Grand Challenges Proposal
Project Independence
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ABSTRACT

Homelessness in the Atlanta area is a significant issue facing the Atlanta community even though there are resources available to aid individuals in need. Through research, interviews, and on-site visits with shelters, we have developed a solution to increase resource allocation efficiency. By starting with a small number of local shelters, we can create partnerships where we obtain information to be compiled on an online website with two main components, "Tonight" and "ShelterMatch". Along with this information, we will integrate real-time capabilities on a mobile application that automatically updates the website on the number of available beds in each shelter that we work with. By increasing networking and communication between homeless individuals and shelters, we can cut resource costs and time significantly and create a pathway to the independence of homeless individuals.

PROBLEM STATEMENT

"How might we improve communication between homeless shelters in Atlanta?"

Problem

Homelessness affects many facets of society and is a prominent issue in the Atlanta region. No shelter can meet the needs of every homeless individual in the city since there are such a wide variety of issues and unique problems faced by homeless individuals. The primary cause of homelessness tends to be substance abuse and unemployment, but there are a variety of other causes, including foreclosure, poverty, layoffs, lack of public assistance, high rent, unaffordable health care, domestic violence, mental illness, and addiction [8]. A shelter that focuses on women who have been abandoned by their families or who have escaped an abusive relationship will not be able to effectively help a veteran dealing with post-traumatic stress disorder. For this reason, there are many homeless shelters, help centers, etc. including Atlanta Mission, that assist these people. A prominent issue in the Atlanta area is that there is a plethora of homeless people that have no particular road map in order to receive aid even though there are many resources available. A major barrier for the homeless to get help is the confusion and disorganization of where to obtain it. This is due to a lack of communication among the shelters offering aid.

One example of disorganization among Atlanta shelters can be seen when looking at bed inefficiencies among night shelters [18]. Night shelters provide immediate safety to anyone who finds themselves on the street. However, these shelters are frequently filled to capacity and must turn people away. On a given day, 1,740 people could not be provided emergency shelter and 1,422 could not be provided transitional shelter [8]. While this is happening, a variety of shelters have empty beds even though there are still homeless on the street who need a place to sleep for the night [18].

This discrepancy occurs because of a lack of communication between shelters [19]. When a shelter turns away a person in need, they have no way to direct them anywhere else. There is no collective information between multiple shelters telling them how many resources are available at that given time. If shelters in Atlanta that are in close proximity knew which location had empty beds, they could accommodate many more homeless on the street who need a safe place to stay. The provision of safe immediate shelter is a necessary first step in meeting the needs of homeless people on the street looking to rebuild their lives.

Significance

The first reason this problem is crucial to tackle is because according to HomeAid Atlanta, there are over 10,000 homeless people in Atlanta. About 40% of these are women and

children. However, there are over 125 homeless shelters in the Atlanta area and enough resources to shelter over 8,000 of these people that are underutilized. If all these resources are used wisely, there should only be about 2,000 people without shelters [8,10].

Another reason this problem needs to be solved is that the current way of helping the homeless is not utilizing taxpayers' money to the full extent. According to the HUD secretary, an average homeless person costs taxpayers $40,000 a year [17]. Homeless individuals extensively use government-funded institutions, such as hospitals, and some are imprisoned due to circumstances of their lifestyle. They are also found to spend more time and resources at these institutions. For example, in an examination of hospital discharge data from New York City's public hospitals, Salit found that homeless patients stayed 36% longer than other patients [14]. It was also found that 13.3% more money was spent serving homeless veterans than domiciled veterans [13].

In addition, homelessness is a problem that can affect almost anyone. HomeAid America states that the major reasons for homelessness are usually centered around tragic life occurrences like lost of a loved one, job loss, and domestic violence [16]. People have a tough time recovering after such devastating experiences and become homeless because of them. Unfortunately, it is not uncommon for people who are well off to become homeless overnight. In fact, from 2008 to 2010 there was a 12% increase in the number of people that are homeless and this increase of homeless people came from the middle class population [9].

If the amount of homeless individuals were to decrease, Atlanta would benefit in numerous ways. The money taxpayers give would be better used and the local government would get a better name if there are fewer people without homes. Overall, tackling this problem is essential for a more efficient community.

