

# Things to Do Filter Patterns Evaluation Study Findings

Helping users understand and narrow

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# The Filter Patterns Journey

**LX\_FILTERS 2018**

Product category: Parent filters (19)	Child filters
1	Child filters
2	
3	Tours & sightseeing
4	Cruises & boat tours
5	Food, drink & nightlife
6	Art, culture & history
7	Sightseeing & attraction passes
8	Adventure & outdoor
9	Air, helicopter & balloon tours
10	Wildlife & nature
11	Water sports
12	Winter activities
13	Shows & concerts
14	Amusement & theme parks
15	Shopping & fashion
16	Spa & wellness
17	Private & custom tours
18	Holiday & seasonal tours
19	Wedding & honeymoon
20	Classes & workshops
21	Airport & ground transportation services
22	
23	
24	
25	
26	
27	

**Desktop Website:** Expedia.com showing a complex filter sidebar for Seattle tours. The sidebar includes categories like 'All Tours', 'Specials', and 'Price' with various sub-options and counts.

**Code Editor:** A snippet of PHP code for connecting to a MySQL database and processing filter data.

```
<?php
// $filters = $_REQUEST["filters"];
// echo $filters;

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "categories_test";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Get activity data from HTML File
include('simple_html_dom.php');
$html = new simple_html_dom();

// Load HTML file
$html->load("html/body");
// Load file
$html->load_file('SRP_pages/srp_10.html');

// Find element
$element = $html->find("p");

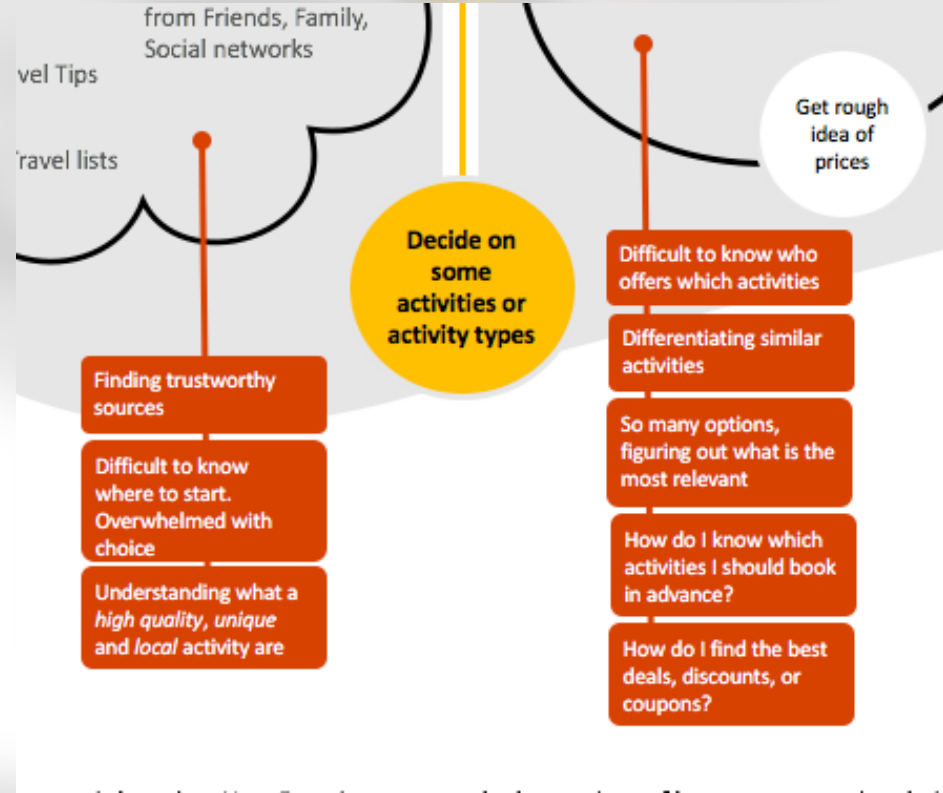
// Modify it
// $element[1]->innertext .= " and we're here";

# output it!
// echo $html->save();

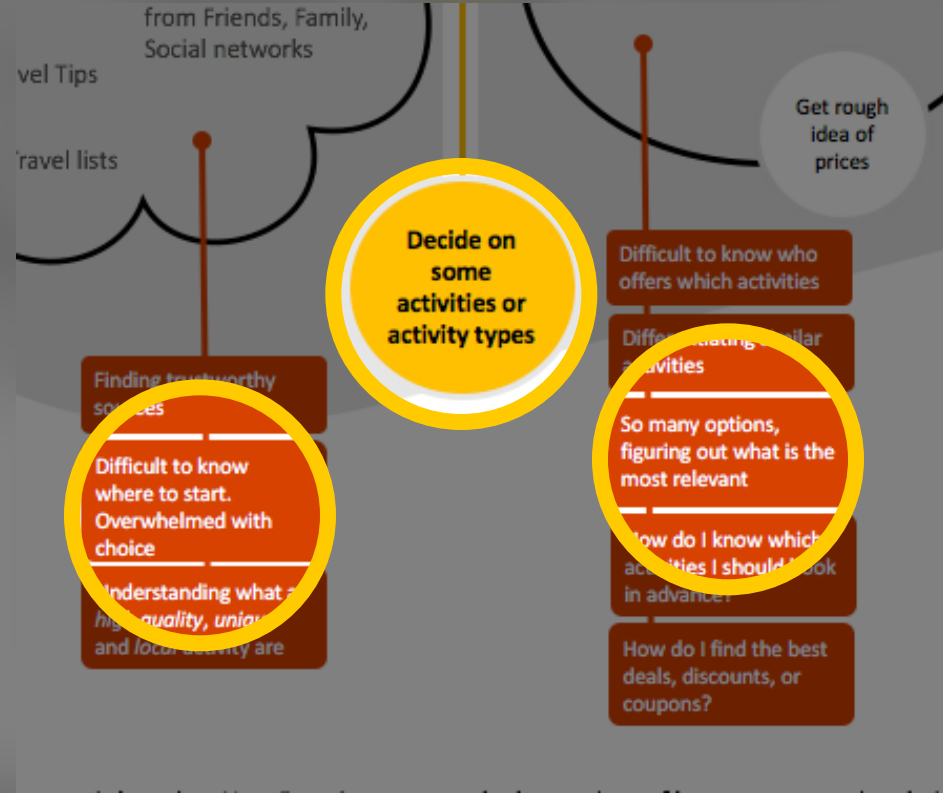
$activity_ids = array();
$activity_durations_temp = array();
$activity_ratings = array();
$activity_reviewcounts = array();
$activity_prices = array();
```

**Mobile App:** Two smartphone screens showing the Expedia mobile app interface. The left screen shows the filter sidebar with buttons for 'Tours & Sightseeing', 'Cruises & Boat Tours', 'Bus & Minivan Tours', and 'City Tours & Packages'. The right screen shows the filtered results for 'Las Vegas' with a list of activities like 'Night Flight & Gun Range' and 'Helicopter City Lights Tour with Limo'.

