

**2023**

# THE INTEGRATIVE CONSERVATION CLINIC FINAL REPORT

**Institute for Integrative Conservation**

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Integrative  
Conservation  
Clinic

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# EXECUTIVE OVERVIEW

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In this report we go through the research findings, analysis, design goals, and final prototype the group designed given the design problem. This was a 6 month long term project that was assigned to us by our client Dr. Alexandra Sabo who is representing the Institute for Integrative Conservation. The design problem presented to us was targeting conservation platforms and the primary users of conservation professionals. These platforms are often over crowded with information making it difficult for professionals to find the information they are looking for.

The Integrative Conservation clinic was designed to help professionals in the conservation field access original content and information about various disciplines in the conservation field. The design was made to overcome the hurdles many conservation users face while trying to find quick and efficient information. When designing this platform we conducted various user testing with an emphasis on testing users who are practicing in the conservation field daily. Upon analyzing the research data we had received through our interviews our group began working towards a solution that will solve the design problem at hand. Our group was trying to answer “How might we make information informative and efficiently available for conservation professionals to use.”

By analyzing the research data gathered from professionals our group tackled this project by creating various prototypes, testing each one throughout the process while trying to answer our original “How Might we statement”.



# INTRODUCTION

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## Design Problem

The design problem that was given to us by our client was targeting conservation platforms and the information they provide to the professionals. Users are struggling finding information and having to go through many filters and hurdles to find the original information they are looking for. Most conservation platforms struggle with overusing text, which is ultimately resulting in trouble conveying vital information. Users get lost in the text-heavy content because they cannot find what they are looking for or it is a very time consuming task. Users can also feel stuck and confused in the text-heavy content making it difficult to discover what they are searching for.

Also the information that is being presented by many platforms is disciplinary focused which leads to users not being able to gain an understanding of the different perspectives of other professionals. All in all finding information for conservation professionals is becoming a very tedious and time consuming task.

## Targeted Users

The main target audience for this project consists of professionals who are in the field of conservation such as practitioners, educators, researchers and regulators.

## Application Design

Our design solution is an online platform which will allow users to search for information in a simple way. Users will be met with a search bar right on the home screen which will allow them to enter any question or term. The search result will provide the user the best possible result based on the type of specific question they may ask. A filtering option will be available on the results page.

Users will be able to communicate and interact with the wider conservation community. Forums and groups allow for further connectivity. Users can join specific groups within the conservation community where they can share opinions and contribute to the group feed. Forums will be available to discuss specific nuanced topics or ask general questions.

The platform will be accessible regardless of if a user account has been made. A user who has made an account will have a personalized experience on the home page and throughout the platform.

The platform will provide a way for verifying the authenticity of information. This can be accomplished through peer review, in which conservation experts examine and confirm content provided on the platform. The platform can also give permissions to credible sources and allow users to flag incorrect material.



# COMPETITIVE ANALYSIS

While researching, we came across a number of different platforms that serve the conservation community but they all are lacking in either connectivity or information. The platforms are outdated and the user experience is inadequate. We see ourselves taking advantage of this and introducing many ideas to try and change the landscape within conservation.

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## **We looked at the following platforms within our initial research:**

- Bon In A Box
- Research Rabbit
- Conservation Tools
- Panorama
- Wild Labs

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## **We analyzed these platforms and created a competitive matrix profile (Figure 1). The matrix profile scores each platform on 6 categories:**

- 1.Information
- 2.Accessibility
- 3.Usability
- 4.Navigation
- 5.Simplicity
- 6.User Interface



# COMPETITIVE ANALYSIS

## Opportunities

The visual matrix (Figure 2) shows us the imbalance between all of the current platforms. Along with some of the platforms serving a niche audience, there are opportunities to capitalize on the current marketplace. Ideally we want to see our platform be the perfect balance between informative and social, while also being very organized. Some of these platforms have positives and negatives we can take and build upon. A platform such as ConservationTools has an incredible amount of information available while being very simplistic to use, but WildLabs serves as a more social platform with information. We can find the balance within all five of the platforms we have researched and attempt to create one that works well. By implementing some of the social ideas and user integrated solutions, we will be able to push our platform to heights that these platforms have not been able to reach. Additionally, the content offered on many conservation platforms is frequently disciplinary focused, which means that users may not obtain a thorough grasp of varied views from other professions. This can limit the capacity to interact and identify common ground, thereby delaying conservational progress of practices.

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# RESEARCH METHODS

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## High Level Goals

Our high level goals with our research was finding the answer the following questions:

- Who are our users? What do they do? What problems are they looking to solve?
- What is the best way to approach the design? (Website, App, or something else?)
- What are the difficulties users are facing with existing designs?
- When and why do our users look for information online?

## Methods

Interviews were the research method we employed. Our interviews were structured with 10 base questions and further probing questions when needed. We conducted interviews with the following 5 users:

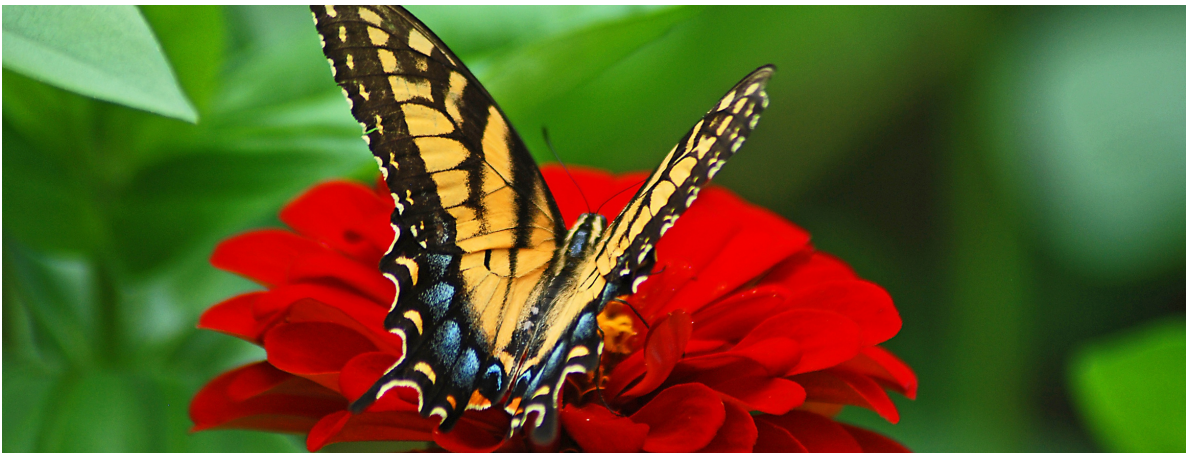
User 1 – Conservation Consultant

User 2 – Coordinator of Outdoor Recreation and Natural Lands

User 3 – Conservation Science Director

User 4 – Conservation Biology Coordinator

User 5 – Environmental Technologist



# USER NEEDS ANALYSIS

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## Research Analysis

After speaking with the five participants in our interviews, we recorded some of the key points stated by each participant.

