

Reclaiming Infrastructure: Community-Centered Inquiry into Disaster Risk and Access in Jacksonville

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Background

Disaster risk is co-produced by the built environment, roads, transit, and land use patterns that shape who can access resources and who cannot. In Jacksonville, auto-oriented planning has left many residents, particularly in historically marginalized Black communities, with limited mobility and poor access to schools, healthcare, and evacuation routes.

These everyday barriers become life-threatening during hurricanes and flooding events. These conditions are especially acute in Health Zone 1, where hurricane and flooding risks intersect with long-standing social and health inequities.



Jacksonville neighborhoods disconnected by interstate.

Study Area: Health Zone 1

Home to predominantly Black communities shaped by generations of disinvestment, racial segregation, and discriminatory housing policy. Residents face overlapping vulnerabilities:

- Limited transit and walkable infrastructure,
- Proximity to flood-prone areas,
- Inadequate healthcare access and elevated environmental hazard exposure.

The Emerald Trail

Jacksonville's planned citywide greenway promises walkability, stormwater management, and climate resilience, especially valuable for underserved neighborhoods. Yet comparable projects show a recurring pattern: without equity protections, green infrastructure can drive rising property values, displacement, and green gentrification when equity concerns are not addressed upfront.

| BENEFITS | RISKS |
|---|---|
| Active transit, flood resilience, green space access, stormwater management | Displacement, rising property taxes, exclusion of long-term residents, green gentrification |



Emerald Trail planned greenway rendering through affected neighborhoods.

Research Approach

This project positions residents as co-interpreters of risk, not passive stakeholders. Conducted through the NSF-funded project in partnership with DTSC Lab and FIBER.

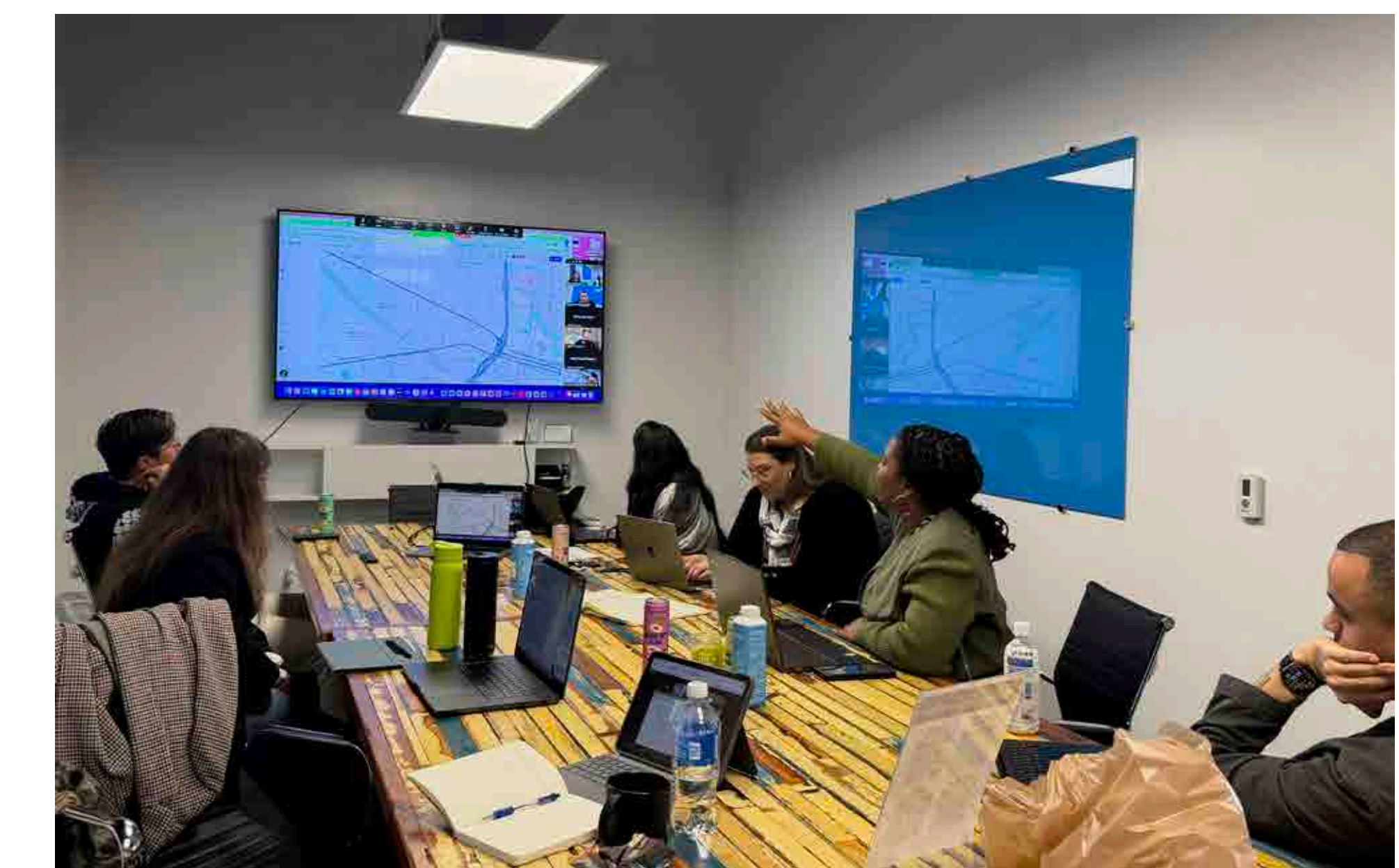
- 1. Community workshops:** Surface how infrastructure failures shape daily life and disaster vulnerability through structured dialogue with residents, community organizations, and planners.
- 2. Co-defining the problem:** Work alongside residents to define what infrastructure risk means from their perspective, grounding inquiry in lived experience rather than aggregate data alone.
- 3. Participatory modeling:** Build tools that allow communities and planners to explore tradeoffs in infrastructure investment scenarios, integrating community-defined priorities alongside technical metrics.
- 4. Policy translation:** Co-produce findings into accessible formats for city planners and policymakers, supporting more equitable and transparent infrastructure decision-making in Jacksonville and beyond.

