INST702 - Advanced Usability Testing

Recreation.gov
Usability Testing

Group 8
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The Project Brief

Project Goal

Recreation.gov is a website where you can plan your next trip, figure out the details, and reserve experiences at common facilities and individual sites across the country.

By conducting usability testing with real users, we would be able to **explore how usable and efficient the information and tools on the website are** for its visitors to plan their next recreational activity.

Project Overview

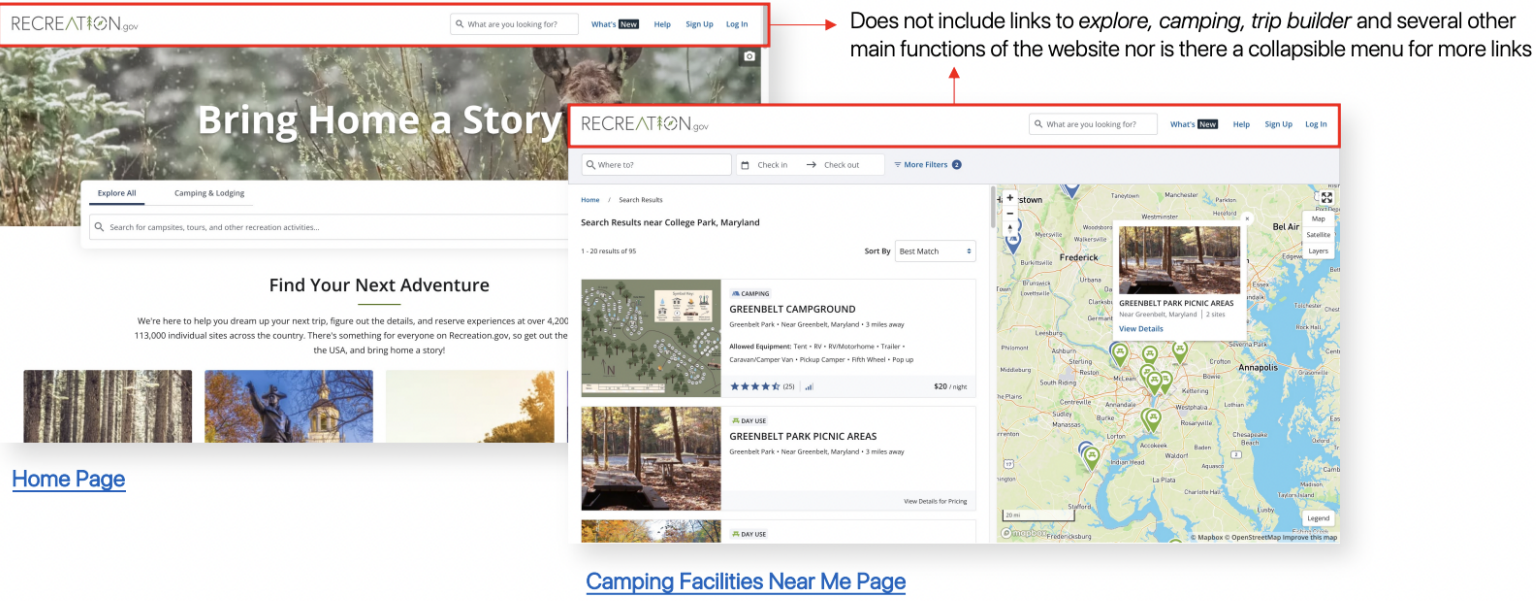| Team	Process	Tools Used	Timeline
Alden Brown	Heuristic Review	Figma	12 weeks
Eyimofe Barrow	Persona Devlopment	Microsoft Excel	
Krithika Balasubramanian	Scenarios & Task	Zoom	
	Task & Path Analysis		
	Test Plan		
	Usability Testing		
	Test Analysis		
	Suggestions		

Heuristic Evaluation

We identified the following issues from the heuristic evaluation we performed before the usability testing to help us gain some insights on the aspects we can improve usability of this website

1. No Navigation Menu

Issue: None of the pages have a navigation bar/menu to navigate around the website. Users are forced to scroll down the homepage to make use of the features and tools offered.
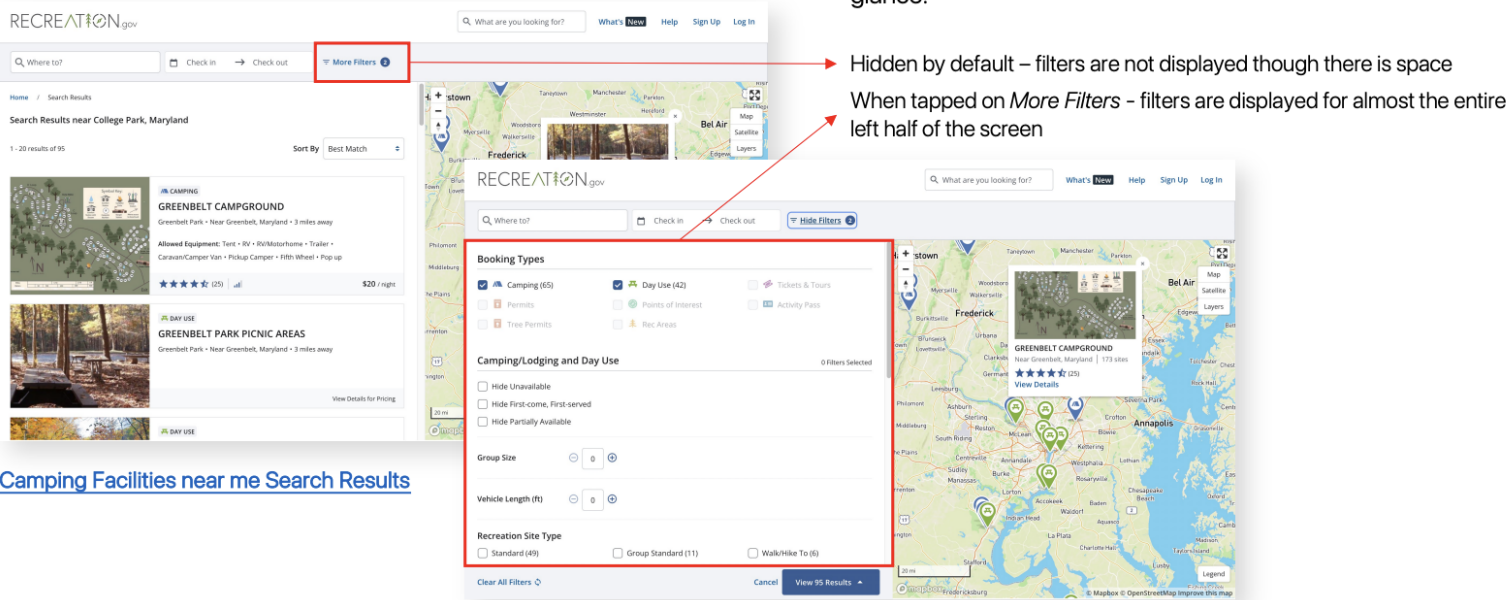
Recommend: Redesign the top navigation bar to include the main pages or add a collapsible menu to help users navigate around the different pages within the website.