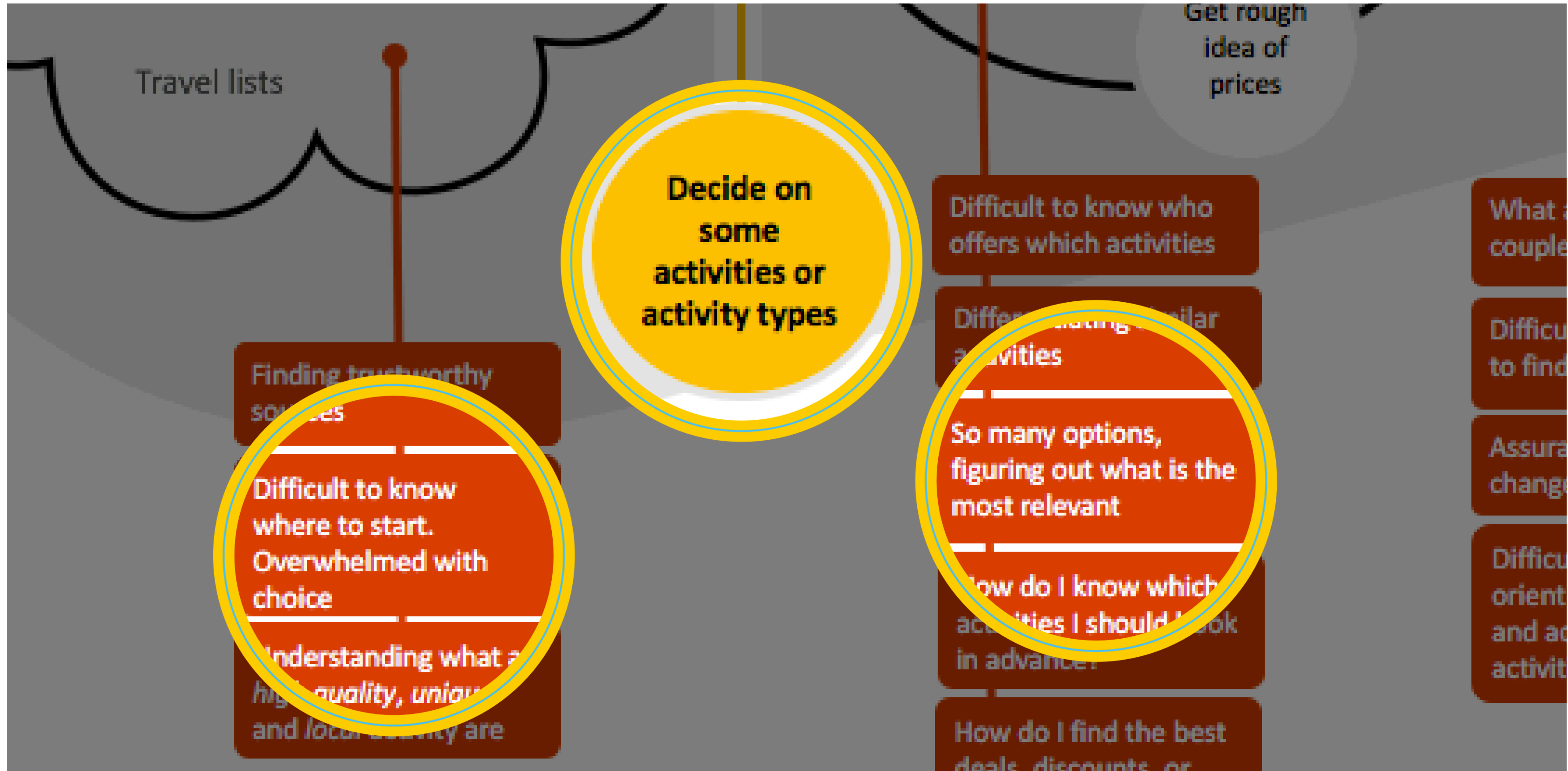
# LX Traveler Journey Map



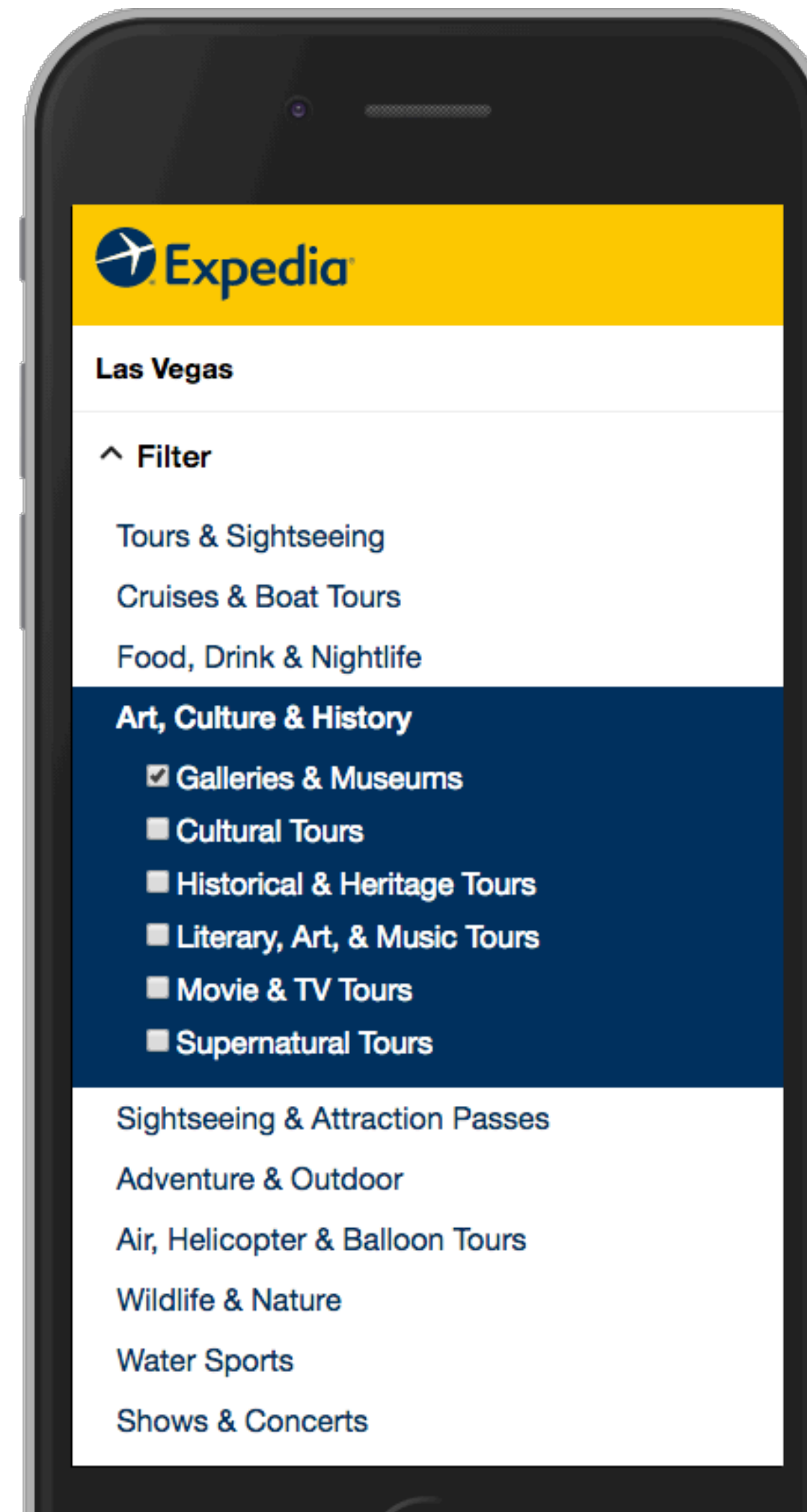
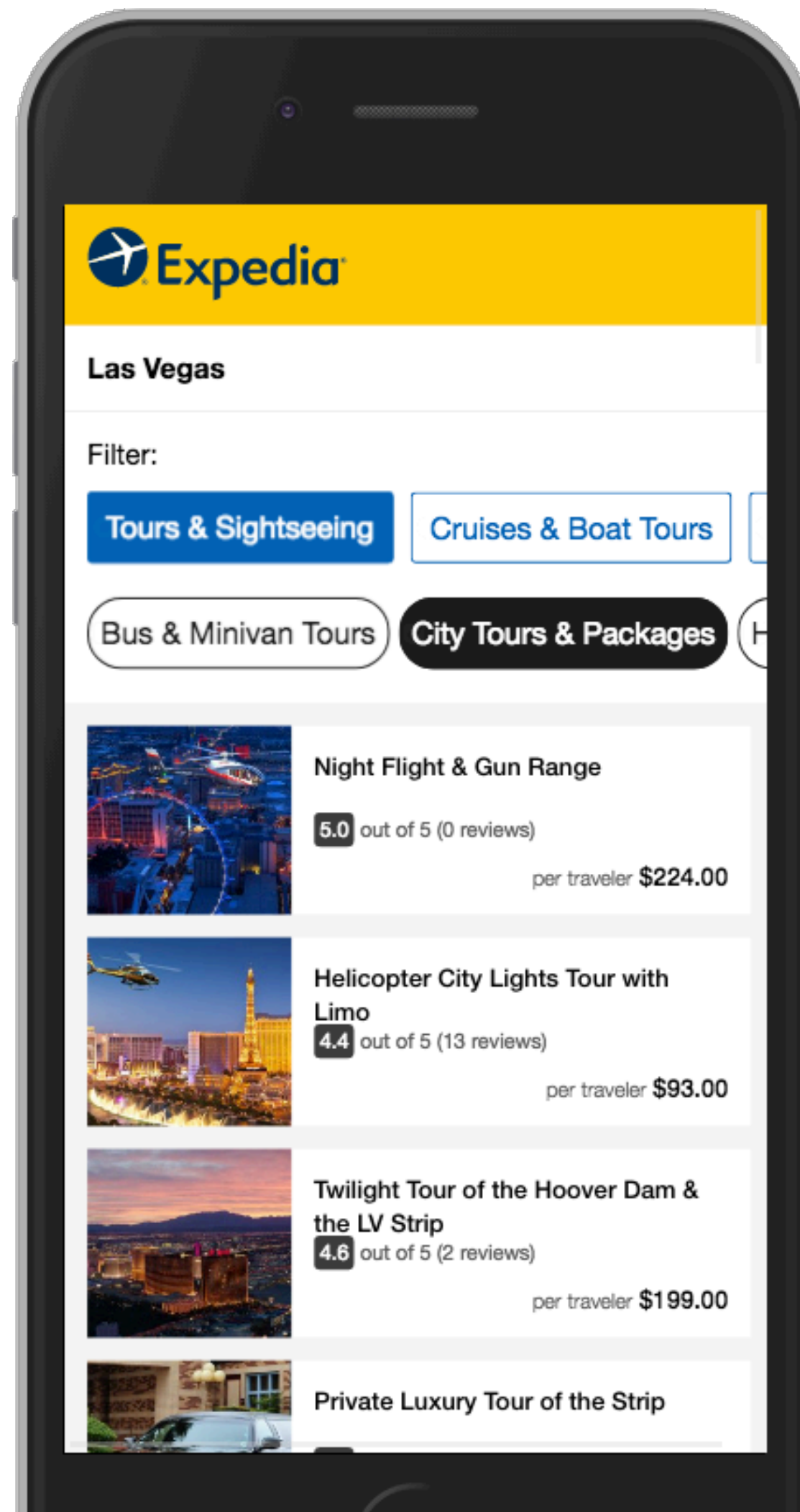
# LX Traveler Journey Map



# Pain Points and the User Journey



# Design Concepts



# Evaluate Design Concepts on Three Metrics

## Comprehension

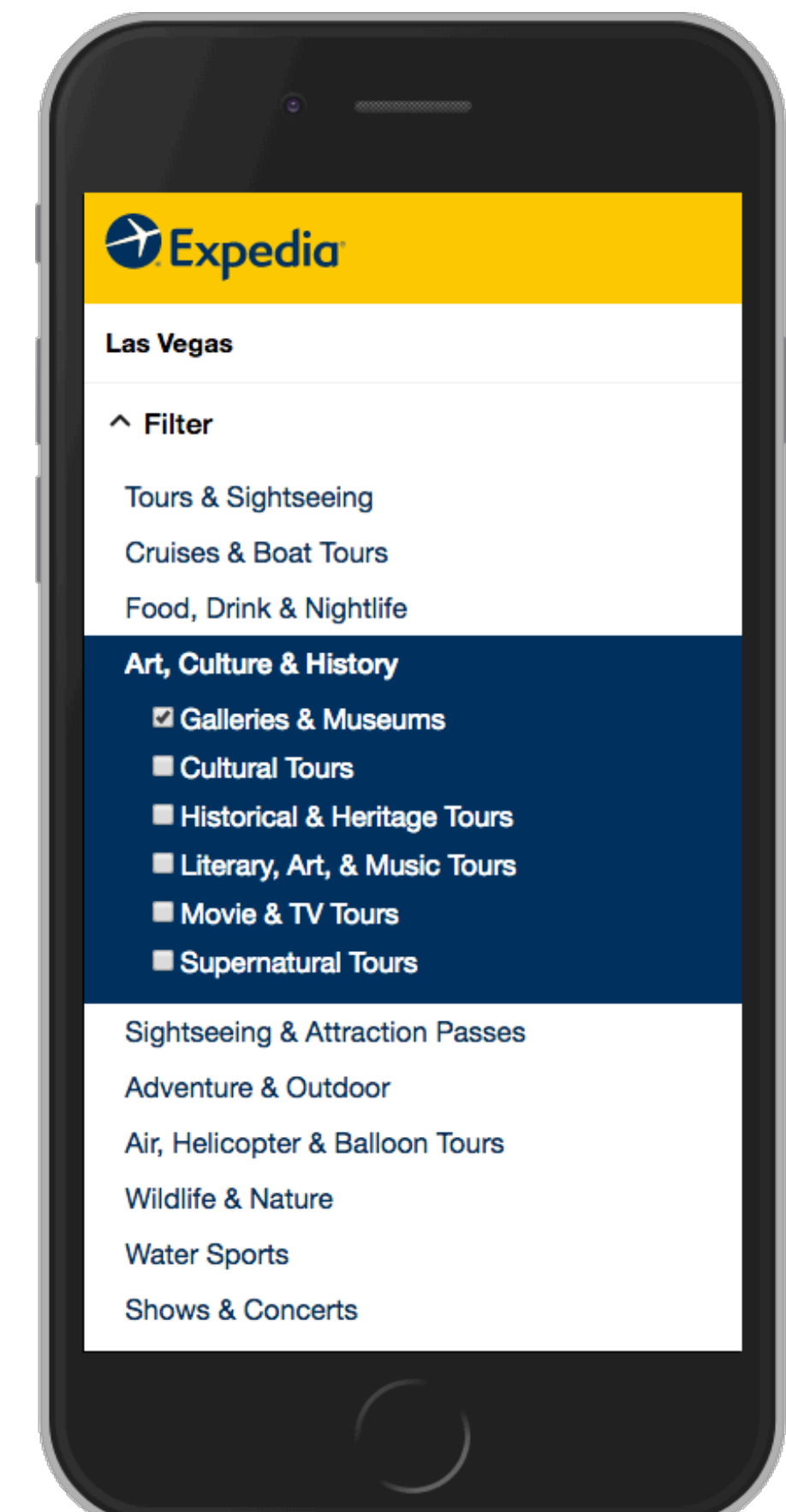
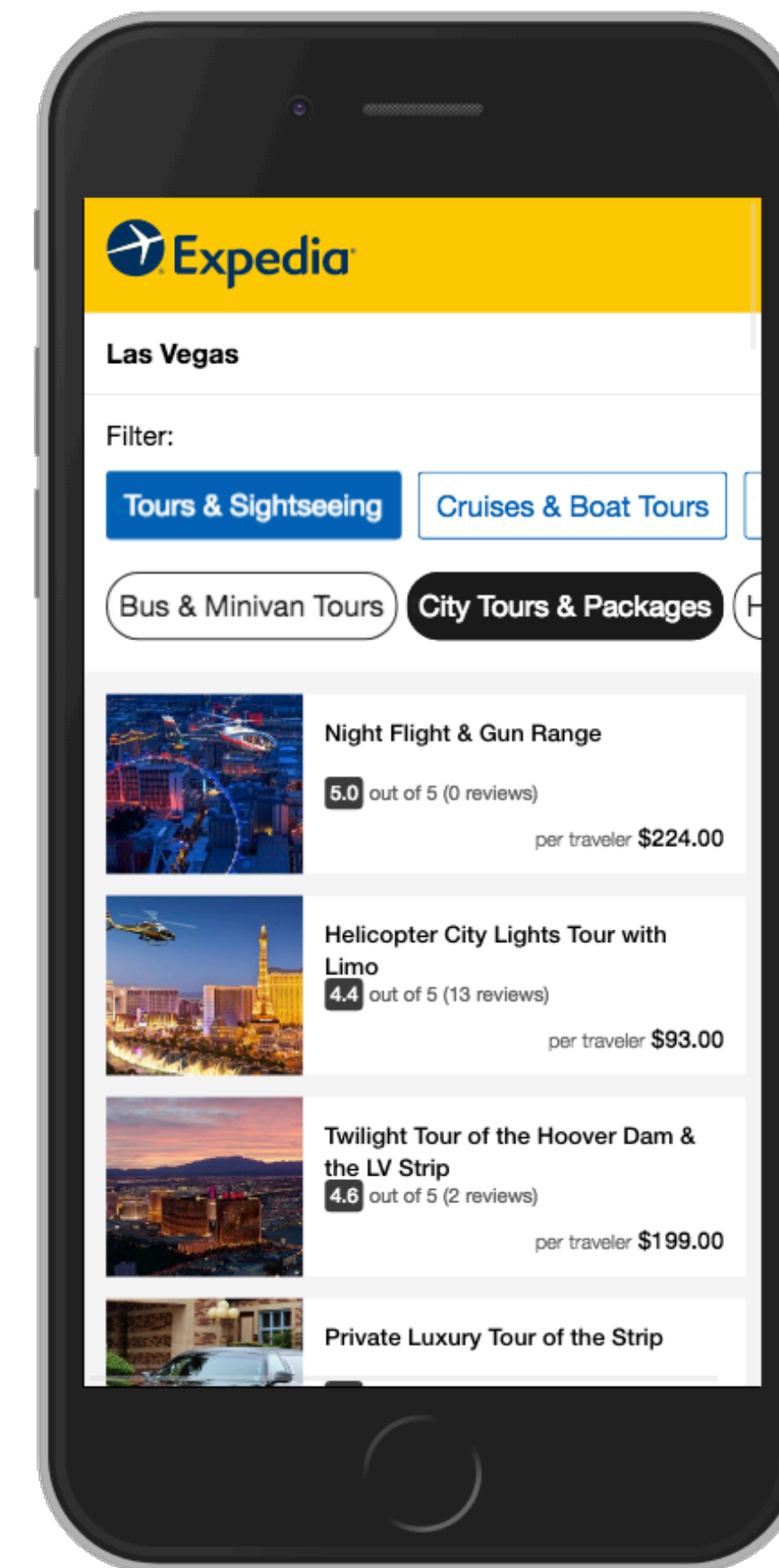
- Do users notice and recognize that filters are on the page
- Do users understand how to interact with filters
- What do users expect to happen when they interact with different aspects of the filters (categories and subcategories)

