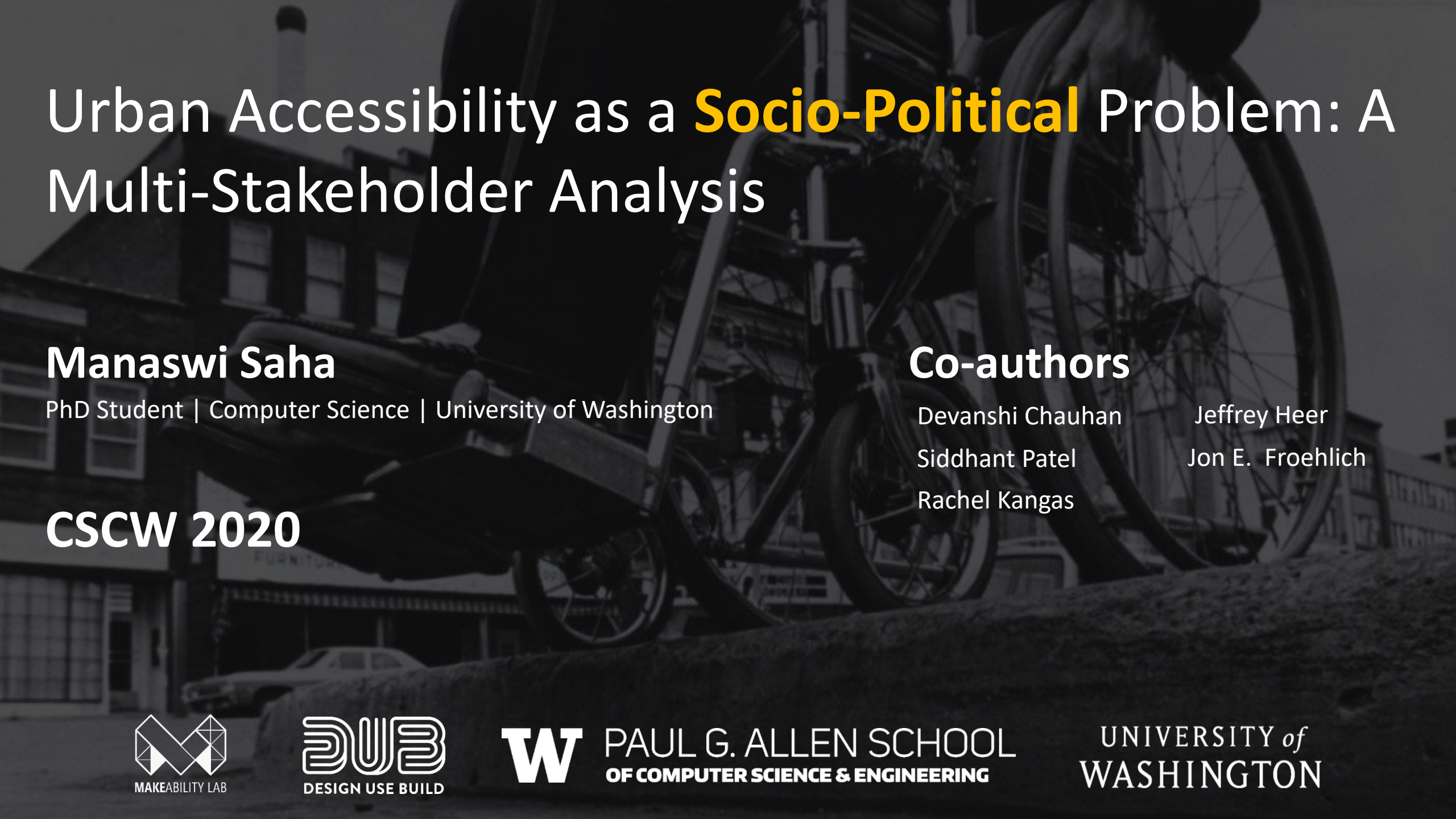

Urban Accessibility as a **Socio-Political** Problem: A Multi-Stakeholder Analysis

