P4: Responsive Web

Team 3: Cam Davison, Mira Mookerjee,
Connor Shannon, Mike Jin

Table of contents
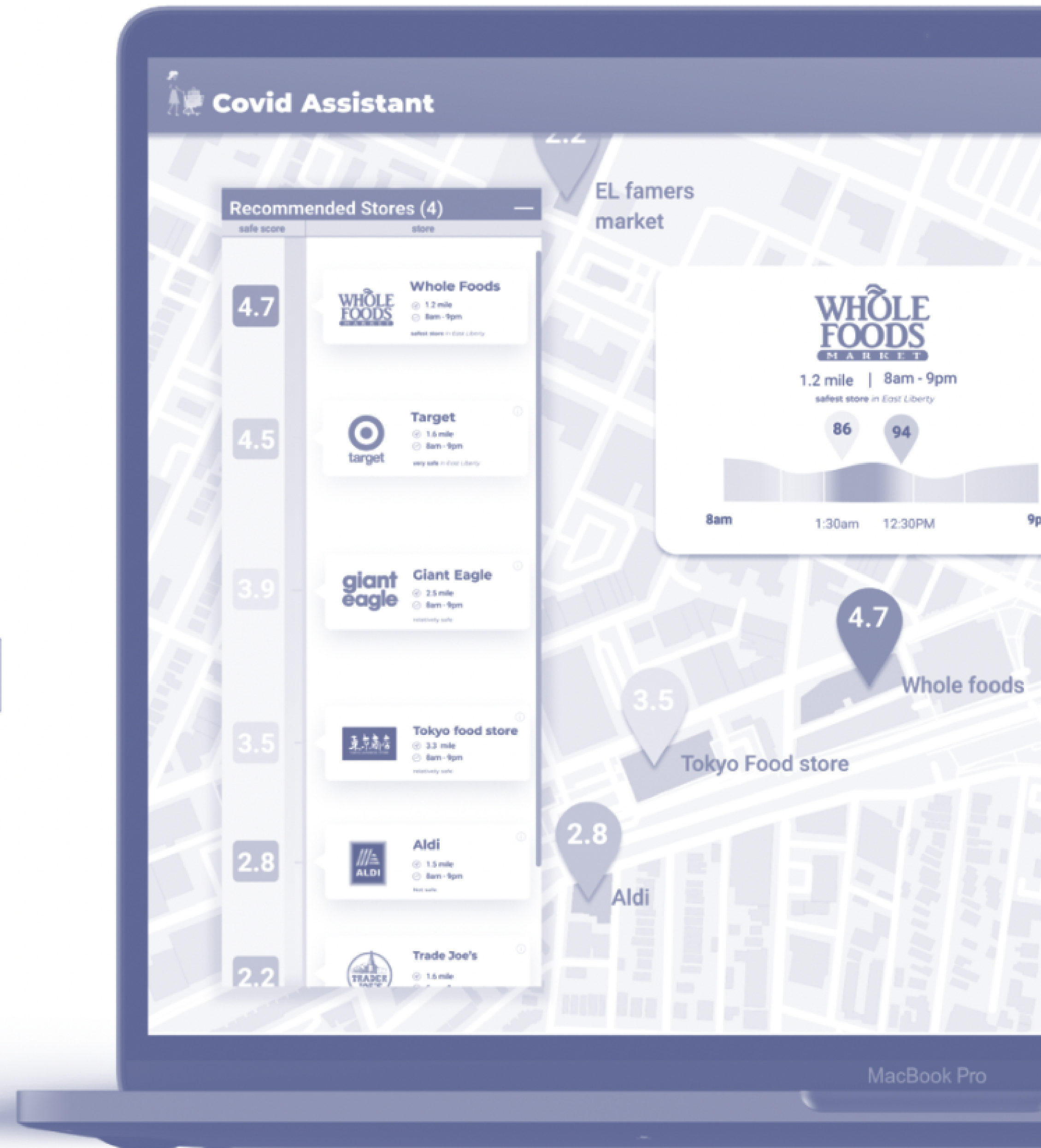
Project Discovery

Preparing for Interviews

After settling on grocery shopping as our topic, we wanted to conduct some pop-up user research to discover pain points that went beyond our personal experiences. We chose directed storytelling as our interview method, and created a guide to follow, making sure to probe further into interesting relevations during the interviews.
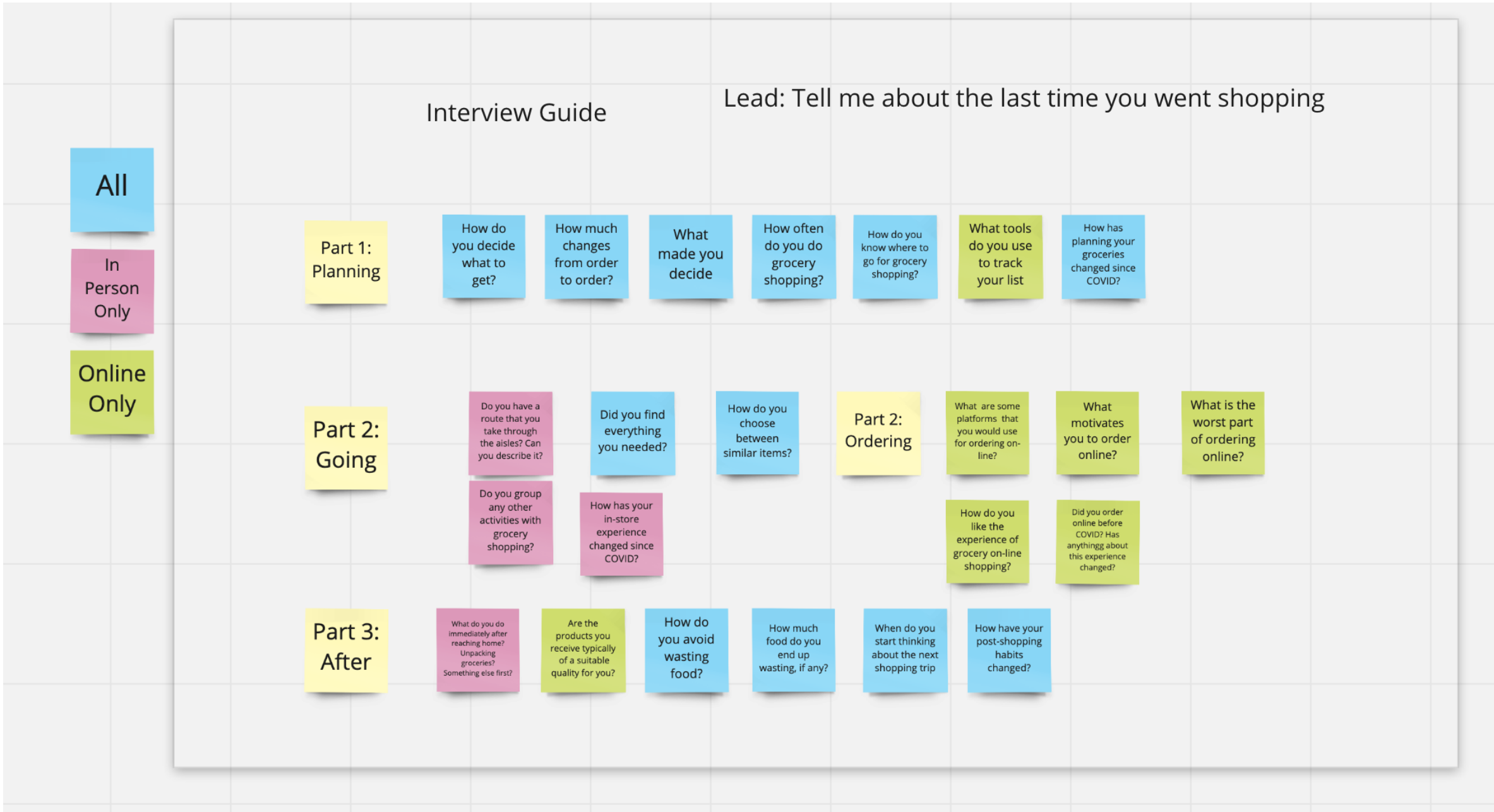

Our interview guide was divided into the three stages of grocery shopping: planning, actually shopping, and post-shopping activities. Within each of these stages, we color-coded questions based on if our inteviewee primarily used in-person shopping or online-shopping. We used this as a rough guide, often adding or leaving out questions on the spot as we saw fit.

Conducting the Research

After conducting a few interviews, we decided to narrow our demographic focus. While we felt that our discoveries were interesting, we also wondered if the pain points of a more high-risk demographic may hold more rich insights. Thus, we pivoted to focus on seniors, defined by our team as individuals aged 65 and older. After interviewing 12 of these seniors, we found interesting insights with plenty of opportunity to innovate. These insights include the following:

- **There is a general lack of clarity regarding how safe and effective existing cleaning protocols are**

- **Despite this uncertainty, and despite being able to use technology, all of our senior interviewees elected to shop in-store rather than to use online services**

- **COVID has taken the "fun" out of grocery shopping, and has turrned it into a stressful experience.**
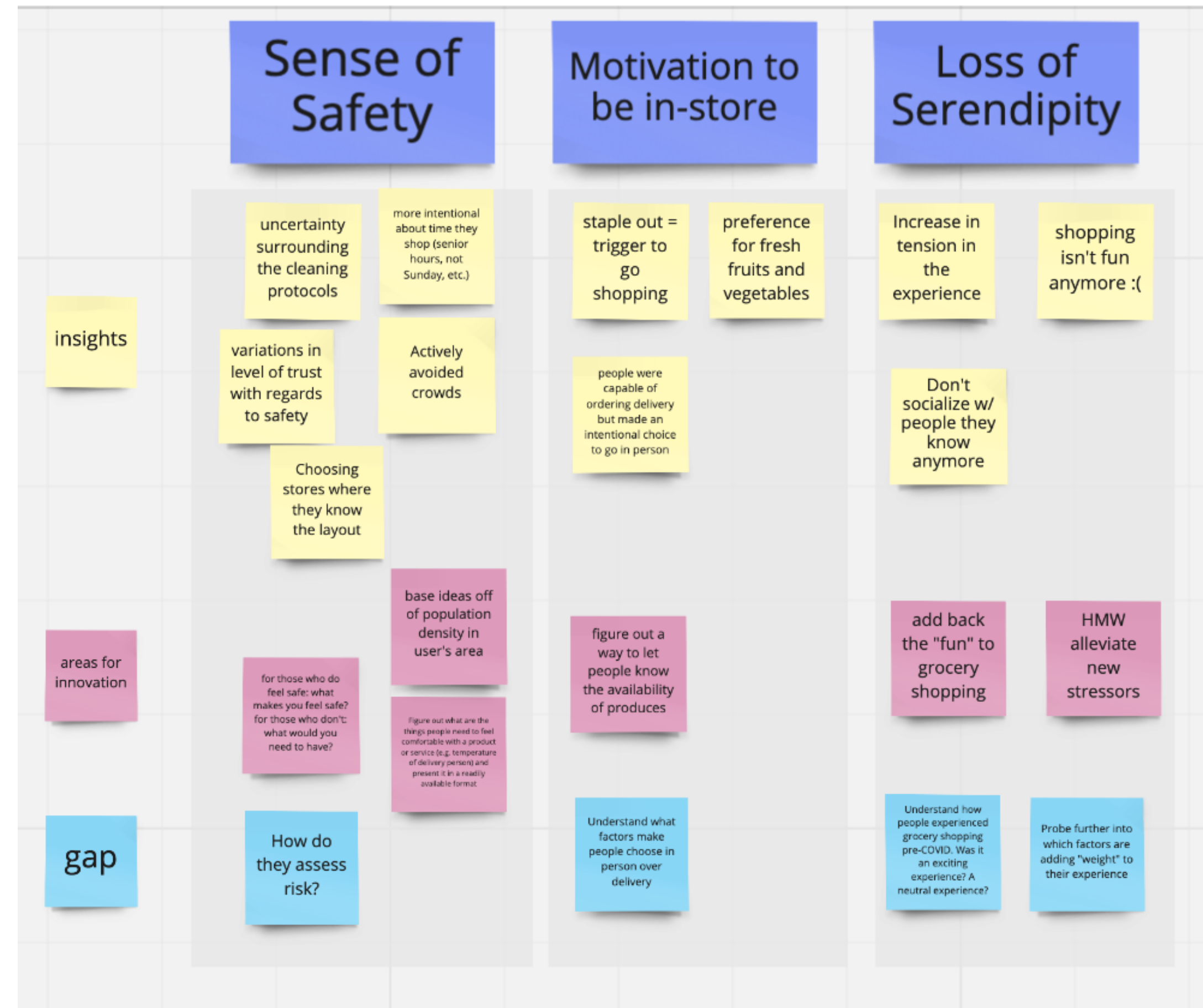
Affinity diagram of insights from our interviews. We organized our insights into three categories: sense of safety with the overall process, the motivation for seniors to shop in-store rather than via online platforms, and the loss of serendipity in the grocery shopping in the COVID age, such that tensions are heightened and the "fun" of grocery shopping is lost. We then identified areas for innovation and gaps in our knowledge for each of these categories.

