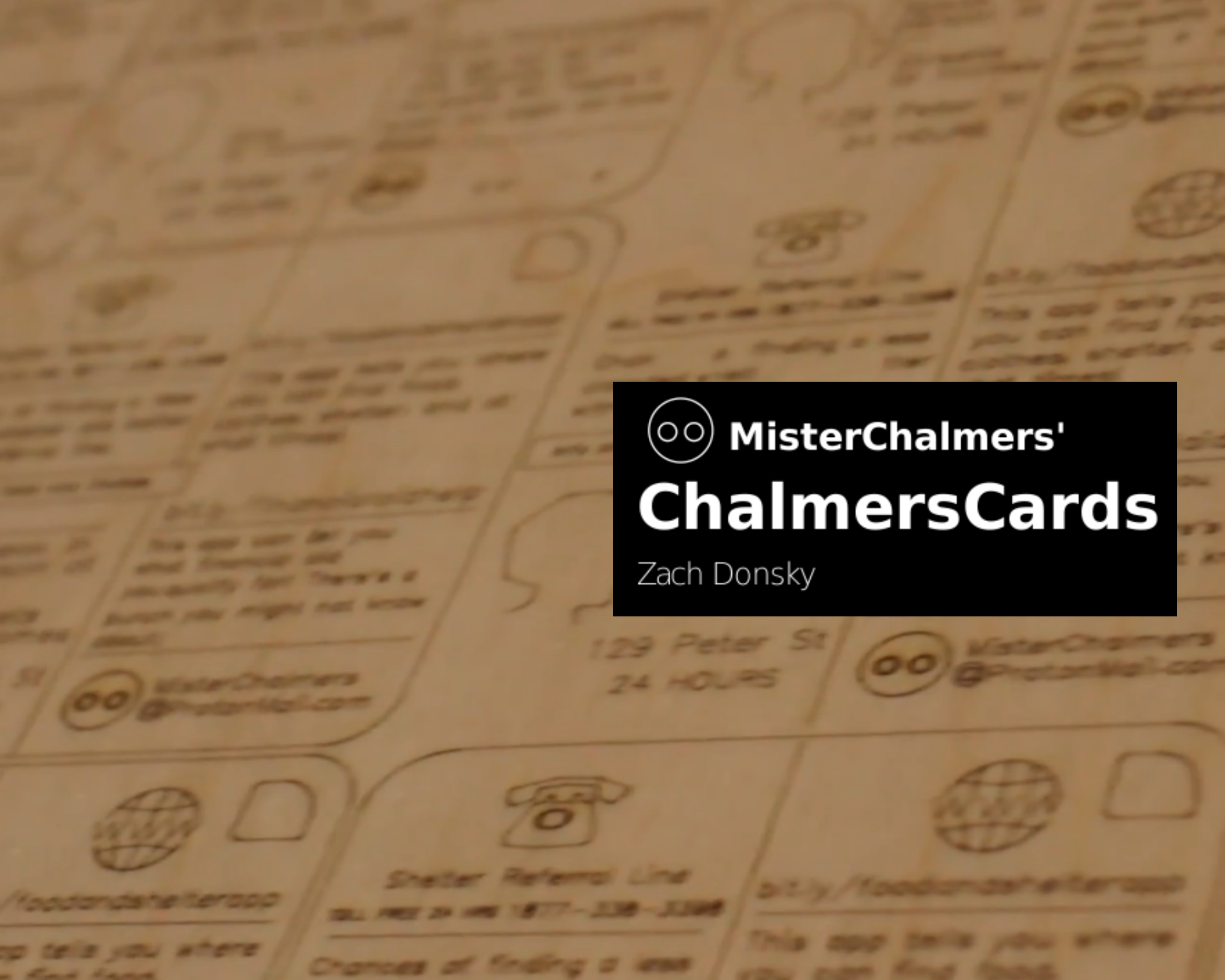

MisterChalmers'
ChalmersCards
Zach Donsky



\\ Shortly after starting this project I made a habit of stopping and talking with the folks I passed by on the street who were panhandling or flying signs. I also started volunteering at a weekly drop-in warming center.

I quickly learned that friendly conversation can be rare, and is nearly always appreciated, for someone who experiences unstable housing. A lot of the folks I talked to were often insulted, ignored, and sometimes assaulted. I tried to show them that I gave a damn about the state of homelessness in Toronto. Often folks were keen to tell me about their lives growing up, and about their experiences on the street.

I learned a lot from these conversations. Later on in the project, after vetting the information on my prototypes, I began distributing Chalmers Cards to the people I spoke with.

I want to be clear that these conversations were never part of a formal research effort. I gained a lot of key insights from these conversations, many of which you'll find in this book. But the intentions of the conversations were only ever to be friendly, or were a byproduct of my attempts to bolster the ranks of front line workers fighting homelessness in Toronto.

I wanted to put a dent in Toronto's Homeless Population.

```
\\ There are more than 6000 Torontonians that
   experience unstable housing. An estimated 600
   Torontonians sleep rough on the street.

   I cannot commute to school without passing a
   fellow Torontonian sitting on the street and
   flying a sign.

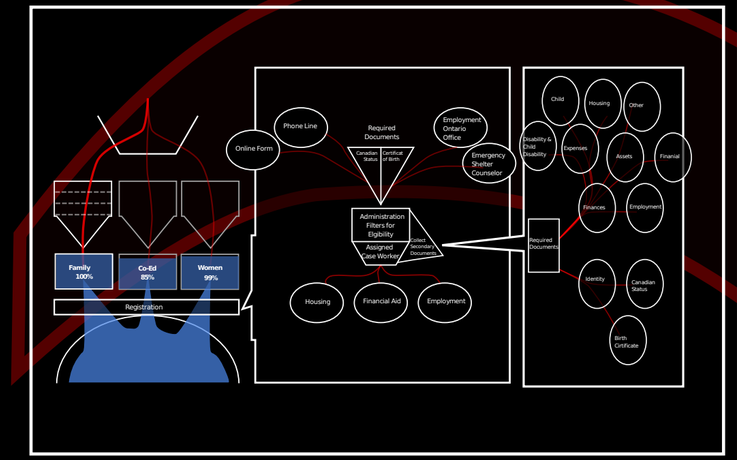
   ---

   This summer I went on birthright with a group
   of my peers. I visited the western wall in
   old Jerusalem. I don't believe in God, but
   while my friends made prayers of their own, I
   promised to find a way to help the homeless
   in Toronto.

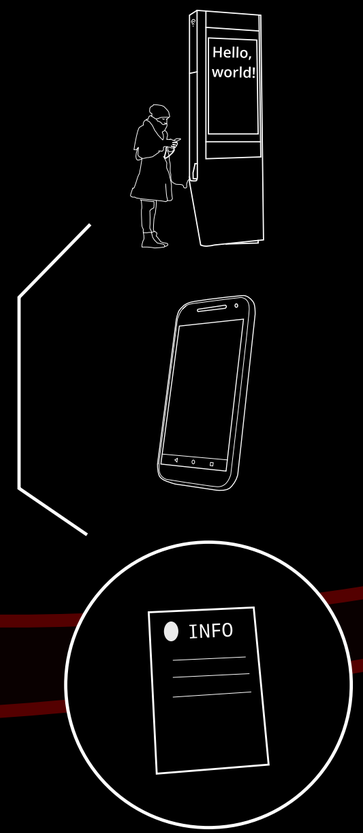
   ---

   It sucks that there are people that have to
   sleep on the street. And it sucks that
   emergency shelters have a reputation for
   being dangerous, wrought with theft, and
   discriminatory.
```

Phase 01 Research







Phase 01 Research



Temporary Shelter

Emergency Shelter

Winter Respite Center

Out the Cold Program

Transitional Housing Programs

Financial Aid

Ontario Works

Ontario Disability Support Program

Support Programs

Neighborhood Houses

Toronto Public Library

211 / 311 / other phone lines

\\ The emergency shelters have multiple tiers, and have sub tiers that they organize their bed supply into . Financial Aid programs have tiers and sub tiers as well. Support program locations and times are peppered throughout the city.

The tiers of each resource usually refers to the quality of service. And a users placement in tiers usually depends on the stability of their current situation, or in their cooperation in a resource's recommended programming.

For example: Ontario Works has a tier of financial aid stipend often referred to as "street allowance" --the amount payed to applicants who sleep rough on the street or in low barrier emergency shelter-- $275/ month. But Ontario Works offers stipends up to $780/month. Larger stipends are payed to applicants who need help paying rent, and who participate in Ontario Works programming.

