Urban Accessibility as a \textbf{Socio-Political} Problem: A Multi-Stakeholder Analysis

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Urban Accessibility is a product of a dynamic interaction of human and the environment (Hahn, 1985).

Accessibility is the ease or difficulty for people to reach opportunities and services (Dalvi and Martin, 1976; Wachs and Kumagai, 1973).

Mobility and Disability are factors in Accessibility.

Trip rate and Proximity to destinations are components of Mobility.

Interactions between human and lands (Hansen, 1959) are a component of Disability Studies, Urban Planning and Transportation, Human Geography, Disability Studies, and Urban Sociology.
SOCIO-POLITICAL MODEL OF DISABILITY

Shifts the emphasis from “the individual” to “the broader social, cultural, economic, and political environment”
People using Mobility Aids

Physical disability

MI individuals

Pedestrian infrastructure

Missing Curb Ramps
Surface Issues
Obstacles
No Sidewalks

Sidewalks
What is the socio-political context of urban accessibility?
How do we enable change in the socio-political context of urban accessibility?
What are the information needs and challenges for assessing and making decisions around urban accessibility and the role of data and technology?

How do stakeholder groups communicate and interact together to assess priorities and make decisions?

What are the future design opportunities to improve existing assessment and decision-making practices?
**METHOD**

**INTERVIEW STUDY**

25 participants across 3 cities

Multi-stakeholder approach with **five** stakeholder groups

Questions around practices around **assessment** approaches and decision-making practices
KEY STAKEHOLDERS

- MI individuals
- Caregivers
- Advocates
- Policymakers
  Elected Officials
- Department Officials
  DOTs
FINDINGS

STAKEHOLDER PERSPECTIVE OVERVIEW

MI individuals

Safety and quality of physical access
Freedom and support to travel around a city

Advocates

Represent people in need
Fight for their rights and change the status quo
Closely engage with both citizens and government officials

Caregivers

Policymakers
Elected Officials

Department Officials
DOTs
MI individuals

Caregivers

Advocates

Developing laws and policies
Prioritization and equitable distribution of resources
Manage funding amongst many competing issues

Policymakers
Elected Officials

Department Officials
DOTs

Execute policies and make accessibility improvements
Schedule and prioritize maintenance projects
Allocate available funds to specific projects
Conduct ground assessments of urban infrastructure
FINDINGS

FINDINGS OVERVIEW

**Data and Technology** Practices for Accessibility Assessments

**Interactions** between Stakeholders for Accessible Infrastructure Development

**Decision-Making Practices** for Accessible Infrastructure Development

**Challenges** in Accessible Infrastructure Development
FINDINGS
FINDINGS OVERVIEW

Data and Technology Practices for Accessibility Assessments

Decision-Making Practices for Accessible Infrastructure Development

Interactions between Stakeholders for Accessible Infrastructure Development

Challenges in Accessible Infrastructure Development
City-scale decision making involves significant interactions between stakeholders

Focus on 3 groups

Policymakers
Elected Officials

Department Officials
DOTs

Advocates
FINDINGS

INTERACTIONS BETWEEN STAKEHOLDERS

Policymakers
- Legislator
- Representative

Interaction Goals
- Setting city agendas and priorities
- Prioritize investments

Advocates
- Advisor
- Investigator
- Mediator
- Educator
- Litigator

Department Officials
- Implementer
- Investigator
- Advisor
Findings

Challenges in Accessible Infrastructure Development

Social, political, and economic challenges

Lack of political will

Lack of public interest

Conflicting responsibilities and priorities

Inconsistent regulations

Insufficient funding
Social-political challenges

Lack of political will
“Only if a legislator had a particular interest would you then request to have a [transportation] committee hearing on the state. We often didn’t, in part because when I was there, the chair was not particularly interested in pedestrian issues so that was not a real focus of the committee.” (P18PM)

Public disinterest
“The challenge is that it’s competing priorities and that pedestrian voices usually are low in number when people go to advocate for things because everybody wants to talk about the new bright, shiny thing.” (P11A)

Public disinterest influences Political will
“At the end of the day, it becomes a political discussion of how much money do we think the citizens are willing to vote for...at the end of the day, it’s going to be nine council members and the mayor deciding, ‘here’s what we think the population will bear’, and it becomes more of a political discussion and less of a policy.” (P17PM)
How do we enable **change** in the socio-political context of urban accessibility?
Civic Interaction Space: Six Points of Civic Interactions

Interaction Goals

1. **Raising Awareness** (A → PM)
   - Policy Recommendations (A → PM)
   - Setting Priorities (A ↔ PM)
   - Community Input (A → PM)
   - Issue Resolution (PM → A)
   - Issue Data Generation* (A → PM)

2. **Raising Awareness** (A → D)
   - Setting Priorities (A ↔ D)
   - Community Input (A → D)
   - Issue Data Generation* (A → D)

3. **Raising Awareness** (A → CM)
   - Building Capacity (A → CM)
   - Community Input (CM → A)
   - Investigating Issues (CM ↔ A)
   - Issue Resolution (A → CM)

4. **Community Input** (CM → PM)
   - Issue Resolution (PM → CM)
   - Issue Data Generation* (CM → PM)

5. **Raising Awareness** (D → CM)
   - Community Input (CM → D)
   - Issue Resolution (D → CM)
   - Issue Data Generation* (CM → D)

6. **Setting Priorities** (D ↔ PM)
   - Policy Recommendations (D → PM)
   - Investigating Issues (D → PM)
   - Legislative Oversight (PM → D)
   - Issue Resolution (D → PM)

* Indirect Interactions through civic participation apps/tools

Legend

- More communication
- Less communication

Includes MI individuals and Caregivers
Improving Community Input and Government Feedback
(increase government feedback – more transparency)

Supporting Advocacy Efforts
(providing tool support to organize efforts well – make data gathering easier)
Socio-political factors complicates things!

Facilitating **civic interactions** may hold the key!

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Traditional Physical Audits

Walkability Audit
Wake County, North Carolina

Walkability Audit
Wake County, North Carolina

Safe Routes to School Walkability Audit
Rock Hill, South Carolina
Mobile Reporting Solutions

Select Complaint

- Broken Sidewalk
- Fire Hydrant

Trees & Parks
- Damaged Tree
- "New Tree"

http://www1.nyc.gov/311/index.page
CHALLENGES

TRADITIONAL DATA COLLECTION APPROACHES

Slow, Manual, and Laborious

Huge Cost

Localized
Computer vision can automatically find curb ramps.