Helping Hands

Team Members and Their Roles

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Problem and Solution Overview

People who are newly homeless are vulnerable to a state of further decline if information is not readily accessible. With the helpful efforts of organizations and volunteers, there is typically information about food, shelter, and other resources online in urban cities such as Seattle. However, the problem identified here is that the availability of the information does not fully take advantage of the convenience in accessing and acting upon it that technological and online platforms offer. Being homeless is hard work, and planning to fulfill basic necessities each day is time-consuming and tedious. By ensuring that information between homeless and volunteers and social workers is optimally designed, we can better monitor and provide for the needs of homeless, start new and inexperienced homeless off on the right foot, and contribute to reducing the rate of both chronic and temporary homelessness. Our design is a system of public displays with a phone to provide homeless people with information and also to connect them with the outside world so they can get advice about getting out of homelessness and be able to talk to someone. The design's public nature also allows for more interactions between those who are homeless and those who aren't, and also raise public awareness. This design is the best way to allow homeless people to maintain their physical and mental well-being.

Contextual Inquiry Target, Stakeholders, and Participants

For the first inquiry, we chose to observe and interview homeless people outside Cafe Allegro. We chose this location because of its relatively central location on the Ave as well as its close proximity to a needle exchange and a youth homeless shelter. Our interviewees were homeless individuals between the ages of 18 and 30. We chose this segment because we thought that they would have the most access to cell phones, particularly smartphones. 9/10 people that we talked to had a cell phone. Out of those 9, only 5 had smartphones, but they lacked service while those with "dumb" phones could afford service. The majority of these individuals weren't from Seattle, but rather seemed to come from all over the Pacific Northwest. The furthest individual was **V**(male, age 26) who hailed from Brooklyn. When asked what he did when he first came to Seattle, he mentioned that he spent the first few days on the streets and relied on asking other homeless people for assistance. V also mentioned that he had a cell phone and that he used if for texting other members of the community.

For our second inquiry, we talked with a homeless man **A**(male, age 32) coming from Eastside Winter Shelter in the early morning under permission, supervision, and guidance with a volunteer **J**(female, age 25) at Redmond Hopelink. Being on the Eastside, his experience differs in having a more technological background and had a smartphone to access Wi-Fi at the nearby Redmond Library. However, some others he had met came from downtown Seattle or had travelled in from other states. For people like A, the events leading up to homelessness were important juncture. A's came from poor timing involving moving to Redmond and divorcing in 2015 as well as poor preparation when renting apartments and then crashing at friends' apartments. J thinks there is comprehensive resources available for homeless, which A agrees with in retrospect, saying that he had never considered calling a homeless crisis hotline. The events following homelessness are also very important, and A hadn't reached out for help when he became homeless staying with friends starting December 2015 but only until he was actually on the streets in February 2016. He noted that food was not as great of a concern for him as shelter at the time, which he now regrets for being a "trap" that aggravated his situation by constantly moving and spending hours each day searching and travelling for shelter, losing his job as a result. A and J agree that there are a lot of homeless resources that get utilized too late. Instead of reaching out to volunteer services, A posted on Reddit's /r/homeless to get help stretching money in his situation and also learning from a friend, M, various tips and strategies to spend time productively during the day (e.g. getting a gym membership to exercise and clean, part-time and manual labor, travelling with the help of services like Hopelink). Communication is vital for information, rehabilitation, as well as leisure, despite describing the homeless in downtown as having "quirky cultural and political rules."

Our final inquiry was with **P**(female, age 20) who has lived on the Ave for 4 years and was originally from Florida. She has a smartphone and used to have a laptop. She mentioned that there was an abundance of resources for the homeless and that many groups did outreach. She also mentioned that there is a tight community among those on the Ave, akin to a "foster family," and that this is where she gets most of her information. An interesting thing she mentioned was that a lot of the newly homeless "Ave mice" aren't motivated in seeking help and that they lack social support and interaction with everyday individuals.

Contextual Inquiry Results and Themes

As suspected, the homeless we've had the chance to meet expressed that being new to their situation or not being from the area weren't immediately able to find assistance or services until they tapped into already-existing networks of homeless people. This is shown by the use of "dumb phones" for calling and texting, as well as smartphones used to access the Internet. While the information the newly homeless were able to learn from other homeless was valuable, it ran into issues of potentially being out of date or conflicting with others'. From volunteers and other homeless, the greater Seattle area provides resources ranging from standard food, shelter, and medical assistance to jobs and transportation that get utilized months too late. In-person and online communities at homeless services provide information but are severely limited by location and Internet connection. As a result, many homeless, especially new, are not

well-informed of available resources and instead find street interactions as their primary source of information. This is additionally shown by the development of homeless groups and squats which assert territorial claims within a city, but still may not have up-to-date information.