Does not include links to *explore, camping, trip builder* and several other main functions of the website nor is there a collapsible menu for more links

Home Page

Camping Facilities Near Me Page

2. Filters are Hidden

Issue: Selected filters are hidden by default on search results

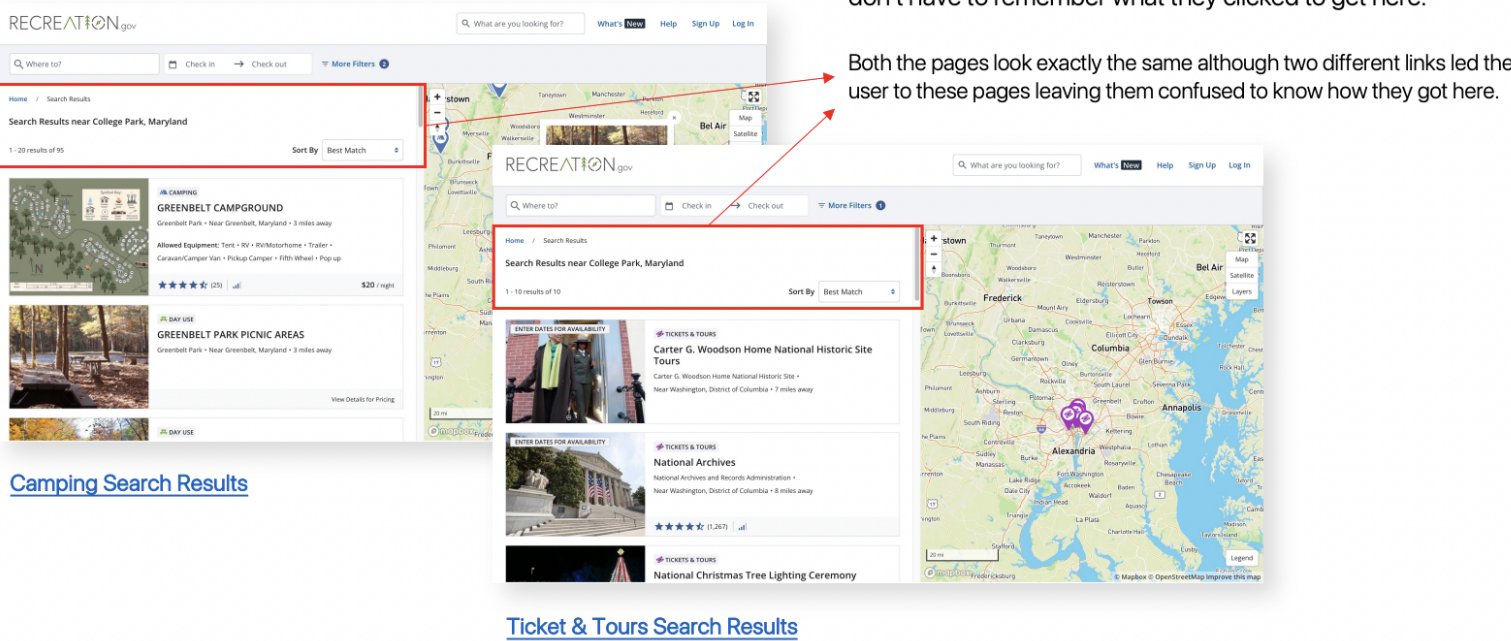**Recommend:** Show the selected filters by default to help users understand the information displayed on the page at one glance.

Hidden by default – filters are not displayed though there is space

When tapped on *More Filters* - filters are displayed for almost the entire left half of the screen

Camping Facilities near me Search Results

3. No Page Title

Issue: Most of the search pages do not tell you where you are.

Recommend: Include a page title/ rephrase breadcrumb so the user is informed of where inside the website they are, so they don't have to remember what they clicked to get here.

Both the pages look exactly the same although two different links led the user to these pages leaving them confused to know how they got here.

Camping Search Results

Ticket & Tours Search Results

Persona Development

After identifying usability issues based on heuristics, we developed three different personas to understand users' expectations, motivations, and frustrations when using recreation.gov

Kea
Young Techie Traveler

ADVENTUROUS   SOCIAL   ACTIVE

About
Age: 28
Job: Software Developer
Location: California
Camping Exp: Experienced
Tech Exp: Moderate - High

Bio
Kea is a software developer who works remotely. She enjoys traveling, camping, and bird-watching. She is very social and spends a lot of time outdoors with her friends and family when she's not working.

Scenario
She's looking to go camping with her friends over the 4th of July weekend in Colorado. They're looking for a spot that is scenic to camp and also has easy access to lots of outdoor activities.

Goals
Reserve a spot at a campsite using recreation.gov
Plan a trip around that campsite and create an itinerary
Share information with friends quickly and efficiently

Influencers
- Planning a trip with everything in one place to consider is easy.
- Info on network coverages helps in decision-making.

Frustrations
- Reservation system is annoying to use as most of the spots seem to booked or not released
- There isn't proper information on how many days prior it can be booked/ what time of the day the bookings are open for a specific date.

Harold
By the books dad

ORGANIZED   OLD SCHOOL   FAMILY ORIENTED

About
Age: 51
Job: History Teacher
Location: Massachusetts
Camping Exp: moderate
Tech Exp: Low

Bio
Harold is a detail-oriented high school history teacher who has a soft spot for the way things used to be. This can be seen in his fascination with scale model recreations of famous battles and also in his short temper with technology.

