
domain research
onsite research
analysis
solutions

08 march 2017
carnegie mellon university

razing & raising

user centered research & evaluation | affordable housing

team deep blue

akshay goradia
bobbie soques
faith kaufman
tundun oladipo

table of contents

Introduction.....05
Our Purpose.....07
Process Overview.....11
Research.....12
Key Findings.....19
Survey Findings.....33
Solutions.....41
Next Steps.....47
Bibliography.....49
Appendix.....51

introduction

The neighborhood of East Liberty in Pittsburgh is undergoing a drastic change. Urban renewal is sweeping through the neighborhood, with the cost of living skyrocketing as developers buy up property and transform low-income housing into high-rise condos. The conflict between locals and gentrification sparked into public knowledge when residents of Penn Plaza, an affordable housing block, protested the destruction of their home to make way for the expensive grocery store Whole Foods—a protest that is ongoing.

With this dramatic backdrop, our group delved into the issues of affordable housing and gentrification in Pittsburgh. As we discussed the causes and activities surrounding urban renewal, we kept coming back to a repeated cycle of **razing** old buildings and **raising** new ones in their place. Knowing that we could do little to stop this cycle, we focused instead on helping those affected by it. As we brainstormed possible locales to research, we kept coming back to East Liberty: not only the most well-known Pittsburgh neighborhood facing gentrification, but one that is close to home at CMU's campus.



We noticed a "Homes Not Whole Foods" campaign that protests the gentrification of East Liberty.



Penn Plaza is one of the affordable housing buildings that is being razed to make way for new structures.

we are team deep blue



akshay goradia
information systems + hci



bobbie soques
creative writing + hci



faith kaufman
design + hci



tundun oladipo
psychology + hci

our purpose

As we developed our mission statement, we knew we wanted to help the affordable housing residents of East Liberty affected by gentrification. But with the deadline for Penn Plaza residents to move out fast approaching and redevelopment of East Liberty properties already underway, we knew we couldn't focus on preventing East Liberty citizens' relocation. Instead, we turned our attention to aiding those have already been displaced—an unusual niche for affordable housing groups, who typically focus on those in the process of displacement.

Thanks to our domain research, we knew there was a lack of housing organizations that focused on involving displaced citizens in their activities. So, we made giving displaced citizens a voice one of the goals of our project. And, of course, our end goal is to aid them in finding a place to stay where they won't have to relocate again.

After brainstorming and much discussion, we finally developed a mission statement that fit the purpose we had developed: **Empowering displaced citizens of East Liberty to achieve stable housing.** On the next page, we go into more detail about what each part of our mission statement means.



We used a post-it note activity to brainstorm how to word our mission statement.

mission statement

“To empower displaced citizens of East Liberty to achieve stable housing.”

- empower =
what we can do to help displaced citizens help themselves
- displaced citizens =
Pittsburgh residents displaced from their homes by gentrification
- east liberty =
a neighborhood in Pittsburgh currently facing gentrification
- stable housing =
affordable housing and improved quality of life, continuing into the future

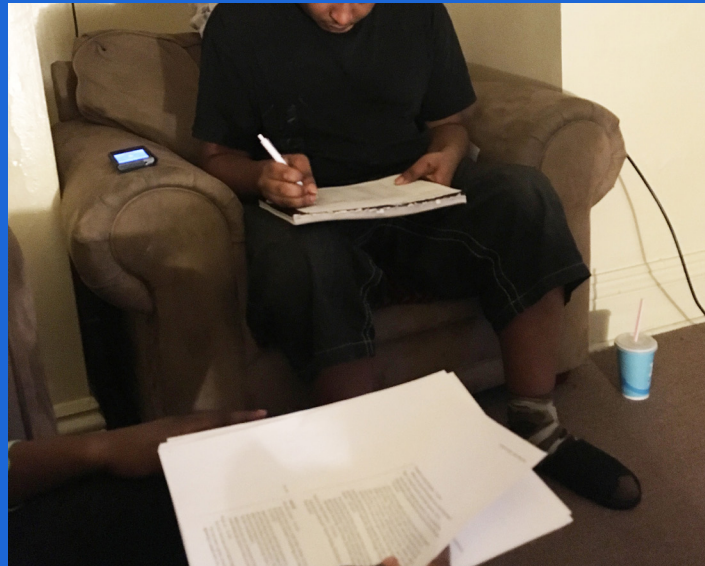


We arranged post-it notes with key words and phrases to create our final mission statement.

process overview



Discussing the first draft of a stakeholder map, identifying those who care about and are affected by affordable housing.



Talking to a displaced East Liberty citizen in his current living situation.



Grouping together what we learned from our interviews to find key patterns and findings.



Designing and discussing solutions based on our findings.

domain research

We started our research by drawing out a stakeholder map to identify who cares about and is affected by affordable housing and gentrification, as well as an ecological map of the key values and activities involved. We then looked into organizations that currently work with displaced citizens and affordable housing. After collecting and grouping this information, we were able to do a competitive analysis comparing these organization to find gaps in the current provisions.

going into the field

Using websites and contacts, we were able to set up meetings with four former residents of Penn Plaza and other displaced citizens from East Liberty. We met them at their current homes and interviewed them about their relocation experiences, using a retrospective chart activity for mapping their past housing situations to aid our conversation. In addition, we interviewed two experts who work in the field of affordable housing to learn more about this issue from an organizational perspective.

analyzing our findings

We transcribed all our interviews and split them into different points. Building up from the points we grouped them into sub categories, then finally into five broad categories and three key findings from all the information gathered. Based off of our findings, we created personas of a typical displaced citizen, and mapped out their journeys from one living situation to another, in order to better understand our audience and the problem space we're solving.

developing solutions

We brainstormed "How Might We" (HMW) statements: questions based on our interviews and research, that pose problems for which we could design solutions. We then answered these questions and drew out our solutions in storyboards, making sure to cover the context, problem, solution, and resolution.

survey

Using Google Forms, we distributed a survey to our friends and family assess why they do or do not donate or volunteer. We asked questions about their motivations and obstacles for donating and volunteering, in addition to their frequency of donations and volunteering. We received over 175 responses that we then analyzed.

domain
research

conducting analysis

We identified prominent groups in the Pittsburgh area that have programs or missions related to affordable housing and aiding increasingly gentrified or low-income neighborhoods. There are government organizations, like the City of Pittsburgh’s Affordable Housing Task Force; non-governmental organizations, like Neighborhood Allies, Design Center Pittsburgh, Urban Innovation 21, and ACTION Housing; and business or commercial ventures like Trek Development Group and East Liberty Development, Inc. We treated this as a representative sample of affordable housing-related organizations in Pittsburgh, as the groups are well-known, come from a variety of backgrounds, and run a wide variety of programs.

After identifying these groups, we did some in-depth research into their programs and goals. We identified six main focuses across these groups and their various initiatives: providing affordable housing, incentivizing commerce, funding other groups or initiatives, advocating for residents, directing residents to resources for affordable housing or neighborhood revitalization, and seeking input and direction from the residents themselves.

Having identified these focus areas, we then set about ranking how each group performed in each one. For some groups, it was very tricky to assign a ranking. In those cases, we evaluated the group holistically for its impact in each area. ACTION Housing, for example, is fantastic about finding affordable housing for those who need it, even though directly developing or funding affordable housing isn’t as significant to its programs, so we assigned it a High “housing” rating.

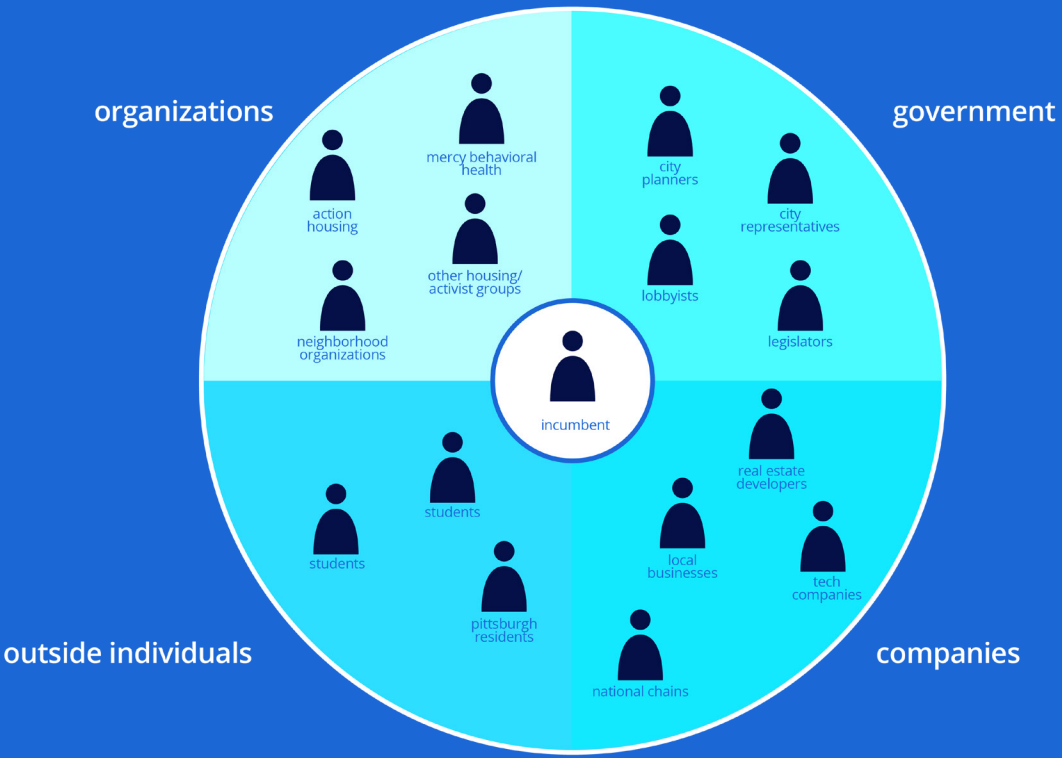
After assembling our matrix, we could then identify “holes” where the surveyed groups ranked low or not at all on a focus. We immediately identified a hole in the “resident-driven” column: whether because there is a lack of grassroots affordable housing groups, or because such groups are not well-known, there is a distinct opportunity for us to develop and research resident-driven affordable housing programs.

	housing	commerce	funding	advocacy	resident-driven	resources
ELDI	●	●	●	●	●	●
NA	●	●	●	●	●	●
DC	●	●	●	●	●	●
Trek	●	●	●	●	●	●
UI21	●	●	●	●	●	●
CoP	●	●	●	●	●	●
ACTION	●	●	●	●	●	●

● = nonexistent ● = low ● = medium ● = high

- housing**
Do they provide affordable housing directly or do they encourage affordable housing development?
- commerce**
Do they incentivize commerce and local business in affordable housing neighborhoods?
- funding**
Do they provide funding, loans, investment, grants, etc. to affordable housing, neighborhood revitalization, or other community improvement groups?
- advocacy**
Do they advocate for residents and the community, or help residents advocate for themselves?
- resident-driven**
Is the group run by locals or residents of the neighborhood they’re trying to help/improve? (Low rating: do locals have input in the group’s programs?)
- resources**
Do they connect residents with resources for finding affordable housing, improving their neighborhood, or running their own community improvement initiatives?

Surveyed groups: East Liberty Development, Inc. (ELDI); Neighborhood Allies (NA); Design Center Pittsburgh (DC); Trek Development Group (Trek); Urban Innovation 21 (UI21); City of Pittsburgh (CoP); ACTION Housing (ACTION).



A map of the stakeholders in the affordable housing and gentrification issue in Pittsburgh. You can see this map in more detail in the appendix.

actors

citizens
city planners
companies
municipal government
action housing
mercy behavioral health
neighborhood organizations
developers/realtors
students

activities

building
tearing down
starting up
raising and building new things
raising prices
protesting/lobbying
legislative action
organizing
political agendas
community bonding

places/context

pittsburgh
east liberty
hill district (historical context)
strip district
bloomfield, lawrenceville
lower economic district
zoning
ethnic group neighborhoods
saturated housing
geography and location affect

racism and class issues
people remaining after "white flight"
divisions entrenches
routes blocked off from former trade routes
college town and education

trends/patterns

minorities pushed out
lower economic groups pushed out
displacement
rent hikes
"hipster" local food
startups, tech, kickstarters
"white flight"
ethnic groups stick together
wage gap issues
racism

#1 place to work
most livable city

other products

petitions
fund-raisers
homes to people who can't afford it
nonprofits and support groups
apps

desired outcomes

citizens: healthy stable communities
incumbent citizens: preserve traditions
companies: foster innovation in a profitable way
city government: high property values
developers: make profit
allies: economic equality

our desired outcome:
legislation
balance
raising awareness for incumbents

An ecosystem map exploring the domain of affordable housing and gentrification in Pittsburgh. You can see this map in more detail in the appendix.

stakeholder map

As we started our research, we drew out a stakeholder map, identifying the people and groups who care about or are affected by affordable housing and gentrification.

We sketched out a design for the stakeholder map where, rather than bubbles with overlaps, the stakeholders progress through a gradient that conveys the lack of distinct difference between the groups. We identified which categories were most similar, in order to place them relative to each other in location and hue.

ecosystem map

In the ecosystem map, we explore the domain of affordable housing and gentrification in Pittsburgh.

We began by brainstorming the actors related to neighborhood gentrification, coming up with broad groups, such as government and developers, and specific individuals, such as the incumbent residents of the gentrifying neighborhoods and the entrants moving in. Next we brainstormed trends and patterns, starting with those directly related to gentrification, such as displacement and rent hikes, and broadening out to indirect patterns such as racism and incoming tech companies.

From there we moved onto activities, first coming up with verbs related to gentrification and then more specific activities, like lobbying. Then we went to places and context, thinking about physical context, such as specific neighborhoods and geography, as well as social context like self-segregation and classism.

Having filled out these sections, we felt empowered to list out desired outcomes, first for the stakeholders we'd identified in the actors section, and then for ourselves and this project. Finally, we brainstormed about other products or initiatives that have also addressed the issue of gentrification and affordable housing, like petitions and fund-raisers.

onsite research



Julie, one of the experts we interviewed at New Pennley Place, at work at her desk.

2 expert interviews

As part of our field research, we went to the offices of two experts in the field of affordable housing. One expert works for the affordable housing building New Pennley Place, and the other works for the local non-profit Neighborhood Allies. By talking to these experts, we gained a perspective on the problems surrounding Pittsburgh's affordable housing process the views of those who try to help displaced citizens, as well as their opinions on possible solutions.

4 contextual inquiries

Following our expert interviews, we conducted four contextual inquiries in an effort to intimately interview displaced residents. In these contextual inquiries, we went to the current homes of citizens who have been displaced from East Liberty in order to speak with them "in context" of their everyday lives.

We asked our interviewees about their past living experiences, as well as their experiences moving from place to place. We chatted with a wide range of folks—those that had more positive experiences with relocation, and those that had more negative experiences with relocation. This gave us well-rounded exposure to the problems displaced citizens face.



Conducting an interview with Eleanor, in her current residence on Larimer.



A view of the living room and kitchen of Emil, one of our interviewees in East Liberty.



A view of the living room of Eleanor, one of the displaced citizens that we interviewed.

key findings

key findings

Displaced citizens feel hopeless about their housing situation.

Dave, a former resident of Penn Plaza we talked to, told us that *“You’re not in control of your life unless you control the land you live on.”* Many of the displaced citizens we interviewed have no hope that their housing situation can change, and no sense of control over their future living situation. This means that they are unmotivated to seek help or a better housing situation, because they just don’t see the point.

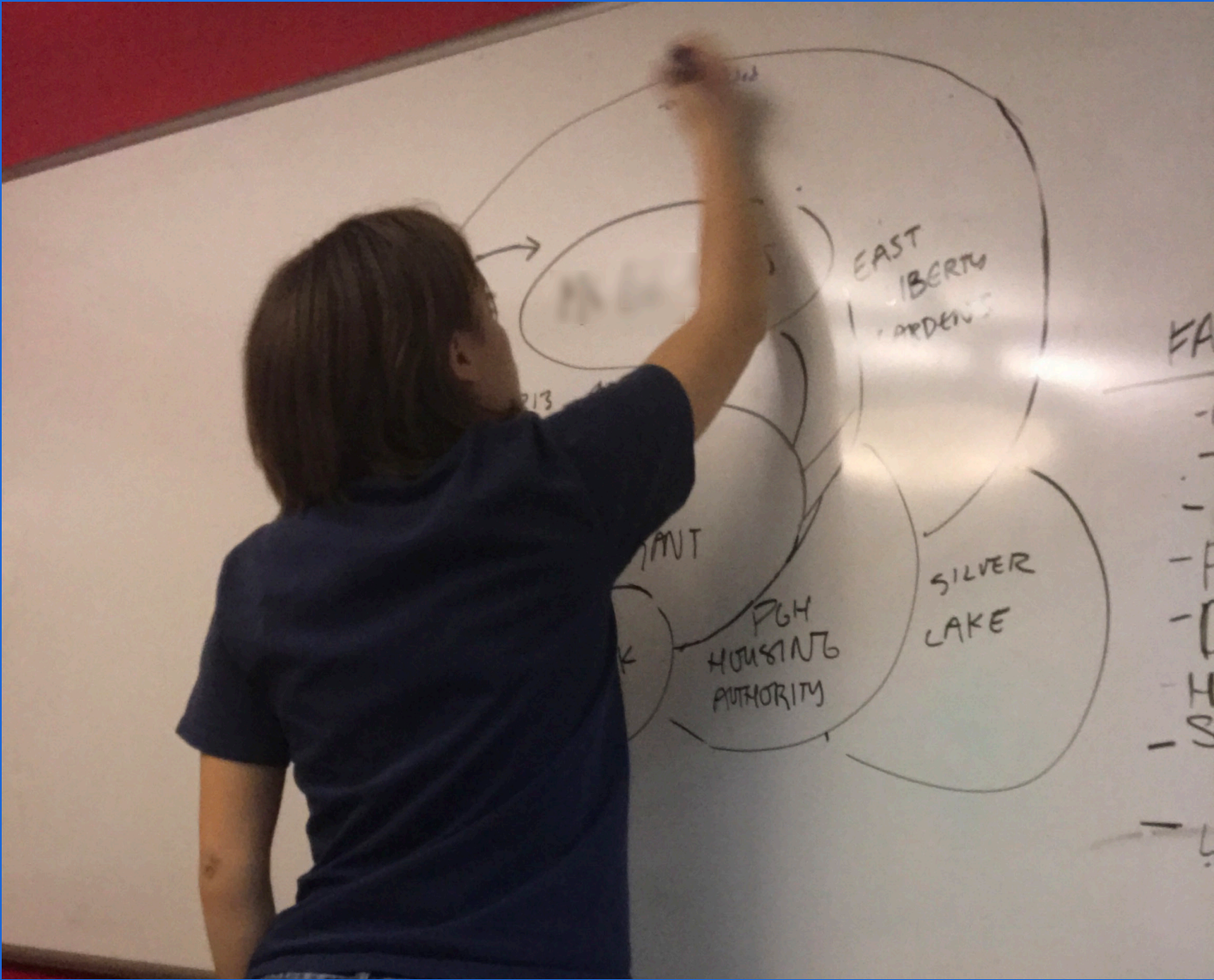
Displaced citizens in transitional housing are not moving.

Displaced citizens that are fortunate enough to get transitional housing are not moving out. They are supposed to live in transitional housing only until they get back on their feet. However, Julie, who works at transitional housing location New Pennley Place, told us that *“There are people who have been living here for 15 years.”* Many folks just don’t have the resources necessary to get higher paying jobs and move out, or simply just get complacent, preventing those in need of transitional housing from moving in.

There is a communication breakdown between organizations that try to help relocate displaced citizens, and the citizens themselves.

Claire works at local non-profit Neighborhood Allies, which helped relocate East Liberty citizens displaced by recent development. She told us, *“We don’t even know how many people lived there, we know how many people left, some of them we don’t even know their name...”*

While many residents of affordable housing and displaced citizens are aware of organizations and resources to help them attain housing, few seek it out. Successful organizations literally knocked on doors and had members pester residents to come to meetings, in order to share information, provide advice, and plan protests. And even for organizations that do successfully help displaced citizens, they quickly lose contact with their clients and have difficulty knowing how successful their relocation was.



Bobbie is pictured working on the chart for one of the affinity diagrams. The name is edited out for confidentiality.

implications

No one likes moving out, but for different reasons.

