



A Social Media App for Survivors of Traumatic Injury

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01

Introduction

Product summary

01

About the product

A wellness-powered platform which nurtures connection between loved-ones of different physical capabilities. Initially focusing on communities impacted by spinal cord injury, Moova is creating an environment which celebrates physical effort, not capability.

02

Client pain points

Diversity in user base proposes a challenge in universal design

Users have complex psychosocial profiles, how can we heed to that?

03

Client requests

Identify options for user engagement strategies

Identify and design digital identity representation system (Avatar)

Purpose statement

The purpose of our project is to deeply understand the user ecosystem, identify key values of stakeholders' psychosocial profiles, and pair user engagement strategies to fulfill their needs.

Our goal final deliverables are listed on the right.

A comprehensive UX report

An interactive interface, created with Figma

Validated design decisions through UX research

Suggestions for future app improvements

Limitations

Limitation 1

Finding target users who are willing to engage in our research process (as they are quite niche)

Limitation 2

Scarce research in the area (spinal cord injury is an underrepresented area of science)

Mitigation strategy

Execute **specific research structure** which recycles interviewees through various phases of research + venture into other stakeholders and user groups, such as experts, doctors, and therapists

Research plan

Literature review

Research past studies on the connections between survivors of spinal cord injuries and changes to their social interactions

Competitive product analysis

Assess which current products on the market fulfill certain social needs for our users and what pain points they currently have with the available platforms

User interviews and surveys

Get to know our users and stakeholders better through interviews and surveys

Usability testing

Test our proposed design solutions on relevant stakeholders



02 Background information

What is traumatic injury?

- Refers to sudden tissue injuries from violence or accidents
- Includes traumatic brain injuries, **spinal cord injuries**, fractures, amputation, etc
- **Six severity levels** across six body regions
- **Physiotherapy plays a crucial role** in the rehabilitation process post-trauma
- Duration depends on:
 - Severity of the traumatic event
 - Age at the time of the trauma
 - Support you receive after trauma
- Recovery can be between a few months to years

What is traumatic injury?

Injury Severity Score (ISS)

Body Region	Score	Abbreviated Injury Scale (AIS)
Head	1	Minor
Face		
Neck	2	Moderate
Thorax		
Abdomen	3	Serious
Spine		
Upper Extremity	4	Severe
Lower Extremity		
External and other	5	Critical
	6	Unsurviveable

All injuries are assigned from an internationally recognised dictionary that describes over 2000 injuries. Multiple injuries are scored by adding together the squares of the three highest AIS scores. The ISS can range from 1 to 75. Scores of 7 and 15 are unattainable because these figures cannot be obtained from summing squares. The maximum score is 75. By convention, a patient with an AIS of 6 in one body region is given an ISS of 75.

Main takeaways from background research

- It will be crucial to find out the **age** at which the user has experienced the trauma and **how long it has been since**
- It will be important to understand where their trauma falls on the **ISS Severity scale**
- It will be important to ask about **support** the user received after undergoing the trauma (whether it be physical and/or psychological)

ChatGPT Glide: Using AI to identify pain points

- A major disadvantage survivors face is:
Social Isolation and Stigma
- Social isolation has mental and physical health implications + a poor impact on existing relationships
- Social support networks + community engagement are good ways to ameliorate the impact on relationships
- Support groups + self-care practices are good ways to ameliorate mental health implications of social isolation





03

Market research

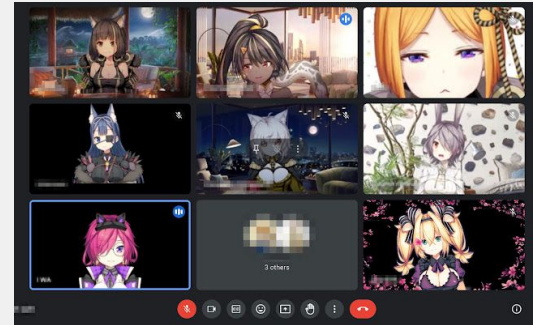
Market research: Avatars

As per our client's request for a digital **avatar** creation interface, we did some research on avatar creation and how different social media apps use avatars for digital identity expression.

- Xbox, Playstation that an avatar creation feature along with social networking
- Find the pleasure and pain points to incorporate them into Moova



Microsoft teams - Avatars app

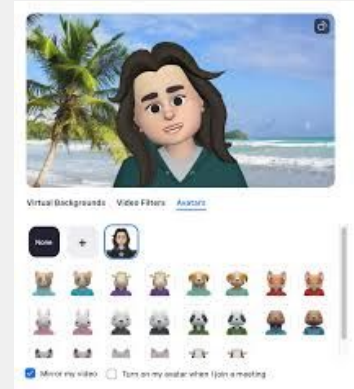


Google meet - Animaze

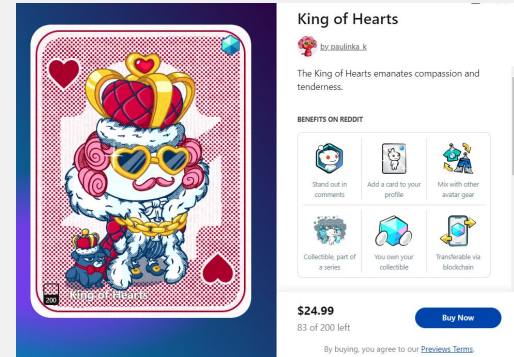
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Zoom



Reddit

Market research: Social media apps

- Social networking platforms where people with similar health challenges
- Do not have an avatar creation feature
- Find what's best features of networking via these apps in comparison with apps like X, Facebook groups, Instagram etc.