## Usability

- Are there any general usability issues with either pattern?
- Are touch targets big enough?
- Can users successfully interact with the filters?

## Utility

- Does the pattern help users quickly get a sense for the types of activities offered in a destination?
- Does the pattern allow users to quickly narrow down to a set of activities or specific activities?



# Study Methodology

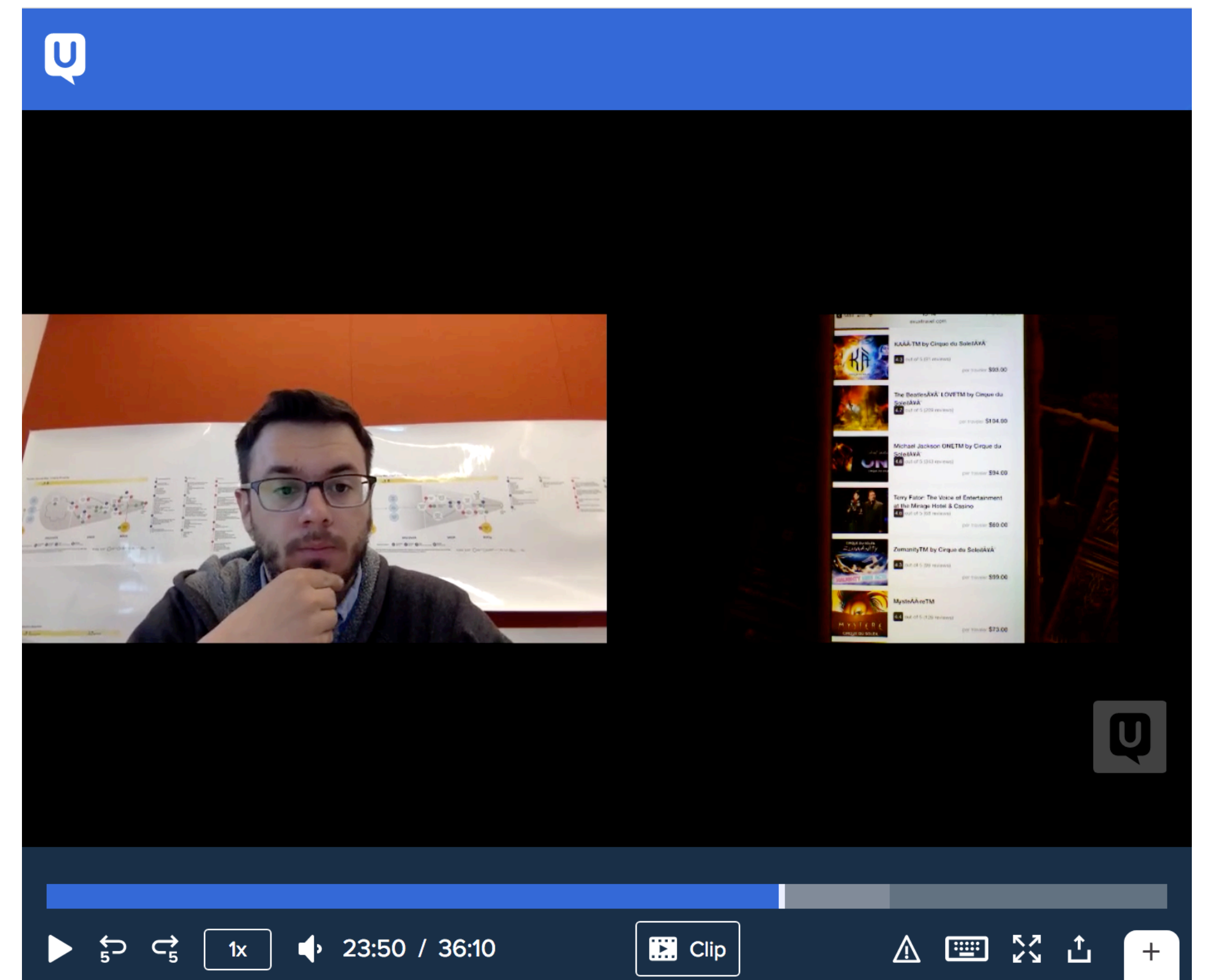
## Remote moderated User Testing Live Conversations

- 10 participants
- 30 minute sessions
- Have an upcoming trip planned
- Had to have booked travel online in the past year
- Own and use a mobile device
- Mobile web prototypes utilizing real data

## Scenario

You've just landed in Las Vegas and checked into your hotel, now you're looking for something fun to do in the next day or two while you're on your trip.

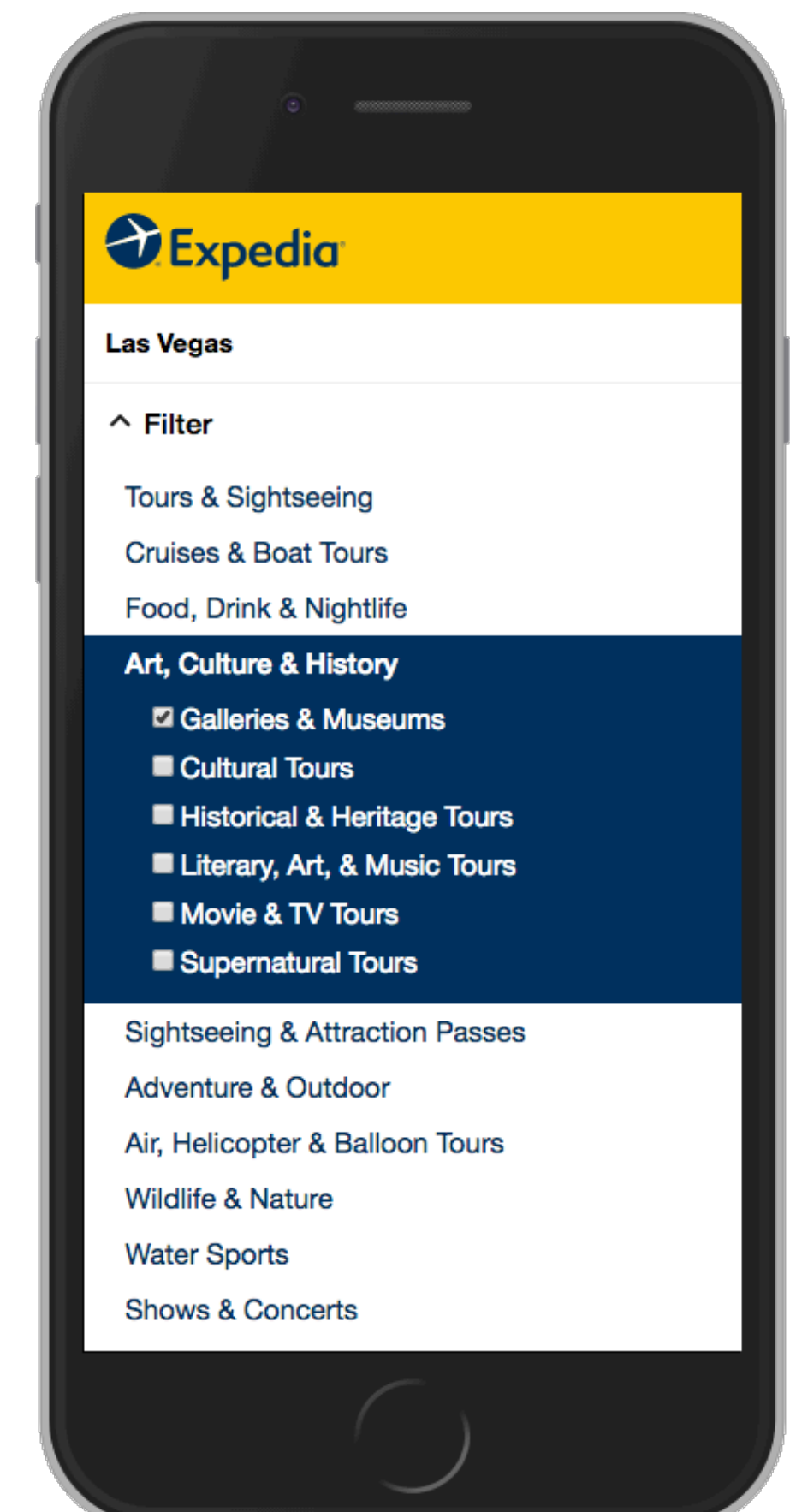
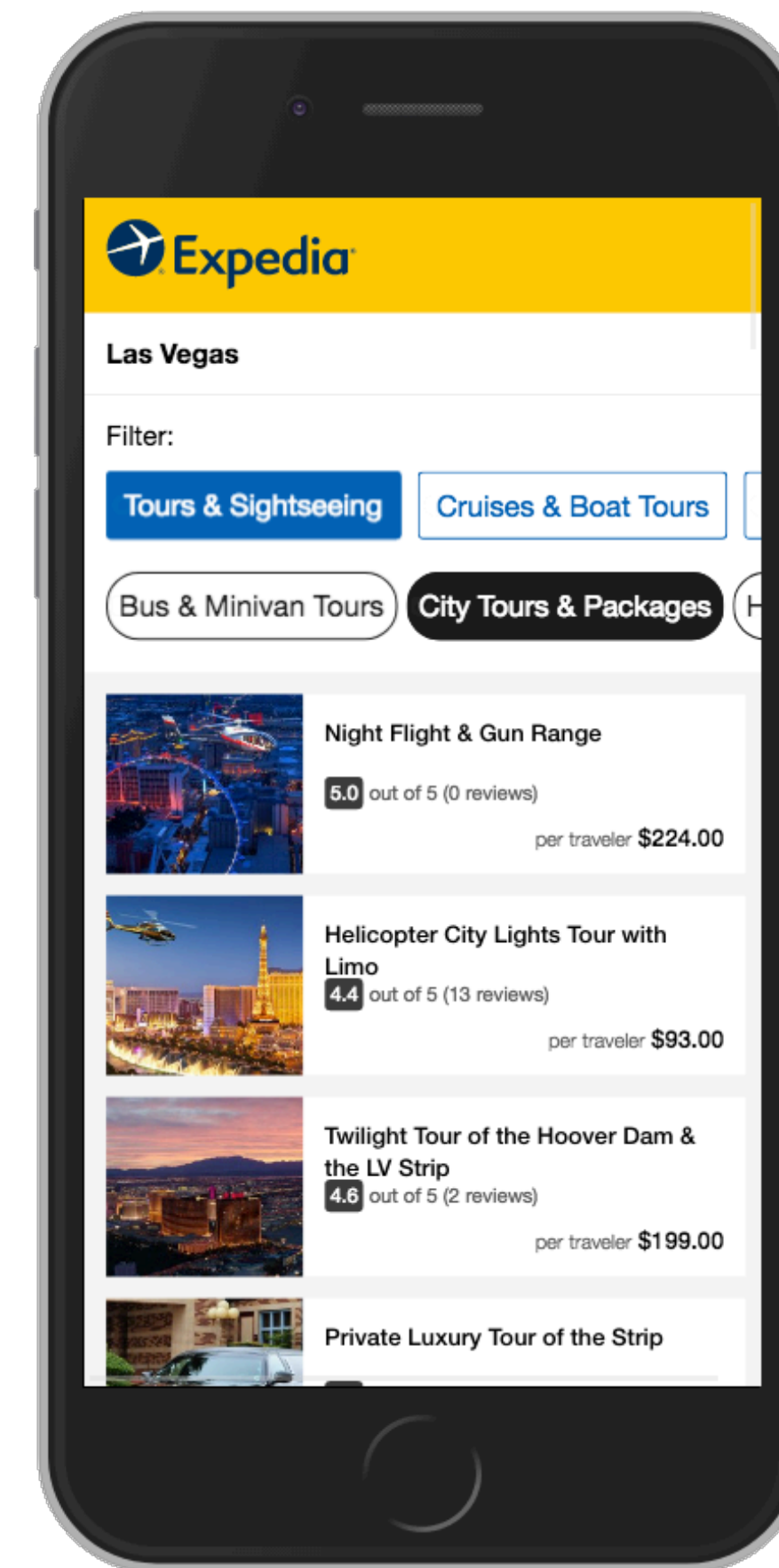
Your friend mentioned that they really liked the Madame Tussaud wax museum last time they were in Vegas. You want to learn more about that activity.





