

POVs and Experience Prototypes

Niharika B; Phoebe F; Manikanta K; Karen T
Studio Theme: Mobility

Problem Domain: Enhancing the mobility of regular commuters

Initial POV

We met Marion, an 88 year old woman, at a Marguerite bus stop.

We were surprised to realize that her focus when driving is ensuring her health and safety.

It would be game changing to provide her with a way to feel safe while driving.






Additional Needfinding

In our initial interviews, we had a disparate age range (young professionals and elderly commuters). So, we wanted to fill this age gap and diversify our perspectives. In addition, we focused on experiencing their commutes by going with them.

Sean is a 38 year old chemical engineer who drives to work and hopes to use his commute time to organize his day.



<p>Heather is a 26 year old commuter who is frustrated by the traffic on her daily commute.</p>	 <p>(Heather's anger during traffic)</p>
<p>Maria is a 49 year old maid who wants to have a restful, calm commute.</p>	 <p>(Maria was shy, and didn't like pictures)</p>
<p>Josh is a 34 year old father with two kids - he wants to ensure that his children are comfortable and occupied during their shared commute.</p>	

Surprises, Contradictions, and Tensions

Heather

We were surprised to understand the depth of Heather's frustration with traffic - since her anger is such a pivotal part of her day, we wanted to look into ways to mitigate it.

Josh

For commuting with young children on public transportation, Josh was truly an extreme user. We were surprised about how worried he was about his children's commute, and wanted to look deeper into the rationale behind that emotion.

Revised POVs and Ideations

Below are the three POVs we considered most interesting for further research. Each POV spawned a long list of HMW statements, of which we picked the three most intriguing statements. We have outlined some of our favorite HMW statements and ***bolded and italicized*** our top three.



POV #1 - HEATHER

We met Heather at the Stanford Housing Front Desk.

We were surprised to realize that traffic conditions shape her emotional state.

It would be game changing if we could make traffic during Heather's commute a positive experience.



HMWs:

1. HMW provide Heather with information about her commute to prevent traffic surprises?
2. HMW encourage drivers to use public transportation?
3. HMW optimize Heather's perception of time so that she stays patient while commuting?
4. HMW help Heather focus on the road while doing other activities such as talking to her husband, listening to music, etc.?
5. **HMW involve other commuters to prevent annoyances during stop and go traffic?**

POV #2 - JOSH

We met Josh at the Palo Alto Caltrain station.

We were surprised to realize that he commutes with his kids and is invested in ensuring their comfort.

It would be game changing if we could remove Josh's anxiety about forgetting an item valuable to his children.



HMWs:

1. HMW ensure that Josh's children can stay productive and quiet during their commute?

2. **HMW ensure that Josh remains calm and prepared to meet the demands of commuting with his children?**
3. HMW identify productive tasks that Josh can perform while commuting?
4. HMW make the journey an experience about family engagement/bonding?
5. HMW get commuters or employees on the Caltrain to help Josh occupy his children?

POV #3 - MARION

We met Marion at the bus stop outside of Tresidder.

We were surprised to realize that her commute experience is dictated by safety and health concerns.

It would be game changing if we could ensure that she feels confident about her health before driving.



HMWs:

1. HMW ensure that Marion derives pleasure from her commute instead of considering it purely utilitarian?
2. HMW make it easier for Marion to get help from others before or during her commute?
3. HMW interact with other commuters to create a safer travel experience?
4. **HMW help Marion be more aware of her health before starting her commute?**
5. HMW add features to Marion's car to make it "accident-proof"?

Experience Prototypes

Talk-in-traffic

What if you could talk to fellow commuters during your drive to work?

Motivating HMW

HMW involve other commuters to prevent annoyances during stop and go traffic?

Assumptions

1. Our target audience is frustrated commuters.
2. We assume that people want to vent to others when frustrated.

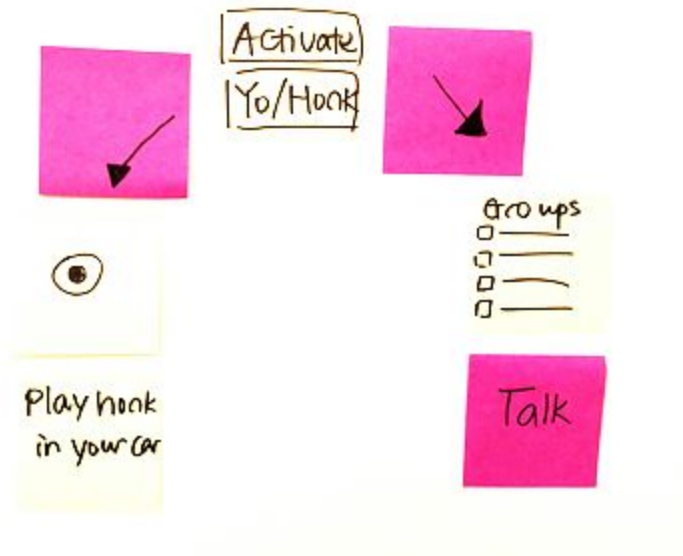
3. Each participant has a smartphone.