Known Problems Analysis

Similar apps have common issues, including:

- Text-heavy and cluttered UI
- Inconsistency of user journeys
- Inaccessible avatar creation process
- Lack of cultural representation in avatars
- Need for tutorials

BeReal	Social media	https://apps.apple.com/us/app/be
Agapé	Social media	https://apps.apple.com/us/app/ag
Reddit	Social media	https://apps.apple.com/us/app/red
Facebook	Social media	https://apps.apple.com/us/app/fac
Messenger	Social media	https://apps.apple.com/us/app/me
Locket	Social media	https://apps.apple.com/us/app/loc
Caring Bridge	Social media to share personal health upda	https://apps.apple.com/us/app/ca
PatientsLikeMe	Social media to share personal health upda	https://apps.apple.com/in/app/pat
HealthBoards	Social networking support group	https://www.healthboards.com/
Zoom	Social media	https://apps.apple.com/us/app/zo
SCI-Lynx	Physical and social activity tracking	https://apps.apple.com/dk/app/sci
Xbox - Xbox Avatar Editor	Avatar	
Microsoft teams - Avatars app	Avatar	
Google meet- Animaze	Avatar	https://apps.apple.com/us/app/an
Metaverse	Avatar	https://apps.apple.com/us/app/me
Finch	Mental Wellbeing	https://apps.apple.com/us/app/fin
Habitica	Habit tracker -Gamification Mental	https://apps.apple.com/us/app/ha
Goalify	Habit tracker - Mental	https://apps.apple.com/us/app/go
WheelWithMe	Physical -Workout, Mental - Independence	https://apps.apple.com/nz/app/wh
Strava	Physical fitness tracker	https://apps.apple.com/us/app/str
MyFitnessPal	Fitness tracker	https://apps.apple.com/ca/app/my
StepBet	Physical fitness -gamification	https://apps.apple.com/us/app/ste



04

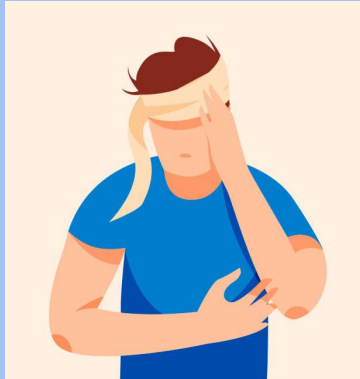
Research methods

User group identification

Person with a
traumatic injury
(spinal cord
specific)



Person with
traumatic injury
(non spinal cord)



Family, friend,
partner, or general
caretaker



Medical
professional



Research methodology

Pre-interview survey

- Gauge quantitative/background information about the user prior to the interview
- Conducted remotely through Google Forms

Interview

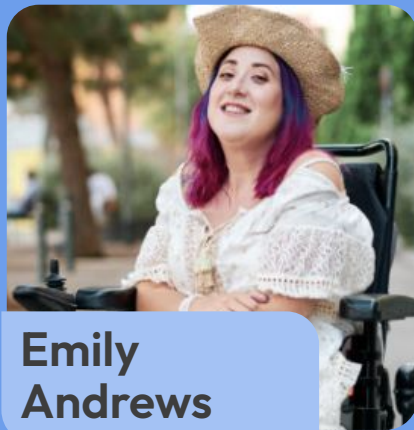
- Gauge the support that this participant had/provided in relation to their's or someone else's traumatic injury and how relationships have changed as a result of the injury
- Was conducted via Zoom (and recorded for future reference, with the participant's permission)



05 Research findings

User group 1: Person with traumatic injury (SCI)

- Individuals may feel an increased connection to their social community
- They tend to identify themselves as 'individuals with a spinal cord injury' rather than 'survivors of a spinal cord injury'
- Self-fulfilling prophecy: Society's beliefs about disability can impact self-perception and capabilities.
- Challenges with universities and healthcare providers in addressing accessibility needs
- Limited social connections post-injury, mostly with pre-existing friends
- Evolution of social life: Some relationships strengthened, while others ended due to misunderstandings
- Recognition and acceptance of disability took several years
- **Accomplishment felt in overcoming societal expectations and achieving personal goals**