- While we expected displaced residents to be unhappy at having to relocate, we did not expect the prevalence of feeling hopeless and powerless about the move. While this shows that there is definitely work to be done in empowering displaced residents, it also shows that doing so will be difficult, because overcoming mixed and negative emotions is far more difficult than resolving concrete problems.
- Dave, a former resident of Penn Plaza, was angry enough at the sudden eviction that he organized his neighbors to protest. But despite his action, he still expressed the strong feeling that he has no control over his own housing or future.

I move out because I have to, not because I want to.

- One common thread jumped out when we looked at all the reasons people gave for relocating: every reason was negative. No one moved out because they wanted to go to a better living situation, but because they felt forced to, whether because of rising rent, bad landlords, or their building being torn down. This is true even when the displaced citizen feels as though their new living situation is better than the other, as is the case with all of the citizens we interviewed.
- For example, Sam felt he had to move out of the building he'd lived in for many years when the management changed the regulations too much, even though he considers himself blessed to have in his current place.

I know housing is possible, but there are too many problems in the way.

- We found a multitude of factors contributing to the difficulty our interviewees had in achieving housing, from personal to environmental to process and structural problems. The interviewees knew about the housing options available, but were able to successfully secure housing by being proactive in searching for options and using resources available to them. Emil faced waiting lists three to five years long for housing that may have put off others, but by putting his name on multiple waiting lists and applying for as early as possible, he managed to secure his current location.
- We noticed that residents were, for the most part, cognizant of the resources at their disposal. However, there was a perceived sense of hopelessness resulting from the misrepresented wait

lists (often time 3-5 years long). Most interviewees were familiar with Allegheny Link and other similar resources. Given how pervasive this theme of hopelessness was during our interviews, we feel as though this attitude serves as a massive obstacle in empowerment.

Communication is key, during and after relocation.

- From speaking with experts on the relocation we saw a pattern for the lack of communication and information. A lot of the organisations that provide relocation service don't share talk to each other and share what they have. In addition, citizens who move tend to also not share information with the relocation organisations about their new housing and living situations. Talia describes how she doesn't know what happened to many of the people Neighborhood Allies helped, or even whether they found housing.

There's help for you if you ask.

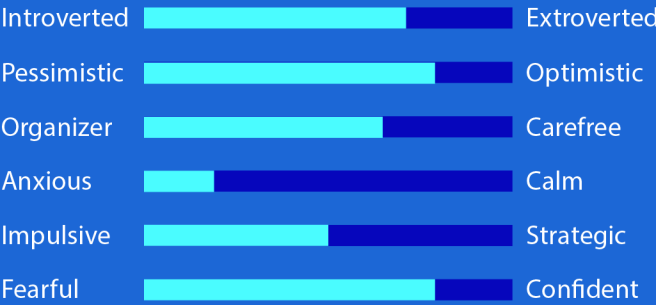
- Further discussion into the relocation of displaced citizens led to the discovery of different aids for relocation. Although they may be hard to find or hear about, being proactive in looking for a place to stay and a means of funding can go a long way, and different organizations provide services and resources to guide displaced citizens. During Eleanor's relocation process, the Choice Neighborhood organization gave residents of East Liberty Gardens advice and structure for moving out that the residents might not have asked for on their own, but needed and benefited from.

persona 1

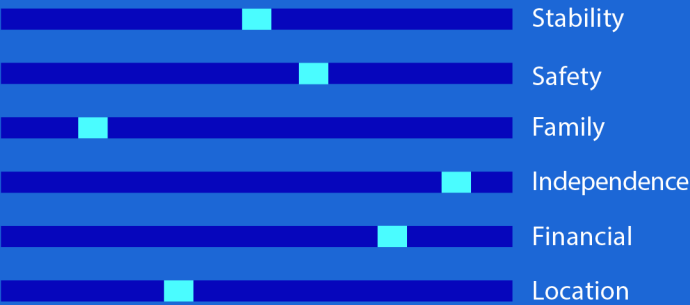
MS. ALMA WESTBROOK



Personality



Motivations



Demographics

Age 30
African-American
Female
Very low-income

Occupation

Working as a cashier

Personal Relationships

Stayed with Mum for a while but now lives alone
Has friends that want to live off her for free

Frustrations

Unnecessary regulations in housing
Landlords and police officers constantly disturbing her
Freeloading friends

Short term goals

Pay rent on time
Fix shower pipes
Go to Section 8 meetings on time

Experience goals

Work well with Section 8
Have fun with friends

Long Term Goal

Maintain housing and living situation
Find better paying job

Special Notes:

Not in affordable housing, but uses Section 8 vouchers
Uses public transit to get to work and stores (bus or walks)
Found housing & secured Section 8 funding on her own
Has little guidance from organizations

“I’m so glad to have my own place that I can afford”

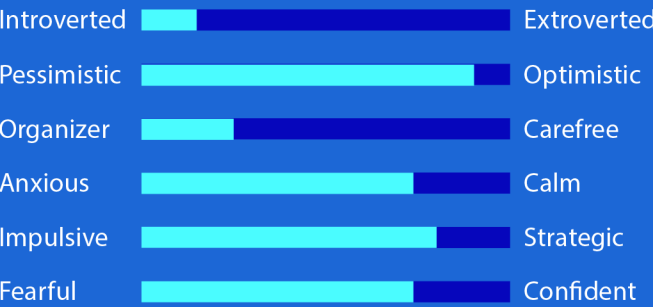
This persona was inspired by our conversation with Sam, one of the displaced residents we interviewed. He is inspired most by his need to be on his own and live independently from his mother. He had a great experience using section 8 vouchers to find affordable living that is better than where he lived before.

persona 2

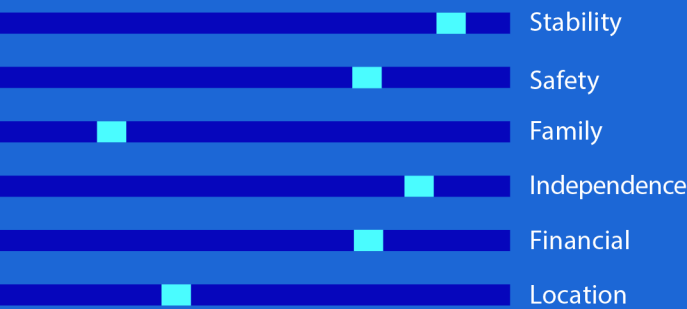
MS. ELEANOR JACKSON



Personality



Motivations



Demographics

Age 68
African american
Very low-income

Occupation

Unemployed

Personal Relationships

Separated from husband when went to jail
Recently started dating after divorce several years ago
Children and grandchildren who live out of state

Frustrations

Neighbors' gossip about her
Lack of things to do

Short term goals

Continue relationship with boyfriend
Find part-time employment she can do from home

Experience goals

Have programs and things to do
Volunteer or work with/for/in community

Long Term Goals

Stay in her current housing / maintain current lifestyle
Revitalize community

Special Notes:

Had a very positive moving experience (organization helped)
Relies on PHA and social security
Currently stays in affordable housing

"I am blessed to live here and I want to share that blessing with my community"

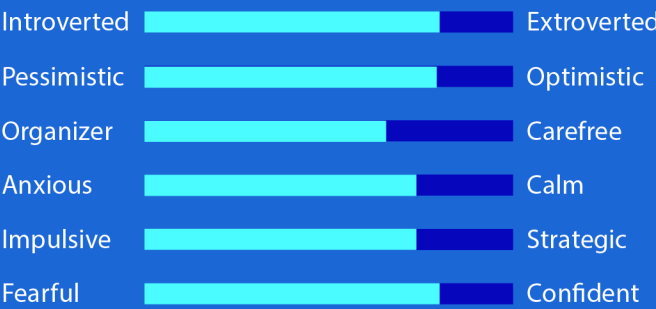
This persona was inspired Eleanor, who is the most satisfied with her housing relocation process. Her frustrations are mostly atmosphere-based since she feels that she has reached a living condition that is better than where she previously was living.

persona 3

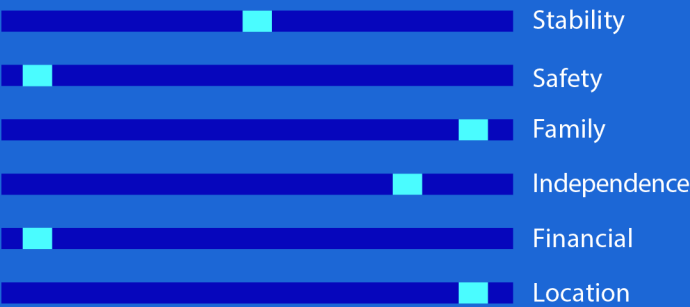
MR. EMIL RUSSO



Personality



Motivations



Demographics

Age 72
Caucasian
Veteran

Occupation

Casual Uber Driver

Personal Relationships

Separated from ill wife, but still visits and takes care of her
Close with his 2 children who attended Pitt

Frustrations

Losing the relationships he had because of having to move
Dislike neighbors other than veterans

Short term goals

Traveling the world
Staying fit & active

Experience goals

See and do new things
Spend time with family

Long Term Goals

Take care of wife and children
Make the most of the last few years

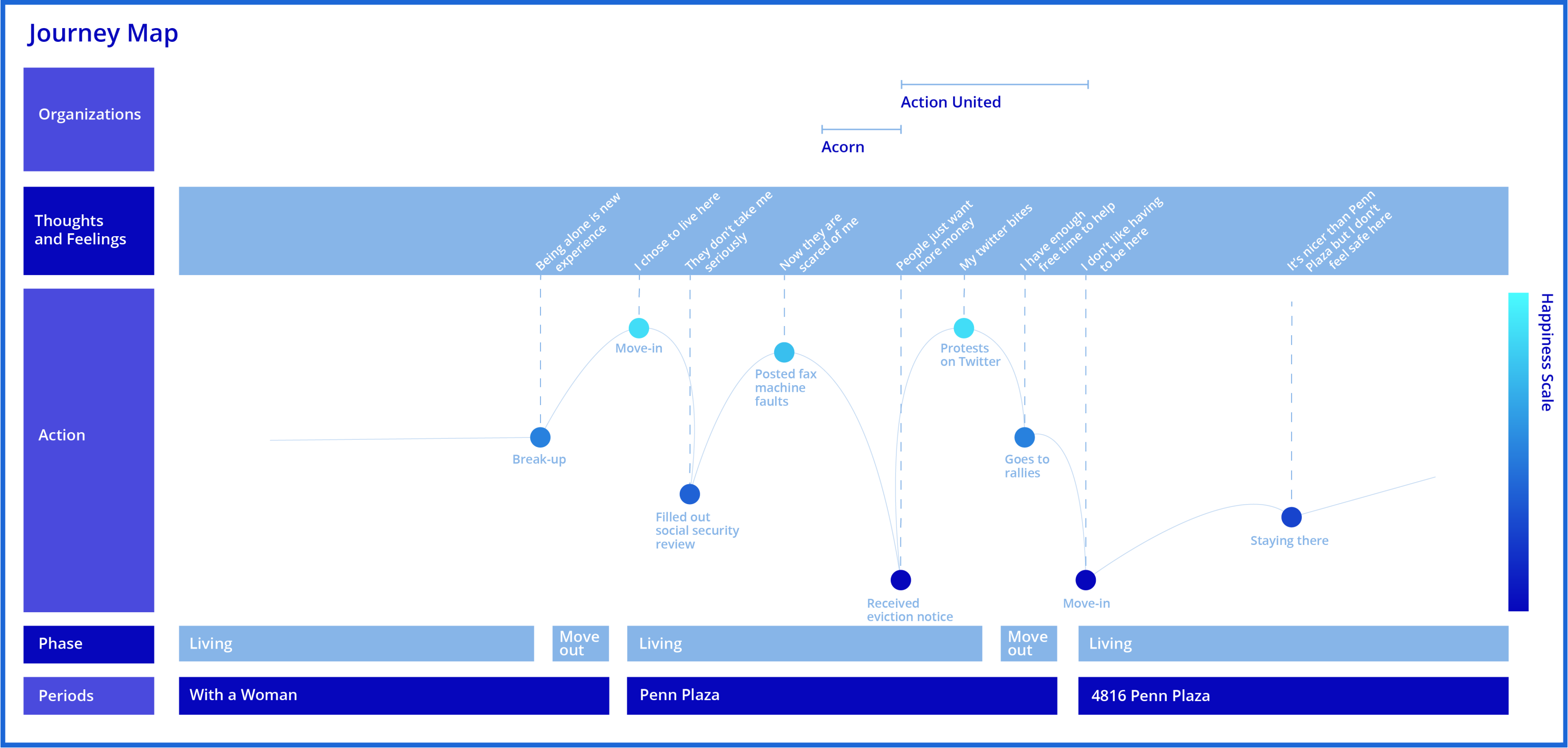
Special Notes:

Owns a car
Has enough money saved that doesn't need a job
Lives in affordable housing and takes advantage of PHA, but self-motivated (didn't get help from organization)

"I want to stay close to my family and make the most out of these last years"

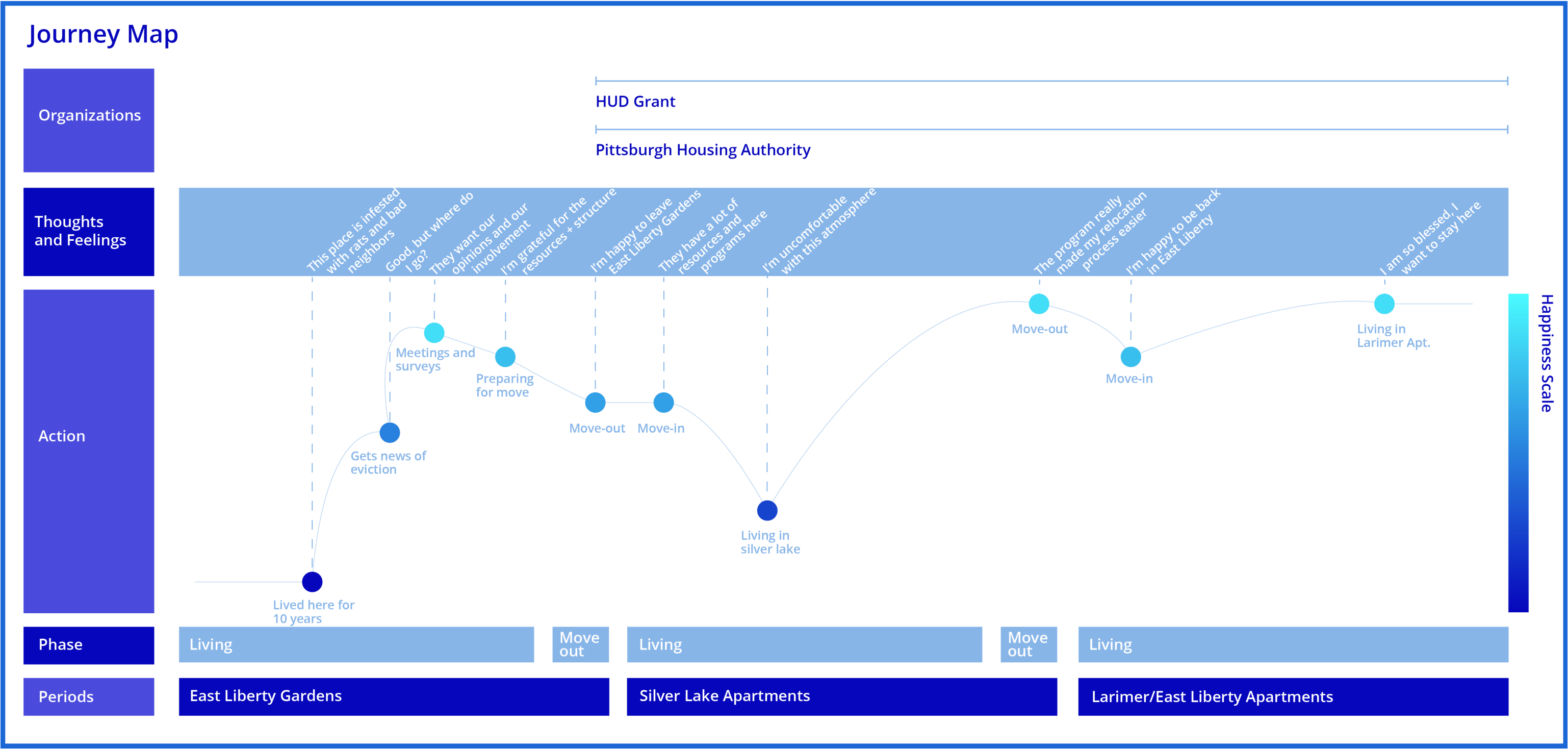
This persona was inspired primarily by Emil, one of our outliers among those we interviewed. He is motivated the most by his attachment to his family, which makes him want to not leave his current location of East Liberty. He is pretty unaffected by the environment that he lives in.

journey map 1



Upset with many parts of the process of finding housing, Dave found a small bit of relief when he started gaining assistance from Action United, after the fall of Acorn. He is very active about communicating his continued dissatisfaction with the process.

journey map 2



Eleanor had a positive experience, in stark contrast with Dave. She was very unhappy living in East Liberty Gardens. Through going to meetings and being in constant communication with Housing Authority, she has relocated to a home that makes her feel very blessed and happy.

survey findings



This is Juliann, a CMU Information Systems major, taking our survey and giving us feedback on its design.

creating the survey

We determined our survey questions by first asking ourselves: what are we ultimately trying to find out? We wanted to try and discern why people don't volunteer as much as is needed, so we crafted questions about volunteering and donating habits. When crafting multiple choice questions, we first asked people what their answers would be in a freeform way. We then used the freeform responses to make concrete multiple choice options.

We decided to use Google Forms because we were familiar with the product. In addition, Google Forms allowed us to create programmatic surveys, in that the questions of the survey dynamically change based on answers to previous questions.

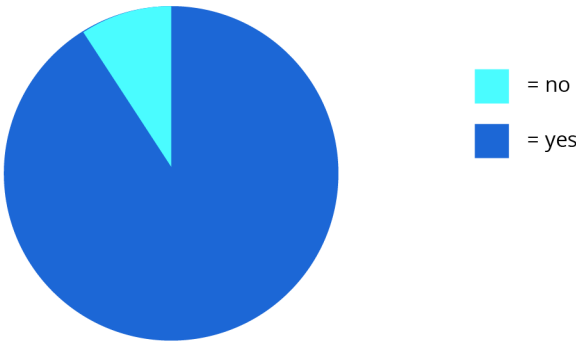
We wanted to gather a large and diverse sample of participants to take the survey. We sent the to our families, posted it on social media, and sent it out to various campus organizations that we're a part of. As a member of CMU's service fraternity, Tundun was able to reach a large number of students that volunteer, and Bobbie was able to reach out to her mother's large network of adult volunteers.

We're cognizant of the potential bias resulting from our sample primarily being composed of CMU students and upper-middle class parents. So, when we conducted our final analysis we kept that in mind.

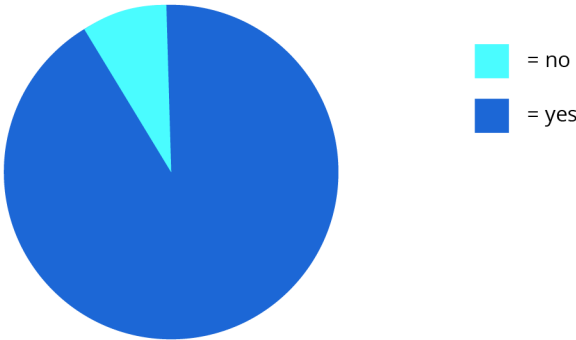
We tested the survey with a handful of people to ensure that it was well crafted in terms of content and design. Pictured to the left is Juliann, a CMU information systems major and friend.

findings

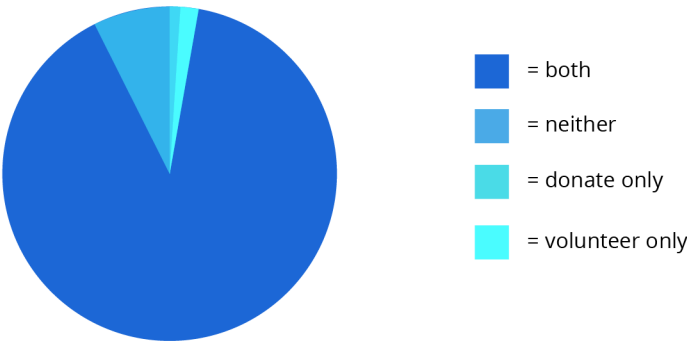
do you volunteer?



do you donate?