Findings

Key Takeaways

1. Our team had some concern about our **demographic** choices and their technology use. We found in our initial research that many seniors don't use technology when going to the store, so we worried about how well our design would be adopted. Nonetheless, we received feedback that we should focus on solving the problem in an effective way, rather than on concerns around adoptions. We were advised to place a heightened focus on usability, a key concern for seniors using technology.

2. We were advised to remain precise in our **focus.** Specifically, we were advised to ensure we focus on solving one problem really well, rather than to solve all of them in a single application. In short, depth trumps breadth.

Our biggest takeaway here was to shift our focus from adoption to usability, while taking demographics into account. Furthermore, as we moved to creating a customer journey map, we employed a mindset of identifying discrete pain points within our customer's flow, and with the intention of focusing our efforts on solving that pain point, rather than veering into other areas of the customer journey map.
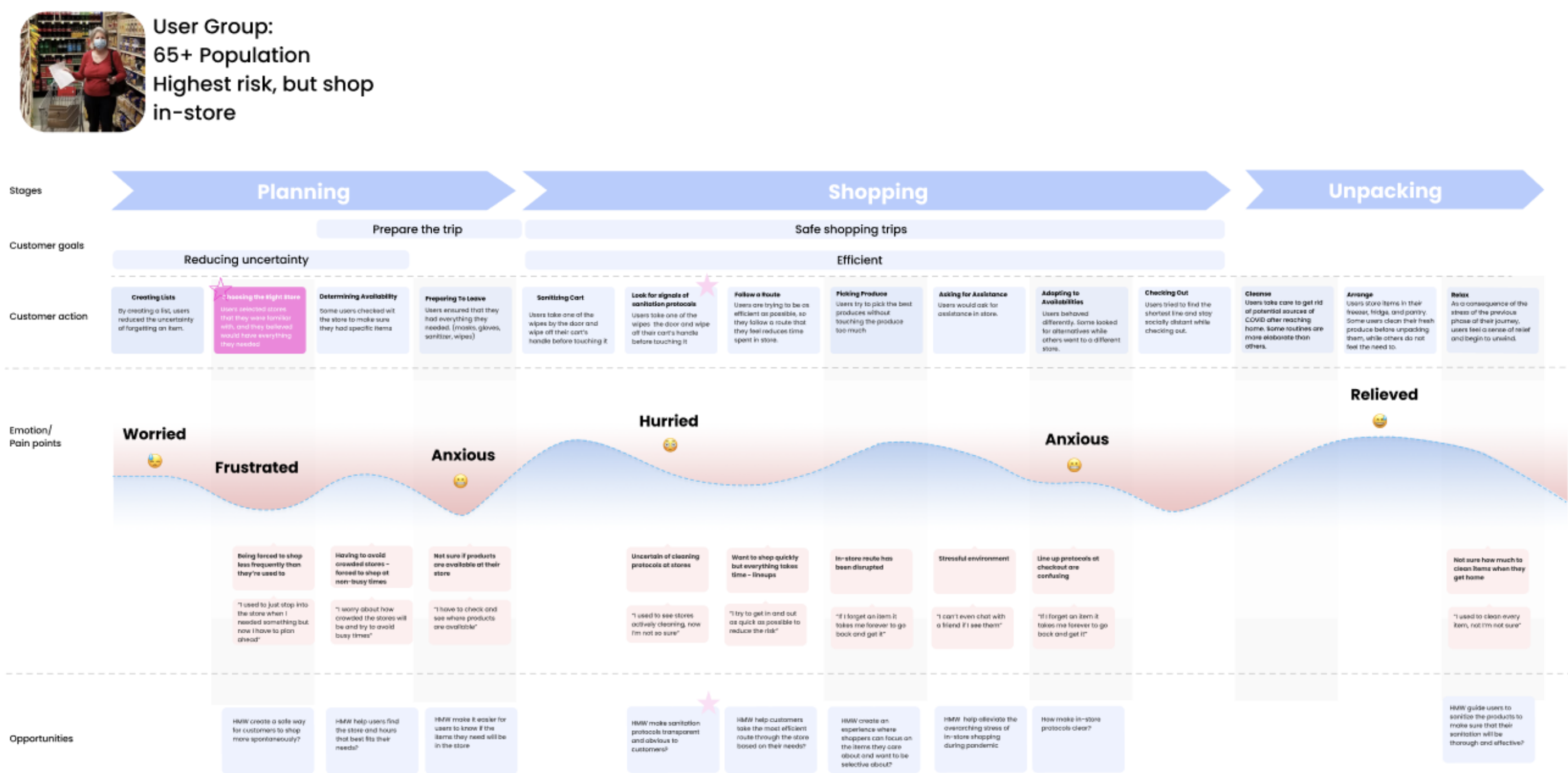
User Journey

Research and Journey Maps

For each of our twelve interviewees, we created a customer journey map to understand the emotional ups and downs in each of their grocery shopping journeys.

We then created a consolidated customer journey mapm that broadly represented our participants, with the goal of finding a specific pain point we wanted to address.
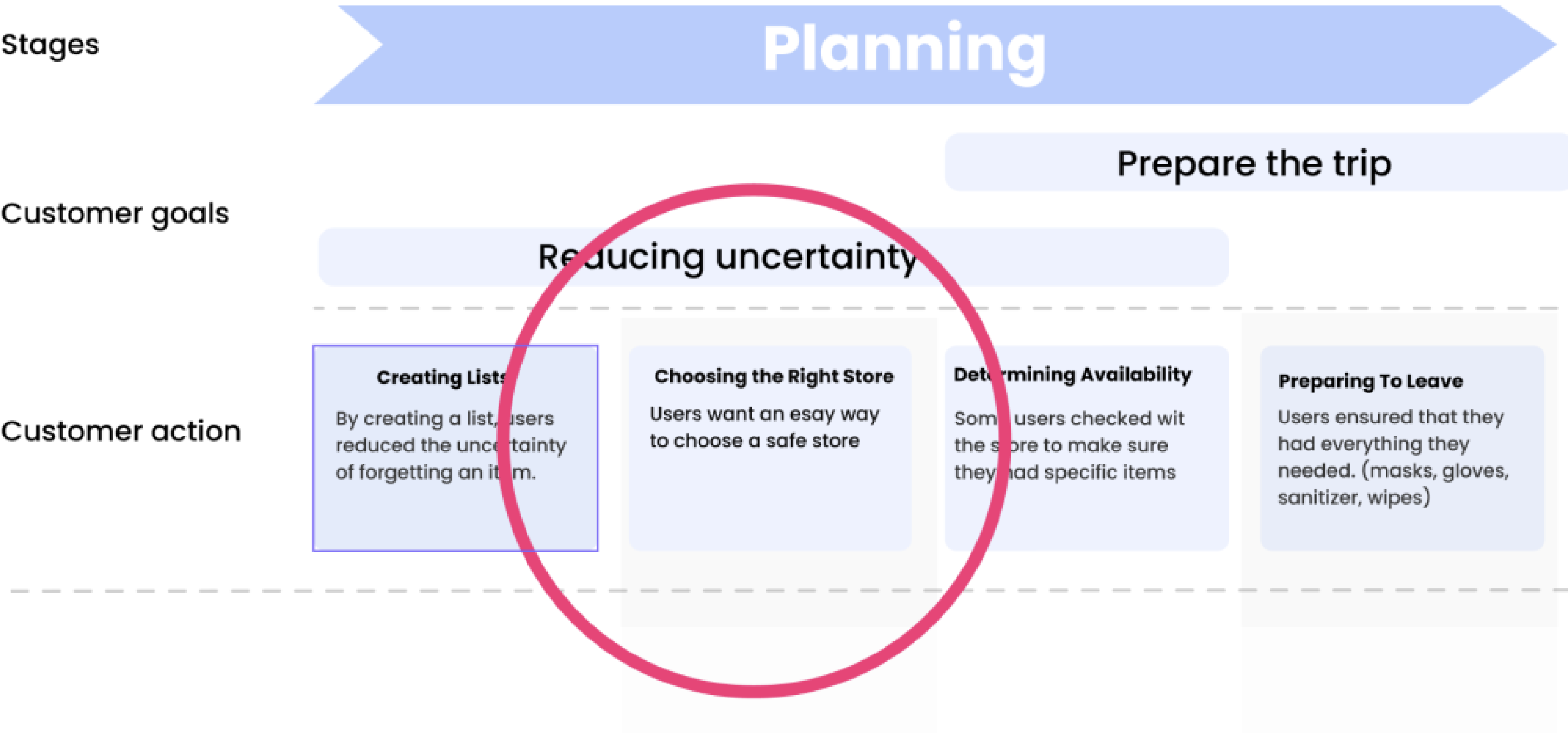
Choosing Our Focus

After considering the pain points on this map, we identified the area with the most impactful barriers for our user: choosing the right store to meet their needs. To address this concern, we asked ourselves the question:

"How might we make choosing the safest store as easy and trustworthy as possible?"

We determined two possible territories to explore:

1. Consolidation of COVID data streams into something more user friendly

2. Leveraging senior in-store shopping to drive asymptomatic testing and eventual vaccine implementations

Stages — Planning

Customer goals — Prepare the trip · Reducing uncertainty

Customer action

Creating Lists	**Choosing the Right Store**	**Determining Availability**	**Preparing To Leave**
By creating a list, users reduced the uncertainty of forgetting an item.	Users want an esay way to choose a safe store	Some users checked wit the store to make sure they had specific items	Users ensured that they had everything they needed. (masks, gloves, sanitizer, wipes)

Feedback

1. For the first idea, we needed to be clear on the source of the data. Our idea needed to be realistic, and our critiquer was hesitant that crowd-sourcing and self-reporting sources are reliable and accurate.

2. We received a thorough criticism of our second idea. There were some unanswered quuestions, namely: Who tests whom, how often, and why does that help? The idea didn't cohere, and the screen design may not have been as rich. However, we did receive positive feedback with regards to giving a profile that describes the safety of different stores.

Key Takeaways

1. To address the first concern, we decided that the data should balance crowd-sourcing data with data from a reliable third party. After doing some research, we decided that these third-party sources would include the CDC, Johns Hopkins, Google.

2. After receiving the feedback on our second idea and discussing as a group, we agreed that there were too many logical flaws in a plan that may not have as rich of an end result. We decided to retain the "store profile" idea as we focused on our initial, data-driven idea.

Ideation + Audience Determination

Ideation

We had identified that a considerable pain point for seniors was picking the safest store to shop at. We also received positive feedback about exploring the territory of consolidating COVID data streams to be user friendly.

As we ideated different ways our user might find safety information, we settled on primary sources being the CDC, local governments, Johns Hopkins, and Google.

How could we create an experience that helped seniors navigate all of these sources of data? How could we create something user-friendly that they could trust?