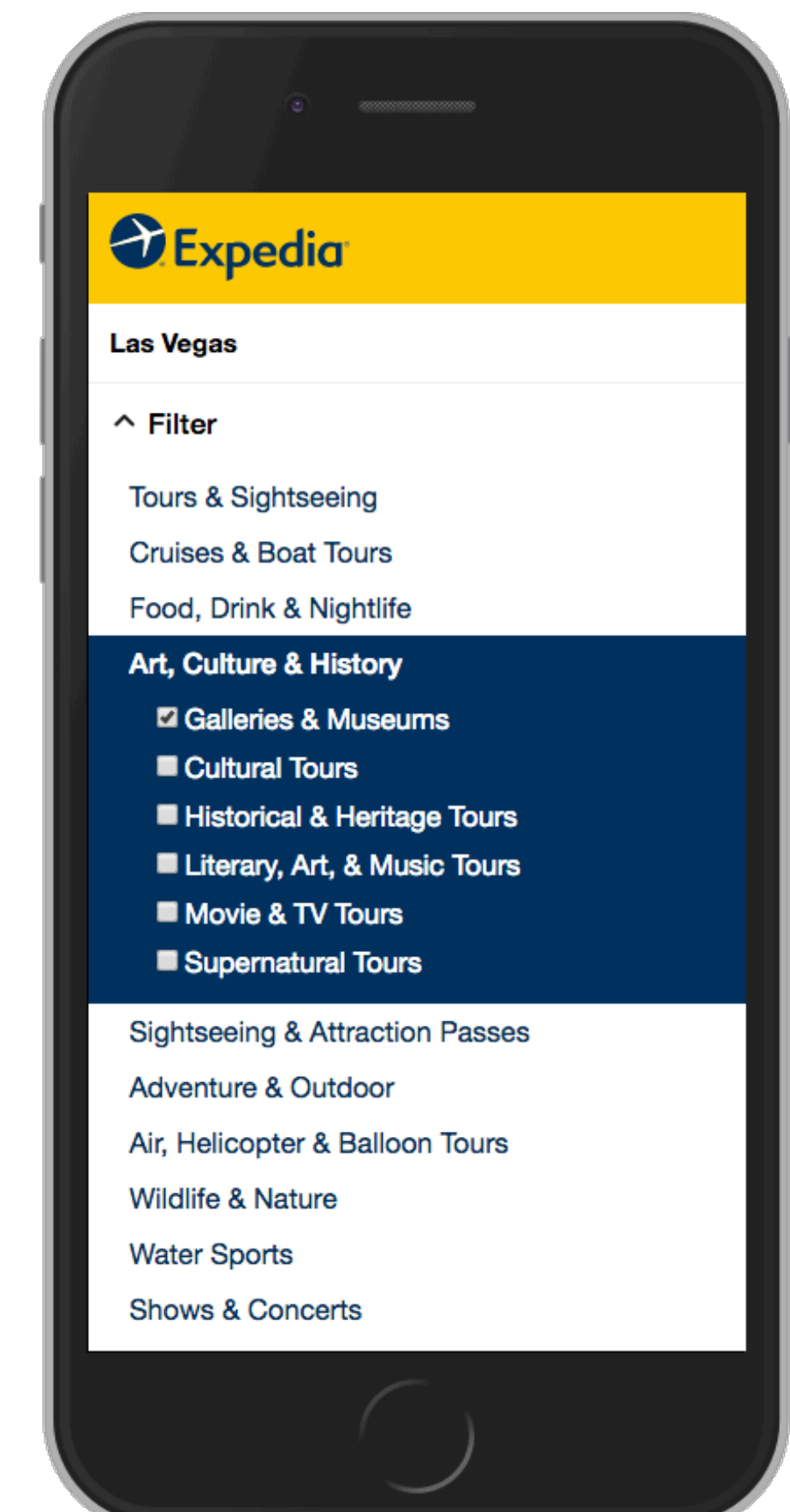
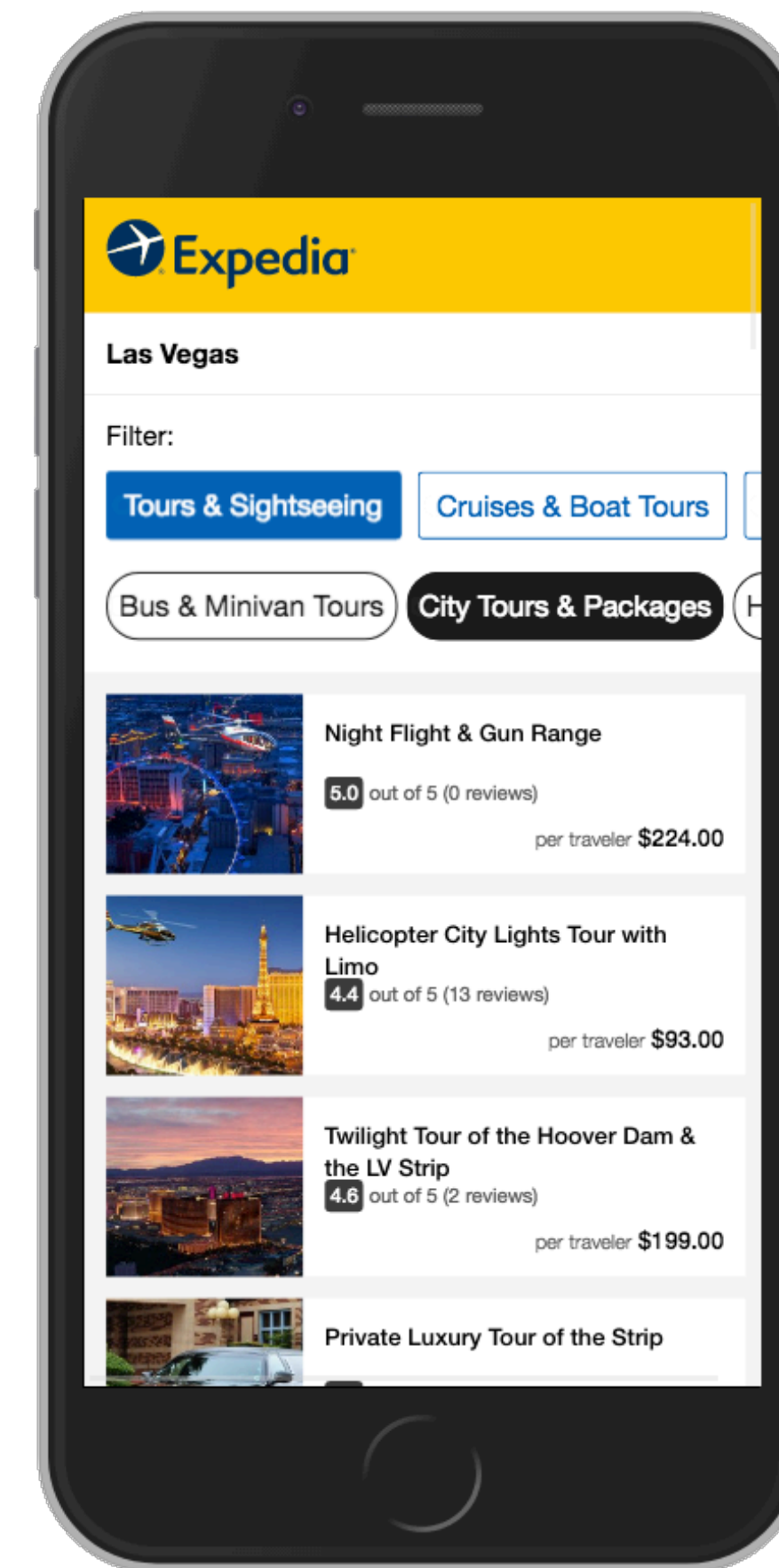
# People use filters for three main tasks

- To quickly get a sense of the types of activities offered in a destination by reading names of filters provided
- Use filters to narrow to a type of activity to compare
- Use filters to find a specific activity



# Common expectations for how filters should work

- People expect to be able to select one top level category at a time, drill down and explore it first, then move on to another top level category
- E.g. if you're clothes shopping, and you need a shirt, pants, and socks, you don't select all those categories at the same time; you select shirt first, find a shirt, then move on to pants
- People didn't expect to be able to select subcategories from multiple categories at the same time