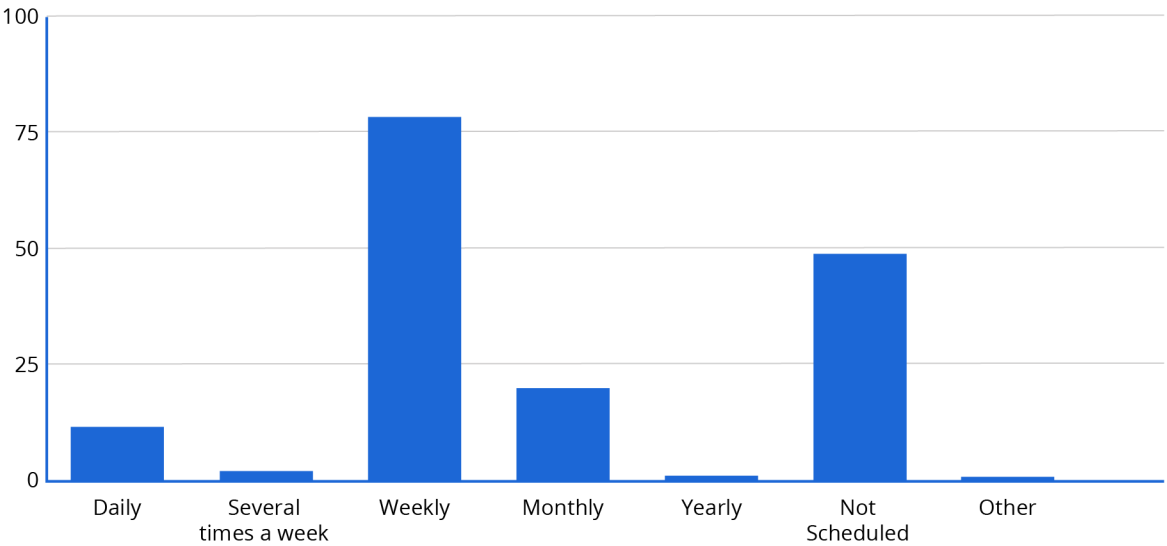


overall - volunteering or donating

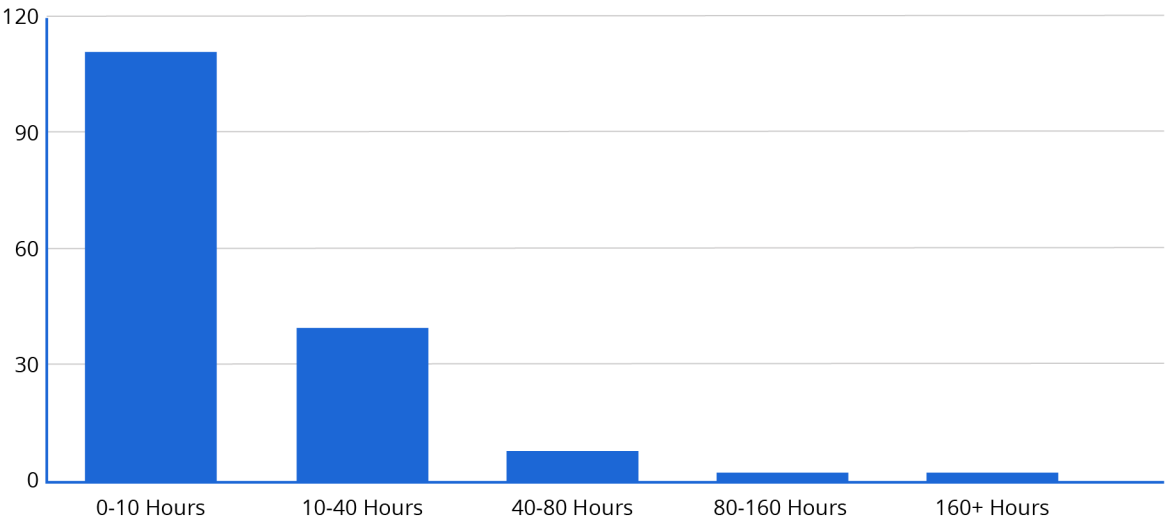


These graphs look into the breakdown of our participants. The majority of our participants volunteer and donate in their community.

how often do you volunteer?

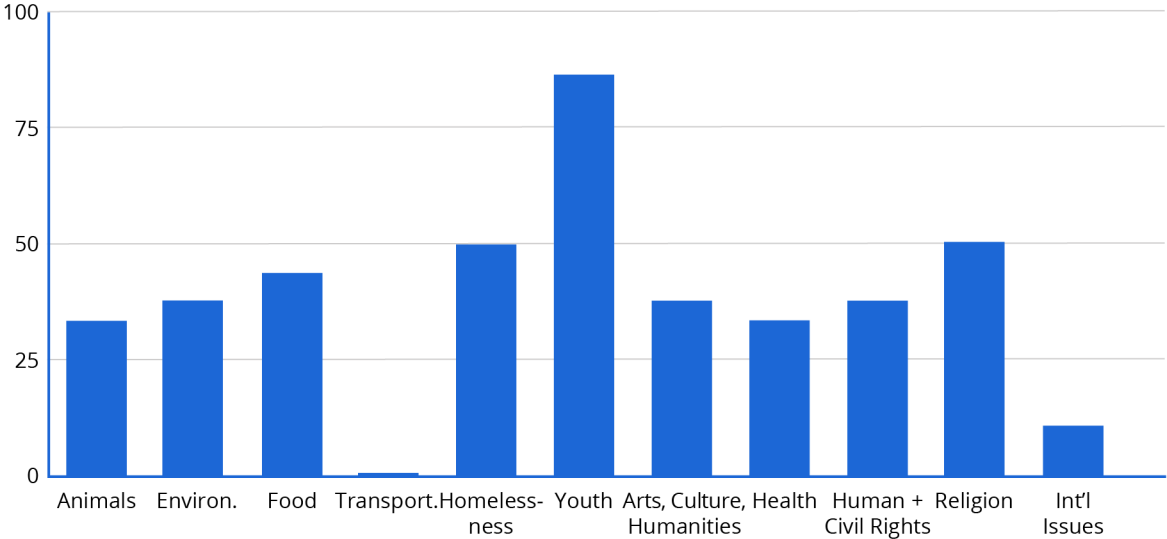


how many hours a month do you volunteer?

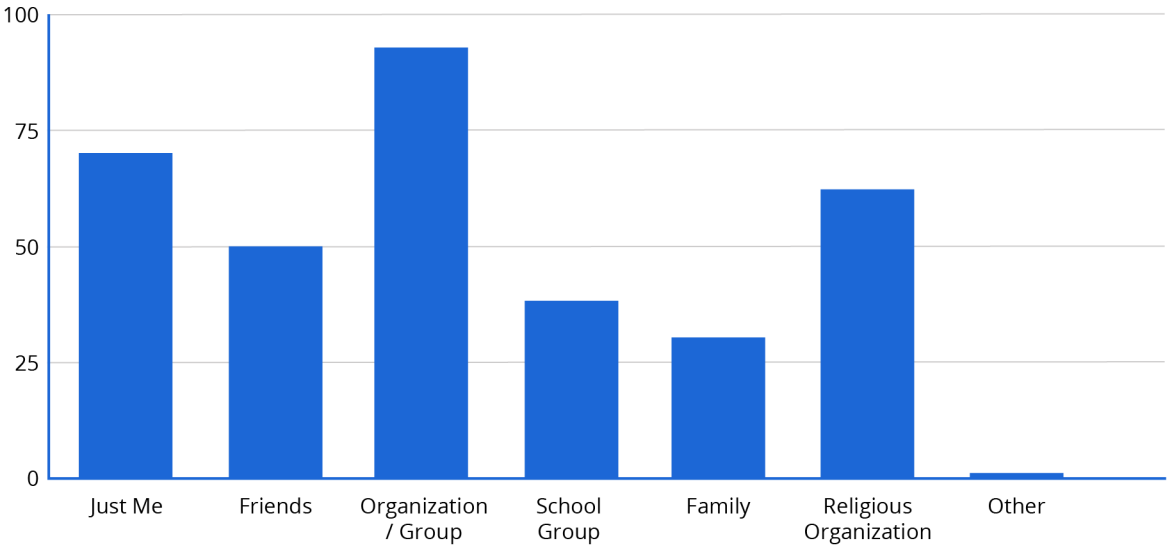


Of those that volunteer, we looked into how often they volunteer on average. Most will volunteer on every week.

what causes do you support by volunteering?

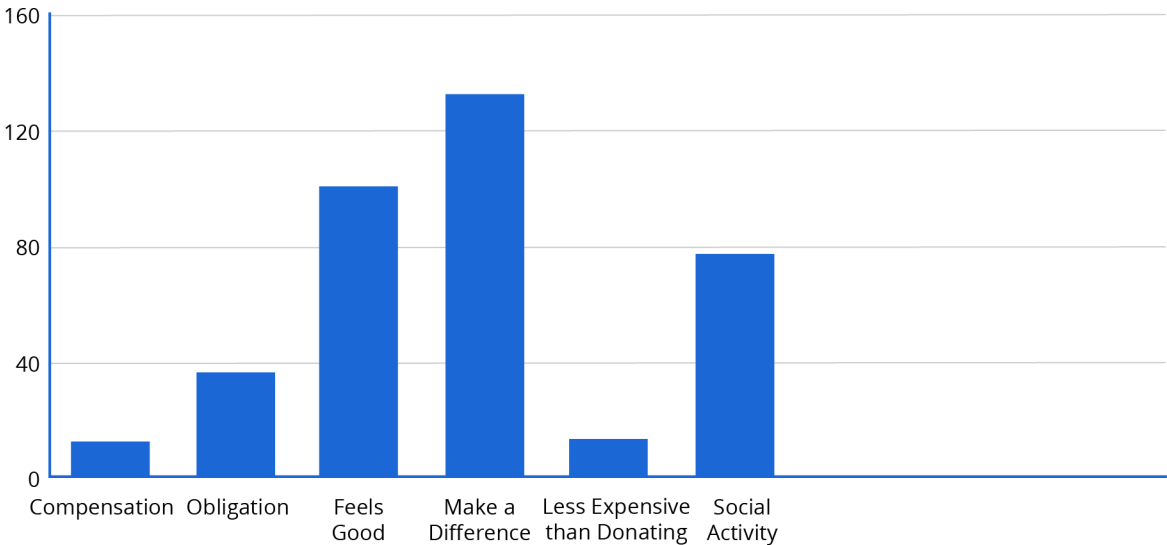


who do you volunteer with?

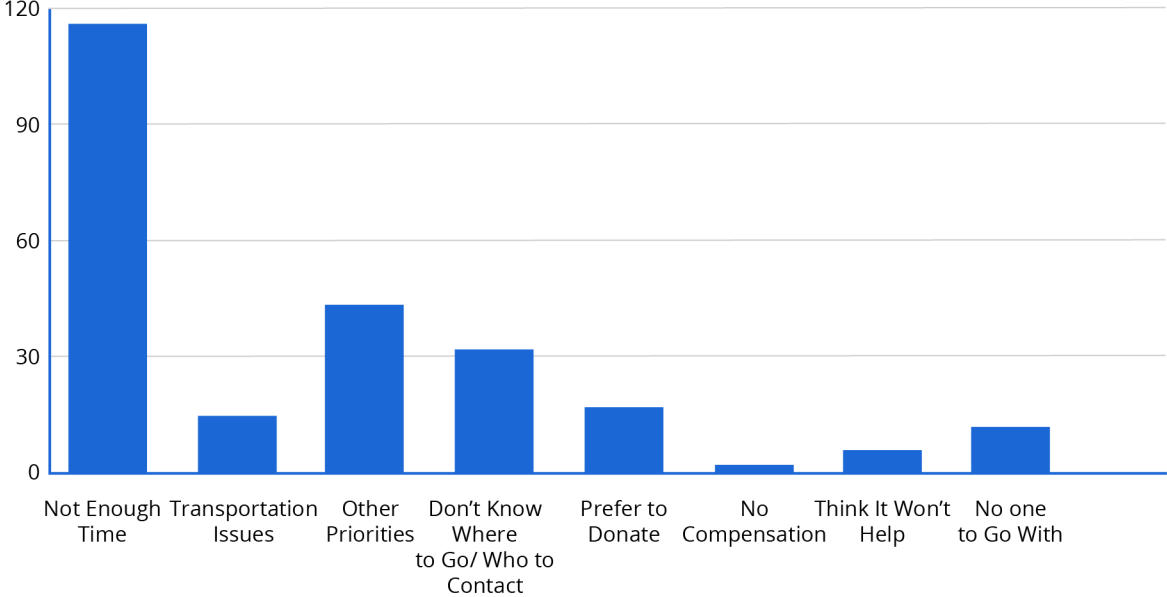


The main ways our respondents volunteer is through programs for youth and working with an organization or group.

what motivates you to volunteer?

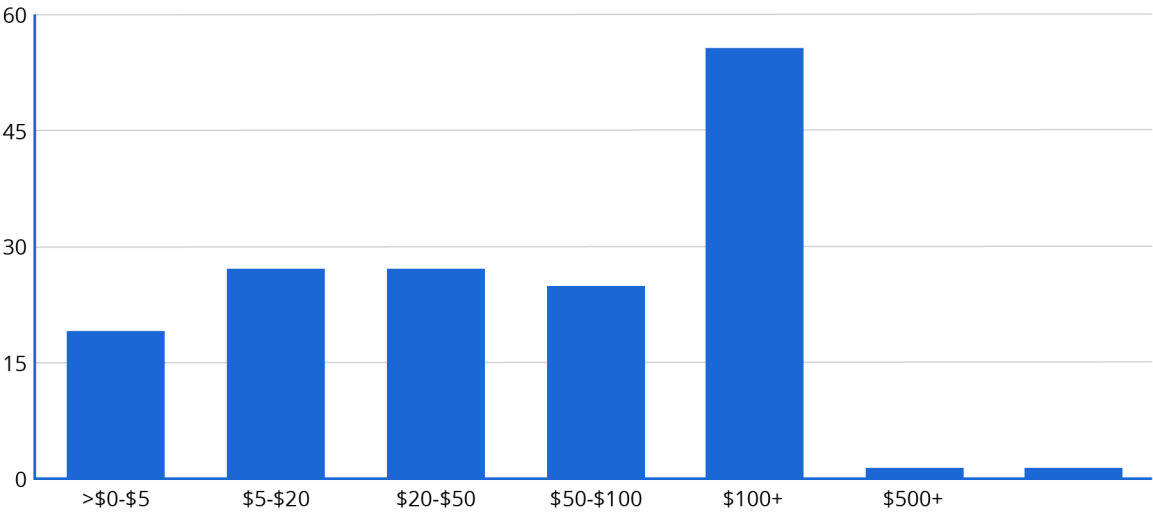


what stops you from volunteering?

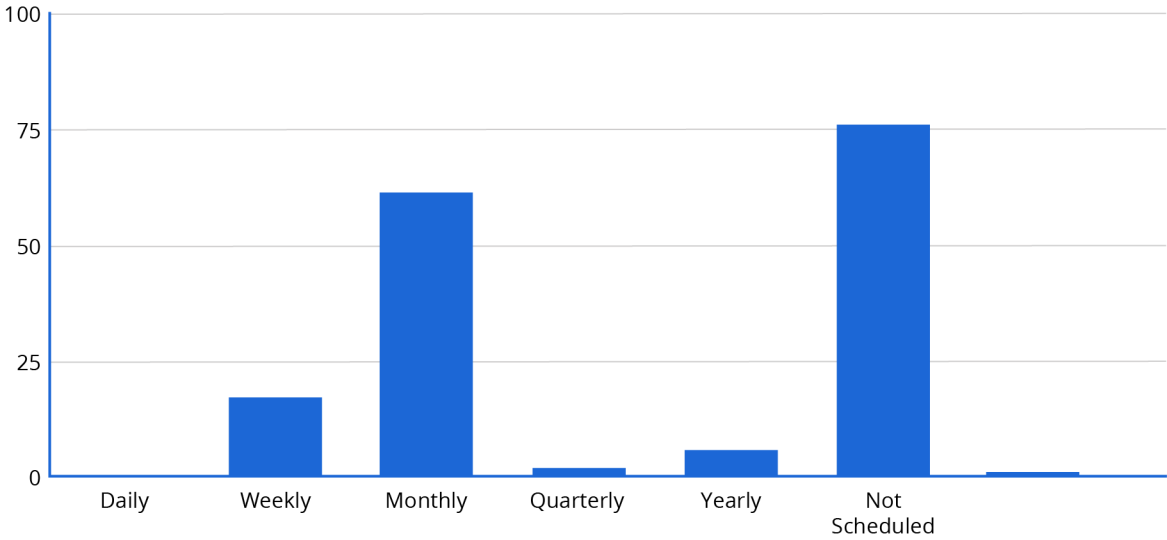


People find the idea of making a difference motivating, but not having enough time gets in the way, which we had predicted.

how much do you donate?

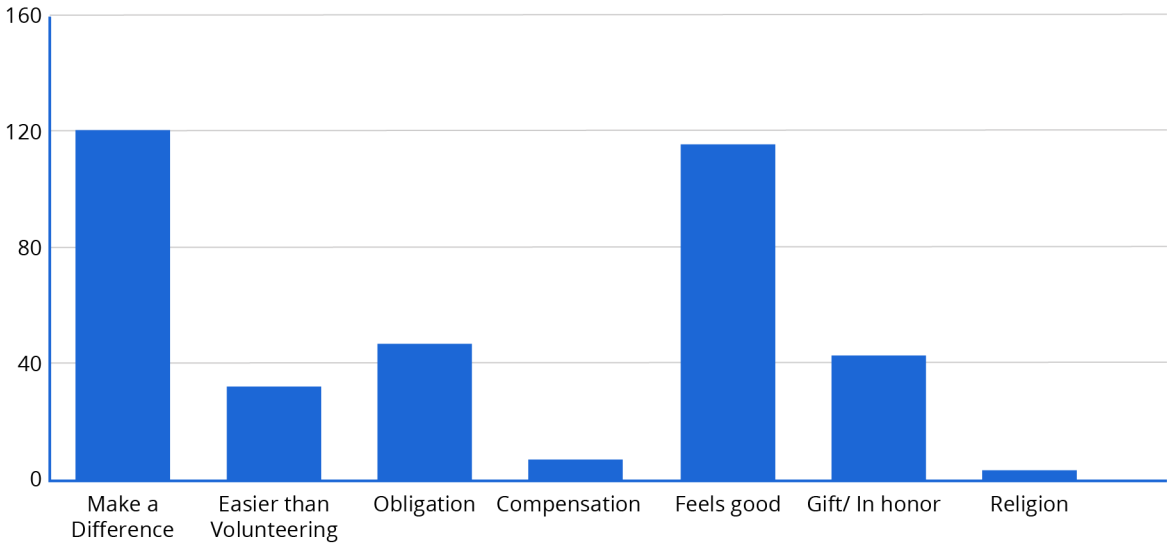


how often do you donate?

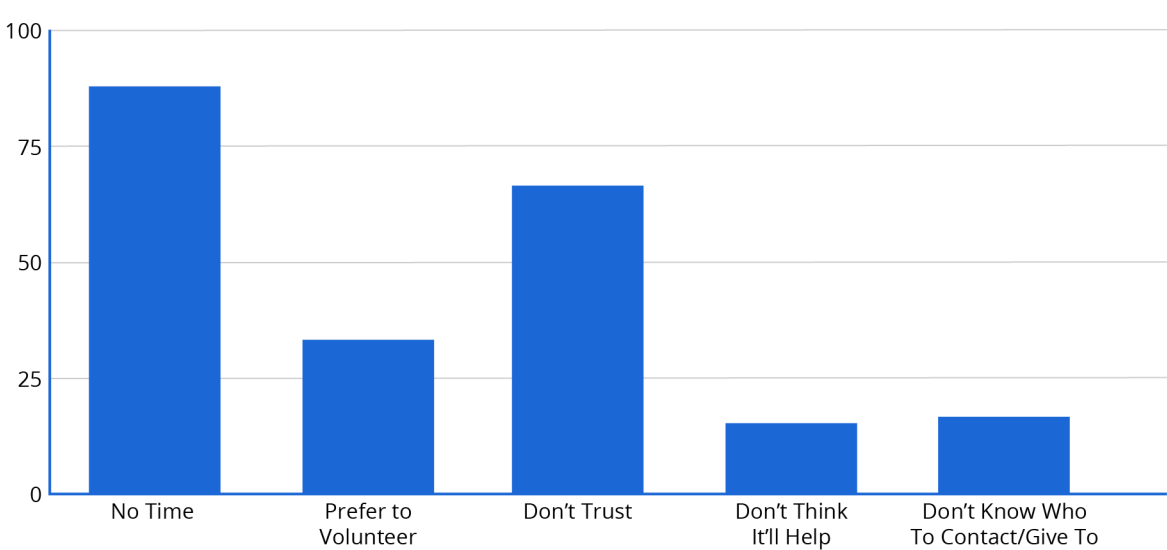


Our respondents don't donate as regularly as they volunteer. Most donations were in the \$100 range.

what motivates you to donate?



what are obstacles to donating?

