NeighborHub

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Goal of the Project

When organizations and universities poll the public about whether their vote and voice matters, the results are typically bleak. Pew Research Center's results showed that 39% of people didn't feel voting by people like them mattered, and 47% said ordinary citizens can't do much to influence government.[1] In the context of the political discourse today, most people find it hard to discuss politics and policy with their friends and family because they know it could result in a heated fight. We thought that one approach to fix this was to take the partisan debate out of the equation, and focus on listening to people's thoughts, concerns, and hopes about their neighborhoods. Since polling can be done effectively from the congressional level up, and polling from a state senate district population size and lower is uncommon, expensive, and inaccurate, we thought there might be a way to resolve this issue. Finally, we wanted to produce something that people would be able to look at and easily interpret – we didn't want to produce a lot of data that was impossible to decipher.

That became the goal of NeighborHub – a way to make people feel like their voices were important by bringing them together with their neighbors in a non-partisan way through data visualization. After brainstorming different ways to achieve these goals – we started to develop the model.

Means/Development of Project

The first iteration of NeighborHub was a decanvassing website that would allow anyone to log in and start going door-to-door to ask their neighbors questions about the community and their role in it. This was based on Emmanuel Macron's listening tour in France that was partly responsible for catapulting him to victory.

Team members tested out the overall premise of the idea and questions by going door-to-door to see how receptive people were to the idea. We needed to understand what questions would be

[1] http://www.people-press.org/2015/11/23/8-perceptions-of-the-publics-voice-in-government-and-politics/

effective in getting people to open up and what data we would use to paint a meaningful picture of each neighborhood.

After our initial test, we realized there were three considerations we needed to explore further in order to push NeighborHub forward: the setting of the interview (door to door or on the street) within specific demographics, what the question prompts would be, and the incentives to participate.

Setting/Demographic:

We explored a number of different settings to facilitate conversations in neighborhoods. We did door-to-door decanvassing, high traffic areas interviews, student body listening competitions, and individual listening surveys.

- In door-to-door decanvassing, we found that if people answered their door and we framed the exercise clearly, people were receptive to the conversation.
- In high traffic areas we asked people if we could get their feedback on our idea and ask them a few questions. They were generally enthusiastic to participate and answer questions about their lives.
- Student body listening competitions will be discussed in the incentives section below.
- We created surveys that could be sent out via link to gather the data by interviewing your friends and family. We tested this out during Thanksgiving Break by targeting specific groups of people that would be most likely to respond: degree specific groups (EMBA/Undergrad), friends, and family.

Question Prompts:

Our questions were inspired by the En Marche! Listening Campaign questions. We modified them slightly to fit our purposes and decided to prime the interview subject with a silly introductory question:

1. Cats or dogs?
2. How do you take your coffee?
3. Where would you throw a block party?
4. What works in your neighborhood?
5. What doesn't work in your neighborhood?
6. What is a question you would ask your mayor?
7. What is a moment where you felt like you belonged here?
8. What gives you hope?
9. Are you going to vote?

These questions were designed for interview subjects to think of themselves in relation to their role in their immediate neighborhood. In the first round of interviews, the questions were informative. We found that many people in the same neighborhood had similar answers for questions like "what gives you hope?" (children was a common answer), but wildly different answers on examples of what wasn't working in the community.

For many of our rounds of interviews we kept these questions the same, but for our final round over Thanksgiving break, we decided to slim down our questions and enable multiple choice responses. They were:

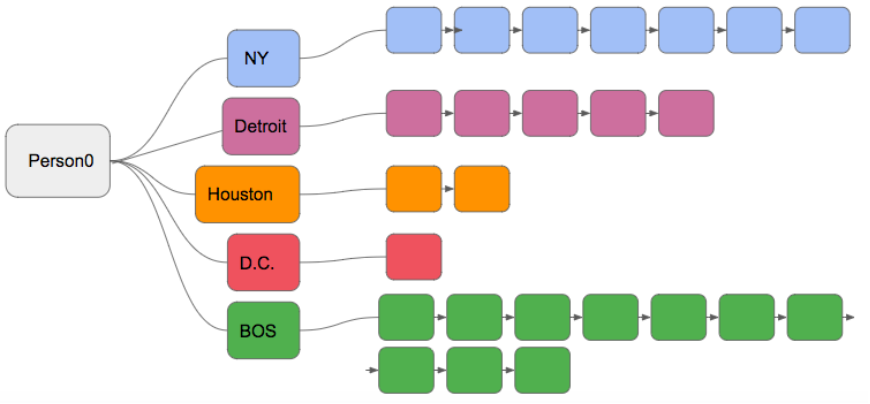
1. If you could think of a spirit animal for your neighbors what would it be?
2. How long have you lived in your town/city?
3. How often do you feel like you belong in your town/city?
4. If you could envision your local government spending 4 years to improve one thing what would be at the top of your list?
5. Show people a word cloud of what gives people hope, what is one word you would like to add?