The first commonality noted was information not being easily accessible. User 3 stated “sometimes it can be difficult to find information about a topic you’re not familiar with. There’s lots of specialized platforms”. This was a consistent answer amongst most of the participants. They all uniquely specialize in certain areas of conservation and have trouble finding information outside of their specific disciplines of conservation.

When asked “How difficult is it to connect with other conservation professionals? Why?” Three participants mentioned Wildlabs being one of the few resources they have used. They expressed a desire to have another platform where more academic findings can be highlighted in a social aspect.

When asked “Where do you find the most difficulties when searching for information? Why?”, all of the participants mentioned ease of use and navigation. User 5 stated, “Most of these current websites are crowded or way too confusing.”

## User Needs

We took our research analysis and created 3 personas we felt represented a portion of our user base. (Figures 3 -5) Those user personas allowed us to narrow in on our following user needs.

- Users want information to be easily accessible with one user saying “sometimes it can be difficult to find information about a topic you’re not familiar with. There’s lots of specialized platforms”
- They want a place to be able to share their findings and research.
- Want to be able to connect with other researchers.
- Should be simple to use and navigate.
- There needs to be a way to validate legitimacy.
- Information can be accessed remotely.



# DESIGN GOALS

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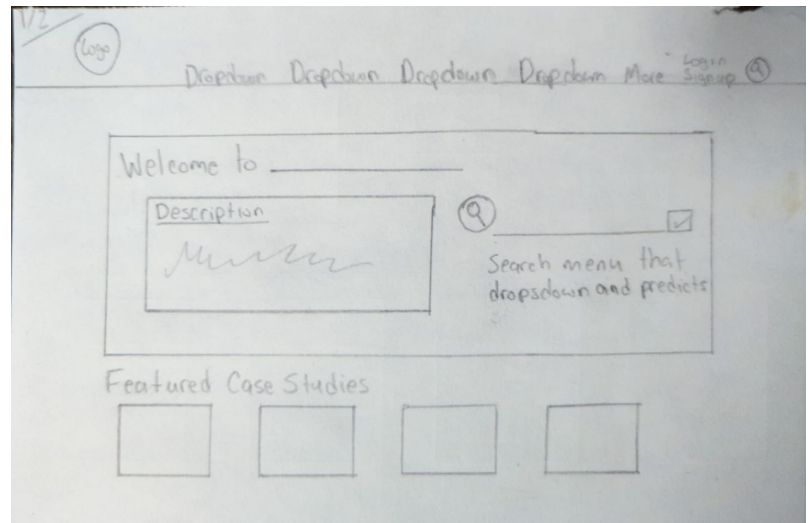
- **Easy Information Access:** The platform should be developed so that users may easily obtain information on conservation subjects. Provide a user friendly interface that allows searching for material by subject, keyword, or category. In addition, the platform may make customized suggestions depending on the user's interests and search history.
- **Collaboration and Sharing:** The platform should allow users to share their research and discoveries with other conservationists. This can be accomplished through the use of a forum, a blog, or a social networking component. Users should be able to contribute papers, photographs, videos as well as receive feedback from others.
- **Networking with Other Researchers:** Users should be able to easily connect with other conservationists and researchers using the platform. This can be accomplished through a message system or a social networking tool that connects users with others who share similar interests and skills.
- **Simple and User-Friendly Design:** The platform should have a simple, intuitive and easy to navigate design. Users should be able to quickly find their topic without having to look through many pages or menus.



# DESIGN METHODS

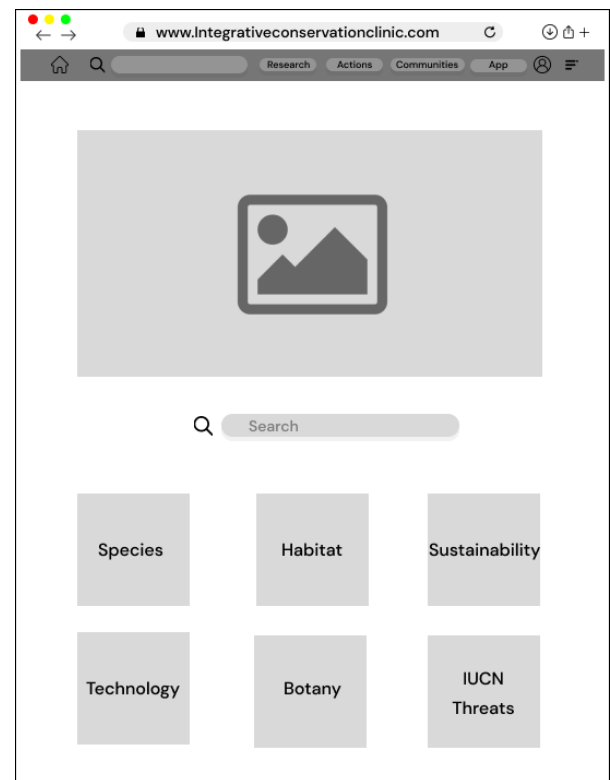
## Sketches

Our initial prototypes included 4 sketches and 1 low fidelity prototype created on Miro. The sketches gave us a potential look at how we could structure the design. We brainstormed potential ideas for housing the design. These ideas included a web app, mobile app, and a combination of both web and mobile. We created our sketches for a web platform based on our user interviews and competitive analysis. Below is an example of one of our sketches.



## Low Fidelity Prototype

Once the sketches were completed, we moved our ideas onto a single digital figma prototype. This prototype was a low fidelity wireframe that allowed the user to complete tasks. The low fidelity prototype had 11 screens. Below is the home page of the digital low fidelity prototype.



# DESIGN METHODS

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## Testing and Iterations

Our testing process for the low fidelity prototype included performing a think aloud test while having the users complete certain tasks. Due to the prototype not being interactive at this stage, the actions were completed verbally by the users. We tracked the user's actions, thoughts, clicks, and usability issues as they worked through three tasks.

Task 1 had a success rate of 80%.

Task 2 had a success rate of 60%.

Task 3 had a success rate of 20%.

