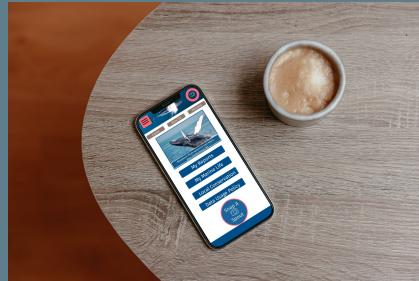# Spout: Spotting & Tracking Endangered Whales

An App with a Porpoise

Brian Walsh

Project overview
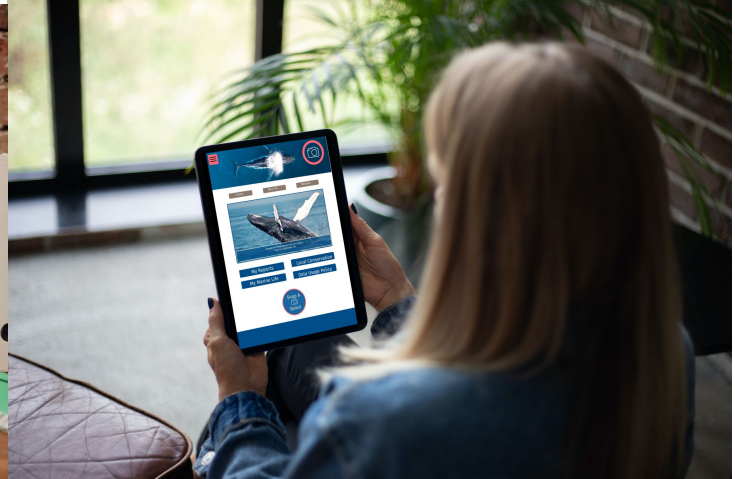
The product:

Design a tool to help save endangered species

Project duration:

Sep 2022

Project overview

🔒 Design a tool to help save
🔒 an endangered species of whale

The problem:

There are many factors that contribute to the decrease in whale populations throughout the world. While many causes are unknown, many whales suffer from known decreases in population, but there is insufficient data to motivate action.

The goal:

Encourage coastal residents around the world to to log and track whale sightings. Logging and tracking whale activity provides scientists a deeper understanding of typical migration patterns and population counts.

Project overview

My role:

Lead UX Researcher, Designer & Copywriter

Responsibilities:

- Founder
- User Research
- Design
- Branding
- Customer Experience/UX

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary

My user research consisted of questions that separate interviewees by their geographic information and gauge factors such as their familiarity with local whales, their likelihood to use an app to log whale activity and sightings, and their interest in learning more about local whales through the app.

This research generated three persona profiles, with no discernable gender difference:
1. Those who are familiar with whales and spend time near the water at home
2. Those who live by coasts or large bodies of water but are unfamiliar with whales or local marine life
3. Tourists who are passionate about whales, but are not local to the community

User research: pain points

1

Familiarity

Many participants reported that they simply didn't know enough about whales to identify them, but would be willing to learn.

2

Access

Not all potential users would have close access to areas where whales gather and pass, but would be interested in supporting from afar.

3

Ease of Use

How would the app work? Do I have to upload grainy pictures, or would there be other ways to report the information?

4

Privacy/Good Faith

How trustworthy is the app? Who's backing it and where does the information go? What is done with the data once it is collected?

Google

"As a local Bostonian, I want to strategically help preserve the whales and wildlife that are such a huge part of our ecosystem so that I can make a difference in my community."

Theo is a sales rep who enjoys an active outdoor life in the Boston area, which is home to many kinds of whales. While he's not a marine life expert, he can identify common whales in the area having lived there all his life. Being able to continue sharing these sightings with his friends and loved ones is important to him, but he doesn't know how he can help as a citizen.

Theo

Age: 25
Education: College Graduate
Hometown: Boston
Family: Parents, Sibling, Girlfriend
Occupation: Sales

Goals

- Contribute his knowledge in a meaningful, but convenient way
- Help report details of whale activity to support their conservation

Frustrations

- Unclear how he can help
- Not sure where the information is being used or how it will be used.
-

Sam

Age: 35
Education: College Graduate, Professional Certificates
Hometown: Los Angeles, US
Family: Boyfriend, Parents,

Occupation: Systems Analyst

"As a recent transplant to Portugal, I want to get involved with supporting local conservation efforts so that I can protect part of the reason why I moved here"

Sam recently moved to Portugal with his husband as a digital nomad. With a highly technical job, he enjoys the great outdoors and wants to become involved with conservation efforts to preserve his local surroundings. However, Sam doesn't know where to start or how he can get involved with a full-time job in a new place without an established community, so finding people with like interests would be an added bonus.