As we explored the problem and the data sources, our solution and audience began to clarify.
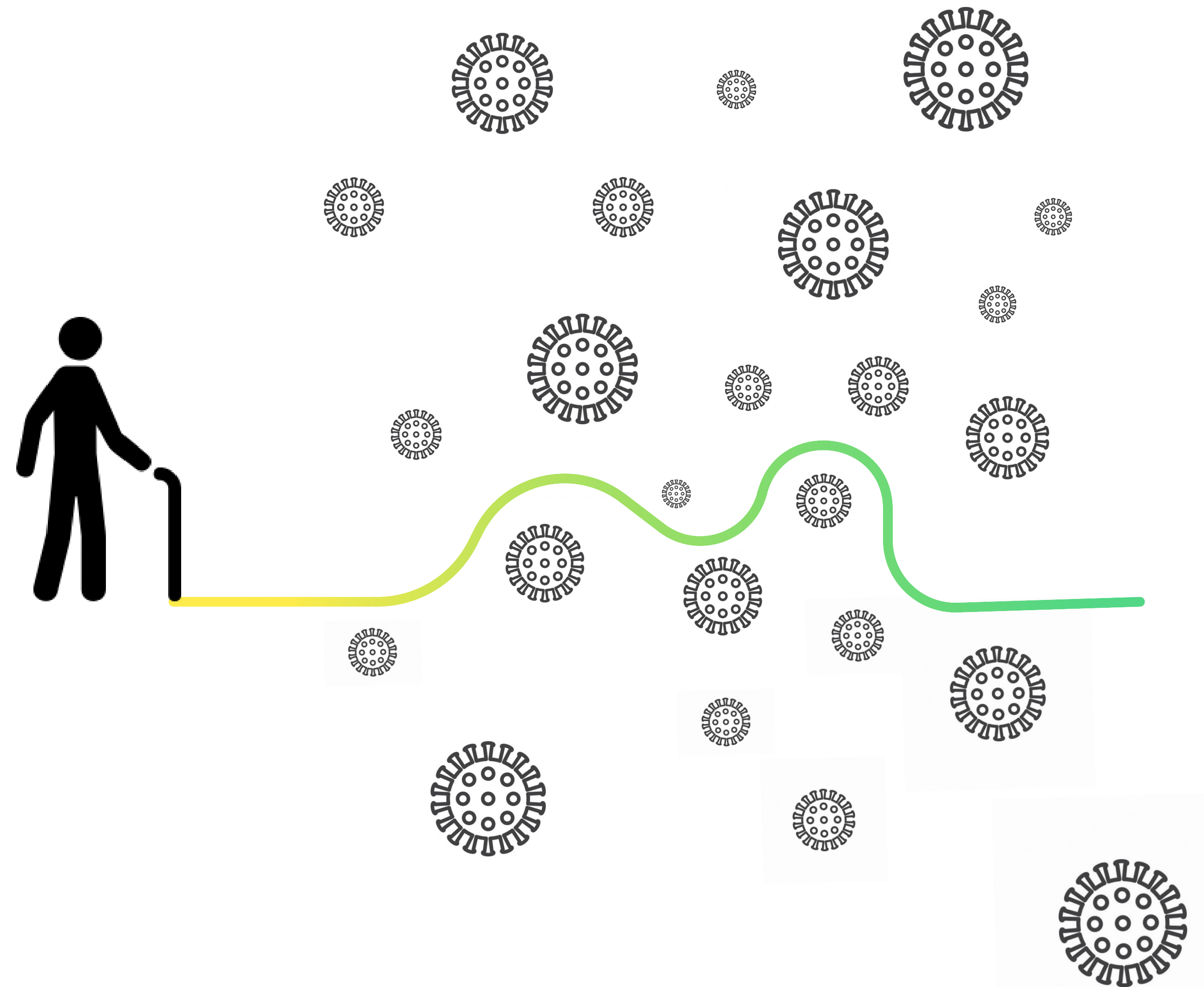
Our Idea

Our idea: Pitch the city of Pittsburgh on a responsive web app that combined goverment level , Johns Hopkins, Google Maps and community reported data to give users accurate and easy to find and understand information to determine the safest time avd place to shop.

Value for Governemnt of Pittsburgh:

The pandemic is going to get worse before it gets better. Daily case rates are increasing exponentially. Despite this aggressive increase in community transmission, high risk individuals in the 65+ age range are still shopping in-store. The city governemnt needs to find a way to bridge the gap between this community transmission and the vaccine.

Value for Seniors:

Simple, easy-to-understand method to releive the anxiety and real safety concerns with finding a safe way to shop.
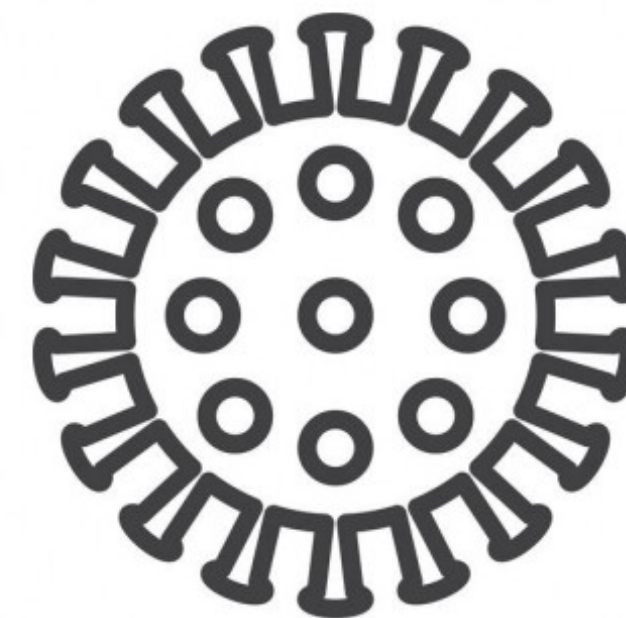
Design: Paper Prototype

Paper Prototype

The team quickly moved to creating a series of low fidelity prototypes to test our concept as quickly as possible.

After brainstorming, building and analyzing several screen ideas, we decided to test the map screen and the store details to gauge the users general undrstanding of our idea and let them tell us what features should be prioritized.
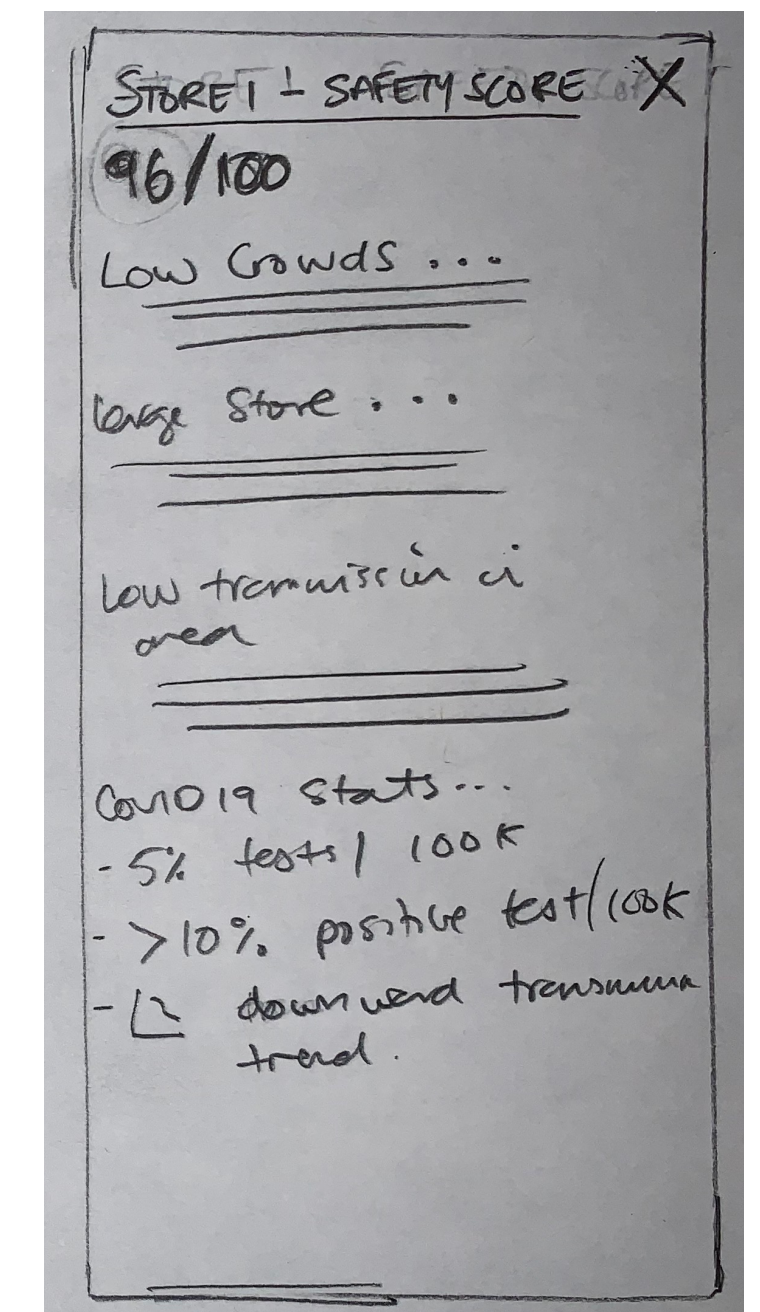
We combined these ideas into a paper prototype and conducted think aloud sessions with classmates for feedback.
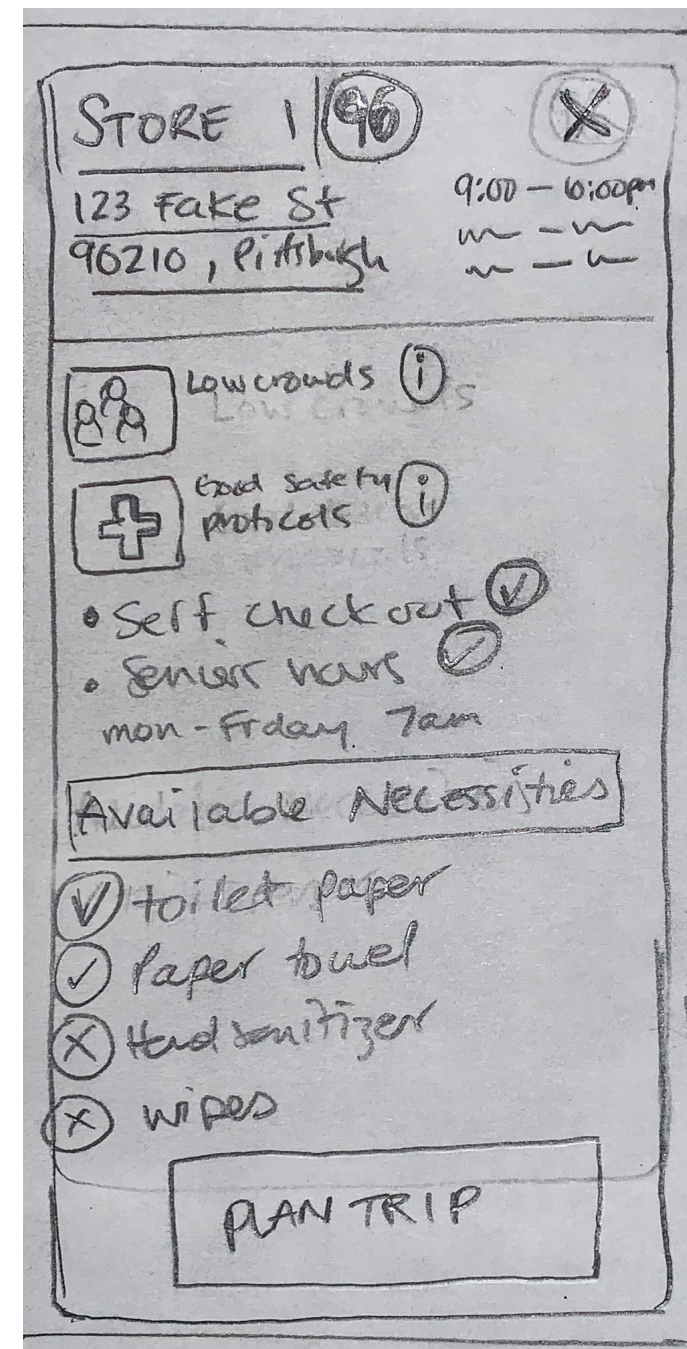
Early store details page displaying possible features and options for the user

Early map screen featuring date selection, multiple locations and the introduction of our safety score idea

Page explaining safety score, intended to surface how much users wanted to know about the score and how it was created

Feedback

Users like the idea of a safety score but it was not prominent enough on the map and store details screen. The component of the safety score that was most valuable to them was the crowd size, so there was a strong call to prioritize crowd level information.

