Embodied Shopping Experience

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Objectives

Our overall goal is to improve people's in-store shopping experience by embodied design.

Based on our primary and secondary research. We break down this overall goal into 2 small research questions:

1. how to solve the overcrowding problem in grocery stores?
2. how to solve the difficulty in finding employees easily?

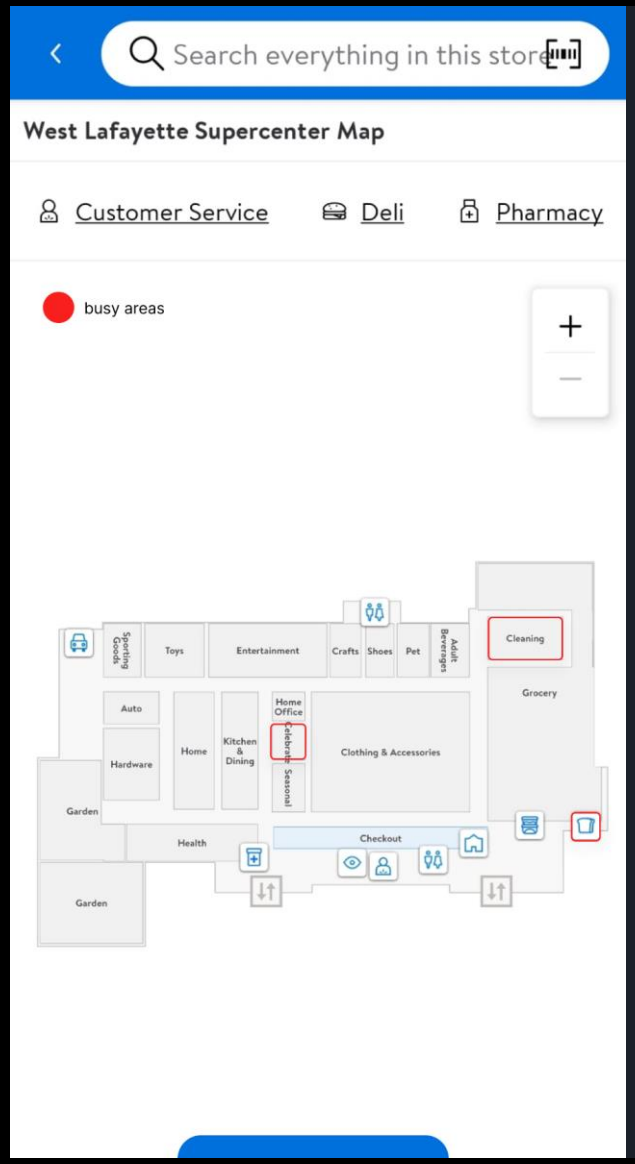
Solution 1

- **To solve overcrowding**

Our design is that when an area gets crowded, a red light on the ceiling will be on.

The red light on the ceiling has two functions in our design:

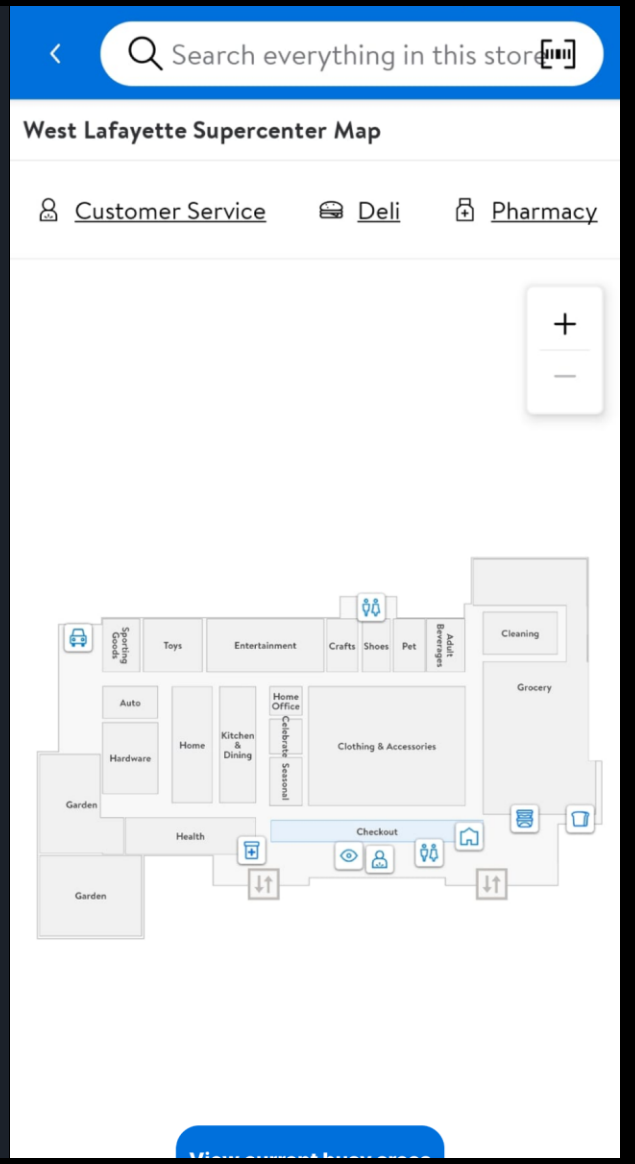
1. When shoppers enter a store, it’s easy for them to notice which areas are crowded now and better decide which areas they want to go to first by looking at the ceiling.
2. When shoppers are in an overcrowded areas, the red light may be able to nudge them to shop quickly and make room for other incoming shoppers .



Solution 1 - continued

- **To solve overcrowding**

- We use mobile apps to help users view maps of the entire grocery store and identify all busy areas.
- When users want to know the current busy status on the map, they can click "View current busy areas" to know or refresh the current busy areas with red rectangles of the entire grocery store.



Solution 2

- **To solve difficulty in finding employees for help**

Our design is that when customers need help in one area, customers can turn on a switch and a light for that area will turn blue.

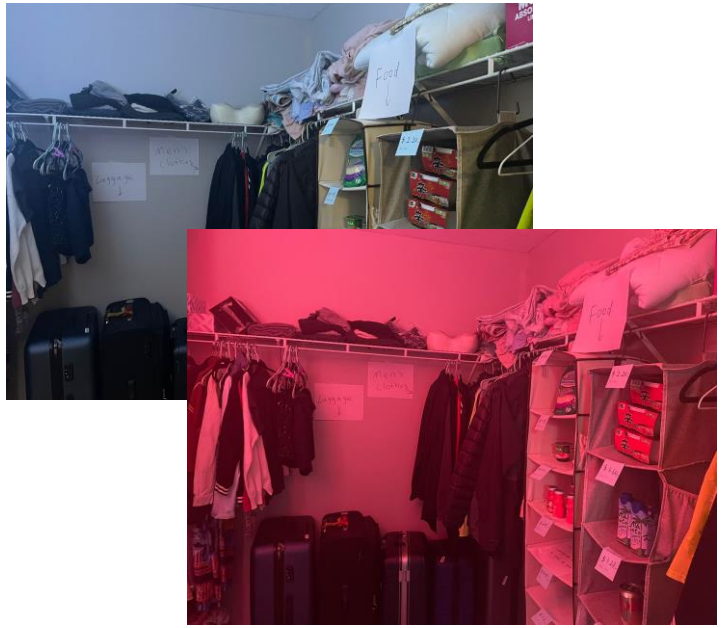
Users prefer blue light according to our user testing. Also, the blue light has the function of soothing the shoppers when they are waiting for employees for help.

