



harmory

Final Design Spec

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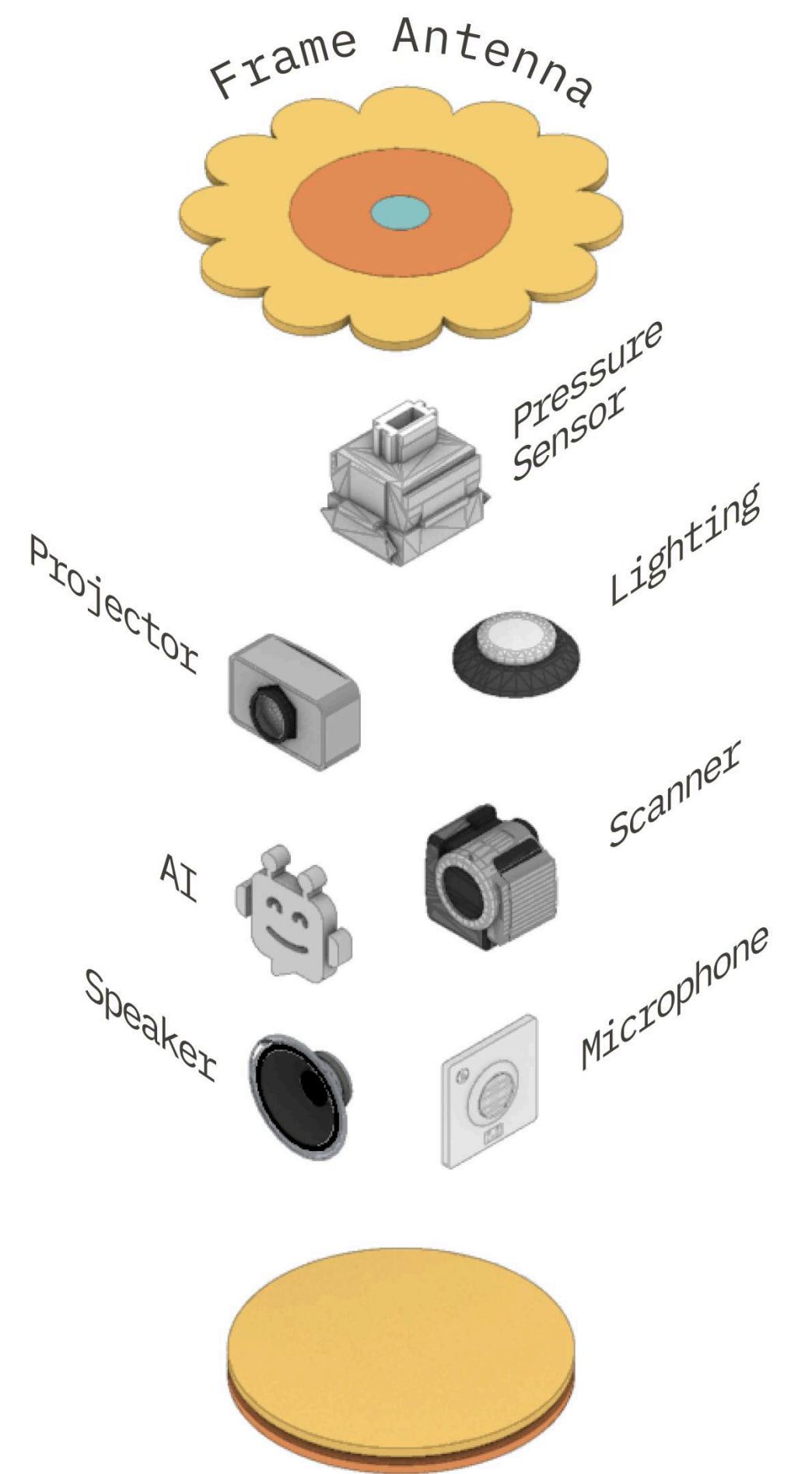


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- | Visual System
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Introduction

Research

Our research started with a literature review on the elderly and loneliness, where we found that “**43% of those age 60 and over report loneliness.**”¹

Driven by a desire to address this problem space, specifically improving visits between residents and their children, we visited a retirement home and conducted a cultural probe and interviews. Through this, **we uncovered a deeper need for story-sharing.** This insight shaped the new direction of our continued research and prototype development.

After ideating and developing our prototype, we returned to the retirement home to test it. This follow-up visit affirmed that our participants were excited about charms as a focus for storytelling. It also gave us new focus areas: customizable attachment methods, support for fluid topics in conversation, and the need for dynamic & personalized projections.

Design Challenge

Retirement home residents share a need for story-sharing and good conversation.

How may we support them to connect and share their stories with each other and other generations?

1. Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). "Social relationships and mortality risk: a meta-analytic review." *Psychological Bulletin*, 136(2), 1-26. doi:10.1037/a0022234

■ Target Users



Retirement Home Residents

- Enjoys conversation & storytelling
- Craves connection
- Physical & Mental Disabilities

Adult Children

- Limited time and attention span
- Want to be a good listener & engaged
- Generational gap (knowledge)



■ Desired Outcomes

1. Provides an object folks can use to take control of the conversation
2. The bracelet and charms provide a set of key, vivid memories to draw from
3. The charm's shape and technology features help the listener understand context and events of a story and supports fluid conversation

■ Design Response

Charmory empowers elderly individuals to share their stories with each other and other generations. Each charm symbolizes and embodies a significant memory, person, or topic becomes a storytelling centerpiece. These charms come to life by projecting images and audio that add depth and color to every tale.

