Curious Boston

Interaction Team Degree Project
Jillian Arkin-Burns, Zachary Bennett-Engler, Kiley Choi, Rucha Khanolkar
Fall 2019 – Spring 2020

Introduction

Our research over the Fall 2019 semester focused on the Boston Open Data Department and their interactions with different community and advocacy organizations in the Boston Community. Through meetings with several different community organizations from a variety of sectors as well as brainstorming, prototyping and check-ins with the head of the Boston Open Data department, we identified several pain points and inefficiencies in the data flow — mostly concentrated between Data.Boston.Gov and the community and advocacy organizations they are trying to serve. Based on our findings, we designed an initial wep prototype for a new search mechanism to be added to Boston's data portal.

Over the course of the Spring 2020 semester, we continued testing and development of this web prototype. We expanded on this work by building high-fidelity prototypes of a new data inquiry form and a new way for community organization users to showcase their data projects. To connect different organizations and explore what they were interested in about public data, we also hosted a data-focused event featuring a data training and interactive activity.

The following book details the process and documentation of all of our research and work from Fall 2019 to Spring 2020.

Semester 1

Curious Boston 2020

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Semester 2

Semester 01

Team Goals and Interests

Initial Team Goals

- Making a real impact on informing the Boston community on data and data usage
- Creating something that people can use
- Ensuring accessibility of the final project

Potential Ideas of Interest for Project

- Allowing communities to learn from within
- How to inform the general public about data security
- Accessibility to data and how it is being used

Research Plan

The First Iteration

Research Questions

- Are Bostonians curious about data?
- What are Bostonians curious about regarding data?

Research Hypothesis

Bostonians are curious about data but don't have the means to ask questions about it. Additionally, people don't know what questions to ask.

Goals of Project

- Find out Bostonians' curiosities regarding their data and city data
- Reveal (and increase) curiosity about data
- Present the concept of data in a positive light
- Create (and streamline) processes for the city to help (and solve) data curiosities

Initial Research

The General Idea

To model our idea of getting people to ask the right questions, we created a vending machine with inputs and outputs to get people to ask better questions.

Inputs: Question about data
Outputs: Better question about data

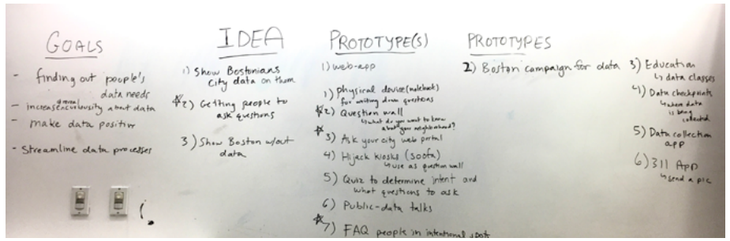
How it Worked

The person would ask a question related to their neighborhood and data. The vending machine would consume the question, and ask a question in return to help the person ask a “better question” denoted by the criteria below. The person would ask an improved version of their question until they successfully asked a “good question” deemed by our standards. The machine would then celebrate this with a showering of confetti.

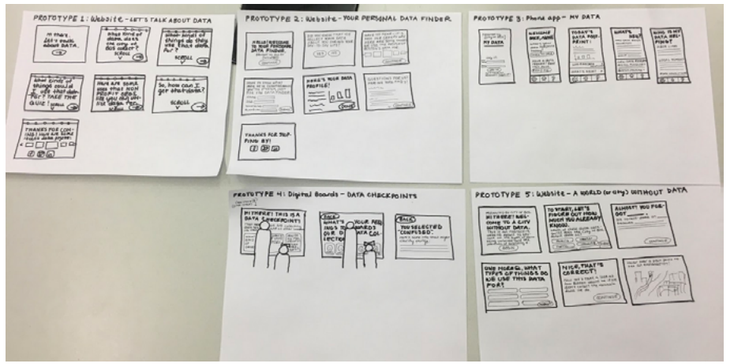
What is a Good Question?

- **Productive:** answer can be used to provide a solution to problems
- **Specific:** have limited possible answers
- **Quantifiable:** Kim can offer data resources to inform solution
- **Relevant:** related to the data that the city can provide
- **Purposeful:** include why the person is asking the question

Prototyping



We went through all of our possible prototype ideas and grouped them by idea and goal



Some rapid storyboarding sketches of possible prototypes

Master List of All Prototypes

- Web app
- Boston marketing campaign for data using eye-catching visualizations and statistics
- Education - data classes
- Digital “data checkpoints” where data is being collected
- Data collection mobile app
- 311 app to streamline process - send a picture
- Physical device (notebook, etc.) for writing down questions
- Question wall - what do you want to know about your neighborhood
- “Ask your city” web portal
- Hijack existing kiosks (SOOFA) and use as question wall
- Online quiz to determine intent of data search and who/what to ask
- Public data talks
- FAQ people in intentional spots

Final Prototypes

Through our idea generation, we selected three prototypes that will collectively offer us insight into Bostonians' curiosity about their data and city data. We decided that a range of interaction methods were necessary to find out the full scope of what Bostonians think about data.

01 Web Application

Description

Users would input basic demographic information on themselves and leave questions on this digital "wall" that Kim and other data stakeholders could later look back on to direct future department efforts and community outreach.

Demographics

Residents of Boston communities - specifically a younger age range (Generation Z, Millennials) that would be more comfortable with a digital question board format and more likely to engage. This digital experience would also serve as a secondary "safety net".

02 Data Representatives

Description

A person (probably one of us) whose job it is to answer and collect questions residents ask at specific points of interest. A similar example of an already existing representative could be the MBTA officers that stand on the subway platforms.

Demographics

We are interested in the residents of the communities where these Group Data Representatives are placed. They could be of any age group, but we want to focus on location and how questions change, or are similar, based on location.

03 Question Wall

Description

Question walls are large surfaces (typically sides of buildings) at street level that pose a question to people that pass by. Attached to the wall are writing implements for people to write their answers on the wall itself. The status of the wall and the answers on it are catalogued at regular instances.

Demographics

We are interested in the foot traffic where the walls are placed. This prototype is intended for Boston residents, rather than tourists or commuters. They could be of any age group, but we want to focus on location and how questions change, or are similar, based on location.

Prototype 01

First, we decided to prototype the Web Application using a Google Form.

Goal

We aimed to use the responses to each question as a gauge on how successful each question was in garnering the information on the opportunities for Kim to direct future department efforts and community outreach.

Methods

As a group, we came up with several questions to ask our participants. We ended up setting on the top bolded questions as we thought they would best represent and collect the data we wanted.

I think data is ____
I think data should be ____
I want to know ____ about my neighborhood
My neighborhood needs ____ to help ____
I want to help my neighborhood by ____
I want to know ____ about my city's data
I want to know ____ about Boston's data
I think my city should know ____
I think my neighborhood should know ____
I want to improve my city by ____
I need ____ to solve ____
I hope my neighborhood gets help with ____

I want to know ____ about my city
I want to know ____ about Boston
I want to know ____ about data
I want to know ____ about my data
I want my data to be ____
I want to solve ____ with ____
I want to help ____ with ____
My neighborhood needs help with ____
I want to use ____ to help my neighborhood
My city can help me ____

Prototype 01 Results

Results

Prototype active time period: 10/25 - 10/27
Prototype method: Google Form
Number of responses: 10

I think data is ...
Useful
Important
Important, big, DANGEROUS AND A TOOL THAT CAN EASILY BE USED FOR EVIL
extremely valuable.
A synonym for information
cool
Helpful
often biased but also important if understood how to interpret
organized information
Cool

My neighborhood needs _____ to help _____
I don't know; I don't know
Means, those who need it
Money, everyone
money the homeless
To embrace culture, enhance community
fewer people, the noise
More police; lower crime
affordable housing --- diversify
affordable housing...keep it lively
A strong community to help keep the neighborhood nice

I think data should be ...
Secure
Accessible to the public
Private, secure and VISUAL
shared.
Used? In moderation?
open to everyone
Displayed in a way that's easily understandable
collected and interpreted responsibly; reflective of all
accessible
From multiple sources

I want to help my neighborhood by ...
Volunteering some place
Volunteering my time to good causes
Feeding everyone
not sure
Not sure what I can add?
volunteering
Cleaning up
being engaged and knowing neighbors
preserving its character
Recycling, cleaning up trash

I want to know _____ about my neighborhood
More
Secrets
When the construction will be over
?
Who
history
Safety
demographics, environmental issues, future plans, how to encourage diversity
who lives in my neighborhood
About the history

Prototype 01 Analysis

Analysis

Positives

- Every question except for the first confused at least one person
- First question and Fourth question were most successful because they provided the most actionable items for Kim to provide data
- Provided insight into what makes a successful question

Areas of Improvement

- Third question was too varied and vague
- Prototype was related to imagined final product, but was not an exact representation of it
- 10 responses all from Bostonians is helpful, but is not a significant view into or representation of the whole
- Responders were confused by 4 out 5 questions
- Overall: informative, but only mildly successful

Thoughts for Future Prototypes

- Create a prototype more similar to imagined final product
- Single question form
- Ability to view others' responses
- Ability to see your response on 'the wall', after submitting
- Refine questions to promote specific answers that encourage actionable items

Transition

Why we changed our idea

After conducting our first prototype, and talking with Kim, we realized that **our target audience was too broad**. Having all Boston citizens be the audience resulted in a very varied interest in data and goals. We checked in with Kim, and decided to **narrow in on community organizations** that may already be dealing with data or would like help accessing it.

New Team Goals

- Figuring out what data Boston organizations are interested in
- Creating a framework that they would find useful in asking for that data to make them self sustainable
- Streamlining processes for Kim to make data more accessible to the community.

New Area of Interest

Creating a reusable platform for organizations to ask the city for data. If an organization wants data from the city, they have to meet with Kim, discuss and narrow down their focus, and ask for a specific data set. Then, Kim either presents the data requested, gives a reason why the city cannot share the data requested, or tells them why the city does not have the data requested. If the city does not have the data requested, the organization works with Kim to determine the best way to get the data. After defining their approach, the organization executes this plan.

Research Plan

The Second Iteration

Research Questions

- What would Boston-based community, non-profit, and research organizations want from a platform that allows them to ask the city for data?
- How might we align that with what Kim and the Boston government want from the platform?

Research Hypothesis

Organizations want data and access to data, but don't always know where to start looking and/or how to ask for the data. Kim wants to streamline the process of giving data to organizations.

Proposed Solution

A web-based platform that community, non-profit, and research organizations can use to ask the city for data.