**Emily
Andrews**

Age: 39

Gender: Female

Pronouns: she/they

Occupation: Freelance writer

Location: New Jersey

Education: BA in English

Relationship status: Single

Age of injury: 20

Type of injury: complete spinal cord injury

Loves and Aspirations

- Connecting with others
- Exploring new places and experiences
- Spending quality time with close friends
- Build a strong and supportive community
- Passions for writing and storytelling

Traits

- Resilient
- Empathetic
- Creative
- Optimistic
- Resourceful

Motivations

- Desire for connection, understanding, and belonging
- Opportunities for personal growth and self-improvement

Pain points

Social isolation
Emotional challenges
Accessibility barriers
Dependency on others

User group 2: Person with traumatic injury (non-SCI)

- 5 interviews with traumatic brain injury survivors with avg age being 23 yrs old.
- Average mobility was partial paralysis to 1-3 limbs
- Ability to communicate along with partial cognitive disability
- Reported that family is usually the most supportive group early on in recovery, but friends coming into the hospital/rehab gave them a rush of positivity
 - Most friends made a visit, but almost all of them ended up falling out of contact.
 - Average reported social rating was 1.8/5
- Survivors reported a large change in family relationship, but not devastating
 - Large dependence on parents but also deepened their relationship.
- Many identified an adaptive sport, hobby that they picked up



**Matt
Fritzie**

Age: 23

Gender: Male

Pronouns: he/him

Occupation: Student

Location: Florida

Education: High school diploma

Age of injury: 22

Type of injury: complete spinal cord injury

Loves

- Physical therapy
- Listening to music
- Visits from friends
- Adaptive video games
- Going to the movies
- Scrolling on social media

Goals

- Physical recovery
- Social reintegration
- Hobby development
- Adapting to new body
- Regaining independence

Motivations

- Desire for connection, understanding, and belonging
- Opportunities for personal growth and self-improvement

Pain points

Feels like he isn't understood
Feels like he cannot express himself like he used to
His friends are growing distant
He cannot do the same things he used to be able to do alone or with people

User group 3: Family, friend, caretaker of survivor

- All interviewees wanted and were willing to strengthen their relationships with the SCI survivor but don't know how
- Close friends, distant relatives, and family friends want to be more involved but fear being too intrusive or too distant.
- Immediate family members feel guilt for going on with their lives or socializing and having fun.
- Frequently struggle to find different ways to bond and often keep doing repetitive tasks.



**John
Hickins**

Age: 20

Gender: Male

Pronouns: he/him

Relationship to survivor: brother

Location: Michigan

Goes to school in a different state

Uses social media apps regularly

User group characteristics and motivations

- Immediate family member with a younger sister who suffers from a spinal cord injury
- Keeps in contact with his parents and sister using FaceTime
- Bonds with his sister over games like Minecraft and Duolingo
- Motivated by anything that makes his sister happier and feel better

Pain points

Struggles to get responses from his sister to his messages
Feels guilty for being away at college and not physically with his family

User group 4: Medical professionals

- OT is responsible for retraining an individual perform grooming tasks, communication tasks, walking, feeding themselves, wheelchair management skills
 - Redefining their identity with their new body
 - For individuals with traumatic injuries to have disability acceptance
- Medical professional needs:
 - To communicate easily with other medical professionals



**Rosemary
Williams**

Age: 50

Gender: Female

Pronouns: she/her

Occupation: Occupational therapist

Location: Bethesda

Specialization: assistive technology

Motivations

- Witnessed some of her friends and family go through spinal cord injury
- Desire to help individuals with traumatic injuries get the help they need through socialization

Challenges

- Communication to other professionals who are involved with the treatment of a patient
- Getting the patient to accept treatment through AT
- Resistance from patients to socialize

Job responsibilities

- Assess children who are non-speaking for augmentative and alternative communication/access for home environmental control and sparrd play

How might we fit our users' needs?

Non-SCI individuals

1. Social connection.
2. Personal identity expression/rediscovery.
3. Advice from people in their same condition.
4. Real world community interaction/integration.

Individuals with SCI

1. The user needs an app that facilitates meaningful interactions with others virtually
2. Offers accessible resources and information for other survivor-supporting sources.
3. Promotes well-being through positive and mindful activities, like meditation, mindful thinking, etc.
4. Supports community advocacy and education.
5. Customizable and personalized information.

How might we fit our users' needs?

Friends/Family/Caretaker

1. Help in finding new and different ways to connect
2. Find deeper connections without feeling overbearing or intrusive
3. User needs education on how to go about and address the traumatic injury
4. Ways to connect even with a busy schedule or varying physical distance

By Medical Personnel

1. Make early connections (ideally within 3 months post-injury)
2. Meet people with similar experiences and identities
3. To have disability acceptance.
4. Redefining their identity with their new body.
5. Details of social events happening

Pivot in scope: focusing specifically on gamification and avatar creation

- Need to make **scope smaller** because of time constraints
- Focus specifically on **profile page and avatar creation**, specifically because client has not developed these yet
- Want to do **more research** avatar creation and gamification preferences
 - So let's do another survey to specifically assess this!