Stakeholders

People without homes, homeless shelters, residents of Atlanta, and the local government are all stakeholders in a solution to this problem. By improving communication, the people without homes will be impacted because they will have a place to stay at night and a place that they can feel safe in. Shelters are already putting time and resources to serve the homeless, and improving communication will hopefully contribute to their efforts. The general population will be affected because their tax money will be going towards a project that has clear importance and an efficient impact. In addition, there is a general negative reaction to homeless individuals on the streets, and giving them a place to stay will improve public perception of certain areas, potentially leading to economic growth and higher real-estate value [15]. This will give the local government a better name because it will improve economic growth, public safety and health.

Context and Existing Solutions

As mentioned before, there are over 10,000 homeless in Atlanta [8]. Homeless individuals are often turned away from shelters because they have reached full capacity, yet Atlanta has more than 125 shelters that could serve over 8,000 of these homeless if their resources were fully utilized [8,10].

Research has revealed various examples of communities that have found success in developing networks between shelters. The first solution was implemented by a group located in Guilford County, North Carolina, called Partners Ending Homelessness[12]. Their mission is to create a partnership among homeless shelters in the county in order to ensure that each individual has a stable place to live. They are using software that records data about clients in homeless shelters to create a comprehensive database on information about the homeless in Atlanta. Once

shelters began communicating, Guilford County experienced a 25% decrease in chronic homelessness from 2013 to 2014[12].

Another example of shelter networking is in Columbus, Georgia, called the Homeless Resource Network. They have created a Homeless Management Information System (HMIS) which is a web-based database that gathers information on the characteristics and service needs of the homeless clients. By doing this, they provide electronic storage of complete client records, facilitate continuity of care and ease of referrals among providers, speed access to needed resources, simplify reporting to funders, enhance service delivery, provide information for policy makers, and more. Members of the shelter community meet monthly to find gaps in the system and to share knowledge and ideas. This community has many examples of their system improving the state of homelessness in their area. For example, after communicating and discovering the extent of each shelter's resources, the community was able to recognize a gap in services and establish a mail and storage system for the homeless individuals [7].

The Homeless Shelter Directory is another group that is compiling resources of groups all over America. The website allows for people to click on a state on the map and then a specific city which then leads to a page with a list of homeless shelters available [10].

These examples are great models of what networking could accomplish in Atlanta and have shown us that there are some aspects that an Atlanta model must have. The Homeless Resource Network and the Homeless Shelter Directory have successfully compiled resources, however their databases are not updated regularly. The shelters' resources are constantly being used and replenished, so a stagnant database may not be the best thing to implement in Atlanta. Although consistent updating will require a degree of commitment among partnering shelters, we believe that this will result in the most effective system. In addition, these existing models are mostly for small communities that have fewer than one thousand homeless several shelters. Expanding their ideas to a large area like Atlanta will make it impossible to create as close of a partnership and will require a certain level of autonomy among shelters.

Hence there is a need for our solution in Atlanta. Our proposed solution is a website and mobile application through which workers can update shelter information easily. This will ensure that the homeless are aware of places that can fulfill their immediate needs (a place to stay, food, etc.) while also allowing them to enter their background information and long term needs (interest in jobs, education, etc.) into a program will direct them to a shelter best suited for their needs. This solution does not take autonomy away from the shelters because they are simply informing their partners of the services and resources they offer and potentially need, allowing for all 125 shelters to communicate with each other. It can be accessed by both shelters and their homeless clients and will ideally be constantly updated, depending on the degree of commitment of partnering shelters. In this way, the homeless can find reliable information they need immediately. This solution will not only connect the shelters to each other, but will also connect the homeless individuals to the shelter that can best help them.

Why It Is Still a Problem?

Considering Atlanta has over 125 homeless shelters and the resources to serve at least 80% of homeless individuals, the homeless should always be accommodated [8,10]. However this is not the case because resources are not efficiently used. Shelter partnership and resource sharing takes a degree of commitment that is not always present because shelters have so much they are dealing with. A major obstacle that we could potentially face may be finding shelters that are willing to develop partnerships with us and other shelters. Dedicated partners would consistently update their information and would make use of the program to lead homeless clients to shelters

that can meet their needs. We will need to develop some sort of incentive system or other way to show shelters that our solution will aid them in their goal to help the homeless. This is a recurring issue in non-profit organizations that makes it difficult for change and progress.

Another issue with creating a collection of information about the homeless is the inability to calculate the actual number of homeless people due to the number of "invisible homeless" (those living in abandoned buildings for example) in every region[8].