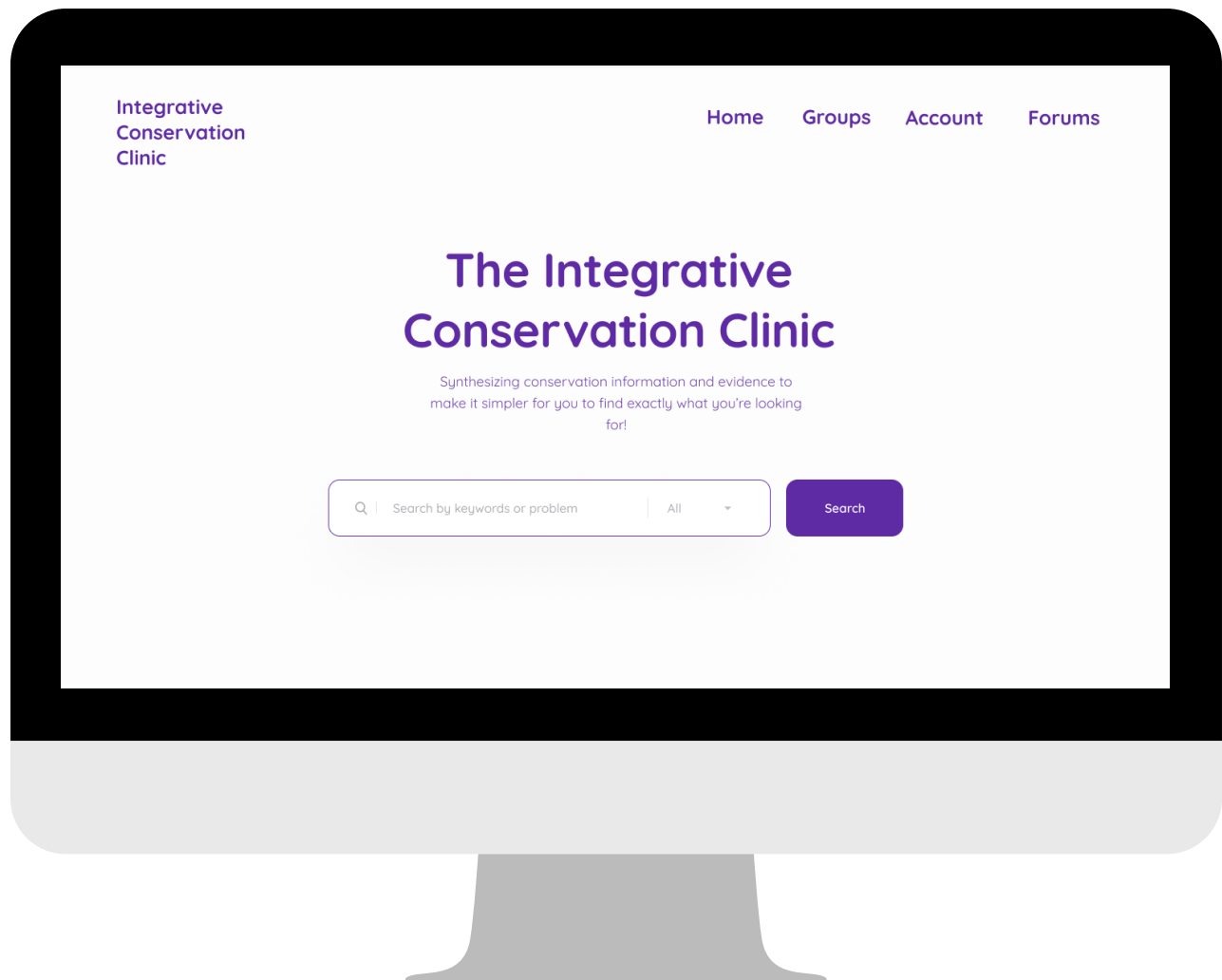
Task 2 confused users when it came to bookmarking a study. Task 3 was where we encountered the most problems with the navigation and layout of the design. Some of the consistent feedback we got was:

- Making sure the home page has a bookmarks section to revisit later.
- Using just a star to favourite/bookmark was confusing.
- The layout looked very text heavy on the study page.
- All of the users liked the idea of having bookmarks.
- Have an option to print directly for those who don't like to take their phone or tablet to wet areas.
- All of the users we tested were confused about how to progress and share their findings.
- They weren't sure if this meant forums or adding a study.
- The communities page on the top of the screen was the correct route to take but they never considered it.
- They all recommended a name change for the social page.



# FINAL PROTOTYPE

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# FINAL PROTOTYPE

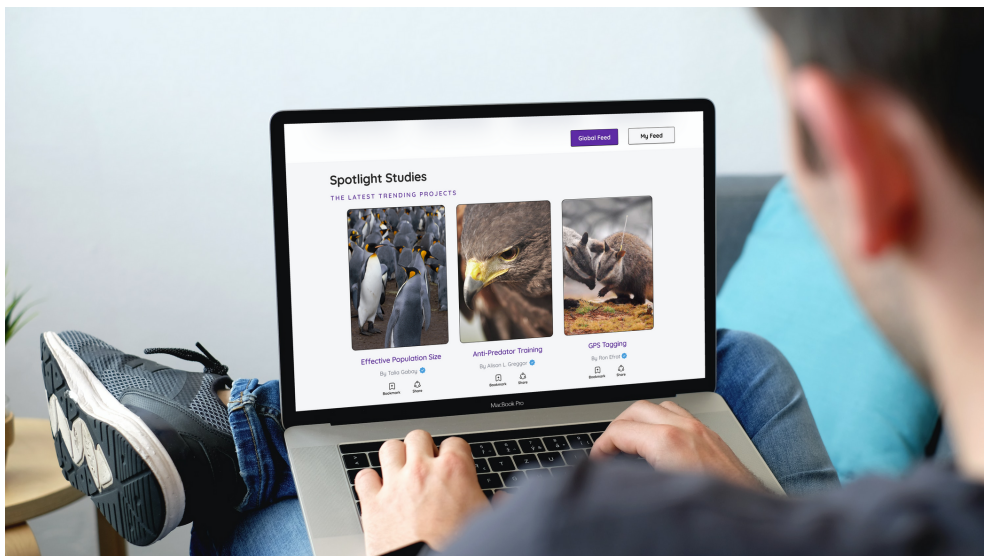
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## Layout and Navigation

The layout and navigation of the design focused on two main pillars.