Goals

- Contribute to local conservation
- Make a difference in his new home
- Meet new people with similar interests

Frustrations

- Doesn't know where to start
- Doesn't have much knowledge of local environment or marine life

Fatima + Rohan

Age: 50, 53
Education: Post-graduate degrees

Hometown: London, UK
Family: 1 child, small extended family
Occupations: Retired (Sr Database Manager, Financial Executive)

"As global citizens with time and disposable income, we want to support global marine conservation efforts so that we can make a difference in our travels and everyday life"

Fatima & Rohan are early retirees who have an adult child and travel frequently. As executives in their professional lives, they're used to making a difference and want to apply that skillset to lasting change while still experiencing diverse global experiences. Although they don't have much knowledge about marine life, they know the ocean is a critical ecosystem that impacts the rest of the world, and want to be involved.

Goals

- Support global causes as globally-aware citizens
- Dedicate their time and energy to education and positive change

Frustrations

- With Fatima's experience in tech, she's easily frustrated with bad UX and tech
- Lack of trust with orgs that don't provide transparent data usage policies
- Learning curve on how they can make a difference

User journey map

Tracking Theo's journey through the app gave us excellent information about what a user, even one familiar with local marine wildlife, would still need help with.

Persona: Theo

Goal: Contribute to Local Whale Conservation

ACTION	Action 1	Action 2	Action 3	Action 4	Action 5
TASK LIST	Notice a whale or other endangered wildlife A. Notice the whale B. Use the phone and take a picture C. Navigate to Spout	Log the siting and any potential negatives A. From phone, use the app or camera to take a picture B. Create a report if there was information worth sharing	Provide Details A. Enter location of whale sighting B. Provide details about species and rough size of whale C.Report any environmental conditions or hazards that may be in the surrounding area	Submit Report A. Review report to see if all information that is to be shared is complete. B. Press submit	Monitor A. Monitor the report in case the app gets in touch B. Explore resources in the app or site that will help educate or provide context C.
FEELING ADJECTIVE	Alarm/Excitement	Practical Logical Fast-Paced	Analytical Thoughtful Urgent	Accomplished Thorough	Curious Inquisitive Helpful
IMPROVEMENT OPPORTUNITIES	Provide a clear introduction to the app	Populate common reporting details as a selection rather than free-form	Format as a questionnaire for faster fill-out	Clear success indicators	Provide education opportunities in advance based on location

Google

Starting the design

- Paper wireframes
- Digital wireframes
- Low-fidelity prototype
- Usability studies

Digital wireframes

These wireframes focused on a simple photo-based function and designed to easily educate and connect users to their local community and marine life.

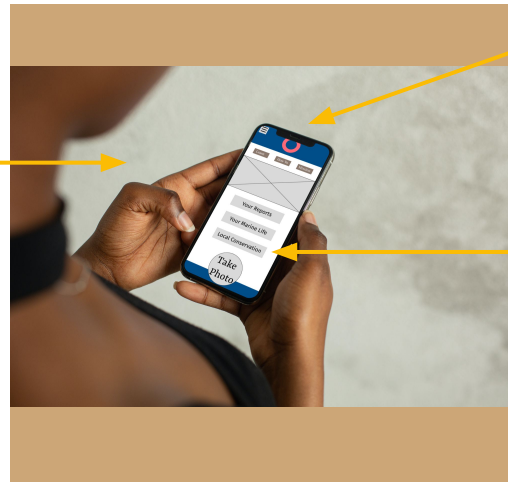
Large image that shares an example report