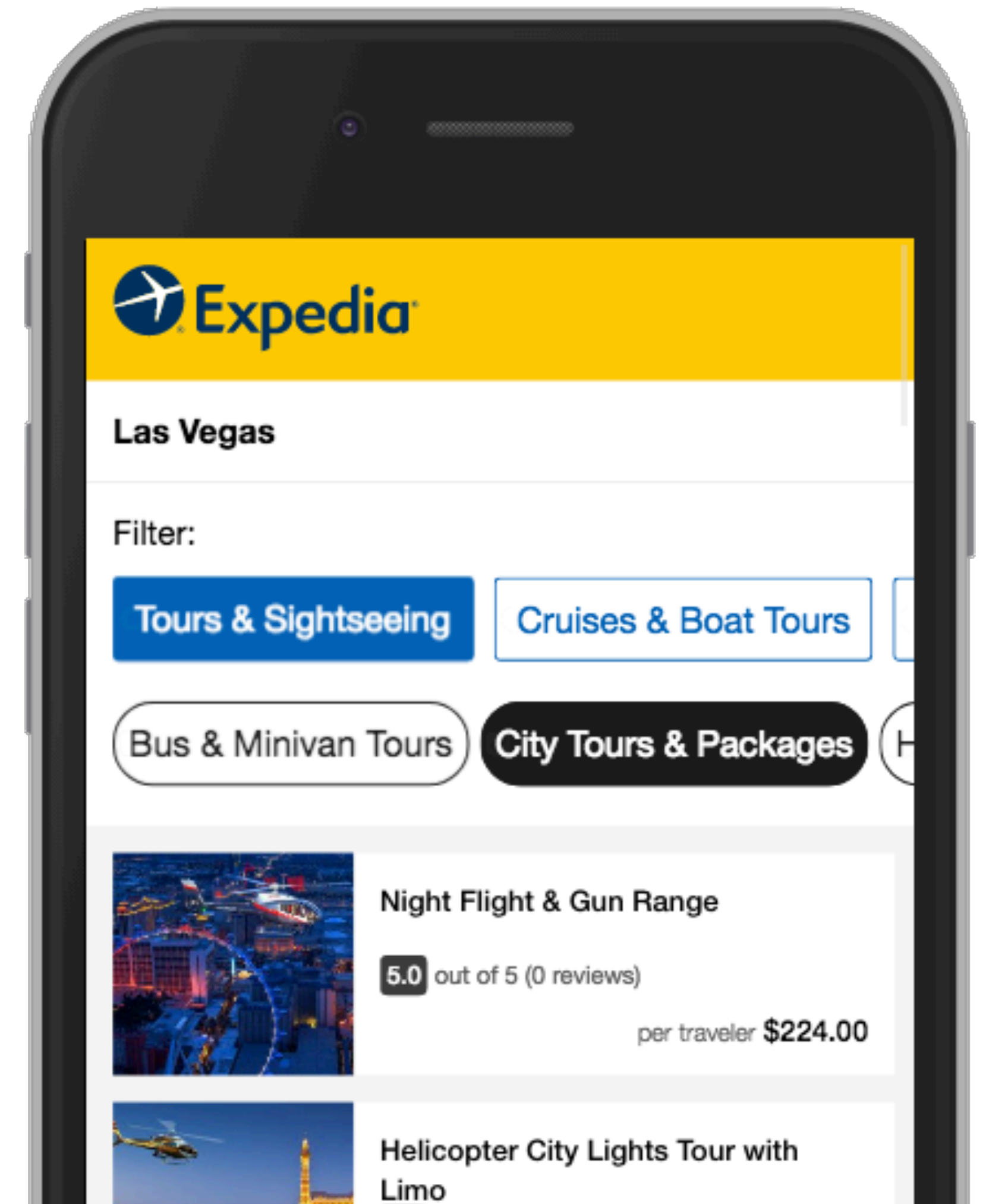
# [V1] - Horizontal Yelp-Like Scroll

## Pros

- Easy to see the impact of your choices -> the activities change in real time right there on the same page
- Good, immediate feedback on user interactions
- Facilitated exploration and play -> users selected many more filters when using this variant than [V2]
- Required less real estate on the page
- Less to process at once (only a few categories on the page at any given time)
- Filters are not hidden behind a CTA, they are exposed, this increases awareness and engagement

## Cons

- Feedback that it wasn't easily glanceable, or easy to see the full breadth of what was available. V2 you could see it all on one page, V1 required horizontal scrolling. Was seen by some as overwhelming to scroll through and read all categories.



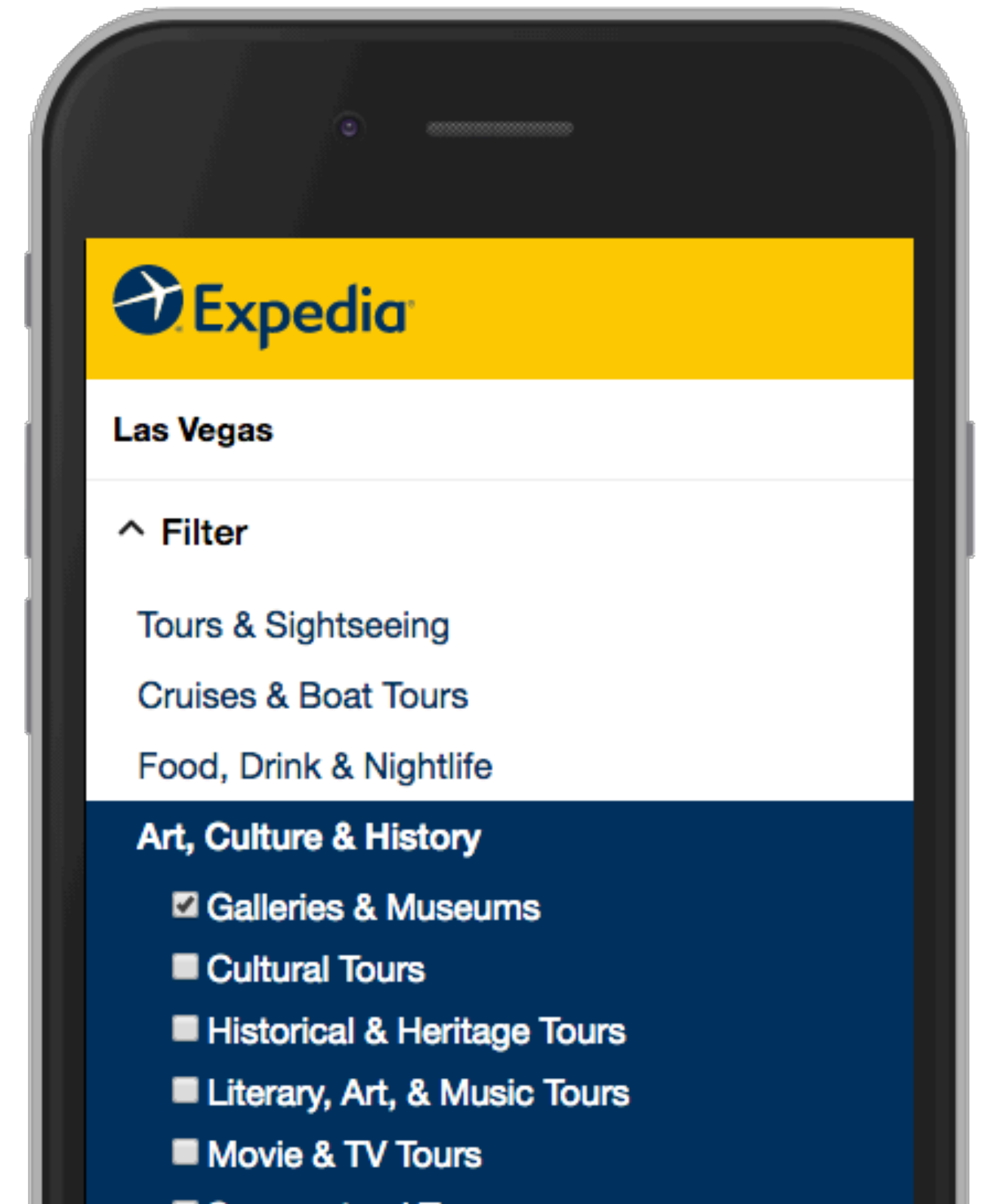
# [V2] - Expandable List of Check Boxes

## Pros

- Can see the entire list of categories on a single page
- Can methodically view options before making a decision/commitment

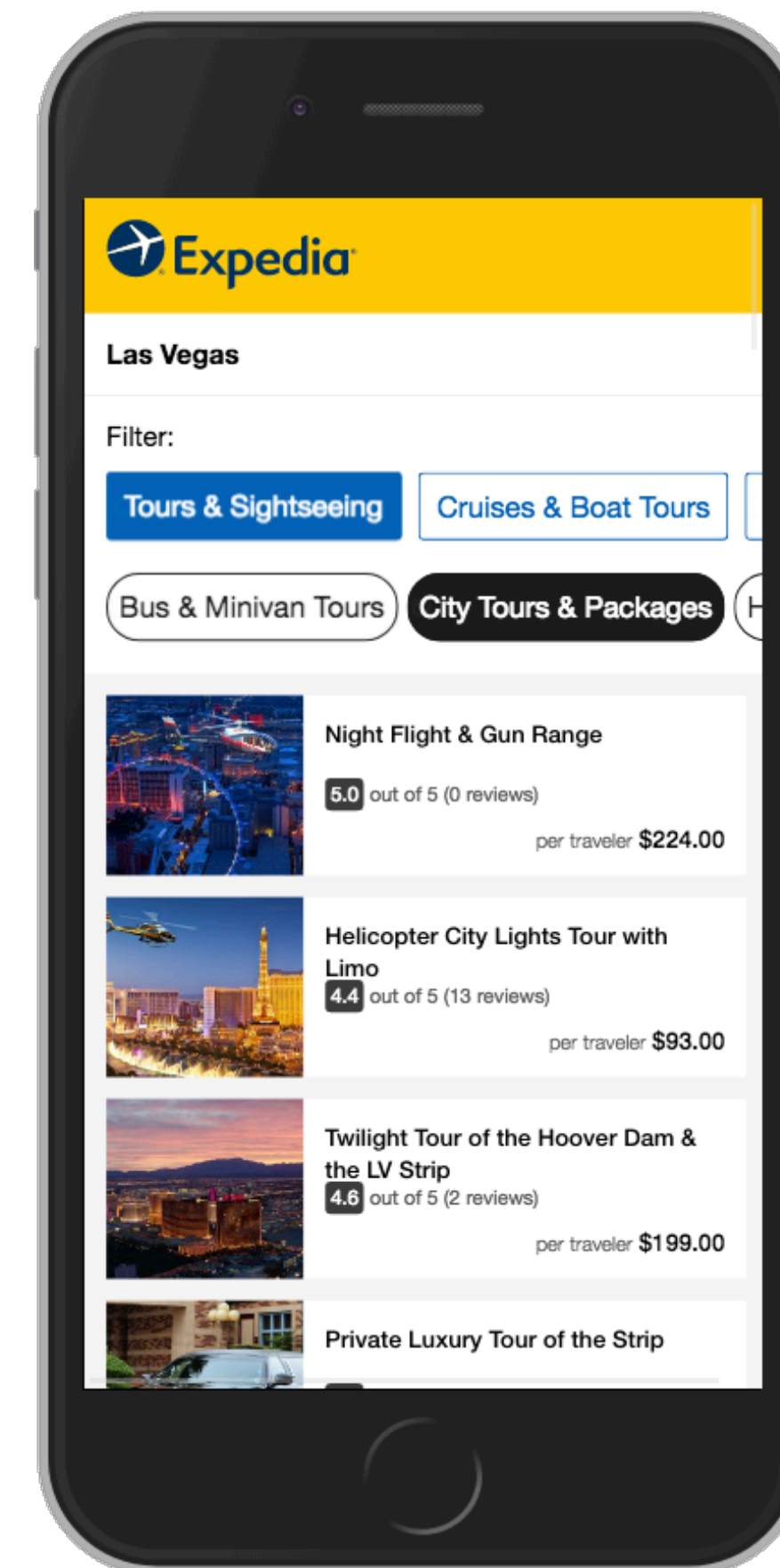
## Cons

- The interaction was seen by some as overwhelming as you have to click to expand something that takes up a full page, read a full list of categories, make a decision, then either scroll or collapse to see the activities again. This makes applying multiple filters in succession difficult.
- Inadequate feedback on user interactions
  - After making some selections, some users were unclear of what they needed to do next to see their filtered results
  - Many were expecting to see a CTA to apply or commit
- Lends itself to more methodical styles, as users took more time to read through all the categories and subcategories they were interested in before making selections