Going forward with questions, we recognize the tradeoffs between strict demographic survey questions and entirely informal question formation. The goal is for this data to be valuable, but to who? For the question responses to be valuable to political representatives, some demographic information must be included as Gary Gensler mentioned. However, if the questions are intended for community members to feel heard by each other, the questions should be more easily amended to local preferences. This is a consideration we are still seeking guidance on.

Incentives to participate:

Up to this point, we had also met for feedback with: Guillaume Liegey, Lawrence Barriner III from CoLab, Kathy Cramer, Jenny Mansbridge, and Marshall Ganz among others to solicit feedback and think of new features to add to NeighborHub. The findings we gathered from these meetings generally focused on how to frame the conversation in a way that will incentivize people to participate. The feedback suggested that clarity of motives, authority and agency attributed to the user, and an immediate payoff for participation would make a difference in the success of NeighborHub.

Anu, our group's EMBA, ran a successful experiment with her classmates where the driving factor in people wanting to participate was competition to get the most responses for their respective cities. The results were positive, the the responses went from 5 to 25 (see the diagram below showing how the responses spread).

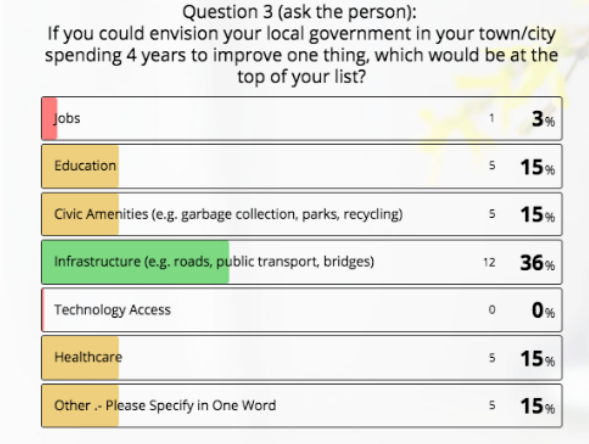


In addition to the competition, the other factor that influenced the results was the network. All the EMBAs knew each other and therefore were willing to participate and talk to each other. Very little training of the people asking the questions was required. The experiment showed the powerful effect of networks in engagement. However, in a situation where networks are weak or non-existent between participants, a compelling narrative and training of participants need to exist in order to sustain engagement.

For our final project, we gave participants a limited amount of time to share the questionnaire with as many people as possible. One challenge was that there was no way for participants to see how their distribution of the questionnaire compared to others so there wasn't much motivation to compete. However, we found that a time constraint could be an interesting gamification variable to play with in the future with more gratification for winners.

Data Visualization:

Initially our idea was to produce a high-level overview of neighborhood results on a map based on the data we collected. Although there were some privacy concerns, we decided it may be more effective to share the data in a fun way that wouldn't require a lot of time to understand. Based off this, we created a word cloud that spit out results based on answers to the questions.



Problems:

Ultimately, we found a few issues within each category that we wanted to fix.

To get the best results from canvassing door-to-door, we would need highly trained and incentivized volunteers. This would yield the most productivity. If our volunteers were less productive, we would need more volunteers to accomplish the scale of input we desired. For incentives, getting people to canvass for political campaigns is difficult, but getting them to canvass for a new nonpartisan effort that was testing engagement hypotheses was proving to be even tougher. We believe this was challenging because there wasn't a clear incentive for why they should participate in the context of the data we were hoping to collect.

Second, in order to collect and analyze the data effectively, we would likely need to incorporate the voter file into the project so canvassers knew which house to hit and to understand the overall data the website pumps out. On the other hand, in high traffic areas there was no way to know if someone had already been interviewed unless they told us, and stopping people in the street was difficult and was not conducive in making interviewees feel comfortable in sharing personal details about themselves.

