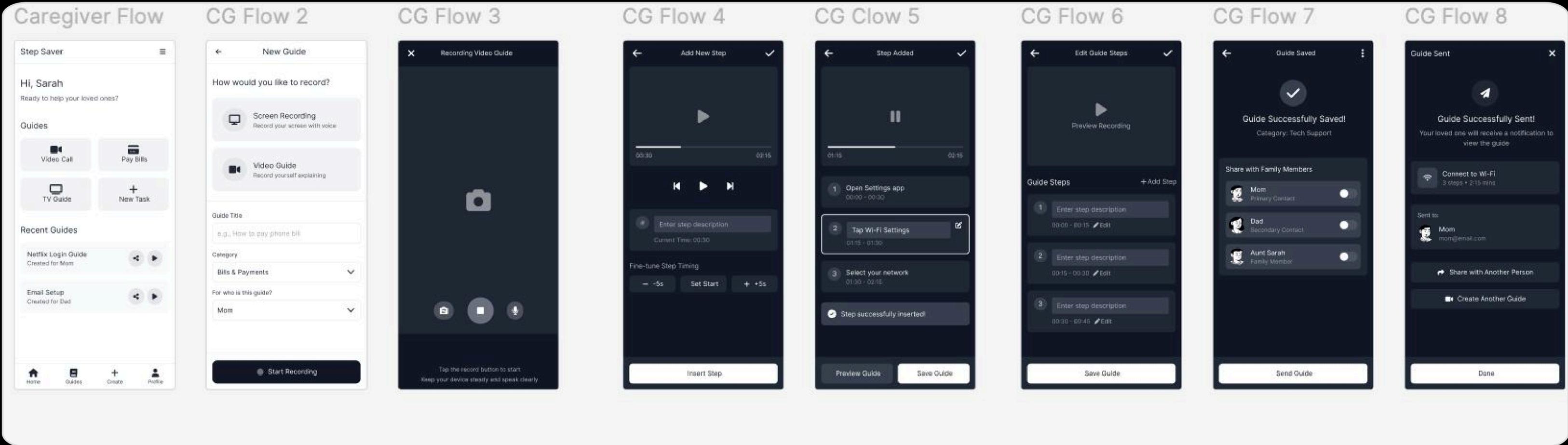
Michael Maps Current State

| Stage | Goal | Action | Task List | Pain Points | Emotions | Opportunities |
|-----------------------------|---------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 1. Receiving the Request | Understand what Darlene needs help with. | Gets a call/text from her mom. | - Pause current work or activity- Ask clarifying questions- Gather device/app details | - Often happens during work or family time- Limited context from Darlene | 😐 Neutral → 😓 Stressed | - "Request Help" alert in StepSaver with context (app name, task) |
| 2. Diagnosing the Problem | Identify the exact barrier Darlene is facing. | Asks Darlene to describe what she sees. | - Listen and visualize the screen- Ask for screenshots or descriptions | - Hard to guide without seeing the screen- Descriptions are vague ("It's not working") | 😐 Confused → 😓 Frustrated | - Live screen share with annotation tools- Pre-recorded guide Darlene can follow |
| 3. Walking Through the Fix | Guide her step-by-step to the solution. | Talks her through the login and navigation. | - Explain each tap and menu- Wait for confirmation before next step | - Repeating instructions multiple times- Connection delays (phone, FaceTime) | 😓 Frustrated → 😓 Guilty (if rushed) | - Step-by-step replayable guide- Shared cursor or highlight on Darlene's screen |
| 4. Confirming Resolution | Make sure Darlene has successfully found results. | Asks her to read or describe what she sees. | - Verify correct page- Ask if she can view/download results | - Uncertainty if she's truly confident- Risk of having to repeat later | 😊 Relieved (if successful) | - End-of-task confirmation from StepSaver- Save guide for future |
| 5. Wrapping Up | Close the interaction without feeling rushed. | Says goodbye, returns to own work. | - Reassure her mom- Resume paused task | - Guilt if time felt rushed- No record of steps for next time | 😊 Relieved → 😓 Guilt (if interruption was disruptive) | - Automated "how-to" record for Darlene to use independently |
| 6. Preventing Repeat Issues | Reduce future calls for the same problem. | Thinks about how to make the task easier for Darlene. | - Consider writing notes- Recommend easier access | - Rarely time to create guides on the spot- Relies on memory for next time | 😓 Resigned → 😊 Hopeful (with StepSaver) | - Ability to create/save guides after helping- Persistent login and shortcuts for common tasks |