Community Organization Interviews

With our new research plan, we started interviewing leaders from various Boston community organizations.

01 BARI (Boston Area Research Initiative)

An interuniversity partnership that pursues original urban research on the cutting edge of scholarship and public policy, with an emphasis on opportunities created by novel digital data.

Who

Will Pfeffer, Program Coordinator at BARI
Riley Tucker, Research Assistant and Data Consultant at BARI

Key Takeaways

- It is very important to show people how to use a tool, otherwise people won't use it.
- Most training sessions start out of places where Will and Riley have connections. These initiatives tend to be more successful because they know how things work.
- Most people attend training sessions because the tool is related or relevant to their job.
- It is difficult to expand training sessions to communities they are less familiar with, and this is one of their biggest struggles.

Community Organization Interviews

02 LGBTQ Youth

The Massachusetts Commission on LGBTQ youth advises others in state government on effective policies, programs, and resources for LGBTQ youth.

Who

Corey Prachniak-Rincón, Director, MA Commission on LGBTQ Youth

Key Takeaways

- It is hard to collect certain data points because they relate to sensitive topics that cannot be outlined with clear definitions like homelessness.
- Corey would love to collect certain data, but has to go through a lot of hoops to get the state or city to collect that data.
- Data and getting someone to the right data generally requires a human element because it takes a lot of connections and knowing people to get specific thigns done.

Community Organization Interviews

03 Asian Women For Health

A peer-led, community-based network dedicated to advancing Asian women's health and wellbeing through education, advocacy, and support.

Who

Chien-Chi Huang, Executive Director at Asian Women for Health

Key Takeaways

- Certain organizations have access to the data they want, but do not have the means to analyze and visualize the data to suit their needs.
- Most data that they recieve needs to be outsourced to a contractor to appropriately utilize those data sets.
- The data and visualizations are important for recieving grant funding to get important projects up and running.

Community Organization Interviews

04 NEU Service Learning

A program at Northeastern that supports research related to service-learning and community engagement, as well as publicly-engaged scholarship in partnership with the community.

Who

Lisa Roe, Assistant Director at NEU Service Learning

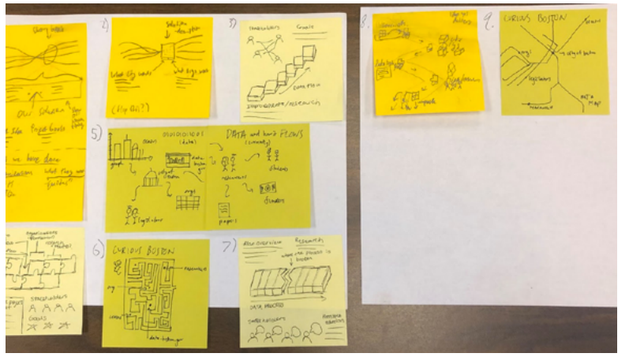
Key Takeaways

- Most work is relationship-based which makes the human piece very central
- Many organizations don't know public data is available for their use
- Many organizations don't know how to analyze/use data and for some grants, they are required to hire an external data advisor anyways

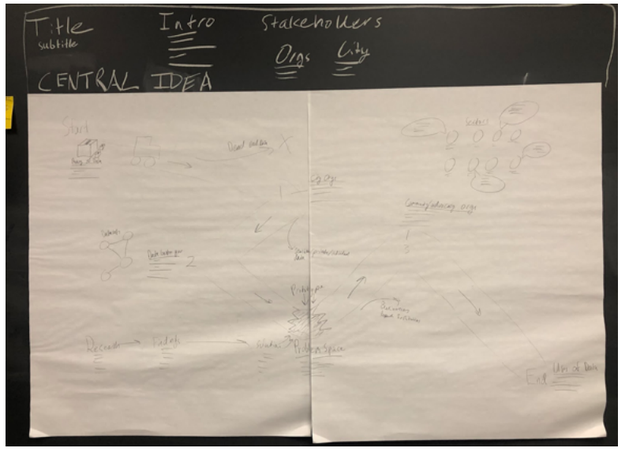
Gigamap Brainstorming

Central Idea: How does data flow through the city?

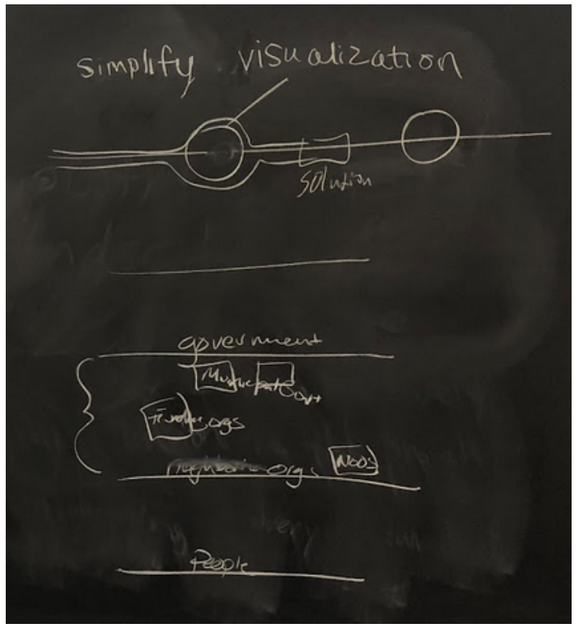
We decided to focus on the flow of data through the city, and came up up with this general flow of data going from data collection, to city orgainzations, to data.boston.gov to organizations to legislators, contributors and funders. We used this flow to brainstorm our initial gigamaps.



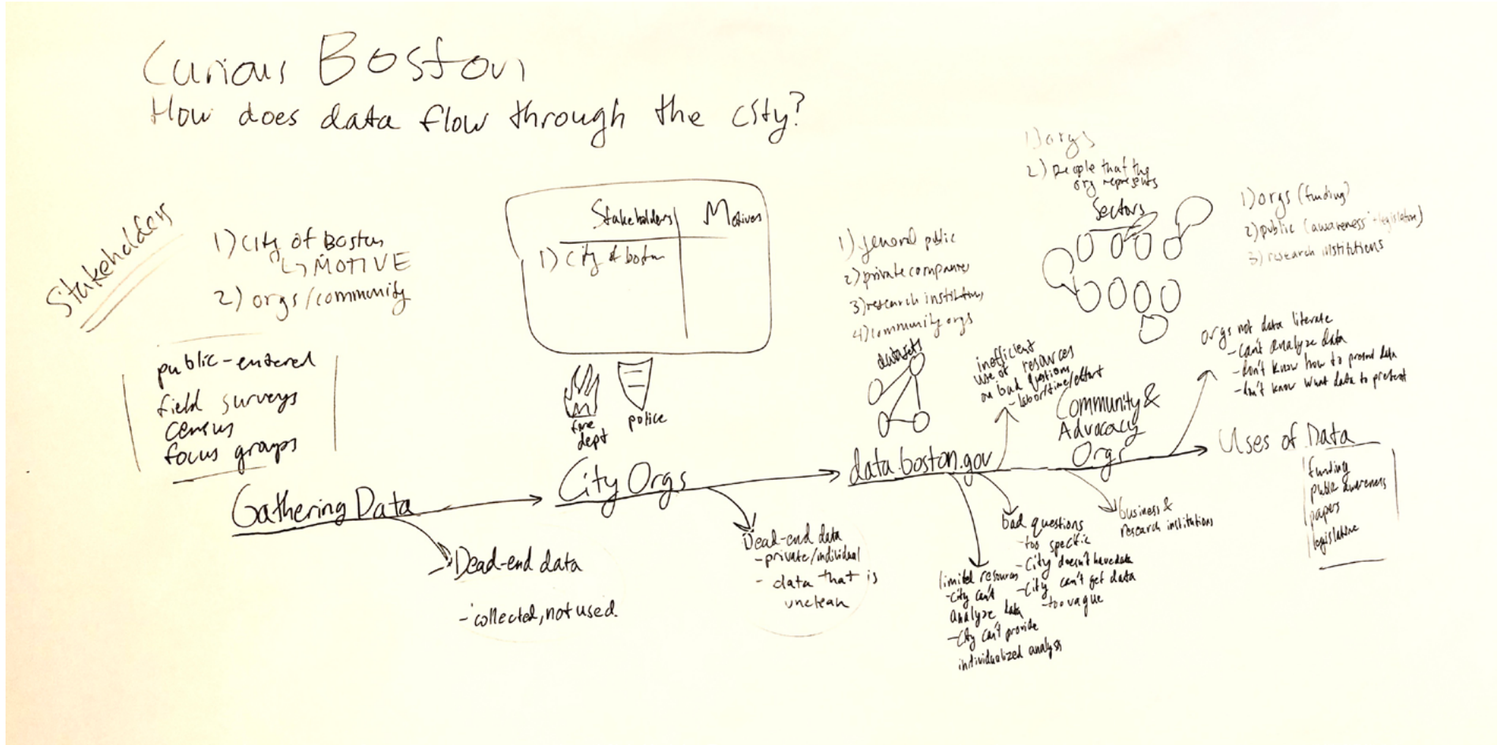
First, we brainstormed our individual ideas for what the gigamap might look like.



Gigamap Brainstorming



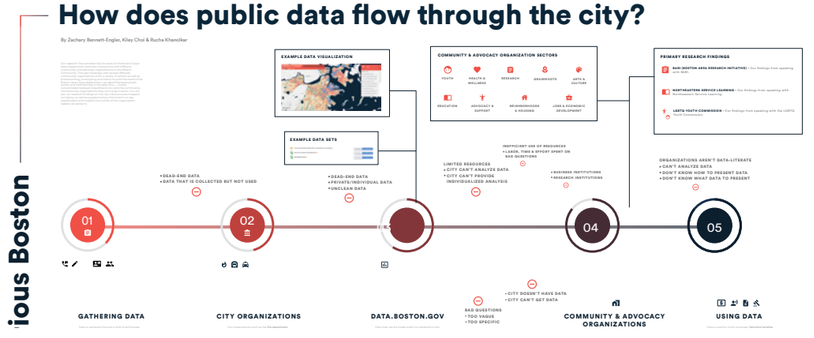
We simplified our visualization to make it more streamlined. We ended up with a chart that showed the flow of data from the gathering stage to the using stage.