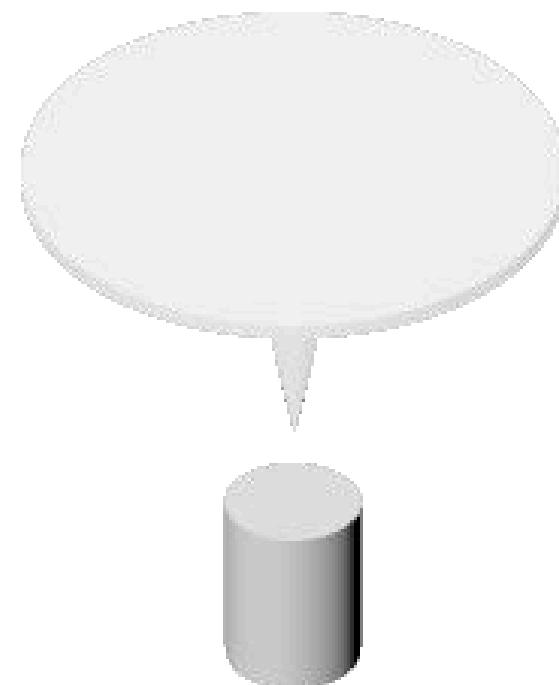
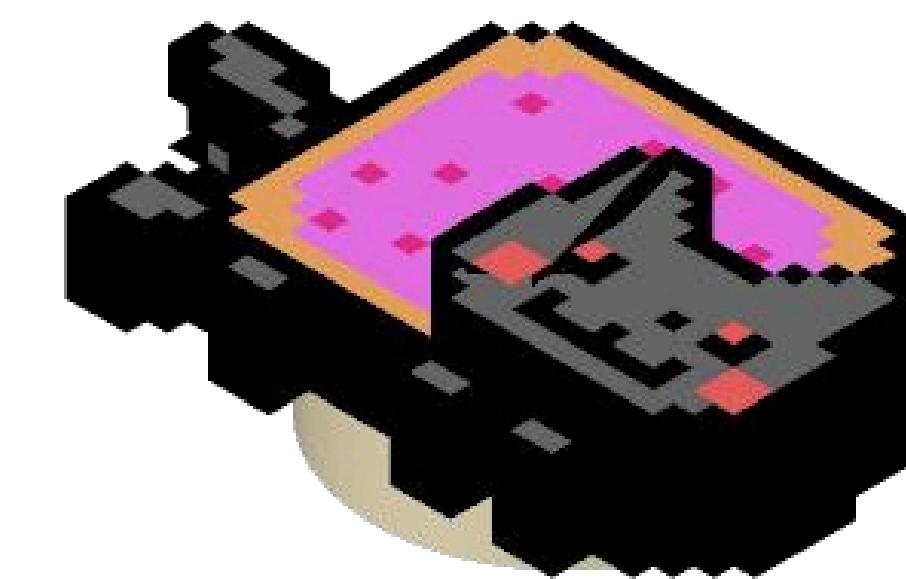
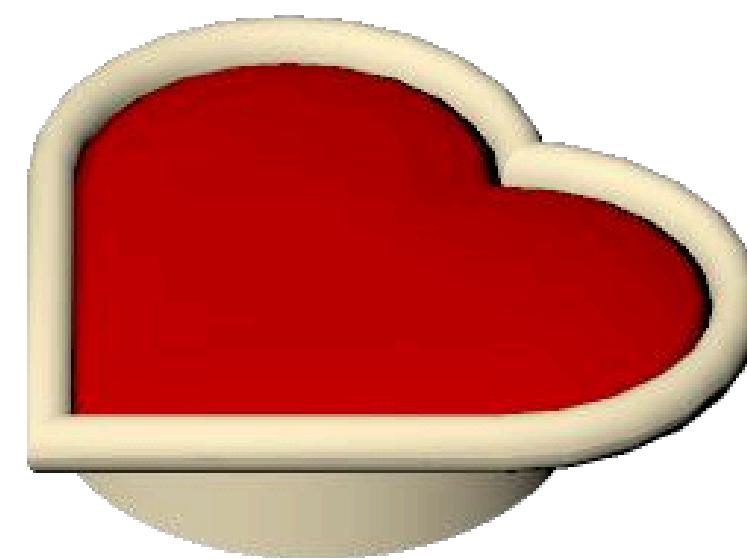
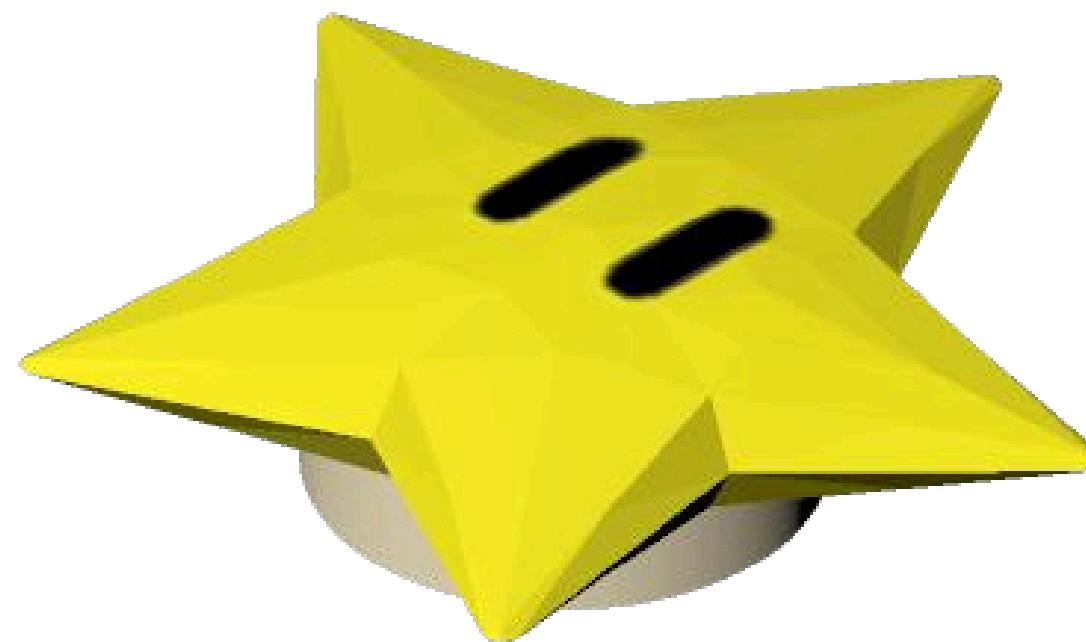
When a contextual gap during conversation (e.g. where a question is asked), the charm detects this, searches for the relevant contextual information and provides a visual and/or audio aid of unfamiliar artists, terms, and tools - transforming storytelling into a shared, interactive experience.

Architecture, Models & Systems

- | Design Breakdown: Modular Design
- | Key Flows / Lifecycle
- | Storyboard
- | User Journey Map