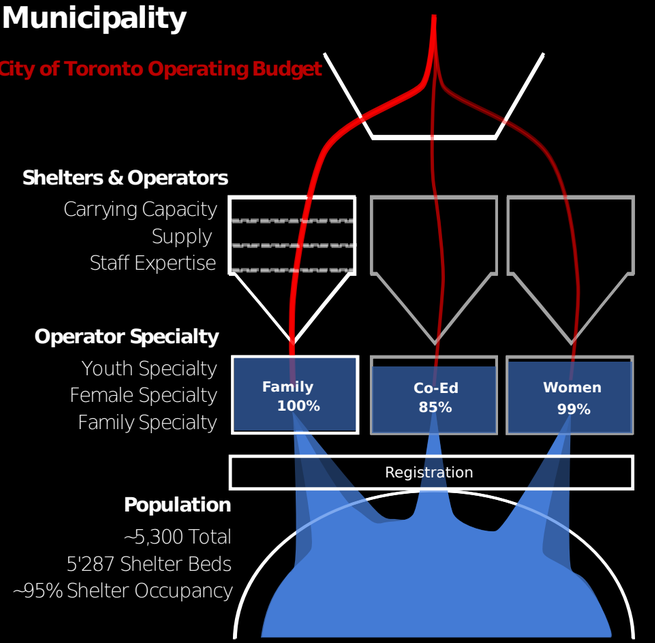
\\ I focused my research of Toronto's existing infrastructure on three perspectives.
* The perspective of the municipality
* The perspective of the applicant
* The perspective of the administration.

\\ The municipality operates an array of emergency shelters which have specialties.

In the chart on the right I have singled out Family, Womens', and Co-Ed shelters. Family shelters and Womens' shelters are the most over crowded shelter types. Co-Ed shelters were included for reference.

Perspective of Municipality

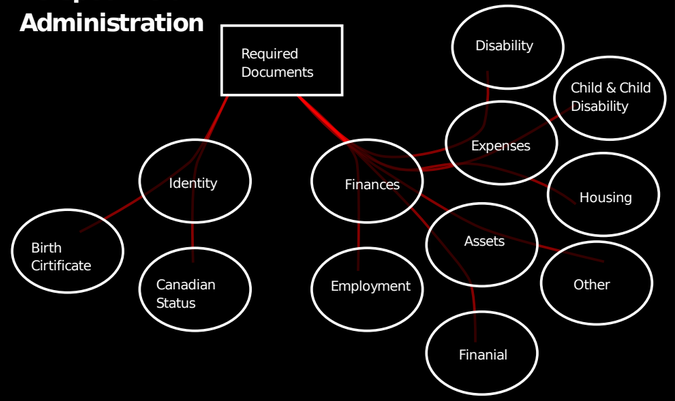
City of Toronto Operating Budget



\\ The chart on the right details the documents Ontario Works administration staff will require from a client before they can start to recieve stipends and benefits. It should be noted that over this past year (2017), Ontario Works has made a lot of progress in improving the user experience of registering for financial aid. Also, Ontario Works case workers have been known to occasionally issue stipends before all the required documents have been processed.

The documents fall under two categories, which Ontario Works internally reffer to as Primary and Secondary documents, but which are labelled on the right as Identity and Finances. The purpose of the documents are to establish proof of identity and a full audit of the client's financial situation.

Perspective of Administration

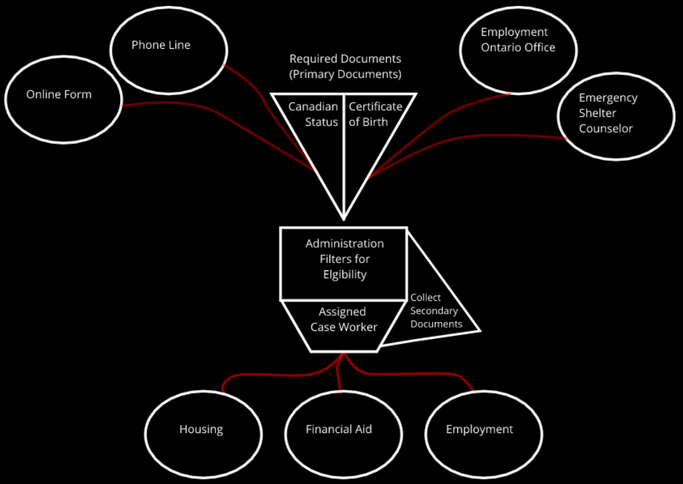


\\ Support infrastructure from the point of view of the applicant happens in three steps: entry, processing, resource delivery.

Financial aid registration for Ontario Works has four intakes: internet, phone-line, at location reception, and frontline counsellors.

After being referred to Ontario Works, the client must interface the staff to collect their required documents and be assigned to their Ontario Works caseworker.

Through their caseworker, the client can access financial aid resources like stipends and subsidized housing.



Bottlenecks in the existing infrastructure

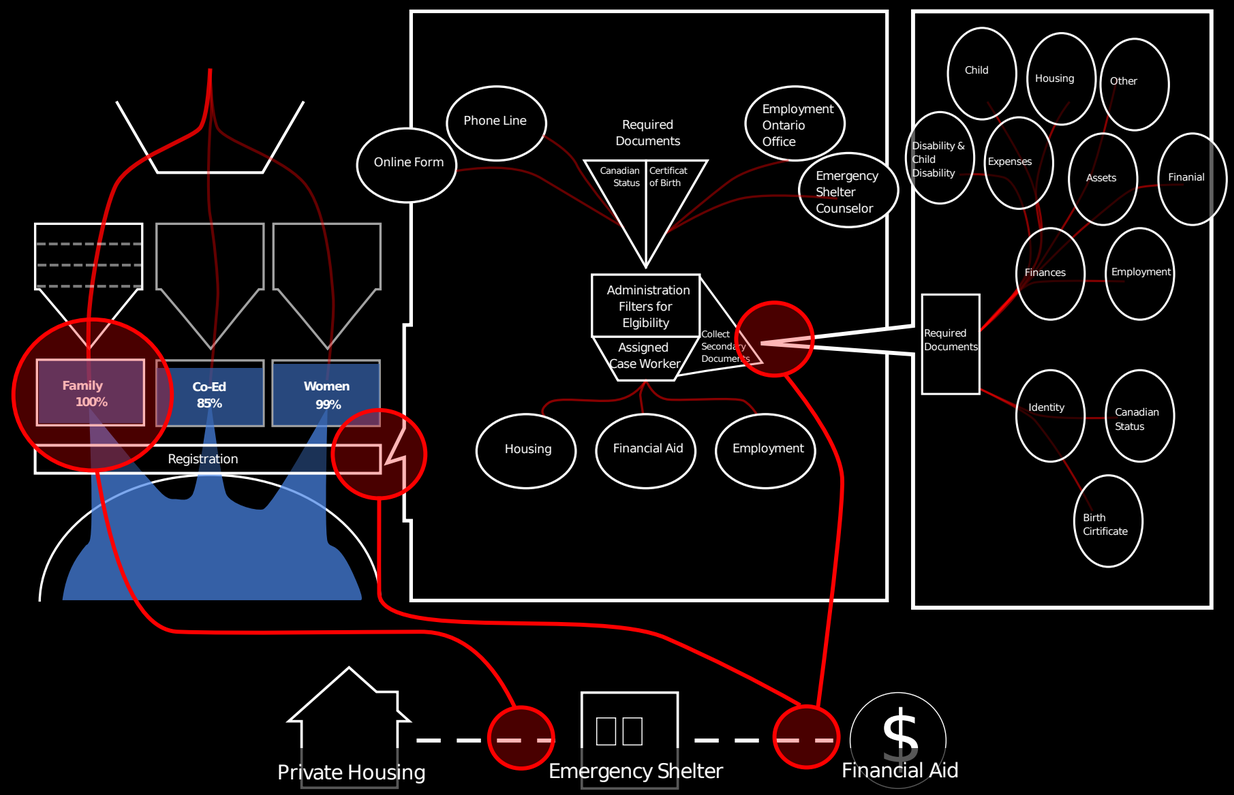
\\ The most pressing bottlenecks I identified in my research of Toronto's existing infrastructure were a shortage of shelter space and a shortage of staff. Additionally, there is a bottleneck involved in collecting the required documents for registering a client for financial aid, but Ontario Works has been successfully making changes to improve this process.

According to city estimates, not a single night in emergency shelters in the last ten years has been recorded below the city mandated maximum capacity. Ten years ago was when SSHA started recording nightly shelter capacity numbers.

The shortage of staff is especially apparent in the operation the shelter referral line, and the workload of Ontario Works case workers.

The referral line has extremely long wait times. It is the City's only recommended intake process for acquiring shelter space, other than going in person to Streets to Homes at 129 Peter St. Even though the referral line is expected to service all of Toronto's unstable housed citizens, there are only 6 operators working per shift. Additionally, the operators are encouraged to conduct lengthy surveys to collect the callers personal information.

Ontario Works case workers often have as many as 100 clients each. The case worker is responsible for helping their client collect all required documents and for interfacing with Ontario Works programming and services.



Interviews

\\ To deepin my understanding of the existing infrastructure, I conducted interviews with SSHA administration, frontline staff, and Torontonians who've been clients of support infrastructure.