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CSCW 2020

MAKEABILITY LAB

DESIGN USE BUILD

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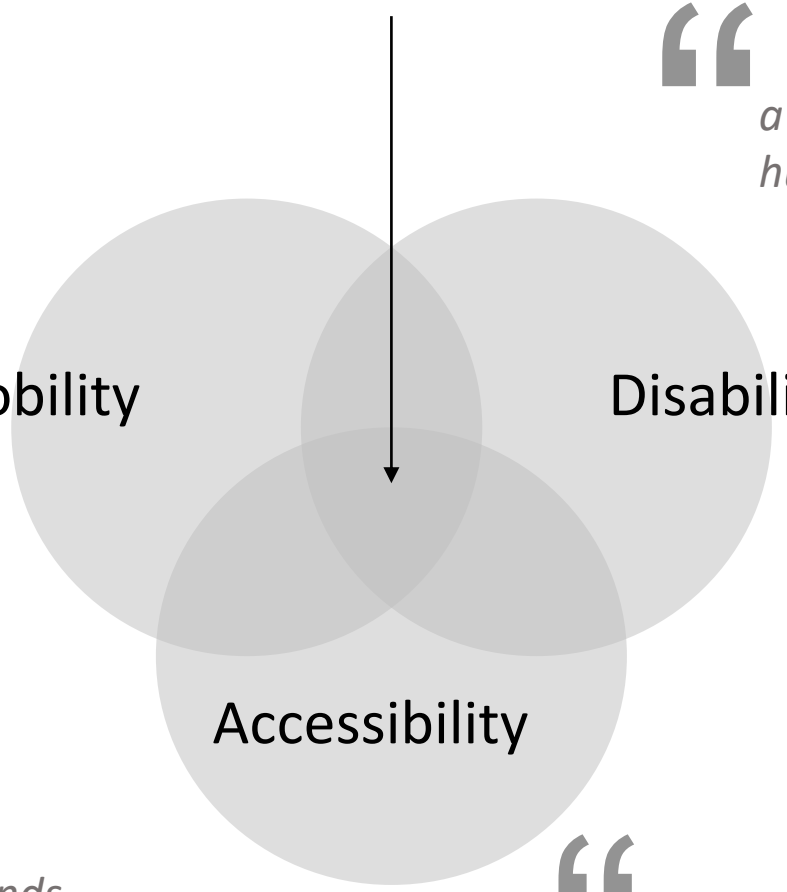
UNIVERSITY of WASHINGTON

MOTIVATION

DEFINITIONS!

Urban Accessibility



Trip rate
Proximity to destinations

> *a product of a dynamic interaction of human and the environment*
>
> (Hahn, 1985)

Urban Planning and Transportation

Human Geography

Disability Studies

Urban Sociology

> *Interactions between human and lands*
>
> (Hansen, 1959)

> *The ease or difficulty for people to reach opportunities and services*
>
> (Dalvi and Martin, 1976
> Wachs and Kumagai, 1973)

MOTIVATION

SOCIO-POLITICAL MODEL OF DISABILITY

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

MOTIVATION

OUR FOCUS

Physical disability

People using Mobility Aids

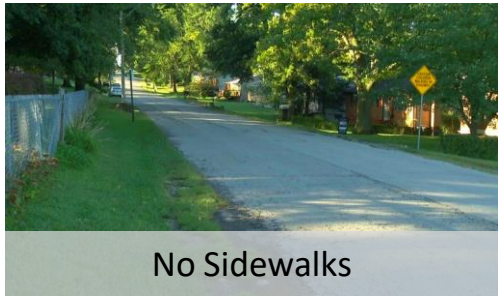
MI individuals

Pedestrian infrastructure

Missing Curb Ramps

Surface Issues

Obstacles



No Sidewalks

Sidewalks

1

What is the **socio-political context** of urban accessibility?

2

How do we enable **change** in the **socio-political context** of urban accessibility?

