RISE RESEARCH INNOVATION SCHOLARSHIP ENTREPRENEURSHIP
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How does public data flow through the city?

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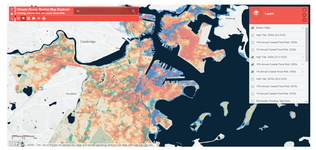
Our research this semester has focused on the Boston Open Data Department and their interactions with different community and advocacy organizations in the Boston Community. Through meetings with several different community organizations from a variety of sectors as well as brainstorming, prototyping 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

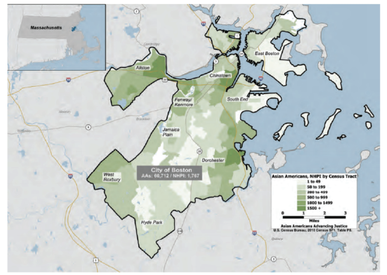
BOSTON AREA RESEARCH INITIATIVE (BARI): KEY FINDINGS
- It is very important to show people how to use a tool, otherwise people won't use it.
- Most training sessions start out of places where Will and Riley have connections. These initiatives tend to be more successful because they know how things work.
- 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 human piece of data communication is central, 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".

Curious Boston

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 — 02 — 03 — 04 — 05

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