I met most of my contacts while volunteering at Civic Tech Toronto, a weekly volunteer meetup where technologists and civil servants work together to chip away at civic problems.

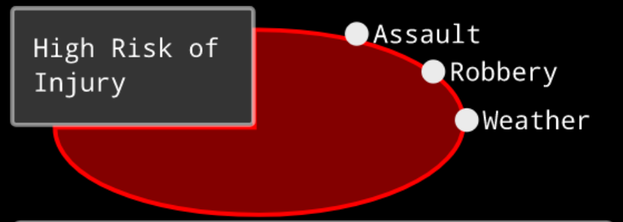
Additionally, I made contacts inside City Hall with the help of the Toronto City Hall Innovation Office. I regularly attended the Innovation Office open hours, which are every friday.

Civic Tech TORONTO

CIVIC INNOVATION OFFICE
Solving for Toronto

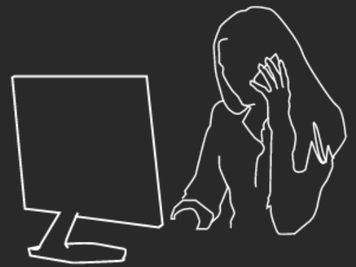
\\ It was around this time in the project I decided my target market: Torontonians who sleep rough on the street. Due to extreme weather conditions this past winter, sleeping rough in Toronto was extremely dangerous. There are other dangers involved in sleeping rough: theft and sexual assault are common. It should be noted that in some cases these two dangers exist in shelters as well.

People Sleeping Rough on the Street



Population change is more easily measurable than people with low income living with family or friends

Points of Contact



Interviews with Toronto Financial Aid Workers



Research on Living Rough on the Streets

Key Findings

Cellphones are a rare item among those sleeping rough

It seems like everyone who sleeps rough has had their phone stolen from them at least once

Public computer access is poor without a Library Card (limited 30 mins at Library)

Its common for those sleeping rough to have a poor relationship with the public library

Some shelters (like Streets to Homes) will recieve mail on behalf of someone

Geared to Income housing has a very long waitlist. But if you are escaping an abusive relationship you are strongly prioritized

Indetification is stolen all the time from people sleeping rough

Its pretty uncommon for people to know about secure places to keep their ID, like ID safes at shelters and community health centers

Those that have used the new OW registration or ID clinic give it glowing reviews

It is uncommon for people to konw that OW registration has greatly imptoved since the spring

Ontario Works prepaid visas are sometimes issued to applicants without ID who are desparate

Some IDs, like an Ontario ID card, are sufficient by themselves to get registered for Ontario Works

Key Findings Cont.

\\ What many of the key findings had in common was that access knowledge of what resources were available was pretty poor.

Most folks sleeping rough didn't seem to have cellphones, as they were often stolen. In many cases people described themselves as having poor computer skills. What public computer access was available was poor; Most locations limited users to a half hour of use. Additionally, I was often told that there were many people who had a poor relationship with their public library.

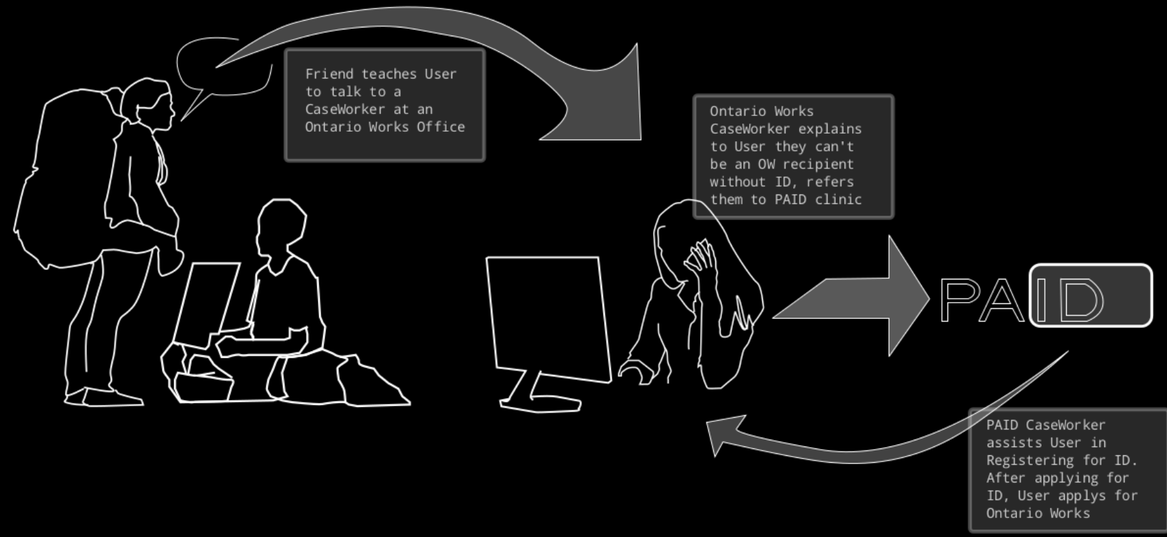
The poor access to information on public resources was unfortunate because many of these resources had short cuts and recommended work-flows.

Ontario Works caseworkers were known to occasionally issue stipends on their first meeting with a client. But these occurrences weren't common knowledge, and their issuing the stipend depended on merit and circumstance.

Food banks and soup kitchen locations often only open for a few hours a few times per week. But when strung together, multiple locations can form schedules that could keep a person fed on 3 meals a day. The city of Toronto developed a web-app to keep track of all the locations and times, but no one I spoke to had heard of it except for the developers themselves.

\\ People usually just learned about resources from word of mouth. Friends would relay personal experiences they had, and sometimes bring them to their first visit. A persons knowledge of resources usually involved the locations that were closest to them.

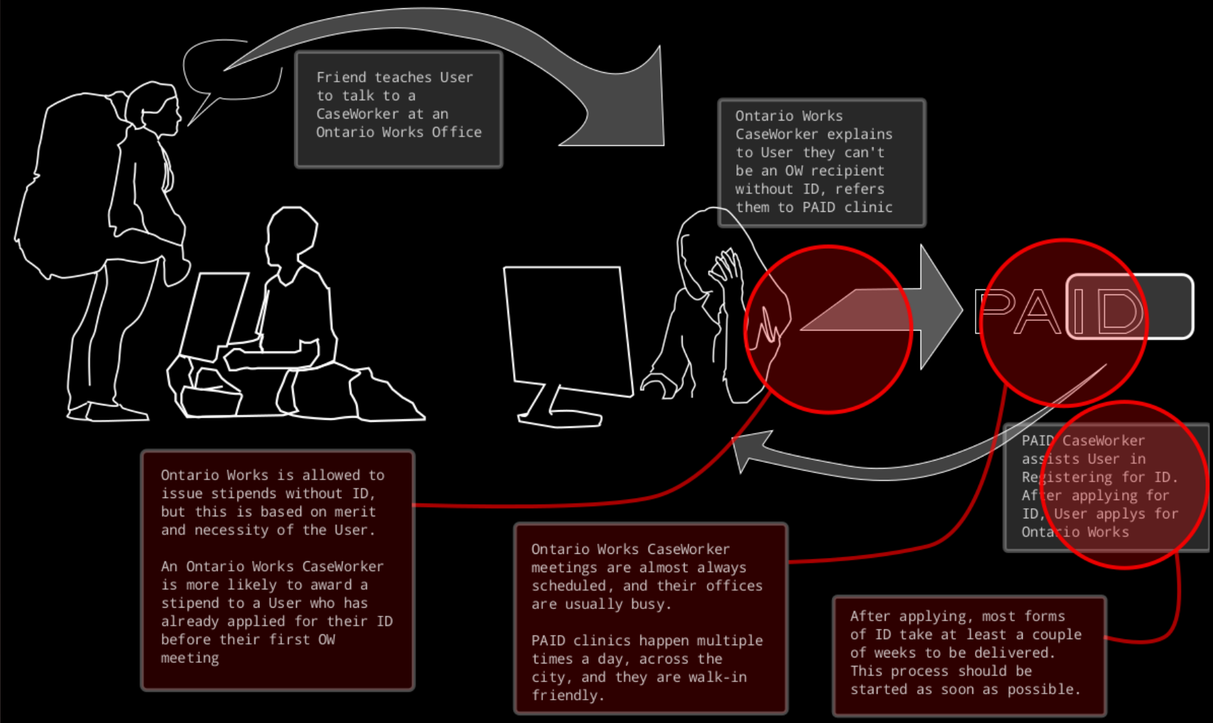
In the example below, someone is unable to access stipends from Ontario Works because they have lost their ID. The caseworker refers them to an ID clinic, because the person can't be registered until their ID is reissued.



People who are underhoused often don't have easy access to information on public resources.

\\ Getting on the Internet is a real chore when you don't have a computer. So people's navigation of public resources depends on learning from friend's experiences, and being referred to resources by friends and front-line workers.