People were wary about what is self reported data and the data streams in general. The inclusion of available necessities was useful to them but they had hesitation as to where that data was coming from and how trustworthy and up-to-date it would be.

Key Takeaways

The safety score passed the test and will become the driving feature of our experience. In our next iteration, we focused on hierarchy of information - crowd data and then everything else.

We made sure to be transparent with regards to self reported data and drivers for the safety score.

In short, we learned that you can learn a lot from a few sketches!

Design: Mid-Fidelity Prototype

Mid-Fi prototype

Based off of feedback from the paper prototype sessions, we moved forward bulding out our user experience. We built the remaining screens to allow our user to plan a trip end-to end.

We amplified the visual prominence of the safety score and ensured there was transparency around self-reported data and the making of the safety score.

We also started thinking about the secondary purpose of our experience: the user reporting flow, where the user could self report on the conditons in the store they visited.
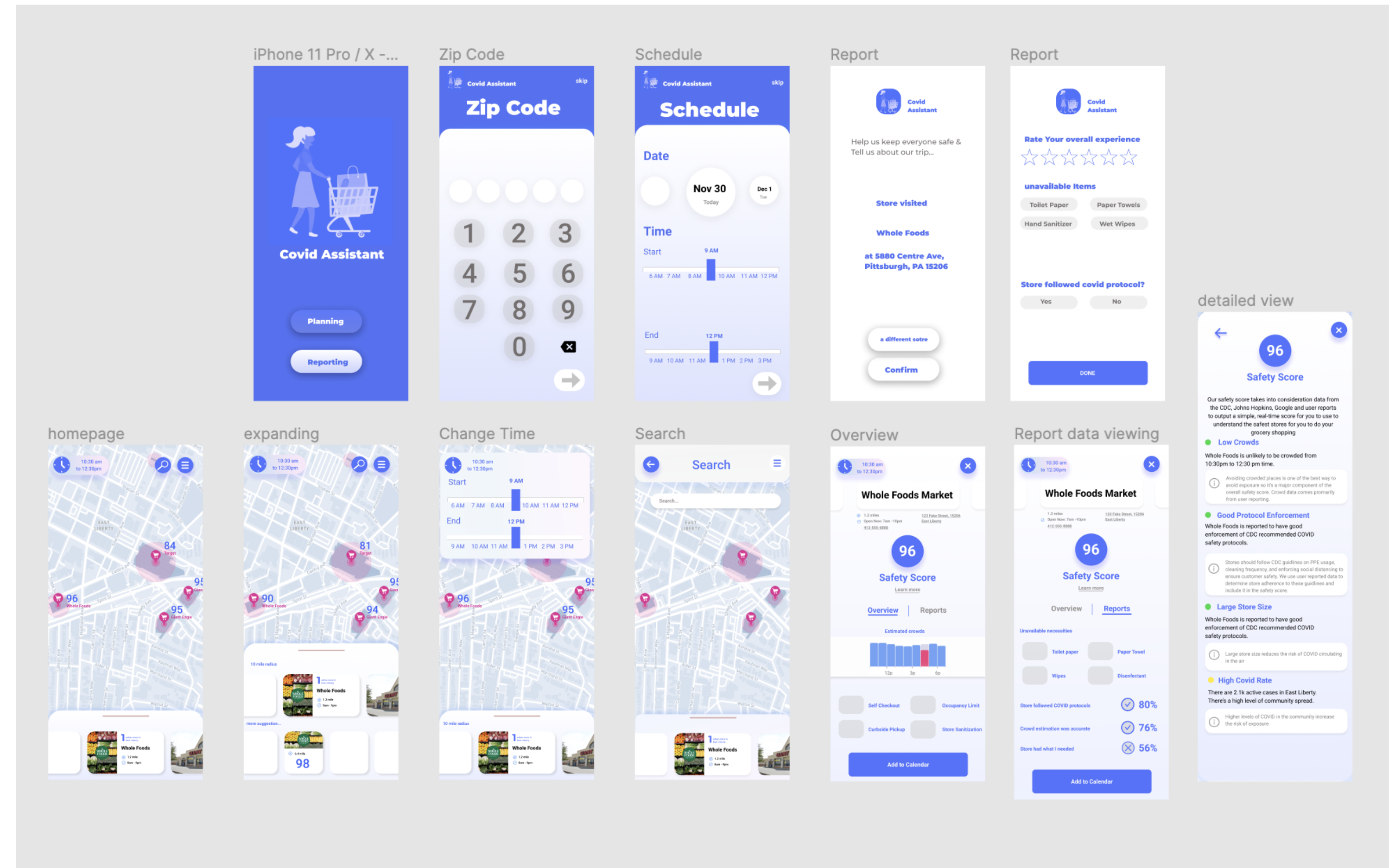
Feedback

The safety score being out of 100 was not intuitive or easily understandable. We needed a way to more clearly convey the relative safety of the stores. Additionally, we had no way for the user to compare multiple stores. We recieved feedback that the user wanted more context as to how a store's safety compares to the safety of others in the area. They suggested including a way to see the average score of the area for comparison.

There were also a few usability issues in our current design. The primary font color was blue. Since blue font is hard to read for seniors, this design choice could be problematic. Additionally, the user couldn't read the top text at the top of the store-specific view.

Key Takeaways

Moving forward to the High-Fi prototype, we needed to make sure we make it explicitly clear that the score is 1/100. We thought that additional signals like a checkmark next to safest options could help.

We had to go through our entire design to ensure that the colors and text sizes we used would be easily readable. Blue font contrast issue for seniors - mindset for the remainder of design senior first. Should add some typographic hierarchy to the design so that the more important pieces of information stand out

We also needed to come up with a way to compare stores so the user knew how the store compared to those around it.

Design: High-Fidelity Prototype

Hi-fi prototype

Bringing in the feedback from the last iteration, we switched to a more muted color scheme to make the safety score stand out more. We used material design components for the time and date selections.