PROPOSED WORK
Goal

Each shelter offers different resources and services to serve the unique needs of different homeless populations, but the only way homeless individuals can make full use of these resources is if the shelters are communicating. However, shelters currently have very little information about what resources other shelters in their area have at any given time. We want homeless individuals to walk into a shelter and be directed to the place that can best accommodate their needs, whether that be a bed for the night, a financial advisor for the future, or whatever else they might need.

When this program is first implemented, shelter workers will keep track of how many empty beds they have and update it on a mobile application ("Tonight") and a website in real time so that other shelters in the area can see. Once the shelters know where the empty beds are, they will be able to direct the people they may have to turn away to a place they can stay.

Once we expand our partnerships, we can use this strategy to expand our real time website to include resources such as clothing, food, consultants and sustainability programs ("ShelterMatch"). When the shelters know about all the resources at each location, they can allocate the people to where they will receive the help they need. This will decrease the frequency of wasted resources and the number of people on the street. People will receive the help they need, even if it is not at the first shelter they walk into. When all resources are being used to their fullest extent, homelessness in the area can be more quickly alleviated.

Objectives
   1) To Create Long-term Partnerships with Shelters
Background

A partnership is "a collaborative relationship between entities to work toward shared objectives through a mutually agreed division of labor" [1]. Without formal partnerships, it would be easy for our entire solution to fall through the cracks and lose accountability when goals have not been met. Having formal partners can help not only our Grand Challenges group gain a leverage in effective solution implementation, but the organizations themselves can realize its mission and achieve programmatic successes with increased program effectiveness, increased program relevance, increased visibility and expanded reputation, and strengthened organizational capacity. All of our interviewees emphasized that it was extremely important to create a strong relationship with the shelters that we work with not only to build trust, but to also take us seriously (not just a group of college students). This was evident when we went to an Atlanta Mission branch and had difficulty asking our questions because the director thought we were only there to volunteer.
Methods
   1) Select potential partners that seem to be good fits for our initial steps. Currently, our main criterion is close proximity between shelters so that individuals without a home may be able to seek resources no matter the distance. Because we will be starting with

communication concerning bed availability, the first partners will need to be night shelters.

2) Before meeting with potential partners, we must prepare a resource packet of who we are, what we do, and why we do it. This creates a formal relationship immediately and sets the business tone while fully informing the shelter about our services. We must also prepare a persuasive "elevator speech," answers to any possible questions or concerns, and a formal contract.

3) Once we secure a partnership, we need to solidify the business partnership through a written contract. This will hold both parties accountable to work together towards the common goal of increasing efficiency in providing resources and ultimately increasing the amount of independent individuals.

4) To sustain these partnerships, we will have an initial meeting where we clearly define our goals, measurable targets and deliverables, and roles, responsibilities, and deadlines. We will also conduct consistent progress meetings to upkeep these goals. During this time, both parties will see overtime whether or not there truly is a good fit. Each side must gain insight into not only program operation and business needs but also how the culture, values, and theories of change contribute to each side's needs. The courtship process may take longer than expected as each side gets a sense of the other's level of interest and commitment. Persistent, gentle follow-ups may be needed to help the partnership move[2].

Outcomes

Our measure of success is to formalize a minimum of three partnerships as a start to our network. As part of our mutual agreement, they will provide us information about their organization so that we can compile all the information and create a system the evidently increases resource allocation efficiency. We hope to build onto this small network with more partners as we continue to grow as a more credible organization.