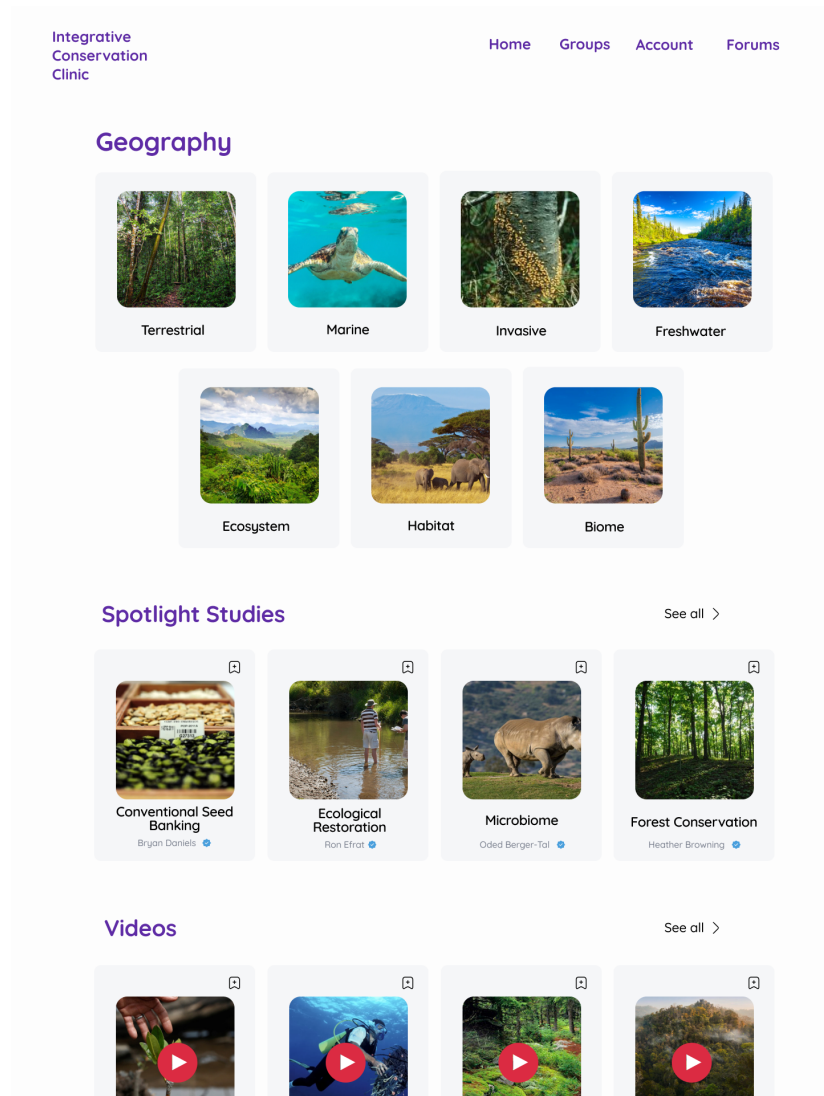
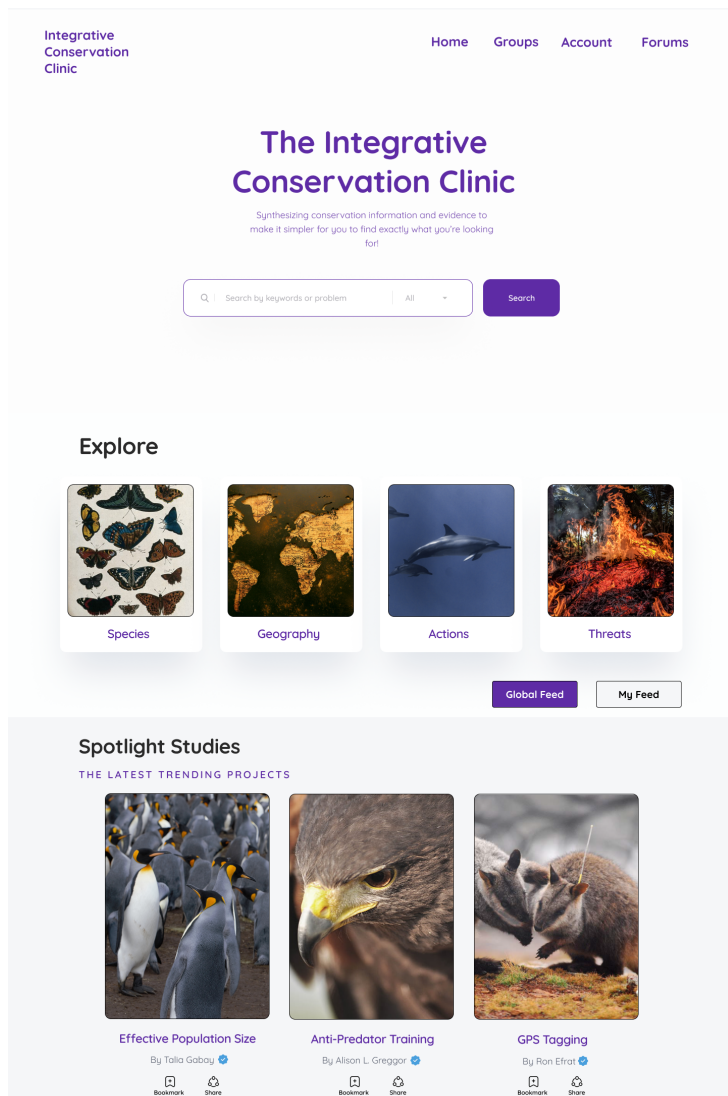
**Simplicity** – We heard from our users that they needed the website to be simple to navigate with one user saying “we have a lot of older volunteers that come in to help with projects and it takes them a lot longer to learn these complicated websites”. The website is designed primarily with simple boxes and images. This is done purposefully to simplify the experience and make it easier for anyone to understand. The main nav bar at the top of the website is also simplified for the most important key tools for the user. They can go to the home page, groups page, forums page and account page. The remainder of the more specific pages will be on the homepage as the user scrolls down

**Ease of use** – Building from the simplicity of the design, we also want the design to be easy to use for any user. The website can be accessed and used by anyone, regardless of whether they have an account or not. If a user decides to create an account, their experience will become much more seamless. Their homepage will be personalized and catered to their specific group choices and forum participation. This will be an easy way for users to come back and immediately revisit an earlier topic. We also added certain accessibility options for users as well. These include the ability to increase font sizes and add audio descriptions to the website.