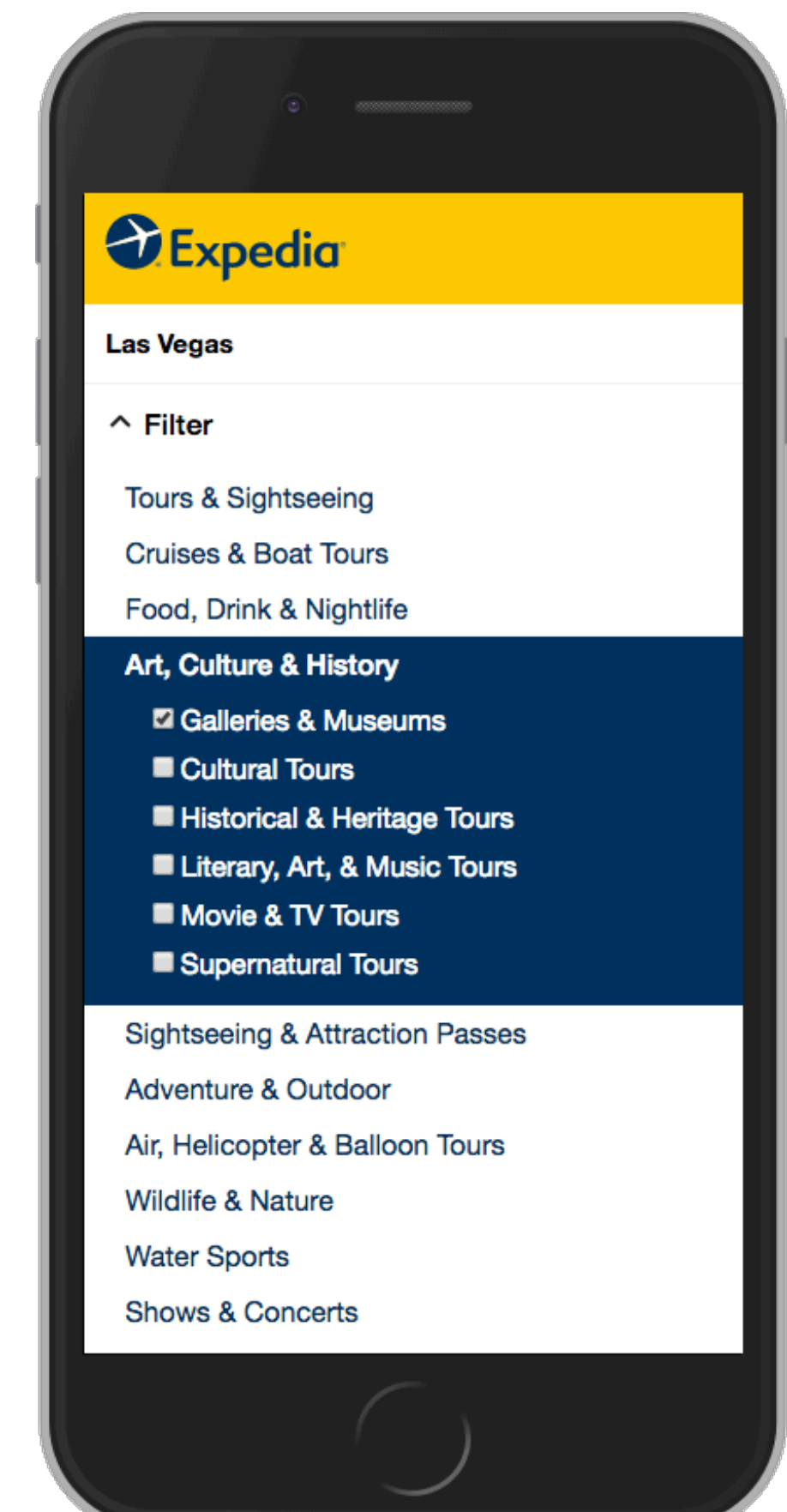


# Users comprehended both patterns, however there was some confusion around how to “apply” with V2

- **Do users notice and recognize that filters are on the page**
  - Users noticed and recognized equally well with both [V1] and [V2]
- **Do users understand how to interact with filters**
  - Users understood how to select filters equally well with both [V1] and [V2], but with [V2] they were unclear of how to “apply” or view filtered activity list
- **What do users expect to happen when they interact with different aspects of the filters (categories and subcategories)**
  - [V1] and [V2] were both understood, but with [V2], users were expecting to have to hit “apply” or didn’t realize that the filters were applied dynamically



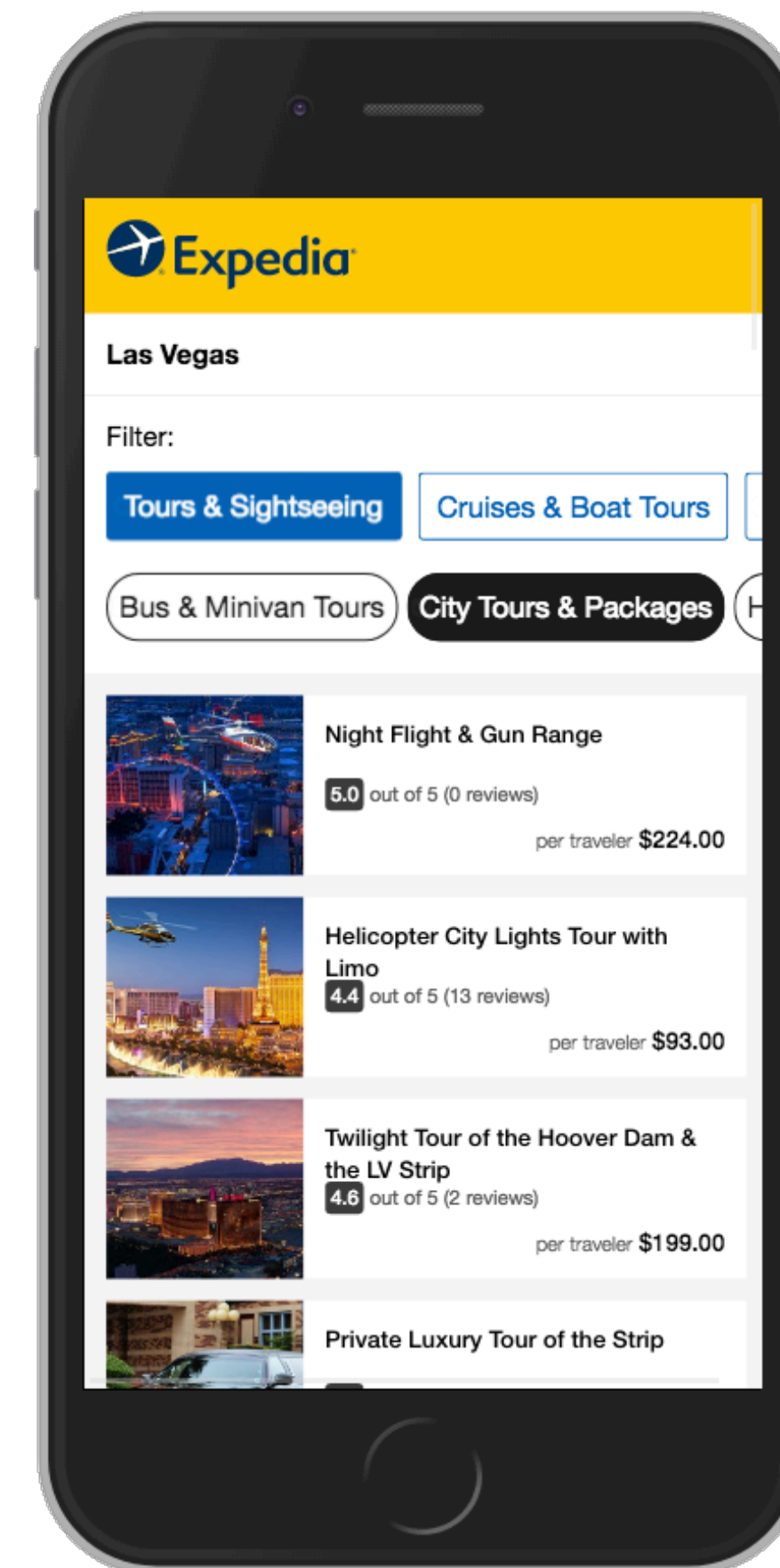
V1



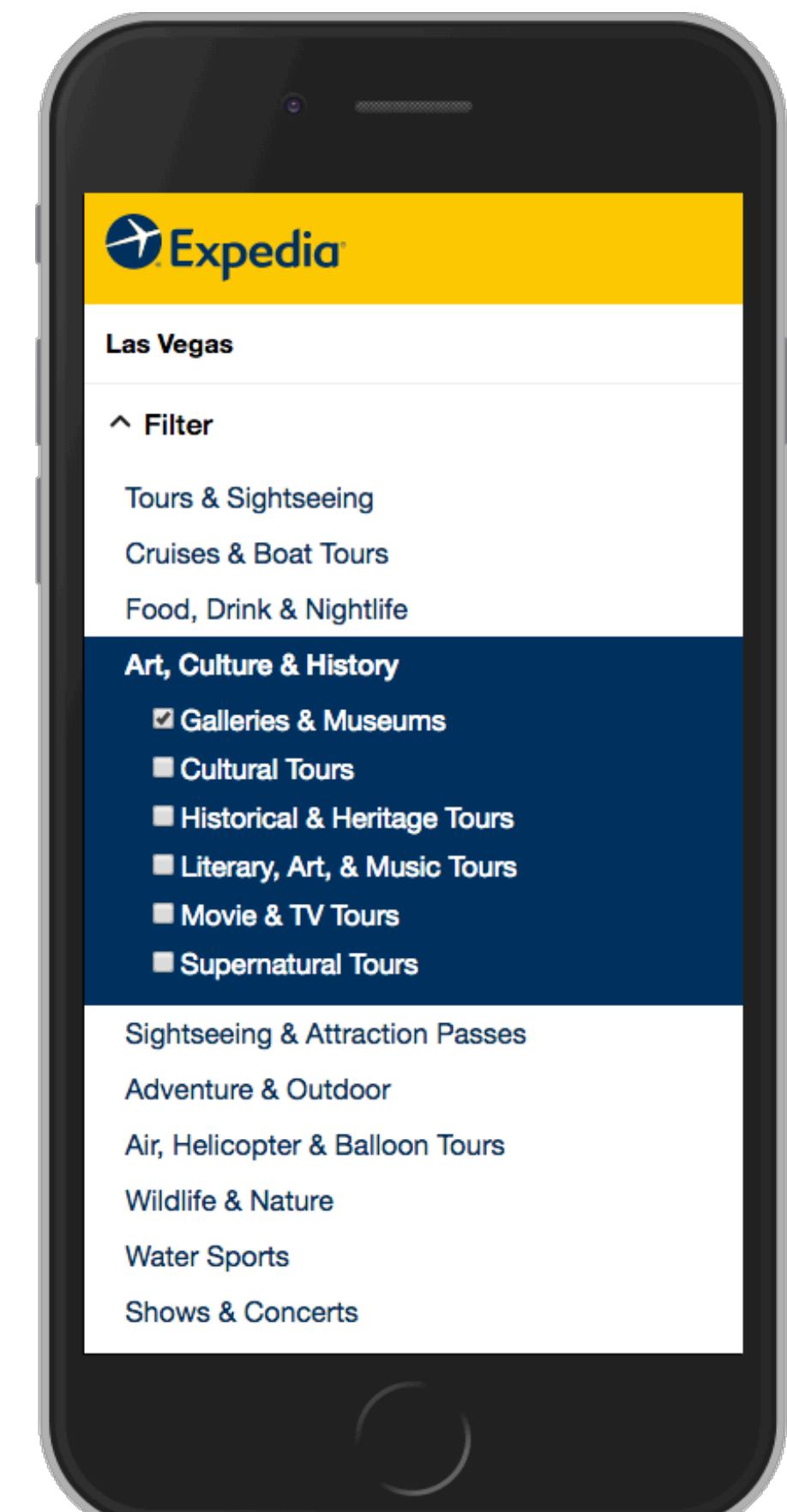
V2

# Usability could be improved on [V2] by giving clearer indication when filters are applied

- **Are there any general usability issues with either pattern?**
  - [V1] requires a lot of horizontal scrolling to see all the categories
  - [V2] users expected some indication that filters were applied after they made their selection, beyond just the check mark. They also expected some CTA to apply the filters.
  - [V2] some users felt it was difficult to go back and forth between applying categories and looking at the filtered activity list.
- **Are touch targets big enough?**
  - Generally yes. On [V1] one user swiped from the edge of the screen and accidentally triggered the browser back functionality
- **Can users successfully interact with the filters?**
  - [V1] and [V2] Yes