Avatar creation and gamification survey

- **Comprehensive survey** focused on **gamification elements and avatar creation preferences.**
- Promote the survey through various channels and relevant online communities (connections through Hind and Henry)
 - Survivors + loved ones (the main users of the app)
- Were able to monitor survey responses and gather valuable insights into user preferences

Survey responses: Types of motivations/needs?

n=13

Gamification Preferences:

- Challenges for Avatars:
 - **Quizzes, quests, and intellectually engaging activities**
- Rewards:
 - Virtual rewards such as **customization options** like hats, sunglasses, and poses for avatars.
- Progression System:
 - **Leveling up based on completed challenges.**
 - Option for leaderboard participation to showcase users' levels.

Do you want to offer rewards specific to your avatar (e.g., accessories, more customization options)?

13 responses

Yep

Tangible

Yes, more accessories and ability to customize

no

What motivates your avatar? (e.g., ability to express yourself, socialization, achievement and recognition, new customization options, competition)

13 responses

Socialization and connection

Reflection of personality

Socialization

Collaboration w others

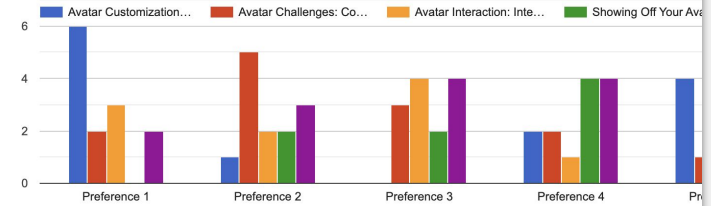
Survey responses: Representation?

n=13

Avatar Creation Preferences

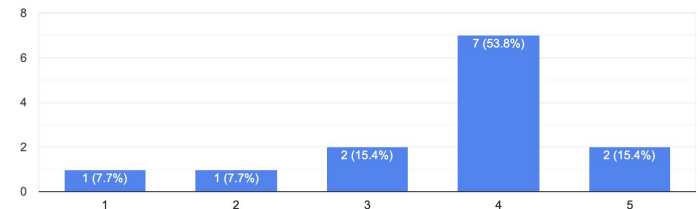
- Avatar's Motivations:
 - Socialization, connection**, and collaboration with others
- Avatar Preferences:
 - Unlocking new **customization** options as rewards.
 - Avatar-specific challenges** contributing to leveling up
- Avatar Representation:
 - Highly representative avatars** with customization options for hair, clothes, gender, and skin tone.
 - Option for users to choose **between pre-existing non-human avatars or customize human avatars**.
 - Preference for **realistic avatars over abstract representations**.

Rank which of the following you would like to see incorporated into the avatar customization process (preference 1 means you highly prefer it, preference 5 means you least prefer it)



Place on the scale how representative you want your avatar to be of you (high representation means you want the avatar to look just like you, have the same abilities as you; low representation means essentially the opposite)