Photo icon that is present in the header navigation

Menu items that allow users to navigate to their activity and learn

Google

Digital wireframes

The ability to customize the order was a focus for a lot of my users. Making the customization screen easy to use, but still centered around delighting the customer.
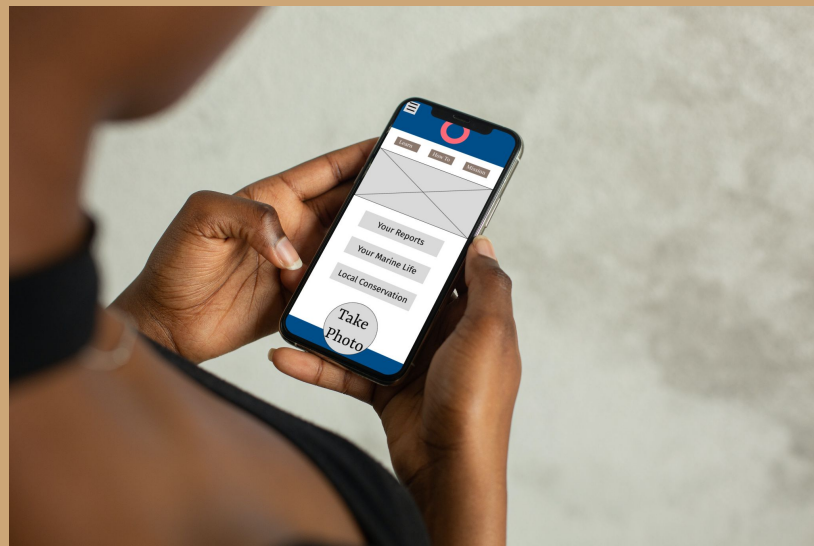

Image of item remains central, creating a visual experience that users will enjoy.
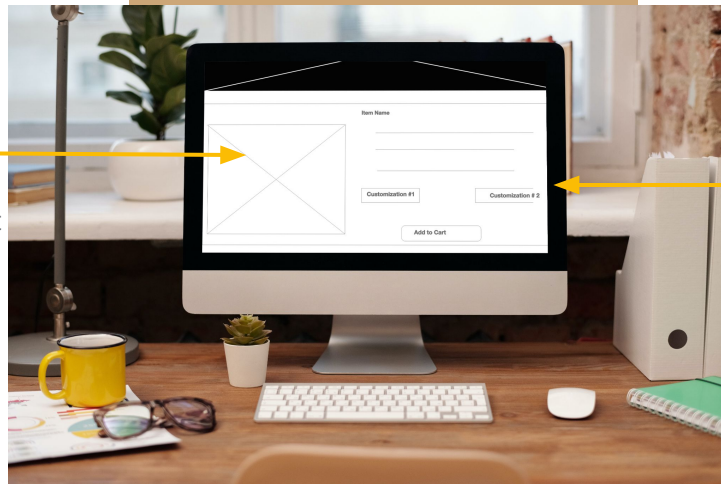
The fields for customization are separate, and large enough to easily follow.

Google

Low-fidelity prototype

This Figma prototype
demonstrates the initial
prototype for this user journey to
take and send photos of marine
life, with simple report details.

Usability study: findings

My diverse, but passionate test group provided some consistent feedback that shows that there was universal improvement required to the overall experience.

Round 1 findings

1. Limited trust of how data was used

2. Inability to navigate backwards

3. No Home button to navigate back or forth

Round 2 findings

1. Users not able to enter data in fields

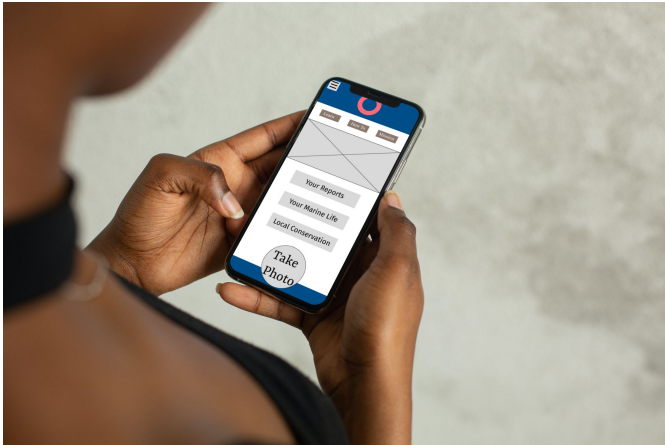2. Report submission flow was too long

3.

Google

Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

Mockups

Much of the feedback from the usability study was about overall flow and navigation, rather than design.