Scenario
Harold is planning on taking his family on a cross county road trip where they stop to camp along the way. So he logs on to Rec.gov to reserve some camping spots close to his route.

Goals
Reserve multiple campgrounds large enough for his family
Find campgrounds along his road trip route

Influencers
• Campground is close to his route.
• Campground allows 5 people
• Planning a trip is an easy process that supports customization
• The ability to see campground reviews.

Frustrations
• Understanding the reservation process.
• Dealing with the inconsistent aspects of the trip planner.
• Inability to determine if a campground is already taken or if it hasn't become available yet.

Carl
Curious young outdoorsman

INEXPERIENCED   SOLITARY   INQUISITIVE

About
Age: 23
Job: Barber
Camping Exp: None
Location: Utah

Bio
Carl is a barber in the city. He loves walking in nature. He's friendly and social but also values his alone time.

Scenario
Carl's never gone camping before, but he really wants to try it. He just moved to Utah and he knows how popular it is here.

Goals
• Find out what parks/sites are near him
• Learn about what gear he needs

Influencers
• Gear thats effective but not too expensive
• Campgrounds close to the city
• Articles that don't use too much jargon

Frustrations
• Articles are hard to find
• The site is hard to navigate without a menu
• Does not know where to start

Scenarios & Tasks

After defining our personas, we put together a task list with scenarios to gain insights in areas we identified to have need for improvement.

TASK 1

Scenario

You are going on a roadtrip from Hoboken NJ to Freedom NH. Can you find a Campgound that is near your roadtrip route?

TASK 2

Scenario

You are working professional who is looking to go camping with your friends over the 4th of July weekend in Colorado. Reserve a campsite in Colorado which has scenic photos.

TASK 3

Scenario

You are a teacher trying to book a field trip to a popular national park with limited permits available. Enter a lottery for a chance to visit Angels Landing.

TASK 4

Scenario

You are a college student planning a Spring Break roadtrip with your friends and you want to do some camping along the way. Use the Trip Builder feature to find 3 suitable campgrounds near your route from Yakima to Fresno.
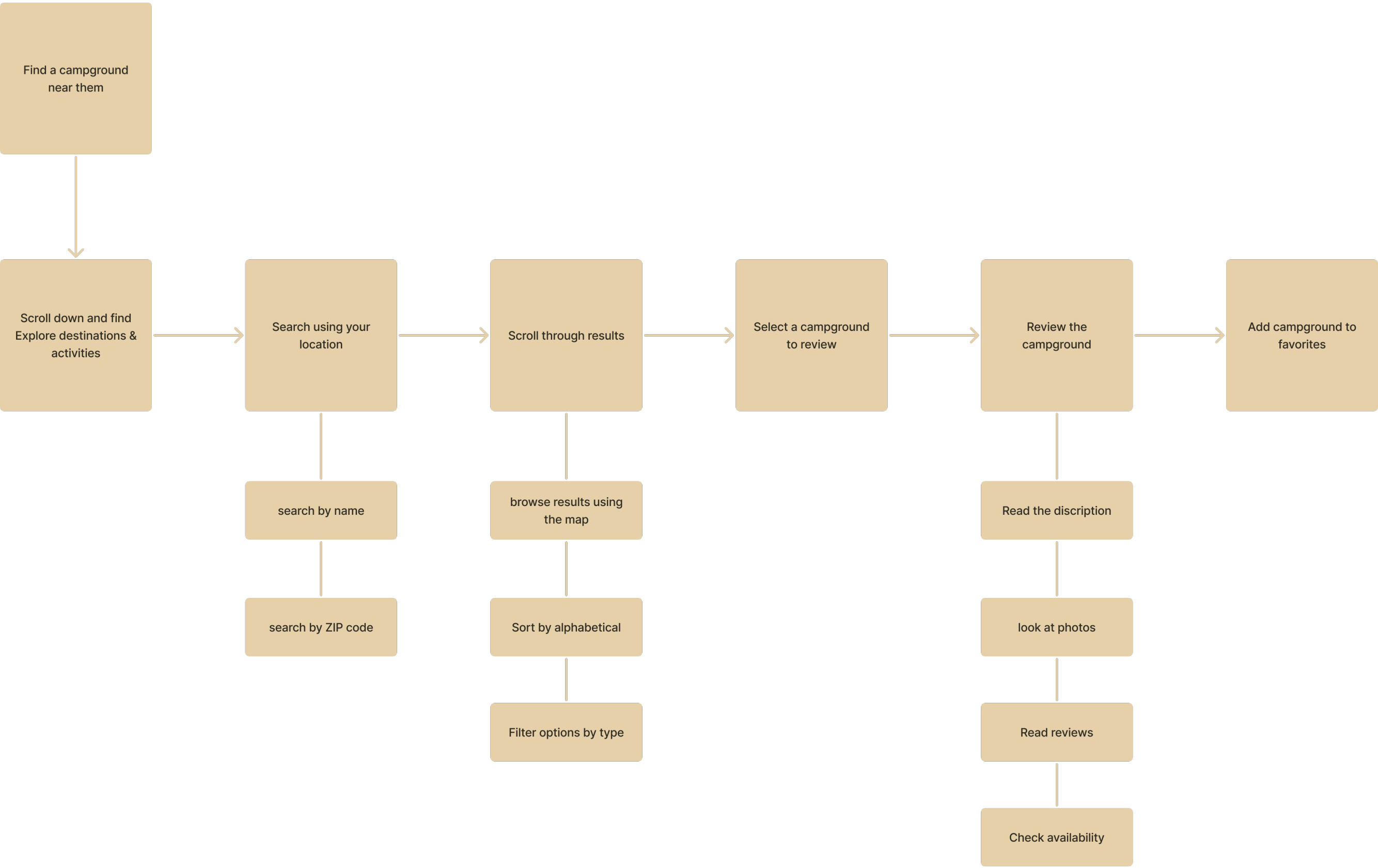
Task & Path Analysis

We conducted task analysis to understand users' behaviors when they perform each task. Additionally, we did a path analysis to find the optimal path for users to achieve the task goal.

Task 1 - You are going on a roadtrip from Hoboken NJ to Freedom NH. Can you find a Campgound that is near your roadtrip route?