Anticipated Problems

We realize that the beginnings of our partner search will be especially difficult as we try to build our reputation as a professional group. Established shelters and organizations are likely to be resistant to change or skeptical of the viability of our endeavors. We will also have a limited list of potential partners to pursue, so there may not be a "perfect fit" or miscommunication could lead to a partnership turned sour.
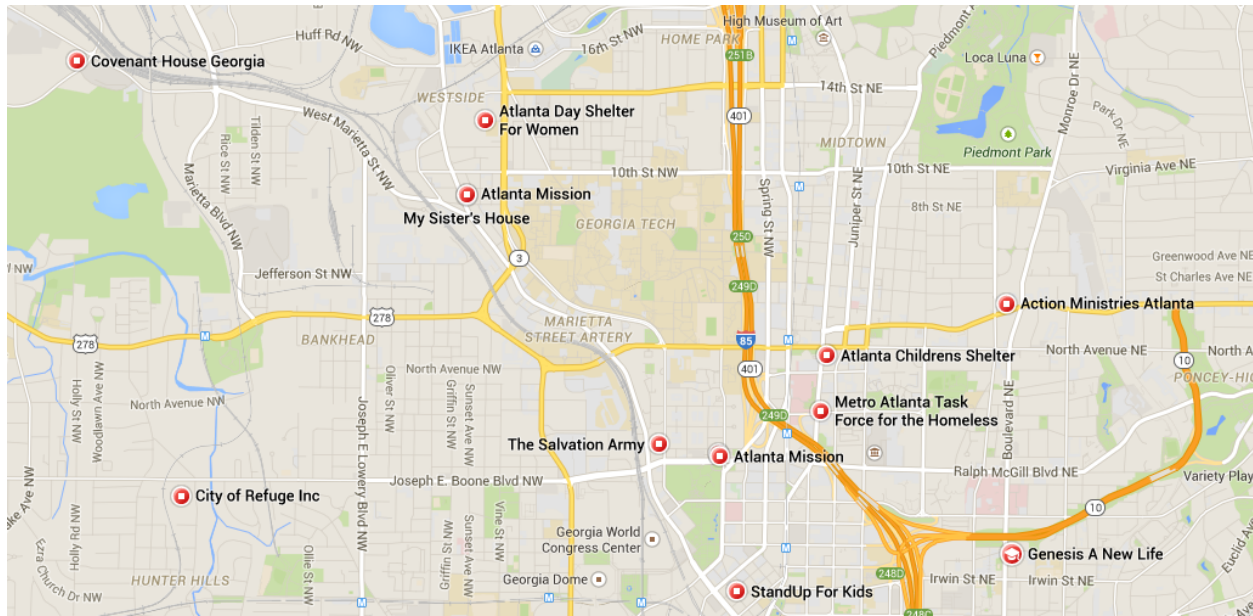
Figure 1: A map with potential shelters to reach out to that are in close proximity to Georgia Tech.

2) To Create an Easily Accessible Collection of Information of Shelters

Background

Once we have created relationships between our group and the shelters, the next step is to establish a network among the shelters themselves by sharing their information with the other partnering shelters. There are two main types of homeless shelters - shelters that help people on a nightly basis and those that help people for the long-term and provide programs to aid the journey to independence. We hope to provide two main services to cater to the needs of these different shelters.

Our first application will be "Tonight", which will focus on the information sharing issue seen in the bed usage inefficiency in the night shelters that was mentioned previously[16]. Some shelters have lines outside the door while others have beds that remain empty the entire night. Without communication between shelters, different homeless individuals that might have been helped a few blocks down the road may not have their needs met.

After more shelters are added to the network, the collection of information can expand to include food and clothing availability as well as services offered. This will result in the development of our second service, "ShelterMatch", which will allow homeless individuals to input personal information in a secure fashion that will link them to shelters that can best provide for their individual needs; the information that the homeless people input will not be saved for privacy and ethical reasons. This is important because in order for people to be able to become independent, they need to have various needs on Maslow's Hierarchy met in addition to physiological needs.

Creating a collection of easily accessible information will allow shelters to communicate more effectively. In this way, the collaborating shelters can ensure that the wide variety of resources in shelters around the city are being used to their full extent. There are over 125 shelters in the area that specialize in different issues, and if each shelter knows about the others, workers will be able to guide a homeless individual to the shelter that can best meet their needs[10].

As discussed previously, communities in Guilford County, North Carolina, and Columbus, Georgia, have establishing networks among their shelters, and hopefully this approach will hopefully have the same effect in Atlanta.

Methods

1) The first step toward implementing this solution is to create a website that holds the information that will be gathered and updated. Initially, the website will hold information concerning number of beds available in each shelters, a program called "Tonight." Each shelter will have an account that they can use to access the website in order to update their information. The reason for this is to enhance privacy and autonomy of the homeless shelters within our network while enabling the information to be easily accessible for both shelters and homeless individuals.

2) In addition to the website, we will also develop a mobile application called that will serve as a live counter, integrated with the website. This counter will allow homeless shelters to press a simple button when a homeless person enters the shelter that will automatically update the number of available beds on the website. Another real-time service that the mobile application could potentially help with is a food and clothing counter. Whenever the amount of food or clothing in a shelter lessens, then the number on the website will also decrease. Other shelters will be able to see these amounts and tell their clients where they can get resources like these if one runs out. This will eventually aid resource allocation.