# FINAL PROTOTYPE

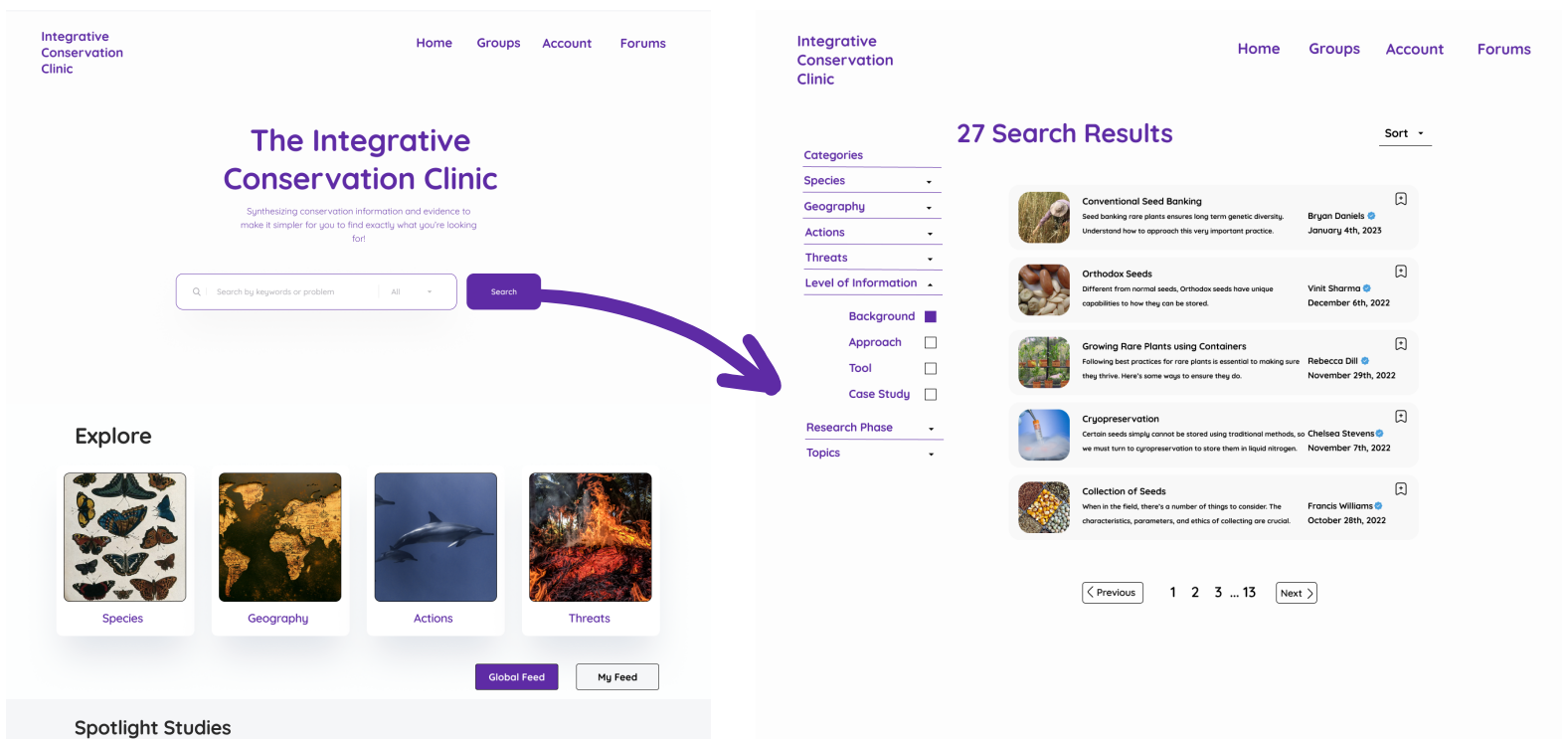
## Layout and Navigation



# FINAL PROTOTYPE

Our final prototype accomplishes 4 key tasks.

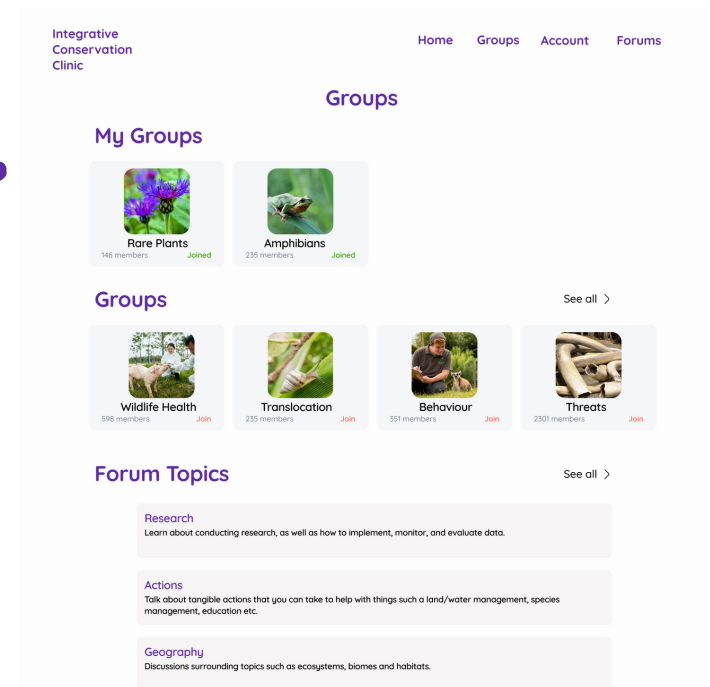
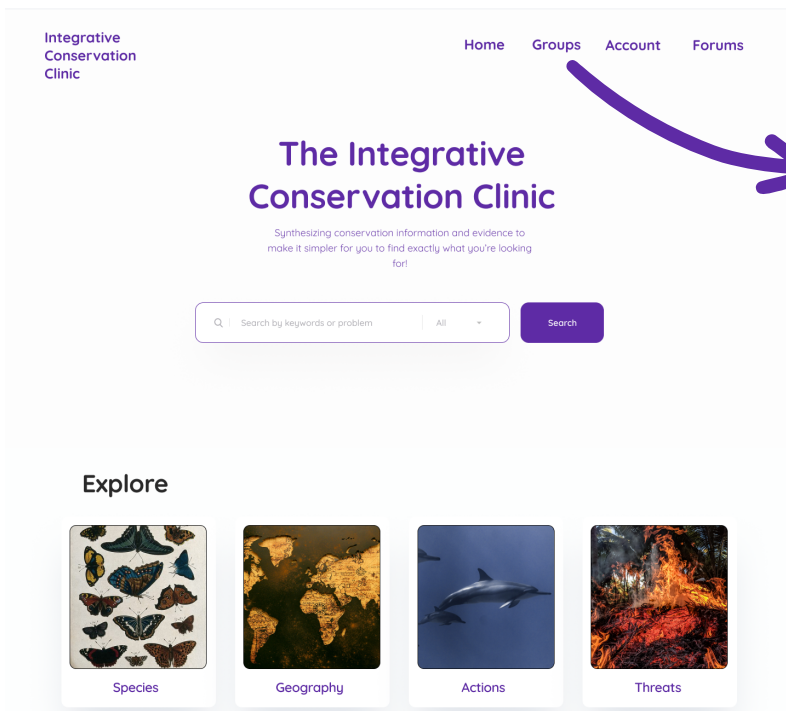
- Searching – The user can search for information using the search bar or navigating through the website. The users will be able to search for 4 different levels of content.
  - Level 1: Theoretical background (Basic information about a topic)
  - Level 2: Broad Approach (How you should do something)
  - Level 3: Specific Tools (What is needed to do the task)
  - Level 4: Case Study (Here's how it went when I did it) (also links all 3 above)
  - These 3 levels of content are known as BATs (background, approach and tools) will be the primary way content is organized on the website.



# FINAL PROTOTYPE

Our final prototype accomplishes 4 key tasks.