Michael Maps Future State

| Stage | Goal | Actions | Tasks | Pain Points | Emotions | Opportunities (via StepSaver) |
|-------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|----------------------|----------------------------------------------|
| 1. Setup Before Babysitting | Ensure Mom is prepared to help kids confidently | Prepares devices, but now creates quick StepSaver guides in advance | Records login steps, app access, WiFi connection | Less worry about forgetting details, setup is smoother | 😊 Confident | Pre-saved guides reduce prep time and stress |
| 2. Babysitting Evening – First Tech Issue | Kids log into school or entertainment app without stress | Mom attempts task, StepSaver notification reminds her of guide | Taps guide → replays screen/voice instructions | No confusion about passwords, fewer mistakes | 😊 Empowered | Smart reminders prevent calls to Michael |
| 3. Independent Troubleshooting | Mom resolves issue on her own | Uses StepSaver's "Replay Step" button instead of calling | Replays exactly where she got stuck | Learns by repetition, feels less dependent | 😊 Relieved → 😊 Proud | Builds confidence through guided practice |
| 4. Remote Backup (if needed) | Michael stays available only if Mom can't fix it | Mom taps "Request Help" in StepSaver | Michael sees screen remotely, gives quick fix | Shorter calls, less frustration for both | 😊 Supported | Co-pilot mode makes backup fast, guilt-free |
| 5. Post-Success Confidence | Build Mom's trust in herself, reduce Michael's cognitive load | Mom reflects on success with StepSaver guide | Saves guide for reuse, shares with other family | Michael doesn't need to repeat explanations later | 😍 Proud → 😊 Relaxed | Sustained independence, family-wide benefit |