These themes and problems suggest that access to real-time information is important, and proliferated in a manner that is convenient for newly homeless people to reach whether they intend to embed themselves in a group or live independently. Spreading tried-and-true advice from more experienced homeless is also still a present idea to design around the tasks, given that a number of valuable information lies in the details of priority resources, long-term goals, methods of communication, and general tips for survival.

Daytime activities depend from person to person. Daily planning of accessing and travelling to resources is important early on for newly homeless to survive, and routine later. Killing time can be a dangerous task that would ideally kept productive with the goal of making a homeless person achieve employment (whether it be manual labor, part-time and transitional employment, and full-time) and housing (as safe as possible on the streets, in shelters, motels and daily housing, transitional housing, and permanent).

One important insight that we uncovered from this inquiry was the importance of mental well-being among homeless individuals on the Ave. After our conversations with V and P, we began to sense that many of the homeless feel isolated from the outside world which causes them to bond further with the existing community, but can prevent some individuals from getting the help they need. It is important that our design to find a way to alleviate this isolation while not destroying pre-existing communities among the homeless.

Answers to Task Analysis Questions

Who is going to use the design?

Our design would be used by newly homeless people and people at risk of becoming homeless.

What tasks do they now perform?

Currently, many homeless reached by our inquiries tap into the information of other homeless people and their social networks. In addition, volunteers, workers, and homeless services organizations provide information and other help extending to rehabilitation and finding/assisting employment and housing. According to our research, homeless persons live in a reactive way rather than being proactive.

What tasks are desired?

Based off our research, it is desired to get a list of resources that they can utilize, as well as have the ability talk with someone akin to a helpline. It would be helpful to use a public system to find shelter and/or a place to sleep, and a map of safe places to reside in. In addition, it is useful for them to get real-time information about homeless services. Most importantly, it would be desired to use a platform to help recently homeless individuals find employment.

How are the tasks learned?

Beyond common sense, survival instincts, and any experience a person may have in the city in which they are homeless, they follow the example of other homeless. To an extent, for the proportionally few who visit and stay at shelters or other centers regularly or even occasionally, tasks can be informed by volunteers and experts. In large part, our research found tasks to be learned reactively instead of proactively.

Where are the tasks performed?

They are performed in the streets where fellow homeless are allowed to occupy space. However, for residents at risk of homelessness and newly homeless (which, like Adam, includes people staying in volatile housing like motels, cars, or friends and families' homes), tasks may be performed in preparation, but this occurs rarely according to our research.

What is the relationship between the person and data?

Almost certainly, shared data including those provided by volunteer and charity organizations as well as peer-to-peer communication. Even so, as mentioned in the themes drawn from the inquiries, the data can be out-of-date or conflicting. Therefore, while the data is shared, it is staggered by the uses of technology, location, and cliques.

What other tools does the person have?

Social workers offer an official channel of information and help for homeless. Homeless advocacy and volunteering groups allow outside communities to help homeless and low-income individuals (and families). Combined, they both often host websites listing resources from each organization or, for some, in aggregate. There may also be communities in these websites as well as online forums which homeless can use to ask for help (e.g. Reddit subreddits for homelessness, Seattle, etc.)

How do people communicate with each other?

Peer-to-peer dominates homeless communication, including word-of-mouth, texting and calling (especially those provided for free by services as welfare), and other online engagement with aforementioned communities and forums.

How often are the tasks performed?

With our focus on new and at-risk homeless, these tasks emerge when people move to new cities, enter risky or low-income situations, or otherwise become homeless. Otherwise, general tasks are performed daily or even more often, for finding information about food/shelter/medical resources, searching and applying for transitional housing and work, and otherwise receiving a helping hand.

What are the time constraints on the tasks?

Various resources are provided on a schedule, often different from one another, requiring planning and transportations to access. One example is shelter, which, when overcrowded, requires waiting to secure a spot before it closes daily, and leaving early in the

morning back to the streets. Finding jobs introduces a number of time constraints, with communication, technology, education, and securing a permanent address (which groups and churches may provide for for jobs applications).

What happens when things go wrong?