Gigamap Iterations

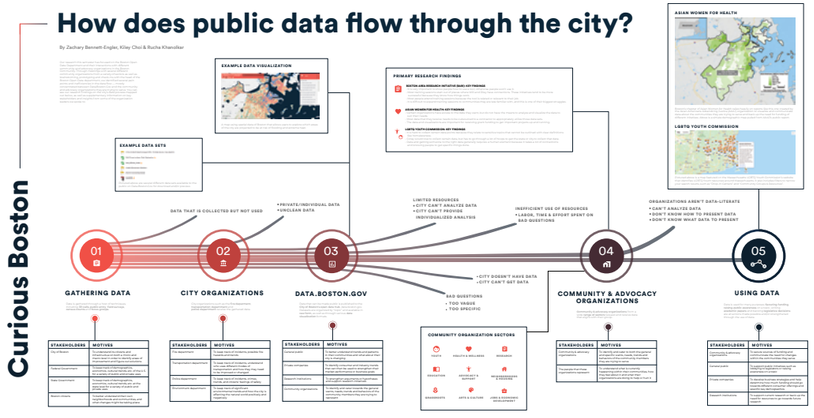
First Iteration

The first map was a good start, we mostly decided to fix sizing, and positioning of certain items. We also decided on making the loss of data portion more obvious by creating individual lines instead of one large central line.



Second Iteration

The second map added the individual lines, as well as tables for the stakeholders and motives. After critique, we decided on adding more consistency within the central line as well as bolder colors and repositioning of icons.



Final Gigamap

How does public data flow through the city?

By Zachary Bennett-Engler, Kiley Choi & Rucha Khanolkar

Our research this semester has focused on the Boston Open Data Department and their interactions with different community and advocacy organizations in the Boston Community. Through meetings with several different community organizations from a variety of sectors as well as brainstorming, prototyping and check-ins with the head of the Boston Open Data department, we identified several pain points and inefficiencies in the data flow — mostly concentrated between Data.Boston.Gov and the community and advocacy organizations they are trying to serve. You can see our research findings on the city's data process mapped out below, as well as supplementary information on key stakeholders and insights from some of the organization leaders we spoke to.

EXAMPLE DATA VISUALIZATION

A map using spatial data of Boston that allows users to explore which areas of the city are projected to be at risk of flooding and extreme heat.

EXAMPLE DATA SETS

Pictured above are several different data sets available to the public on Data.Boston.Gov for download and/or preview.

PRIMARY RESEARCH FINDINGS

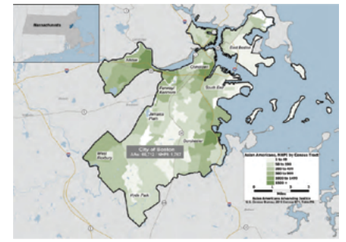
BOSTON AREA RESEARCH INITIATIVE (BARI): KEY FINDINGS
- It is very important to show people how to use a tool, otherwise people won't use it.
- Most training sessions start out of places where Will and Riley have connections. These initiatives tend to be more successful because they know how things work.
- Most people attend training sessions because the tool is related or relevant to their job.
- It is difficult to expand training sessions to communities they are less familiar with, and this is one of their biggest struggles.

ASIAN WOMEN FOR HEALTH: KEY FINDINGS
- Certain organizations have access to the data they want, but do not have the means to analyze and visualize the data to suit their needs.
- Most data that they receive needs to be outsourced to a contractor to appropriately utilize those data sets.
- The data and visualizations are important for receiving grant funding to get important projects up and running.

LGBTQ YOUTH COMMISSION: KEY FINDINGS
- It is hard to collect certain data points because they relate to sensitive topics that cannot be outlined with clear definitions like homelessness.
- Corey would love to collect certain data, but has to go through a lot of hoops to get the state or city to collect that data.
- Data and getting someone to the right data generally requires a human element because it takes a lot of connections and knowing people to get specific things done.

NORTHEASTERN SERVICE LEARNING: KEY FINDINGS
- The truest piece of data communication is centred, most work is relationship-based.
- Many organizations don't know that public data is available for their use.
- Many organizations do not know how to analyse and/or use data.
- For some grants, organizations are required to hire external data advisors.

ASIAN WOMEN FOR HEALTH



Boston's chapter of Asian Women for Health relies heavily on reports like this one created by the Asian Americans Advancing Justice (AAAJ) organization to visualize and communicate data about the communities they are trying to serve and back up the need for funding of different initatives. Above is a simple demographic map pulled from AAAJ's public report.

LGBTQ YOUTH COMMISSION

Pictured above is a map featured on the Massachusetts LGBTQ Youth Commission's website that identifies LGBTQ Youth resources around Massachusetts. It also includes filters to narrow your search results, such as "Drop-In Centers" and "Community Groups & Resources".

DATA THAT IS COLLECTED BUT NOT USED

• PRIVATE/INDIVIDUAL DATA
• UNCLEAN DATA

LIMITED RESOURCES
• CITY CAN'T ANALYZE DATA
• CITY CAN'T PROVIDE INDIVIDUALIZED ANALYSIS

INEFFICIENT USE OF RESOURCES
• LABOR, TIME & EFFORT SPENT ON BAD QUESTIONS

ORGANIZATIONS AREN'T DATA-LITERATE
• CAN'T ANALYZE DATA
• DON'T KNOW HOW TO PRESENT DATA
• DON'T KNOW WHAT DATA TO PRESENT

• CITY DOESN'T HAVE DATA
• CITY CAN'T GET DATA

BAD QUESTIONS
• TOO VAGUE
• TOO SPECIFIC

01 **GATHERING DATA**

Data is gathered through a host of techniques, including **311 calls**, **public entry**, **field surveys**, **census counts** and **focus groups**.

STAKEHOLDERS	MOTIVES
City of Boston	To understand its citizens and infractructue on both a micro and macro level in order to identify areas of improvement and figure out solutions
Federal Government	To keep track of demographics, economics, cultural trends, etc. of the U.S. for a variety of public and private uses
State Government	To keep track of demographics, economics, cultural trends, etc. at the state level for a variety of public and private uses
Boston citizens	To better understand their own neighborhoods and communities, and what changes might be taking place

02 **CITY ORGANIZATIONS**

City organizations such as the **fire deparment**, **transportation department** and **police department** receive the gathered data.

STAKEHOLDERS	MOTIVES
Fire department	To keep track of incidents, possible fire hazards and trends
Transportation department	To keep track of incidents, understand who uses different modes of transportation and how they may need to be improved or changed
Police department	To keep track of incidents, crimes, trends, and citizens' feelings of safety
Envrionment department	To keep track of significant environmental trends and how the city is affecting the natural world positively and negatively

03 **DATA.BOSTON.GOV**

Data that can be made public is published to the **City of Boston's open data hub**, data.boston.gov. Datasets are organized by "topic" and available in **raw form**, as well as through various **data visualization** formats.

STAKEHOLDERS	MOTIVES
General public	To better understand trends and patterns in their communities and what about their city is changing
Private companies	To identify consumer and industry trends that can then be used to strengthen their market performance or business goals
Research institutions	To strengthen arguments or hypotheses and support research initiatives
Community organizations	To identify and cater towards the general wants, needs, trends and behaviors of the community members they are trying to represent

COMMUNITY ORGANIZATION SECTORS

- YOUTH
- HEALTH & WELLNESS
- RESEARCH
- EDUCATION
- ADVOCACY & SUPPORT
- NEIGHBORHOODS & HOUSING
- GRASSROOTS
- ARTS & CULTURE
- JOBS & ECONOMIC DEVELOPMENT

04 **COMMUNITY & ADVOCACY ORGANIZATIONS**

Community & advocacy organizations from a wide **range of sectors** request and receive data that aligns with their group.

STAKEHOLDERS	MOTIVES
Community & advocacy organizations	To identify and cater to both the general and specific wants, needs, trends and behaviors of the community members they are trying to serve
The people that these organizations represent	To understand what is currently happening within their communities, how they feel about it and what their organizations are doing to help or hurt it

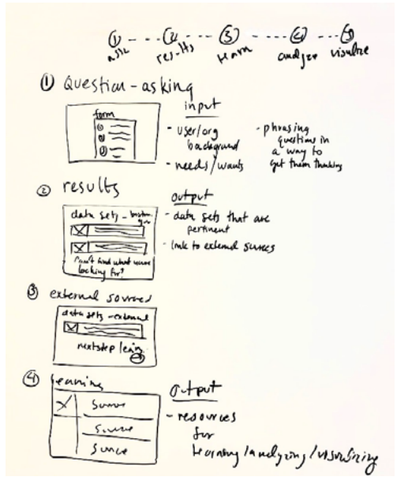
05 **USING DATA**

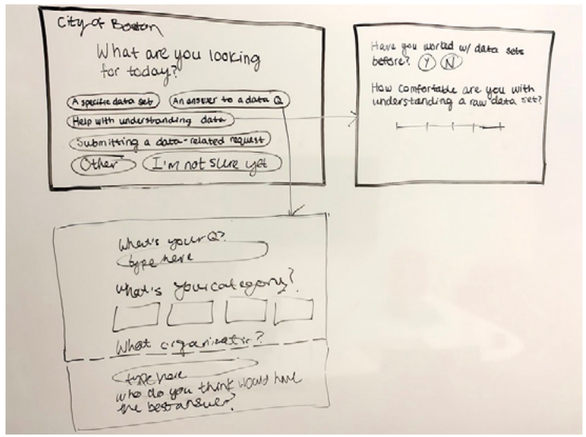
Data is used for many purposes. **Securing funding**, **raising public awareness** on a topic, writing **academic papers** and backing **legislative decisions** are all actions made possible and/or strengthened through the use of data.

STAKEHOLDERS	MOTIVES
Community & advocacy organizations	To secure sources of funding and communicate the need for changes within the communities they serve
General public	To support public initiatives such as lobbying to legislators or raising awareness on a topic
Private companies	To develop business strategies and help determine how much funding should go towards different consumer offerings and specific key demographics
Research institutions	To support current research or back up the need for resources to go towards future research

Curious Boston

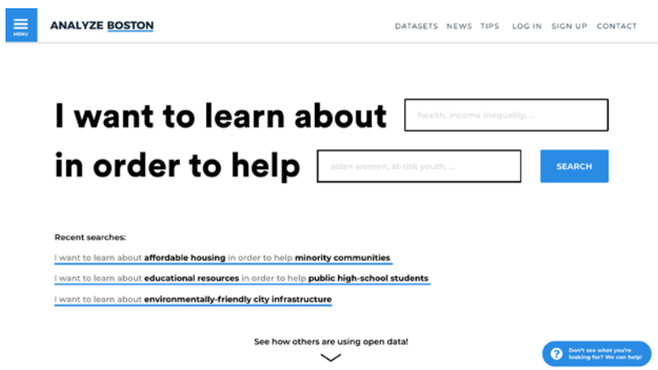
Web Prototype Brainstorming



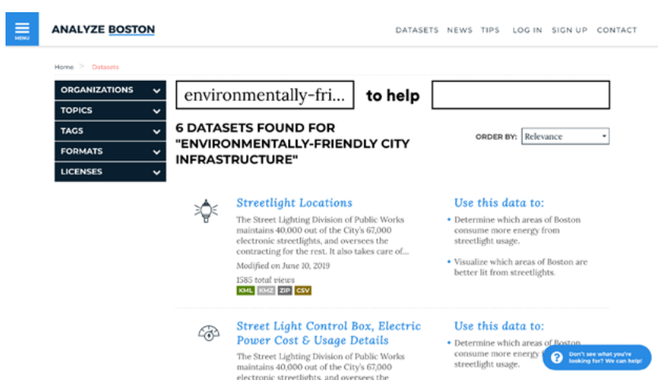


Initial screens we brainstormed to figure out how a user might walk through this web prototype. We decided on creating a simple landing page that would help users ask questions.