3) After implementing "Tonight," we will determine exactly what additional information we can add to our system to increase communication effectively. We need to figure out exactly what is essential information, including location, average amount of volunteers, kinds of resources are present, whether that shelter assists a particular demographic, programs or services that shelter provides, shelter capacity, average stay of a homeless individual, and success rate at making people independent. This is something that we will need to research and discuss with our partners.
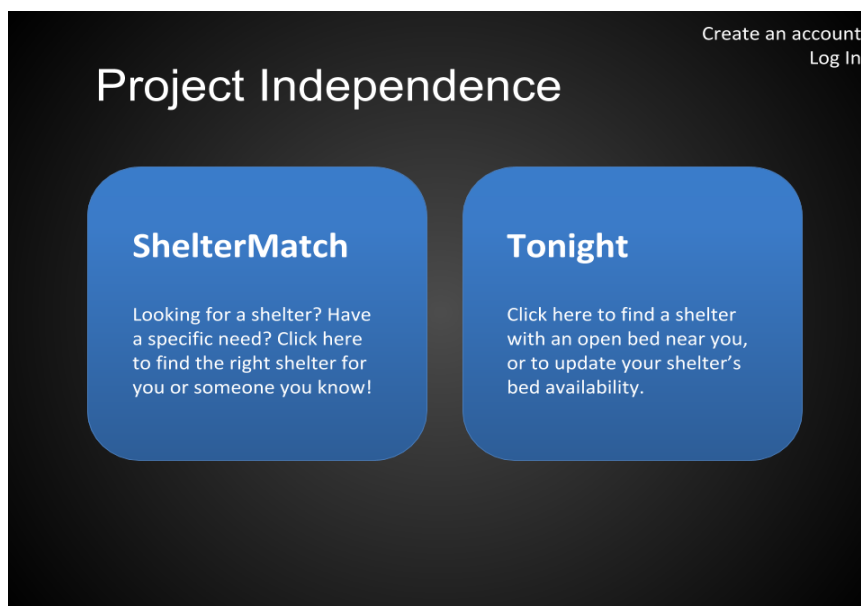

Figure 2: The website with access to both parts of the solution, "ShelterMatch" and "Tonight"
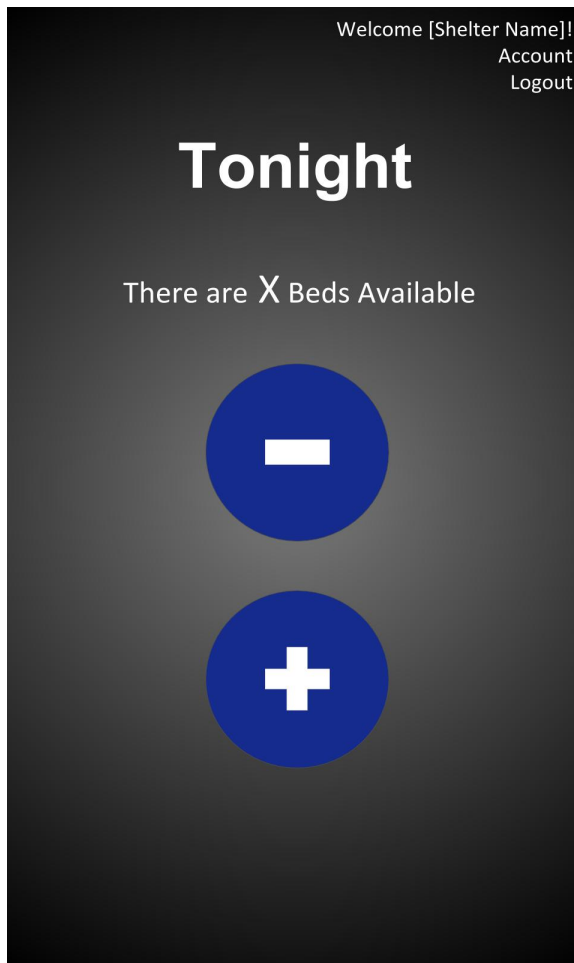
Figure 3: "Tonight" mobile application with counter to update available beds in real-time. Simple design makes it easy to use.
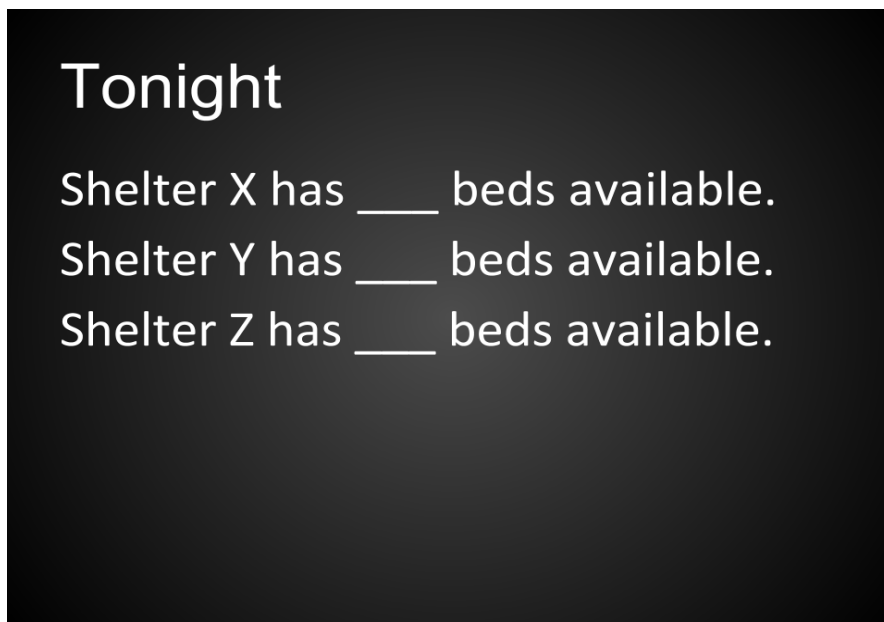