Task Analysis

Find a campground near them

Scroll down and find Explore destinations & activities

Search using your location

Scroll through results

Select a campground to review

Review the campground

Add campground to favorites

search by name

search by ZIP code

browse results using the map

Sort by alphabetical

Filter options by type

Read the discription

look at photos

Read reviews

Check availability

Path Analysis

Find a nearby campground
- Find Explore Destination & Activities on the home page
- Type Boulder, CO in the Find Destinations by State search bar
- Browse through possible campgrounds
- find and select Arapaho Bay
- Learn more about the campground
  - Read the description
  - Check availability by clicking on campsite list
    - look through the availability grid
  - Click on View Photos
    - look through photos
  - Click the Ratings & Reviews tab
    - read through reviews
- Add campground to favorites by clicking the favorite heart

Alt path replaces step 2
- navigate using the map to locate Boulder, CO
- click and hold to drag the map
- hold ctrl and scroll to zoom in and out

Task 2 - You are working professional who is looking to go camping with your friends over the 4th of July weekend in Colorado. Reserve a campsite in Colorado which has scenic photos.
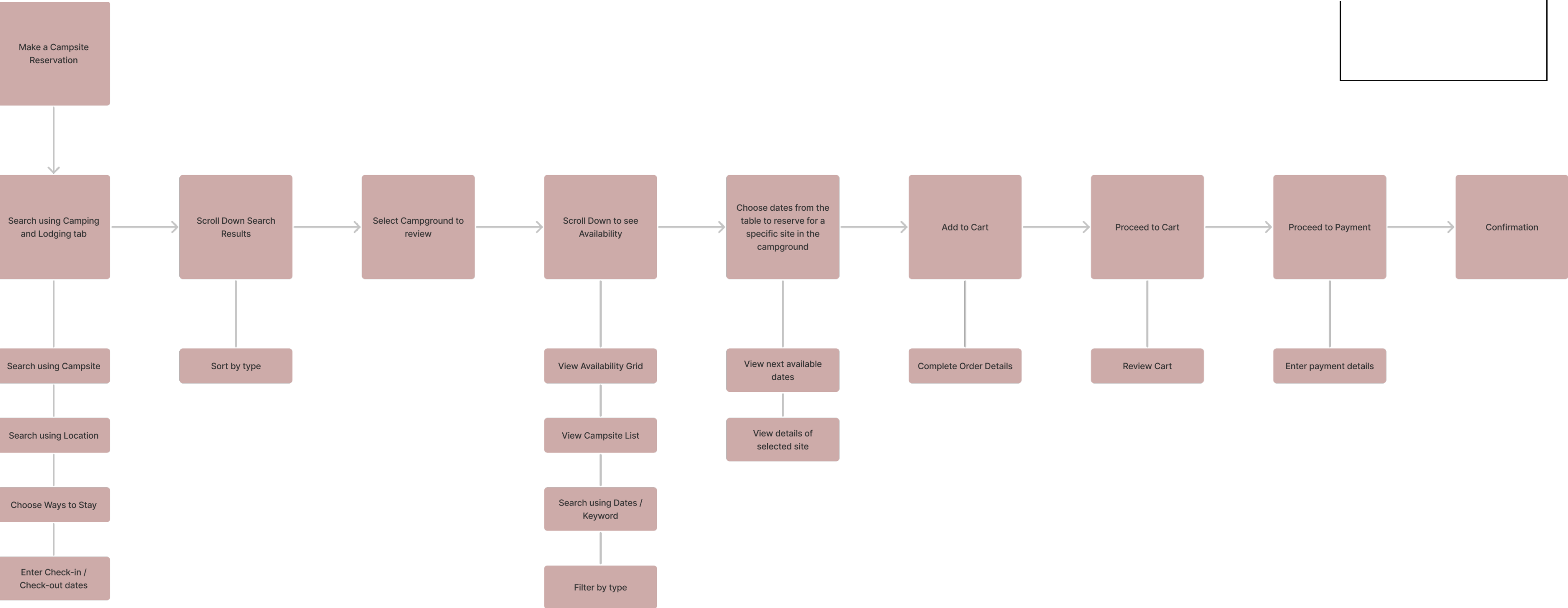
Path Analysis

Make a Campsite Reservation
- Select Camping & Lodging tab
- Type in camping location
- Choose ways to stay
- Enter check-in / check-out dates
- Sort search results by availability
    - Scan through the results

Follows same path after this point

- Choose a campground
    - Read through the relative info
- Select campsite list tab
- Enter check-in / check-out dates
- Choose site type
- View the table in Availability Grid
    - Check for availability before and after preferred dates
- Choose dates from the table to reserve campsite
- Select Add to Cart
- Fill in group size and number of vehicles
- Read and agree to important information
- Review cart
- Make payment
    - Enter card details
- Confirm reservation details

**Alternative Path** (replaces the first few steps)
- Scroll down to Explore Destination & Activities
- Type in camping location
- Filter - 'camping'
- Choose a campground
    - Look through the list / Choose from map

Task Analysis

Task 3 - You are a teacher trying to book a field trip to a popular national park with limited permits available. Enter a lottery for a chance to visit Angels Landing.