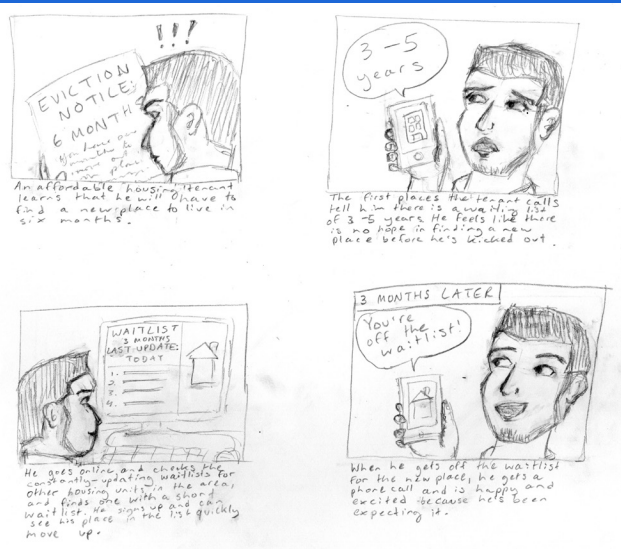


Like with volunteering, “making a difference” also motivates donating, along with the good feeling it results in. But also like volunteering, not having enough time gets in the way.

solutions



Developing our storyboards to answer the "How might we?" questions we posed, in order to design solutions to the problems we found in our research.



A draft of one storyboard, showing our answer to the question "How might we instill hope by providing more accurate waitlists?"

We had previously identified our two main problem areas to be hopelessness on the part of the displaced citizens, and a breakdown in communication between housing organizations and displaced citizens. With these problems in mind, we set to brainstorming "How might we...?" questions that both helped solve these problems and provided an opportunity for feasible solutions. The two questions we asked are:

- *How might we instill hope by providing more accurate waitlists?*
- *How might we help people actually transition out of transitional housing?*

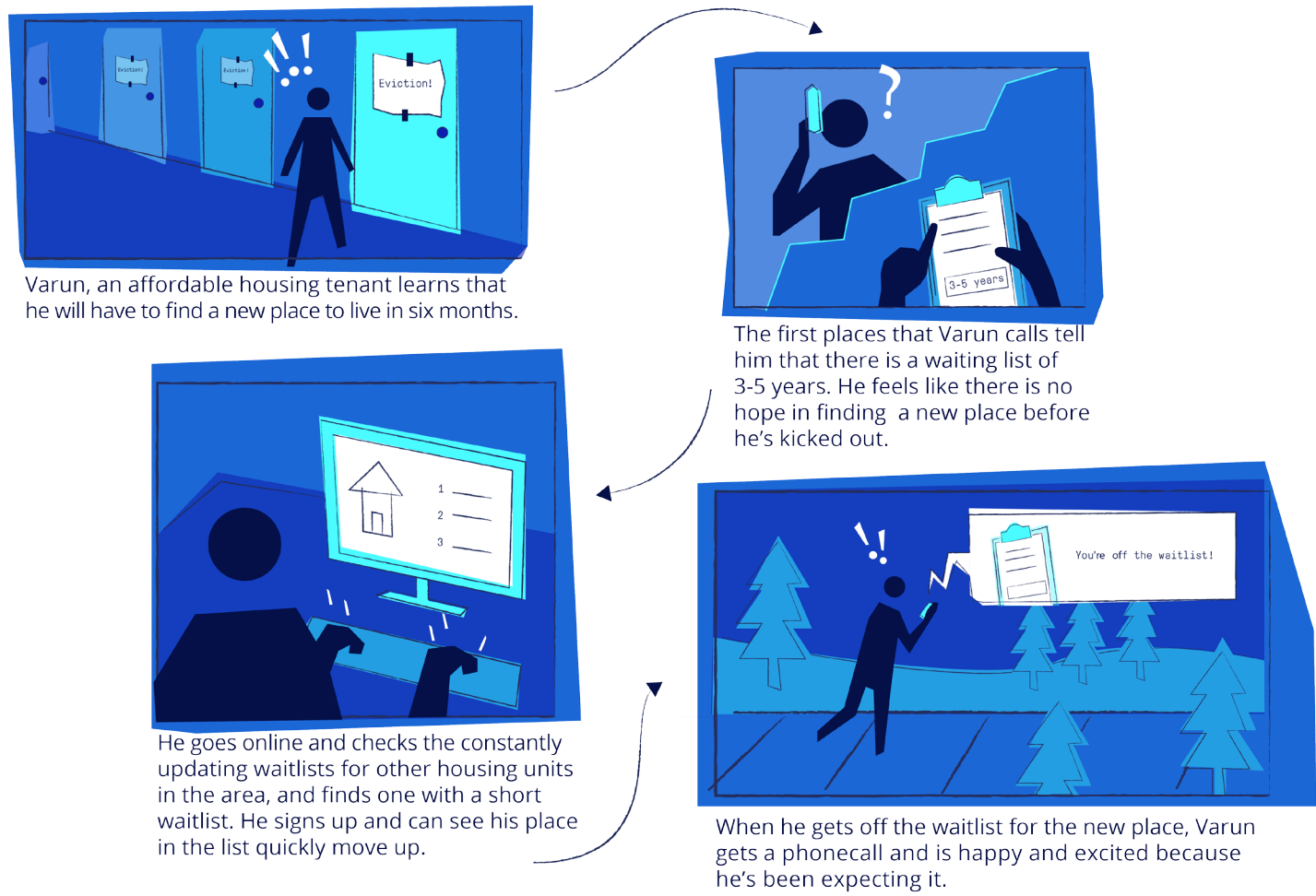
In response to these questions, we drew out storyboards—small comics—to illustrate two possible solutions. For the first problem of waitlists, we envisioned a master database where all local housing properties keep their waitlists up to date, and a website connected to that database that allows citizens looking for housing to check the real-time waitlist for each option as well as their place in line. An app to this effect is already used by the Housing Authority of the City of Pittsburgh (HACP) to help Section 8 voucher applicants keep track of their place in the waitlist, so we reason that this could be effective if applied to a broader range of housing options.

In response to the second problem of transitional housing, we took inspiration from Eleanor's positive experience relocating, which she attributed to the HACP and other organizations getting involved with the community and providing guidance to the citizens being displaced. We imagine that, if a similar program is installed in transitional housing and made mandatory for residents, we can help those in transitional housing actually transition into more stable housing.

You can see the storyboards and more detail on our development of these solutions on the next few pages.

solution 1

“How might we instill hope by providing more accurate wait-lists?”



how might we instill hope by providing more accurate waitlists?

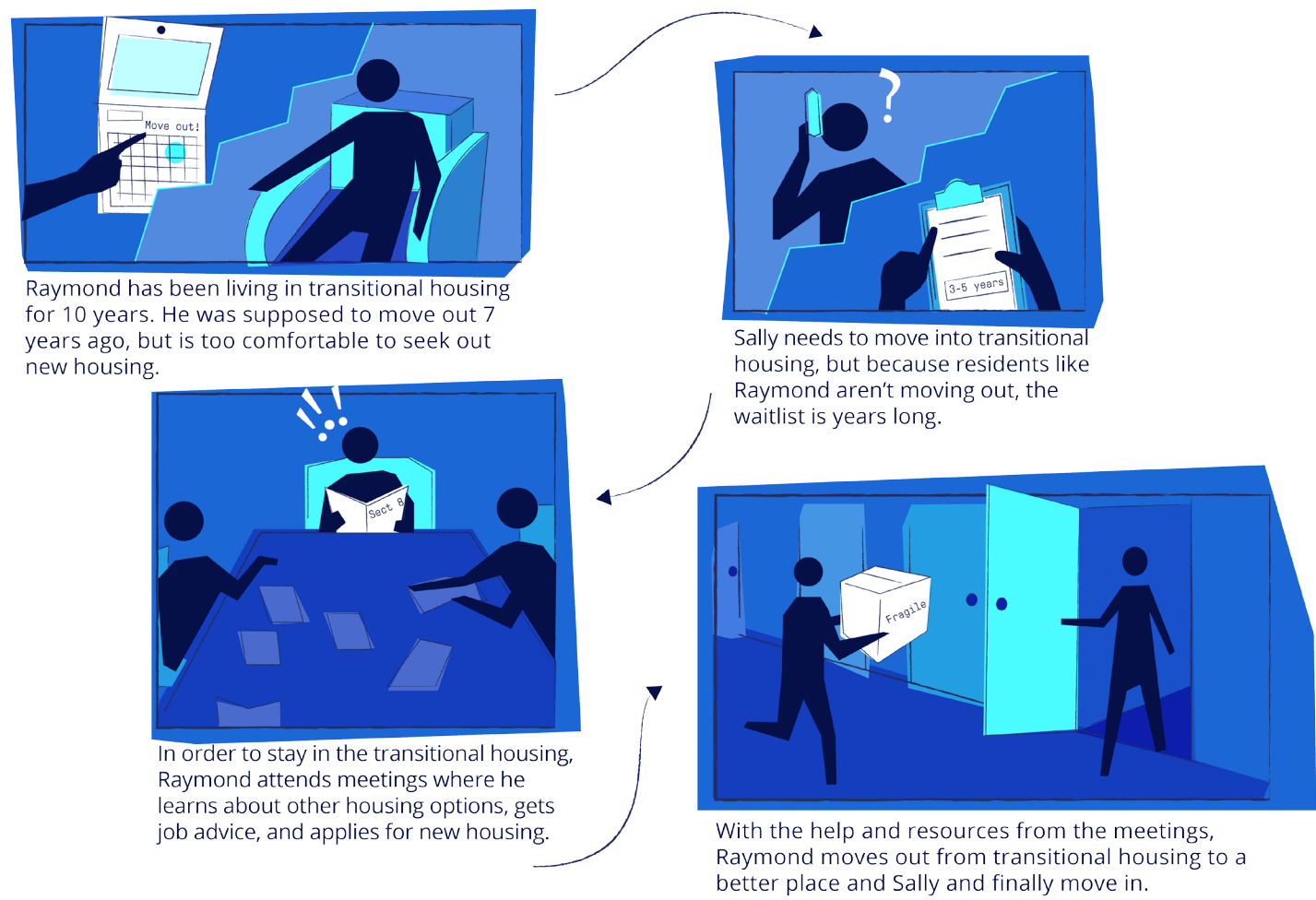
When conducting our contextual inquiries, our interviewees frequently brought up the depressing lengths of waitlists for different housing options: emergency housing, transitional housing, affordable housing, even market housing. Some places had waitlists up to five years long, when the people on those waitlists needed housing in a few months! We noted how these long waitlists made our interviewees disheartened and desperate, and could even turn off other displaced citizens from looking for housing altogether.

However, interviewees who encountered these long waitlists also noted how quickly they would sometimes move off the waitlist: Emil told us how, after being quoted a wait time of three to five years, he received a call informing him that there was an available unit after only a few months. Clearly, there is a breakdown somewhere in the process that leads to incorrect communication on the wait time. We envisioned that providing a more accurate waitlist with up-to-date information on someone's place would both help solve this communication breakdown, as well as provide more hope to the people on those waitlists as they see their name move up rapidly.

This is a digitized storyboard illustrating our first solution.

solution 2

“How might we help people actually transition out of transitional housing?”



how might we help people actually transition out of transitional housing?

When thinking about the long waitlists as we developed our previous "How might we" question, we recalled a problem brought up in our very first interview. According to Julie, tenants of transitional housing overstay their planned residency by several years, which both defeats the purpose of transitional housing and prevents those who need transitional housing from being able to move in, creating an unplanned waitlist years long. This is a problem both for the tenant and the person on the waitlist, and by answering the question How might we help people actually transition out of transitional housing? we saw an opportunity to help both.

Based on the success of Eleanor' relocation process, we could hypothesize that an effective answer to this question is for a housing organization like the Housing Authority of the City of Pittsburgh (HACP) come into the community of a transitional housing building, and establish meetings where they provide resources and guide residents into finding secure housing and jobs. The key to this solution's effectiveness is both in going to the community directly to get them involved and in making these meetings mandatory for tenants in order for them to stay in the transitional housing program.

This storyboard illustrates our second solution.

next steps

if we had another month, what would we do?

Given another month to continue working on this project, we would continue our research into the experiences of East Liberty citizens who have been displaced, to gain more stories and perspectives than the four we have. We would want to investigate the experiences of former residents of housing options besides Penn Plaza, to see what commonalities arise versus what is specific to Penn Plaza.

We would also research our storyboarded solutions to see if or to what extent they are already implemented, and what existing obstacles are in their way, since we didn't have time to do so before giving our final report. In doing so, we could revise and flesh out our solutions, so that they are more feasible and relevant to the City of Pittsburgh and local housing non-profits and organizations.

what's highest priority?

Our next highest priority is to further develop the solutions we storyboarded and presented in this report. Having come up with these ideas, it is imperative to determine the extent of their feasibility as well as what obstacles are in their way. Since we have started the solution designing process, we can also begin researching existing solutions and see what we can learn from them or how we can improve our own designs.

what should the city do next?

One solution that we discussed but did not storyboard is one that relies exclusively on legislation. In one of our interviews with an expert in affordable housing, we learned of a law in Washington, D.C. that requires a developer who tears down affordable housing to build a new one to replace it. Recently, Mayor Peduto has called for the developers of the Penn Plaza area to help provide housing for the residents they displace, but having actual laws to this effect could go a long way to assuaging the pains of relocation due to gentrification (Belko, Smelth, and Giammarise, 2017).

In an effort to accurately reflect waitlists and keep track of where displaced citizens are going/have been, apartment buildings could pool together databases of residents and waitlist. This way, organizations can track movement of displaced citizens and update waitlists accordingly.

The city could also start considering the possibility of building community resources supported by HACP in transitional housing. As mentioned earlier, the city has the reach and support to deliver resources to residents in this situation to free up this supply bottleneck.



Discussing the next steps and further research we'd do for this project, if we had more time.

bibliography

ACTION-Housing. (n.d.). Retrieved January 30, 2017, from <http://actionhousing.org/>

Belko, M., Smelth, A., and Giammarise, K. (2017). Peduto asks developers to house displaced Penn Plaza residents. Pittsburgh Post-Gazette. Retrieved March 6, 2017, from <http://www.post-gazette.com/business/development/2017/02/22/Mayor-Bill-Peduto-asks-East-Liberty-developers-to-find-homes-for-displaced-residents/stories/201702220204>

Brooks, E., personal communication, February 15, 2017.

Design Center Pittsburgh. (n.d.). Retrieved January 30, 2017, from <http://www.designcenterpgh.org/what-we-do.html>

East Liberty Development. (n.d.). Retrieved January 29, 2017, from <http://www.eastliberty.org/>

Fuller, D., personal communication, February 17, 2017.

Housing & Urban Empowerment Transition Team. (n.d.). Retrieved January 30, 2017, from <http://pittsburghpa.gov/mayor/transition/housing-urban-empowerment>

Make Our Neighborhoods Safe With New Affordable Housing. (n.d.). Retrieved January 29, 2017, from http://apps.pittsburghpa.gov/mayorpeduto/HU_LowInc.pdf

Neighborhood Allies. (n.d.). Retrieved January 28, 2017, from <http://neighborhoodallies.com/>.

Romito, R., personal communication, February 19, 2017.

Tobusto, D., personal communication, February 19, 2017.

TREK Development Group. (n.d.). Retrieved January 28, 2017, from <http://trekdevelopment.com/>

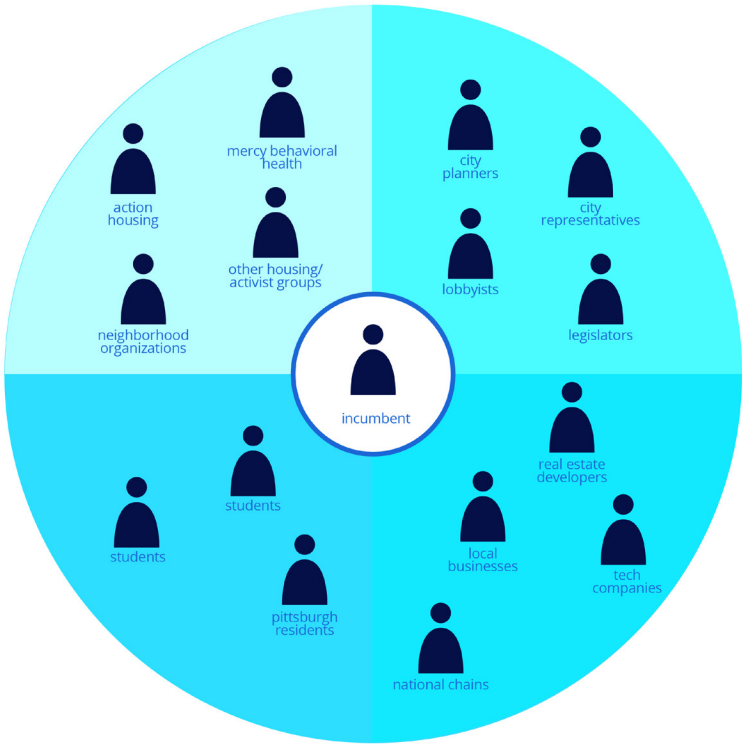
Urban Innovation21. (n.d.). Retrieved January 30, 2017, from <http://urbaninnovation21.org/>

appendix

Over the course of our research we gathered a large quantity of data and produced many visualizations and analyses of what we found. In this appendix we have added most of our processed information: our affinity diagram, stakeholder maps, personas, journey maps, contextual models, and a detailed step-by-step description of our process, among other things. Having conducted all this research and analysis, we present it here in the hopes that you may find it useful and enlightening.

