DATA-DRIVEN CLIMATE RESILIENCE

IMPROVING SEATTLE'S
CLIMATE CHANGE ADAPTABILITY
WITH OPEN DATA

PROBLEM

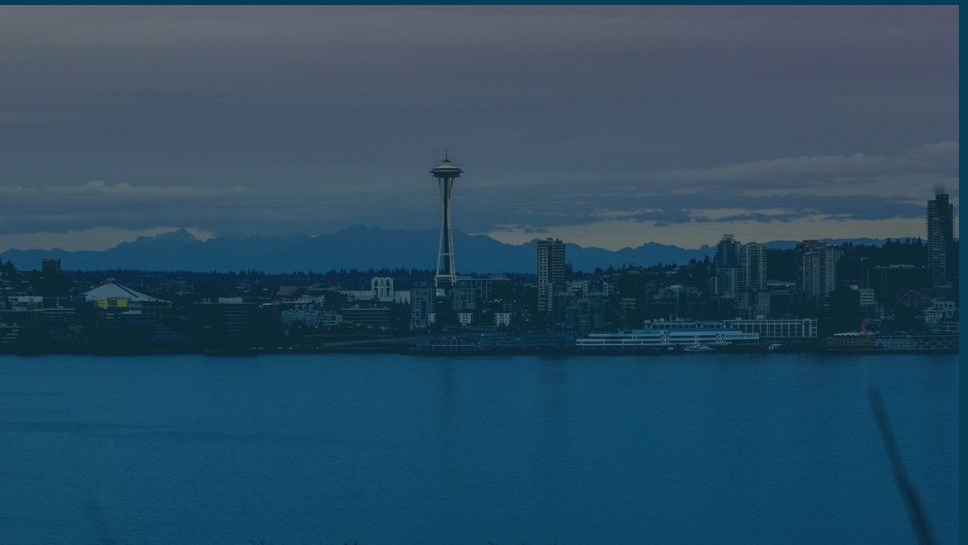
While Seattle leads the nation on climate change policy, data.seattle.gov currently provides limited open data related to solving climate change issues.

COMMUNITY

Cititzens of Seattle deserve excellent climate open data to foster transparency and spark innovation. Plus, other organizations may benefit.

SEATTLE AT RISK

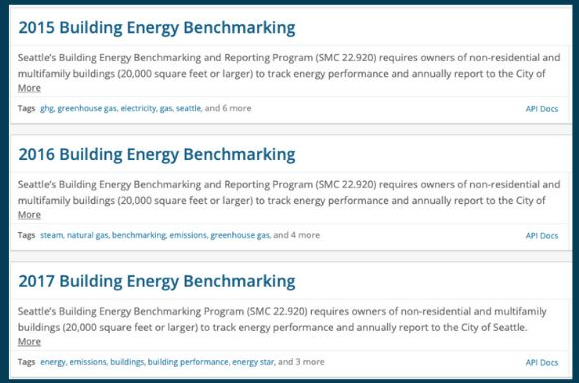
Weather extremes, sea level rise, threatened resources



OPEN DATA CAN HELP

More climate-related datasets: assets, vulnerabilities, predictions, and visualized scenarios

EXISTING DATA & INFRASTRUCTURE



DATA.SEATTLE.GOV'S CURRENT DATASETS

Building energy benchmarking, liquefaction zones, tree canopy, flood zones, environmentally critical areas

CITY OF SEATTLE CLIMATE ACTION

The Office of Sustainability & Environment leads climate planning, and recently published a new, data-driven plan.

GLOBAL & NATIONAL CLIMATE DATA

More and more climate data is released every day, and some of it has implications for Seattle, if transformed with users in mind.

PROPOSAL MODEL: ANALYZE BOSTON

DATASETS

- Sea level rise
- Social vulnerability
- Greenhouse gas emissions

DOCUMENTATION

- Data dictionaries
- Associated research study
- Map explorer
- Data dashboard

(City of Boston, n.d.)

PROPOSAL: NEW DATASETS & SUPPORTING ELEMENTS

DATASETS

- 12 new open datasets on data.seattle.gov
  - Sea level rise projections (3)
  - Flood level risks (6)
  - Social vulnerability assessment
  - Seismic data
  - Evacuation routes

DOCUMENTATION

- Data dictionaries + METACLIP metadata
- Research Study
- Visualizations
- Portal Highlight

PROPOSAL: STAGES OF WORK

1

COORDINATE WITH PARTNERS

Collaborate with existing partners at City of Seattle, and other organizations to identify data.

2

COLLECT CLIMATE DATA

In coordination with partners, begin collecting climate datasets identified for ingest.

3

INGEST AND PACKAGE DATA

Once collected, transform and package data using climate4R for upload to portal.

4

PROMOTE NEW DATA

Curate data for reuse and discovery with METACLIP metadata and documentation; promote to public.

(Iturbide et al., 2019)

PROPOSAL: TIMELINE & COST ESTIMATE

TIMELINE

- Approximately 1 year
- Hiring / training data intern (1-2 months)
- Stages of work (6-8 months)
- Project wrap-up / documentation (1-2 months)
- If funding is needed first, add approximately 6 extra months to write and secure grants.

COSTS

- Approximately 200 FTE hours
- Data analyst summer intern
- In coordination with other departments
- Will seek grant funding opportunities from EPA, FEMA, Kresge Foundation, IMLS, and any other funders applicable to this project.

(U.S. Climate Resilience Toolkit, 2016)

RESOURCES

RECOMMENDED READING

City of Boston. (2016) Climate Ready Boston Executive Summary. Retrieved from https://www.boston.gov/sites/default/files/02_20161206_executivesummary_digital.pdf.

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U.S. Climate Resilience Toolkit. (2016). Funding Opportunities. Retrieved from https://toolkit.climate.gov/content/funding-opportunities.