Task Analysis
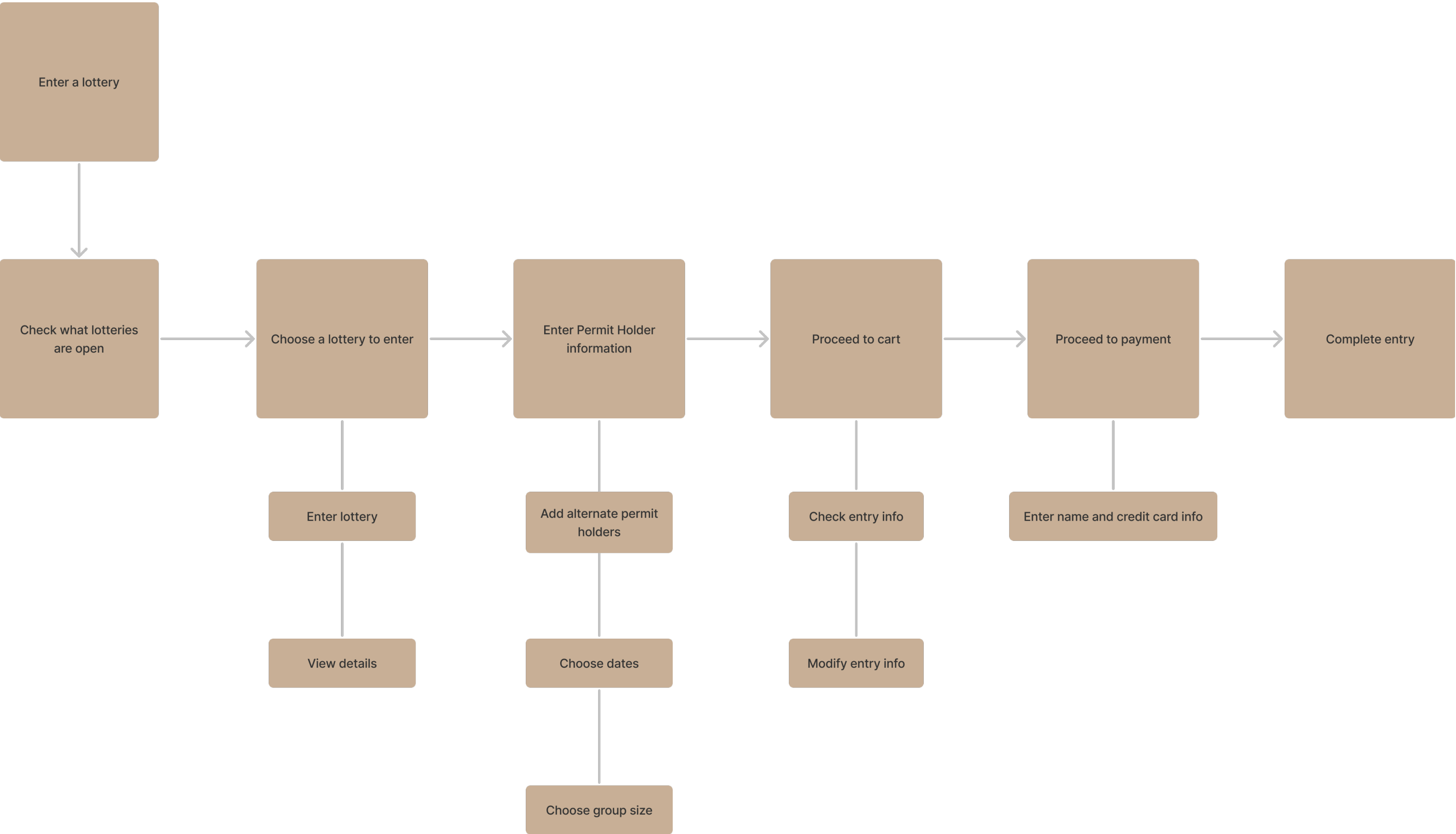
Path Analysis

Enter a lottery
- Go to the Lotteries page
- View the details of the first open park
  - View the "Need to Know" information
  - View how to get there
  - Look through the photos
  - Read a 1-star review
- Register for park's lottery
- Enter your information
- Choose your date
- Choose your group size
- Add an alternate permit holder
- Proceed to cart
- Proceed to payment
- Enter name and credit card info
- Complete lottery entry

Task Analysis boxes:
- Enter a lottery
- Check what lotteries are open
- Choose a lottery to enter
  - Enter lottery
  - View details
- Enter Permit Holder information
  - Add alternate permit holders
  - Choose dates
  - Choose group size
- Proceed to cart
  - Check entry info
  - Modify entry info
- Proceed to payment
  - Enter name and credit card info
- Complete entry

Task 4 - You are a college student planning a Spring Break roadtrip with your friends and you want to do some camping along the way. Use the Trip Builder feature to find 3 suitable campgrounds near your route from Yakima to Fresno.

Path Analysis

Find campgrounds near their roadtrip route
- FindTrip Builder on the homepage
- Select Trip Builder
- Input starting date
- Add the number of participants
- Enter starting location
- Enter destination location
- Select how how many days you will stay at that location
- Select your accomodations
- Select start planning
- Browse through avaiable campsites using the map
- Select a campsite from the **map** for review
- View the details
    - View the "Need to Know" information
    - View how to get there
    - Look through the photos
    - Read a 1-star review
- Add it to your itenerary

Alt Path
- Select a campsite from the **list** for review
- View the details
    - View the "Need to Know" information
    - View how to get there
    - Look through the photos
    - Read a 1-star review
- Add it to your itenerary

Task Analysis
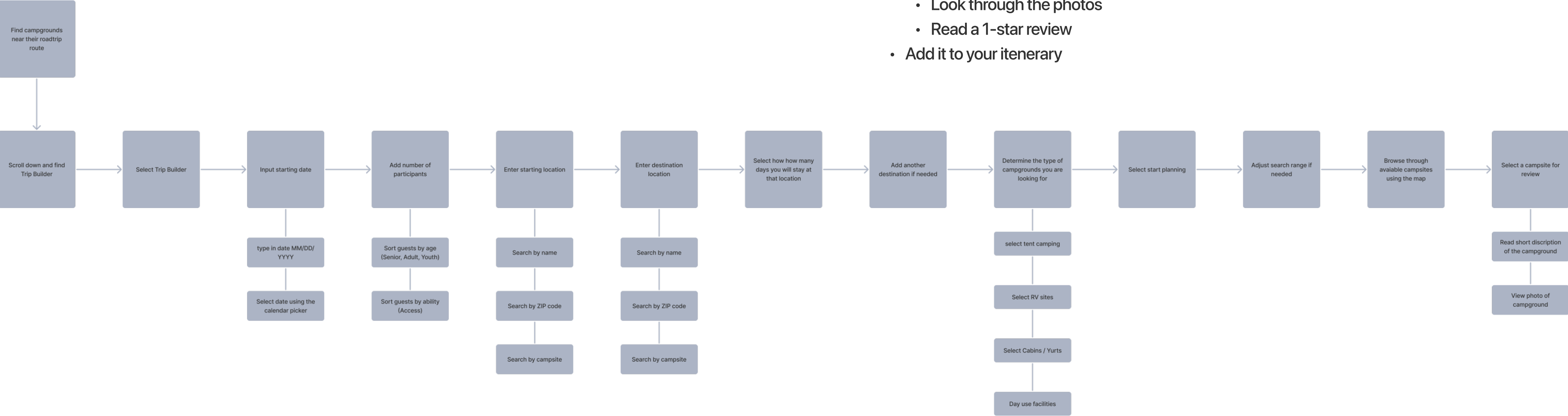
Test Plan

We documented our test plan before we began testing to have consistent responses that we can gather findings from.