- domain research..... 52**
- contextual inquiry tools.....55**
- contextual models: eleanor..... 58**
- contextual models: emil.....61**
- contextual models: sam..... 64**
- contextual models: dave.....68**
- affinity diagram..... 70**
- full process documentation.....72**

domain research



A map of the stakeholders in the affordable housing and gentrification issue in Pittsburgh. The stakeholders progress through a gradient that conveys the lack of distinct difference between the groups. The categories that are most similar are adjacent in location and color, except for organizations and outside individuals, which are very different.

actors

citizens
city planners
companies
municipal government
action housing
mercy behavioral health
neighborhood organizations
developers/realtors
students

activities

building
tearing down
starting up
razing and building new things
raising prices
protesting/lobbying
legislative action
organizing
political agendas
community bonding

places/context

pittsburgh
east liberty
hill district (historical context)
strip district
bloomfield, lawrenceville
lower economic district
zoning
ethnic group neighborhoods
saturated housing
geography and location affect

racism and class issues
people remaining after "white flight"
divisions entrenches
routes blocked off from former
trade routes
college town and education

trends/patterns

minorities pushed out
lower economic groups pushed out
displacement
rent hikes
"hipster" local food
startups, tech, kickstarters
"white flight"
ethnic groups stick together
wage gap issues
racism

#1 place to work
most livable city

other products

petitions
fund-raisers
homes to people who can't afford it
nonprofits and support groups
apps

desired outcomes

citizens: healthy stable communities
incumbent citizens: preserve traditions
companies: foster innovation in a profitable way
city government: high property values
developers: make profit
allies: economic equality

our desired outcome:
legislation
balance
raising awareness for incumbents

An ecosystem map exploring the domain of affordable housing and gentrification in Pittsburgh.

contextual inquiry tools

Neighborhood	Sector #	Pop. 1940	Pop. 1950	Pop. 1960	Pop. 1970	Pop. 1980	Pop. 1990	Pop. 2000	Pop. 2010	% Pop. Change, 60-70	% Pop. Change, 70-80	% Pop. Change, 80-90	% Pop. Change, 90-00	% Pop. Change, 00-10	Pop. as % of City total (2010)	Land Area (sq. mi)
Allegheny Center	3	4,521	3,862	2,512	632	1,586	1,262	886	933	-74.84%	150.95%	-20.43%	-29.79%	5.30%	0.31%	0.2
Allegheny West	3	3,210	3,313	2,170	1,124	820	654	508	462	-48.20%	-27.05%	-20.24%	-22.32%	-9.06%	0.15%	0.1
Allentown	6	8,227	7,487	6,416	5,361	4,292	3,600	3,220	2,500	-16.44%	-19.94%	-16.12%	-10.56%	-22.36%	0.82%	0.3
Arlington	7	2,702	3,203	4,430	3,949	2,294	2,210	1,999	1,869	-10.86%	-41.91%	-3.66%	-9.55%	-6.50%	0.61%	0.5
Arlington Heights	7	2,413	2,860	2,272	2,037	1,466	1,497	238	244	-10.34%	-28.03%	2.11%	-84.10%	2.52%	0.08%	0.1
Banksville	5	1,214	1,328	2,641	4,927	3,831	4,769	4,540	4,144	86.56%	-22.24%	24.48%	-4.80%	-8.72%	1.36%	1.0
Bedford Dwellings	15	2,663	3,870	4,915	3,800	2,878	2,317	2,109	1,202	-22.69%	-24.26%	-19.49%	-8.98%	-43.01%	0.39%	0.2
Beechview	5	10,853	11,994	14,032	14,360	11,911	9,311	8,772	7,974	2.34%	-17.05%	-21.83%	-5.79%	-9.10%	2.61%	1.5
Beltzhoover	6	8,407	8,153	7,064	5,908	4,206	3,338	2,783	1,925	-16.36%	-28.81%	-20.64%	-16.63%	-30.83%	0.63%	0.4
Bloomfield	12	20,708	20,074	16,715	14,411	11,761	10,405	9,089	8,442	-13.78%	-18.39%	-11.53%	-12.65%	-7.12%	2.76%	0.7
Bluff	15	9,391	8,949	5,955	4,379	4,723	3,220	6,423	6,600	-26.47%	7.86%	-31.82%	99.47%	2.76%	2.16%	0.3
Bon Air	6	814	1,330	1,500	1,428	1,144	1,006	889	808	-4.80%	-19.89%	-12.06%	-11.63%	-9.11%	0.26%	0.3
Brighton Heights	2	11,515	11,847	11,483	10,604	9,122	8,580	8,050	7,247	-7.65%	-13.98%	-5.94%	-6.18%	-9.98%	2.37%	1.1
Brookline	5	14,721	16,559	20,381	20,336	17,231	15,488	14,318	13,214	-0.22%	-15.27%	-10.12%	-7.55%	-7.71%	4.32%	2.1
California-Kirkbride	3	5,893	5,428	4,235	3,007	1,800	1,156	973	761	-29.00%	-40.14%	-35.78%	-15.83%	-21.79%	0.25%	0.2
Carrick	5	16,534	16,530	16,480	15,855	12,930	11,625	10,685	10,113	-3.79%	-18.45%	-10.09%	-8.09%	-5.35%	3.31%	1.7
Central Business District	16	7,864	7,517	2,211	3,679	3,220	3,785	2,721	3,629	66.40%	-12.48%	17.55%	-28.11%	33.37%	1.19%	0.6
Central Lawrenceville	13	14,148	12,594	10,251	8,043	6,563	5,867	5,106	4,482	-21.54%	-18.40%	-10.60%	-12.97%	-12.22%	1.47%	1.0
Central Northside	3	12,486	11,538	9,897	6,492	4,665	3,723	3,200	2,923	-34.40%	-28.14%	-20.19%	-14.05%	-8.66%	0.96%	0.3
Central Oakland	14	7,852	8,452	6,701	6,135	5,872	5,406	5,281	6,086	-8.45%	-4.29%	-7.94%	-2.31%	15.24%	1.99%	0.3
Chartiers City	4	935	1,049	1,014	1,156	772	569	595	477	14.00%	-33.22%	-26.30%	4.57%	-19.83%	0.16%	0.1

source: http://www.pittsburghpa.gov/dcp/snap/raw_data.

cheat sheet

mission
Remember the mission of our project: Empowering displaced citizens of East Liberty to achieve stable housing. The purpose of the interview is to find what's keeping the interviewee from achieving stable housing. Keep the conversation on that purpose.

- tips**
- Make eye contact, smile, be interested and engaging.
 - Show empathy when asking questions. If they don't want to talk about it, don't talk about it.
 - You are not the expert. Be gracious--you are trying to learn from them.
 - Remember you're on a time limit! Even if you both get really into the interview, you have to go home sometime. Know when to move on from a topic, especially if it's not related to our project mission or interview purpose.

- interview outline**
1. Introduce yourself, the project, and what you're going to be doing. Obtain consent to record. (10 MIN)
 2. Conduct the interview. Guide conversation towards gentrification-related obstacles to achieving stable housing. (1 HR)
 - Ask about present living situation. (15 MIN)
 - Introduce Retrospective and explain its purpose, then have them fill it out. (10 MIN)
 - Ask about past living situation, while working on Retrospective or guided by how they filled it out. (20 MIN)
 - Ask about future living situation. (15 MIN)
 3. Ask any lingering or last-minute questions. (10 MIN)
 4. Thank them for their time. Make sure you can get in touch with them again. (10 MIN)

remember to record

A cheat sheet we utilized during our field interviews to help remind us of our purpose and techniques.

housing retrospective

name_____ date_____

The worksheet below is meant as a guide to think about and track your living situation(s) over the past few years. Please include details in the boxes about why and how you changed living situations.

living situation	spring	summer	fall	Winter
	year_____	year_____	year_____	year_____
	year_____	year_____	year_____	year_____
	year_____	year_____	year_____	year_____

Your information is for research purposes. Your name and information will not be used for any other purposes.

A retrospective activity for data collection. After assessing the different data collection tools that were introduced last class, we decided that our research would be most helped by a retrospective chart to help people remember their experiences. We thought that to understand housing stability, we must first understand housing instability. Thus, we hope to track how people shift from various living conditions.

housing retrospective

name_____ date 2-15-17

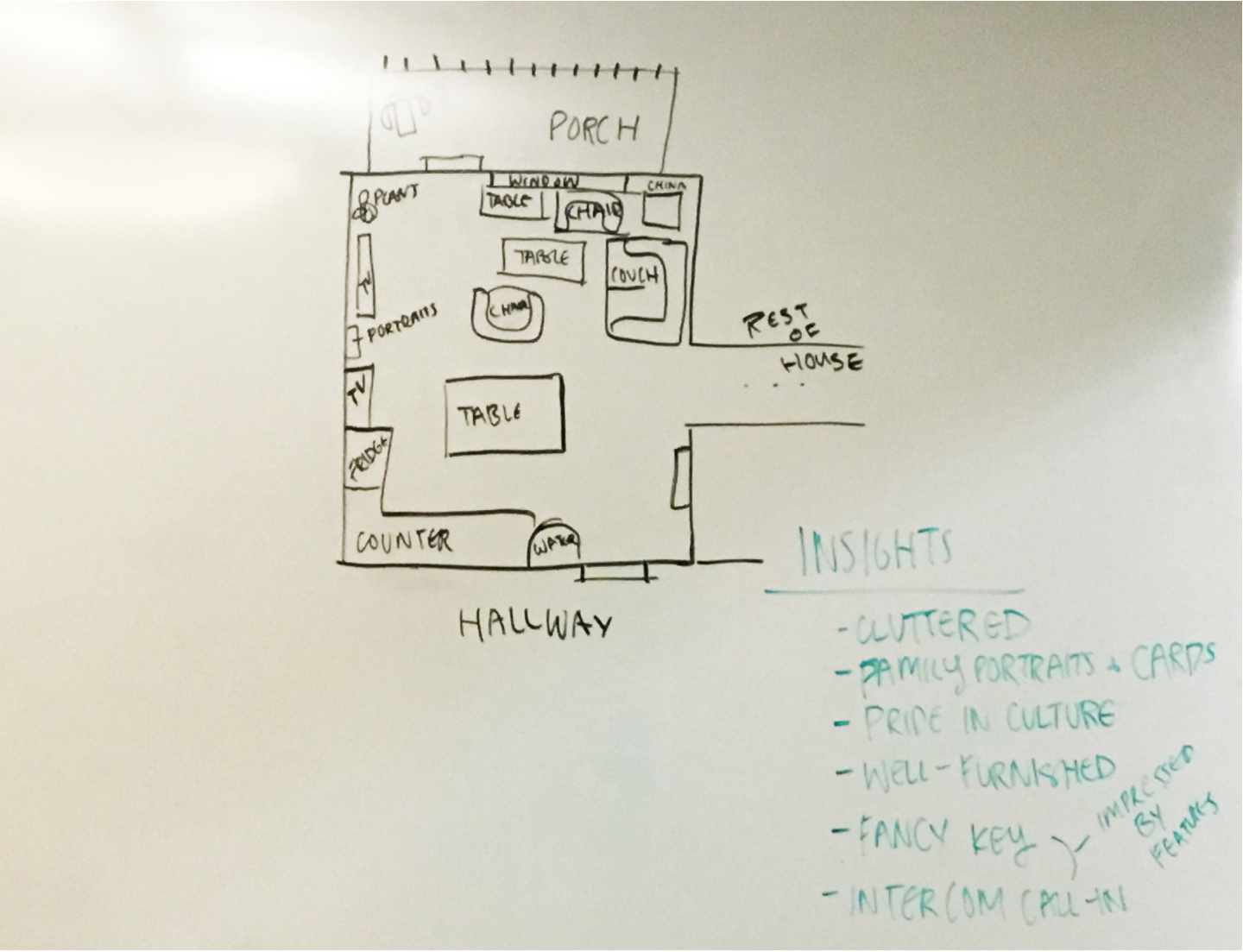
The worksheet below is meant as a guide to think about and track your living situation(s) over the past few years. Please include details in the boxes about why and how you changed living situations.

living situation	spring	summer	fall	Winter
East Liberty Gardens ELG	year 2007 I lived there for 10yrs. It was an apt complex that was over crowded and in much need of being remodeled, really it needed to be closed down and taken over by by the Psh Housing Authority to be torn down + redeveloped. ELG, a part of the Larimer Area had long been forgotten about + was allowed to become rundown + drug infested	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year <u>2007</u>	year_____ year <u>2016</u>
Silver Lakes Senior Apt Complex	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year <u>2016</u>
Larimer / East Liberty Apts.	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty	year_____ relocated from through the choice Neighborhood Grant, the ELG-3/10 through Urban strategies program was developed for the relocation process purpose of helping ELG residents, smoothly transient to different housing. I chose SLC, which was Authority -they helped alright but I was the youngest resident + me find this apt I didn't particularly care for the atmosphere and I didn't want to end up having year 2017 to move to far from East Liberty

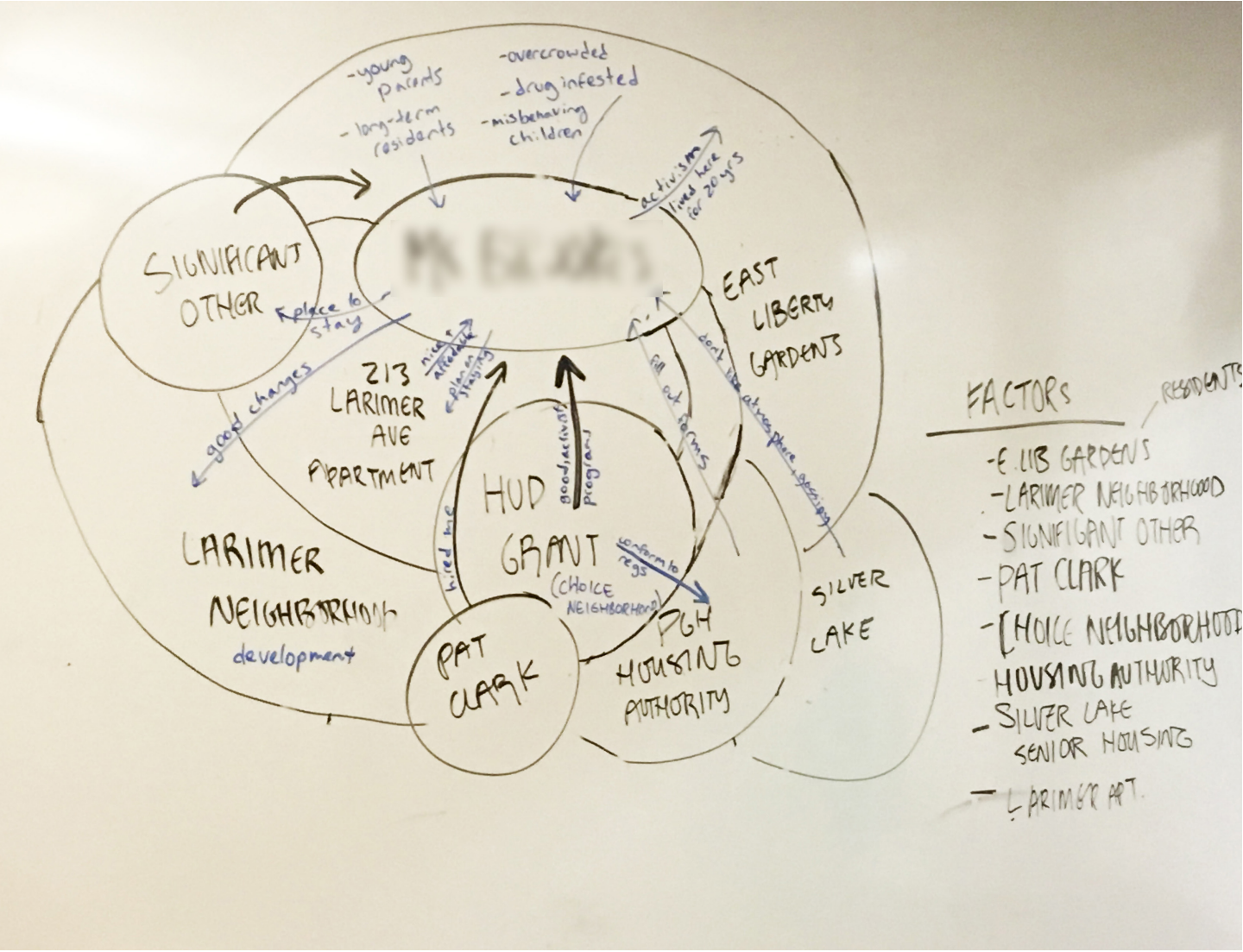
Your information is for research purposes. Your name and information will not be used for any other purposes.

Eleanor's detailed completion of the housing retrospective chart. We used what she wrote as a jumping-off point to go into more detail, and as is evidenced by the overflowing text, the chart helped her start thinking about her past living situations. Tellingly, the notes for her current location are blank, as she had little complaints. [name is blurred out for confidentiality.]

contextual
models:
eleanor

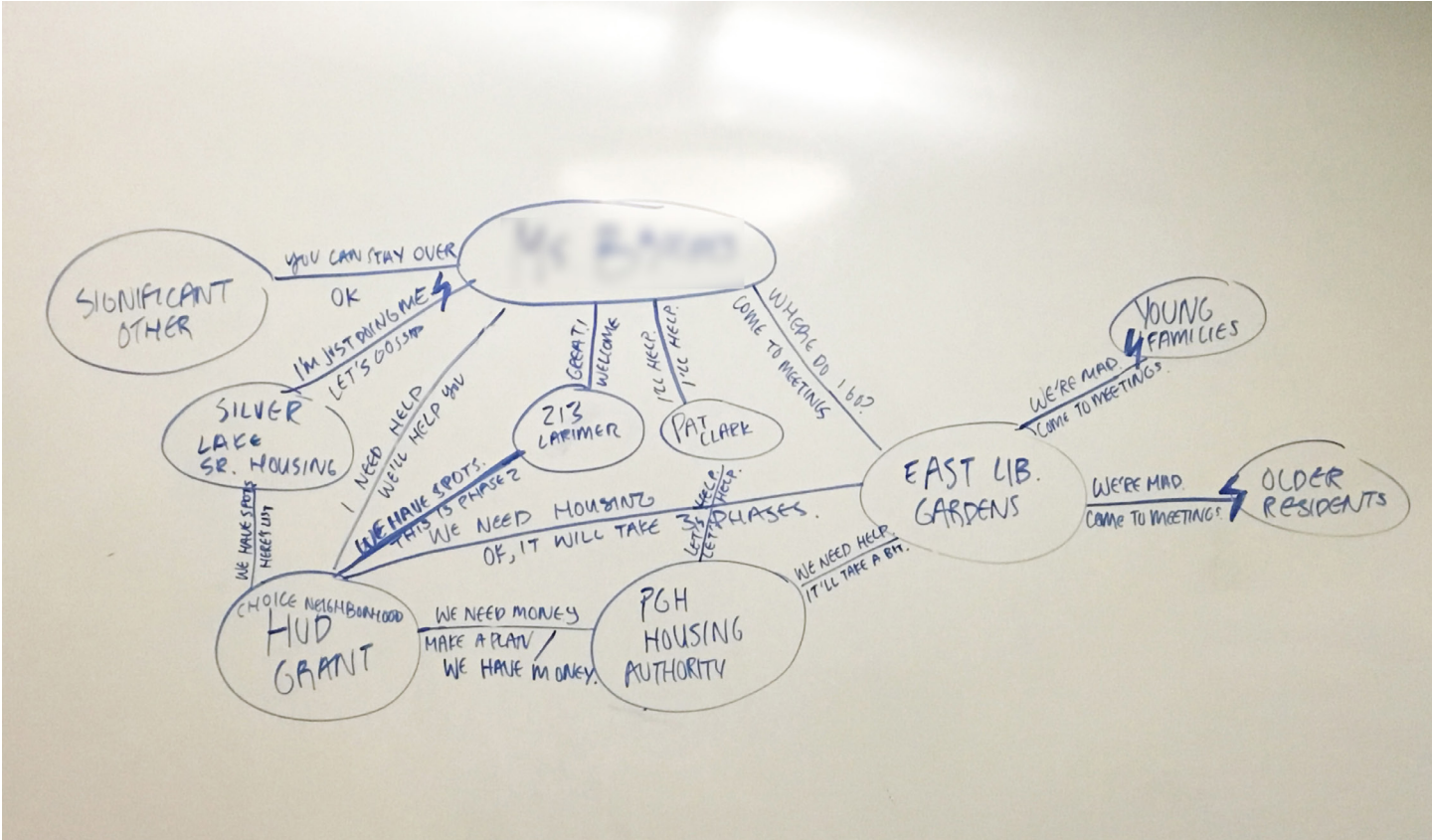


A physical model of Eleanor's current apartment on Larimer. While small, it is very well-furnished to the point of clutter—she mentioned that the designers expect one person to live there, but she has her partner over often. The electronic key to enter the apartment, as well as the intercom, shows how new and high-end the building is. Eleanor had a plethora of images and documents depicting famous African-American figures as well as Afro-centric art, showing her pride in her culture.



A cultural model of Eleanor. Drawing out the model helped us realize the significant influences on Eleanor, including Pat Clark and the Housing and Urban Development grant. The places she lived, including East Liberty Gardens and her current Larimer Ave. apartment, are located close to each other and thus overlap. [name is blurred out for confidentiality.]