\\ When they arrive for their first time at a resource, they may be missing a required article. This event creates frustration and extra work for the user. A user pressed for time might abandon a resource after this event.



This is what it might look like if people did have easy access to knowledge on public resources.

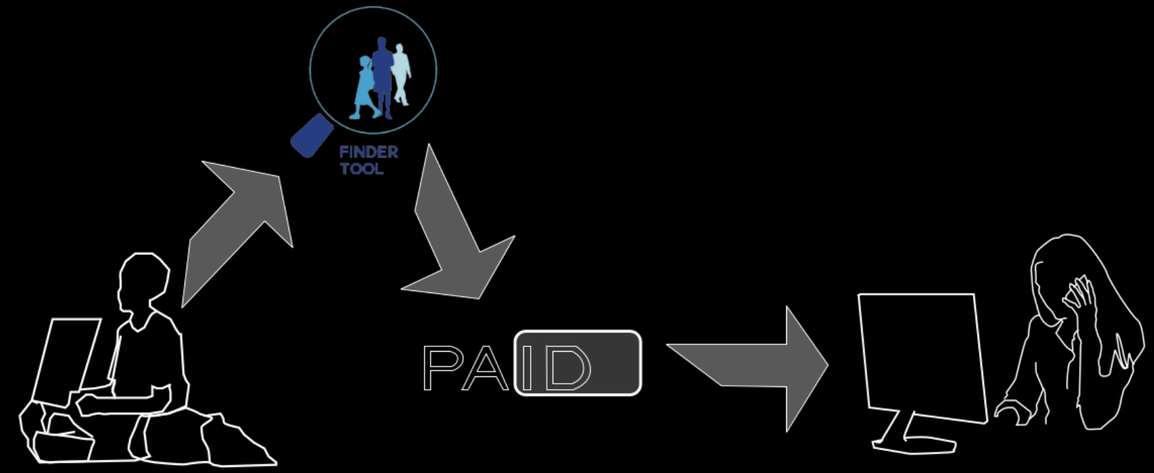
\\ The diagram on the right is an example of what it might look like if a person who has just had their belongings stolen had a comprehensive knowledge of how to register for financial aid.

The example uses an existing web site called the Human Services Finder tool to explain to the user what financial aid they qualify for. The user is queried about how much ID they have; Since their ID was stolen, the tool refers them to the closest and soonest ID clinic.

After applying to get their ID reissued, the user gets a meeting with an Ontario Works caseworker. Because the user has already applied to get their ID reissued, it is more likely the caseworker will issue them a stipend that day.



The Human Services Finder Tool is a web app built by the City of Toronto.

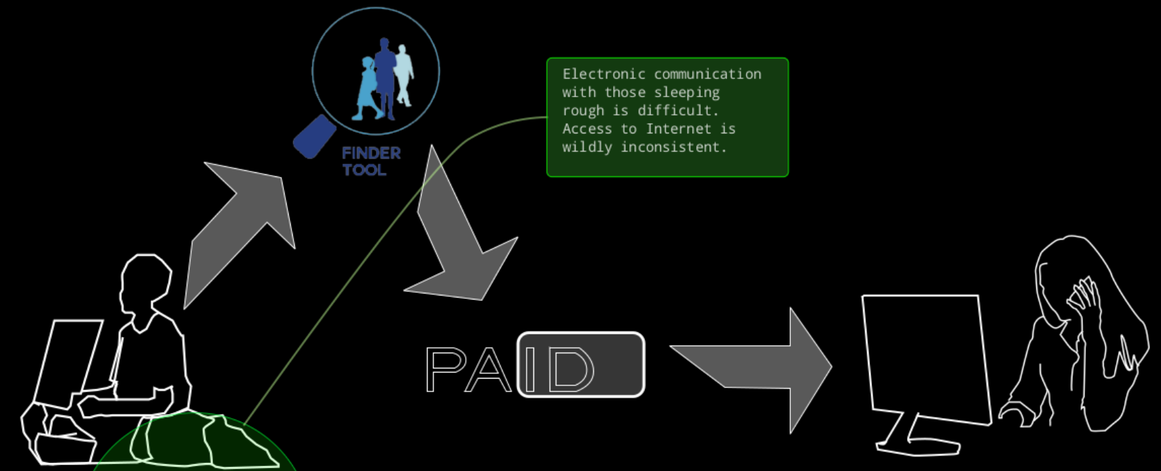


User is introduced to "Human Services Finder Tool", which interviews User and collects all forms of financial aid they qualify for.

The "Human Services Finder Tool" refers the User to nearby and timely PAID clinic. The user registers for their ID, an Ontario Works CaseWorker Meeting, and an ID safe.

Ontario Works CaseWorker begins the registration process of financial aid. Time that would have been spent giving information on registration requirements is either saved or spent on counseling.

\\ The example diagram is flawed because it depends on a user interfacing with a web app. Getting on the internet is difficult for people who don't have computers, and computer literacy is lower on average among people who sleep rough on the street.



Electronic communication with those sleeping rough is difficult. Access to Internet is wildly inconsistent.

User is introduced to "Human Services Finder Tool", which interviews User and collects all forms of financial aid they qualify for.

The "Human Services Finder Tool" refers the User to nearby and timely PAID clinic. The user registers for their ID, an Ontario Works CaseWorker Meeting, and an ID safe.

Ontario Works CaseWorker begins the registration process of financial aid. Time that would have been spent giving information on registration requirements is either saved or spent on counseling.

```
\\    As I saw it there were four potential strategies to...

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Public street computer

\\ The illustrations on the right are of NYC Hub, an existing project. NYC hub provides street level free computer access, phone access, and wireless internet access.

A public street computer in Toronto offers internet access in an extremely accessible way -- unmonitored, unregulated, and unobstructed on the side of the street.



Permanent Outdoor Installation

Link Hub in New York City

Project is monetized by advertisement on it's side

Provides:
Tablet for internet access, free phone calls, free wireless internet, phone charging



The Public Library

\\ Libraries are a widely spread resource, they are staffed, and they already have programs to support under-housed citizens. It's especially important that any interaction can be explained and assisted by on-site staff.

Free Phone



\\ Distributing free smart phones to anyone who does not have a computer has some big disadvantages.

1. It'll require complicated distribution and regulation
2. It'll have the expense of the phones (~$50 per unit)
3. Phones are a high priority target for theft

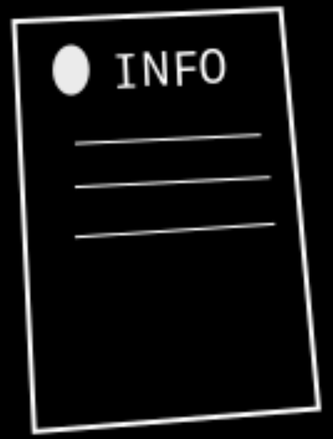
But they have some potentially powerful benefits.

1. Could potentially provide internet access wherever the user is
2. Device would personally belong to the user, which gives lot of agency.
3. Likely be easy to convince the user to accept the phone; Reaching the target market may be easier.

Handout

\\ Distribute something cheap and light.

Its only barriers are literacy, language, and eyesight. It's cheap and easy to distribute. And of the four strategies, it's by far the easiest to prototype.



Phase 02
Prototyping

User Testing

Collect feedback and prototype



Number Tested ~60

User Testing

Collect feedback and prototype



~140

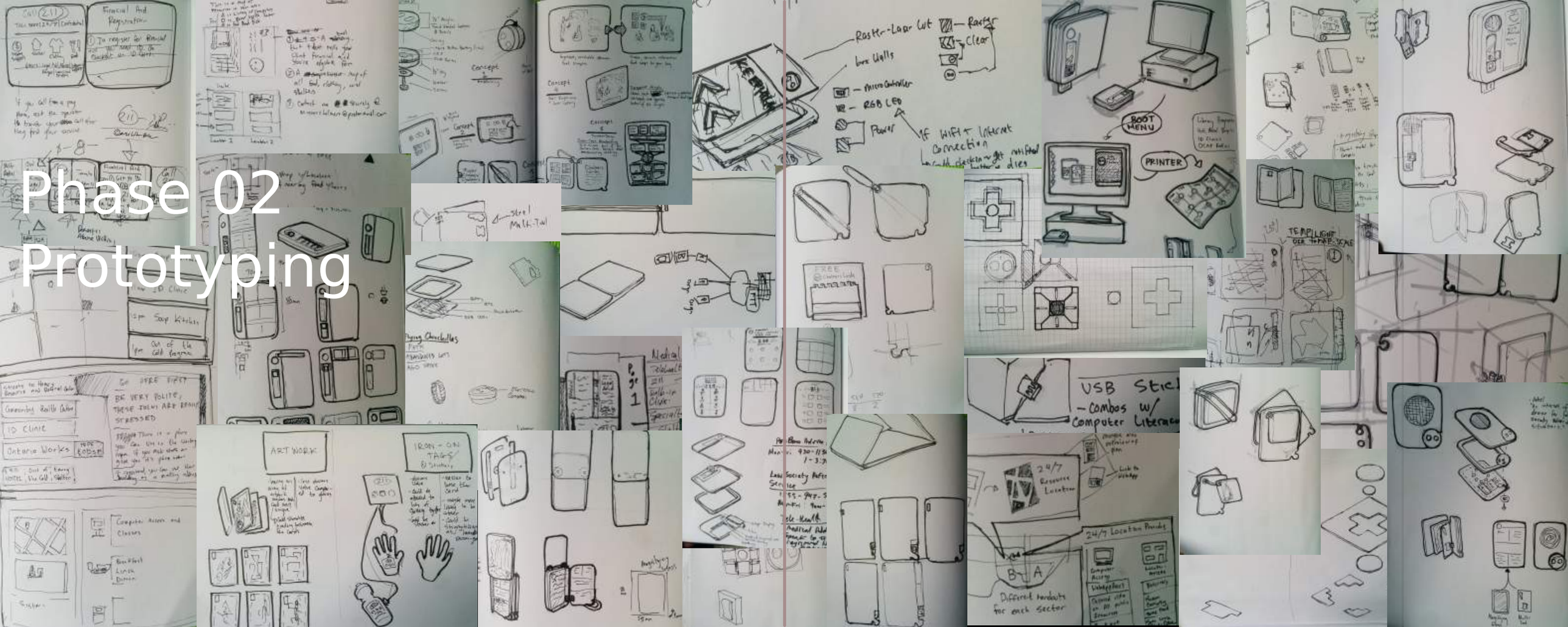
User Testing

Collect feedback and prototype

User Testing



~40


Phase 02
Prototyping

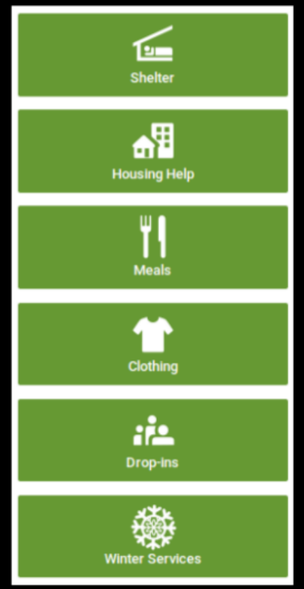
Web App

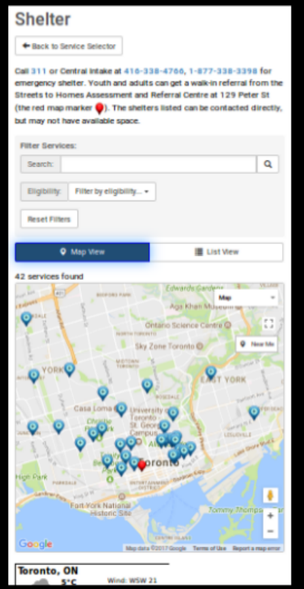
```
\\ Three of the four identified strategies
   involved internet access. So I felt it was
   necessary to investigate the option of
   building a web-app for people to access info
   on public resources.

