Team Journey

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Problem Domain

Our domain is travel and our studio theme is Human-Centered AI. Our needfinding interviews narrowed down the domain into two themes: productivity in travel and the boredom of transit. Through additional interviews, we discovered a third theme around decision-making anxiety in new places.

Initial POV

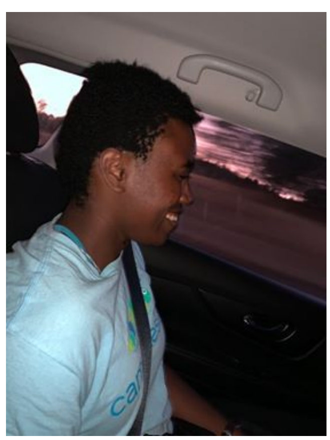
We met Connor, an international student and frequent long-distance flyer. We were surprised to notice that he views the act of traveling as an uncomfortable, frustrating, and inevitable waste of time. It would be game changing to help Connor feel in control of his time and productivity at every step of travel.

Additional Needfinding Results

We interviewed 6 additional people. For brevity, two of our participants are in the Appendix.

We met Helvie, a recent grad working at a nonprofit in San Jose. She commutes to work by car and enjoys taking road trips with friends. We accompanied her as she drove 2 hours each way to visit an orchard. Surprisingly, she was happy to be the driver for the long journey, despite other offers to drive from other passengers. Helvie is a self-proclaimed lover of commuting, explaining that: “I love being in transit because it’s built-in time for reflection.”

We talked to Nediva and Vind, a couple from Connecticut we met in Main Quad while they were visiting Stanford. Vind had a work conference, so the two took a week-long vacation. They were staying with friends in Mountain View and enjoyed their trip because they had people to show them the best sights. To them, this was much easier than figuring everything out on their own.



We talked to Natalia, an experienced outdoorswoman and a frequent traveler who has lived on 3 continents. Natalia described how the most frustrating part of her trip to Singapore was orienting herself after landing. She explained: “I was so tired after the flight and just wanted to get going but there was so much to figure out first”. Natalia contrasted her international travels to her road trips within California. She greatly prefers road trips to flights because she feels more in control and is able to talk with friends.

We talked to Jack, a traveling Doctor and family man. He told us about a recent trip to Europe where he almost missed his connecting flight. He wasn't stressed because he researched every transit backup option before his first flight. Jack discussed how time spent at the airport can feel like a waste. However, he's found ways to create productivity, such as using a Kindle while in line.

Revised POVs and HMWs

POV 1
We met Alik, a curious tourist from Eastern Europe visiting Stanford University with a penchant for adventure. We were surprised to notice that he equally disliked trains and planes as banal unless he was socializing with people. We wonder if this means that Alik's thirst for adventure is vampirically dampened by the repetitive, mundane routine of transit. It would be game changing if Alik could feel like his adventure started the second he stepped on the plane.

Sample HMWs
1. HMW help Alik foster travel companionship while in-transit?
2. HMW highlight opportunities for personal productivity to enable Alik to pursue things that matter to him while in transit?

Final HMW
HMW empower Alik to actively engage with and find joy in his surroundings during transit?

POV 2
We met Connor, an international student that flies across the world for work, school, and vacation. We were surprised to notice that Connor strongly felt that his long flights for travel were a waste of time and productivity, even though many of his tasks could be done while in transit. We wonder if this means that for Connor, there is no flexibility in what he defines as unproductive time in transit. It would be game changing to reframe Connor's perception of transit time as a valuable opportunity to reach his goals.

Sample HMWs

1. HMW use Connor's community to heighten his productivity while in transit?
2. HMW create a commute environment (i.e. in the plane or car) that supports Connor's goals?

Final HMW

HMW enable Connor to maximize dead time spend waiting in transit to practice his habits?

POV 3

We met Natalia, a thrill-seeking world traveler hungry to explore new destinations. We were surprised to notice that the most frustrating part of traveling for her wasn't the jet lag or the cultural barriers, but rather the difficulty of navigating through the airport and choosing what to do first. We wonder if this means that, for Natalia, the most difficult part of the journey isn't the trials and tribulations along the way, but instead, taking the first step. It would game changing if Natalia could transform her initial indecisiveness into a powerful opportunity to confidently shape her own path.

Sample HMWs

1. HMW empower Natalia to choose the ideal first step to begin her vacation by reducing decision-making complexity?
2. HMW provide passengers with enough personalized guidance/context to construct their ideal itinerary while in-transit?

Final HMW

HMW make Natalia feel like she has a personal tour guide to introduce her to every new destination?

Best Solutions

POV 1: An alert system that plays soundbites anytime there is something of interest around the user to prevent travel boredom.