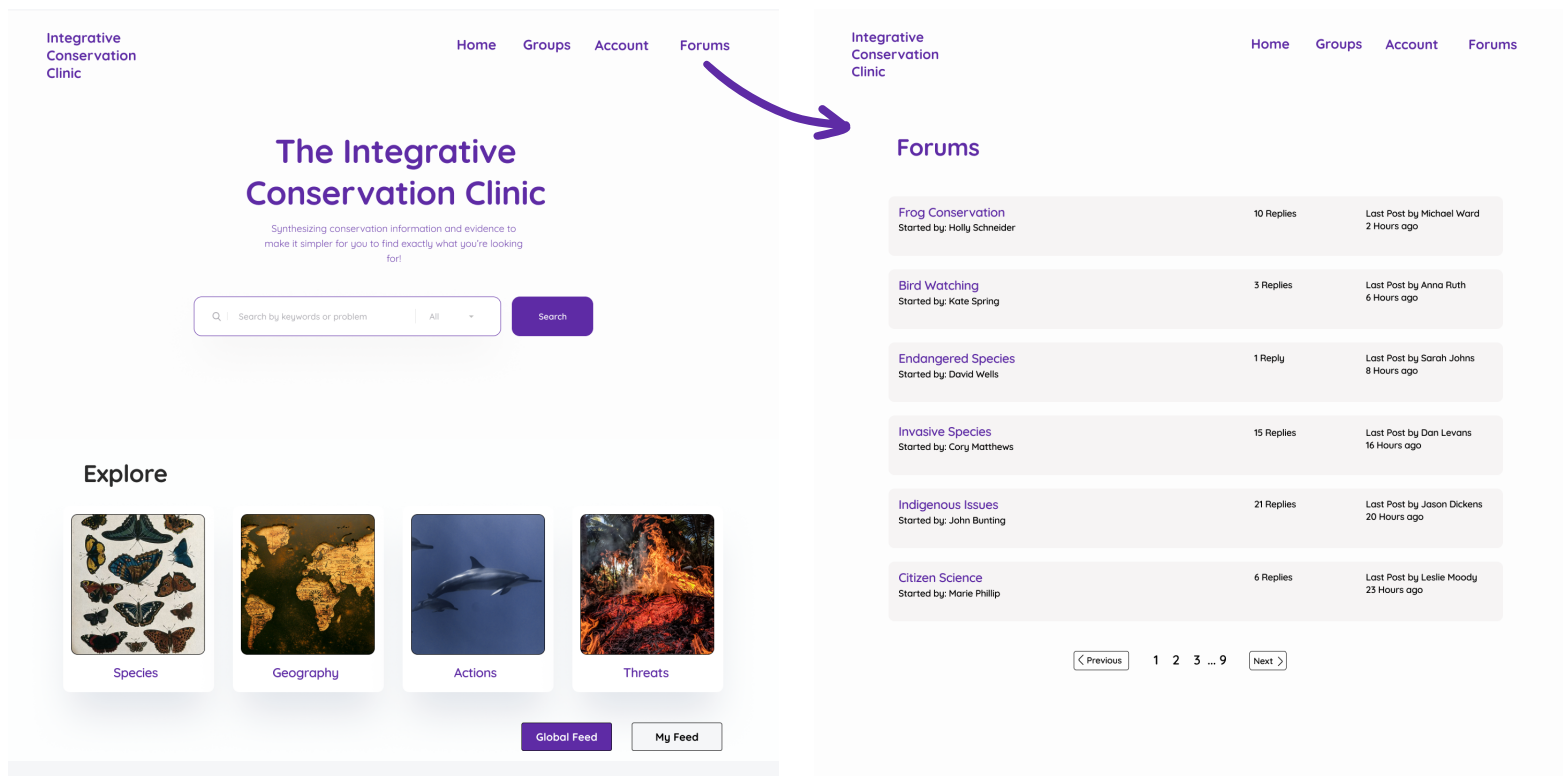
- Groups – Groups will help conservation professionals collaborate around a certain topic or area of conservation. Users will be able to create discussions, posts, share to a feed or comment on recent posts. They will be able to see who they are interacting with and will be able to join multiple groups at once.



# FINAL PROTOTYPE

Our final prototype accomplishes 4 key tasks.

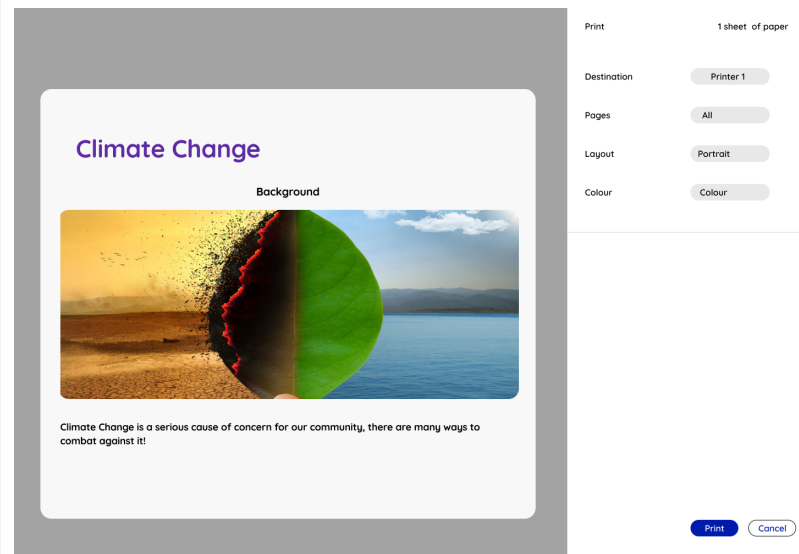
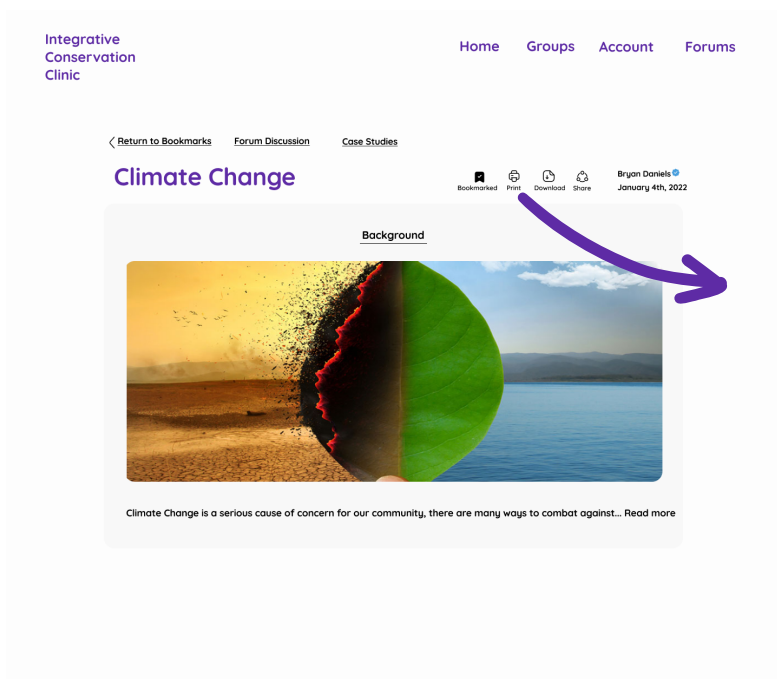
- Forums – While groups will help connect people around a singular topic, forum discussions will be where more nuanced and informative discussions will take place. Users can visit the forums page and contribute to an existing discussion or create new discussions entirely.



# FINAL PROTOTYPE

Our final prototype accomplishes 4 key tasks.

- Offline – As one of the key pain points recognized earlier in our research, having access to information offline and on the go is crucial for conservation professions. The ability to save any study as a PDF or print it out directly will help solve the pain point of limited access in remote areas.





# FINAL USABILITY TESTING

## Participants

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The following were the participants for the interactive prototype testing.

User 1 - Parks Canada Representative. Environmental Scientist.

User 2 - Coordinator of Outdoor Recreation and Natural Lands.