When things go wrong, they can go really wrong, which is why it's important to continue bolstering the resources and information available. Failing to secure shelters or housing results in sleeping on the streets, and staying further on the street exposes people to harassment and violence. Moreover, physical and mental fatigue plagues those who are poorly prepared or struggling to survive on the streets. Even the straying dullness of the daytime offers temptation to stray from recovery to chronic homelessness, unaddressed mental issues, and drug addiction.
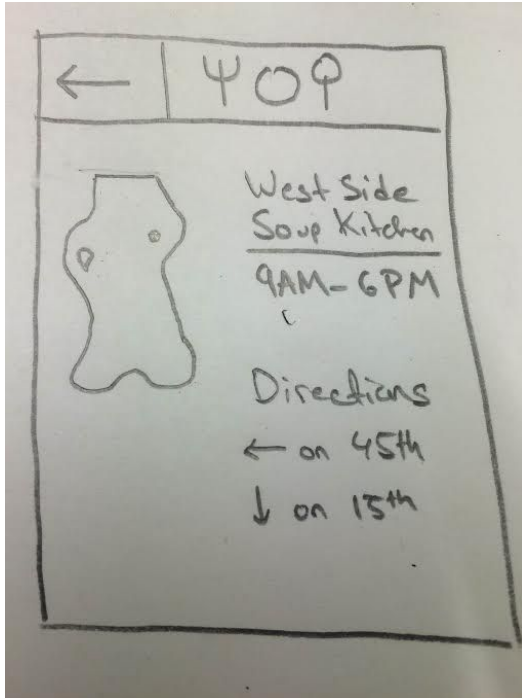
Proposed Design Sketches

Design 1

The first design is a system public displays with a phone to provide homeless people with information and also to connect them with the outside world. The system wouldn't be real-time and would serve primarily to guide people to places that they can look to.
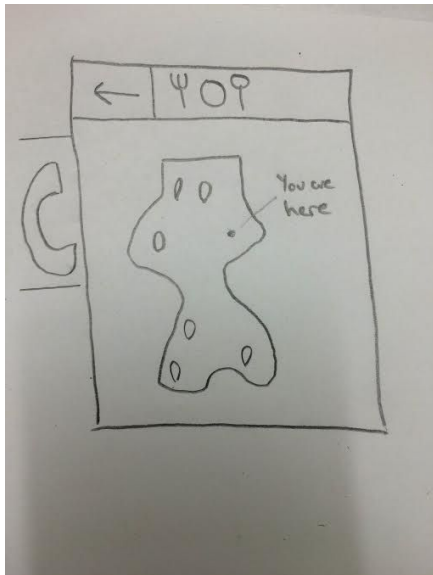
How the display and phone would look (Food View)

How the display and phone unit would look (Resource View)


The icons that will be used in our display

- To find a list of resources in the city, Abiel walks up to a display and selects the option that he needs.
- To find someone to talk to about his life, Abiel can use an attached phone with a button to dial an available volunteer. If a volunteer isn't, then there will be a message to try again.

- To find shelter, Abiel will click on the shelter icon and there will be a map showing nearby places to find shelter.
- To find advice about getting a job, he will select the talk icon, then select the job option and then press the call button.

Design 2

The second design is an SMS based system to provide homeless people with real-time information about available services and to connect them to the outside world. The system will work by responding text requests for information by homeless with a text message containing the response to the request.
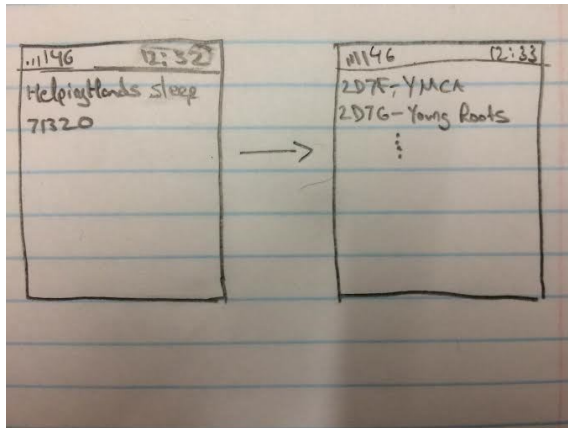

A message to our service and the response it returns

- The system receives a text with "HelpingHands" followed by a bus stop number and then sends a message containing the closest services near that stop.
- The system receives a text "HelpingHands talk" and then responds with a message containing the phone number of someone who is willing to talk to or text with them.
- The system receives a text "HelpingHands sleep" followed by a bus stop number and then sends them a list of shelters near them. The shelters are numbered so that if a number then texts "HelpingHands" plus the shelter code, followed by a bus stop, it will send infromation and or directions to that place.
- The system will be connected to central server so it can constantly updated as the day progresses so that whatever it sends out in the form of a text message will be up to date.