DESIGN BREAKDOWN

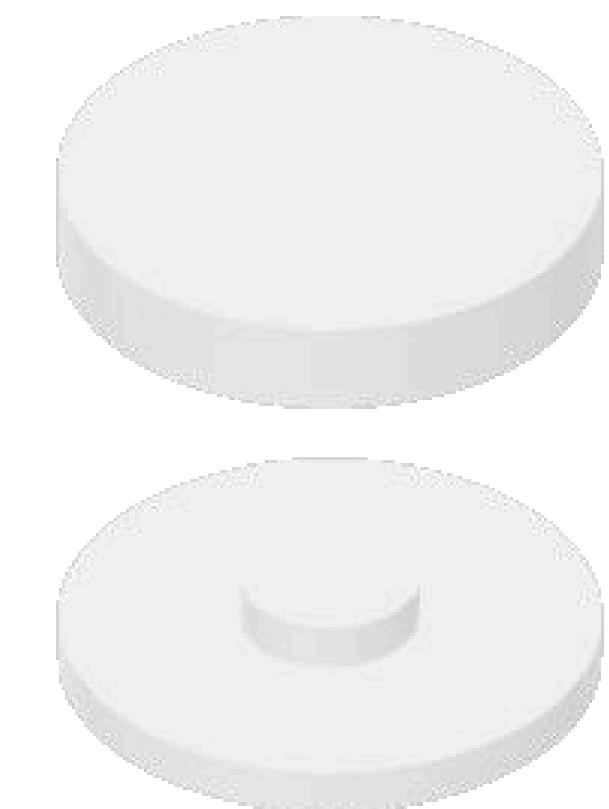
Modular Design



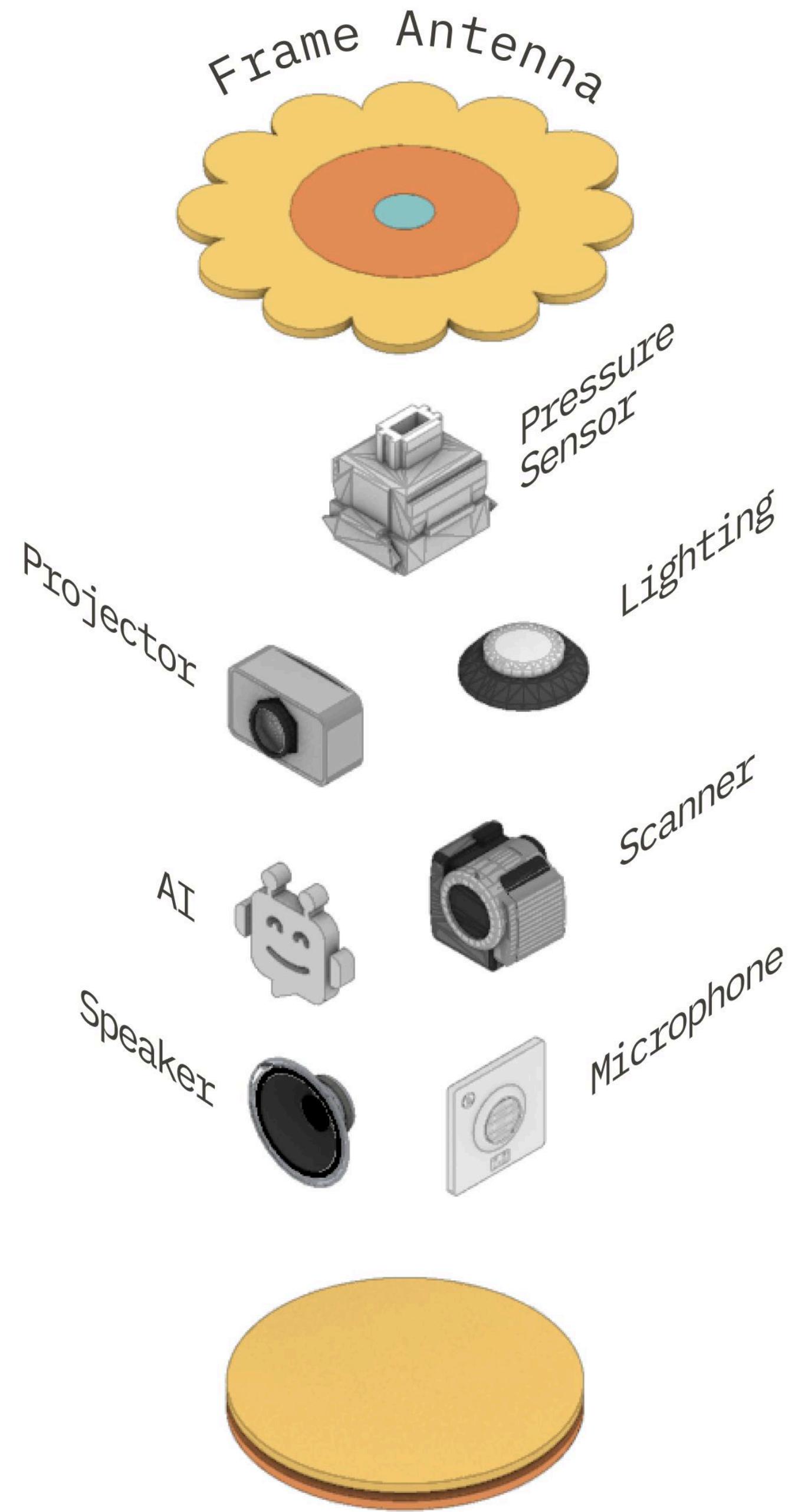
Pin



Velcro



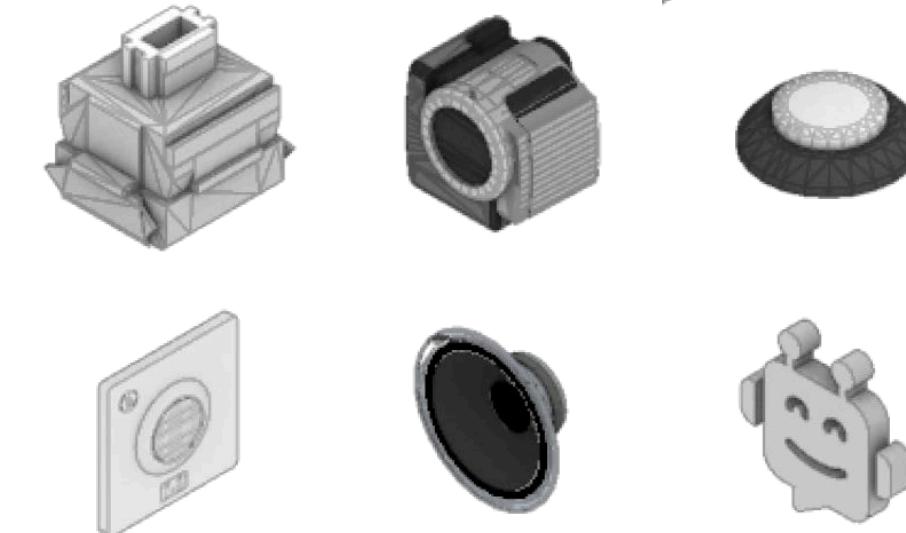
Magnets



Key Flows / Lifecycle

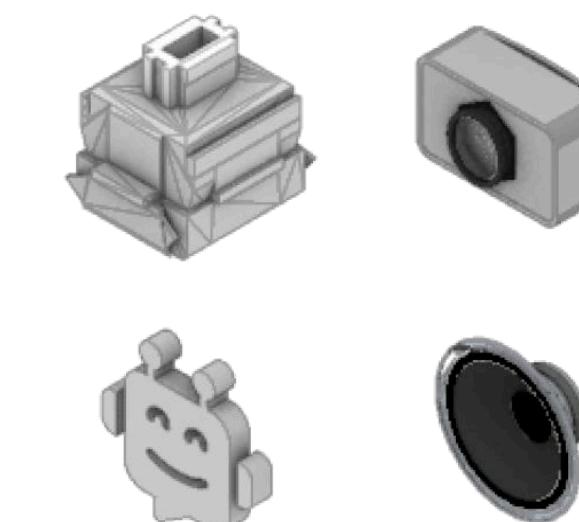
Onboarding

Scan in photos, artifacts, and written memories to enhance storytelling and attach the charm



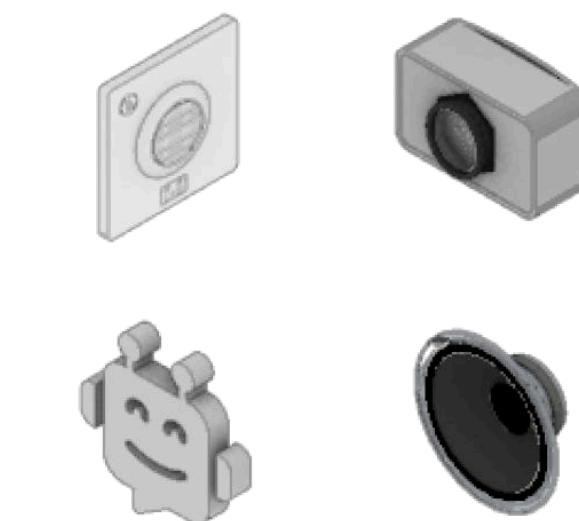
Immersive Storytelling

Create an immersive storytelling experience by sharing projected pictures, items, and sounds



Contextual Projections

Share “A-Ha!” moments with the listener as the charm shows them unfamiliar terms, celebs, items, or music in conversation



STORYBOARD

Meet Evelyn! She's a resident at Northgate Plaza who loves telling stories. Recently, her cat Kitty has been getting older, and she wants to preserve her memory for friends and family. She hears about Charmory and decides it'll be a perfect way to share her love for her cat and grow her bond with her grandson Edward!