POV 2: A personal planning assistant that optimizes user productivity by building goal-based schedules around dead time.

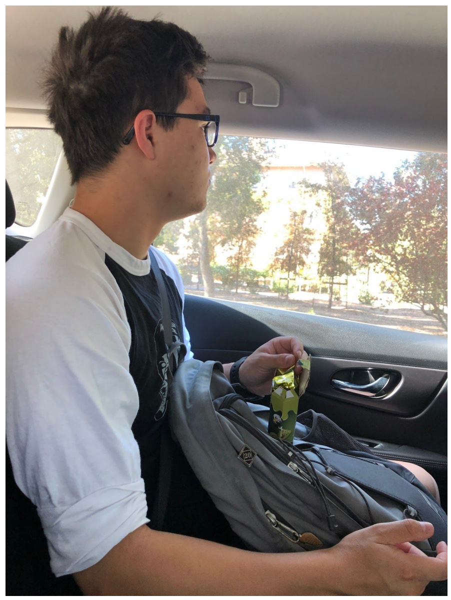
POV 3: Hyperlocal next-best action recommendations based on the user's physical context, not their generalized plans.

Experience Prototype 1

We first tackled the problem of riders not being mentally present and therefore not enjoying their commutes. We assumed that travelers would be more present during transit if they could engage with their surroundings, and that travelers may be passive because of an inability to connect with their surroundings.

We tested these assumptions by assessing whether someone would be more present when presented with information about their route through an in-transit experience guide. We had Alex, a Stanford student, simulate a passenger in-transit. Alex rode with Ray and David on a predetermined route around Palo Alto. Before the commute, Netta recorded information about various landmarks of the route. For example, she recorded the following sample message:

> "*We're driving on Sand Hill Road. Sand Hill Road is a road famous for its concentration of venture capital firms...*"



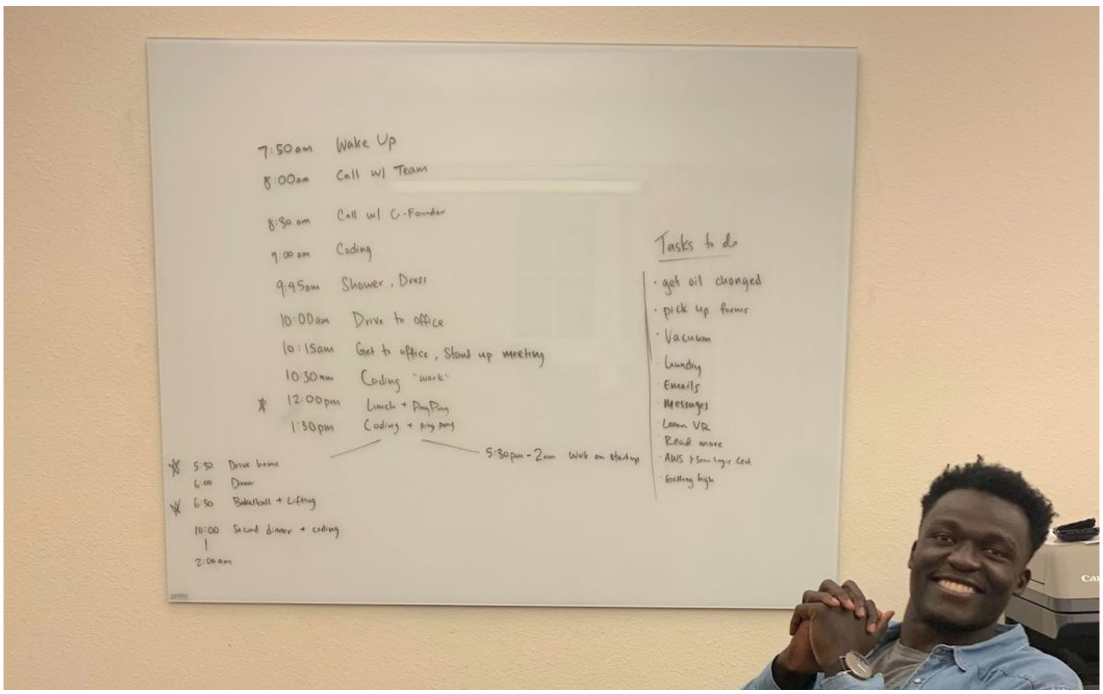
For the first half of the trip, we provided no stimuli and instructed Alex to act kike he was riding an Uber. We noticed that Alex did not use his phone or talk, but decided to look out the window. Midway through the first half of the trip, he noted that he didn't like riding in a car. For the second half of the trip, David played the recorded messages as we passed landmarks.

