Increasing Access to Cooling Centers through Data & Policy

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INNOVATION

Agenda for this Presentation

1. Executive Summary
2. Introduction to the Project
3. Findings & Recommendations: Heat & Health
4. Findings & Recommendations: Cooling Center Access
5. Next Steps
6. Conclusion/Questions

Executive Summary

Problem

Increased heat has dangerous health consequences
Disproportionate impact on poorer neighborhoods
Goal: Increase access to cooling centers.

Methods

Web scraping, map building, and policy research

Key Recommendations

Create equitable access to cooling centers by:

- Ensuring cooling centers are equitably placed
- Partnering with Rideshare (like Uber or Lyft) to facilitate access where needed
- Broaden awareness of centers through community outreach + marketing campaigns
- Collaborating with nonprofits and private companies to increase awareness

Introduction to the Project

Project Purpose/Goal

To better understand the intersection between heat and health, and determine efficient ways to increase access to cooling centers.

Methods

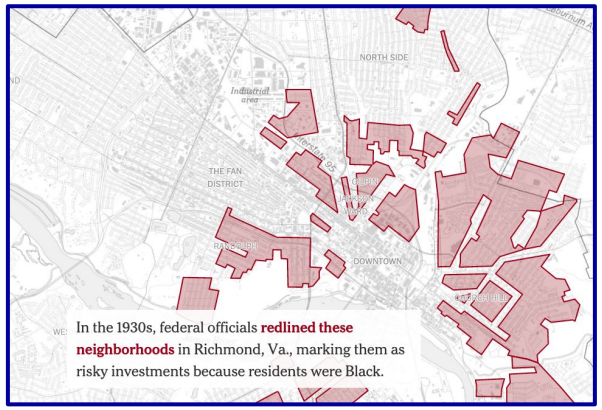
Developed prioritized list of policy recommendations based on findings from:

1. Secondary literature review on the causes of, impact of, and existing mitigation techniques to combat rising heat
2. Visualized map existing cooling centers overlaid with walking, driving, and public transit radii (using ArcGIS and web scraping via Python)
3. Used findings from maps and literature review to inform policy recommendations

Heat is rising across the entirety of the United States, but…

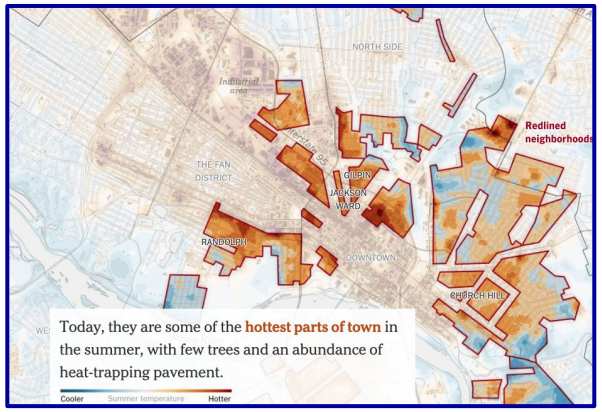
Heat is rising across the US, but disproportionately so in formerly redlined areas, where populations tend to be less advantaged than other areas of the city. Redlined neighborhoods tend to:

…be poorer



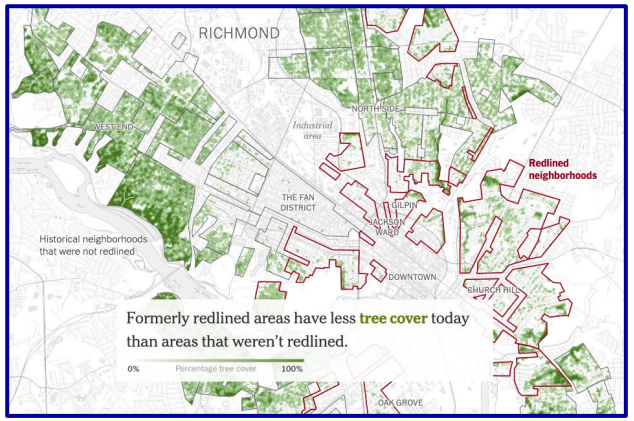
- Less likely to afford air conditioning, better home insulation, pools
- More likely to work outside in harsher conditions

…. be hotter



- Higher likelihood of suffering from extreme heat
- Could impair socioeconomic mobility by hindering productivity and exacerbating existing health conditions

… and have less tree cover



- Trees and parks cool down surrounding areas
- Asphalt and concrete absorbs and radiates heat

Source: NY Times, Summer in the City Is Hot, but some Neighborhoods Suffer More

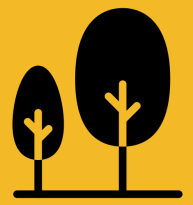
Recommendations to mitigate rising heat in urban areas

Based on a review of data research, there are two broad recommendations to reduce the burden of heat by increasing cooling access.