   To test the feasibility of a web app, I
   demoed City of Toronto's Homeless Help web
   app for friends I had met while volunteering.
   Most of the people I demoed it to didn't own
   computers, so I printed cards with shortened
   URLs on them so they could access the app
   again later.

   No one was interested in using the web app.
```

Getting onto the Internet is too large a barrier for someone who doesn't own a computer



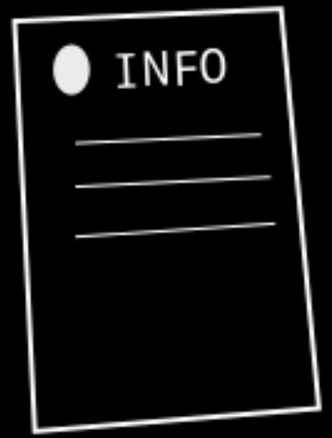






Handout

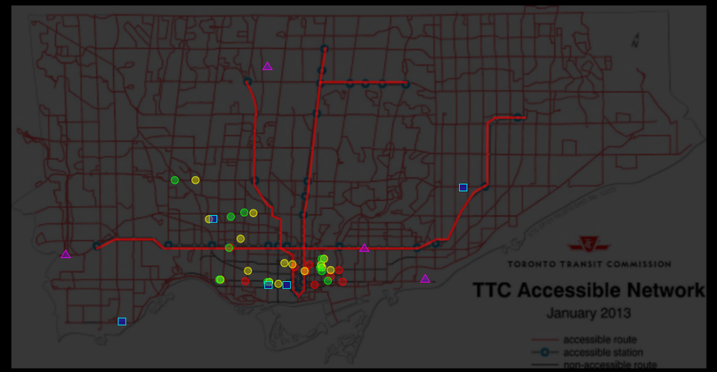
\\ Since my research suggested building a web app would be an ineffective strategy, I switched to building an inexpensive handout. I figured a handout would be easy to prototype. That way I would be able to move into testing quickly.

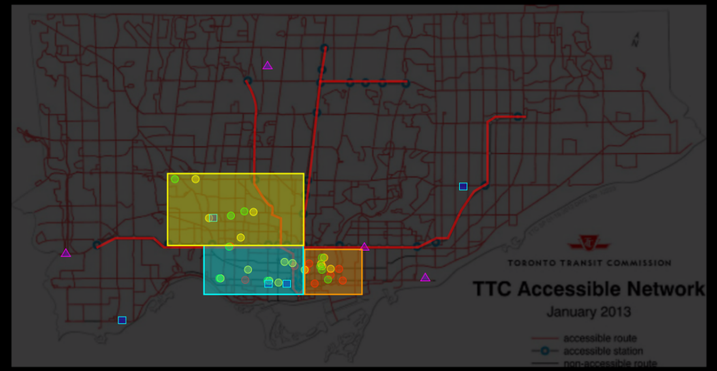


Mapping

\\ To plan out the first handout, I familiarized myself with the resource location in Toronto by mapping them.

The resources seemed to concentrate themselves in clusters. So I sorted the resources into sectors.

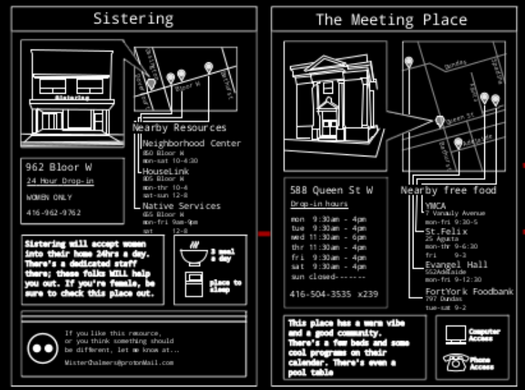


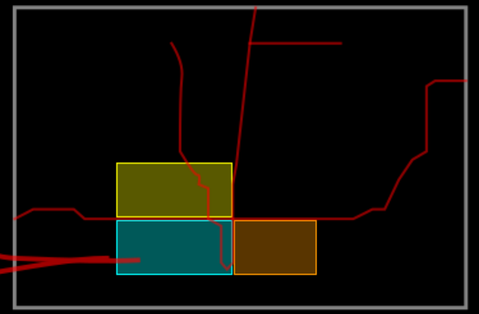


Paper Handout

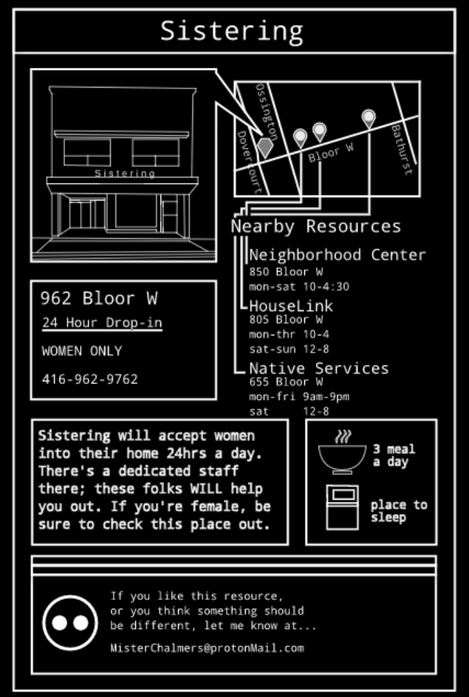
\\ I picked a sector, and within the sector I picked two resources that had consistent hours and a cluster of other resources nearby them. I then printed cards with the resources' information on them.

One of the two resources is detailed on each side of the card, as well as other resources within a one block radius.









User Feedback

\\ I handed out the cards while volunteering.

Most people were happy to take them, but it often seemed like the cards were taken because the effort was appreciated, and not because the cards seemed useful.

People's lack of interest in the cards became more apparent after a few weeks. The cards were often lost, and were also easily damaged.



User Feedback

- Everyone Liked the icons for resources
- People were pleased at the geniune interest in helping the cards demonstrated.
- People were willing to distribute them amongst their friends



User Feedback

- Some found the map useful. Most people were able to operate the map with mild difficulty
- Some folks found the illustrations intimidating. Others found it mildly helpful.
- Some folks found the descriptions imprecise. Some thought removing them would cut down on the amount of text. Some found them friendly though.
- Many people explained that there was too much text on the card. They described it as looking too complicated.



User Feedback