We debriefed with Alex following the ride, and he noted that he disliked the recordings and found them to be annoying. Alex said that the recordings were an unwanted distraction, and that he'd prefer to zone out uninterrupted, even though he didn't like the commute. We learned from Alex's thoughts that our assumption and prototype may not be suited for a certain user segments. For Alex, information about his commute presented through audio soundbites was not competitive with his baseline affinity to zone out. However, Alex described himself as having an abnormal liking for personal reflection. For example, Alex mentioned that he dislikes audio guides at museums, unlike many of his friends, because he prefers to independently engage with exhibits.

Experience Prototype 2

Our second experience prototype tested the assumption that people generally have “dead” time in their schedules (commuting, waiting, etc) but don’t know how to use that time to reach their goals. We assume that this productivity issue lies in the lack of reminders and helpful information about dead time, not in the lack of motivation to be productive.

We tested this assumption by having our participant, Pascal, walk through his next-day schedule for the next day. We then asked him if there were any tasks or habits that did not fit into his planned schedule but that he still wished to complete. Such activities included finishing the book he is reading. Afterwards, we starred times in his day where he thought there was dead time (e.g. driving to work, waiting at the gym). Finally, we worked to utilize his dead time to reach certain goals; in this case, we helped him download an audiobook of his book and set a phone reminder to play the audiobook when he starts driving to work. This experiment was a human simulation of a productivity assistant application.



Pascal was incredibly pleased with reducing the overhead of optimizing his goals and was looking forward to listening to the audiobook the next day. Our assumption was therefore validated -- with the correct reminders and tools, Pascal was excited and motivated to implement changes to his schedule to better fit his habits. Also, we confirmed that Pascal has indeed been listening to and enjoying his audio-book during his commutes!

Experience Prototype 3

Our third experience prototype dealt with the issue of not knowing next actions in an unfamiliar destination. When traveling without a detailed, pre-set itinerary, travelers often rely on guide resources that provide generalized recommendations. We assume that hyperlocal, personalized recommendations for immediate next steps are significantly more helpful for travelers. We tested this assumption by hosting an informal tour for tourists on Stanford's campus. We offered a choice of two specific recommendations based on location and past activity.

In our test, we offered two options based on their location: the Whisper Circle or the Rodin statues. After our test users chose the Whisper Circle, we gave them a tour there. Following the debrief interview, the tourists lingered and took photos, indicating they enjoyed the recommendation.

Debriefing afterwards, we learned that they enjoyed learning about hyperlocal itinerary options. Their initial plans were generalized because while they tried to book a tour in advance, they found it too confusing. However, learning about specific next best actions delighted them. One piece of feedback was that they wished there was an emphasis on the time required for each choice for better schedule optimization.

Key Takeaways and New Assumptions

From our first experiential prototype, we conclude that there is a high bar for external stimuli to pull travelers in-transit away from their baseline of “zoning out” and this bar was not met for the user. Our new assumption is that the uncomfortability of transit may not be tied to the lack of engagement with surroundings, but rather stems from the act of transit itself.

From our second experiential prototype, we conclude that our solution would work better for people spending significant time in-transit, as our user only spent 40 minutes per day traveling and didn’t have much unoptimized time. However, he noted that having his thoughts organized and responded to was effective, and he greatly appreciated being periodically reminded of his to-do tasks. Our new assumption is that people want to expend effort to schedule tasks within their in-transit time.

Our third experiential prototype, a guided hyperlocal tour of Stanford campus, confirmed that people often start with a broader destination in mind, but struggle to determine which specific locations to visit. We now also assume that people want to organize and prioritize their travels with more time granularity.

Best Solutions and Next Steps

We found that our second and third experiential prototypes were most successful in achieving a desired solution with incredibly positive user feedback, and we will move forward with a combination of both as we believe that there is significant overlap in terms of scheduling personal tasks in-transit with scheduling location-based itineraries since both tasks revolve around recommending actions.

Appendix

Additional Interviews

We talked to Maddy, a competitive biker, frequent traveler, and Stanford student. Maddy explained that for all of her trips, she usually packs groceries or begins her trip by buying groceries. Maddy is extremely health conscious and hates eating out constantly on trips.

Maddy traveled alone through Europe several times and mentioned that her flights would quickly get repetitive. However, she had several enjoyable encounters with other fellow travelers on flights. In one instance, Maddy overheard conversations between several travelers and realized that they also enjoyed mountain biking. In another instance, Maddy noticed a restaurant name on someone's shirt and realized that this traveler was from Maddy's home state. The conversations that Maddy had with these travelers greatly improved her transit.

We talked to Fred, a businessman who travels 4-6 times per month. Fred's highest priority during travel is maintaining personal fitness, and we were surprised to hear that he only booked hotels when on business travel that had gym facilities onsite. Furthermore, Fred emphasized that travel had become almost second nature for him due to the personal travel "hacks" or best practices that he had developed over time.