Increasing affordability of cooling devices:

- ✔ **Increase federally funded Low Income Home Assistance Program (LIHEAP)** grants such as in NY State to expand use beyond installing AC to include energy efficiency retrofits
- ✔ **Subsidize home weatherization** such as Illinois Home Weatherization Assistance Program (IHWAP) which provides maximum $16,000 per eligible client's home for energy-related weatherization and repair work, and maximum $3,500 for health and safety related measures

Incentivize increasing tree cover through:



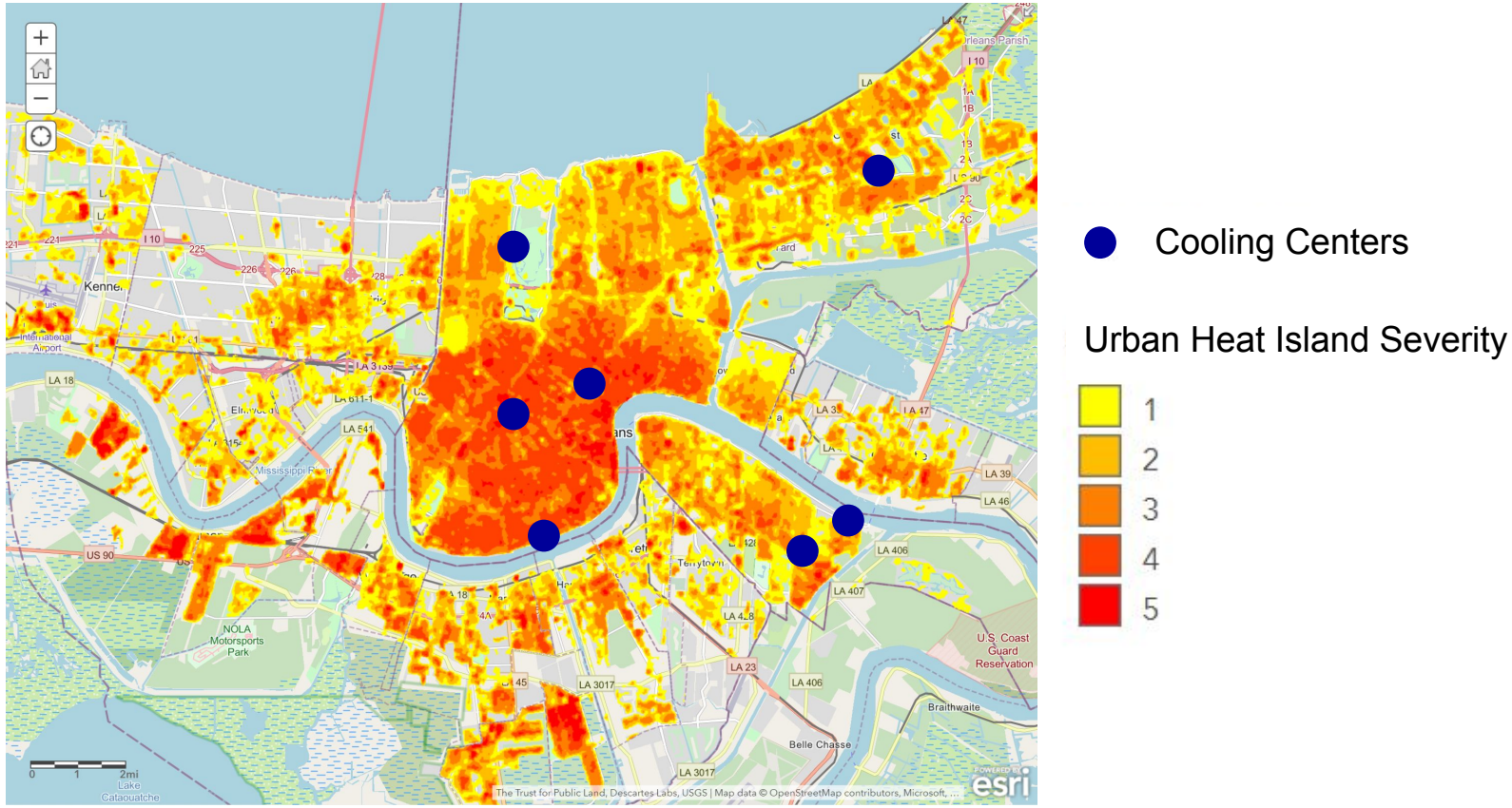
- ✔ **Green Roofs** which are shown to reduce near surface temperatures by 16.4℉ (Moisse)
- ✔ **Increasing urban forestry coverage**

Findings & Recommendations: Increasing access to cooling centers

Due to limitations in cooling center data, this section of work focused on building a **proof-of-concept map to examine equitable access to cooling centers** in New Orleans, ranked as the worst urban heat island in the US.