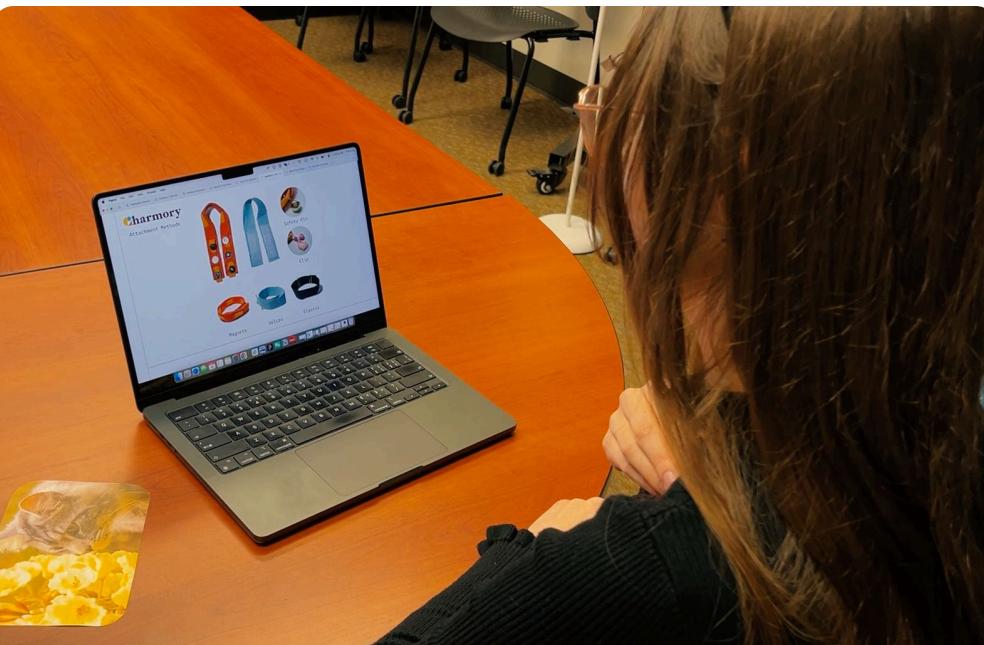
Onboarding



Evelyn begins her journey with Charmory by choosing a cat charm and an attachment style. She selects a pin attachment to prevent interference with her pacemaker.

Charm & Attachment Style Chosen

Evelyn chooses a cat charm that best represents her stories with Kitty and chooses the pin attachment style to prevent magnetic interference with her pacemaker.



Immersive Story-Sharing



Edward comes to visit! In the past, Evelyn has had trouble communicating with him, but this time she's excited to see if her new charm will make things smoother.

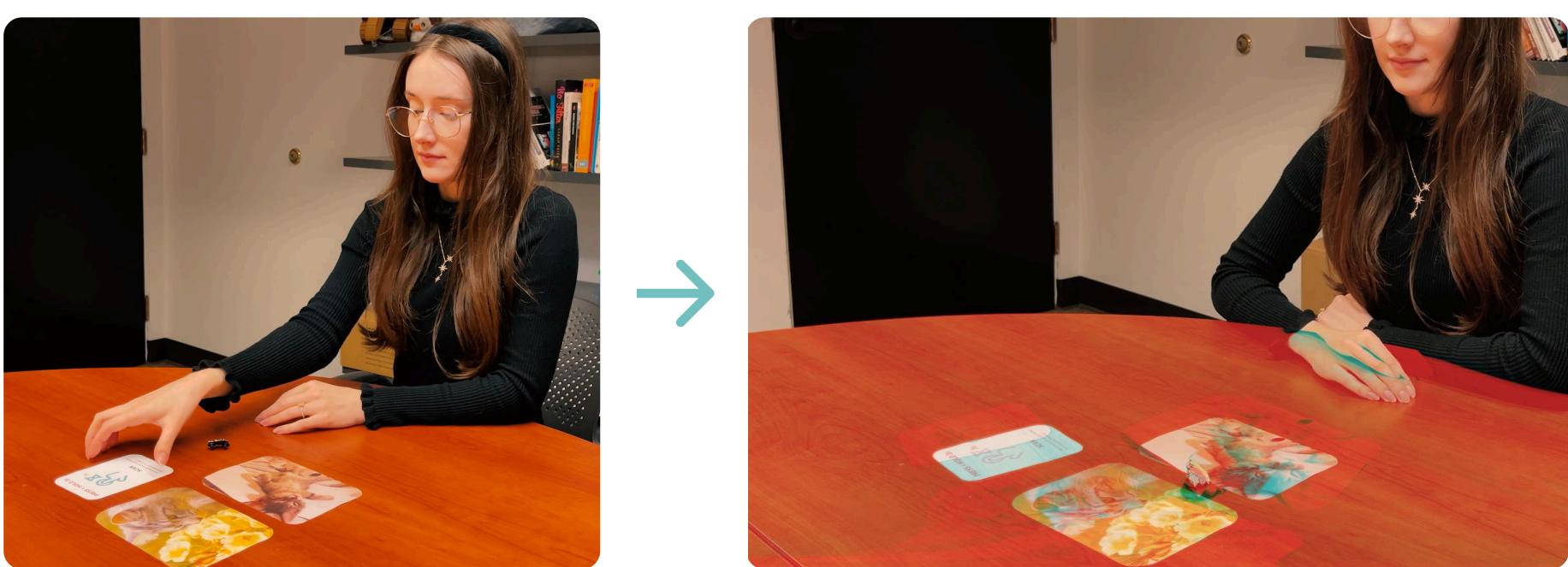
Starting a story

Edward comes to visit! In the past, Evelyn has had trouble communicating with him, but this time she's excited to see if her new charm will make things smoother.



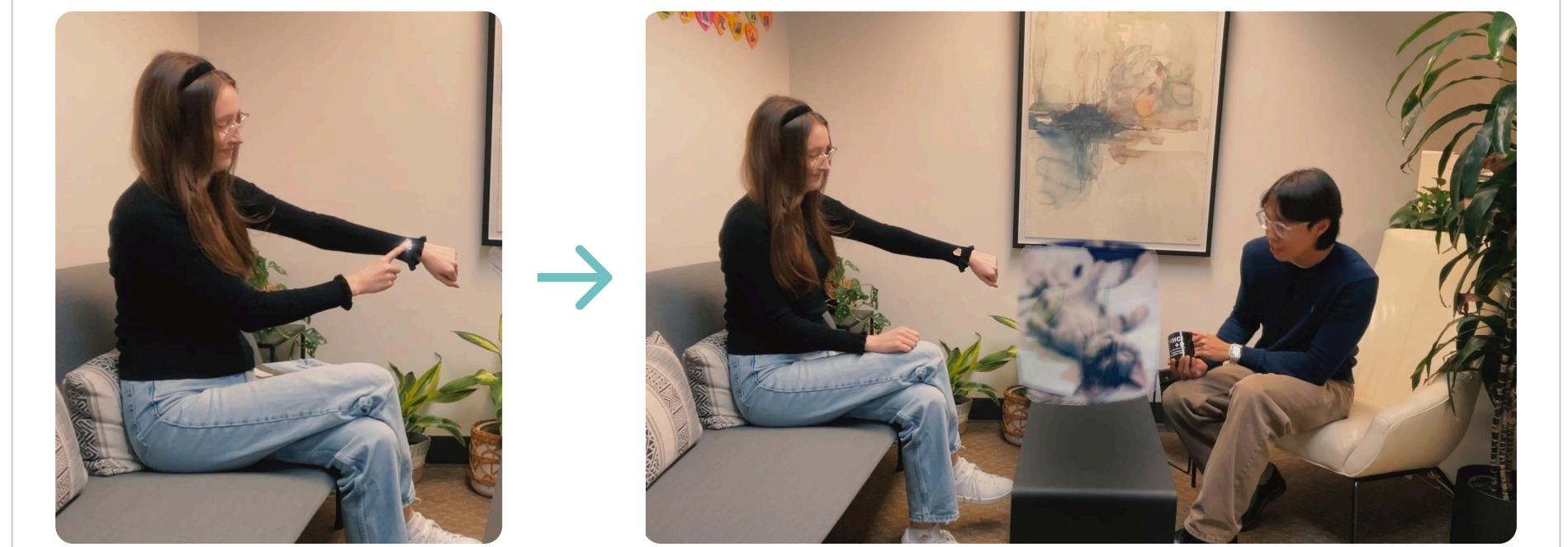
Prepare & Scan Objects

Evelyn recalls her fondest memories of Kitty, collecting photos and other physical objects that represent story. She can choose to write out those stories for safekeeping and story-crafting. Once she's collected the items, she scans by following instructions to press and hold for 3s.