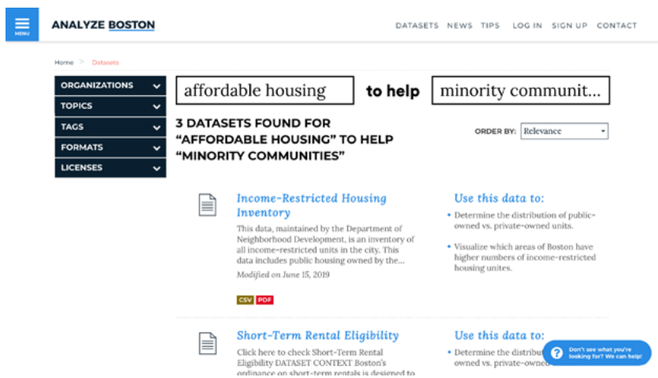
Final Web Prototype



This is the landing page which uses a simple mad libs style search that we tested using our initial google form prototype. Underneath there are sample examples to help users search.



Additionally, users don't have to search using both fields, but can always add a second field later on if they would like.



When the user searches, we show them what is currently shown on data.boston.gov with an added "Use this data to..." result which describes possible use cases of the data. This could inspire projects.

Semester 02

Events Overview

Purpose: After completing research last semester, we realized that many organizations would benefit from the face to face interaction needed to bring them closer to achieving their data needs. This semester, we set off on a journey to plan two events. Unfortunately, we were only able to run one event, as the other was cancelled due to COVID-19.

Goals of Events

- Want to know how organizations use city data? (current)
- How would they like to use city data? (future)
- Any problems they have using city data?
- If they do something with the data, they should be able to share that information with the city → figure out what incentives there might be to get people to share this information
- Generating meaningful conversation
- Connect organizations to each other
- Providing a space for skill sharing

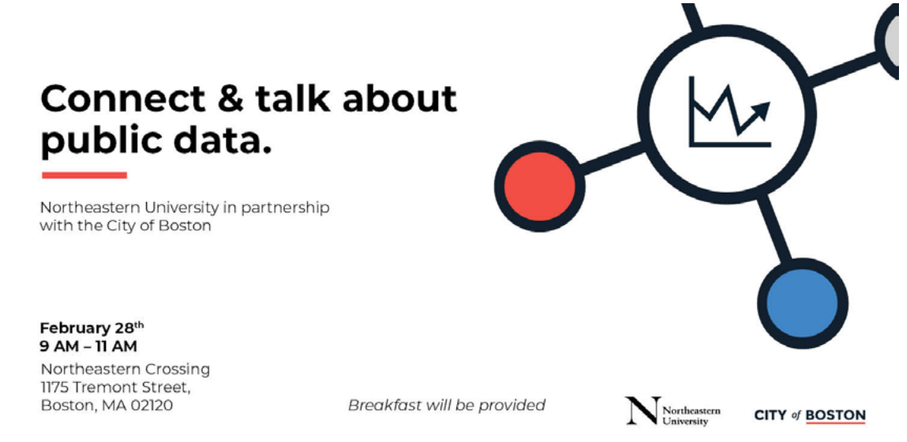
Event 01

Event Overview: Some key event details that we decided on for the first event.

Logistics	**Implementation**
Number of Attendees	• ~20 people • Getting confirmation from 50 organizations • Open invite • Send invite to 50 organizations
Location	Northeastern Crossing
Date	February 28th
Timing	Friday morning during the weekday (9-11am) • Better time for travel • Nature of the event is job related
Food	Breakfast
Confirmation	Eventbrite ticket system

Eventbrite link: https://www.eventbrite.com/e/curious-boston-connect-and-talk-about-public-data-tickets-92587552863

Eventbrite banner:



Event 01

General Agenda of Event 01

Time	Content	Description/Materials
8:30 AM	Setup	• Coffee - Rucha • Bagels - Zack • Donuts - Kiley • Fruit - Jillian • Sharpies - Zack • Sticky Notes - Rucha • Brown Paper - Jillian • Nametags - Jillian • List of Attendees - Rucha
9:00–9:15 AM	Food, settling in	Materials • Food • Nametags
9:15–9:30 AM	Introductions	Who we are Why we're here Why they're here Agenda for this event Orgs introducing themselves • What they have used city data for/what they want to use it for Materials • Powerpoint of above info
9:30–10:00 AM	BARI abbreviated data training	Materials • Powerpoint of Resources • Alina's Powerpoint
10:00–10:15 AM	Break	
10:15–10:45 AM	Interactive data activity	Materials • Sticky notes • Pens • Pencils • Paper
10:45–11:00 AM	Wrap-up & feedback session	Materials • Stickers • Print materials

Event 01

Interactive Mapping Activity

Goal: Have organizations learn how other organizations approached challenges with data.

Phases:
Phase 1 (*4 min*): individual ideation
- (*2 min*) How is public data useful to your org?
- (*2 min*) How would you like your org to use data in the future?

Phase 2 (10 min): small groups (3-5)
- (*5 min*) Place your ideas on a board, and organize them into groups as you see fit.
- (*5 min*) Looking at your ideas of how data is useful, what would you change in order to use data the way you want? It can be within your org, or external.

Phase 3 (*3-5 min*): everyone
- What changes did your group discuss?

Phase 4 (*10 mins*): wrap up
- Do you feel like you've found new strategies for how your org can approach data?
- Has anyone observed these changes in practice?
- Tell us more about your experience

Testing:
Recruit 10-15 students (*~4 each*)
Run through activity with students (*by 2/18*)
- Time each section
  - Use feedback to determine proper timing for Event #1
- Debrief/ask for feedback after
  - Frustrations
  - Suggestions
  - Confusing elements

Document results of various tests and deliver results to Sizhe, Mark
- We conducted a total of 5 tests

Event 01

BARI Training Activity

Goal: Have organizations learn about the BARI tool to help them at their organization.

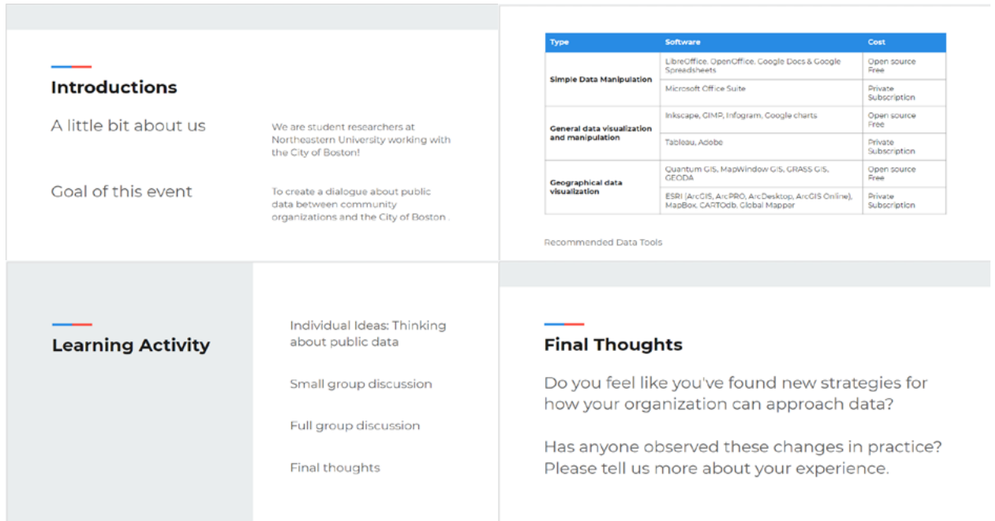
Phases:
Introduce BARI (*2 min*)
Going through the types of data they have (*10 min*)
- How to use the map → in a very basic way
- Show them how to export the data
  - Spatial or tabular data

Using the data (*5 min*)
- Show people what commands they can use (faux JOIN)

Showing a project that BARI has done → final use case (*5 min*)
Resources: Show a list of all the resources (*2 min*)
- Name, Why you would use it, Cost (Table)
- Tableau (easy to use but not open source)
- QuantumGIS (open source spatial visualizer)
- ArcGIS (paid spatial visualizer)

Questions (*5 min*)

Highlights from our presentation:



Event 01

Pictures

A member of the Asian Women for Health organization views the sticky note groups generated from the interactive mapping activity.

Attendees from a variety of organizations fill out event feedback forms.

Event 01

Post-Event Questionnaire Results

Goal: To get feedback on the event so that we could plan the next event better.

Questionnaire:

1. I am comfortable with...
2. Others at my organization are comfortable with...
3. I would prefer to attend these events on... (days of the week)
4. I would prefer to attend these events in the...(morning, afternoon, night)
5. Did you learn anything useful to you? If so, what?
6. Did you learn anything useful to your organization? If so, what?
7. Did you feel like the needs of your organization were voiced during this event? Why or why not?
8. In order of preference, what of the following would you like to see at the next event?
    a. Presentation of how public data is used by the city, Networking with other orgs, data training or education
10. Are you interested in presenting at a future event?
11. Are you interested in hosting a future event?
12. Is there anything else you'd like to mention about this event?

Results:

- Most people were comfortable interpreting data sets but not analyzing or visualizing them
- Fridays were generally preferred, however the time during the day was varied
- The BARI presentation made all attendees aware of the portal, and had not been aware of it before
- In general, people wanted to see an application of how the portal could be used in their day to day organization work
- The presentation itself could have been shorter
- Most organizations don't have the resources or time to send people to training or get trained on data. A lot of them are looking for resources to analyze their data sets

Event 01

Retrospective

Goal: After completing the first event, we wanted to reflect on it as a team and figure out how to better the next event.

