

User Research

- Our three personas have helped identify the layout and look of the dashboard for example having surveys that are catered towards elderly or having an automated process for survey data.
- The user interview has helped us understand what key features are needed for our dashboard, for example things like uploading new files and seeing old data.
- Our survey analysis has provided us the ability to know what data is needed to be analyzed and how to visualize it so that our sponsor can easily distribute funds

Market Research

- The market is good due to there being little already existing tools in place with other Aging services, and a large amount of systems that this tool could be useful for.
- There are cases of Shiny apps mimicking Google Forms. This can be a solution to the workflow, and incorporating the data directly into the dashboard.
- Other Aging services are using KPIs under topics of income, healthy habits, and demographics to evaluate their Senior Centers

Literature Review

- The implementation for making a Shiny app responsive to new uploaded data seems to be pretty simple and would greatly improve the client's data input workflow.
- Implementing technology in senior centers would be slightly difficult due to their inability for fine motor functions and using new technology, but using an easy design layout and intuitive workflow for online surveys could be very beneficial.
- Senior centers' main purposes are helping the social and physical health of their clients. We realized that the thing we should be focusing on are survey feedbacks about activities and aspects of the center that help promote health and wellness and rewarding social activities.

- User interviews, surveys, contextual inquiries
- Interviews with organizations
- Personas
- User journey maps
- Affinity diagrams
- etc

Survey analysis for ADS team:

Each survey question maps to a different outcome. These outcomes decide where ADS puts their funds, so we want to provide data visualization based on questions categorized by outcomes in order to make it easy for ADS to value each outcome and decide where funds go.

Personas:

We have identified three main personas that will use our dashboard. Firstly, the ADS data team (our sponsor) will need our dashboard to send out surveys for seniors at senior centers to take and to visualize/analyze the data. Additionally, they will be able to use it to upload new data and view old data. The second persona is a senior at a senior center. This person will be taking the survey and we will want to

make the survey section on our dashboard very accessible for elderly people. This means making the survey layout as simple and easy to follow as possible. Our third persona is the ADS organizer, who will be using our dashboard to make funding decisions. Right now, their process is to have someone manually input data into excel documents. We aim to eliminate this use of time and make it so all the survey data is through an automated process on our dashboard.

User Interview:

After presenting two of our users (ADS data team and ADS organizer) with our dashboard layout, we were able to find out dashboard features that are most desirable for them. We learned what they want to look out for and how they want it presented.

Market size and opportunity

https://www.longtermcarelink.net/eldercare/ref_state_aging_services.htm

There seems to be a decent market for our proposed survey tool/dashboard. There seems to be little evidence online of a system like this already in place. Each state will have multiple Aging and Disability services depending on the counties, and a good amount of them will have surveys that they will want to be evaluated. This is a great opportunity to have a large impact on these services, so they can evaluate how their Senior Centers are run and thus allocate their funds efficiently.

Design Inspirations:

https://jgassen.shinyapps.io/expand_fuel_economy/

- This would be similar to the shiny app homepage. Our plan is to have a homepage with the baseline visualizations that the sponsor is requiring. It will have a filter and an explanation to go with each.

<https://daattali.com/shiny/mimic-google-form/>

- Here is a Shiny App that would be able to input data. Here is a new idea for filling out the survey so the data can be inputted directly into the analysis resource.

Competitor Analysis:

- KPIs
 - <https://oca.dc.gov/sites/default/files/dc/sites/oca/publication/attachments/DCOA16.pdf>
 - In DC, the aging services have a KPI for the income of the people in the community
 - An increase in healthy habits (hobbies)
 - These will be something to keep in mind to evaluate in our visualizations. We have survey responses that can match these KPIs
- Dashboard
 - <https://www.vcaaa.org/performance-dashboard/#1495753643178-1cc6763d-ec2a>
 - Breaks down the dashboard into 4 different categories:
 - Transportation
 - Nutrition
 - More Services
 - Demographics

- Articles

- <https://deanattali.com/2015/06/14/mimicking-google-for-m-shiny/?fbclid=IwAR2ihgt82xCfgW9hCqL9UoMeeziES8UaiZwJ-jR75LR8nP0WOdnI8PPHDg>
- This article helped inform us how to create a dashboard for our MVP using Shiny. We were researching how stakeholders will be able to upload their own data in order to continue using our product after capstone is over.

- Scholarly papers

- Henry Been-Lirn Duh et al.. 2010. Senior-friendly technologies: interaction design for senior users. In CHI '10 Extended Abstracts on Human Factors in Computing Systems (CHI EA '10). Association for Computing Machinery, New York, NY, USA, 4513–4516.
DOI:<https://doi.org/10.1145/1753846.1754187>
- This article aided our research into how seniors will be able to use technology to conduct surveys and fill out forms.

- Young Seok Lee et al. 2011. Senior wellness: practices of community senior centers. In CHI '11 Extended Abstracts on Human Factors in Computing Systems (CHI EA '11). Association for Computing Machinery, New York, NY, USA, 2179–2184.
DOI:<https://doi.org/10.1145/1979742.1979946>
- This article offered information about how senior centers are run and what their main purposes are with their clients. We realized that the thing we should be looking at most are activities and aspects of the center that help promote health and wellness and rewarding social activities.