User 3 - Conservation Biology Coordinator.

User 4 - Environmental Technologist.

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These were the participants for A/B testing.

User 1 - Coordinator of Outdoor Recreation and Natural Lands.

User 2 - Conservation Science Director.

User 3 - Environmental Technologist.



# **FINAL USABILITY TESTING**

## **Interactive Prototype Testing Process**

Our interactive prototype testing methods included qualitative and quantitative testing. Our testing includes using the think aloud method while the user completes tasks. We tracked user actions, thoughts, clicks and issues.

For the interactive test, we noted usability issues as well. If the user mentioned an issue or we noticed the user moving to an incorrect path, we noted the usability issues associated. To categorize the usability issues, we created a severity rating for each issue. A high severity issue is one that leads to a task failure and requires a lengthy fix such as redesigning site navigation or layout. A medium severity issue is one that may or may not cause task failure but prevents the user from achieving the task in the optimal way. This includes adding or removing elements of the design to make navigation better. A low severity issue is one that can be resolved quickly and easily. This includes resizing certain elements or changing an image.

**Our Interactive testing consisted of 5 tasks for the users to complete:**

1. You're looking to find some information regarding seed banking as you have seeds you'd like to store for future research. How might you find what you're looking for?
2. You've gathered some initial information regarding a species of Chinook Salmon and would like to take the information with you on a research trip. How would you take the needed information into the field with you?
3. You've just returned from a research trip and have some intriguing discoveries that you can't wait to share with other rare plants enthusiasts. How might you report your findings?
4. You want to revisit a forum discussion that you saw earlier on endangered species. How would you reply to this discussion and provide your opinion?
5. You previously bookmarked a study regarding climate change in Canada, and would now like a physical copy to take with you into the field. How would you obtain this physical copy?

We measured task success by task completion within a certain number of clicks. For the interactive prototype, all 5 user tasks were able to be completed within 3 clicks. We gave the user an allowance for 10 clicks in the interactive test. We increased the allowance due to the interactive prototype having more opportunities for exploration. Task failure was measured by an inability to complete a task or using too many clicks.

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## A/B Testing Process

For our A/B testing process, we conducted tests over Zoom while providing users with a total of 2 tasks from the interactive tests completed earlier. The two tasks we chose highlighted the most important issues that needed to be addressed. Our testing team pasted the prototype links in the chat and directed the participants through each task for both prototypes. As they go through each task, we encourage them to speak out loud, and provide us with their honest opinions. During the process we will jot down notes of the challenges, struggles, and what went well throughout the whole test.

The goal of this study is to determine which one of the two iterations of our prototype performs better. From the feedback we received in the earlier tests, we prioritized navigation and forum discussions as they were the most confusing areas for users.

These were the two tasks we asked users to complete:

1. You're revisiting a forum discussion that you saw earlier as an expert in endangered species, how would you reply to this discussion and provide your feedback on the topic.
1. You're looking to find some background information regarding seed banking. How might you find what you're looking for?

After conducting the test, we asked the user to score each prototype. We used a semantic differential scale of 1-10 to get feedback on each design. We asked them to score the navigation and visual look of each design.

On a scale of 1-10, how would you rate the navigation of each design? Why?

On a scale of 1-10, how would you rate each design overall? Why?

On a scale of 1-10, how would you rate each design visually? Why?



## Interactive Prototype Testing Results

Task 1 had a success rate of 100%.

Task 2 had a success rate of 50%.

Task 3 had a success rate of 50%.

Task 4 had a success rate of 75%.

Task 5 had a success rate of 75%.

From the testing completed, these are the most common complaints the users have identified:

- Some users clicked on the 'species' page instead of clicking on the search bar as they thought that was the right way to initially go.
  - They were confused about which option gave them the correct result when they arrived on the results page. They could bookmark, print or download the study.
  - The new 'social' tab was still difficult to interpret.
  - They couldn't figure out the correct route to go and often clicked back to the home page instead of clicking on 'social'
  - Users found the 'see all' buttons to be small
  - They were instinctively clicking on the person's name to see if they could view a profile.
  - Wanted more resources to be mentioned in the forums such as outside tools that can be discussed.
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## A/B Testing Results

For this test we used our existing interactive prototype and the new iterated prototype. Prototype 1 is the existing and prototype 2 is the iterated prototype.

### User 1

Prototype 1

Navigation - 8

Design - 6

Visual - 6

Prototype 2

Navigation - 7

Design - 7

Visual - 7

User 1 successfully completed both tasks given to them. They required some assistance at times throughout tasks for prototype 1. They stated that prototype 1 has a "better search bar and information finding". They rated the second prototype higher visually as it had larger text and a simpler navigation bar on the top of the page. They really liked the idea of having a global and personalized feed.

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## A/B Testing Results Cont'd

### User 2

#### Prototype 1

Navigation - 7

Design - 6

Visual - 8

#### Prototype 2

Navigation - 6

Design - 8

Visual - 5

User 2 also successfully completed both tasks. User 2 found the first prototype to be visually pleasing. They liked the navbar having drop down menus with lots of options in prototype 1. They loved the idea of the groups and forums, especially with the global and personal feeds. Visually, they preferred the style of the first prototype due its colour scheme but preferred the overall design of the newer prototype.

### User 3

#### Prototype 1

Navigation - 7

Design - 7

Visual - 8

#### Prototype 2

Navigation - 8

Design - 7

Visual - 6

User 3 completed both tasks. They preferred the visual design of prototype 1. The design for both were rated 7 with the user stating, "both of them seem very similar in terms of the design". User 3 preferred the navigation of prototype two, mentioning the simplified nav bar and larger font sizes making it easier to identify where to go.

# KEY FINDINGS

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Outside of the minor iterations we made to the interactive prototype, we still have issues which will require more time and testing to solve. The adjustments we made to the prototype for A/B testing were minor changes. We did not iterate for large scale changes as the goal is to consistently iterate with small improvements each time. We also considered our limited number of tests as a factor for this. Creating significant changes to the prototype at this stage with limited testing available would be risky.

The first highest priority finding from our final user test and A/B tests is the lack of originality of the design. The design currently looks and feels like many other platforms that already exist. The look of the design was not enjoyed by users 2 and 3 in our final test. During our A/B testing, we received consistent feedback which compared our design to other existing designs.

- “The look is simple but it looks like a lot of other sites I’ve used.” – User 2
- User 3 stated they do not enjoy the layout. Especially did not enjoy certain pages such as the forum discussion page.
- “Reminds me a little bit of wildlabs with the feeds” – User 2 A/B testing

In order to address this issue, we will need to potentially create a new layout or change elements of the design.





# KEY FINDINGS

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Navigation was the next high priority finding from the testing. While there was progress made with the iterated prototype, we recognize that there are still major issues. Some of them were mentioned by the users during the A/B testing.