In this iteration, we also started designing the desktop version of the site. For the desktop design, we utilized the extra space on the desktop screen to show more information at one time.
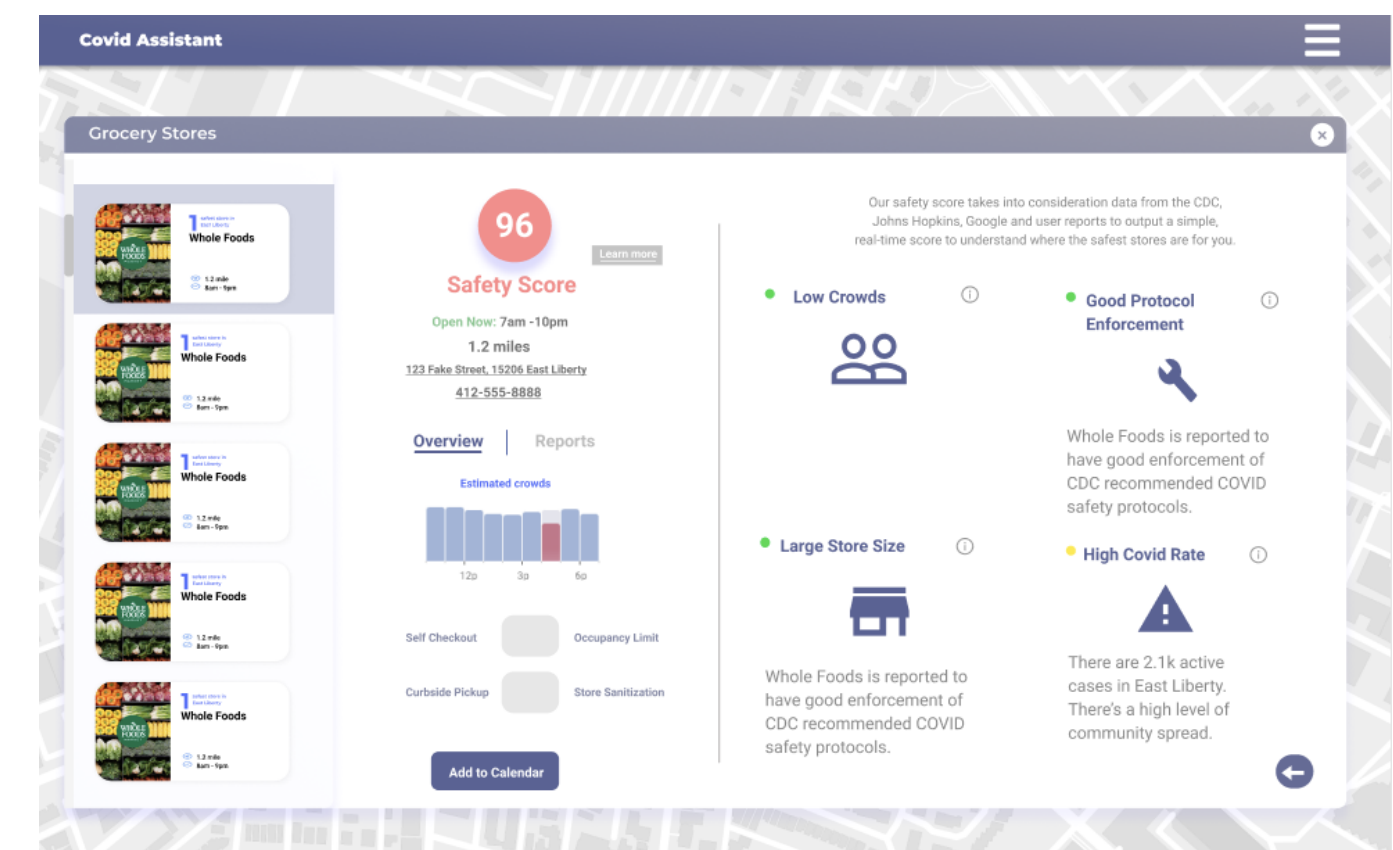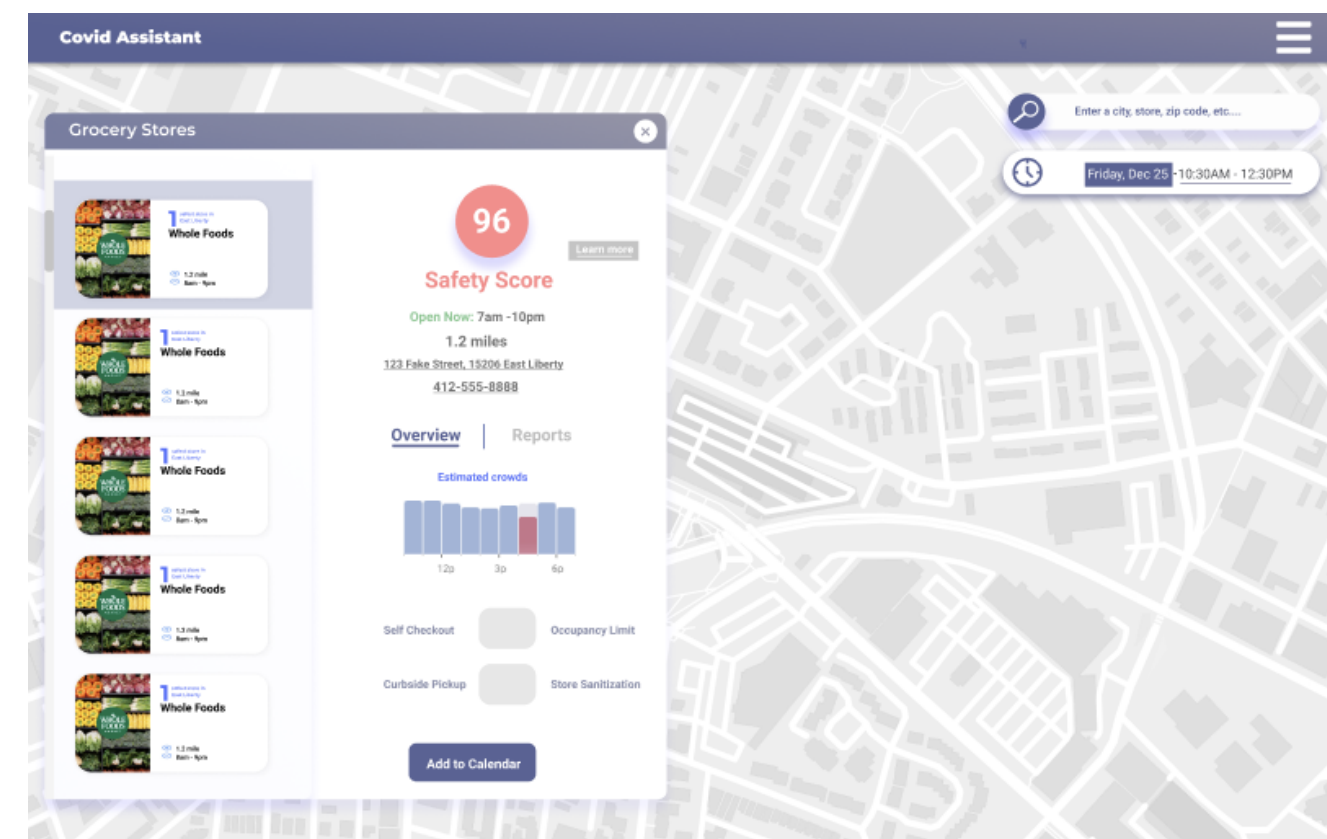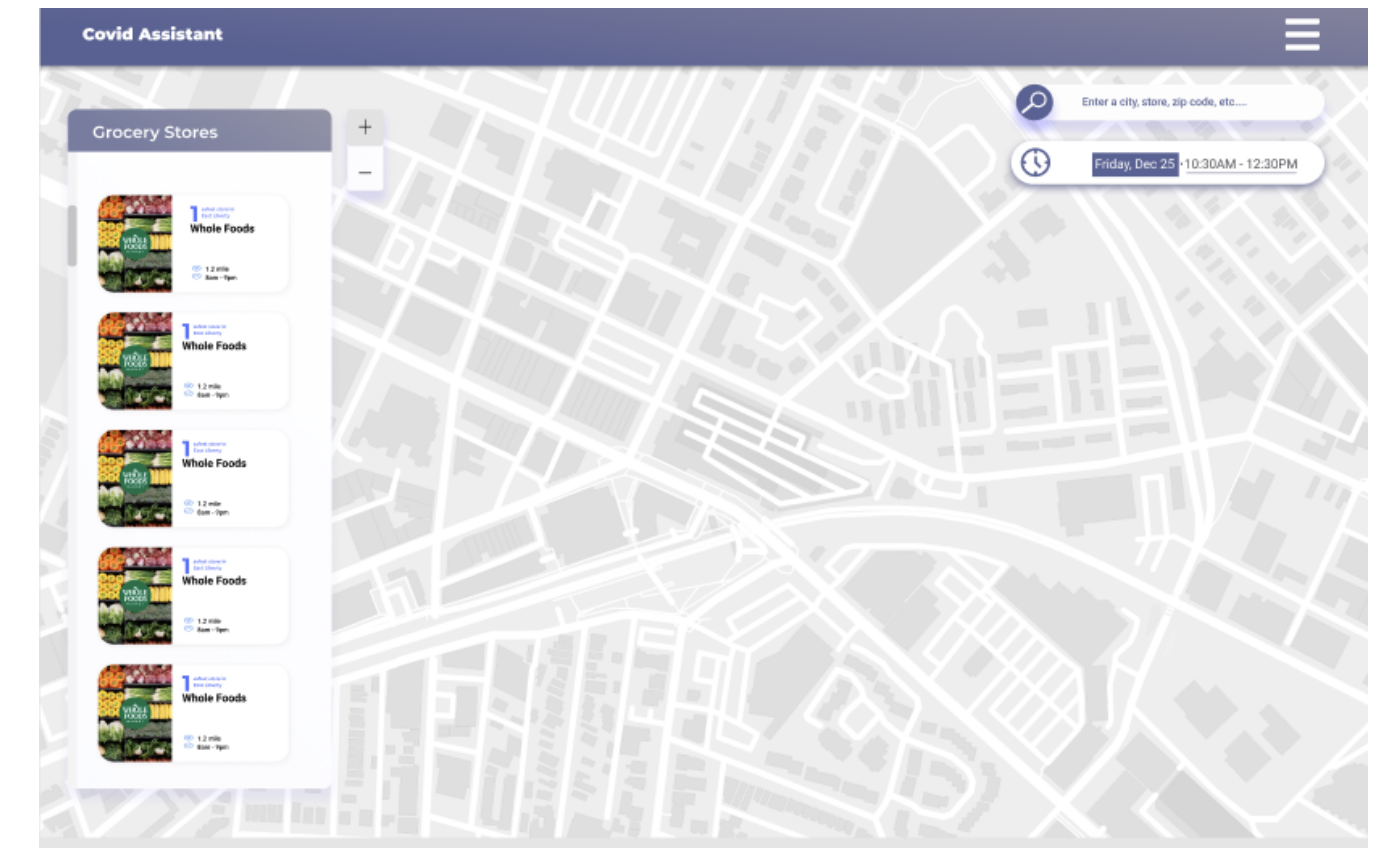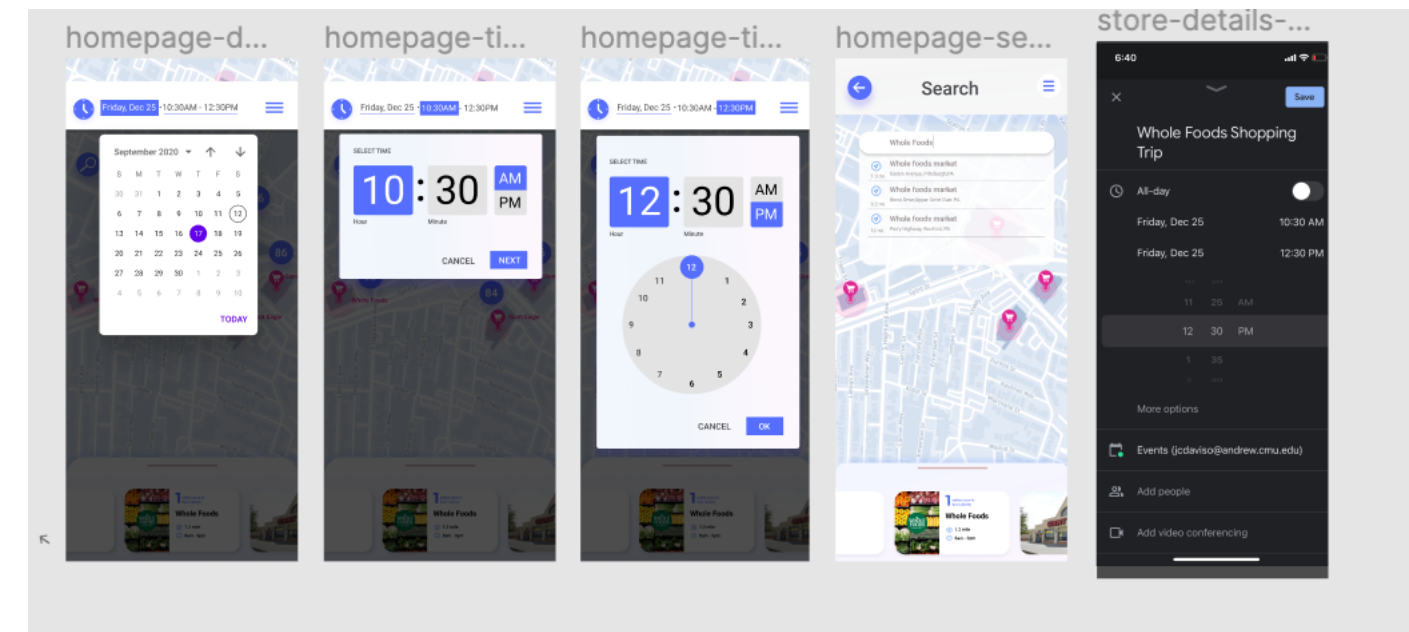
Feedback

The confusing around the rating scale out of 100 came up again in this iteration. Some thought it was a reference to the number of people in the store.

The radius circles around the store pins on the map also confused people. It was unclear whether or not the larger circle was good or bad. Peers mentioned that using red to demonstrate the safest stores actually indicated the leaset safest stores to them.

Key Takeaways

Coming out of our final critique, it became clear that the primary screen of our experience, the map, was not achieving what we intended. Users saw the red score as a negative and thought the number (out of 100) was a reflection of the crowd size and not the safety score. The result was the user interpreting higher-scoring stores to be more crowded stores, flipping what was supposed to be a positive indication of store safety into a negative indication.

Additionally, we heard, for the second time, that being able to compare a store with others in the area would add value.

Design: Final Prototype

Final Prototype

After our final critique, we set out to fix the visual representation of our safety score and refine our experience. The primary changes we made were:

Revising the score from 100 point scale to a 5 point scale

Given that our users thought a high number represented a large crowd (and was therefore a negative thing), we simplified our score to be out of 5. A 5-point scale was more intuitive as a rating scale.

Finalized color scheme with green

Users perceived our high scores as negative becasue of the red color used. We changed our color scheme to be a a spectrum from yellow to green to represent safety to the user. Yellow hues reprersent less safe stores and the green represent the safest. This also provided visual cues for users to identify the safest stores at a glance.
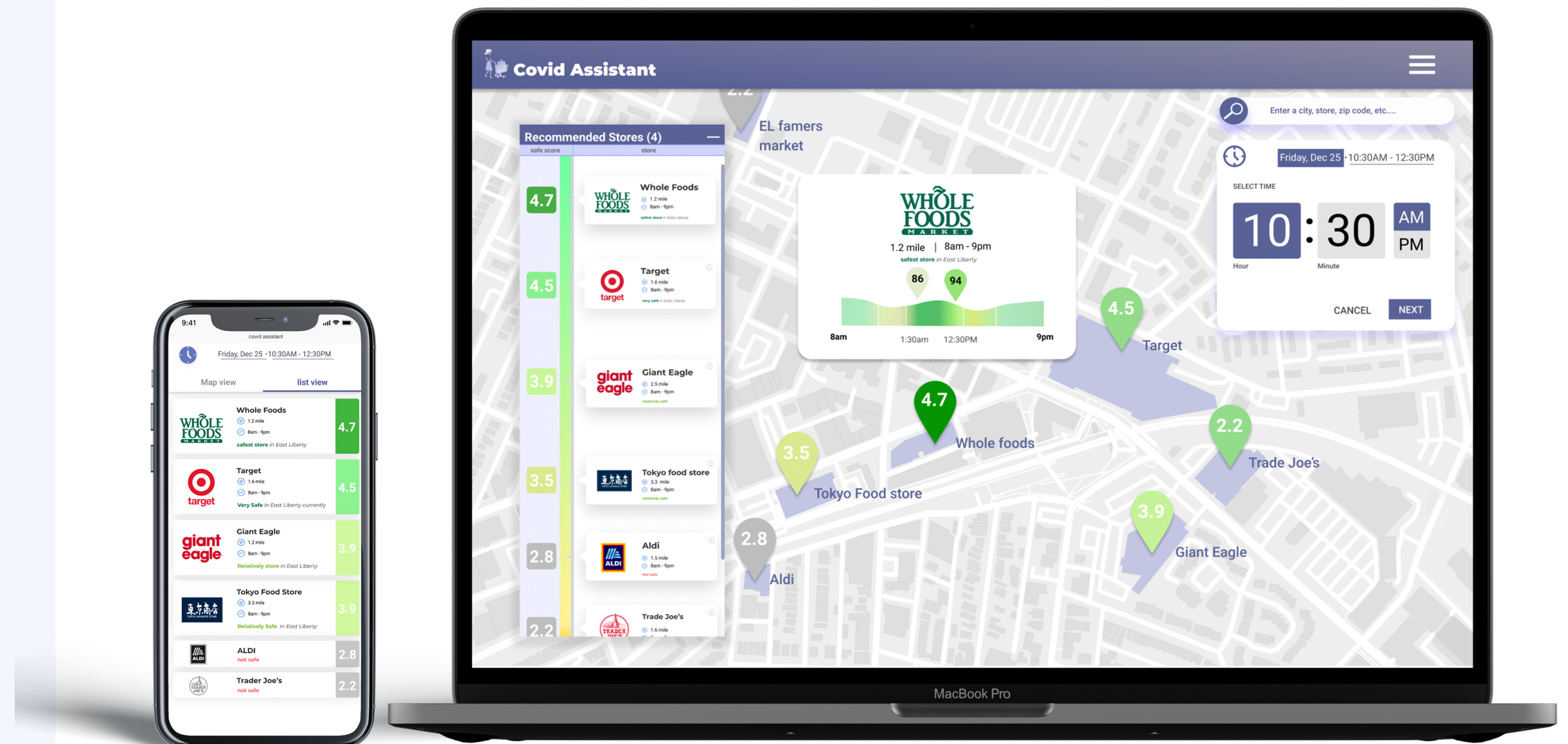
The Map