- Virtually everyone found the lines to the nearby resources confusing.
- People had difficulty relating the location title with it's illustration, hours and description
- In one case, a user explained that he didn't want to use the resouce because the shelters had people more lost than him.

\\ I think what made the first card so unappealing was that it was flimsy and felt cheap. It was paper, and could be mistaken for a business card or flyer.

The insight the first card handout taught me was:

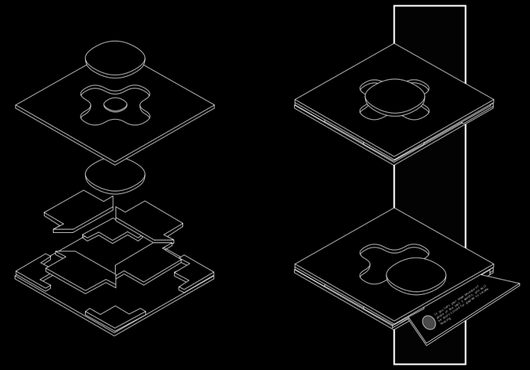
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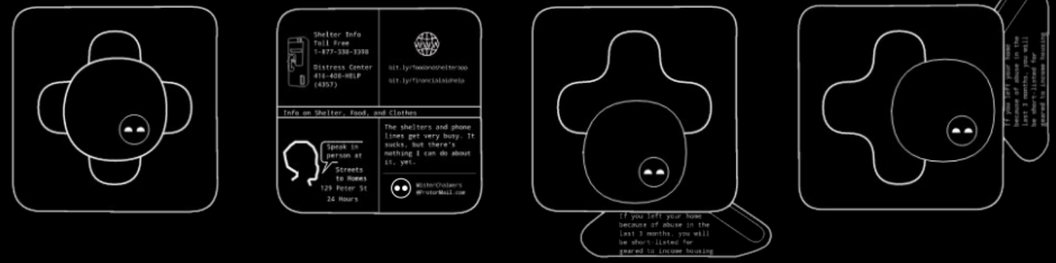

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I resolved to prototype the next iteration of the card by laser cutting it out of plywood.

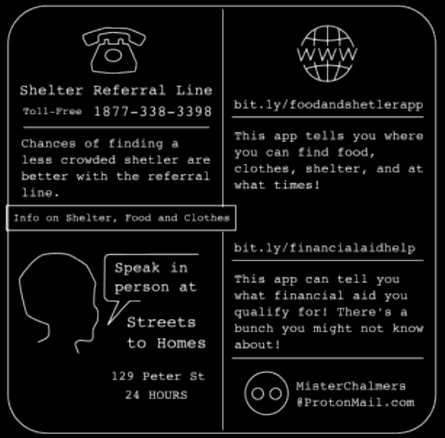
\\ This first laser cut design was never built. It felt a bit too playful, and was an inefficient use of the space for text on the plywood.





Simplifying the Handout

\\ I iterated on feedback of the last prototype being to dense and complicated. I removed the map and location based resources. Instead included resources that had toll free phone numbers and consistent hours. Many of the resources included were 24 hours. That way the resources could be accessed from anywhere in the city, even if the person had to use a payphone with no cash.



Adding Value

\\ The first card that I massed produced (about 140 cards) was a single 70mm by 70mm piece of laser cut birch plywood. They smelt really nice.

People thought they were really cool, like there was a bit of magic in them. It's like the first time you see something 3d printed, and then you get to keep it.

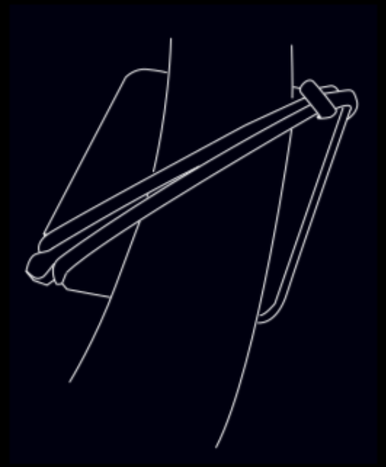
Giving out the paper card felt like giving out a flyer. But giving out the laser cut card felt like giving out a gift.

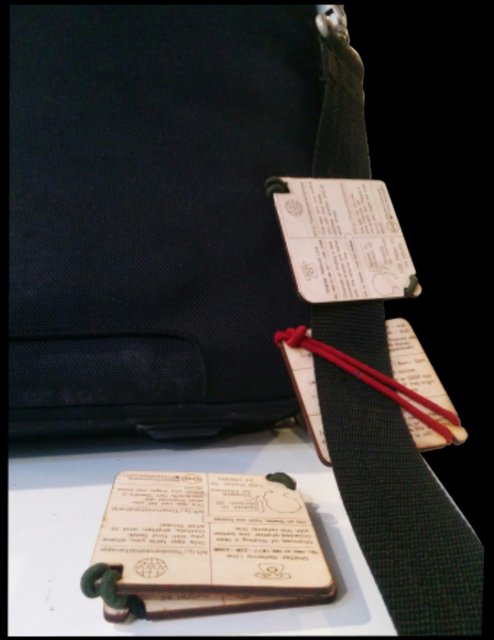


Adding Value

\\ The added value of laser-cutting the information onto wood motivated people to keep the cards! People kept the cards on their person, and people I talked to would tell me about times that they had used the numbers on the cards! People even asked for multiple cards so they could distribute them among their friends.

I soon added an elastic, so that the card could be snapped onto backpacks.

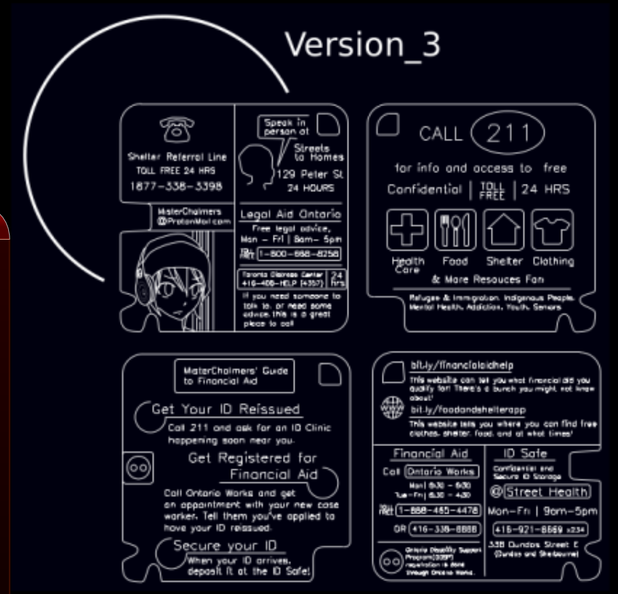


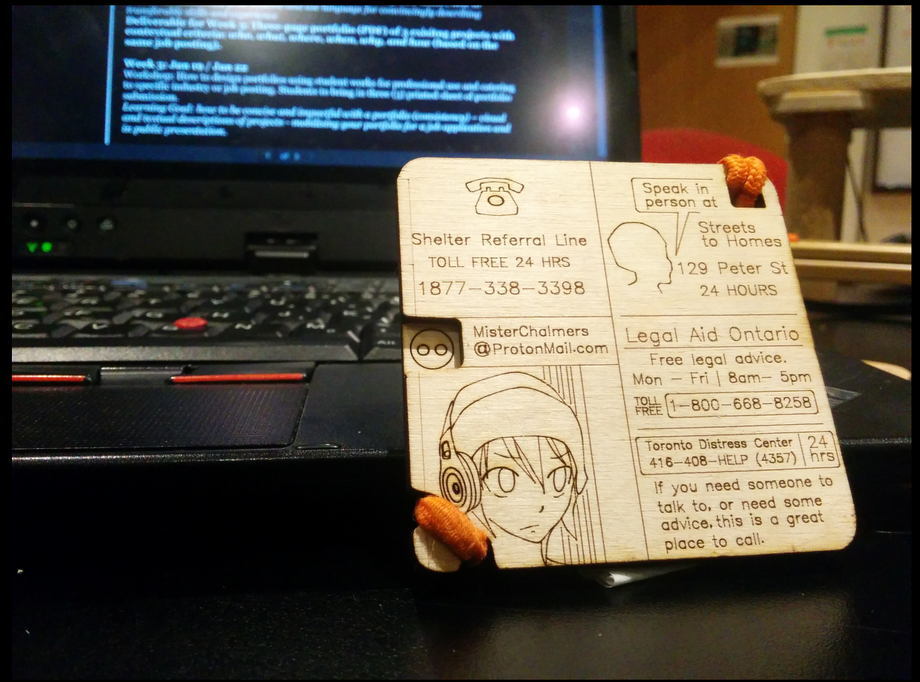


Adding Value

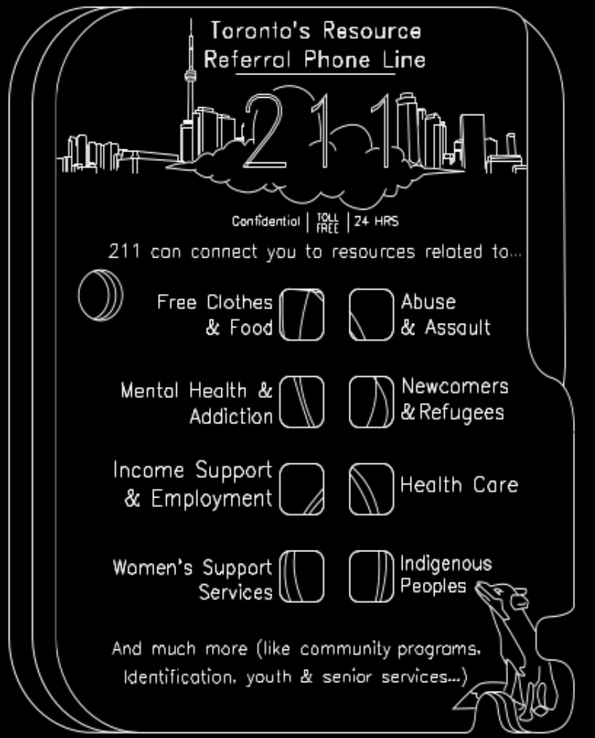
\\ Adding a second card allowed the guide to become more comprehensive