Retrospective findings:

- Meetspace things
    - Bring water to drink
    - Need trash cans in room
    - Less shaky projector
    - Contact venue ahead of time to make sure we can get in early to set up
- Buy less food
- Introducing the speaker with more context
- Being more strict with time – moderating the speaker and questions
- Spending more time on activities/interactive stuff
- Bring camera
- Self introductions! They want to know what we're doing
- There was lots of conversation during the break

Action Items:

- Contact venue ahead of time to make sure we can get in early to set up
- Send more invites – we had 6 attendees but this number could be higher
- Meetspace things
    - Buy some water bottles
    - Bring trash cans into the room
    - Test the projector and all tech equipment
    - Buy less food (for half of the people who say they are attending)
    - Buy hand sanitizer
- Presentation
    - Introduce this presentation with context, goals, our research, etc.
    - Moderate the questions and time so that things stay on topic
    - Use cases of public data by city
    - Use cases of public data by other orgs
    - Contact the city to see if they can come in to talk
- Include networking portion

Event 02

Event Overview: Due to the COVID-19 outbreak, we were not able to host a second event. Based on our first event, here is what we might have planned.

Presentation:

- Many people at the first event were interested in our research, so we thought that for this next event it would be useful to give a high level overview on what we worked on in the first semester
- Walk through some use cases of city data and how they have been translated into projects
- Possibly have someone from the City of Boston come in to give this presentation

Networking:

- Throughout our first event, there was a lot of networking happening, and it was very successful. We wanted to push this idea a little further and dedicate an entire portion of the event to networking

Web Prototype Development

Overview: To aid inefficiencies found in our research, we are designing this web-based prototype to...

1. Provide public data in a way that would be more useful to organizations
2. Clarify the data-related inquiries of individual organizations more efficiently
3. Provide the city with knowledge of how public datasets are used by organizations

In our interviews with organizations, we first learned that they wanted more high-level information about datasets, rather than the raw data. Many organizations do not have the resources to compile, analyze, or visualize data, and so they would prefer to receive factsheets, visualizations, or descriptions on how the data might be used. After learning that the Open Data Department was already working on adding visualizations to their Open Data Portal (data.boston.gov), we designed screens to showcase potential uses of various datasets.

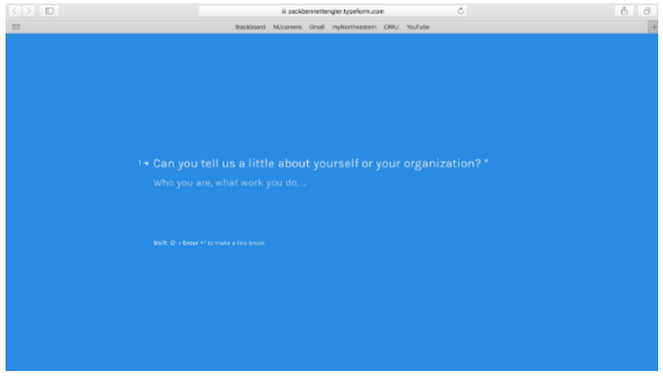
Focusing on the second inefficiency, we designed new methods for inquiring about existing datasets, as well as datasets that are not already published on the Data Portal. Our new home page design for the Portal streamlines the users input and helps them clarify their own interests for existing data and whom their work might serve. This new homepage search method prototype can be found in our Semester 1 Final Web Prototype section. In addition, we created an inquiry form for users to fill out if they wished to ask the city for data that is not currently accessible from the Data Portal.

Finally, this prototype will provide a method of gathering and displaying projects from organizations that use public data. The addition of this functionality will benefit the city, since they will learn how their datasets are being used. Additionally, this functionality will be useful to organizations and individuals, as they have a chance to showcase their projects, receive recognition, and learn from other projects.

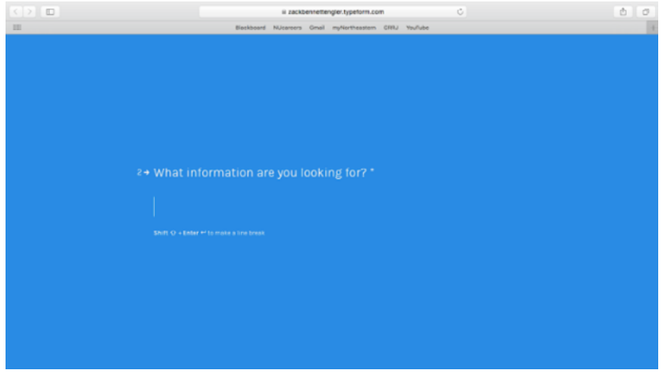
Web Prototype Development

New Data Inquiry Form

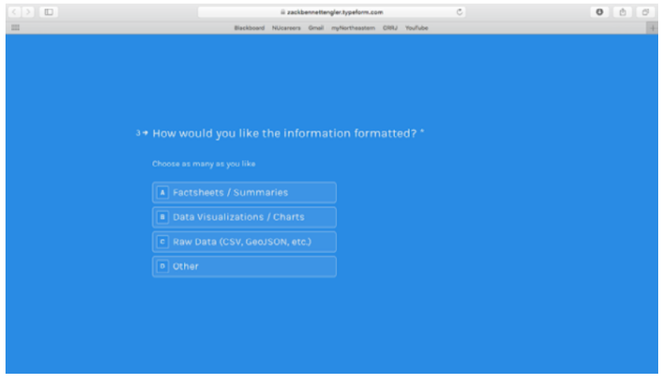
After brainstorming and many iterations of ideas, we developed a set of questions that would be necessary for people to answer as they ask the city to provide additional datasets. In testing these questions among our peers and with organizations, we found that asking more than 5 questions received negative feedback. Since users felt that a straightforward task such as asking for a specific dataset from the city should not take too much time, we narrowed the set of questions down to the most vital ones.



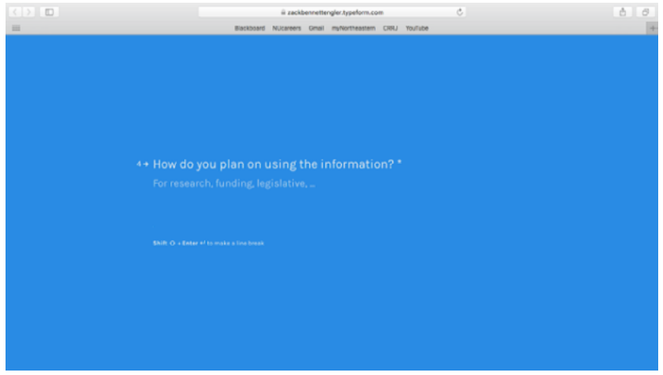
We start by asking about the work the individual or organization performs. This information helps contextualize their inquiry and aids our understanding of the problem space they're working in.



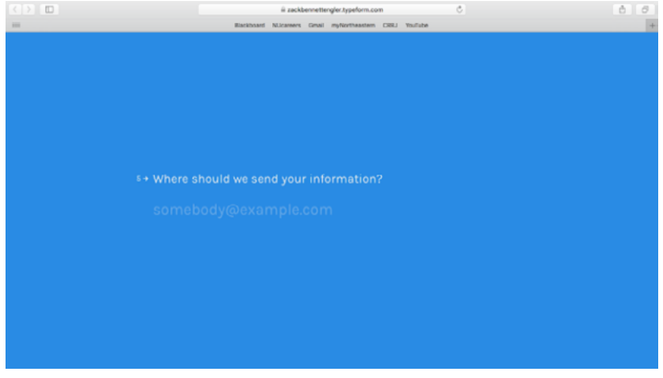
This question is the most significant one, as it is what the person is seeking. Because of this, we allow a long-form answer with no character limit, so that people can enter as much information as they deem necessary.



The Open Data Department expressed that they want to know what information format is most useful to organizations. We selected these categories based on our discussions with various organizations about how they would prefer to receive public datasets.



Through our research into how the Open Data Department currently helps organizations to clarify their questions, we found that this question also helped contextualize the information that a person is seeking.

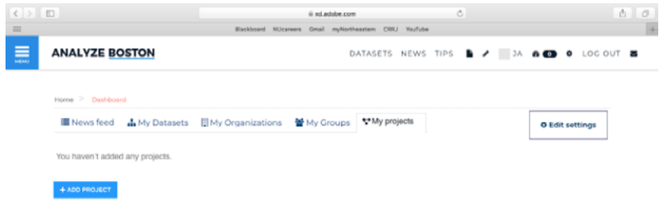


Lastly, we ask their contact information in order to send them the information once the request has been processed.

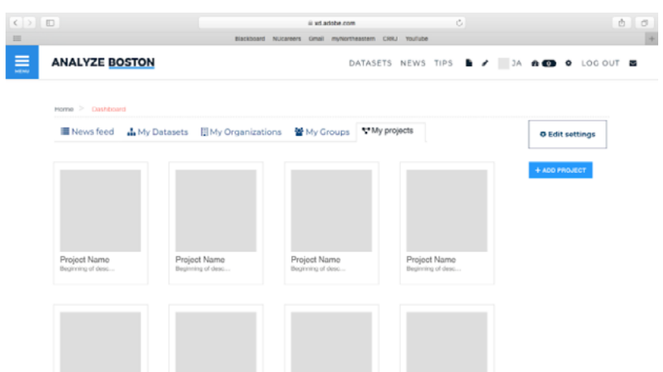
Web Prototype Development

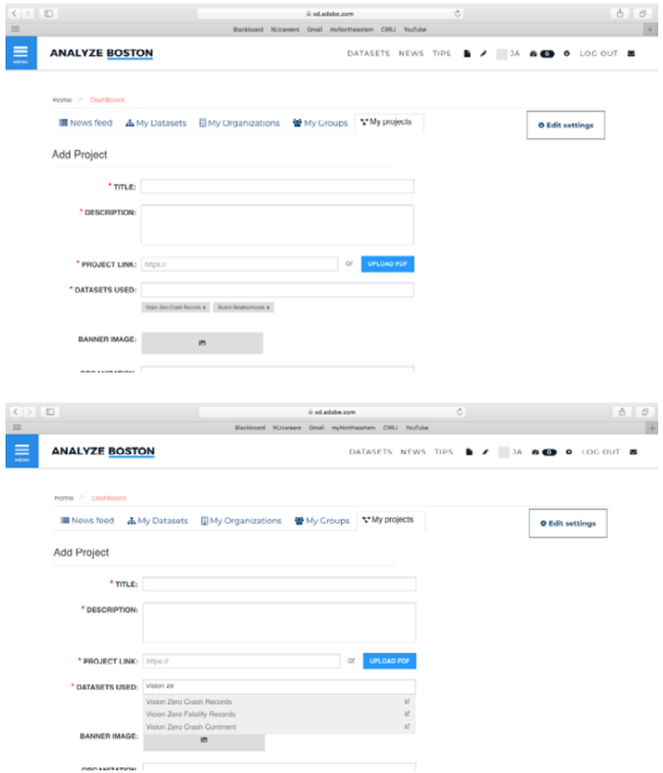
Showcasing Projects

The following screens demonstrate the ability for an individual to upload a project they have worked on to the Data Portal. While users already have the ability to create a profile, join groups, and receive updates from specific data sets, there is no infrastructure for them to upload a project of their own in which they used a dataset from the Data Portal. The addition of this functionality will benefit the city, since they will learn how their datasets are being used. Additionally, this functionality will be useful to organizations and individuals, as they have a chance to showcase their projects, receive recognition, and learn from other projects.