Figure 4: Website potion of "Tonight." List of shelters and their bed availability will allow shelter workers to direct homeless individuals to a nearby shelter with space for them.
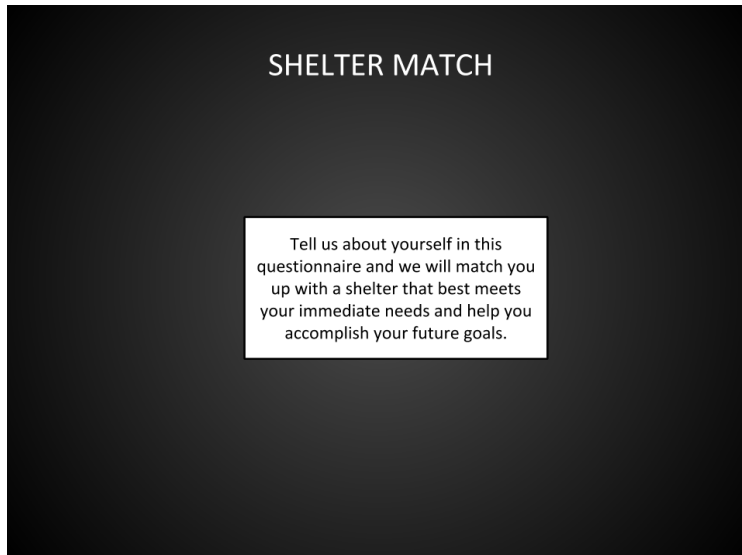
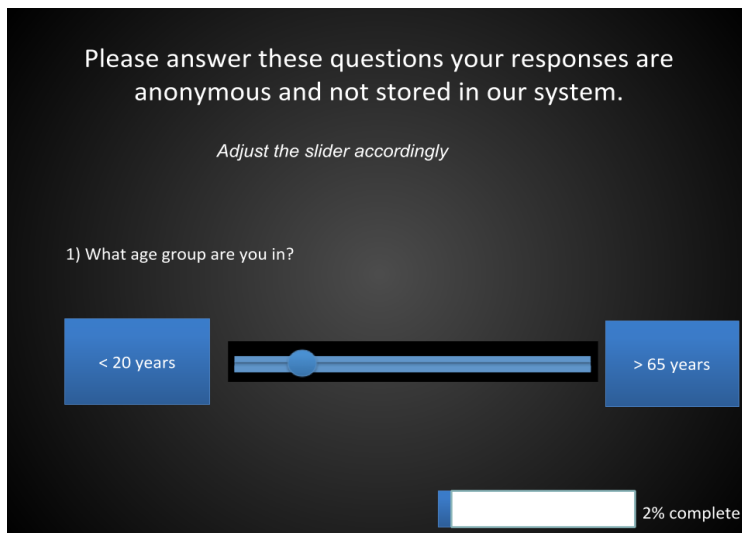*Figure 5: ShelterMatch online, opening page and description*