User can see the safest stores at a glance and get more information by clicking on the store in the list view or on the map.
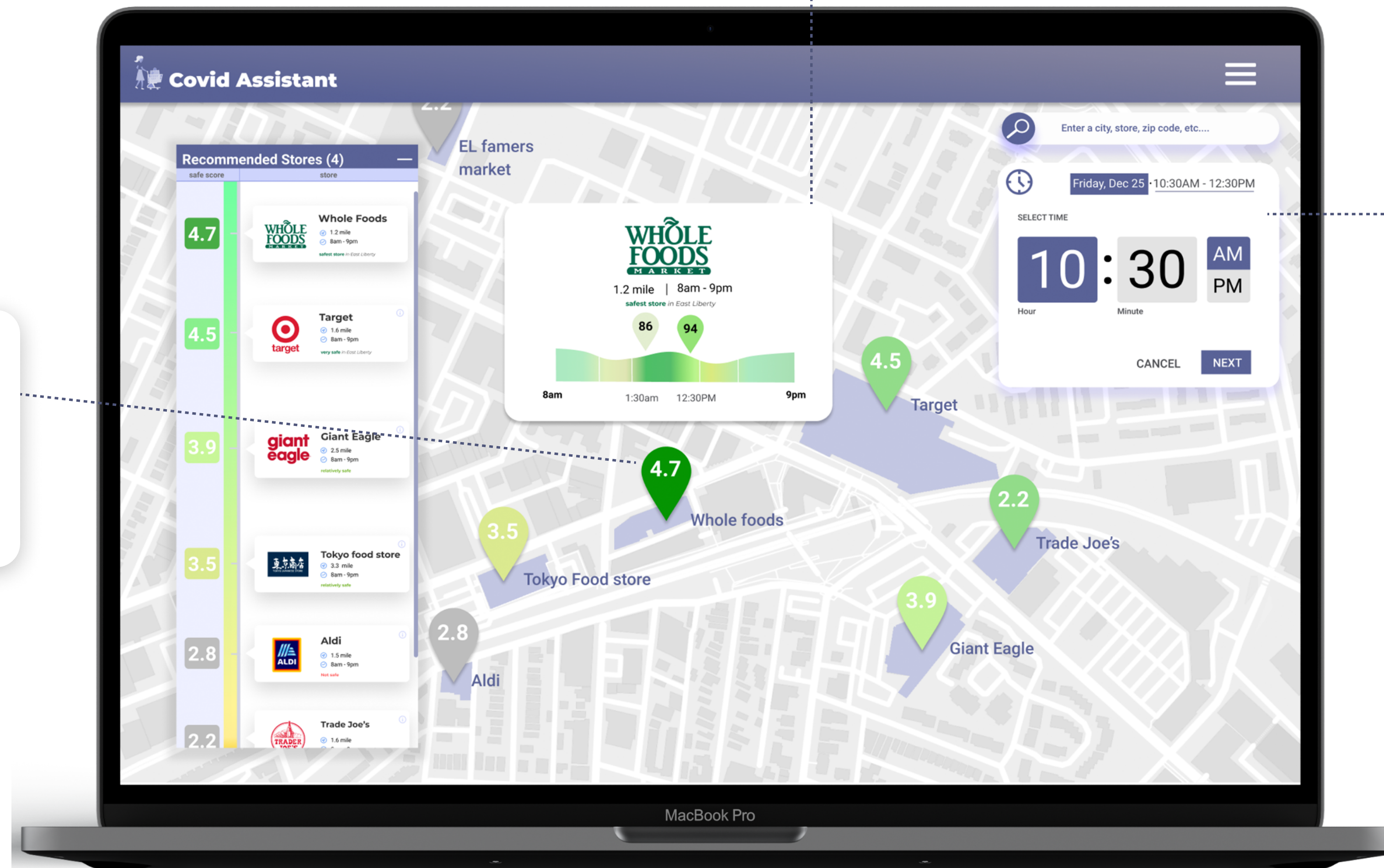

Store Details Peak

On the desktop experience, the user can hover the store pin to see a peak of the details. When clicked it will take the user to the store detail information.

Date +Time of shop

User can change the date and time of their shop at any time to see how the scores update on the map

Store Location

Store is identified by its safety score. The icon is color coded based on the level of safety.

Safety Score

Simple safety score on a 5-point scale gives user simple way to assess how safe a store is. Any reflection fo the score will also be reflected with the color to visualize safety.

Store Details

The safety score is displayed in multiple ways on the details page. Users can see how it compares to other stores and how it changes throughout the day.


Store List View

The stores are ordered by safety score and top level information is displayed

Safety Score Information

If the user wants to learn more, they can see a a breakdown of all the components that go into the safety score. They can also find out more details about how the data was collected for each component by clicking it "info" icon.

This design keeps the UI simple while also giving the user the ability to go deeper into the score to increase his trust in the legitimacy of the score
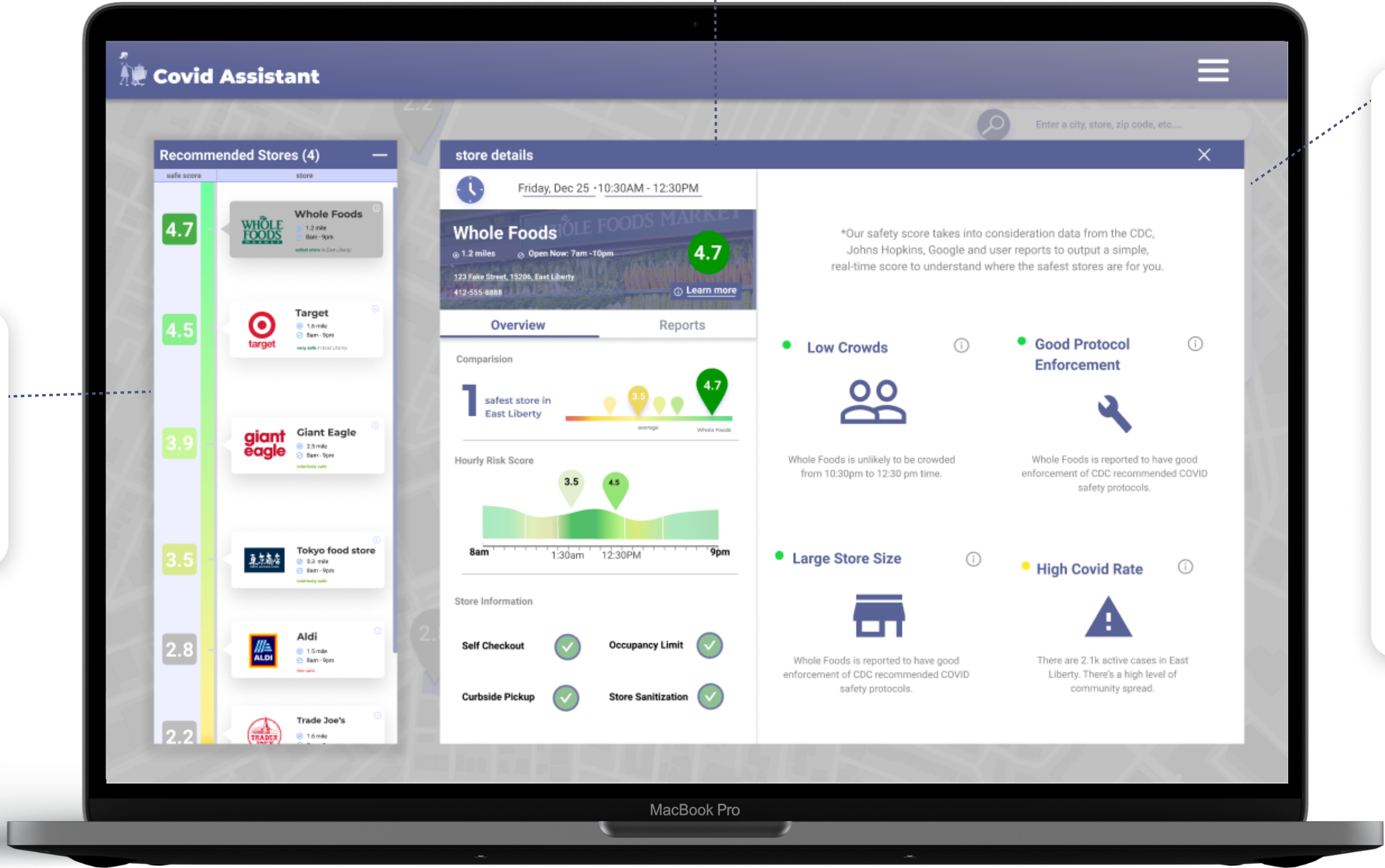
Store Comparison

We designed the desktop site to allow for easy comparison between stores so the users can see the relative safety of stores in their area.

Store Comparison View
The "Comparison" section of the overview page shows how the score compares to others in the area.

Visual Hierarchy

Color, rating, and list order are all used to draw the user's attention to the safest store in their area.