Sharing the Story

Evelyn presses down once on her Charmory, and a projection of a baby Kitty who just wrecked Evelyn's drawers appears between them. Edward is surprised to see Kitty so small and reckless – she's so calm these days!



STORYBOARD CONT

Meet Evelyn! She's a resident at Northgate Plaza who loves telling stories. Recently, her cat Kitty has been getting older, and she wants to preserve her memory for friends and family. She hears about Charmory and decides it'll be a perfect way to share her love for her cat and grow her bond with her grandson Edward!



Mid-Conversation Search

Charmory helps them learn about Tabby cats

Charmory listens to their conversation, and uses AI to pick up on questions and uncommon terms. It hears Edward ask what a Tabby cat is, and shares a short explanation that Tabby refers to a type of coat, not a breed. Both Evelyn and Edward learn something new!



Charmory supports fluid storytelling

Their conversation moves on from cats – at one point Evelyn brings up a past trip to Ireland and a visit to St. Patrick's Cathedral. A schematic appears showing a sense of scale and history. Edward is able to stay engaged and learn without disruptions in the flow of conversation.



After Conversation

Finishing a successful visit

Evelyn and Edward finished sharing a wonderful afternoon of learning and laughter. Together they celebrate and preserve the rich tapestry of Evelyn's life, one story at a time.

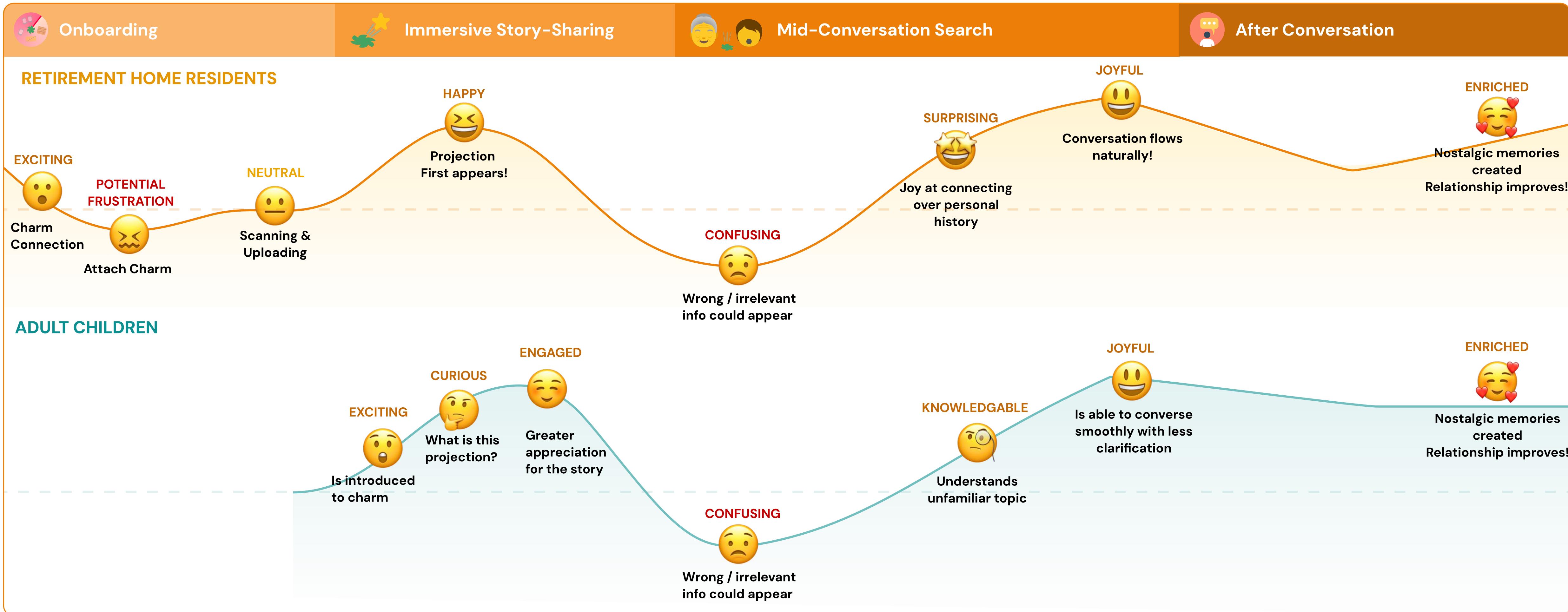


User Journey Map

Legend

 Retirement Home Residents

 Adult Children

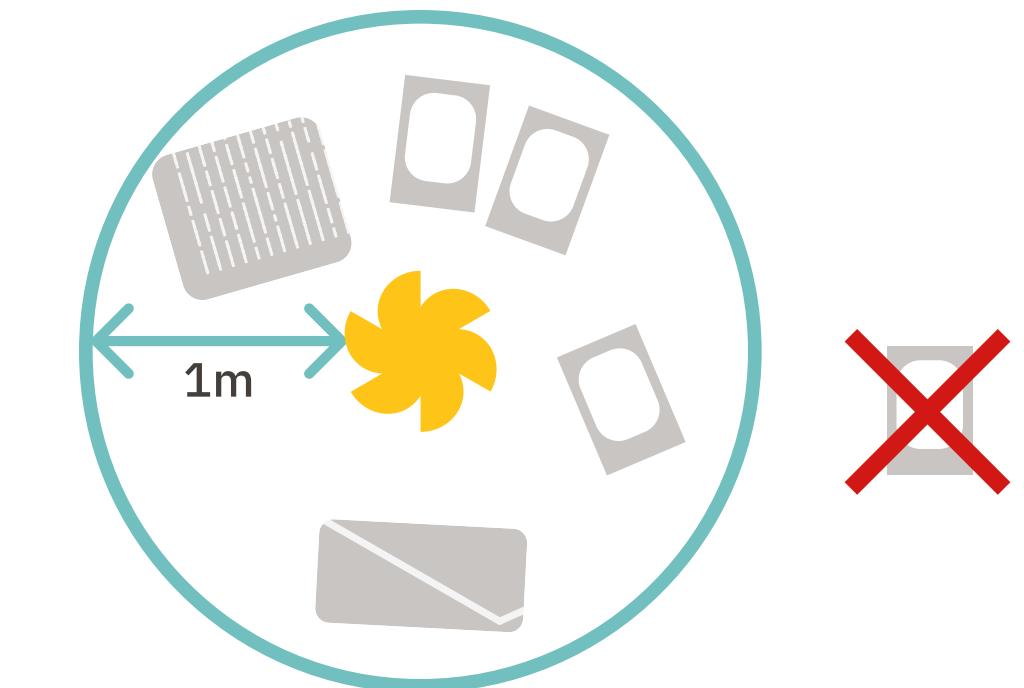


Onboarding



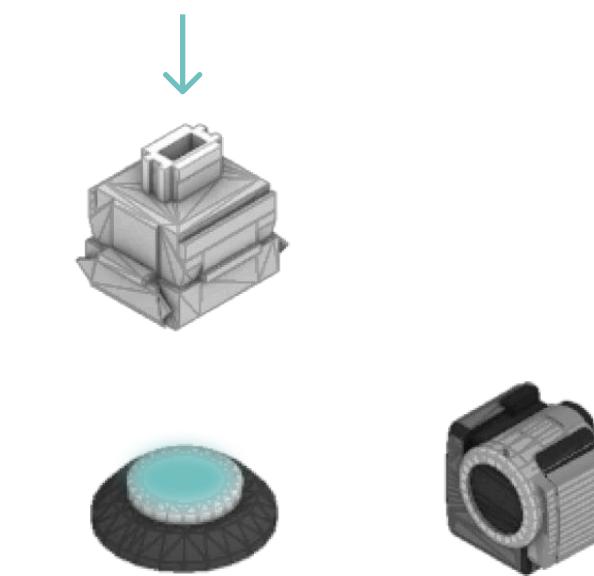
Step 1: Before Scanning

- 1(a) Gather physical objects that represent story.
 - Objects can include image(s), trinket(s), and text document(s).
 - Text document(s) will be parsed by the charm.
- 1(b) Place physical objects around the charm, within a 1m radius.