Looking at NOLA: The “Worst” Urban Heat Island in the US

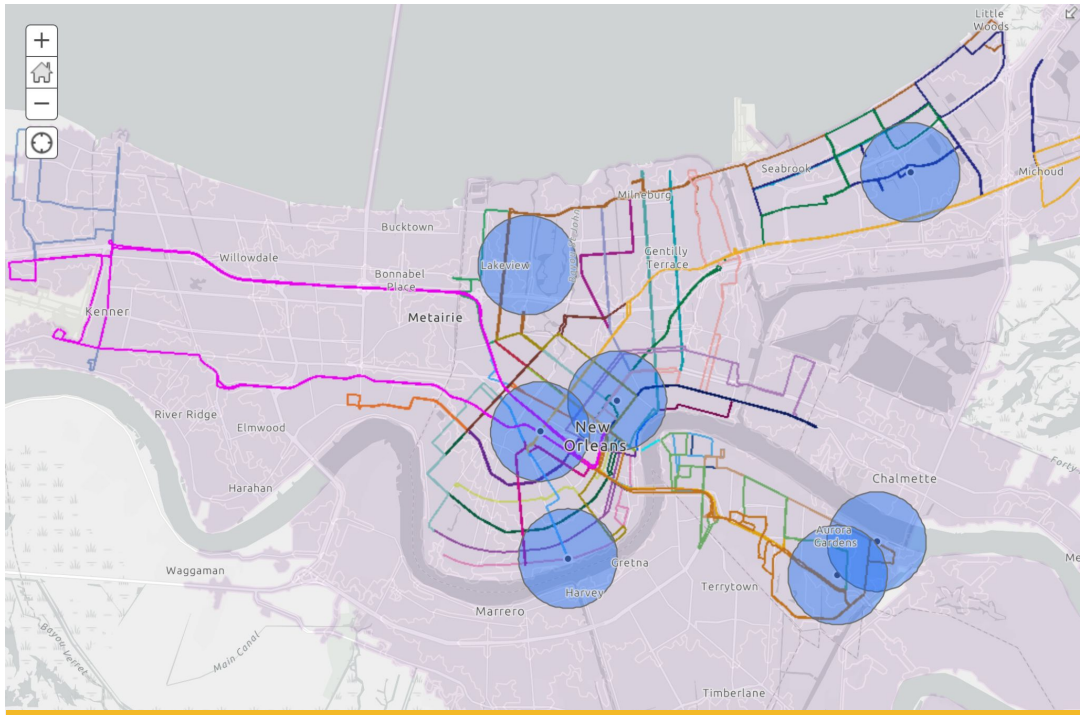
New Orleans has 7 cooling centers, located in some of the hottest parts of the city, but mostly concentrated in the center of the city.