Additionally, we wanted to pose questions that got people comfortable with the interviewer and also prompted them to open up about their true feelings on issues. As stated earlier, we tested questions and settled on a final list that drove at the main points of our project, but for this project to be useful to others, questions might need to be developed through a more structured decision-making process.

Finally, the word cloud was skewed to favor certain words based on the person conducting the interview. If someone interviewed 10 people, and any of the interviewees answers were similar, the interviewer typically entered the same exact response for both questions.

Solution and Final Iteration:

For the final iteration, we decided on a gamified questionnaire that everyone would individually fill out. This reduced the resources needed to do the listening as people could perform the listening in their homes without anyone stopping by their door. This ensured a solid mix of responses and gave people the option to opt out of answering the questions by simply ignoring the link. Furthermore, individuals could fill out the survey themselves. We then added in multiple-choice answers to give us more focused responses for certain questions.

While most polling is a one-way process where answers only go to the polling agency, we attempted to create a mapped open-poll which would entice users to participate by offering them a view into other people's answers. Furthermore, by tracking shares and referrals, we were able to visualize people's connections with each other.

We felt these features gave the idea the highest chance of going viral. To cap it all off, we started to map out and visualize the data collection based on individual responses. The goal was to allow individuals to fill out the survey and tell us about their neighborhood, and then with spread the word with a link that would track their network.

At this point we have a great framework and mechanism to track individual networks. This feature is essentially a borrowed concept from Fifty Nifty – to visualize interpersonal connections and rank individuals based on who has the most extensive and responsive network. We also added in the ability for people to pick mascots for their zip codes as a customization tool and way for them to express their neighborhood in a nonverbal way. Here we were trying to leverage the fun and engagement that made Pokemon Go a success.

Measure of Success and Further Data Visualization

By the end of the course, we were able to build the final iteration, but did not have enough time to fully deploy it and test its virality (see more in next steps). Here we describe the feature-set of the website and the workflow of a user.

The user first encounters NeighborHub either through the website URL: http://www.neighborhub2.herokuapp.com/ or through a referral link from a friend which has the

form: http://www.neighborhub2.herokuapp.com/[userID]. The site is designed to be opened in either mobile or desktop format. When the user opens the site, they are presented with a dynamic map of the NeighborHub network. Other users have already picked out mascots for their zip-codes, and these mascots populate onto the map at their correct location. Every second, a different zip code is highlighted, and a word of hope is written above the mascot. In addition, links are drawn between zip codes where one user has referred another user to the site.

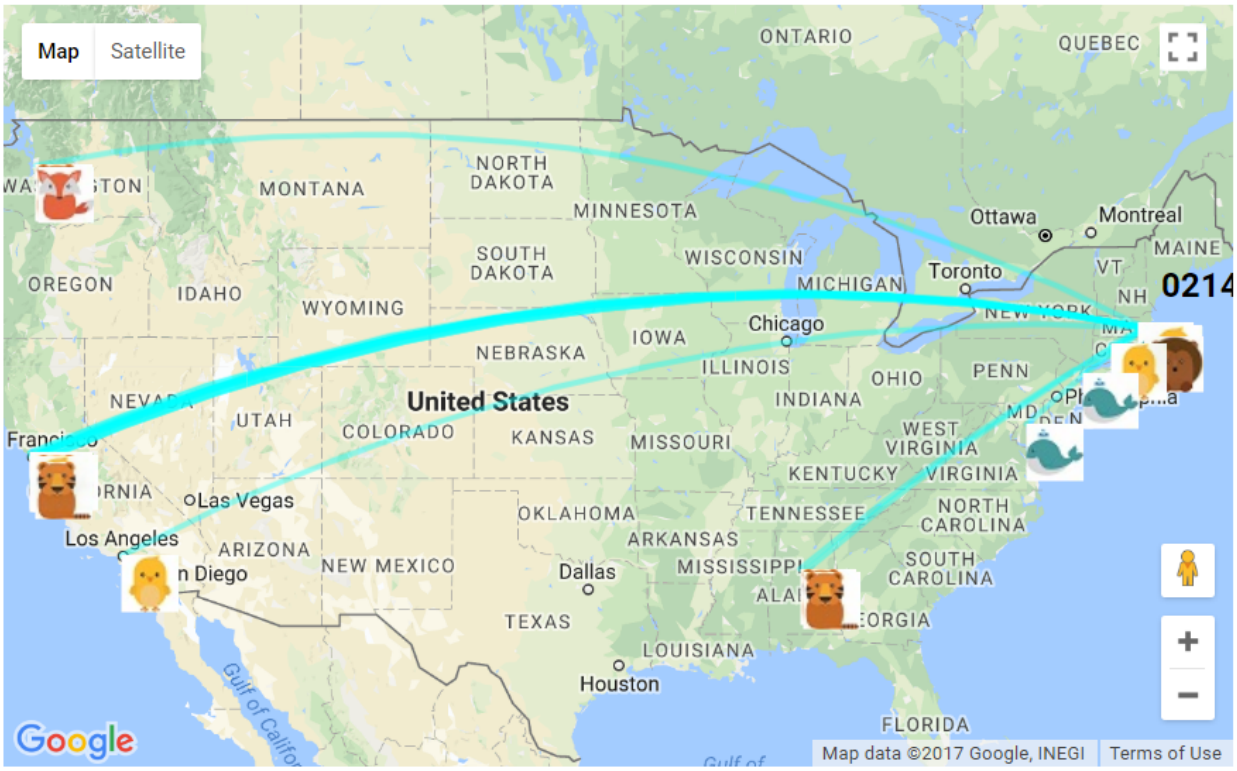
The user is presented with the task of "putting their zip-code on the map". By typing their zip-code into the box, they unlock the survey questions:

1) Pick a mascot for your zip-code
2) Which is the most important issue for you right now? (multiple choice with other box)
3) What gives you hope? (one word response)
4) Anything you want to say to your neighbors? (free-form response)

After clicking submit, their response is recorded in their zip-code. Their vote for mascot is also recorded and dynamically changed on the map.

The user then has the opportunity to share on Twitter, Facebook, or by copying and pasting a link. This link is connected with their anonymous user ID, so they can track their progress as their shares reach other people across the country. The user is alerted at the top of the page as to how many points they've scored (related to how many connections they've generated through shares).

In addition to the dark-blue connections drawn between zip-codes, there is also a light-blue line drawn between the user's zip-code and the other users they've shared with. Using these two colors, both the user's network and the greater NeighborHub network can be visualized on the same map.

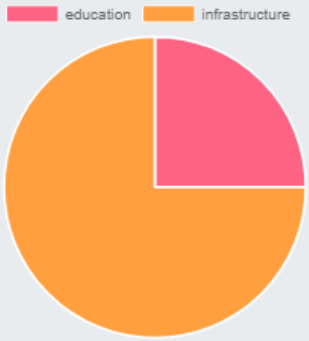


You have collected 1 connection! Share this link to rank up:
http://neighborhub2.herokuapp.com/roQoIg1q8laTlWYJLbxojDnfq8I3!

When you click on any of the zip-code mascots, you are taken to the bottom of the page where you can see statistics about the zip-code, including how many people responded, the proportion of people caring about each particular view, a list of words of hope, and the messages the neighbors sent to each other.

Most important issue for zipcode:

02139



Zipcode Mascot:

Local words of hope:

1. Mueller
2. community
3. feelings
4. success

Messages from Neighbors:

1. default message

What is Left to build?

While most of the site is up and ready, there are some tasks we'd like to finish before putting all our effort into publicizing it:

1) More focus group tasks to validate the UI
2) Build some system for flagging troll messages
3) Build better database security so users can only affect their own data
4) Better system for users to submit new questions / answers, as well creating their own custom NeighborHub variants. This system will enable anyone to submit questions and answers, and have the community vote on if they are relevant

What would hypothetical next steps be?

We have a lot of excitement for the future of NeighborHub as a platform for connecting communities. The big next step for NeighborHub is trying to make it go viral over the IAP period. In order to do that, we will continue running user tests with the goal of a full-launch within the next few weeks.

In addition to a generalized NeighborHub where everyone is asking and answering questions, we are very interested in utilizing it as a platform for campaigns to understand better about their constituencies and how they are connected. We hope to answer further questions about how viral the system can be, and if the impetus of a campaign can push us over the edge.

Github: https://github.mit.edu/hbedri/NeighborHub/
Live-site: http:/neighborhub2.herokuapp.com/