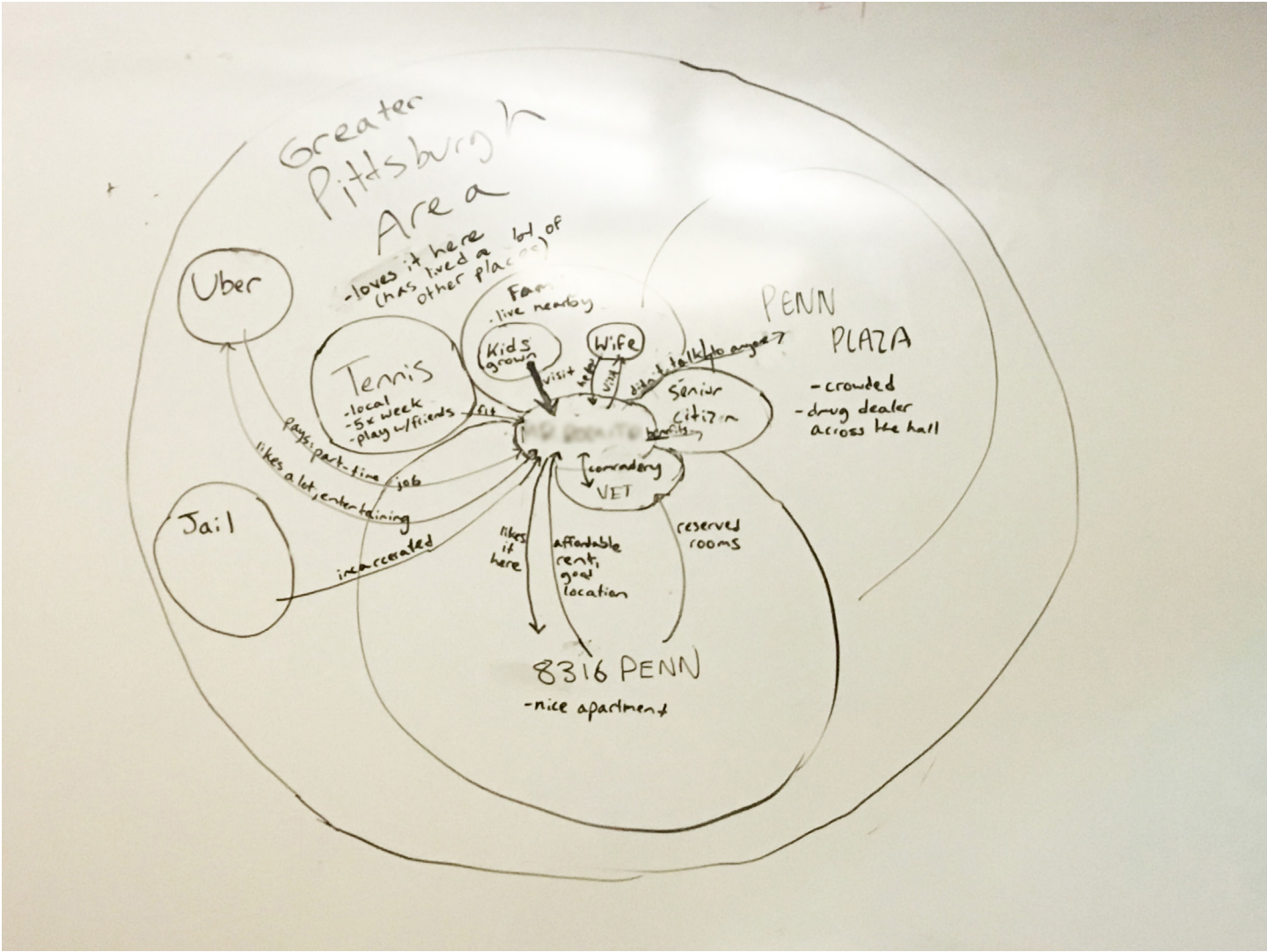
contextual
models: emil



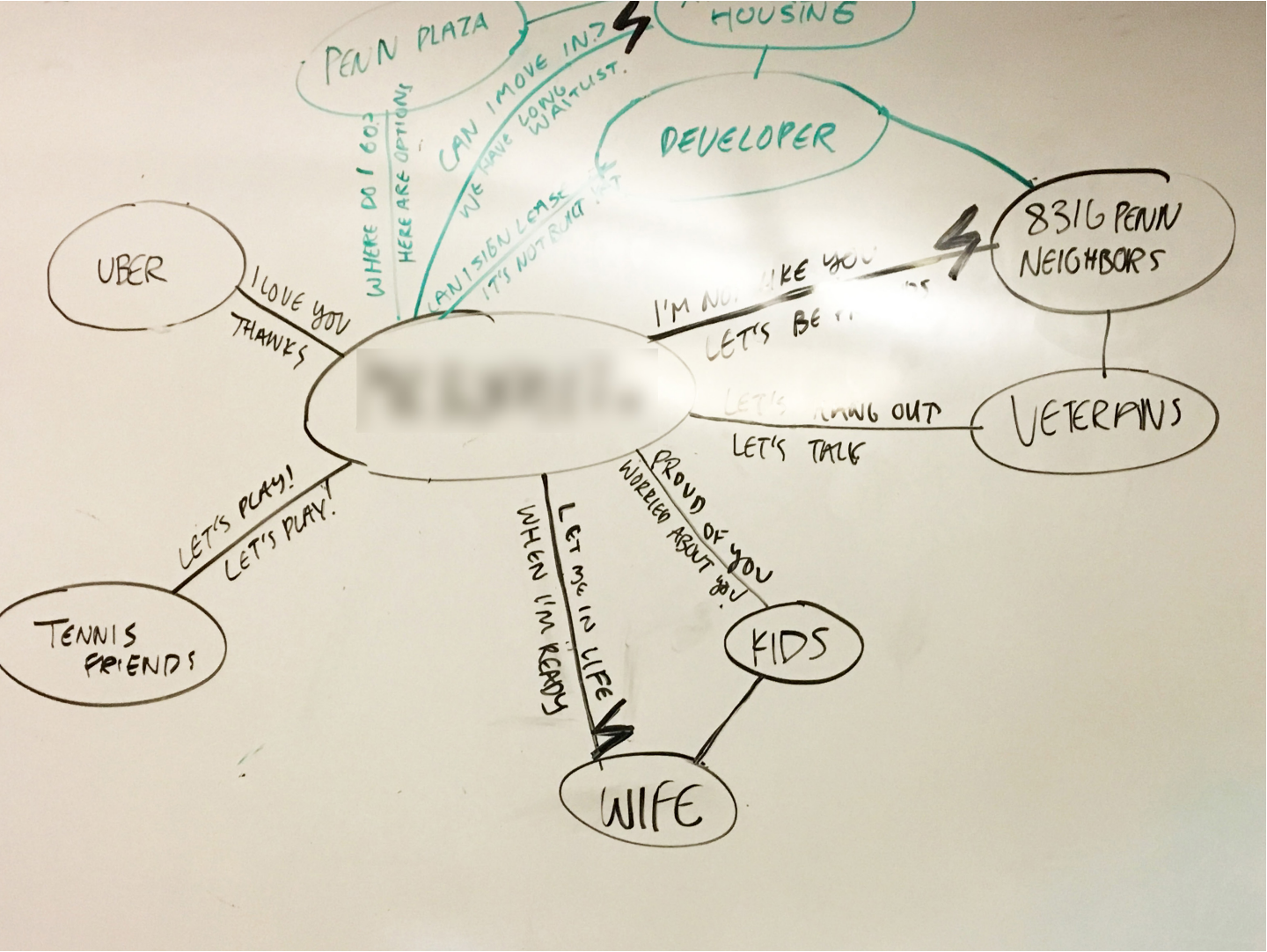
A flow model of information to and around Eleanor based on her interview. The relationship that stood out to us was the connection between the Housing Authority of the City of Pittsburgh (HACP, or "PGH Housing Authority") and the HUD grant, in which the HACP asks for money and the HUD grant organization not only provides funding, but a plan for the HACP to follow. The other relationships we noted were between the East Liberty Gardens (ELG) residents, who were not on the same page as the ELG management. Eleanor identified the source of the breakdown as the residents unwillingness to ask for help. [name is blurred out for confidentiality.]



A flow diagram for Emil. The green parts mark Emil's interactions when he was living in Penn Plaza and trying to find new housing. One thing to note is the breakdown between Emil and his neighbors, whom he views as different from himself, as well as the breakdown between him and his wife, who is nonetheless and important figure in his life.

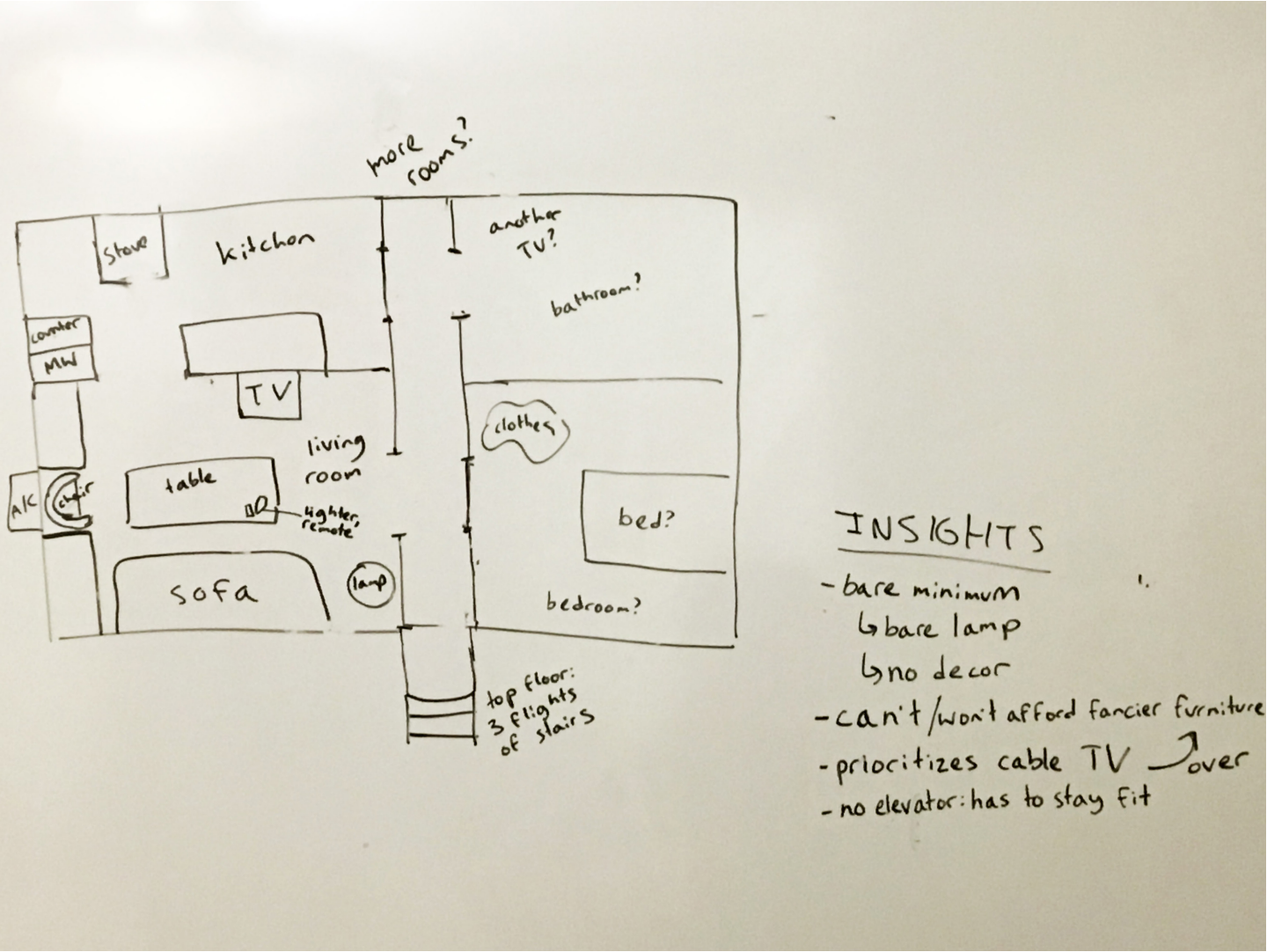


A model of the cultural influences on Emil. His family has a great influence on him, especially his children. One significant reason he gave for his current location is its close proximity to his children and wife, as well as his love for the greater Pittsburgh area. [name is blurred out for confidentiality.]

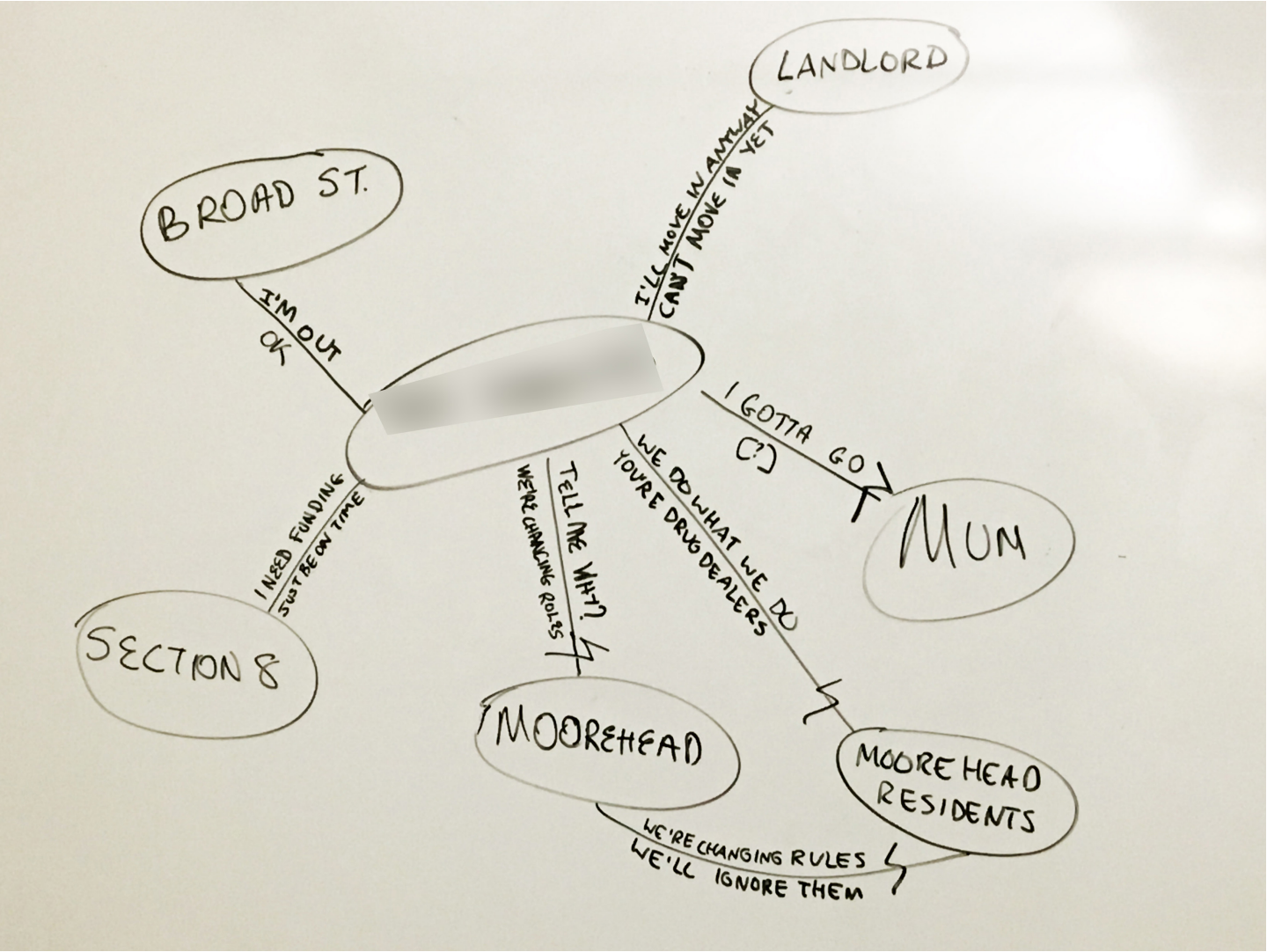


A physical model of Emil's current apartment. While small, it is rather upscale, especially considering the rent cost. The neat, even minimal appearance of Emil's apartment reflects his military training, and his love of travel is reflected in his already-packed suitcase. While he has lived here for a few months, the newness of the building is evident, which is another possible reflection of Emil's military experience and transient lifestyle—he has had very little impact on his living space. [name is blurred out for confidentiality.]