Step 2: How to Scan

- 2(a) Press and hold charm for 3 seconds to activate the scanner.
- 2(b) When the scanner is activated, a teal light will be projected from the charm, in a 1m radius around it. The charm is now scanning the physical objects within its 1m radius.

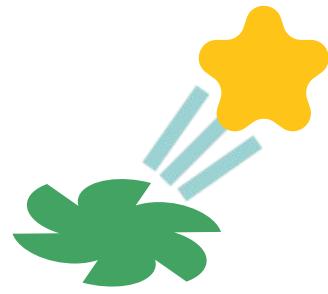


Step 3: Scan Complete

- 3(a) When the teal light disappears, scanning is complete. Now, wait for the charm to glow.
- 3(b) If the charm glows white and the “Success!” message is heard, the scan has been completed successfully.
- 3(c) If the charm glows red and the “Try Again” message is heard, the scan has failed. Repeat Steps 1 and 2 to attempt the scan again.



Immersive Story-Sharing



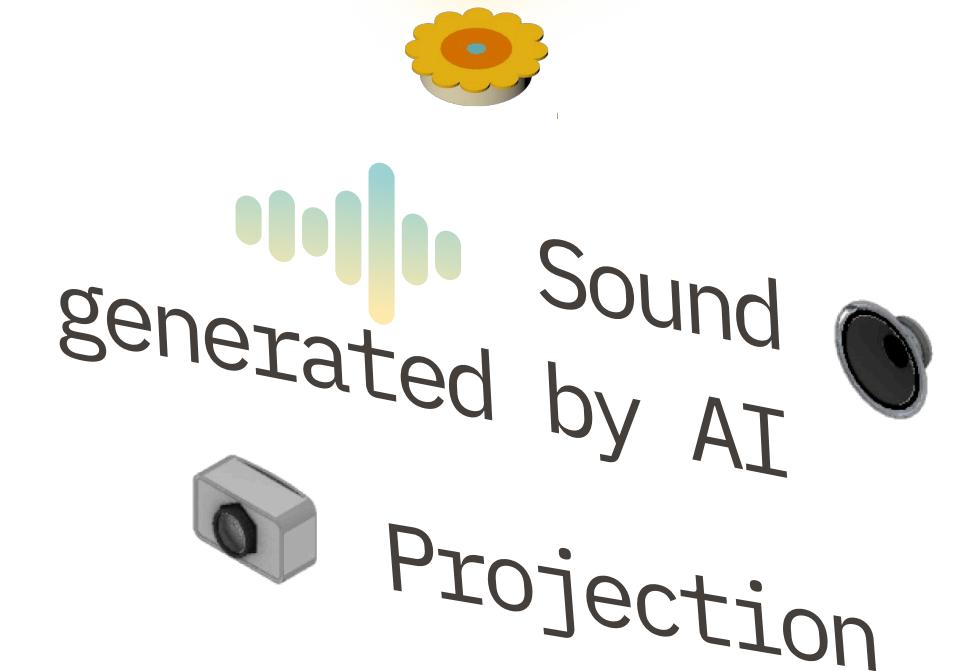
Step 4: Start Projection

- 4(a) Press the charm once to start story-sharing mode.
- 4(b) When story-sharing mode is activated, the charm will play a gentle ping sound and display the 2 ft projection (4 ft if more than 3 users) upwards and outwards from the charm. Accompanying audio (see Step 5(c) below) will be played at -12 decibels from current conversation to prevent interference with speaking.



Step 5: Projection Sequence

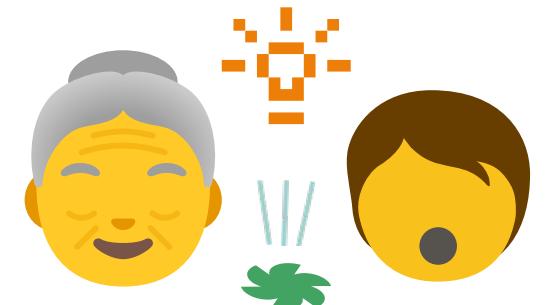
- 5(a) If a written timeline or account was scanned in Steps 1 to 3, it will be projected in a logical sequence.
- 5(b) If no written timeline or account was scanned in Steps 1 to 3, the projection rotates through scanned media randomly.
- 5(c) If scanned text document(s) contain a song title or description of a sound, the charm's AI will recognize it and add audio to the projection.
- 5(d) Note: You will not be able to pause the projection.



Step 6: Stop Projection

- 6(a) Once story-sharing mode is activated, the projection will stay on until deactivated or it detects that conversation has moved on. If conversation has moved on, move to step 7.
- 6(b) To stop projection, press the charm once.

AI Search Assistant



Step 7: Detect Question

7(a) The charm's AI Search Assistant will listen to the user's conversation for keywords that indicate that a question is being asked*.

*For Example: "What is ..." or "Who is.."

7(b) If it detects that the environment is noisy and chaotic or cannot identify a single conversation flow, AI search will not activate.

Step 8: Providing Contextual Information

8(a) If a question is being asked, the AI Search Assistant will project relevant contextual information via an audio and / or image(s).

8(b) If a follow-up question is asked, Steps 7-8(a) will be repeated.

Step 9: Increased Understanding

9(a) Now the listener and the storyteller have an increased understanding and connection. The listener has learned something new and the storyteller has been able to get their point across.

9(b) The AI Search Assistant detects that the conversation about this topic has concluded and turns off the projection, returning to step 7.

9(c) If the pin is pressed, or reattached if removed for storytelling, AI Search Assistant will deactivate.