"Residents are not the problem to be solved, they are the experts whose knowledge must shape the solution."

Emerging Findings

Early community workshops across Health Zone 1 reveal consistent themes:

- **Transportation is the central barrier.** Evacuation routes are designed for cars, leaving transit-dependent households behind during disaster events.
- **Healthcare access** is already severely limited during non-disaster periods; flooding events create cascading crises for those managing chronic conditions.
- **Deep skepticism** about the Emerald Trail benefiting current residents, drawing on prior experiences of displacement following infrastructure investment in their communities.
- **Informal mutual aid networks** are identified as critical resilience infrastructure that formal planning processes do not recognize or support.
- **Strong interest in community land trusts** and anti-displacement protections as preconditions for equitable green infrastructure development.



Collaborating with research partners and community members.

Research Implications

- **Equitable infrastructure planning.** A framework for cities to evaluate green infrastructure projects through an equity lens, building in anti-displacement protections, community benefit agreements, and participatory governance before construction begins.
- **Community-grounded risk modeling.** Integrating lived experience into hazard vulnerability assessments to capture social dimensions of exposure and resilience that technical data alone cannot reveal.
- **Replicable engagement model.** Applicable to other cities navigating climate adaptation alongside deep social inequity, particularly where infrastructure investments risk benefiting newcomers at the expense of long-term residents.

Works Cited

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Additional Research Partners include Unified Community Investors and Health Zone 1 Community Residents in Jacksonville.

Further Information

Disasters, Trust and Social Change Lab
<https://dcp.ufl.edu/fiber/disasters-trust-and-social-change-lab/>



Spatial Justice Jacksonville Storymap
<https://arcg.is/0zuirr>