We added a tab for 'My Projects' to an individual's profile on the Data Portal. Initially, users simply receive a prompt to add a project that they've been working on.





When adding a project, a user will be prompted to enter the title of the project, followed by a short description. We have included the ability to link to a location where their project is hosted, or upload a pdf of their project, depending on the users preferences. Users then enter the dataset(s) used for their project. Lastly, they can upload a banner image for their project (which will also serve as its thumbnail), and their organization's name (if applicable).

The dataset entry field will auto-complete in order to aid users in selecting the correct dataset(s).

Web Prototype User Testing

Test Plan

Type of Testing	Test participants
Usability	• Classmates • Kim • Sizhe • BARI • Event Contacts

Prototype test link: https://xd.adobe.com/view/4de76abd-6f96-41c3-4786-9c86f363cf62-3bd6/

Usability metrics: Tasks

- Find projects that you have uploaded previously
- Upload a project
- Starting at home page of data.boston.gov
  - Find your uploaded project
- Find a dataset about X topic, where X exists
- Find a dataset about Y topic, where Y does not exist
  - What does a user do in this situation

When

By Tuesday, March 17th

- Testing Round #1

By Tuesday, March 31st

- Testing Round #2

Plan

Intro explaining

- What they are doing on the data portal in general
- Who they are (i.e. an organization)
- Why they want to upload a project

Task: Adding a project

- What information would you enter in each of the fields?
- Is there any additional information you would like to be presented with?

Web Prototype User Testing

Team 01 (Education) Test Notes

- In addition to searching for the datasets by name, we should add the ability to paste the url of the dataset from Analyze Boston, in case the person uploading it doesn't remember the exact name of the dataset used.
  - This would also be useful if someone doing a detailed project used more than 5 datasets and had trouble remembering each of them
- The projects currently showcased on Analyze Boston have tags associated with them. In order to add tags, the person uploading them should be able to select from a city-made approved list of tags if they want their project to be more easily searchable.
  - We should keep the addition of tags to the uploader-side, rather than putting the burden for maintaining that on the city-side
  - But, the list of tags should be curated and pre-approved by the city so that tags remain consistent across users

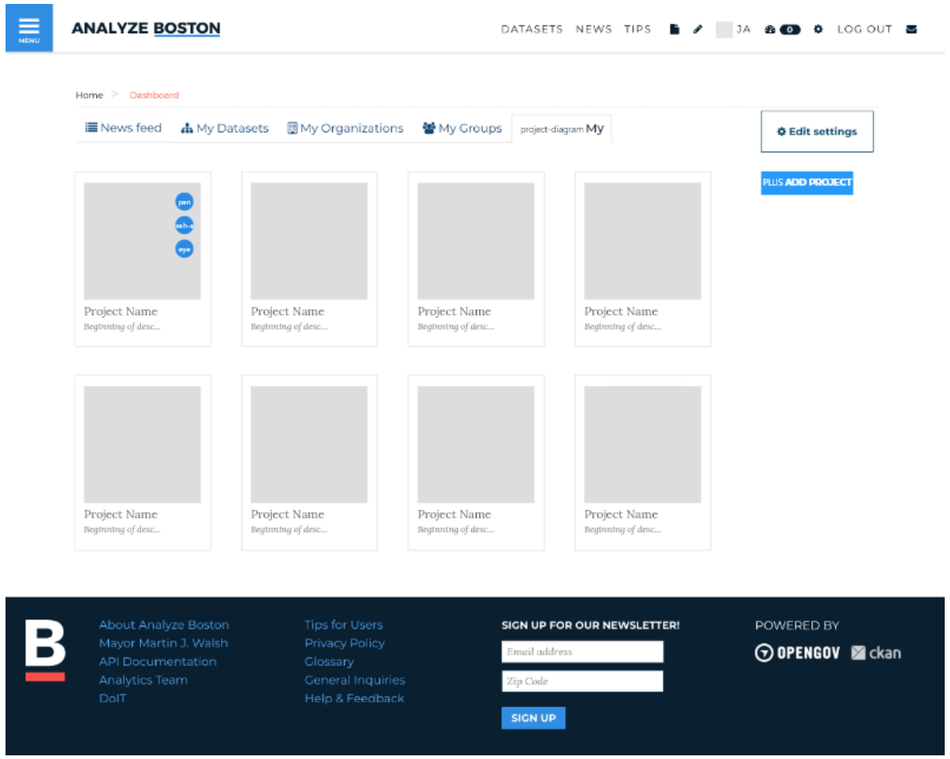
Team 02 (Third Hand) Test Notes

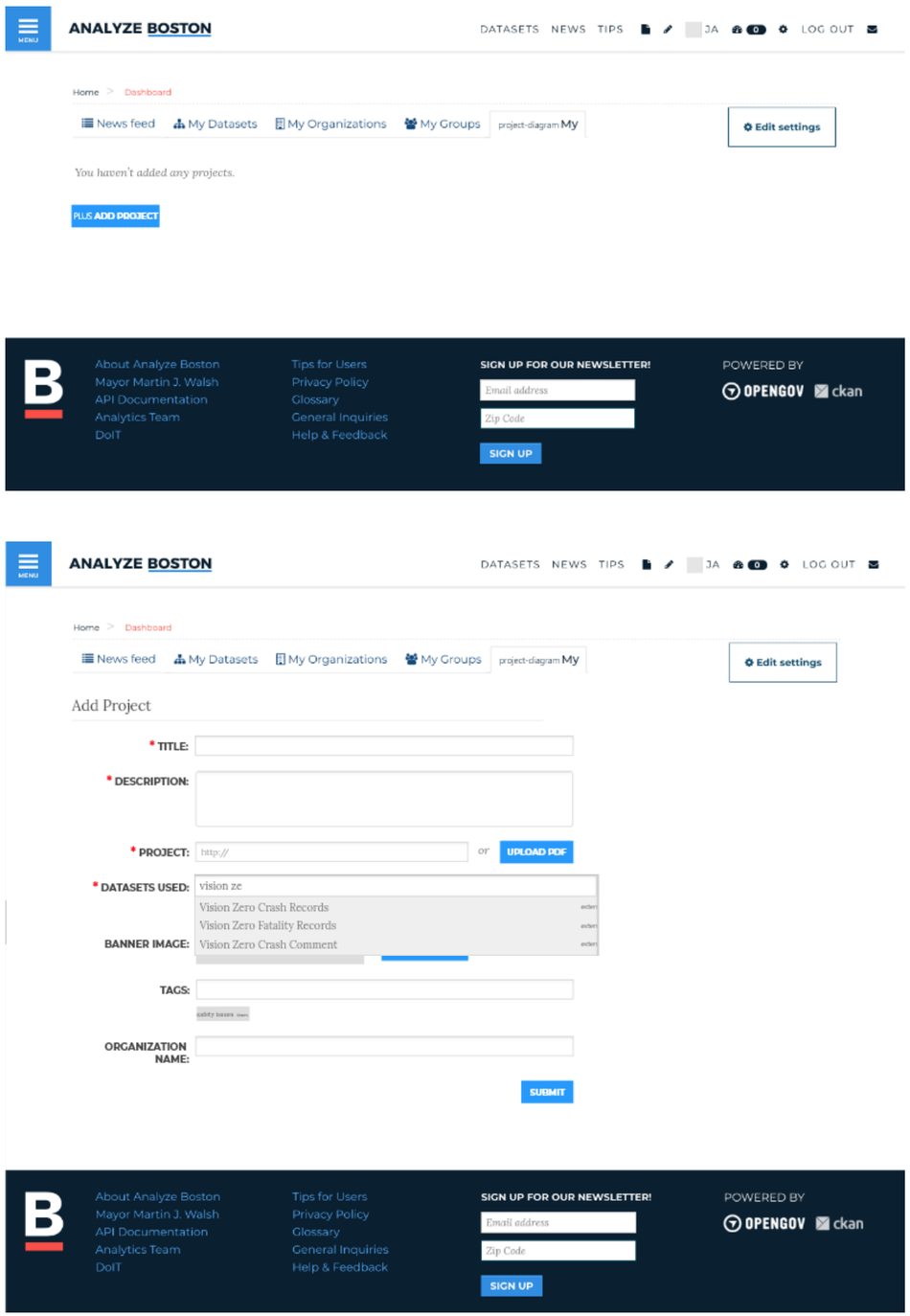
- They had comments on a lot of the existing portal features
  - Nav bar is very filled with icons – could be simplified
  - Organizations tab is kind of confusing
- Instead of "Project Links", consider changing the copy to "Project Details" so there is more flexibility with what they can upload
- People might not remember the name of the datasets they are using
  - Make sure the data set search capability works well
  - Have the person be able to link directly to the data set

Team 03 (Transit) Test Notes

- Wanted "upload file" button for banner image
  - Similar to "upload pdf" for project field
- Easier dataset search – possibly filterable
  - May be difficult to recognize based on name alone
- Add a date field for projects?
  - Might be an automatic stamp for upload date, or manual for past projects

Final Web Prototype





Ideas for the Future

Overview

In addition to the event infrastructure and high-fidelity prototype hand-off, we wanted to provide some potential strategies for continuing this momentum and enthusiasm around the subject of public data. Specifically, we wanted to explain the benefits and trade-offs of a future social media plan to promote the recurring data events, as well as present two different social media and networking platform options to be considered.

A presence on one or both of these platforms would be beneficial for pre-, during- and post-event engagement and provides a number of other advantages explored in the following pages of this report.