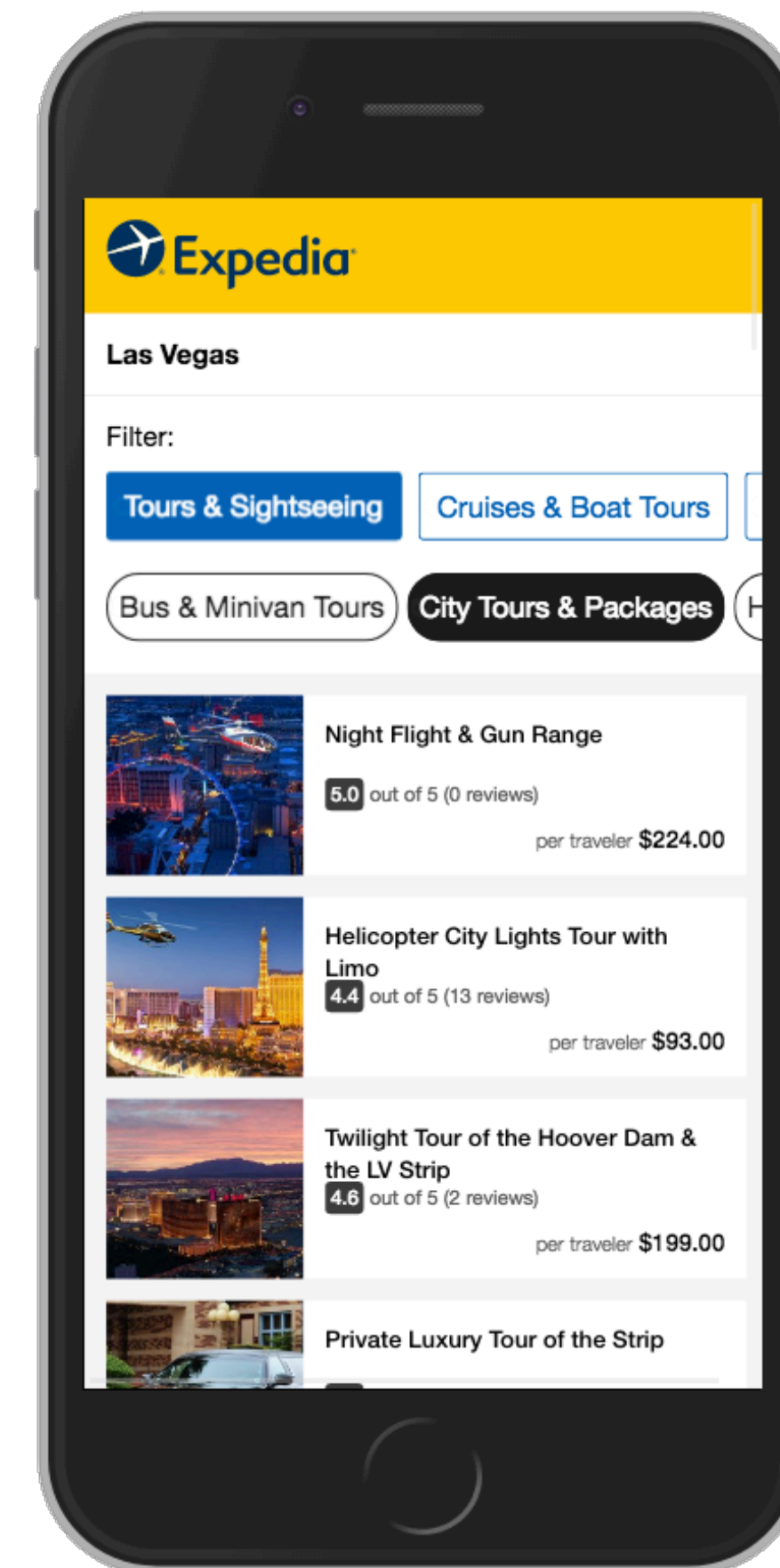
V1



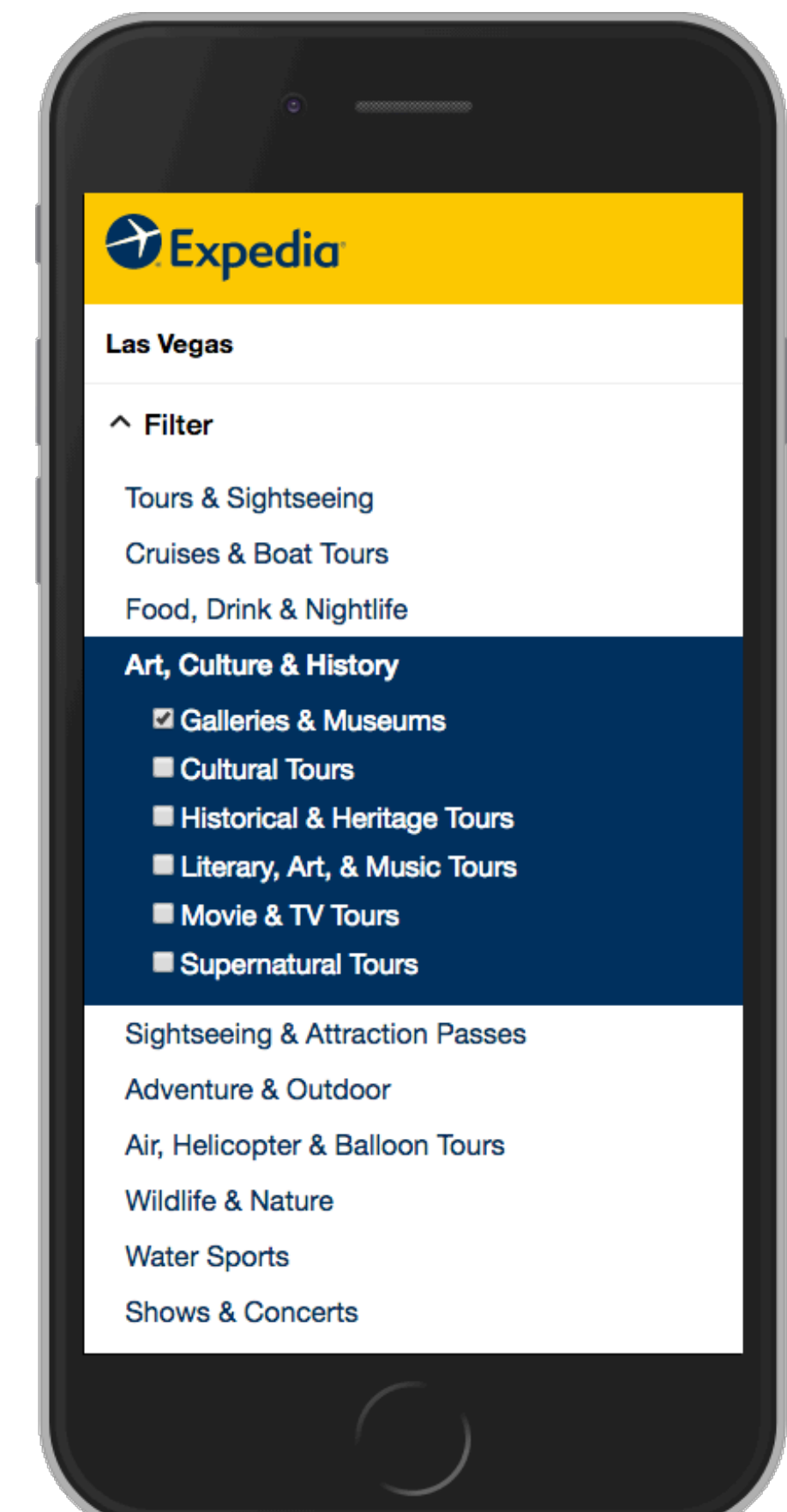
V2

# [V1] does a better job at helping our users

- **Does the pattern help users quickly get a sense for the types of activities offered in a destination?**
  - Both accomplished this goal. [V2] was easier to look at at a glance, but [V1] encouraged more interaction and engagement, and exploration of the categories
- **Does the pattern allow users to quickly narrow down to a set of activities or specific activities?**
  - Both accomplished the goal; [V2] was better if the user knew more specifically what they were looking for, whereas [V1] would require a lot more scrolling to find the right filter. However, if a user didn't know the right category, [V1] enabled more quickly trying out several categories to find the one that had the right activities the user was looking for
  - Most users said that when looking for a specific thing, they would try to use search to find it first, before using filters