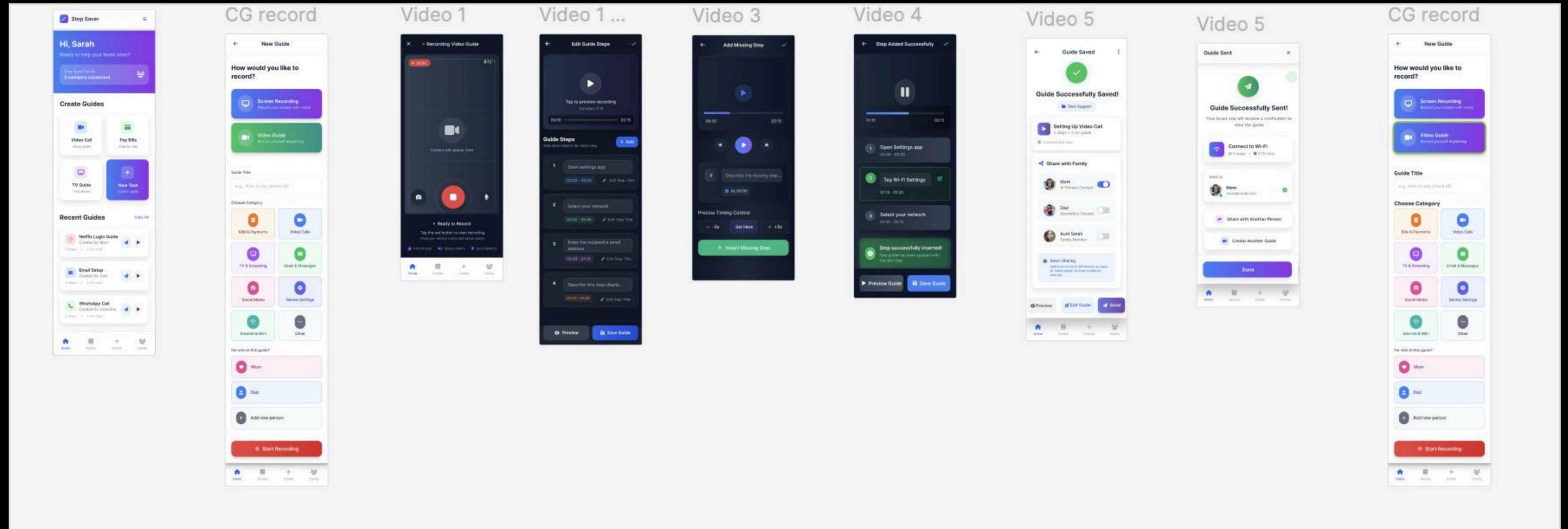
Wireframes



Key Wireframe Highlights

- Focus on user flow and interaction design
- Evaluate layout consistency and hierarchy
- Identify core functionalities and navigation paths

Med-fi Designs



Focus on Usability, Accessibility, and Intuitive Interaction

User Testing Key Insights

- **Insight 1: initially participants thought they were able to do the tasks mentioned in the guide templates like an all in hub ie: pay pills, make a video calls etc.**
- **Insight 2: Participants thought functionality for adding, previewing, editing, and inserting steps at specific timestamps was clear and funtional.**
- **Insight 3: Confusion about intermediate steps, ie which fields were mandatory to move forward and which were optional**
- **Insight 4: Though the app is geared toward helping older adults, participants suggested that they would use the app for other use cases, ie: helping children with tasks, co-workers when handing things over for vacation etc.**
- **Insight 5: Some participants expressed anxiety on when the recorder starts , and suggested some sort of count down so that they can limit false starts and know exactly when the recording is happening.**

Before and After

How would you like to record?

Screen Recording
Record your screen with voice

Video Guide
Record yourself explaining

Guide Title
e.g., How to pay phone bill

Choose Category

Bills & Payments Video Calls

TV & Streaming Email & Messages

Social Media Device Settings

Internet & WiFi Other

For who is this guide?

Mom

Dad

+ Add new person

Start Recording

← Create Guide ⓘ

Record Your Guide
Choose how you'd like to create your step-by-step guide

Screen Recording
Record your screen while demonstrating the task

Video Recording
Record yourself explaining the steps

AI Assistant
Step Saver will automatically title and categorize your guide, but you'll have the option to edit everything if you wish.