Overview Comparison Component

For desktop, we leveraged the larger screen size to enable the users to do a side by side comparison of multiple stores. This way, users can do a more in-depth comparison of two or more stores before deciding
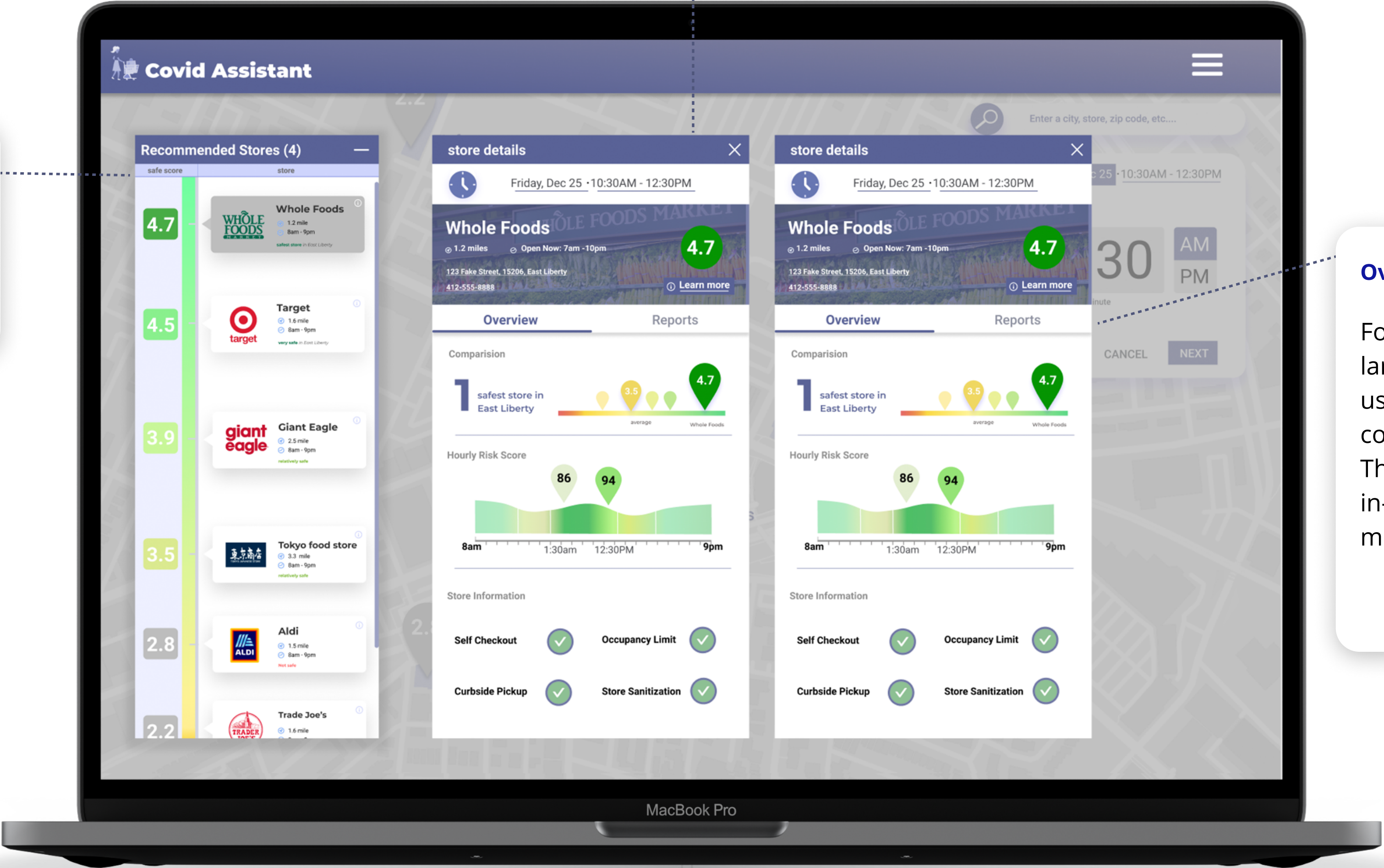
Reporting

We decided to leverage user reporting for the collection of data related to store supplies and sanitation. Participants said they would trust the reports from other shoppers more that reports from the stores themselves.

The reports served multiple functions:

1. Assess how well the stores adhere to COVID safety protocols

2. Verify that the crowd data is accurate

3. Provide information about the current availibility of necessities.
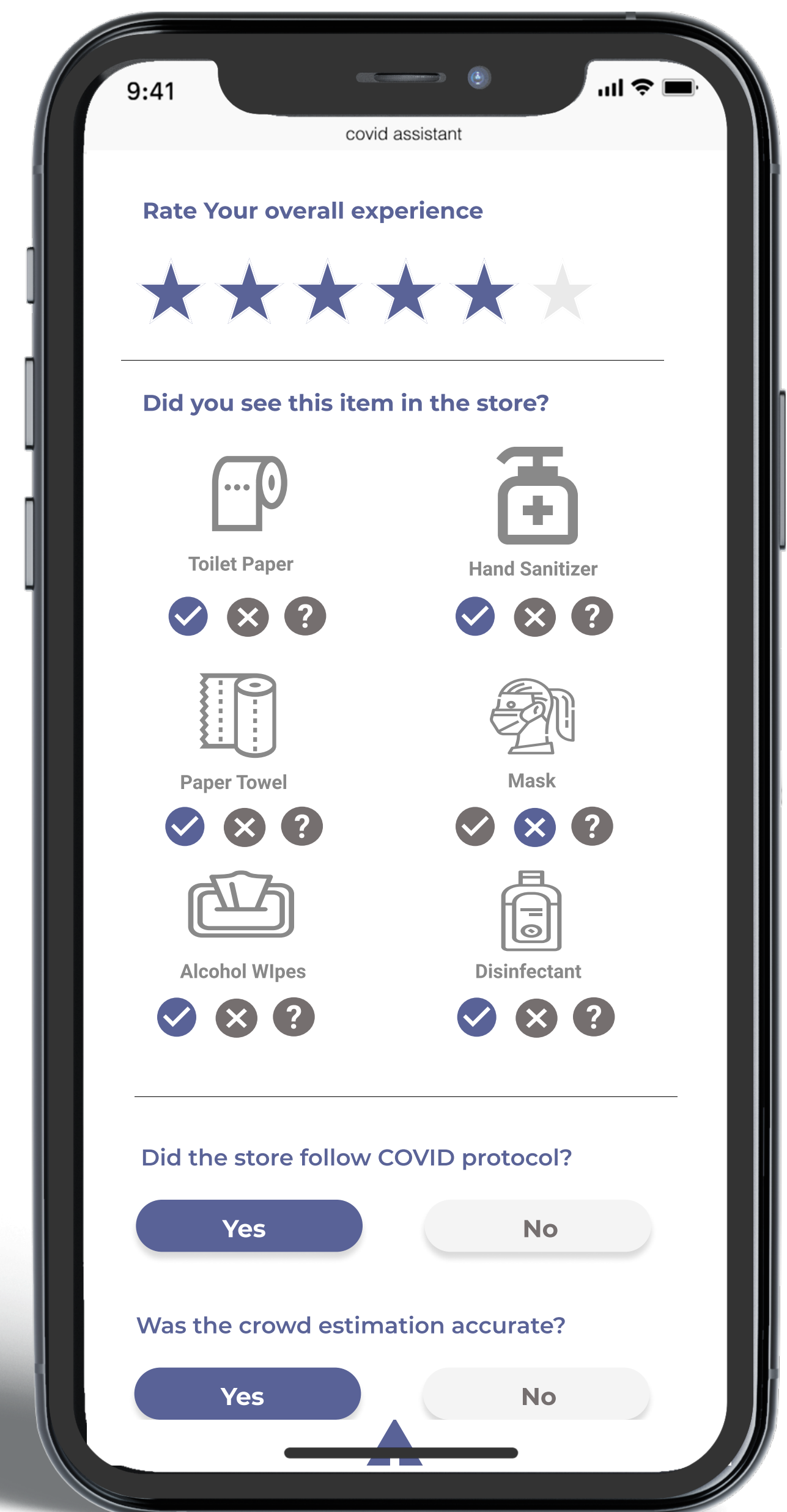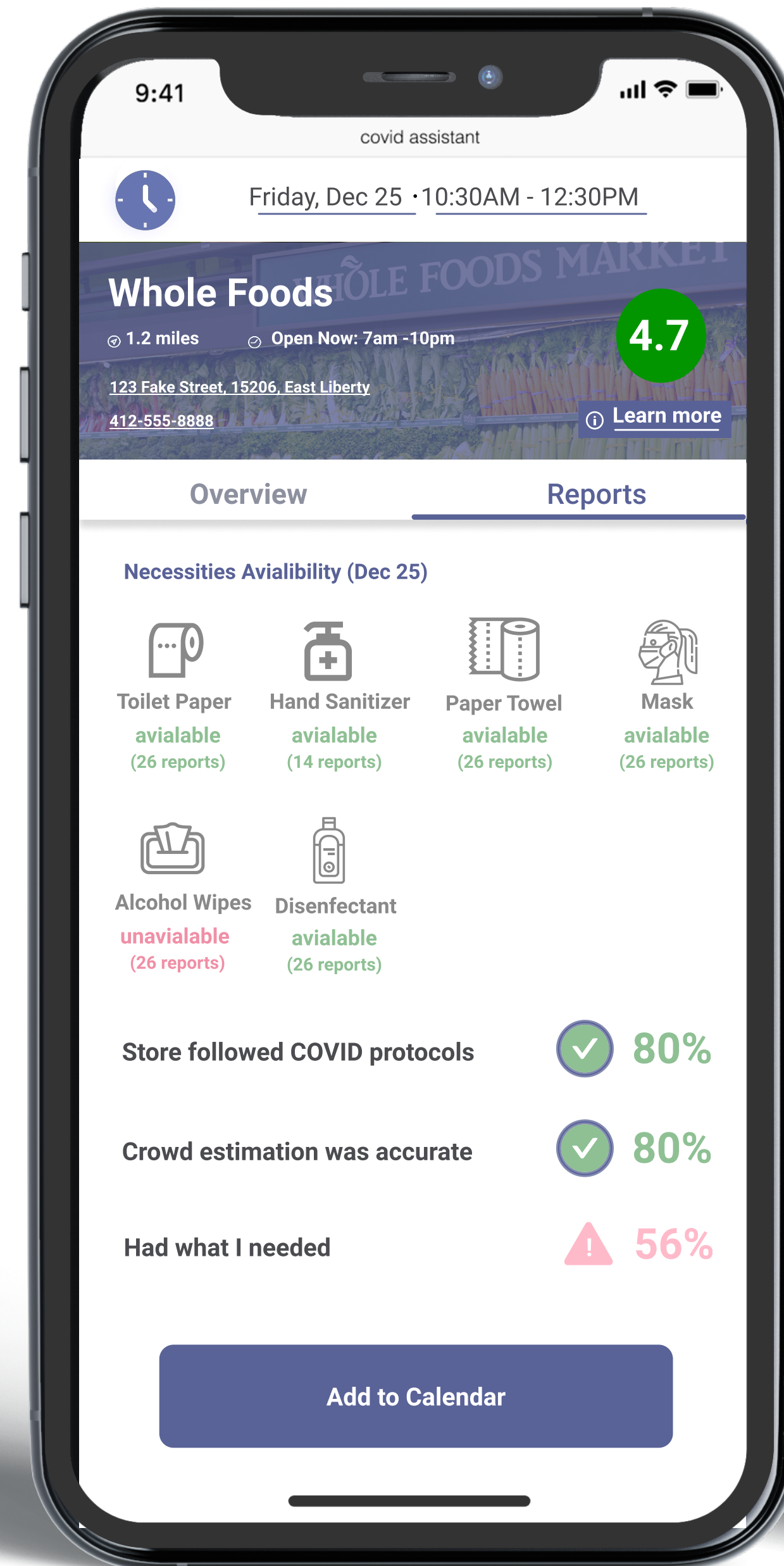
Pitching Our Idea

Our Pitch

Audience: **City of Pittsburgh**

Outlined problem framing, user journey, insght and solution.