One of the pain points identified in sleeping rough was a lack of understanding in how to apply for financial aid benefits. Belongings being stolen is a common occurrence for people sleeping rough, people rarely have their ID. ID is a requirement for receiving any type of financial aid. So I added a work-flow for getting ID reissued and applying for financial aid to the card. I also included a not well known resource "ID Safe", so people could secure the ID against theft.





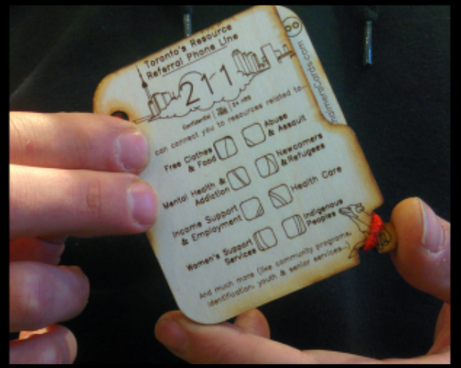
\\ This is the design I'm currently distributing.



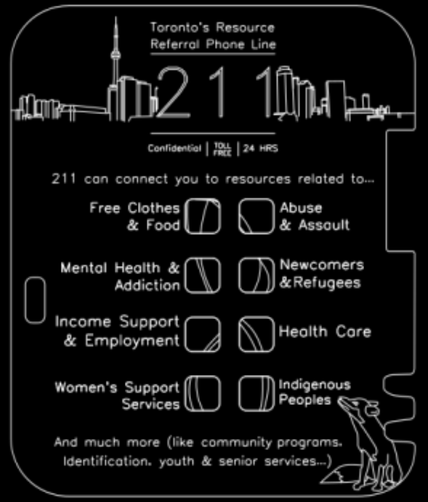
\\ The form factor was increased to allow for a bigger font size. The graphic design was reworked.

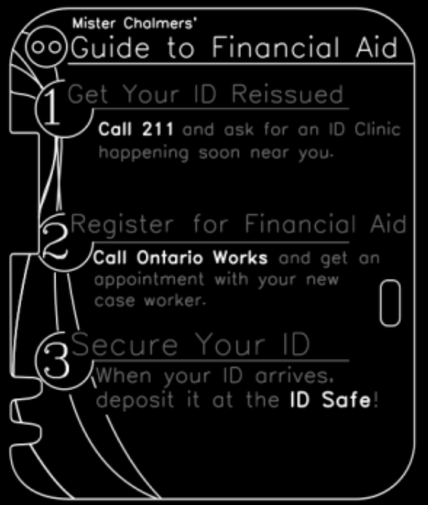
I did my best to sort the information from front to back by its level of stigma. For example:

The Shelter Referral line has a poor reputation because of it's long wait times. It was also recently in the news for distributing incorrect information. But it is still an important service to include on the card. So it is on the very back of the card, in a more tightly packed area so as to not stand out.









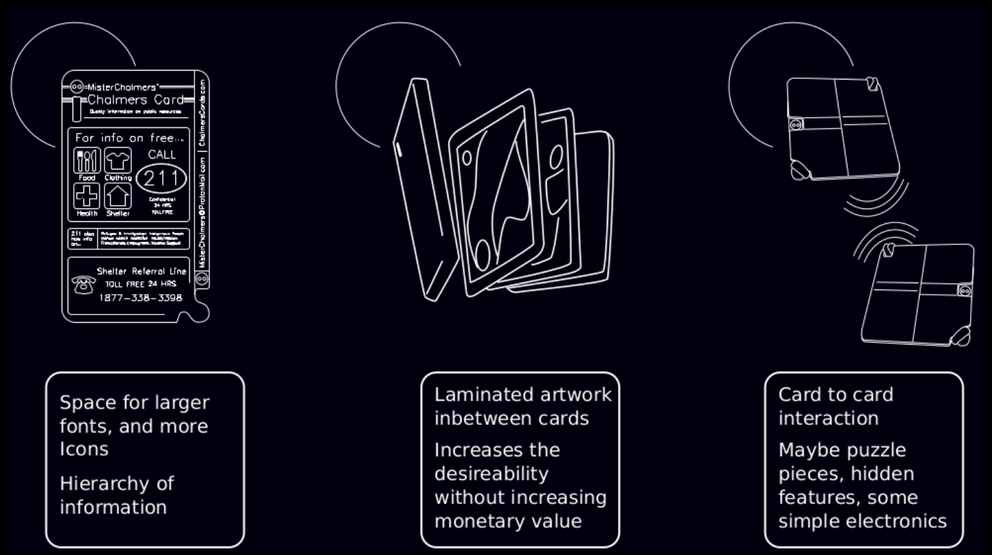


Least Specific
Least Stigmatizing

Most Specific
Most Stigmatizing

Experimentation

\\ I started experimenting with different ways of increasing the card's value. Concepts included tools, different form factors and font sizes, artwork.



Space for larger fonts, and more Icons

Hierarchy of information

Laminated artwork inbetween cards

Increases the desireability without increasing monetary value

Card to card interaction

Maybe puzzle pieces, hidden features, some simple electronics

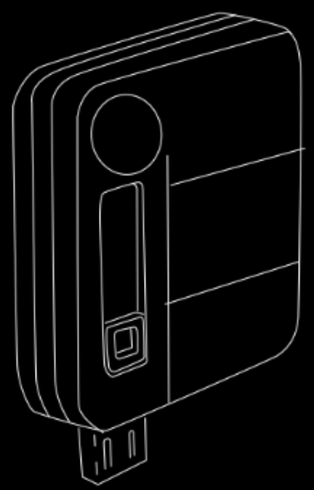








Expansion Concepts







\\ The following are untested prototypes. Some of them are concepts I plan to explore over the summer.

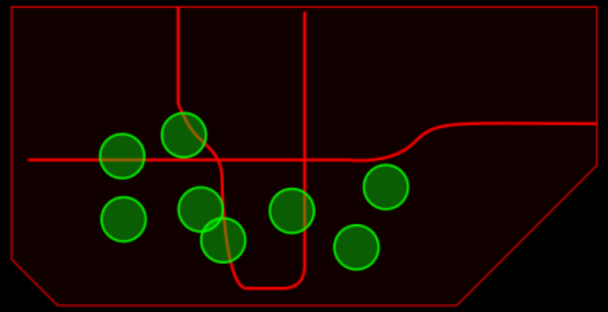
Pointer to closest public resource



GPS points directly to open resources

E-Paper display details resources information

Free downtown wireless



- TO Mesh
- Toronto Free Wifi

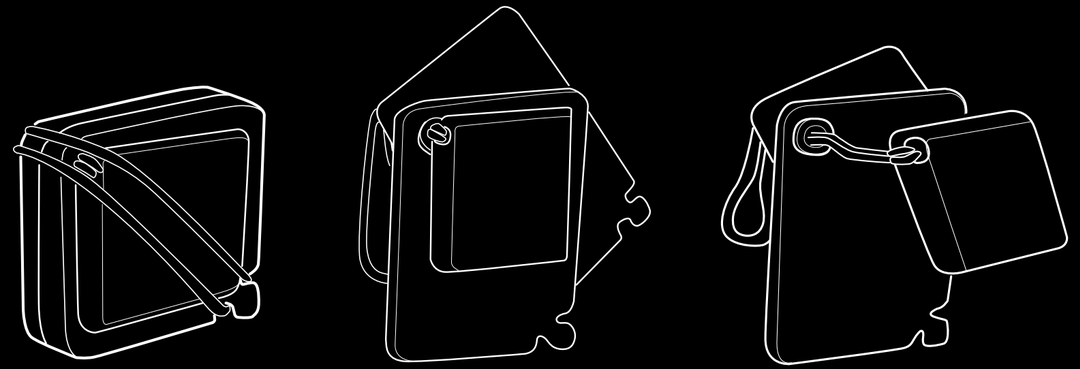
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\\ It would be neat if the card had the ability
   to simply point the user towards the closest
   resource.

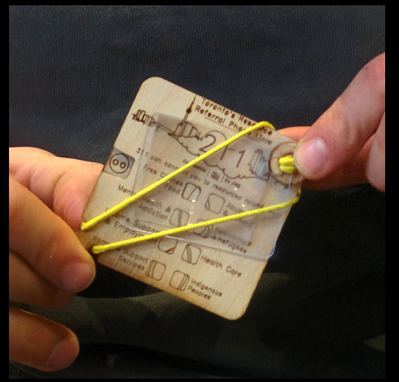
   This card is difficult to prototype, and
   compared to the other cards would be very
   expensive. It would likely require an
   inexpensive single board computer (like a Pi
   Orange) and a GPS and 3-axis compass module.
```