Visual System

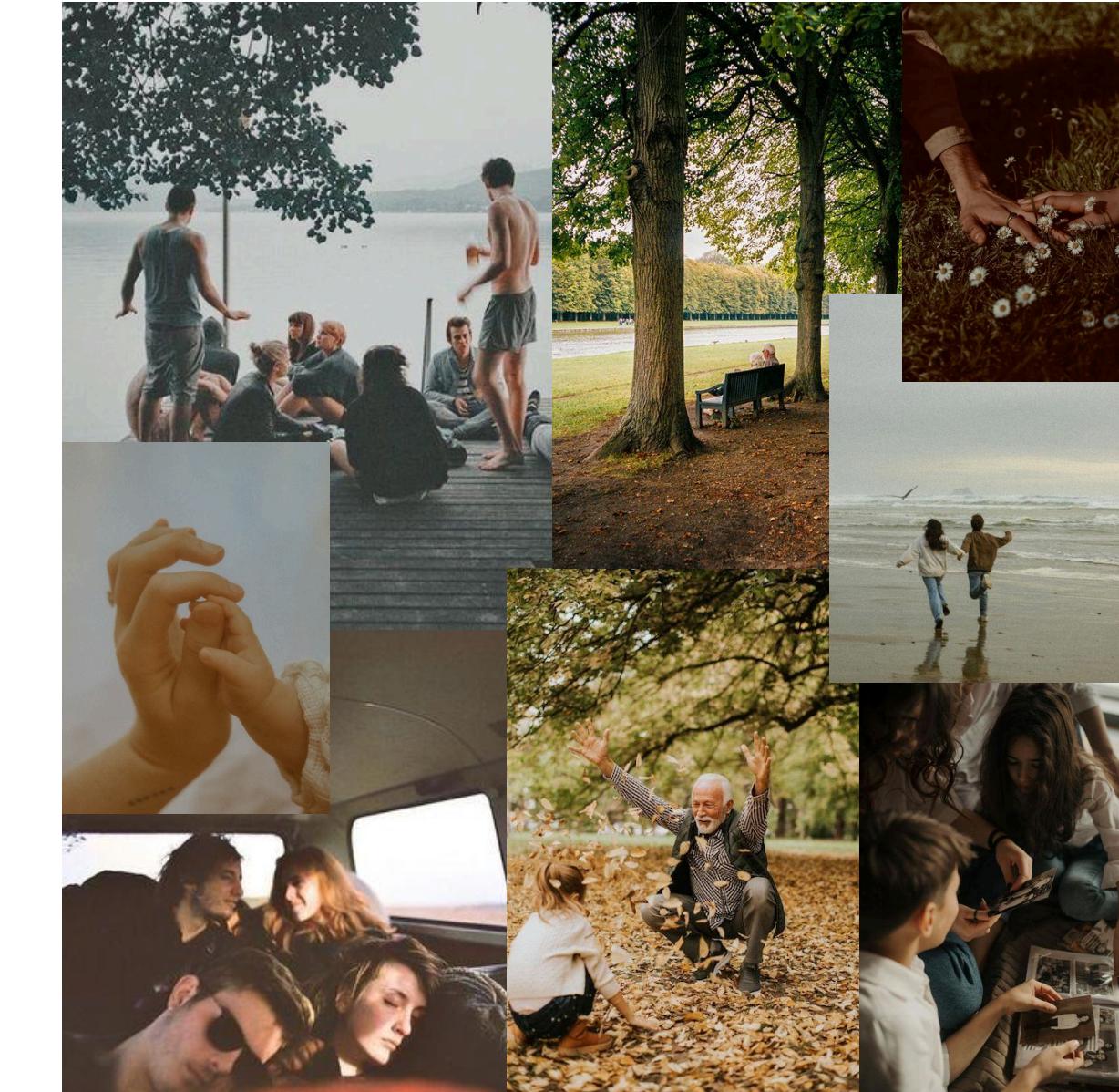
- | Moodboard
- | Color Palette
- | Brand Logo
- | Typography

Moodboards: 5 Brand Values



Creativity

Charmory aims to promote personalization and encourage individual expression. Users can design and create their own charm bracelets, making them truly unique.



Connection

Charmory celebrates the connection and understanding from meaningful human interactions: sparking touch, creating lasting memories, and enriching each other's lives through shared experiences and mutual learning.

Moodboards: 5 Brand Values



Playful

Charmory seeks to encourage users to tap into memories & stories that make them and others laugh, feel good, and smile.



Nostalgia

Charmory serves as a simple yet meaningful way to help users relive special times, emotions and stories. It also offers a way to recall and share these experiences, keeping the past alive.



Legacy

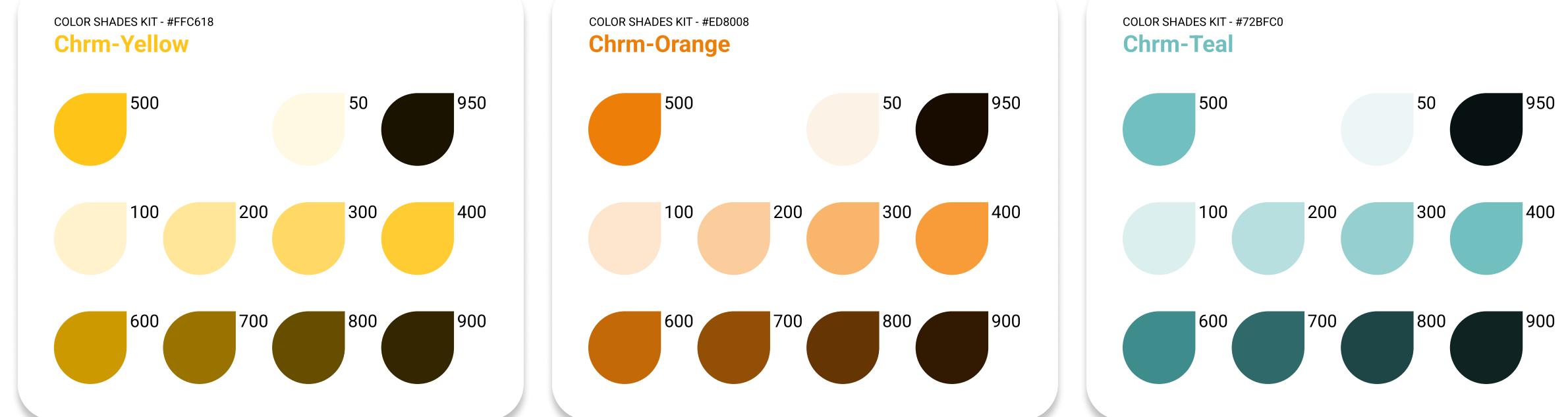
Charmory embodies the fragment of time and tales of our users' vibrant and complex youth - able to be passed down or shared in a moment together!

VISUAL SYSTEM

Color Palette

The color palette is a combination of the colors from our 5 moodboards.