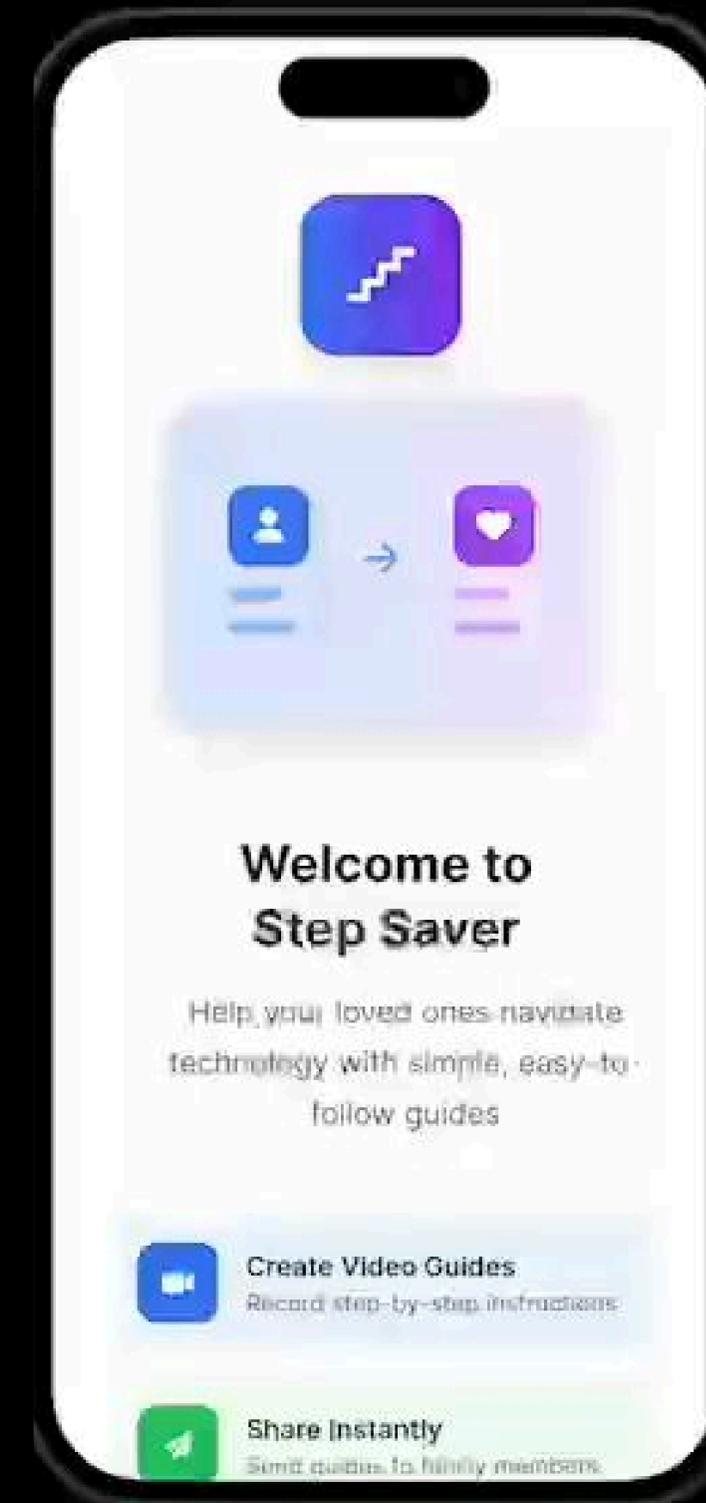
Record Now

Recording Tips

- Speak clearly and go slowly
- Keep each step simple and focused
- Test in a quiet environment

Prototype Walkthrough

This video provides a dynamic overview of the user experience for our latest prototype. It highlights key features and user interactions.



Sneak Peek

Senior User Perspective

Prototype Overview & Target User Set

This prototype is designed for a distinct user segment, highlighting features tailored to their unique needs and interactions. Focus on intuitive flow and accessibility.

Target Users:

- 55+
- Familiar with technology but still requires some assistance.



Project Challenges

Interview participant Availability

Problem: Participants had pretty hectic schedules and tracking them down for interview was more challenging than its been in the past. likely due to lack of incentive.

Challenge: Multi-user concentration.

Problem: Difficulty focusing on one audience due to separate caregiver and older user versions.

Benefit: Gained insights into how audience problems affected each other.

Next Steps

Current actions:

- Task 1: 2nd round of Usability testing
- Task 2: testing “Senior User “ flow

Key Milestones:

- Create Hi-Fi for Elder User Flow
- Wrap all usability testing
- Convert designs to product using Bubble.io
- Create Landing page for early beta testers

Appendix

<https://docs.google.com/spreadsheets/d/1HWp5VFLBC3FzfWVzbKluGmZqWIDzGyv2UDopdv8Z3MM/edit?usp=sharing>

Table of Contents

- Problem Statement
- Research Methods
- Competitive Analysis
- User Interviews
- Affinity Map
- Key insights
- Personas
- Journey Maps
- Wireframes
- Usability Insights
- Before and After
- Prototype
- Challenges
- Next Steps

Thank you for listening!