Ideas for the Future

Why Social Media

It is no secret that social media is on the rise. In the United States, 90.4% of millennials, 77.5% of Generation X'ers and 48.2% of Baby Boomers reportedly use social media on a daily basis. In the event industry, it has practically become expected for events to be publicized through social media platforms and, in doing so, this provides an opportunity for two-way communication between hosts and attendees. For our series of data events, establishing a social media presence for the event series makes sense because:

- When we held our first event, networking was the most frequently-mentioned interest for the attendees
- It boosts awareness and gives people something to share
- It increases the word-of-mouth and referral effect
- It allows hosts to communicate updates efficiently and easily
- It makes organizations appear more accessible and receptive
- It serves as a place for photos, community- building and a feeling of inclusion

To further break it down by timing:

- *Pre-event*: Attracts more people; buzz
- *During event*: Provides a way for both hosts and attendees to document and publicize in real-time
- *Post-event*: Allows for greater after-event reach; keeping the momentum and engagement going

Ideas for the Future

Meetup vs. Facebook

The two social platforms we have selected are Meetup and Facebook. These options were chosen for their superior event-page infrastructure and communication abilities. That being said, these two platforms differ significantly from each other. In the chart below, we have explored the pros and cons for each, to use at your own discretion.

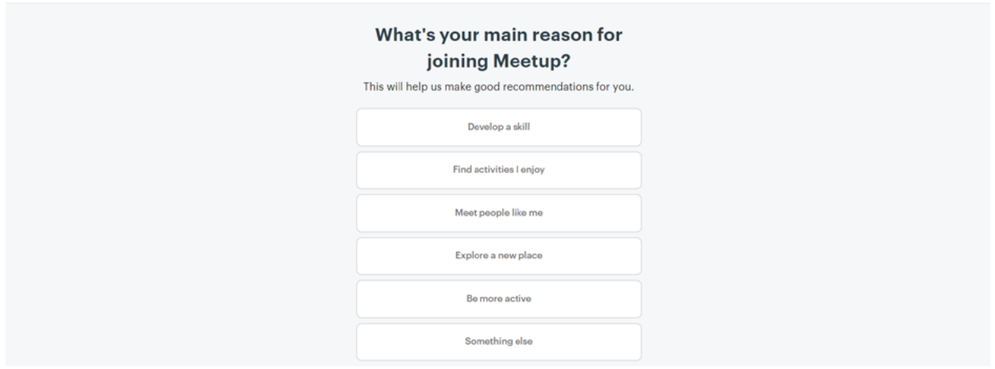
Platform Pros & Cons

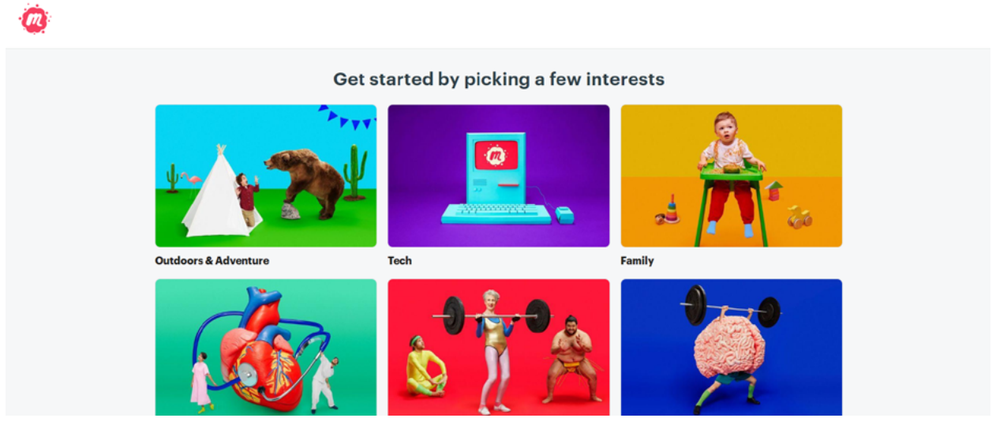
Platform	Pros	Cons
Meetup	• More professional & event-oriented • Intuitive event search tool (similar to eventbrite) • Connects people with similar interests/passions • Allows for creation or joining of interest groups • Allows users to specify their intent or goals regarding events when joining • Free from clutter, ads • “Save-for-later” capabilities	• More limited on social features • Less personal, intimate • Less well-known = less users, less engagement • People may have to create an account just to use it (barrier to use) • Separate channels might be needed for actual promotion - Meetup is more of an event landing than a social platform • Administrator may have to take more time to learn the platform • Hosts may have to pay for continued use ($16.49 per month)
Facebook	• Less barriers to use - many people have pre-existing accounts • Extremely popular and well-known • Has the essential event functions in a more sociable layout • More casual, personal • Allows for interest groups and community-building • Display “popular” and “similar” categories for each user • Easy/familiar for event administrator • Invitation capabilities • “Interested” feature • Generally more metrics and analysis available on the host’s end • Promotion and event registration live in the same place • Advertisement capabilities • Of all social media users, Facebook users visit the app most frequently on a daily basis and spend the most time per visit • Most popular social media platform among event planners	• More casual, personal • Notoriously cluttered interface and layout • Very limited/spotty filtering tools • Brand attitudes towards the platform itself could be negative; perceived as not trustworthy • Not focused (all-purpose platform)