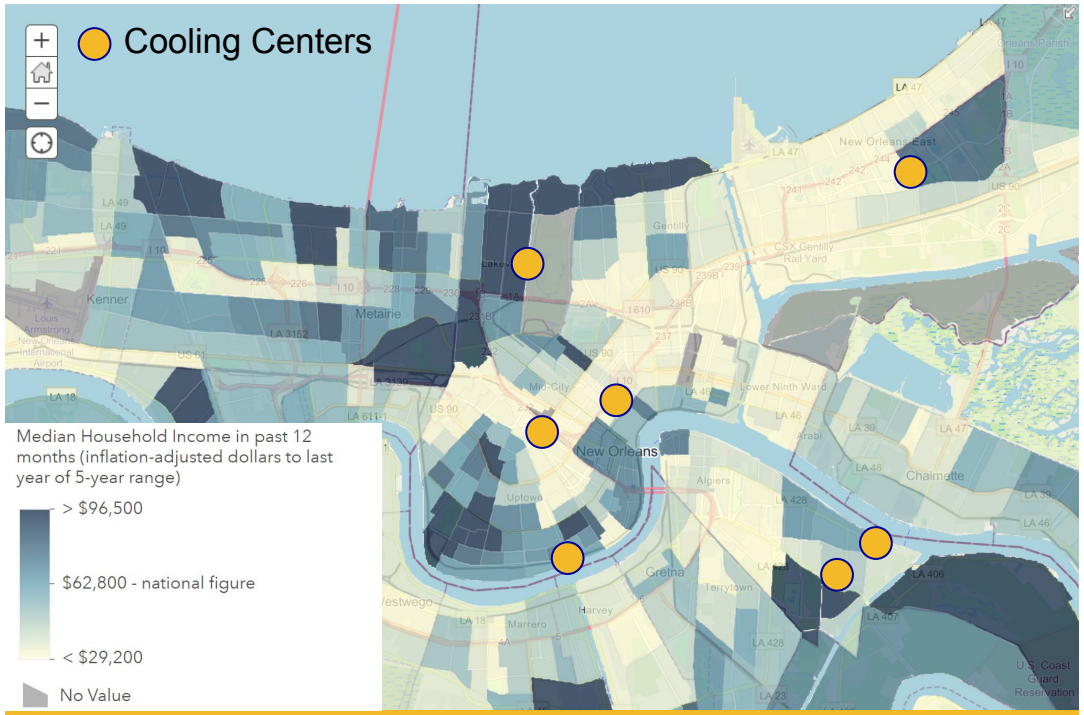
Source: WDSU News, List: Cooling centers in Orleans Parish, 2021; The Trust for Public Land, Urban heat islands for U.S. cities

Cooling Centers access are tied to the Social Determinants of Health

A geospatial review of NOLA's Cooling centers was compared by transportation factors (Regional Transit) and Income Level.



Cooling centers are accessible by few bus lines, but not easily accessible on foot.



Cooling centers are not generally accessible to lower income communities that tend to live farther away from city center.

Sources: City of New Orleans, RTA Routes | Source: Census Bureau, American Community Survey, 2019 5-Year Estimates

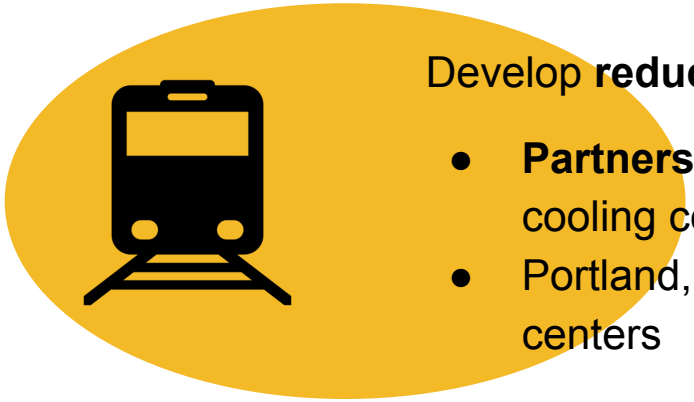
Finding: Cooling centers are too far away and inaccessible

Increasing access to cooling centers is a critical recommendation, especially for low-income populations.

Increase the number of cooling centers farther from the city center to reach lower-income neighborhoods

Include a **wider variety of settings** like religious and cultural centers to ensure that residents feel comfortable

Conduct **additional spatial analysis** to ensure that equitable distribution of cooling centers



Develop **reduced cost and fareless options** to access cooling centers:

- **Partnerships with Rideshare** (such as Uber/Lyft) to provide free rides to cooling centers (similar to rides to COVID vaccination appointments)
- Portland, New York and others offer **fareless public transport** to cooling centers

Finding: Awareness of cooling centers is low

Multiple surveys have shown that people do not know that cooling centers exist, feel that they are unnecessary, or do not feel comfortable, and recommendations are to increase awareness of these resources.

	Hiring full time promoters to go into communities and educate them on the importance of cooling centers
	Marketing with social media, ethnic and cultural magazines, physical advertising
	Collaborating with nonprofits and private companies to increase awareness

Highlight on Maricopa County, Arizona, who implemented a system of community sponsored cooling centers that included goods like food and water, WiFi, and human services like childcare that dramatically increased usage.

Next Steps

Discuss implications of findings, any remaining open questions

Expand mapping analysis to other priority cities (other heat islands)

Consider using mapping analysis to inform implementation of recommendations across priority cities

Thank you! Any questions?

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Appendix: Link to live map dashboard

Link to Map Dashboard: https://arcg.is/qOvr0