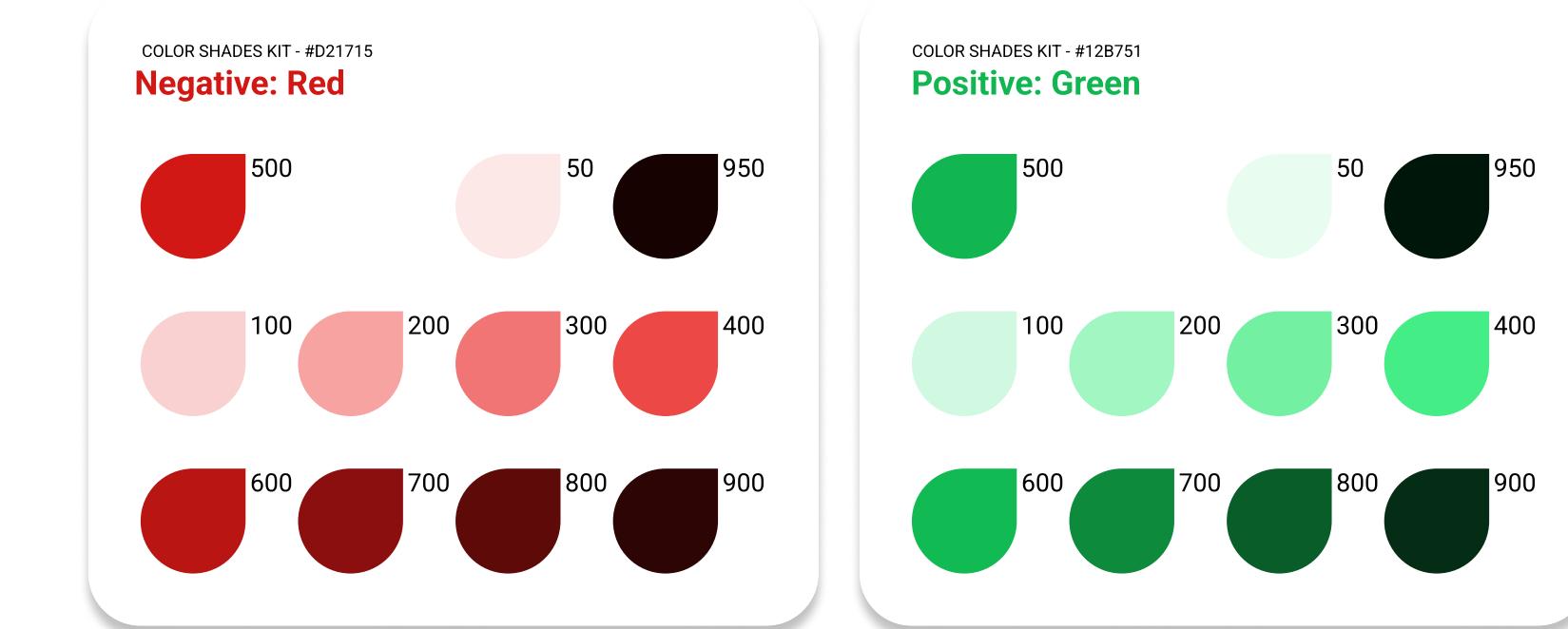
Primary Colors



Secondary Colors



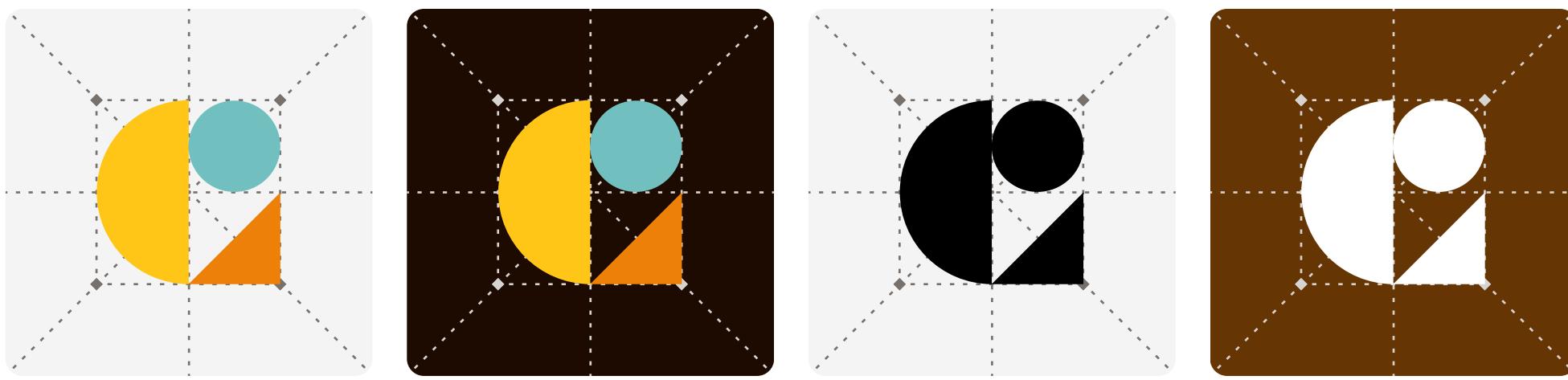
Positive & Negative Colors



VISUAL SYSTEM

Brand Logo

Logomark



Full Logo



Full Lockup



Typography

Hero Titles

128/166 (black, orange-800)

H1 - Subpage titles

60/78 (medium, stone-950)

H2 - Section titles

48/62 (semibold, stone-900)

H3 - Component titles

36/46 (medium, stone-800)

Subheader - To provide context for a section

28/42 (Medium stone-700)

LABEL - USED ABOVE SECTIONS FOR FLAVOR

ALL CAPS 24/36 (SEMIBOLD TEAL-700)

Body - Standard body and Functional Text across interfaces

16/24 (regular, stone-700)

Captions - Small supplementary text

14/26 (regular, stone-700)

Detailed Spec

- | Projection
- | Feedback

Projection Specifications

Pin Movement

- Should be able to account for pin movement, from shaky hands or body. The projection will self adjust, remaining in the same location if the user moves slightly.

Size / Space Constraints

- Projection will be a 2ft forward extension from the pin, in between the listener and storyteller.
- For 2 users 3 ft x 3ft x 3ft
- For 3 users 4 ft x 4 ft x 4ft
- No larger than 4 ft even with more users.

Sound

- Detects and disregards ambient volume.
- Projects sound at 12dB above ambient noise.
- Fun facts are delivered with a helpful, friendly, and relaxing voice.

Color / Brightness Adjustment

- No current interaction method.
- Assume system can generate a bright enough image.

Rotation is Contextual

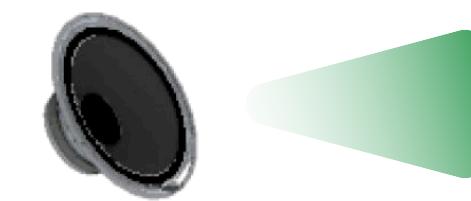
- Rotates slowly for 3D models.
- 2D images will not rotate.

VISUAL SYSTEM

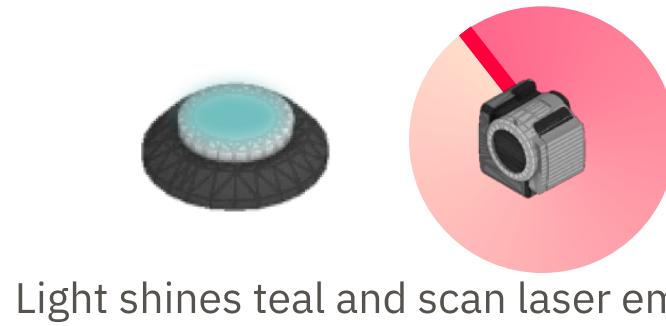
Feedback Specifications

SCANNING

Detecting
Press & Hold



Scanning



Success



Fail state
(first time)



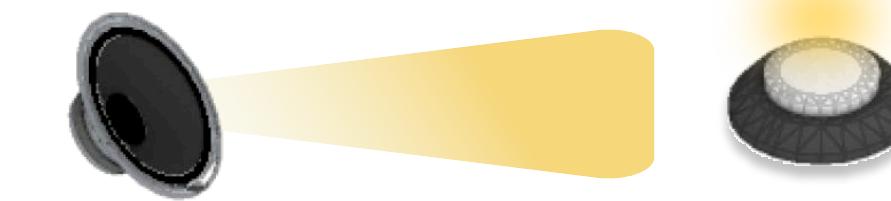
Fail state
(more than once)



This secondary fail state allows users to determine problematic items

DELETING STORY / RESET

Press and hold
for 12s



Deleted



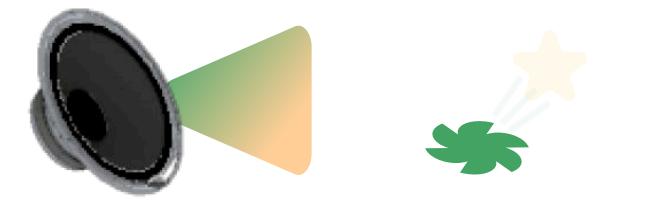
IMMERSIVE STORYTELLING

Start



Short affirmative chime, projection appears quickly

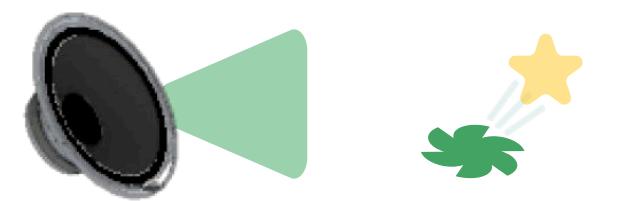
Stop



Short power down chime, projection disappears

CONVERSATION SEARCH

Triggered



Soft affirmative chime, projection fades in slowly
(limits conversational disruption)