Test Purpose

- To evaluate how effective Recreation.gov is at helping people reserve campgrounds.
- To evaluate how easy it is to navigate within the site to make use of the available features.

Ice Breaker Questions

- Do you like camping? How often do you go? Who do you go with?
- Have you been camping at a campground before? If so can you describe the reservation process?
- When you reserve a campground, what is something you typically ensure or look for?

Scenarios

- You are going on a roadtrip from Hoboken NJ to Freedom NH. Can you find a Campgound that is near your roadtrip route?
    - Did you have any trouble locating the Trip builder?
    - Once you found it, was it obvious what you needed to do next

- You are working professional who is looking to go camping with your friends over the 4th of July weekend in Colorado. Reserve a campsite in Colorado which has scenic photos.
    - Did you have trouble identifying a scenic site?
    - After choosing the site, how easy was it to use the reservation table?

- You are a teacher trying to book a field trip to a popular national park with limited permits available. Enter a lottery for a chance to visit Angels Landing.
    - Were you able to enter a lottery?
    - How easy was it to find the lottery?

- You are a college student planning a Spring Break roadtrip with your friends and you want to do some camping along the way. Use the Trip Builder feature to find 3 suitable campgrounds near your route from Yakima to Fresno, CA.
    - Was the trip builder intuitive?
    - How was your experience adding campgrounds to your itinerary?

Closing Activity

- Ask the participant to fill out the SUS Survey.
- https://docs.google.com/forms/d/e/1FAIpQLSdSIlas6uVLcb72tyXx07Y4dcXg-BG6L0qDTz9ynmwMxC5n1w/viewform?usp=sf_link
- Ask the participant to choose a reaction from the emotion clock based on their experience.

Usability Testing

Executive Summary

Executive Summary

- The purpose of the usability test was to evaluate,

- How **effective** Recreation.gov is at helping people reserve campgrounds.
- How easy it is to **navigate within the site** to make use of the available features.

- Our findings allowed us to gather insights and **validate the usability problems** we came across during our heuristic evaluation of the website. Based on the personas created we formulated a task list with scenarios reflecting on the different user groups and their specific needs.
- Our findings show that the **overall experience of the participants was mixed.** Some of them felt positive about the tool and were able to ignore usability issues while some felt negative about the system integration and functionality.
- Due to resource and time constraints, we were not able to test the website with people similar to our personas but were able to gather rich data from our participants which in turn helped us **identify potential design improvements.**

Analysis

Insights from the ice-breaker questions from our participants

P1

Enjoys camping, trekking, and hiking with friends frequently throughout the year. They like to reserve campsites next to streams, and ones which are on flat grounds so pitching tents are an easier process.

P2

They love camping and hold fond childhood memories of going with their family. Since most of their camping experience is from when they were a child, they don't have much experience with the reservation process or hold any strong preferences for campground type.

P3

They have never been camping before. Would want to go camping in the future but it would depend on the campsite. Main priorities in a campground would be safety and available resources.

Task & Time Performance

Task 1

6:34m P1
UNSUCCESSFUL
Usability: 8/10

Home — 1
Scroll Down — 2
Used Explore Destinations search bar — 3

They were unable to find the trip builder feature. leading them to feel unconfident about the task as a whole.

2:42m P2
SUCCESSFUL
Usability: 9/10

Home — 1
Scroll Down to the map — 2
Clicked on Tripbuilder from the homepage — 3

Finding the Trip builder was easy. The presence of the map confused them a bit. Did not pay any attention to the tips

6:23m P3
SUCCESSFUL
Usability: 9/10

Home — 1
Scroll to map under 'Explore Destinations and Activities' — 2
Redirect to Trip Builder from homepage — 3

Found the trip builder feature to be very easy to use and liked the tips displayed. Felt it was a familiar interface to interact with.

Task 3

4:18 P1
SUCCESSFUL
Usability: 10/10

Home — 1
Scroll Down to Lotteries — 2
Selected one and completed the checkout process — 3

The user felt very confident while completing this task. The lotteries were easy to find, and they were only slightly confused about the lottery "choices".

2:49m P2
SUCCESSFUL
Usability: 8/10

Home — 1
Scroll Down to Lotteries — 2
Selected one and completed the checkout process — 3
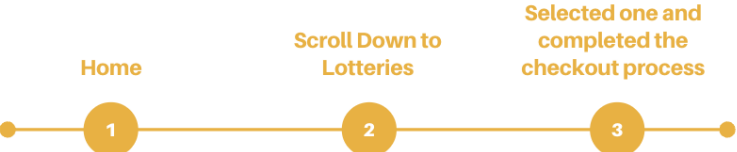
They found the task easy and intuitive. They enjoyed looking at the pictures along the way

3:50 P3
SUCCESSFUL
Usability: 10/10

Home — 1
Scroll Down to Lotteries — 2
Selected one and completed the checkout process — 3

Found it very easy to find and use the lotteries feature.

Task 2

13:06 P1
SUCCESSFUL
Usability: 8/10

Home — 1
Frontpage search bar — 2
Browsed available campsites — 3

Felt that the task was intuitive but ran into a few "first-time user" hitches and 1 bug.

5:59m P2
SUCCESSFUL
Usability: 9/10

Home — 1
Scroll Down to the bottom of the page — 2
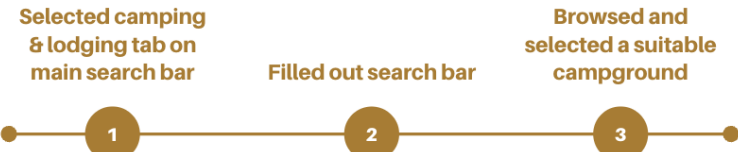Used Map search bar — 3

Had difficulty assessing which campgrounds were better than others based on pictures. Tried searching for a "scenic" filter. Otherwise, found the task easy

5:35 P3
SUCCESSFUL
Usability: 7/10

Home — 1
Selected camping & lodging tab on main search bar — Filled out search bar — 2
Browsed and selected a suitable campground — 3

Preferred to see more pictures while reserving a campsite. Found it simple to use the reservation process.