- User 1 in A/B testing stated their desire to present multiple navigation options. “If I was actually using this, I would click on actions, search or look for drop-downs. I think having all 3 is a good idea”
- User 3 mentioned “I like the groups and forums idea but the way the menu is laid out is a little confusing to tell the difference between the two cause forums can be in groups or separate”

Addressing the navigation of the design will require redistribution of content and performing tree testing and card sorting once we meet our sample size requirements.

The final high priority finding discovered was the need to increase the usefulness of the design. The design currently hasn't distinguished itself enough from other tools available. The iterated prototype includes the global and personal feeds which is a way to address the usefulness of the website. Although there were positives from the changes implemented, we still need to address some of the major feedback we originally received.

- “What makes me use this instead of google?” - User 1
- User 2 stated that he does not think this is a viable tool currently.

Addressing this issue will require creative solutions that do not exist currently in existing tools. We will need to revisit our competitive analysis and look at more tools to analyze. Brainstorming ideas and testing them will narrow down a solution



# NEXT STEPS

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## 01

The most important next step with this project is more research and testing. Talking to more users and gathering more information is crucial to the continuance of this project. With more testing, we can rapidly implement more changes and iterate the prototype on a large scale. Researching our users beyond interviews is a crucial way to really understand their pain points and situation. Observational research as well as in person research will be crucial in learning more about our users.

## 02

Solving our highest priority findings also needed the introduction of features and changes we simply could not implement yet. Some of those features included a companion app, an annotation feature for commenting and a rating system. The next version of this tool can implement these features to help solve some of the high priority findings discovered during testing.

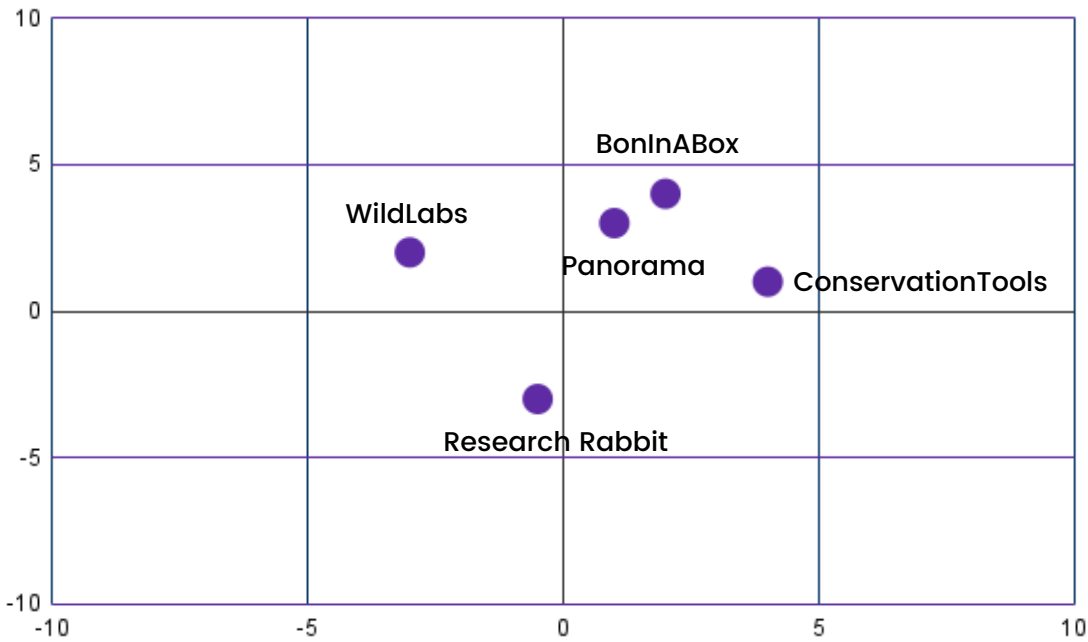


# APPENDIX

Figure 1

		PANORAMA		WILDLABS		CONSERVATION TOOLS		RESEARCH RABBIT		BONINABOX	
CRITERIA	WEIGHT	SCORE	TOTAL	SCORE	TOTAL	SCORE	TOTAL	SCORE	TOTAL	SCORE	TOTAL
Information	3	3	9	2	6	5	15	4	12	4	12
Accessibility	2	4	8	4	8	3	6	2	4	3	6
Usability	1	3	3	4	4	4	4	3	3	3	3
Navigation	1	4	4	4	4	2	2	3	3	3	3
Simplicity	2	3	6	3	6	4	8	2	4	3	6
User Interface	1	3	3	4	4	2	2	2	2	2	2
Total Scores		33/50		32/50		37/50		28/50		32/50	

Figure 2



# APPENDIX

Figure 3

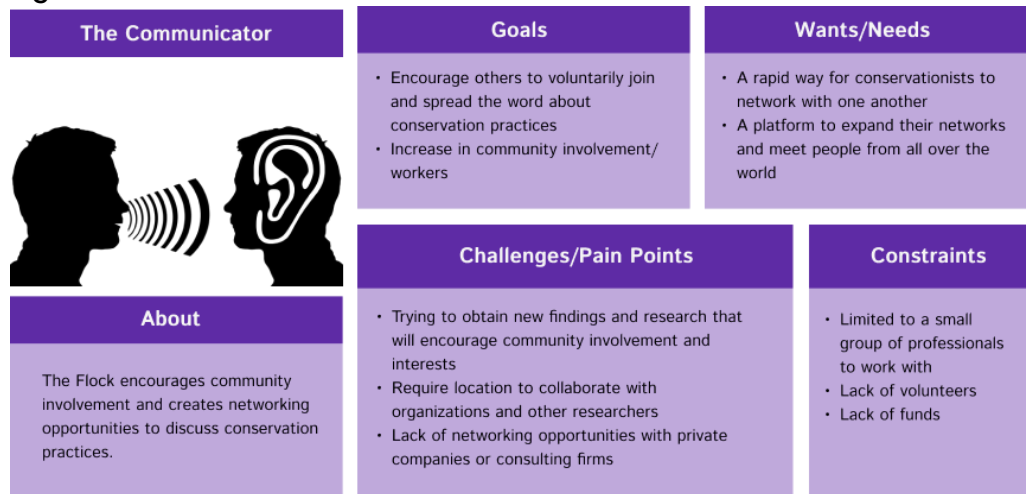


Figure 4

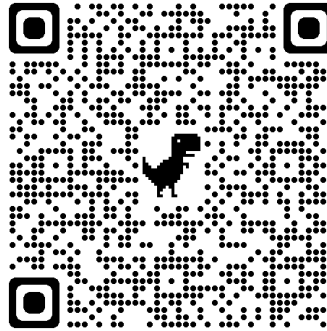


Figure 5



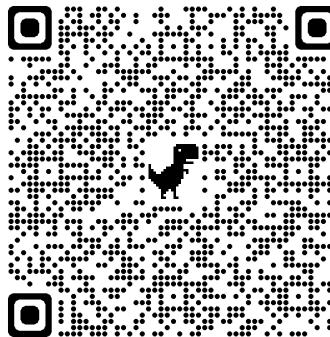
[View the Slide Deck Here!](#)

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[View the Final Prototype Here!](#)

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