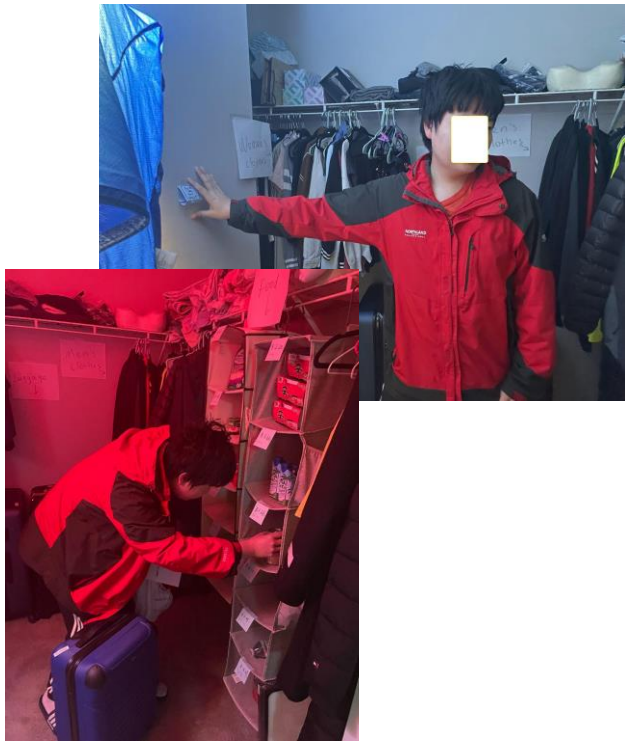
Process

Initially, we designed a simple supermarket shelf prototype and placed it under the light of the six colors. The above shows the examples.

Idea testing

According to the user testing, we decided to choose red light to notify people of crowded areas , and blue light as the cold light for help. A button is provided for them to ask for help.

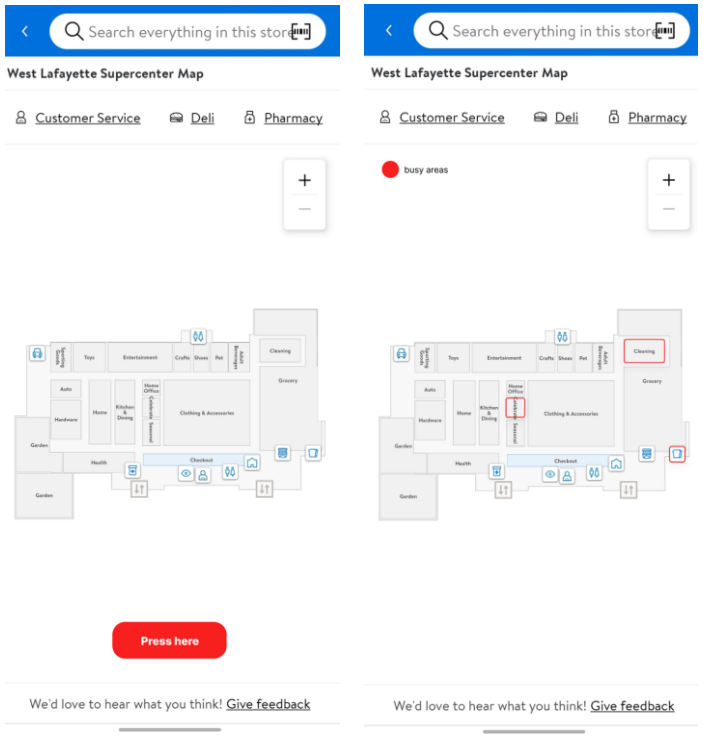




Usability testing

Initial idea → **User testing 1** → **Iteration 1** → **User testing 2**

Process



Usability testing for the mobile app &
A/B testing for the intensity of the light

Participant	High-intensity light (s)	Low-intensity light (s)
Participant 1	12.58	10.16
Participant 2	13.35	9.26

Based on the usability testing, we improved our design by trying to solve the three problems:

- Know all busy areas
- Friendly reading
- Not feeling nervous

Iteration 2 → **Evaluation** → **Final Design**