13 responses



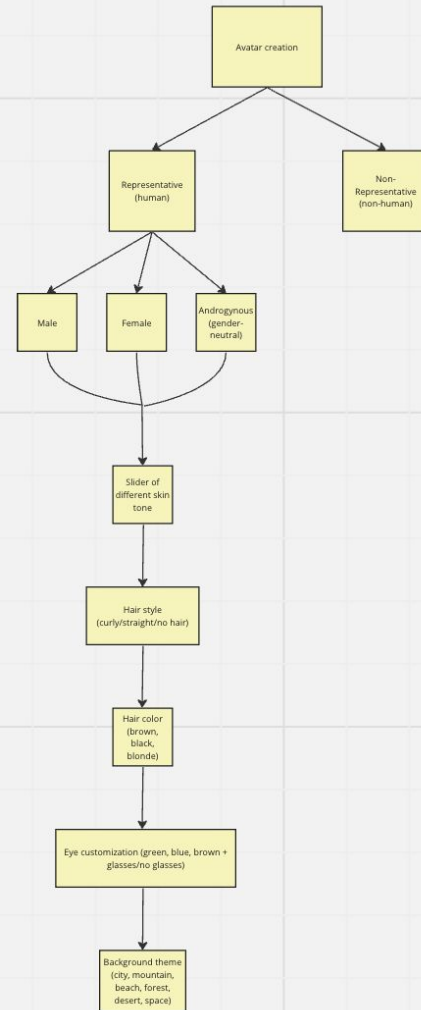


06

Interface design

Flow diagram

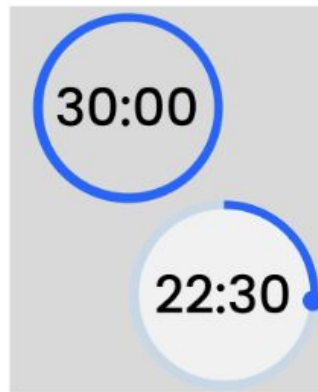
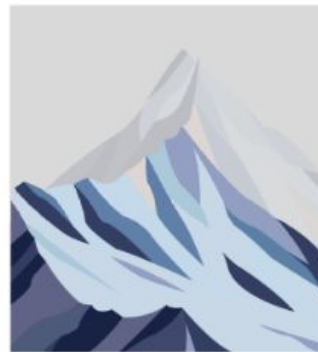
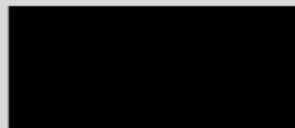
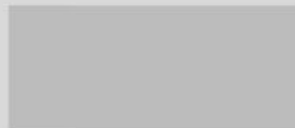
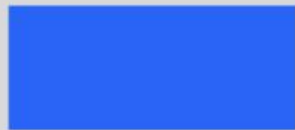
- To the right: avatar creation process for a representative human avatar
 - Very build your own
- To the left: avatar creation process for a non-representative avatar (animal)
 - More 'select from these' style



Moodboard



MOOVA



Poppins
Poppins
Poppins
Poppins
Poppins

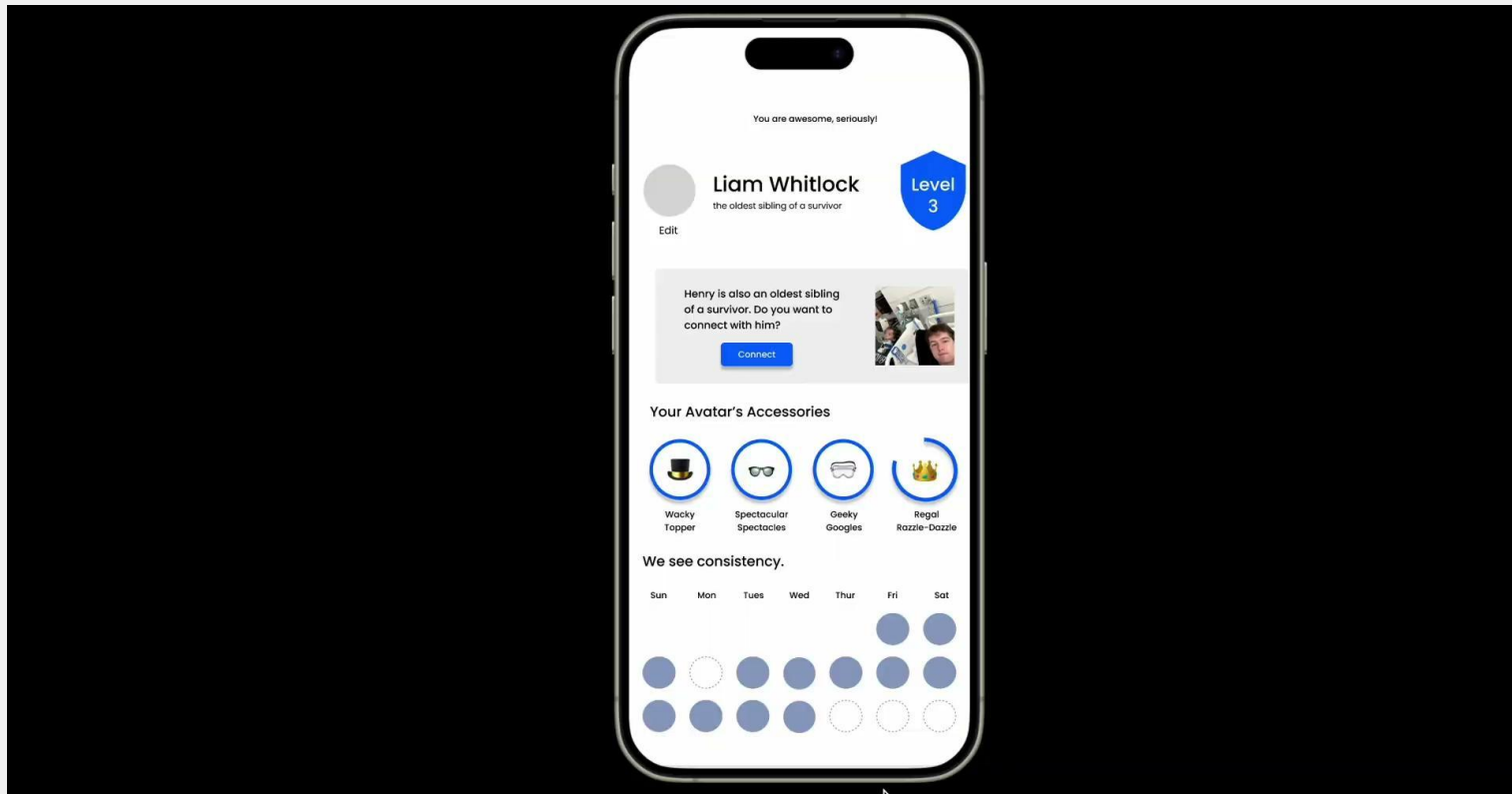
Super! You're awesome.
Be proud. Do something new!
You did a good job.

How are you feeling?