Design 3: Web Application

The third design is a website similar to LinkSF where homeless individuals can find access to resources and shelters, but it will also feature a forum to find information to help them get a job.
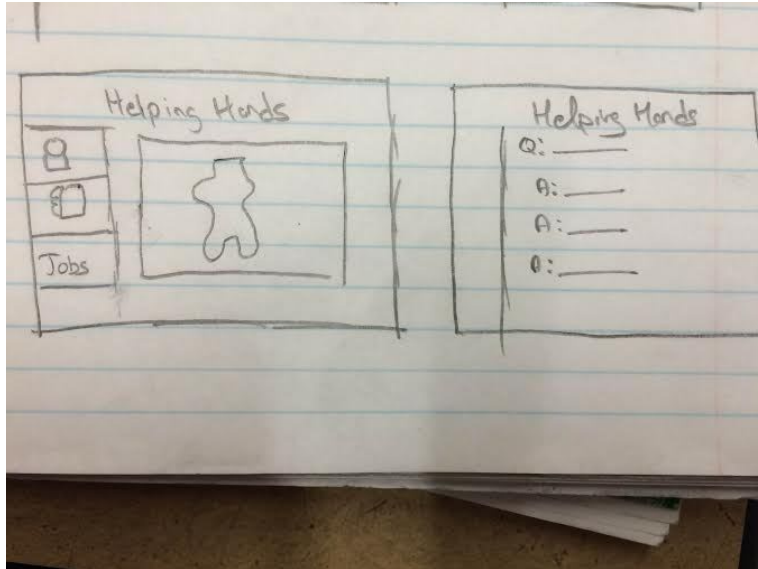
Mockups of the homepage and the Q & A page for HelpingHands

- The user can browse the site and find easily digestible information and resources. It will have a similar user interface to public displays for equivalence.
- The user can chat with individuals on the site, not unlike the style of Facebook Messenger. They can also access the hotline number to get connected with a peer listener.
- They can look up info about shelters and resting areas.
- There will be a Q&A page with helpful information. The user can ask questions to assist with the process of finding employment, as well as companies willing to hire.

Our design is a system of public displays with a phone to provide homeless people with information and also to connect them with the outside world. We decided to choose this design because it would have the greatest possible reach while also still being able to provide for the needs of the homeless. While the SMS based system and the web app were able to meet the needs of the homeless, not every homeless person has access to cell service and the need to conserve battery could limit their usage of those designs. Moreover, the public nature of this design would allow for more interactions between those who are homeless and those who aren't, and also raise public awareness. With this in mind, we chose to focus on allowing users to get lists of resources for the homeless as well as allowing them to talk with others who aren't homeless. Providing a list of resources to the homeless would allow them to spend less time searching for food, shelter, or other treatment and allow them to spend more time working on finding a job and getting out of homelessness. It could also help inform those who are at risk of becoming homeless of the resources that will be available to them if they do become homeless. It was very important for the design to include a way to talk to others because in our research, we found that life on the street was very isolating and talking to someone makes them feel "normal" again. This design provides a platform to address a lot of the issues faced as a homeless person and accounts for all the tasks proposed. Our design and our tasks allow homeless people to maintain their physical and mental well-being.

Written Scenarios

Scenario 1: CityGuide

After a night at the shelter, Abiel gets out and is looking for somewhere to eat. He sees a Helping Hands display that piques his interest. Seeing that it has options for Food, Shelter, Information, and a Talk feature, he selects the Food option. A map of soup kitchens all over Seattle pop up and his current location is represented by a dot. Abiel selects a shelter and it information about it and directions appear on the right hand side. Satisfied with the information, he uses the directions to get to a soup kitchen and find a hot meal for himself.

Scenario 2: Lifeline

Abiel is on the street and is looking for advice for a job. He remembers that a nearby shelter has a Helping Hands display that can help him get this information. He decides to walk over so he can talk with an ex-homeless person for help with getting a job. When he gets to the display, he selects the talk button and then chooses the job option. Abiel then presses the call button to talk with someone to get advice. After the call, Abiel leaves satisfied, knowing that he was able to talk with some and get advice about finding a job and ending his time on the streets.

Storyboards of the Selected Design