Before usability study
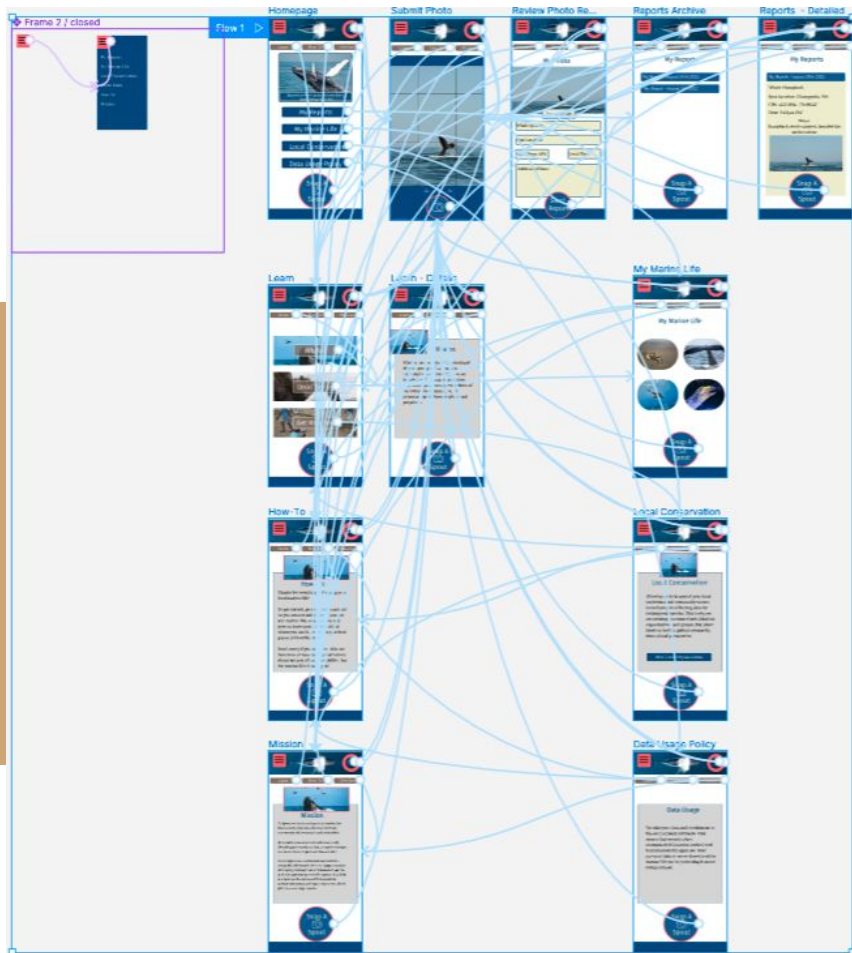
After usability study

Google

High-fidelity prototype

High-Fidelity Link can be found [here](#). This flow shows the primary flow on the main line, as well as a collapsible hamburger menu.

It also depicts the flow to support pages for supplementary offerings in the app.

Accessibility considerations

1

Color
I deliberately chose colors that contrasted so that any overlay/overlap was easy to navigate and distinguish for low vision. This use also helps to clarify where in the journey users are when they're checking out or completing an order/transaction.

2

Voice
Post-prototyping, the goal is to have all the CTA buttons be screen reader enabled. These clear CTAs will help guide the those who use screen readers, rather than confuse them through convoluted actions.

3

Size
To make the app more accessible, I used a larger font than I typically personally prefer. This allows for better legibility, especially if being used outdoors "on the spot".

Google

Going forward

- Takeaways
- Next steps

Takeaways

Impact:

This app will help connect communities and allow locals to take active involvement in environmental causes while also learning and exploring their communities.

What I learned:

Users can be very forgiving when an app is for a good cause. However, that doesn't mean that corners should be cut or best practices not followed. I also learned a lot about trust. Users care a lot about their privacy as well as the protections of their causes.

Google

Next steps

1

Add Pages
I'm still missing some essential pages to the flow, but everything in the main navigation is still accounted for. For the sake of the UX, I should add a profile page and deeper collections of the user's marine life.

2

Content
Follow-up to point #1 - the content that provides a deeper understanding of the local environment would be integral to this current iteration.

3

Design
Some of the design components could be refined further to be more cohesive.

Google

Let's connect!

Thank you so much for reading through!
To connect or contact me, please find me on:

- LinkedIn: https://www.linkedin.com/in/briantwalsh/

Speak soon!