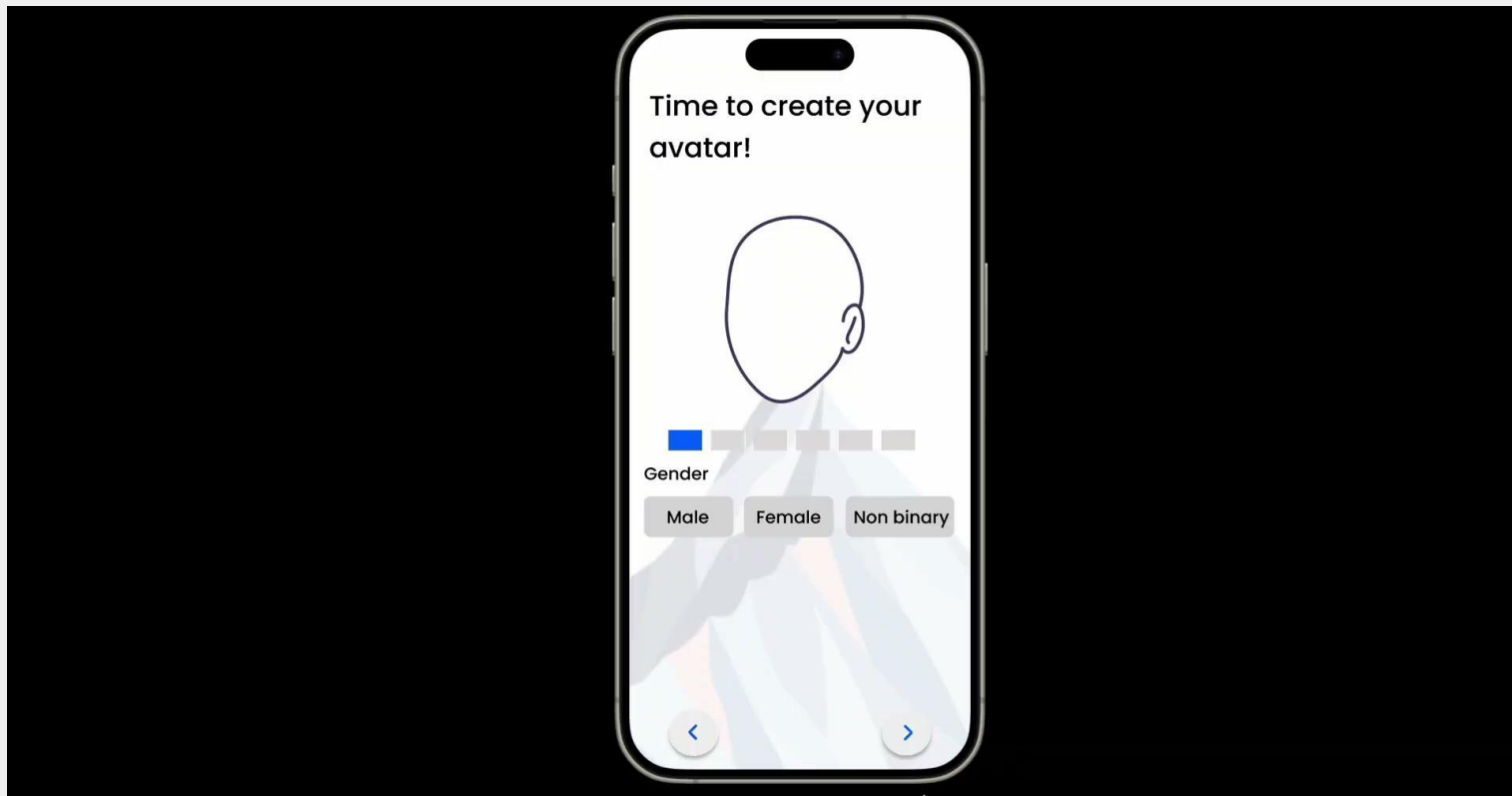


Begin

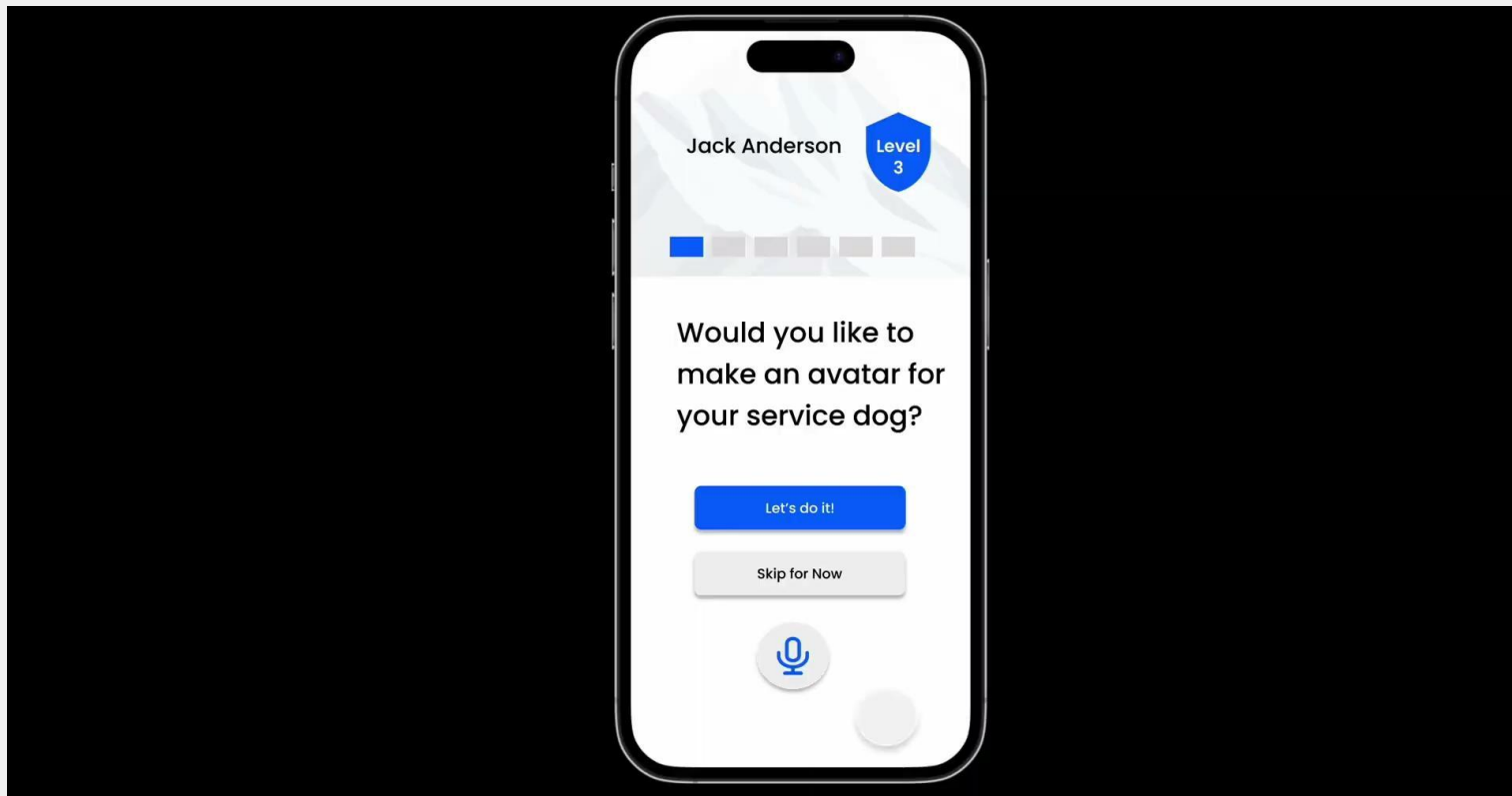
Wireframe: Profile page



Wireframe: Human avatar creation



Wireframe: Non-human avatar creation





07

Usability testing

Usability testing plan and participants

- Moderated usability test, task-based
- Conducted 2 on family member and family friend (user group 3)
- Conducted over Zoom with our Figma interface

Introduction:

Thank you for participating in this usability test for our Moova app. Your feedback is invaluable in helping us improve this app's user experience. Today, you will be simulating the avatar creation and customization interface. Please remember, there are no right or wrong answers in this test since we are interested in understanding how well the interface works for you.

Preparation:

Before we begin, please remember that your honest feedback is necessary for us to improve our interface. We will ask you to complete certain tasks in the next 10 minutes. We will take notes on your actions as you complete the task. You can ask questions while completing the task, but we may not be able to answer all of them.

After completing the tasks, we will ask you a few questions about your experience, specifically any difficulties encountered, suggestions for improvement, or positive aspects you noticed during the process.

Ready? Let's begin!