Detailed walk through of our experience in the slides:
- Design considerations
- Experience walk through
- Mobile v Desktop benefits
- Planning tool + Reporting tool
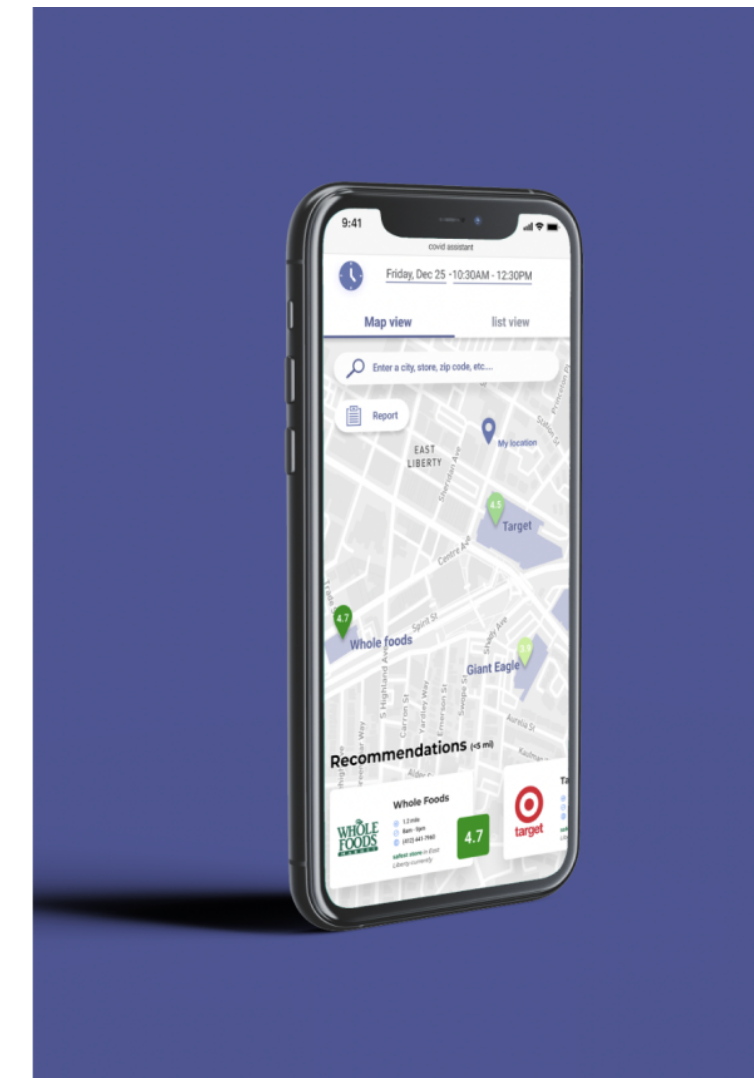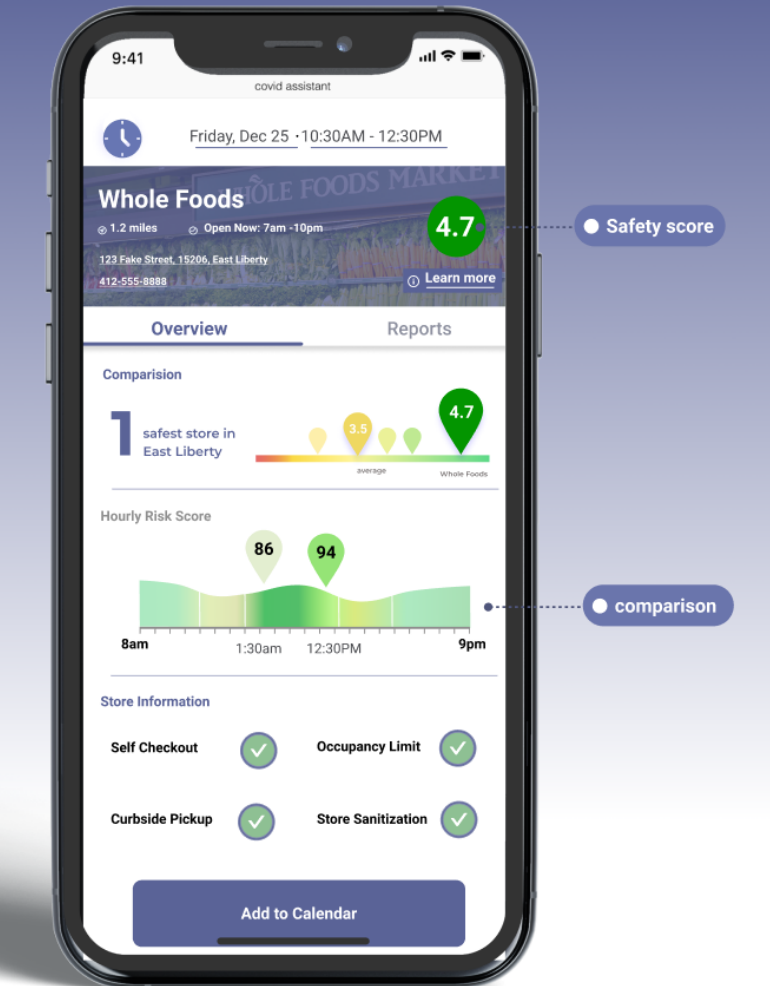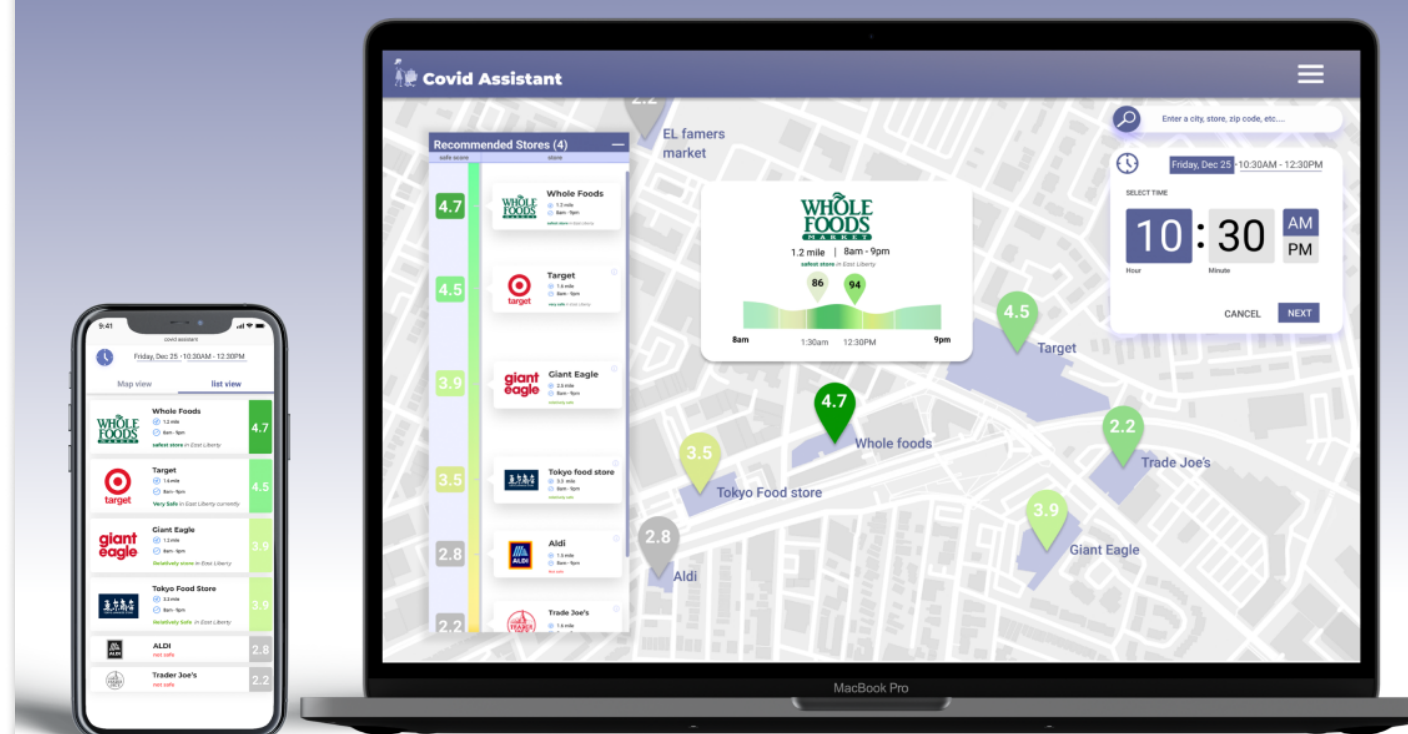
Feedback

The barrier for the user wasn't clear in our initial pitch. We only briefly went over the journey map and recieved feedback that we should have defined and display the customer journey map more clearly. Additionally, we introduced a persona in the beginning but didn't mention him during the walk through. We were told to focus on user persona and their journey through the experience. Some slides included too much text, only the most important thing want to say should be on the slide

In our pitch, we didn't have consistency in the way we presented the screens. We were told that this made the journey harder to follow and distracts from the user journey. We should stay consistent and focus on the user journey more than the aesthetic. Also, many of the screens we displayed were too small so they were hard to read.

We forgot to include a demo or microinteraction in the presentation and were told to make sure to include it in the final.

Key Takeaways

Clarify the foundational story -- problem, user pain point, insight, solution. After problem definition we should approach the presentation as an immersive journey from the users perspective. Define new user persona- 'Chester' and revise the presentation to be from his perspective. To increase engagement we need to simplify how the experience is displayed on screens and present as much as possible in a demo

Final Product
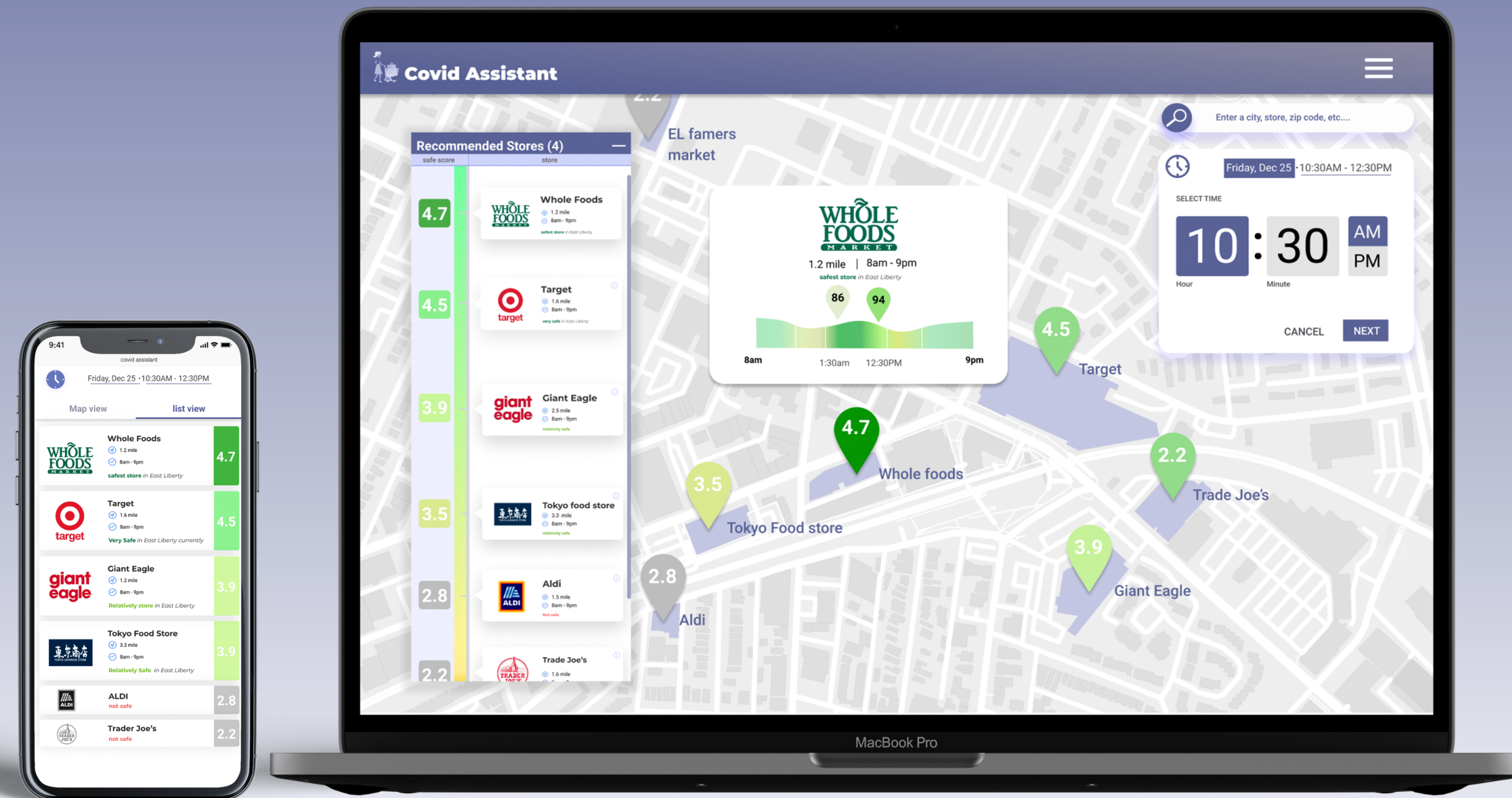
Link to Prototype:
Mobile
Desktop