Figure 6: ShelterMatch online, ShelterMatch will have a series of questions that can help match a homeless individual to the shelter that will best meet their needs
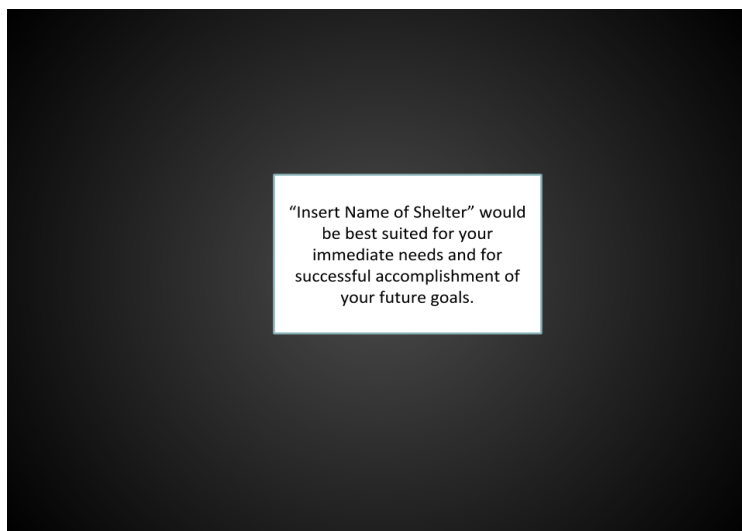

Figure 7: ShelterMatch online, after completing the questionnaire the homeless client will be matched to a shelter that can best meet their needs.

<u>Outcomes</u>

To consider the created system a success, we need to gauge how many organizations and individuals it positively impacts. Since there are so many factors that play a role into helping homelessness in Atlanta (our solution being one of them), it is difficult to measure how much our initiative decreased overall homelessness. We can ensure that our program is being used and updated by monitoring how many visits we have to the website and app. We can also attempt to determine its success by measuring the ratio of empty beds to used beds in our partnering shelters to see if this ratio is becoming more equal between shelters due to using our system. (For example, in the beginning one shelter's used to unused bed ratio might be 100:0 while another shelter's might be 80:20. After implementing our program, hopefully the ratio will equalize to 90:10 for both shelters.)

<u>Anticipated Problems</u>

We are basing our ideas off of the results of small communities such as Guilford County and Columbus, but Atlanta is a large city with 10,000 individuals without homes and about 125 shelters [8,10]. Implementing a network may be a very different experience in Atlanta than in those areas, and it may be much more difficult to connect shelters that are geographically far apart.[2]

Research Team

As a team, we need a variety of skills to ensure success. First, we need members that are able to communicate with shelters to create partnerships based on mutual respect and understanding. We also need members that are willing and able to make a website and mobile application. The app will be updated by shelter employees as homeless people enter and leave each shelter and as resources become available or diminished. The website will be updated with the current number of beds, amount of food and clothing, et cetera. We will also need the cooperation of the shelters, so that we can obtain information from them. Our team has found a couple people that are willing to work with us. The first person that agreed to work with us is Margarita Gonzalez is a program manager and research associate at the Georgia Tech Research Institute. She has agreed to guide us through the process of making partnerships and maneuvering through the nonprofit world. Another one of our partners is Patrick Pierson who is the Partner Services Manager at the Atlanta Mission who has agreed to share his knowledge on current shelters in Atlanta.

TIMELINE

Proposal Timeline
By: Project Independence
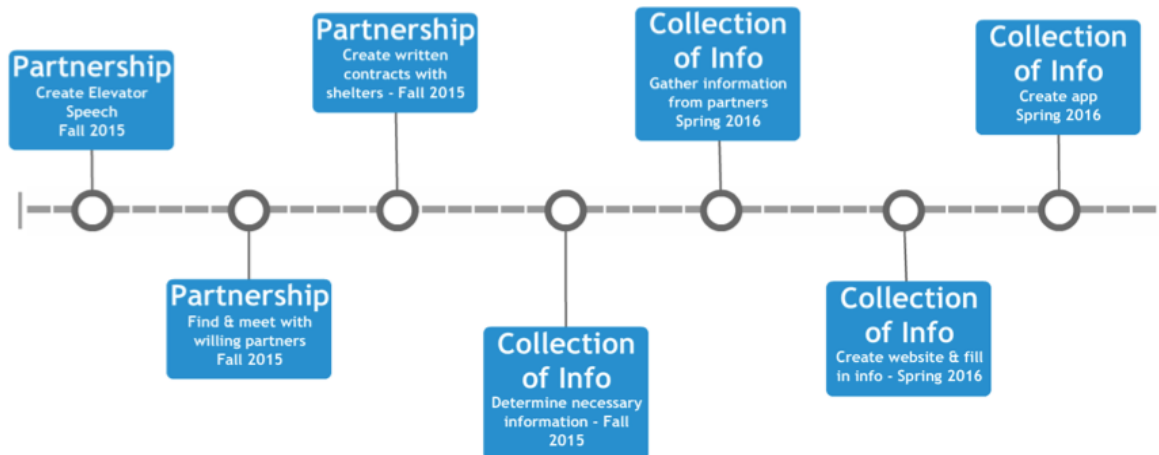
Budget