Please open this link [Figma link] and share your screen so we can see what you are seeing while you complete the tasks. First, is it okay if we record this meeting? Data gathered from this usability test will remain anonymous and confidential. Thanks!

TASKS:

1. Create an Avatar

- Make your avatar male
 - Note: for the purposes of this usability test, the skin tone has been selected by default
- Give your avatar a curly, young brunette Elvis hairstyle
- Give your avatar blue eyes
- Add glasses to your avatar
- Add a beach background to your avatar

2. Create a Service Dog Avatar

- Enter a name and age for your service dog avatar
 - Note: for the purposes of this usability test, the name and age will pre-fill once those input fields are selected
- Create a german shepherd avatar
- Make your german shepherd brown
- Finalize your german shepherd avatar in this step
- Oh wait! You actually wanted to add some accessories
- Add accessories to Luna

g. Add some sunglasses to Luna

3. Navigate Profile Page's Customization Features

- Add the Spectacular Spectacles to your avatar
 - Note: for the purposes of this usability test, nothing will happen
- Add the Geeky Goggles to your avatar instead
 - Note: for the purposes of this usability test, nothing will happen
- What do you need to do to get the Regal Razzle-Dazzle accessory?
 - Answer: complete one more challenge

Post-Task Interview:

We will now ask you some questions about your experience and take notes on your responses. Again, remember there is no right or wrong answer in this process; we hope you will just answer honestly and insightfully!