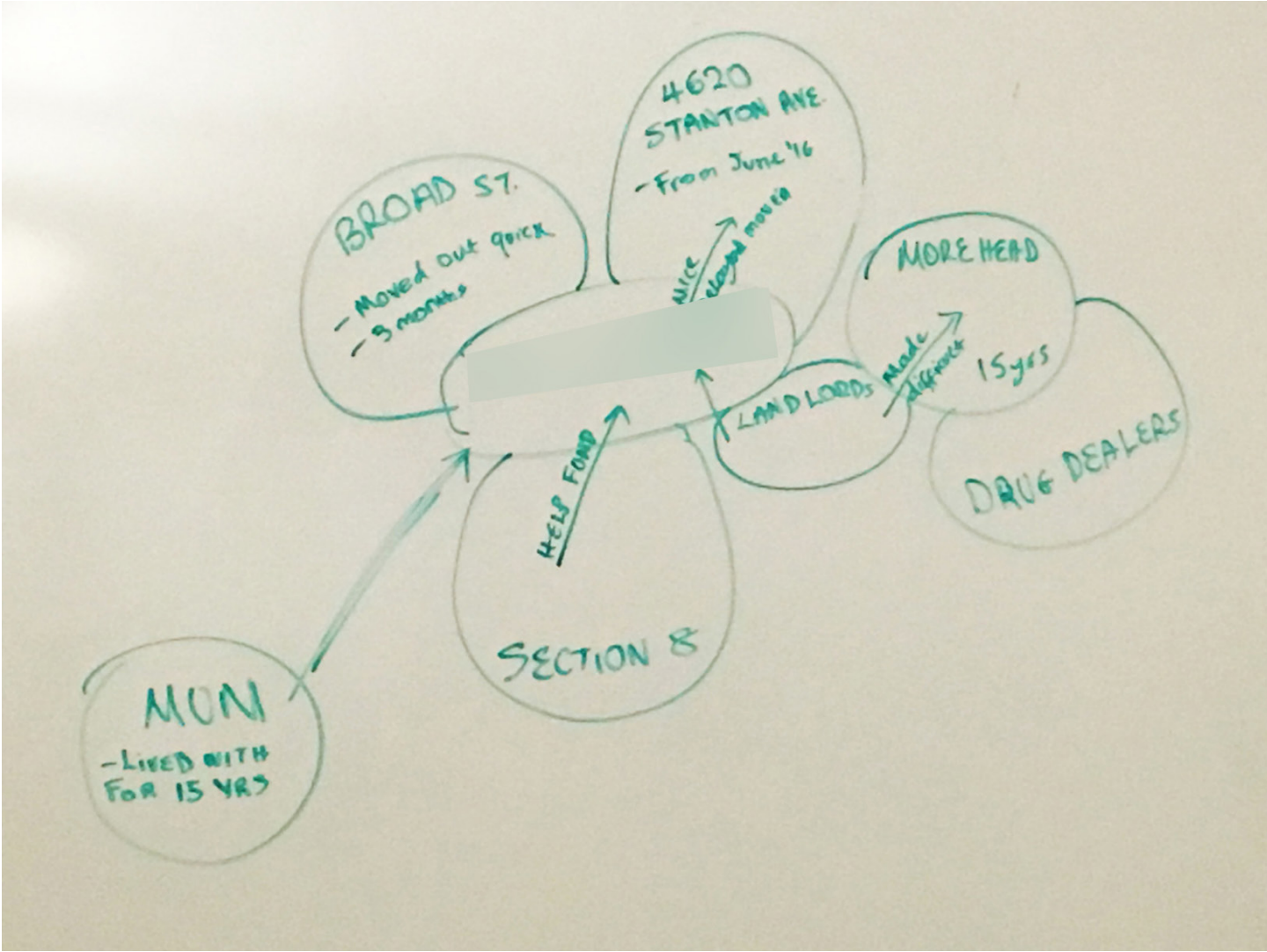
contextual
models:
sam



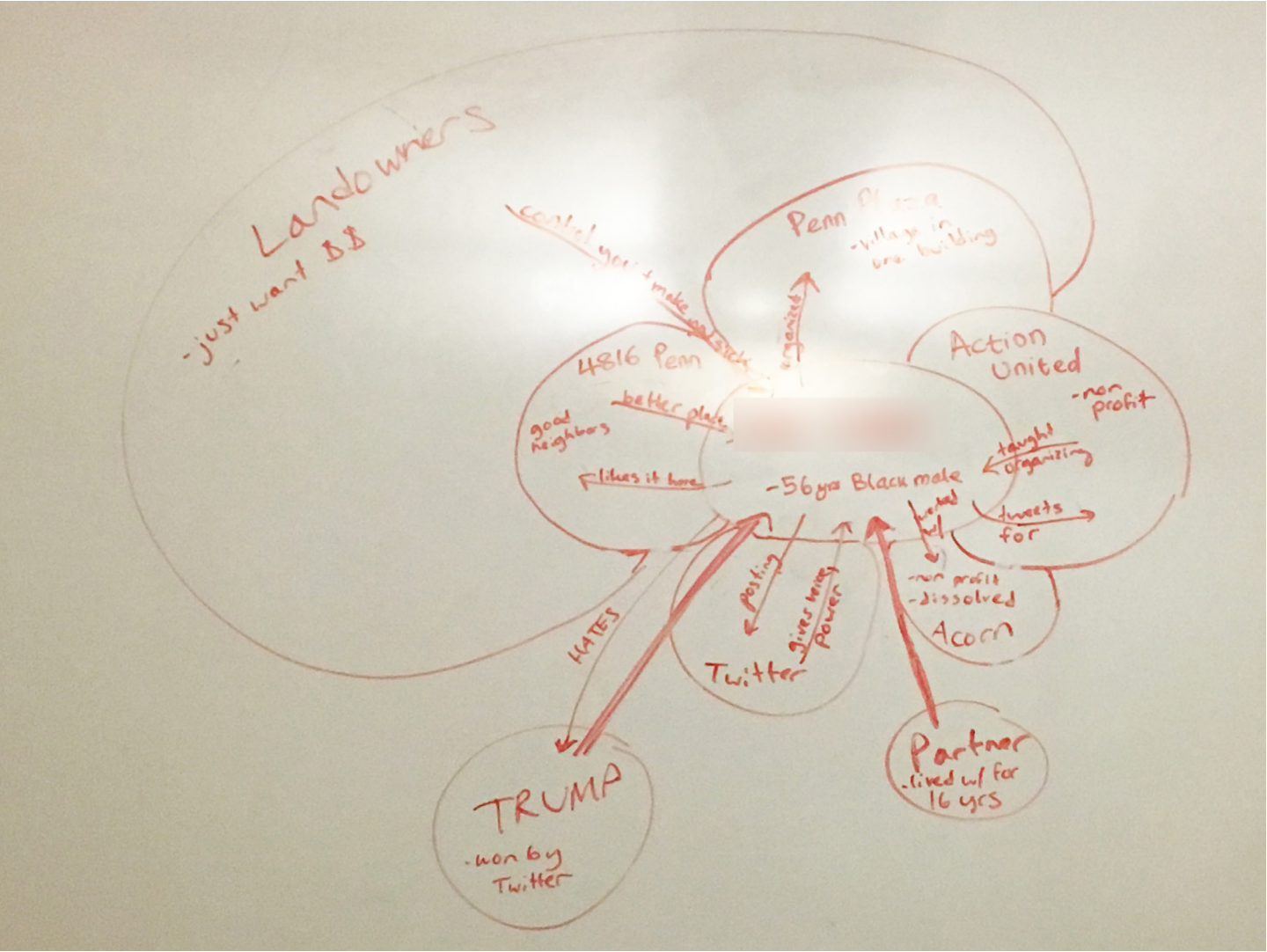
A physical model of Sam's apartment. We did not get to see the entire apartment, so we indicated objects and rooms that we are unsure about. While Sam's apartment is small, with the bare minimum of furnishings, he is quite happy here, indicating that he doesn't place a high value on upscale decor or furniture. Instead, he prioritizes his cable TV access, as shown both here in the model and in his interview.



A flow model for Sam. What jumps out is the complete breakdown of communication between Moorhead Towers, its residents, and Sam. The primary problem Sam identified in this relationship is the failure of the Moorhead management to communicate the reasons behind their regulation changes, leading to non-compliant residents. In comparison, Sam has an amiable relationship with his current landlord, despite moving in early. [name is blurred out for confidentiality.]

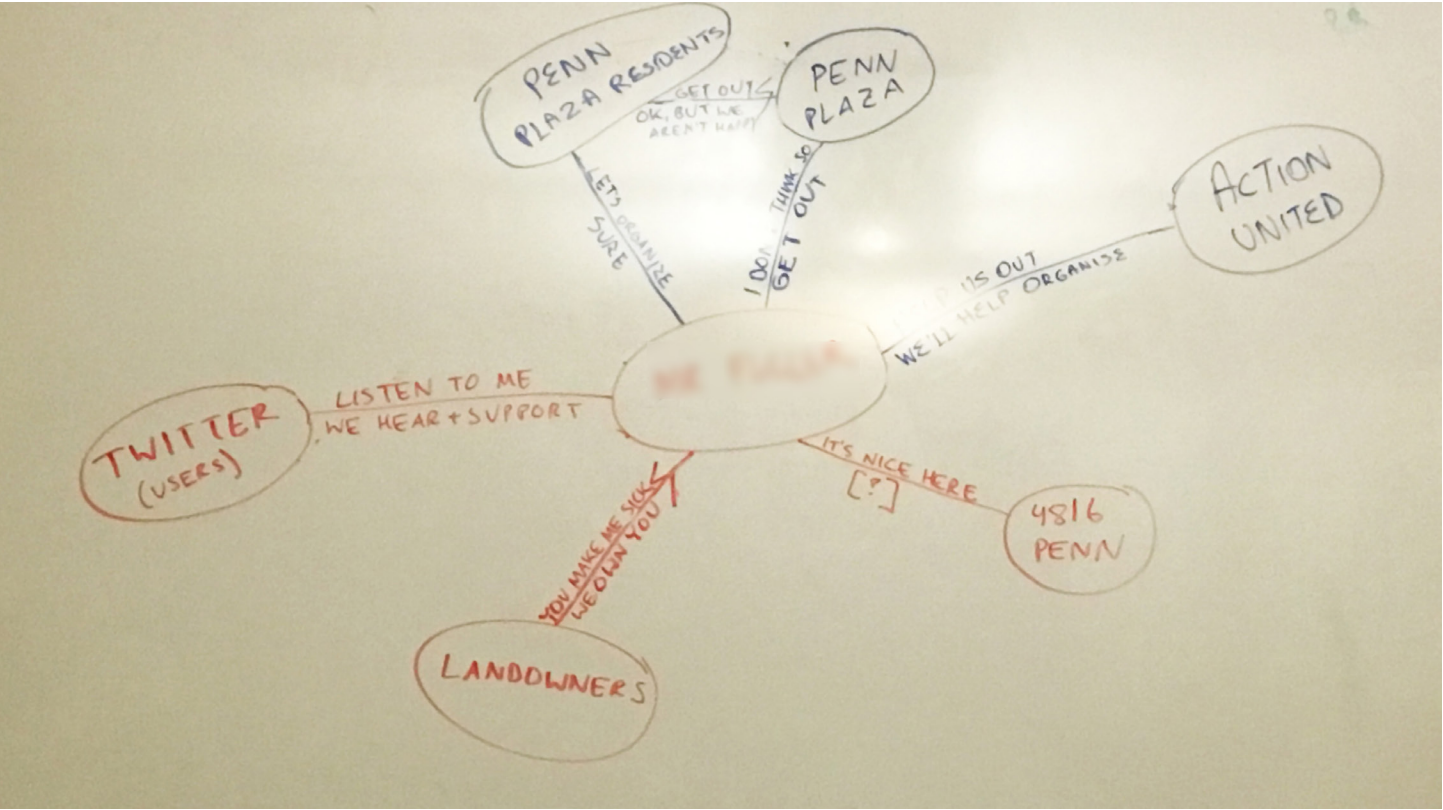


A cultural model of Sam. The time he spent living with his mother, both in Moorhead Towers and on Broad Street, was enough to have a significant influence on him--even if that influence is to encourage him to find his own place. [name is blurred out for confidentiality.]



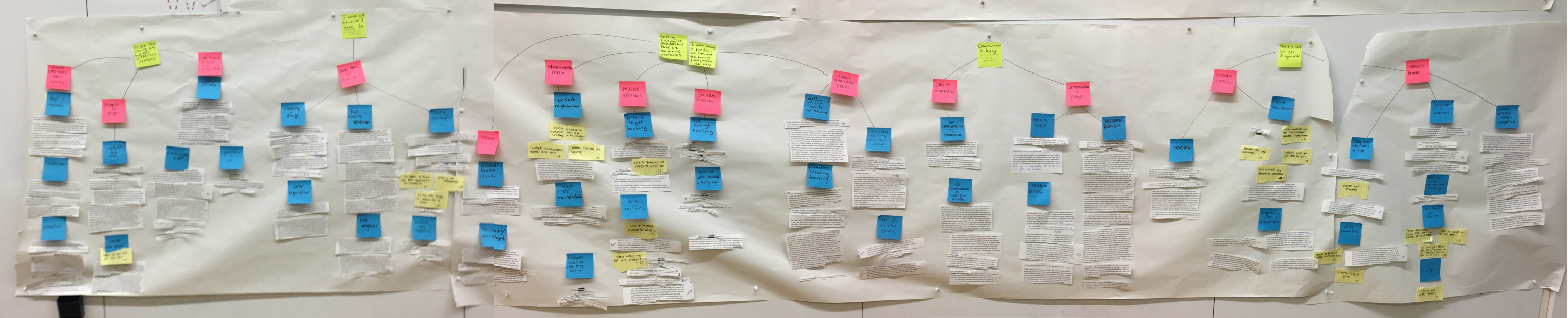
A cultural model of the influences on Dave. Given the extent to which he mentioned President Trump, landowners, and his former partner, we determined that these are very large influences on his values and concerns. [name is blurred out for confidentiality.]

contextual models: dave



A model of the flow of information to and around Dave. The blue parts of the model represent Dave's past relationships while in Penn Plaza, while the red parts represent his current relationships. We don't know how his current apartment building on Penn responds to him, so we left that part of the flow model blank (represented by [?]). The connection between Dave and the landowners succinctly summarizes how Dave views their relationship. [name is blurred out for confidentiality.]

affinity diagram



We took a bottom-up approach. So, our third and final affinity diagram, including categories, sections, and headlines.

full process documentation

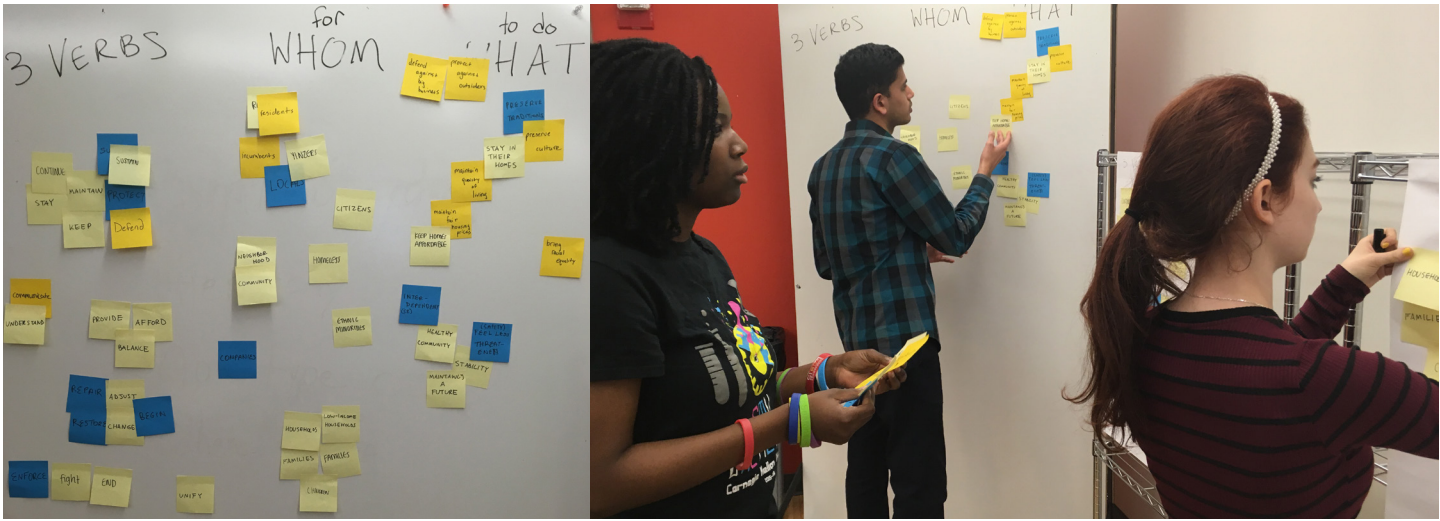
mission statement

Before we started our domain research, we first developed a group mission statement to guide our research process and later design and development. After brainstorming a collection of actions, subjects, and goals using sticky notes, we grouped together related concepts, using that to guide our discussion and find what common threads tugged on us all. After arranging and re-arranging the sticky notes, we finally developed our current mission statement: "To support and empower displaced citizens in achieving stable housing."

Not even being out of the state got in the way of finding our mission: Akshay video-called in to join the group meeting!



Categorizing the different types of organizations.



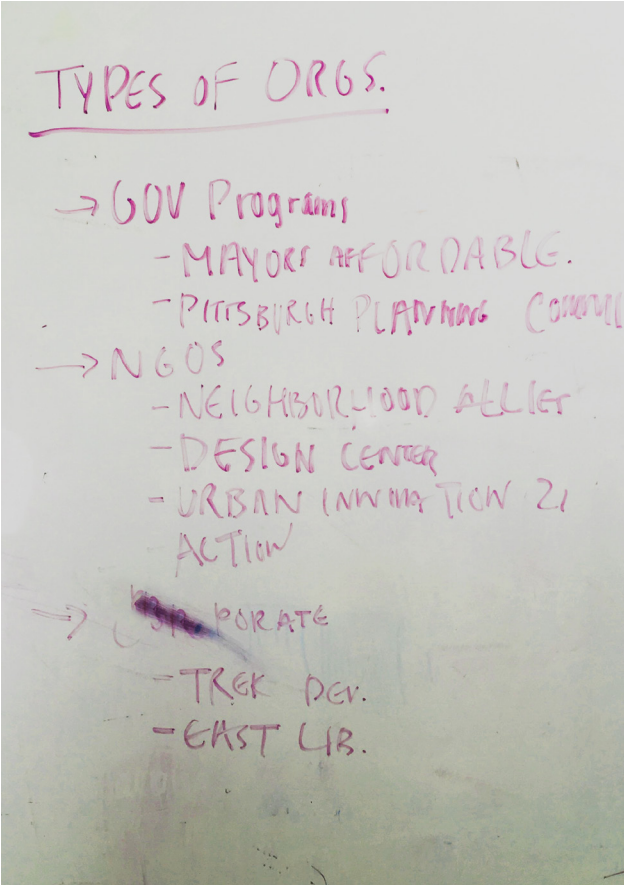
As a group, we post-it noted ideas for 3 verbs, "for whom," and "to do what" in order to come up with our mission statement.



Drafting the competitive analysis matrix.



Meeting to decide the mission statement.



Brainstorming the sections of the matrix.

domain research

Having stated our mission, we moved on to conducting domain research on affordable housing in Pittsburgh. We decided that a Competitive Analysis would be the best method of research for our project, since it would show us what programs and approaches have been successful in the past, and what gaps exist within the existing domain of affordable housing programs in Pittsburgh, that we could then fill. We also researched affordable housing initiatives outside of Pittsburgh, finding interesting approaches like community land trusts and converting vacant buildings to housing. For the purpose of our analytical matrix, however, we decided to focus on Pittsburgh groups and programs from a variety of backgrounds, since our project's aim is to help displaced citizens in Pittsburgh specifically.

competitive matrix

After conducting general research on identifying different Pittsburgh housing groups, we delved deeper into each group's programs and mission in order to create an analytical matrix comparing each group. After discussing our findings, we identified six main traits in each group we surveyed, as well as a large gap in resident-driven groups and programs, which may direct and narrow our future research and design. For more details on our development of the competitive analysis matrix, see the matrix itself on page 5.

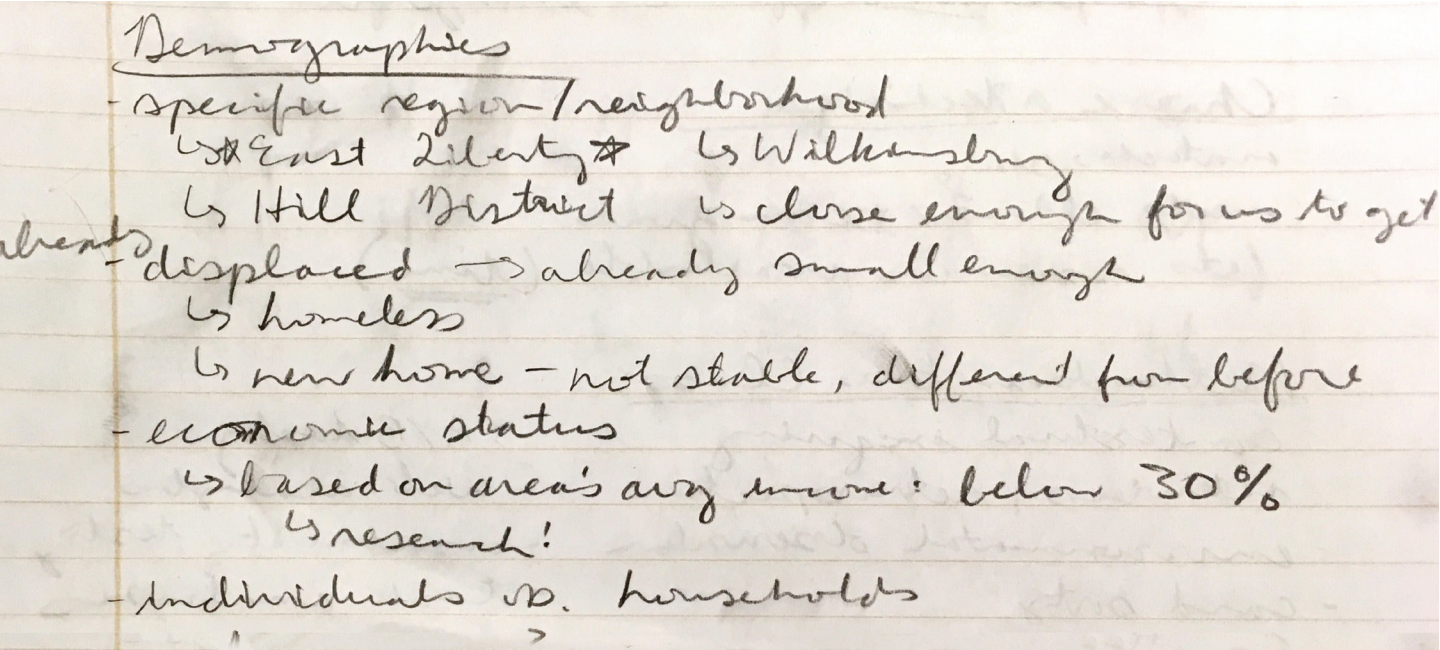
We also located a large data set containing various demographic information on each Pittsburgh neighborhood, which we can use in the future to identify potential areas for further research and targeting.

clarifying mission

After conducting our domain research, we concluded that there was a significant gap in resident-driven programs to address affordable housing. We decided that we would focus on filling that gap, and therefore dropped "support" from our mission statement to emphasize our intent to "empower" displaced citizens to help themselves. We also narrowed our scope to East Liberty, having learned from our research that gentrification has already occurred there and thus it is a prime location to research individuals who have already been displaced.

research project title

We chose our project title when we were discussing things what part of housing we wanted to focus on. We researched different housing issues and found common themes like gentrification, increasing housing problem and demolition of current housing to make way for projects and companies to move into neighborhoods. To identify self sufficient single words to describe these problems we came up with our project title: "Razing and Raising." The two words are similar yet address different issues and problems we want to look into.



Notes we took while figuring out our demographic.



Putting our work together into the document.



Working together on the field guide.

getting participants

Since we had already began looking at organizations’ help with our research topic, we then screened them further using our new demographics discussed in class. We looked up the organizations and companies online and put their contact information (phone number, email address) in a document shared with all the team members. Then each team member picked who they will be contacting. We then wrote up a template to use for emailing and calling so that we are all on the same page and well prepared when contacting each group.

field guide

When designing the interview questions, we wanted to be empathetic to the people we were talking to, by trying not to ask really personal questions and emphasizing their right to withdraw from the interview. We also made sure to say they could decide to not answer a certain question if they felt uncomfortable. In addition to this, we decided to make our interviews concise and as effective as we could so we didn’t take up too much time with our interviewee.

data collection tool

To meet all our objectives and gather the right information, we thought about the advantages of people maps and other types of tools and thought that the retrospective method would work the best. We wanted to be able to see what happened to our interviewee that led to the present living circumstances. In our research we thought it would be important to see why and how they changed their living situations and what they have done since then about their living situation.