INTERVIEW STUDY

KEY RESEARCH QUESTIONS

RQ1 What are the information needs and challenges for assessing and making decisions around urban accessibility and the role of data and technology?

RQ2 How do stakeholder groups communicate and interact together to assess priorities and make decisions?

RQ3 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

METHOD

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

Caregivers

Advocates

Represent people in need

Fight for their rights and change the status quo

Closely engage with both citizens and government officials

Policymakers

Elected Officials

Department Officials

DOTs

FINDINGS

STAKEHOLDER PERSPECTIVE OVERVIEW

MI individuals

Caregivers

Advocates

Developing laws and policies

Prioritization and equitable distribution of resources

Manage funding amongst many competing issues

Policymakers

Elected Officials

Execute policies and make accessibility improvements

Schedule and prioritize maintenance projects

Allocate available funds to specific projects

Conduct ground assessments of urban infrastructure

Department Officials

DOTs

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 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

FINDINGS

INTERACTIONS BETWEEN STAKEHOLDERS

City-scale decision making involves significant interactions between stakeholders

Focus on **3** groups

Policymakers

Elected Officials

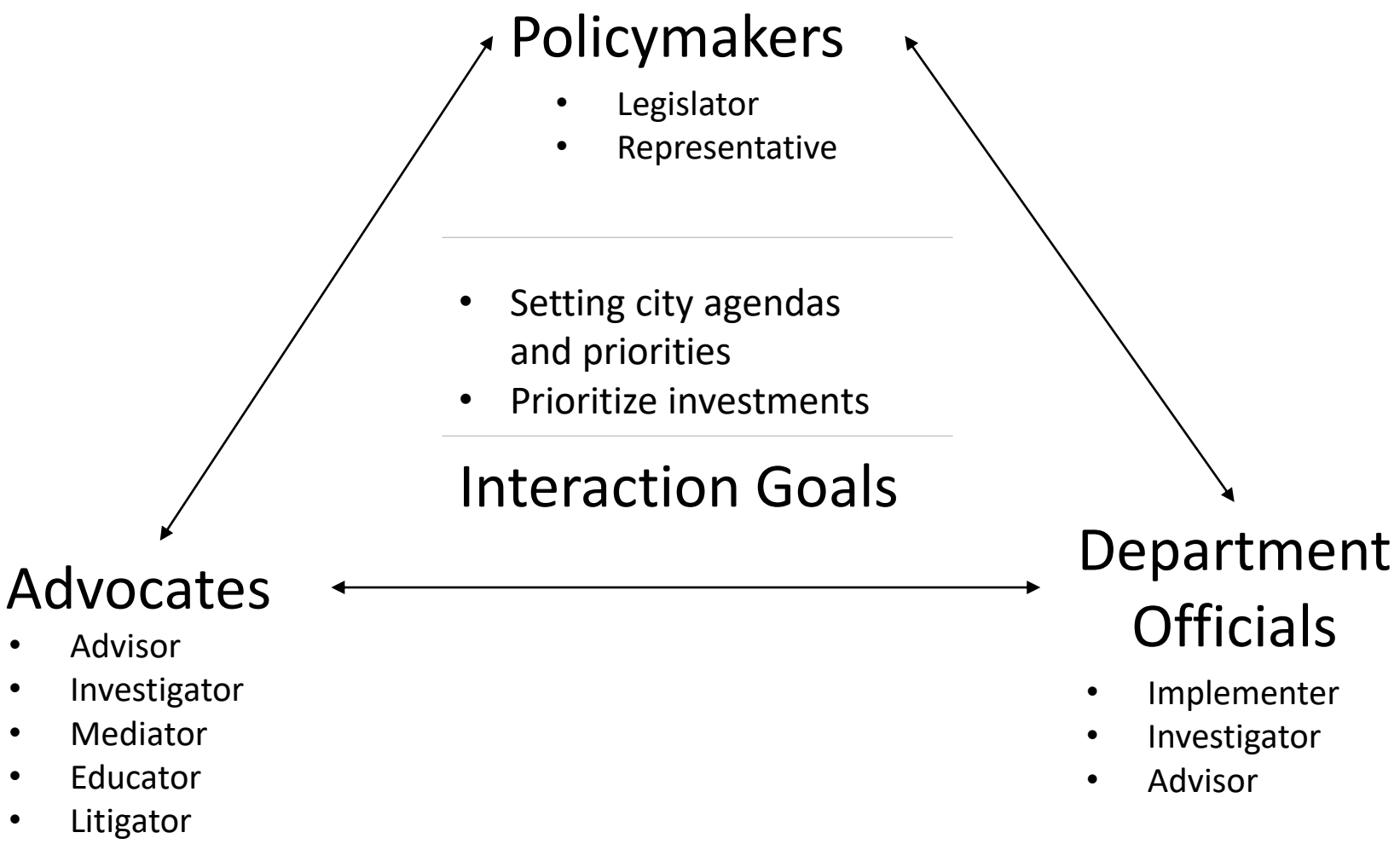
Department Officials

DOTs

Advocates

FINDINGS

INTERACTIONS BETWEEN STAKEHOLDERS



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

CHALLENGES IN ACCESSIBLE INFRASTRUCTURE DEVELOPMENT

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

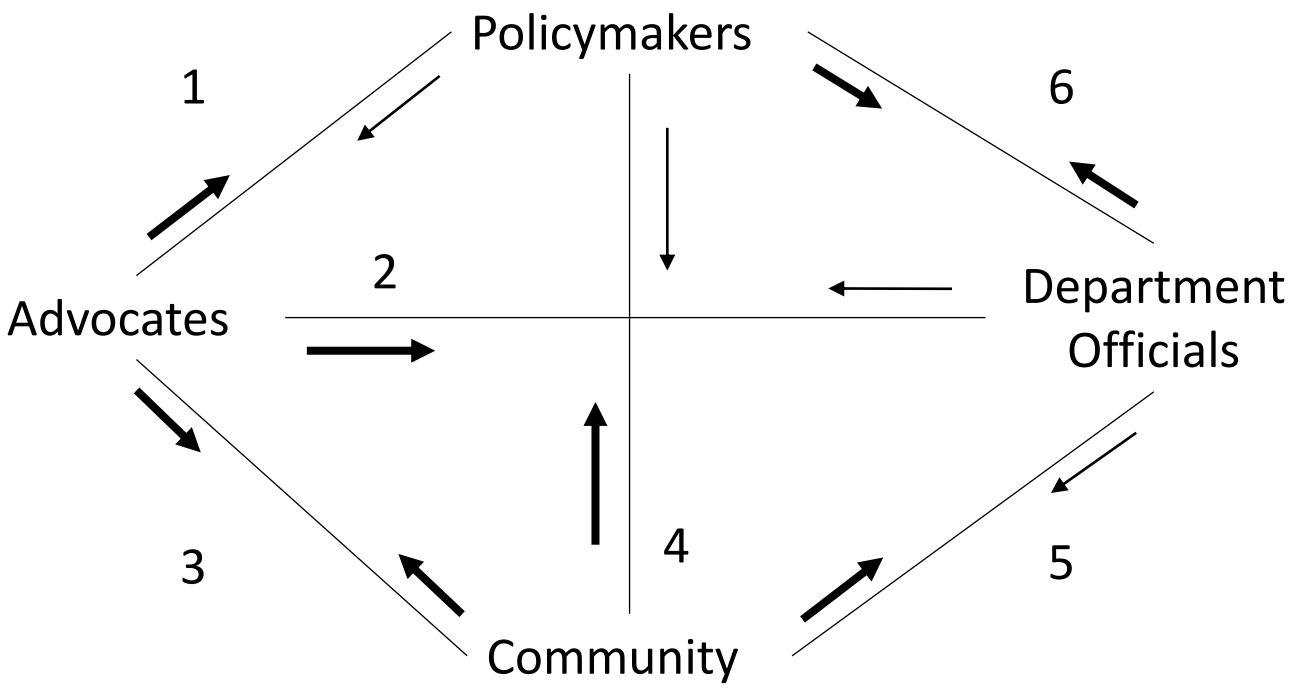
"*The challenge is that it's competing priorities and that **pedestrian voices usually are low** in number when people go to advocate for things because everybody wants to talk about the new bright, shiny thing*." (P11A)