Magnifying Glass

\\ Glasses are often lost, broken, or stolen among folks who are under-housed. Magnifying glasses are a cheap, temporary fix for someone who has lost their glasses.

In addition to wood and the elastic, this card requires a magnifying glass and a rubber grommet.







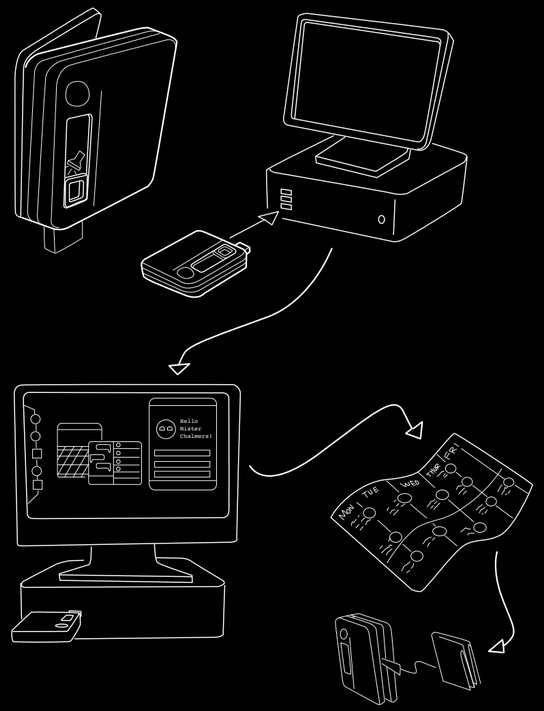


Library Card

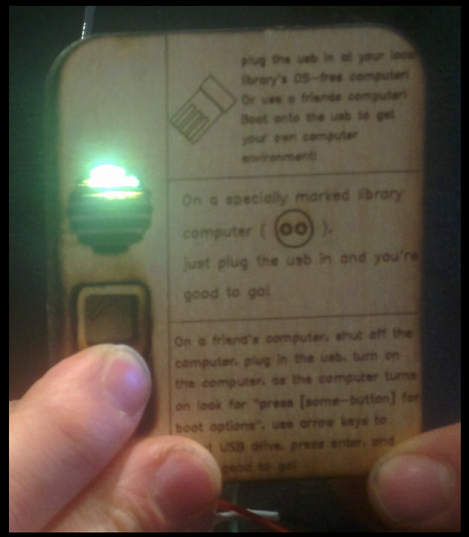
\\ My strongest electronics concept includes a flashlight and a USB storage drive.

The USB storage drive is useful for storing digital files, but it also contains a bootable Operating System. The user can use a public computer at a local library to boot onto their own operating system. The user has full authority over this operating system, and can customize it to their liking (unlike a traditional library computer).

The operating system is preloaded with a program that queries the user on their interest in public resources and free workshops. The program outputs a one week schedule of events that are happening at the library they are currently at, and at nearby locations.





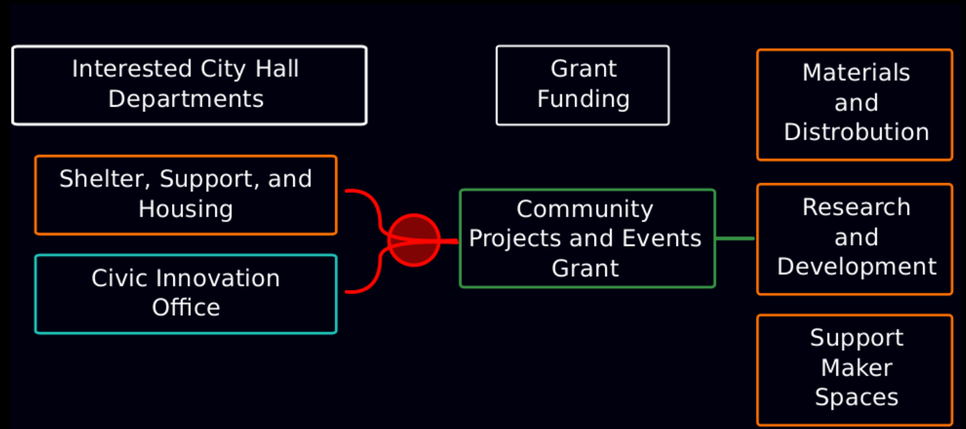


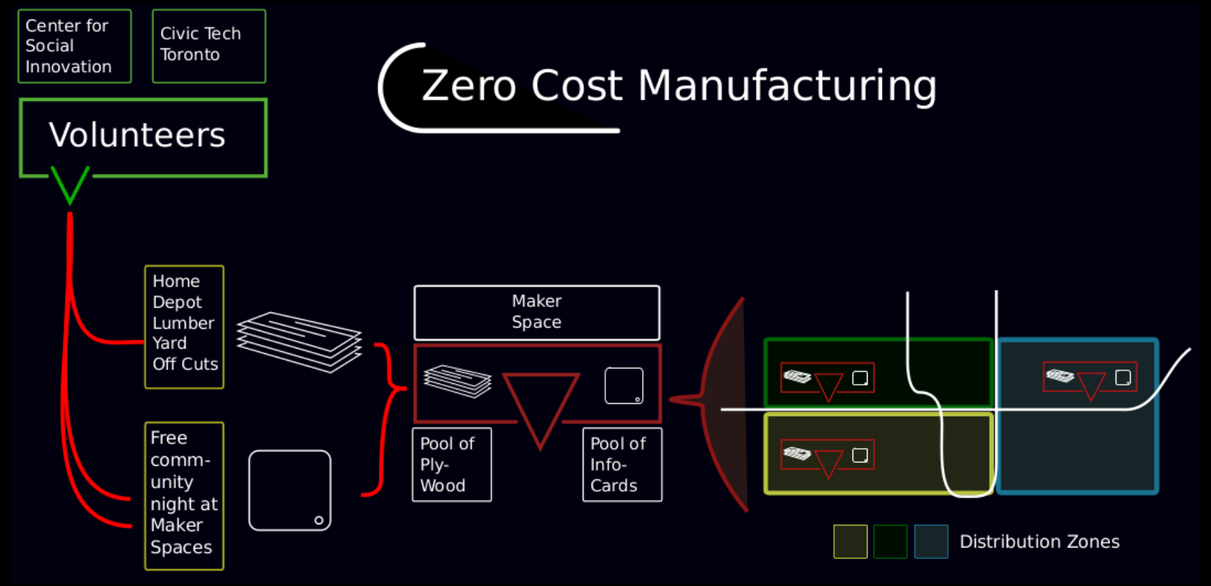
Funding

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\\ I considered a couple of options for funding.

   Some folks who work at the SSHA office
   (Shelter, Support, and Housing
   Administration) and the Innovation office in
   city hall had expressed an interest in
   helping attain a grant from City of Toronto
   to laser cut a bunch more cards.

   Alternately, a handful of volunteers from The
   Center for Social Innovation expressed
   interest in helping with producing the card.
   It would be possible to mass produce the
   cards by using laser cutters at maker spaces
```





Funding

\\ A few times during the project I received donations to provide means to continue to produce cards.

As a thank-you to those that donated, I made the "Description Card". The card is similar to the cards that I distribute to folks who are unstably housed, but instead of detailing public resources it describes the project itself.