Prototype Construction

We brainstormed groups of people to talk to while commuting, and came up with friends, family, and other commuters. We then decided to replicate Whatsapp lists to organize the desired groups.



Process of Building Prototypes



Talk in Traffic Prototype

Testing Method

We first checked that Brian, our interviewee, was of the targeted demographic and then asked him to imagine himself in a stressful commute. Then, we asked him to give us his comments while flipping through our experience prototype.



Results: What Worked/What Didn't

Brian thought it was a novel and interesting idea. He even suggested that we add an auditory element by letting users share their calming playlists with other commuters. Brian also suggested the educational implications of this app - by essentially crowdsourcing traffic information, commuters could piece together the reasons for delays and accidents.

Brian preferred to talk to the strangers in the cars around him rather than pre-curated lists of individuals.

Validations and New/Reformed Assumptions

It was a positive validation to learn that users would be interested in speaking to their fellow commuters.

We decided that the experiences shared between commuters could be deeper than simple conversations - they could crowdsource opinions, music, and traffic information.

We revised our statement that people would prefer speaking to friends and family during stressful commuting times - instead, some commuters would like to speak to those stuck with them - misery loves company!

Checklist reminder

“Never leave the house without something again!”

Motivating HMW

“HMW ensure that Josh remains calm and prepared to meet the demands of commuting with his children?”

Assumptions

1. Our target audience is middle aged parents who commute regularly with children.
2. Our users have access to a smartphone.

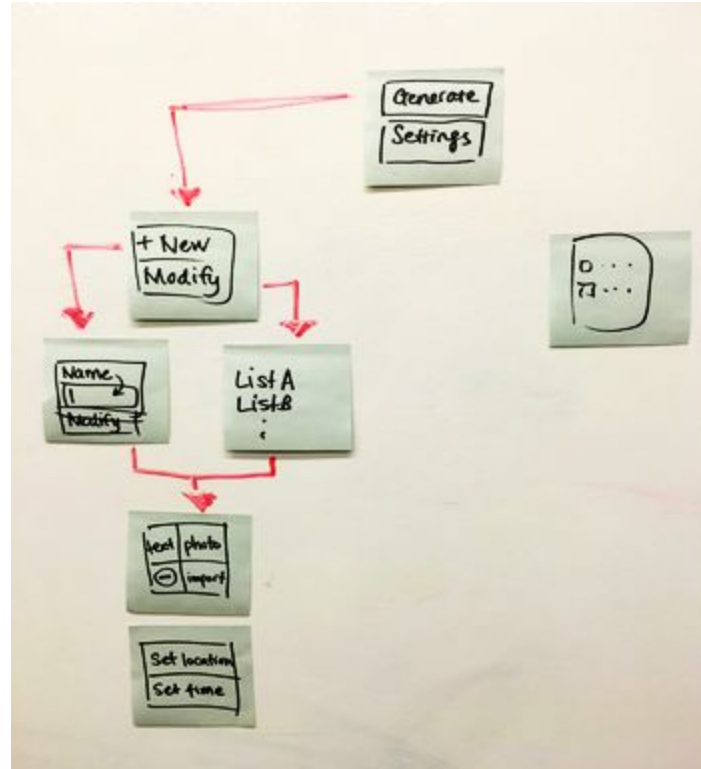
Prototype Construction

We focused on two major functionalities:

1. Allow users to generate their own checklist from various input sources
2. Remind them of the items on the checklist at a specified time and/or location



Process of Creating Prototype



The checklist verifier prototype

Testing Method

We presented participants with the prototype, explained its purpose, and asked them to think aloud as they interacted with it. We had two interviews:

- Howard: a middle-aged professional that works at Stanford's Salon
- Parents of a toddler from China: they carpool to work and usually drop their child at kindergarten.



Results: What Worked and What Didn't

Howard was not familiar with smartphones. Even though he was not an ideal target user, he liked the prototype's functionalities and expanded the use case to scenarios like grocery shopping.

The couple verified that they would like something similar to the checklist verifier to keep track of vital items for their commute. The wife currently uses tools like Evernote and Onenote and mentioned that one major drawback of those apps is that she has to *actively* look for items on her list. We were surprised to observe that the couple still considered the verifier to be a notebook as opposed to a dynamic list.