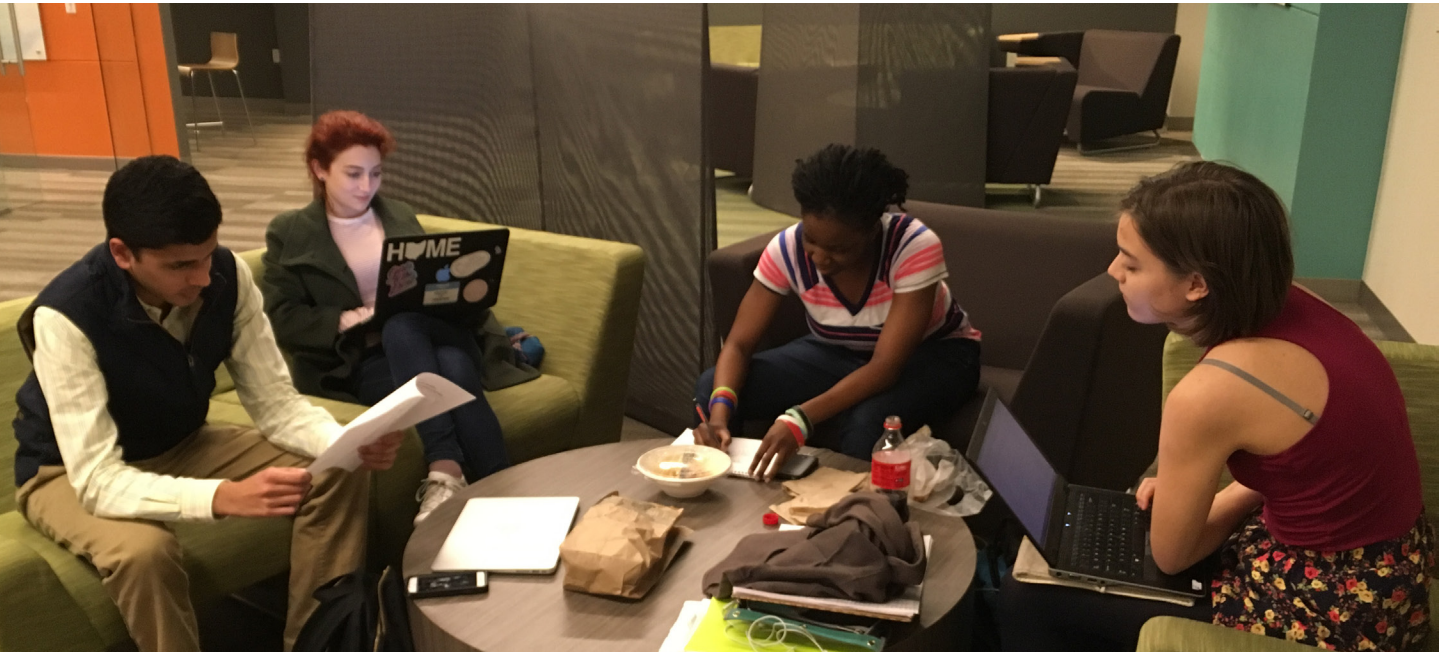
consent form

We combined our knowledge of research and made sure to put all information required, clearly, to give and informed consent on the form. We stated that video/audio recordings will be taken and we restated again the right to withdraw.

interviews and ci’s

We completed 6 interview: 2 with experts, 2 contextual inquiries. Expert interviews, for us, meant speaking with managers of housing complexes and housing organizations. Contextual inquiries involved meeting in the homes of people that had been displaced and relocated. We felt this fit our mission because we wanted to focus on how people could achieve stable housing. So we talked to these people in an effort to find what empowers them to seek help and what stands in the way.

An assumption we had made was that people who had been displaced would want to talk about it. But the topic of housing and homelessness is very sensitive, and so this was definitely not the case.



Meeting together since a lot of work was done in pairs.



Taking the bus to leads on expert interviews and contextual inquiries when we did not receive responses via phone or email.



We walked Penn Plaza, seeing one of the buildings had been completely destroyed.

gathering the data

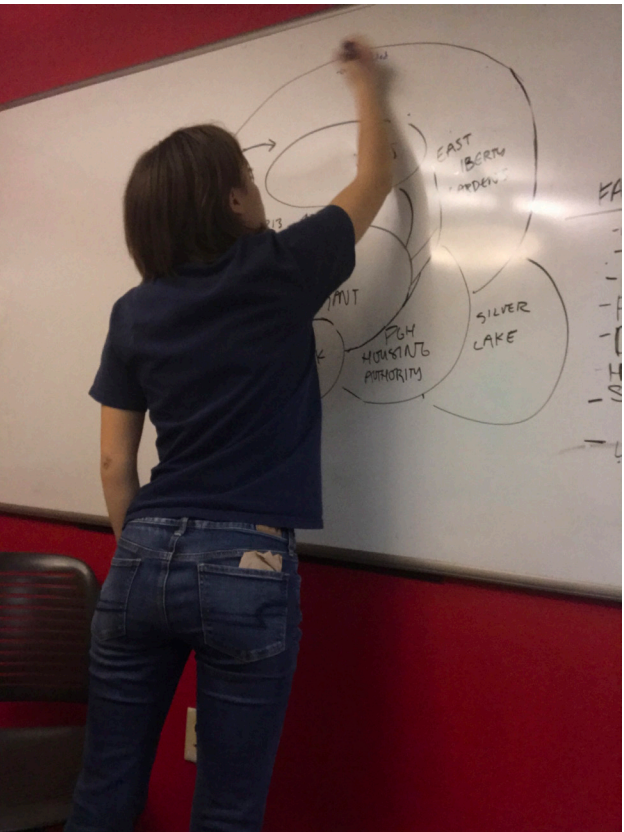
Actually finding people who would let us interview them about the sensitive topic of homelessness and relocation to affordable housing proved to be extremely difficult. For expert interviews, we reached out to many organizations through email, and received little to no responses. From there, we cold called with a bit more success. In the end what proved to be most successful for the interviews was simply showing up at their door and asking if they had time to talk to us. This is what happened for both New Pennley Place’s managerial building, discovered by chance, and Neighborhood Allies. No organizations that we spoke with felt comfortable giving us the contact information of their clients who had been relocated. This challenge was unexpected and set us back on our research timeline by a week. In the end, our professor, Jenna Date, was able to reach out into her network and gather 4 contextual inquiries for us.

We had a variety of different experiences when conducting our CIs. Some of our interviewees were interested in the subject of housing and happy to share their experiences with us, while we had difficulty encouraging others to speak about the topic. It was occasionally tricky to find the homes of our interviewees where we would conduct the CI, but in most cases our interviewees kindly helped us find the location. Overall, it was mind-opening to visit the people who are affected by displacement from East Liberty, see the various different situations they currently live, and hear their varying stories.

We split the interviews between the four of us, based off of our own availabilities and schedules. Each person lead an interview at least once. Since we went in pairs, we always had one person simply listening in and taking notes. With each interview, we also got consent from the interviewee to record the audio of the entire conversation. This provided us with lots of information that we could later transcribe and then cut up for the affinity diagrams. Something unexpected to us was that a lot of interviewees did not feel comfortable filling out the retrospective. Of the 4 CIs, only 2 filled them out, and two different levels of completion.



Typing up transcripts.



Taking over group-work rooms in Hunt Library, we created our charts for each contextual inquiry.

transcribing

We split up the transcribing equally between the four of us. We found that this process took a lot longer than expected. Since all 4 of us could not be at all of the interviews, swapping audio recordings with each other was a good way to get each other on the same page. We also had intermittent team meetings to discuss the interviews and contextual inquiries.

sense-making with charts

While meeting together, we created sequence, flow, cultural, and physical models with the data that we had collected. There were a few times where we were not given enough information for them. For example, with Dave, we were not able to make a physical model. Making the charts was really helpful in understanding breakdowns that existed in communication and within the networks of different people. This type of information and problem identification was very informative to our affinity diagram- building process. We created physical charts which show the space that we interviewed in, flow diagrams that look at communication breakdowns, and charts that looked into the culture and community of each person we spoke to.



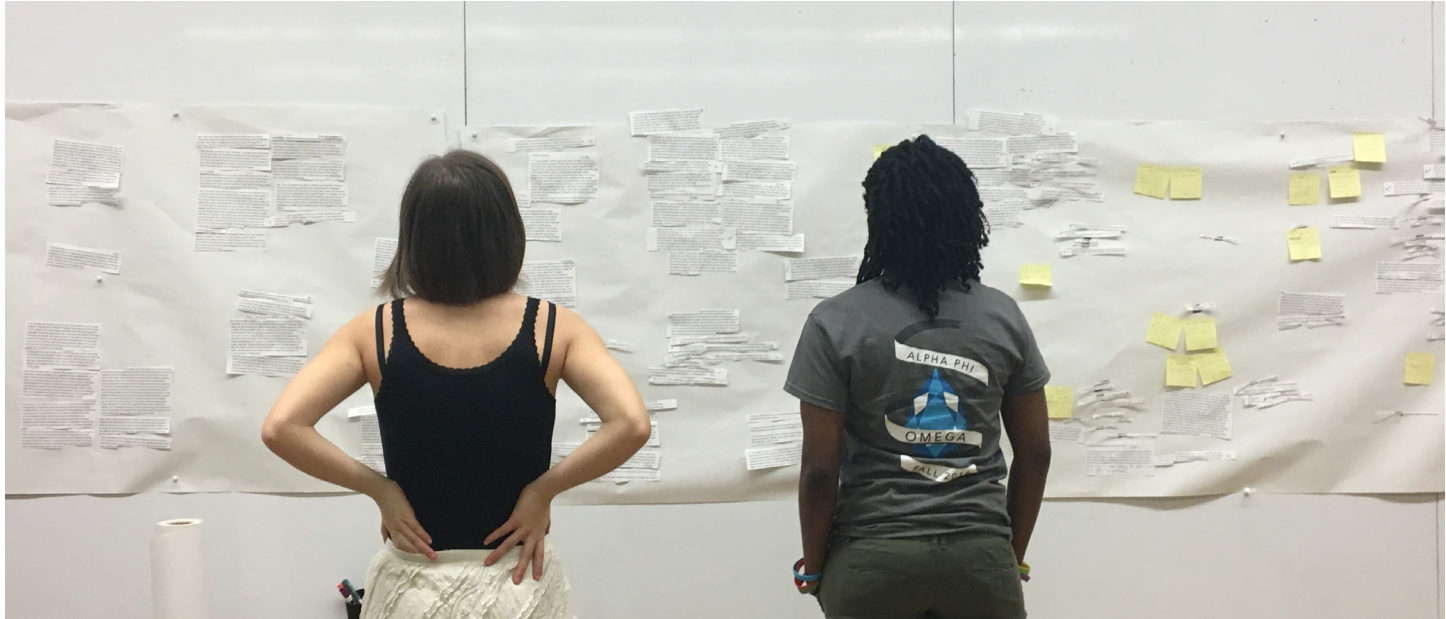
Our first attempt at an affinity diagram, completed during class.

sense-making with affinity diagrams

After each interview had been transcribed, we were able to cut up the quotes from it so that it could be clustered in our affinity diagram. An affinity diagram is a technique designers use to make sense of data.

In our first iteration, when we had only completed the 2 expert interviews, it was more difficult to see relationships between the data. There were lots of different points being made with very little overlap. The information was scattered all over the page so it was difficult to make connections since we did not yet have all of the data.

For our second iteration, we ignored placement again, and focus simply on the grouping of the content. At this point, we had completed and transcribed all of the interviews so it was much easier to make connections. There were a few moments where we found that we had cut up a point that was not really relevant to our data. It was times like this that we remembered Karen Holtzblatt’s lectures and readings about not reducing the data. We only took out data that wasn't relevant. For the rest, we challenged ourselves to find connections and higher-level meaning that accurately described all of our research.



For our second affinity diagram, we clustered similar information together into groupings.



Cutting up the transcripts.



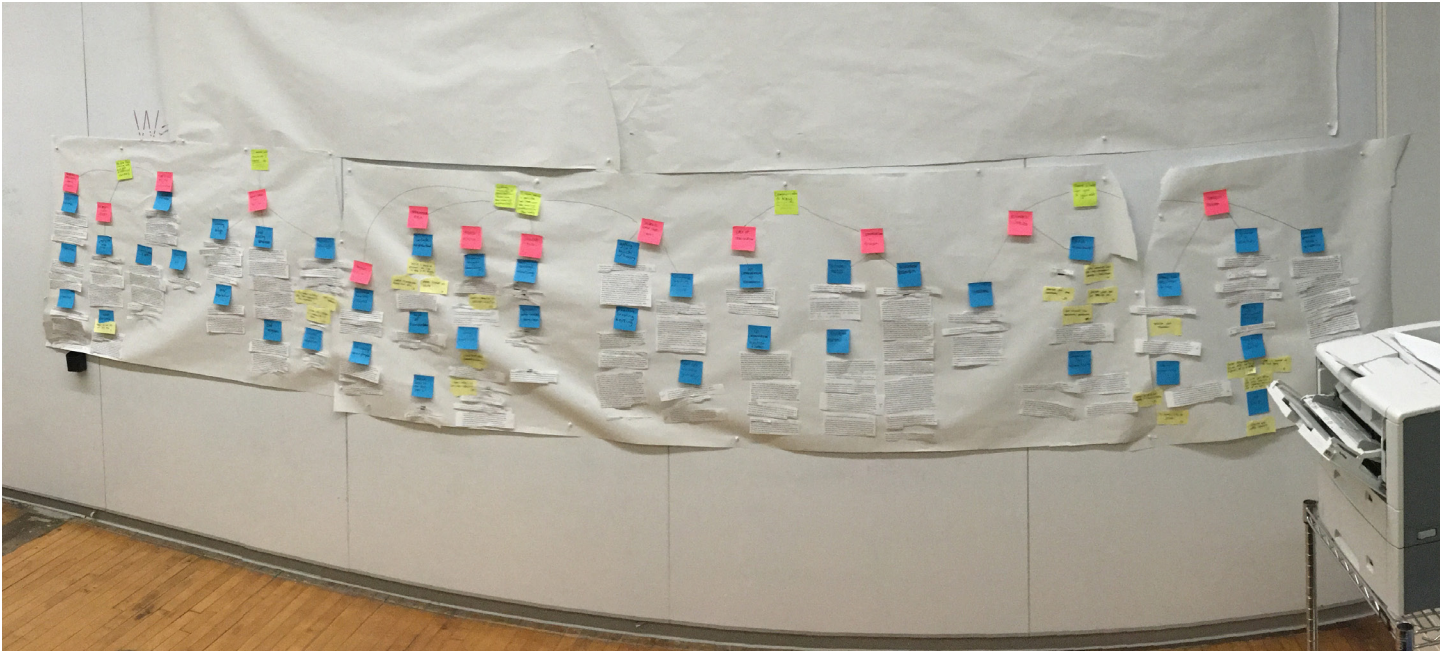
Categorizing the different groupings and rearranging the order they appear on the butcher paper.

For our final affinity diagram, we reorganized all the data that we had categorized. This time, we were much more intentional about it’s location on the page. The left side was more dedicated to feelings of hopelessness and issues in finding housing. The right side dealt more with the gathering of resources, relocation, and ways to empower displaced people.

After this order had been decided on, the column of information naturally began to fall into categories which we marked with blue post-its. Then we, grouped them further into headlines—the pink post-its. Finally, we finished with our “New York Times” sections which we marked with green sticky notes.

The final headlines are (from left to right):

- No one likes moving out, but for different reasons.
- I move out because I have to, not because I want to.
- I know housing is possible, but there are too many problems in the way.
- Communication is key, during and after relocation.
- There’s help for you if you ask.



The final affinity diagram.



Tundun working on interpreting the data.



Bobbie and Faith working on the presentation.



Akshay working on the problem areas and report outline.

data writeup

Tundun handled the majority of the data interpretation for us, since this is her area of expertise. We noticed a bias in the data, since about 90% of respondents both volunteer and donate. Therefore, the main insights that we gathered were on what motivates someone to volunteer or donate, rather than what might deter them.

report outline

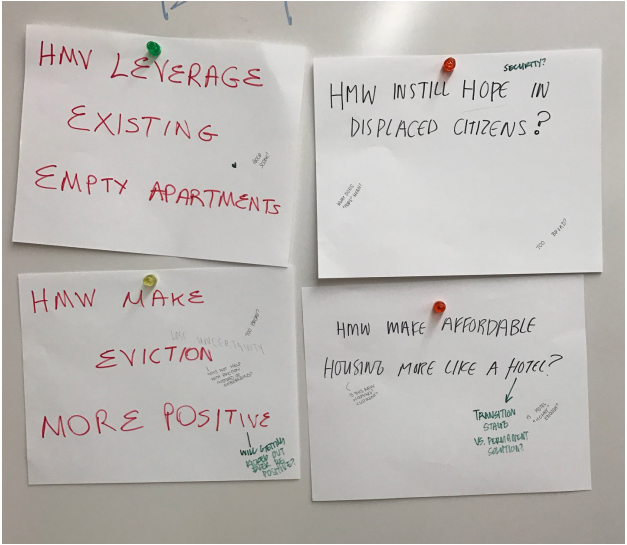
We used the provided report outline and started filling in our content and images that fit each of the different sections.

presentation outline

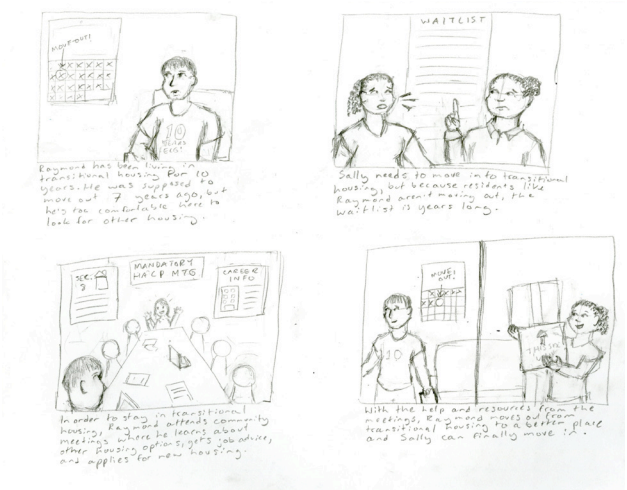
From our report outline, we selected topics that we believe are the most interesting/relevant to our audience. We are keeping our audience front of mind as we continue to write and refine our presentation. We also made the decision to add the stories of two of our interviewees at the beginning of the presentation to serve as a hook.

key problems

To identify our two key problems, we took a step back and synthesized our key findings. We found that these findings, along with other information we'd gathered throughout the process, point towards a sentiment of hopelessness. Additionally, through the number of models we created for each of our interviewees, we found that communication breakdowns were commonplace amongst displaced residents.



HMW statements created in class during a design sprint.



One of the pencil-sketch storyboards.

hmw statements

HMW stands for How Might We and is a technique for coming up with questions that you can use propose in order to create solutions. We started generating our HMW statements in class. Over the following days, we generated over 10 HMW statements. We were mindful to make them neither too narrow nor too broad. We then narrowed down to our two favorite HMW statements, which we believed were balanced in scope and lent to valuable solutions.

storyboards

A storyboard is a drawing that illustrates the context of the problem and the implementation of the solution. To create our storyboards, we closely examined our problem and solution statements. For each of our storyboards, we came up with a context, problem, solution and resolution. Our goal was to set the scene for each story to accurately convey the problem and exhibit its impact at the individual level. We started by sketching rough drafts of the storyboards to brainstorm panels and captions. After that, we finalized our storyboards and sketched our drafts. Bobbie sketched the storyboards and Faith digitized them later.

report outline

The report is where all of our work this semester came together. While content was relatively already finished, we edited our process writeups to consolidate and rewrite them to fit the process report outline. Our largest focus, however, was the design of the report. We wanted it to be beautiful yet user-friendly and digestible.

presentation outline

We created a presentation for the city of Pittsburgh and local housing organizations. The content and solutions that we presented was pulled from our research, but we also used our personas and contextual inquiries in order to bring in a narrative element.