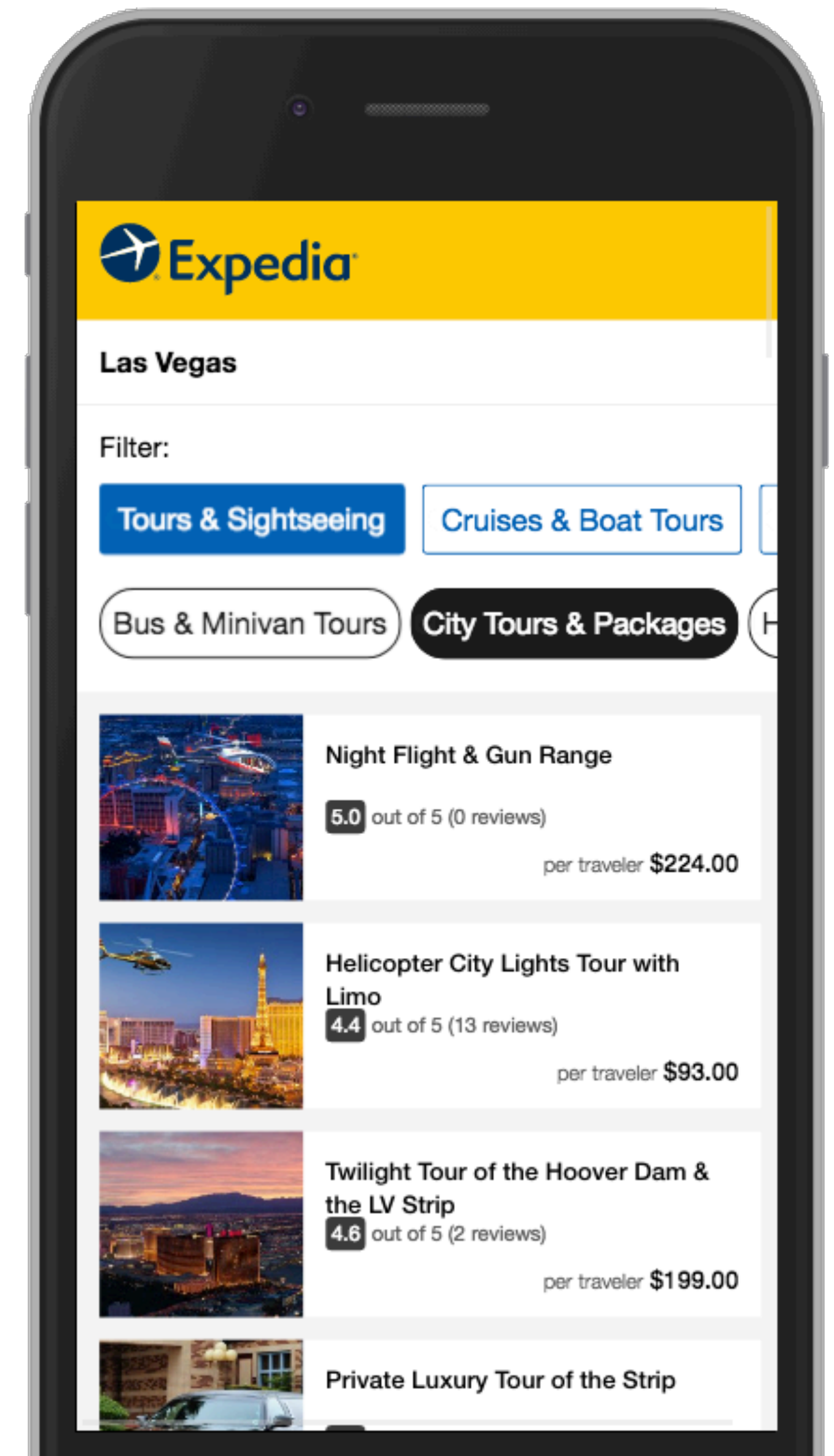
V1



V2

# Recommending we move forward with the [V1] concept

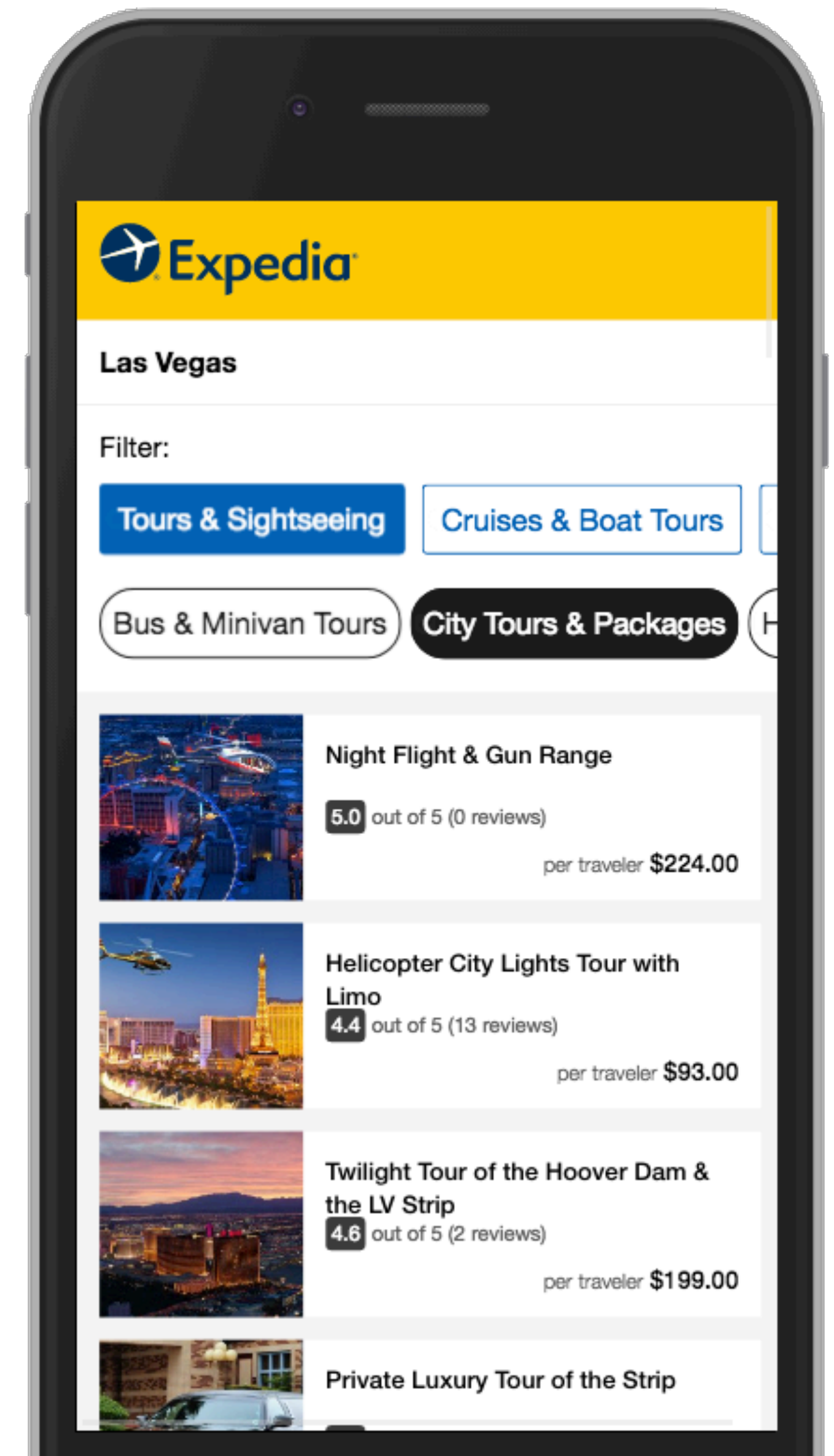
- It encourages more engagement, interaction, and exploration, which facilitates our key scenario (browsing)
- This variant also supports our other two scenarios (narrowing and finding a specific activity), and most users said that to find a specific activity they would use search instead of filters
- Lower effort to select and deselect categories than with [V2]
- Instant feedback showing filtered activities after every interaction





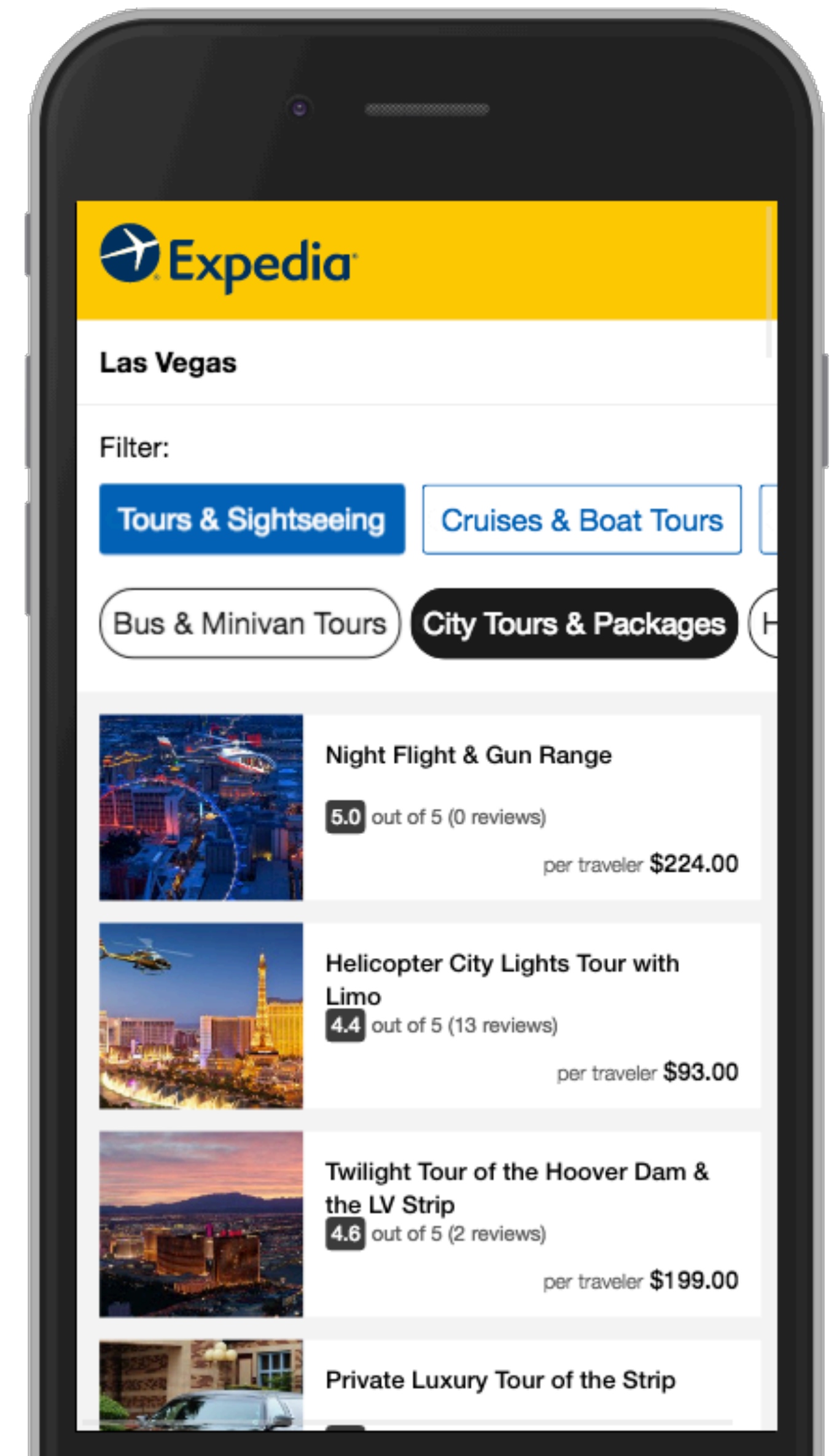
# We can use what we learned in the study to make [V1] even better

- Determine the best order to display categories and subcategories
- Users were split on whether they expected alphabetical order or ranked based on popularity for the destination
- Explore shortening the length of category names
- Explore the possibility of a “see all filters” CTA which will open a modal showing all categories and other types of filters (like Yelp and Android Google Maps)
- Explore showing only the most popular categories in the filter UI rather than all, to minimize horizontal scrolling
- Do we need the label “Filter” or is recognition high enough we can remove it to save space?



# Next Steps

1. Iterate! Improve the recommended filter pattern with the learnings from this study
2. Layer in other features that we have on the live site, including sort, and search within results
3. Explore how this works in a fully responsive design
4. Explore how this works with other non-category types of filters, such as price, available today, and Expedia Picks



# Appendix

**Prototype links:**

V1:

[REDACTED]

V2:

[REDACTED]

**Username:**

[REDACTED]

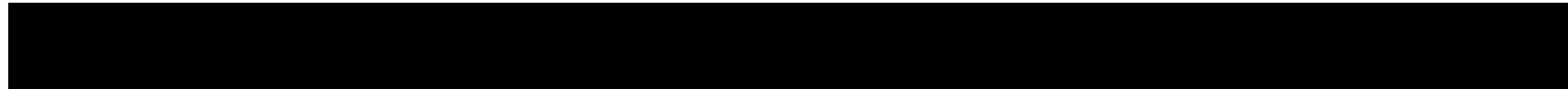
**Password:**

[REDACTED]

# Appendix

## Past Weekly Standup presentations:

Filter Patterns Design Explorations (4/9):



Filter Patterns Prototypes (4/23):