Task 4

7:50 P1
SUCCESSFUL
Usability: 6/10

Home — 1
Finds trip builder and completes form — 2
Adds campgrounds to itinerary. — 3

At first glance, the user found the trip builder to be a handy and intuitive tool. However, once they tried to edit the itinerary or complete their purchase, the tool lost much of its usefulness.

6:07m P2
SUCCESSFUL
Usability: 7/10

Home — 1
Finds trip builder and completes form — 2
Adds campgrounds to itinerary. — 3

Said that they found Tripbuilder helpful. Did not think to use the "Edit Route" feature. Generally confused about how to remove and reorder campgrounds in trip

10:50 P3
SUCCESSFUL*
Usability: 6/10

Home — 1
Finds trip builder and completes form — 2
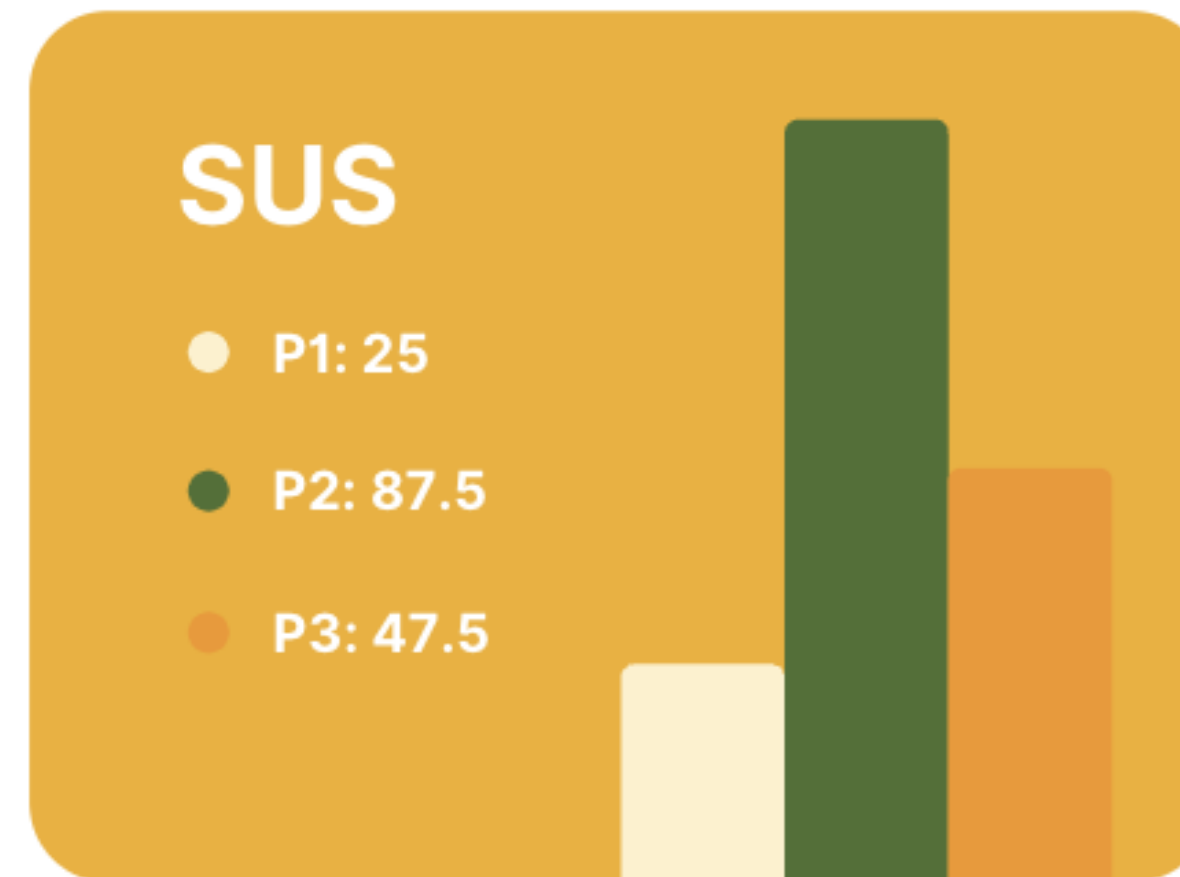Adds campgrounds to itinerary. — 3

Did not find trip builder intuitive and found it to be built differently than others. Also found it difficult to find/filter available campsites.

User Impressions

The overall consensus towards this website was mixed.

SUS

- P1: 25
- P2: 87.5
- P3: 47.5

Based on the tests, this seems rooted in the fact that some participants were willing to look past the usability hiccups because they saw the website as a useful tool overall. In contrast, others felt that these usability hiccups were detrimental to the website's usefulness.

Emotional Takeaways

P1: Negative Frustrated, Suprised (bad), Doubtful

P2: Positive Satisfied, Suprised (good), Excited

P3: Mixed Frustrated, Indifferent, Satisfied

Suggestions

Prioritized recommendations -
Here is a list of changes that we feel
will have the largest effect on the
website's quality from a usability
perspective.