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



Includes MI individuals and Caregivers

Legend

- More communication
- Less communication

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

DISCUSSION: FACILITATING CIVIC INTERACTIONS

2 FOCUS AREAS

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)

ACKNOWLEDGEMENTS

TEAM

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Rachel Kangas

Siddhant Patil

CONCLUSION

TAKEAWAYS

Any Questions?

Socio-political factors complicates things!

Facilitating civic interactions may hold the key!

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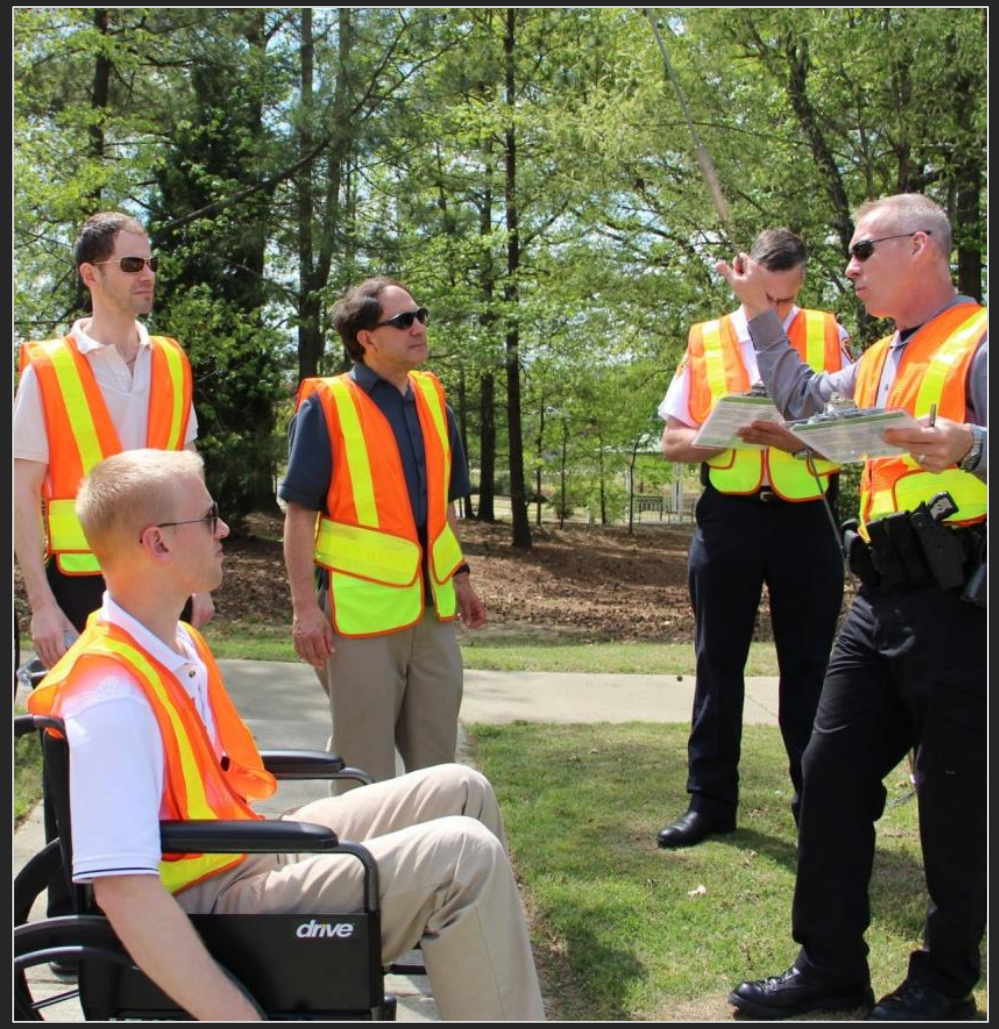
Traditional Physical Audits