- What were your initial impressions of the layout and navigation options?
- Can you describe any challenges you encountered while navigating the interface?
- How effective (on a scale from 1-5) did you find the interface in completing the goal of creating a human avatar?
- How effective (on a scale from 1-5) did you find the interface in completing the goal of creating a service dog avatar?
- How effective (on a scale from 1-5) did you find the interface in completing the goal of navigating the profile page?
- How satisfied were you with your overall experience using this interface (can also rate this on a scale from 1-5)?
- If you had a magic wand and could change anything about this interface, what would it be and why?

Thank you!

Usability test results: Family member

- Enjoyed speed of avatar creation process
- Liked the option of the service dog; suggested that this could also include other service pets and animals
- Add more expressive accessory options
- Confused about the accessories reward system
 - Limit on accessories to be unlocked
 - Amount of accessories left to unlock

Usability test results: Family member

- Confused by the term 'accessories' as rewards for avatar
- Would like more enthusiasm in the wording when creating an avatar; "you're almost done", "looking great!"
- Confused on what the peer matching function has to do with the profile
 - Suggested adding a small statistic that encourages people to connect with other Moova avatars

Risk analysis of usability testing tasks

High Risk Tasks	Risk Aversion Action	Significant Risk Tasks	Risk Aversion Action	Medium Risk Tasks	Risk Aversion Action
Choosing skin tone and clicking next button	Fixing and enlarging the next button	Entering name and age of service pet	Enlarging the text input area and roll them out one at a time	Selecting the wrong option due to button being one sided	Centering and enlarging the option buttons
Tapping on the back button	Centering and enlarging the back button			Choosing color of hair/eyes due to color blindness	Include accessibility settings to include color contrast adjustment



08

Concluding remarks

Recommendations for Moova UX Designer

- Separate the peer matching feature from the profile page
- Include greater customization options for the avatar
- Change the wording of the avatar awards section to clarify how users can unlock them
- Incorporate positive wording and graphics

In Summary...

- After conducting primary and secondary market research we have identified 4 user groups
- A common need across all user groups is having customizable and personalized display of information and expression of identity
- Market research has revealed that avatars are a popular way to do so
- We created and designed an avatar creation process that had largely successful results with a few recommendations to improve



Thank you!
Questions?

Appendix A: Glide

Glide:

https://docs.google.com/document/d/1DmmWzxtzm09jicKDBTQXVYUlulesYM8pANWwHfb_z-U/edit

Appendix B: Pre-interview survey

User group 1:

https://docs.google.com/forms/d/1U2CMJS7gZqczuBkA__wxANIK6x4aG_Tvd6_BE2s57os/edit?usp=drive_web

User group 2:

https://docs.google.com/forms/d/1yuuRE9K5lbqw5u-ncdtn-ZexjGwJz3Sj9JJq43N97Aw/edit?usp=drive_web

User group 4:

https://docs.google.com/forms/d/1S__Tk0s0nPqUUb8v575DA3twlec76zmWPKaeD5omEVs/edit?usp=drive_web

Appendix C: Interviews

Folder with notes and plans:

https://drive.google.com/drive/folders/1IKHzo1uO1KXRVKjDyFMgHmE5Pdbhkzu3?usp=drive_link

Appendix D: Gamification and avatar creation survey

https://docs.google.com/forms/d/1Y0lchoTdrCsyYt8WRQHTrE3qZX3b5tZHCale84GHrnE/edit?usp=drive_web

Appendix E: Flow Diagram

<https://miro.com/app/board/uXjVKXFVhag=/>

Appendix F: Figma

<https://www.figma.com/file/f3HQ4zT02rg5oJW4JFoeMK/Avatar-Creation-Interface?type=design&node-id=12-307&mode=design&t=kLg900vcqpSeJnJl-0>

Appendix G: Usability Testing Script

<https://docs.google.com/document/d/1qQazNdVf06mWib-WF99vR3TmXYYN4BUCPxm0lV240Zw/edit>

Appendix H: Usability Testing Results: Family Member

<https://docs.google.com/document/d/1ft5nnye83eOA3KTMngz71kg hfPN3TVMh7KPyjYkzNtM/edit>

Appendix I: Usability Testing Results: Friend

[Link to notes](#)

Appendix J: Risk Analysis

https://docs.google.com/spreadsheets/d/1QqhwSDuON9gvyA1znuRvcRB-Ed1k6fr_vqizrL4GCsw/edit?usp=sharing

Appendix K - KPA

<https://docs.google.com/spreadsheets/d/1qOit-YG-Pwm8sCDiKhO5YRxC0mgHWTktgCz6GFZH-WM/edit?usp=sharing>