01 Flesh out the navbar to help with user navigation.

02 Finish Trip Builder development

03 Unhide and allow filters to be accessed from the start

04 Add filters for visual elements and availability

01 **Flesh out the navbar to help with user navigation.**

What's New   Help   Sign Up   Log In
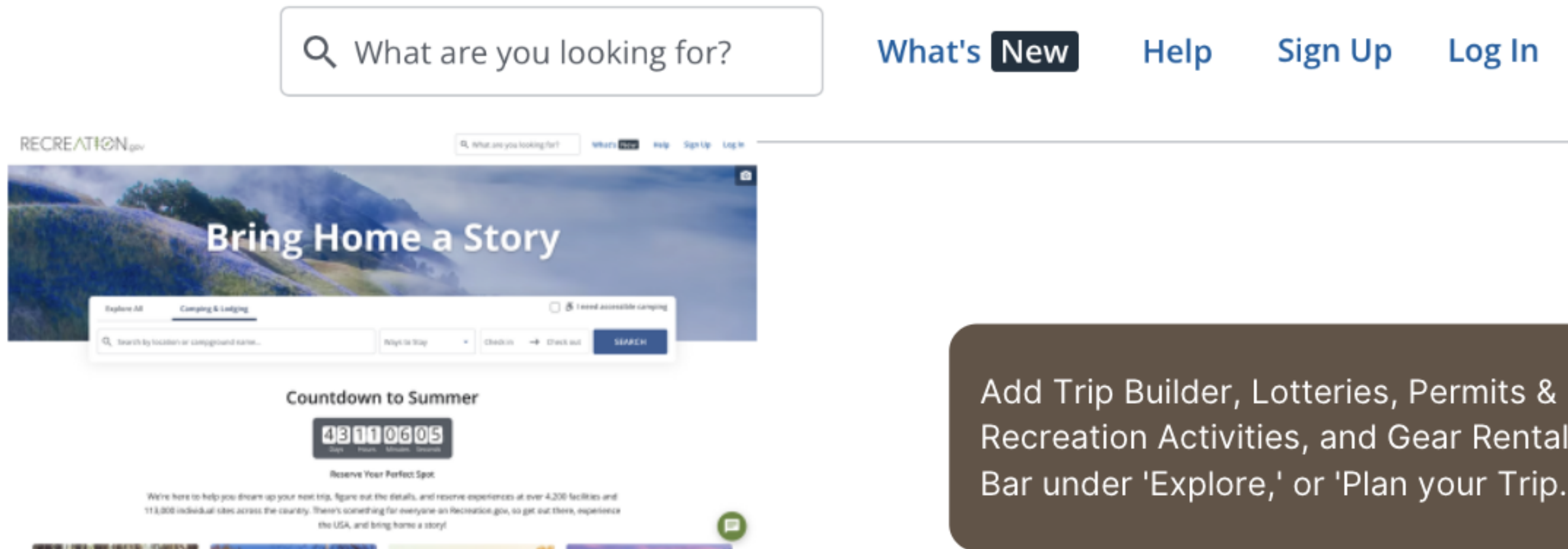
Add Trip Builder, Lotteries, Permits & Passes, Recreation Activities, and Gear Rental to the Nav Bar under 'Explore,' or 'Plan your Trip.'

02 Finish Trip Builder Development

Allow users to change the order of their itinerary without having to delete and re-add trips Allow users to book campgrounds directly from the trip builder Fix the removal button to remove the campsite and all other connected instructions.

03 Unhide and allow filters to be accessed from the start
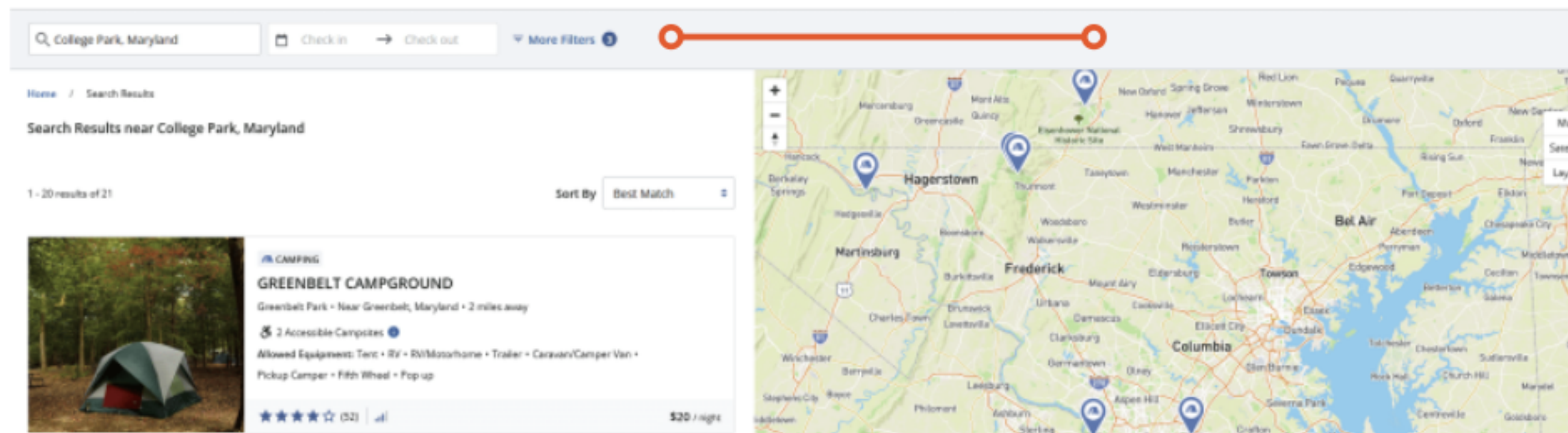
Unhide the chosen filters and make them visible on the page.

Allow filters to be accessed before the user starts searching.

04   Add filters for visual elements and availability

☐ Show available sites only

Recreation Site Type

☐ Standard (125)	☐ Group Standard (23)	☐ Walk/Hike To (13)
☐ Tent Only (65)	☐ Shelter (1)	☐ Group Area (6)
☐ RV (27)	☐ Cabin (15)	☐ Lookout (2)
☐ Horse Sites (4)	☐ Boat Sites	☐ Yurts
☐ Picnic Area (5)	☐ Court	☐ Parking
	☐ Stream	☐ Mountains

Users would often ping pong from the search page to a campsite page in order to determine its availability. This ping-ponging behavior was also viewed when users wanted the campsite to look a specific way, and the photo wasn't clear enough.

Reflection & Learnings

Testing the test plan before the test

Being my first moderated usability test, although I've conducted an unmoderated one before, we made sure the test plan was well crafted. We conducted dry runs of our test plans to ensure that all of the instructions and scenarios were clear to participants. Communicating with the observer/moderator before the test helped us stay focused and ask sensible follow up questions during the test.

Usability testing is very helpful to improve a product's efficiency and effectiveness

We were able to determine which interfaces are troublesome and what makes it tough to move through the website by analyzing user behavior during task completion. We were able to uncover usability concerns and provide simple remedies to improve the product's user experience in a short amount of time.

Effective communication of results

The level of knowledge of the product may vary depending on the audience for this type of usability testing presentation. Visulaizing data through tables, gifs, and screenshots with annotations, could assist the audience better comprehend the context of the usability testing and the product better than reports with more text.

Thank you