Expense	Category	Estimated Cost	Explanation	Justification
Website Consulting	Consulting	$500	Lucy Allison of Techwood Consulting has agreed to design a website for a steeply discounted rate.	An efficient and professional website is needed for this project to be successful.
Website Development	Development	$1,000	Techwood Consulting's development partners will build our website, also at a discounted rate.	An efficient and professional website is needed for this project to be successful.
Application Development	Development	$750	A professional app developer will need to help us develop an application with website integrating capabilities.	In order to make it possible to update the website in live-time, an application needs to be created.

Technological Updates	Upkeep	$50	As the year progresses, technological updates on both the website and the application will be necessary.	In order to be successful, the website and the application can not become outdated.
Website Domain	Development	$40	Owning a website domain costs about $40 per year.	A domain name will be necessary to help us create a platform for our information.
Gas	Travel	$125	Luke Mitchell will drive his car to all the on-site visits to homeless shelters and local businesses.	Personal contact with potential partners is necessary for the success of the project.
250 Brochures	Outreach	$300	Kinkos will print brochures for our project. They may or may not be able to give us a discount off this price.	These brochures are necessary for outreach in the community. This project relies on educating homeless people about their options and also spreading the word to businesses and other nonprofits.
	Total	**$2,725**		

EXPECTED OUTCOMES AND FUTURE DIRECTIONS

When the development of our solution is completed, we hope to have successfully provided access to "Tonight" and eventually "ShelterMatch" for three homeless shelters in the Midtown-Downtown area. These three shelters would be linked together, sharing vital real-time information about bed availability, support resources, program vacancies, and current shelter statistics. For our "Shelter Match" service, the most important information to keep track of will be program vacancies. In order to properly match homeless people with the best programs for their long-term success, the nature and current availability of each of these programs must be available in the online system. The website will have full descriptions of each available program and information about the vacancies in each. With this information, residents at any of the three linked shelters will be able to participate in programs at any one of the linked shelters. The "Tonight" service, if properly implemented and utilized, will greatly reduce the number of unused beds at shelters. Volunteers and workers will use the mobile application to quickly check- in homeless people at the door of the shelter. This information will go into the program to give an accurate count of the beds available at each of our partnering shelters. With this

information in hand, instead of turning away homeless people at the door, the workers will be able to send those in need of a place to stay to another shelter for the night.

After two years of working on this project, we expect to have a working version of our "Tonight" and "Shelter Match" accessible to at least three shelters. With each shelter we add, functionality will expand, but so will upkeep requirements. The end goal is to connect all the shelters in the city of Atlanta to our program, but that will not happen until we have become established and successful at just a few. We are hoping to gain funding from the program Grand Challenges at the Georgia Institute of Technology and a few groups we end up working with who would be interested in mentoring our group in the future. Currently we have established contact with Atlanta Mission, Margarita Gonzalez, Open Door, Partners in Ending Homelessness and Buckhead Church**.** Amongst these locations, Margarita Gonzalez and Buckhead Church would be collaborative relationships that would keep the project going. Margarita has been a mentor to the group and has helped the team since the beginning with our original broad idea of homelessness and provided suggestions in terms of narrowing it down. Hence her advice has been and will continue to be invaluable. Finally, Buckhead Church has been critical in providing insight into the issue of homelessness. As a church frequently visited by a few of our team members, Buckhead's services are very effective in ministering to the community. Furthermore, a few of the group members have been working on finding out more about Buckhead's "Intersect" program, which we expect will provide more insight into our issue. Recently the group has looked at Homeless Resource Network, a local group which is working on a similar idea. This was needed as Partners in Ending Homelessness has not been responsive to our emails or phone calls.

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