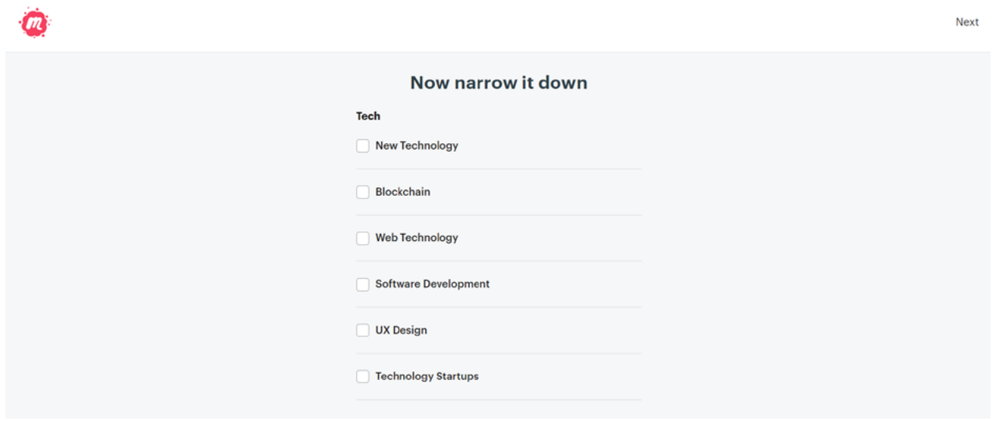
Ideas for the Future

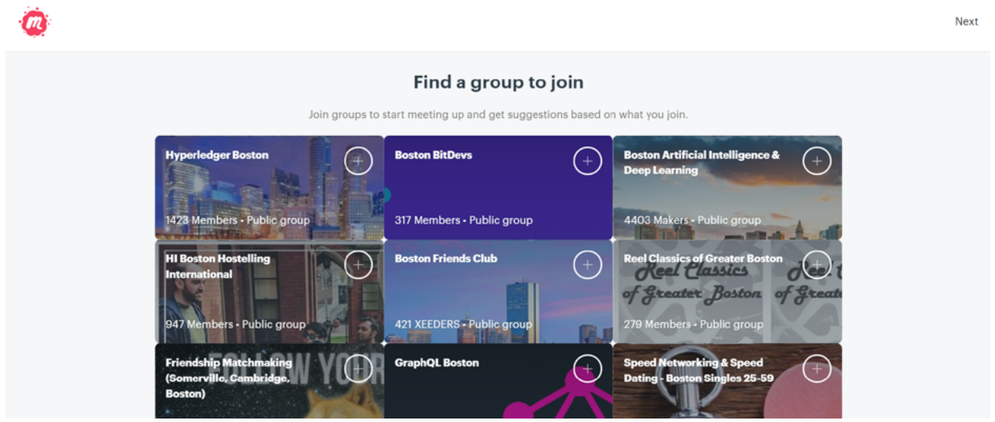
Meetup vs. Facebook - Visuals

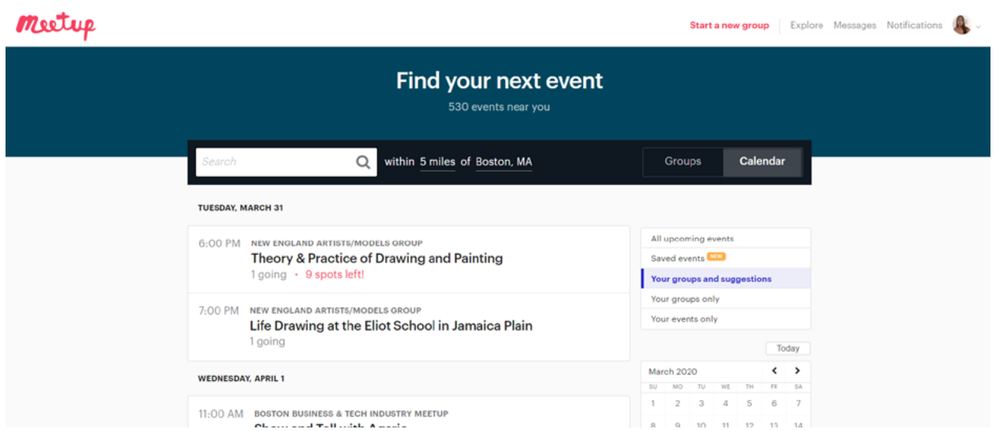
Meetup - signup process







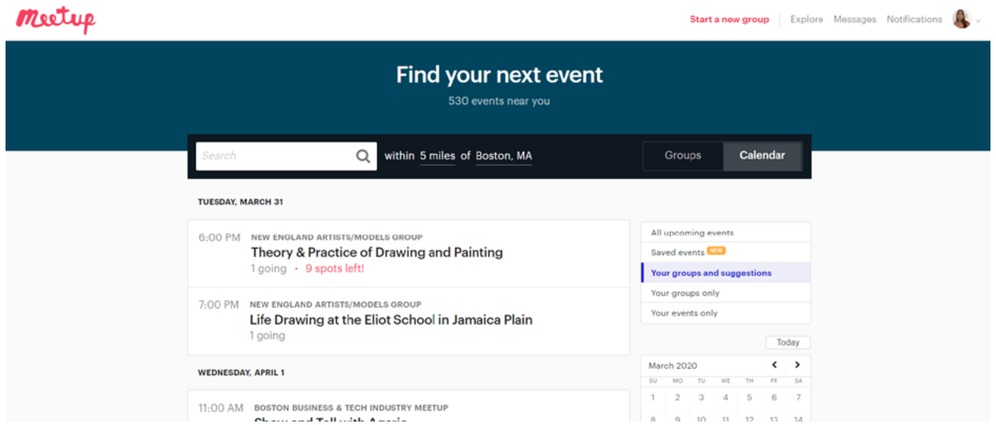




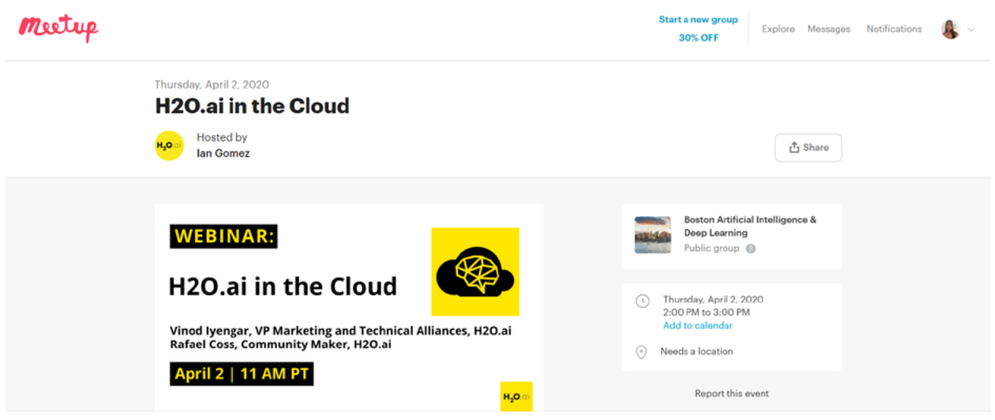
Ideas for the Future

Meetup vs. Facebook - Visuals

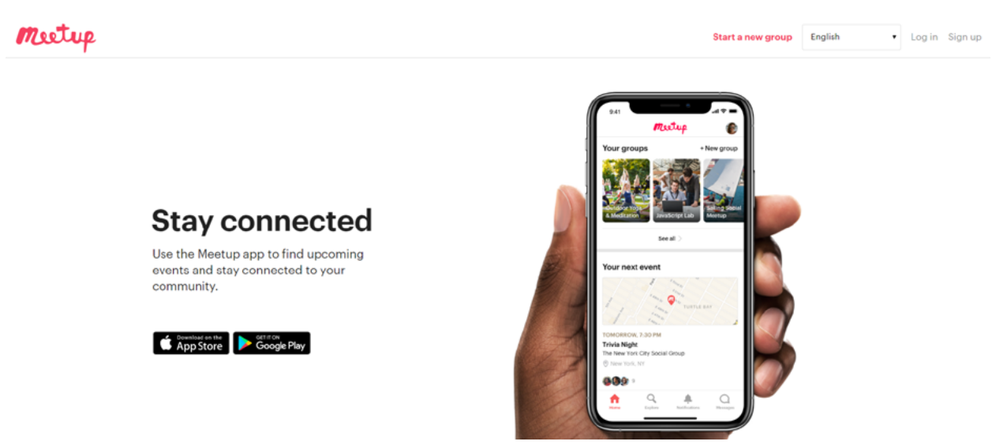
Meetup - user homepage



Meetup - event page



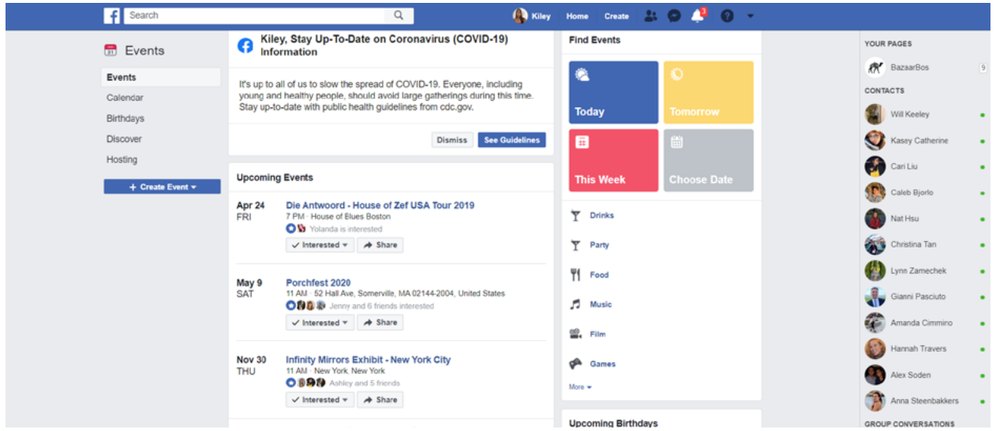
Meetup - mobile app

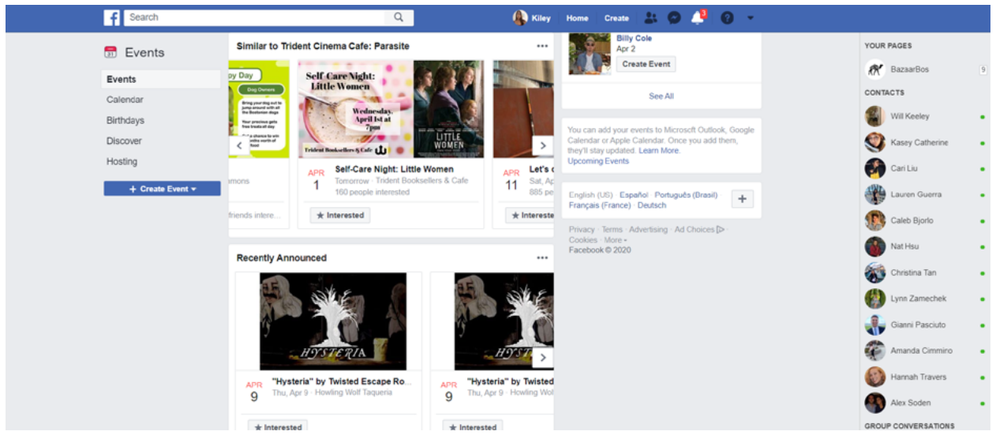


Ideas for the Future

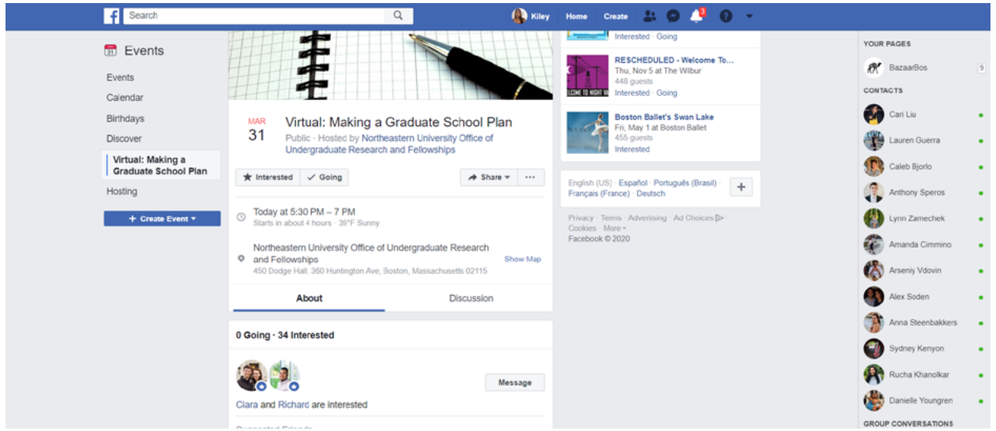
Meetup vs. Facebook - Visuals

Facebook - main event listing page





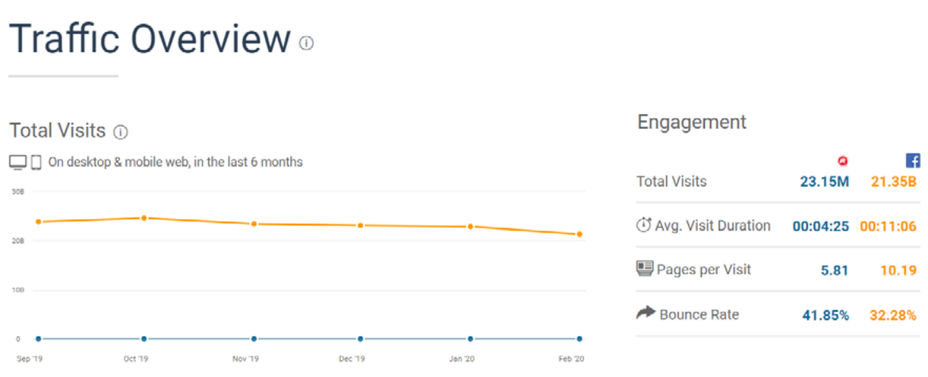
Facebook - event page



Facebook - create an event

Ideas for the Future

Meetup vs. Facebook - Analytics



Ideas for the Future

Factors to Consider

There are time commitments and costs associated with the utilization of social media that should be factored into networking decisions. Most promotional teams that do use social media have a dedicated person solely for this role. This is most likely unnecessary in this case, when there is only one event series to be overseen. However, it would align with best practices to at least formally assign the duties and upkeep associated with social media platform utilization to a specific person(s).

Additionally, there is a time commitment involved for social media plans. Time is spent creating the strategy and profiles/pages in general, as well as performing daily upkeep tasks and possible analyses prior, during and after the event. Although neither of the proposed platforms are particularly complex to use, keeping up with engagement and event updates should be built into the day-by-day activities of the team. Consistent updating and continued responsiveness to potential event-goers not only reflects well on the organization running the event, but also allows the hosts to attract as many people as possible.

Despite these few costs, social media is a relatively low-effort and low-cost way to boost registration numbers, build a favorable image for an organization and engage with the people you are ultimately trying to attract. Implemented correctly, the use of a social media platform significantly increases page views (awareness), thus creating more opportunities for registrations (conversions). It also presents a low maintenance way to track awareness and interest, identify the sources of conversion and analyze the target audience for the event so you can best serve them.

Ideas for the Future

Additional Resources

Take a look at the following guides for more ideas on how to use different social media platforms to promote an event:

https://www.eventbrite.com/blog/how-to-promote-event-social-media-ds00/

https://www.socialmediaexaminer.com/use-social-media-to-promote-your-event/

https://blog.hootsuite.com/social-media-for-events/

https://www.eventmanagerblog.com/social-media-events

Ideas for the Future

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