Validations and New/Reformed Assumptions

They validated our idea of prompting users with items at predetermined times and/or locations. Both groups also responded positively to the idea of being able to share a checklist with family members and/or friends. The first participant said "That would be awesome! I always forget things and I have to call my wife." The couple emphasized that they wanted real time notifications of any changes.

Health checker

This solution would offer an automated health screening test to drivers that would evaluate their motor skills (e.g. vision, reflex, etc.) before they begin their trip.

Motivating HMW

"HMW help Marion be more aware of her state of health before starting her commute?"

Assumptions

1. Our target group is elderly users.
2. Each user has a touchscreen device with working functionality for our health check tests.

Prototype Construction

We constructed the prototype by initially identifying the tests users would need, writing them on Post-It notes, and arranging them into a flip book. We decided that the functionality could be split into two segments:

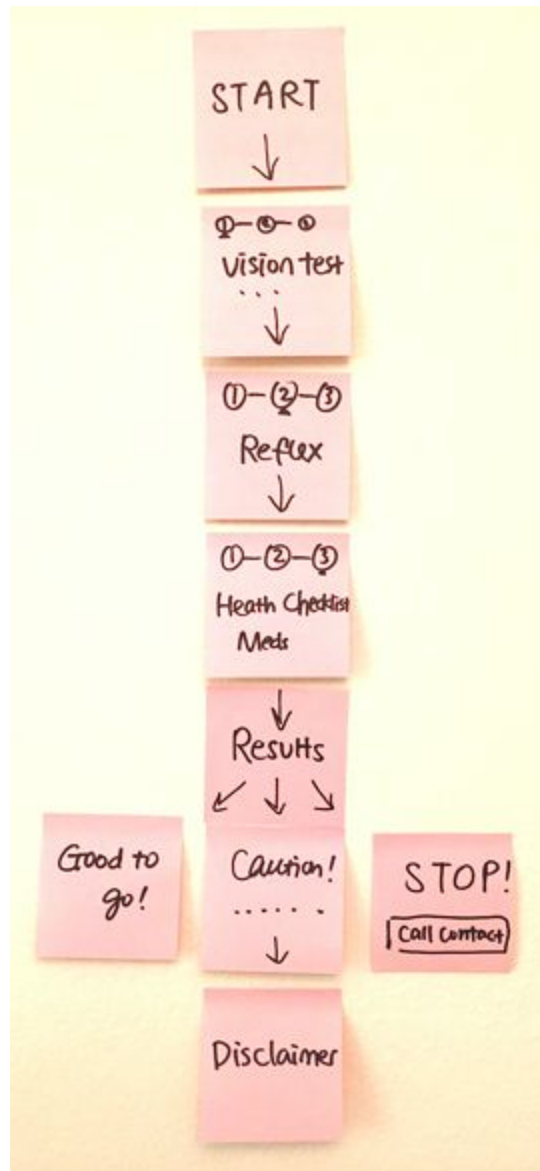
1. User takes tests to determine health status
2. If at a dangerous level, can reach out for support.



Process of Creating Prototype



The prototype for health checker's onboarding process



Prototype for Health Checker

Testing Method

We found a 59-year-old participant named Steven to play the role of user/driver, explained the purpose of our prototype to him, and then placed it in front of him to flip through each page. We asked him to comment on how important he considered each of the health checker's tests and to relay his thoughts aloud as he toyed with the prototype.



Results: What Worked and What Didn't

After we gave an overview of the purpose of the health checker, Steven remarked that he “definitely needed something like that,” which was a good indication that we were on the right track. The progression of the health checks made logical sense to him, and he liked that we incorporated a way for a distressed person to seek assistance immediately with the “Call Emergency Contact” option.

One section that he did not find useful was the medications checklist, since he already has pillboxes to keep track of when he should take his pills.

Validations and New/Reformed Assumptions

One revelation we made during our testing was that we incorrectly limited our target user group to seniors. The task of verifying one's wellbeing can be used by a diverse array of drivers: from athletes recovering from concussions to elderly grandparents just released from the hospital, there are multitudes of drivers who need such a product.

We also found some great new ideas, such as incorporating a hearing test. By talking to Steven, who is currently recovering from a heart attack, we got the idea to factor in a stress check feature into our prototype.

Conclusion

After discussing the feedback we received from each prototype, we unanimously agreed that the health checker was the most successful in achieving our desired solution of enhancing commuters' mobility. Though our other ideas would have enhanced the commute itself, the health verifier could be instrumental in deciding whether the commute will happen at all. This prototype is novel and meaningful to users of all ages, and we are extremely excited to explore, learn, and develop this concept further.