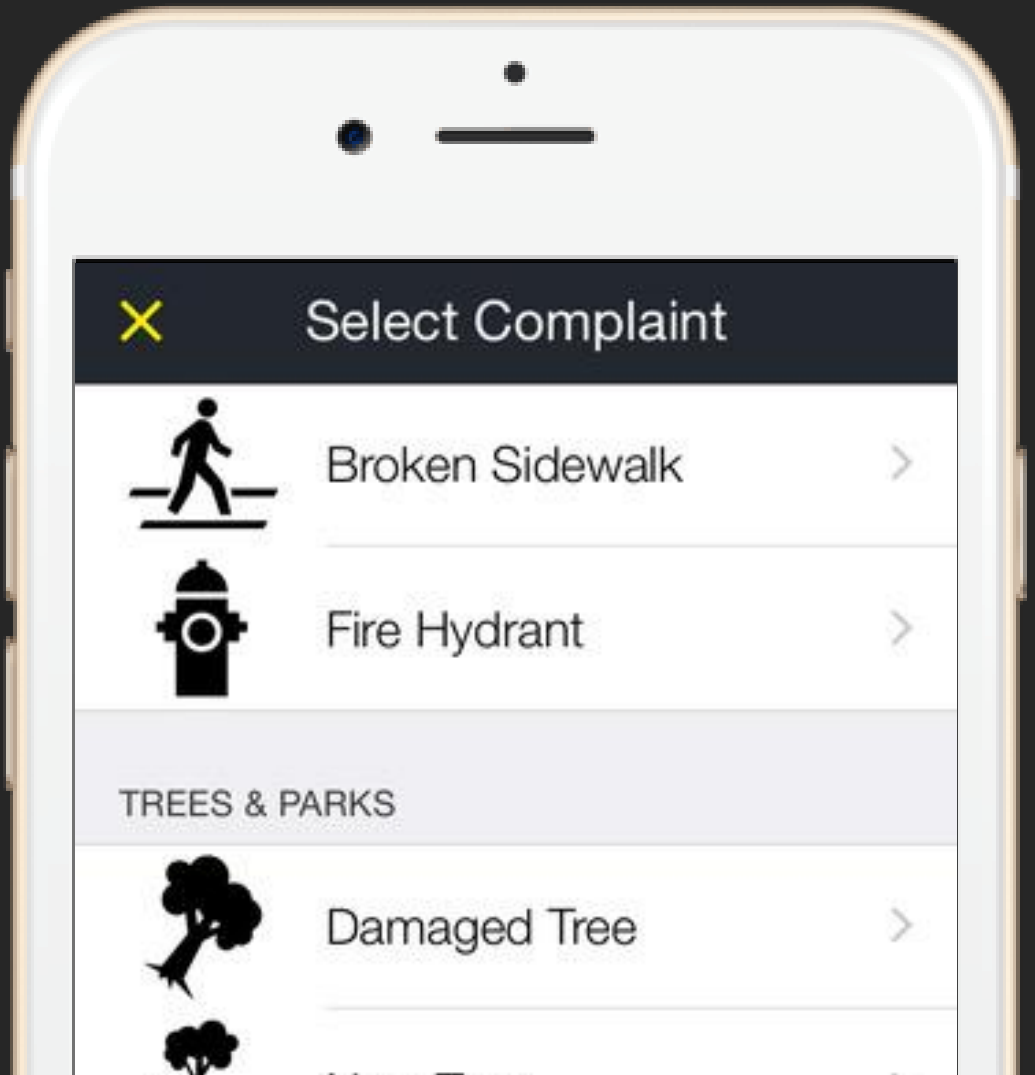


Walkability Audit
Wake County, North Carolina

Walkability Audit
Wake County, North Carolina

Safe Routes to School Walkability Audit
Rock Hill, South Carolina

Mobile Reporting Solutions



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

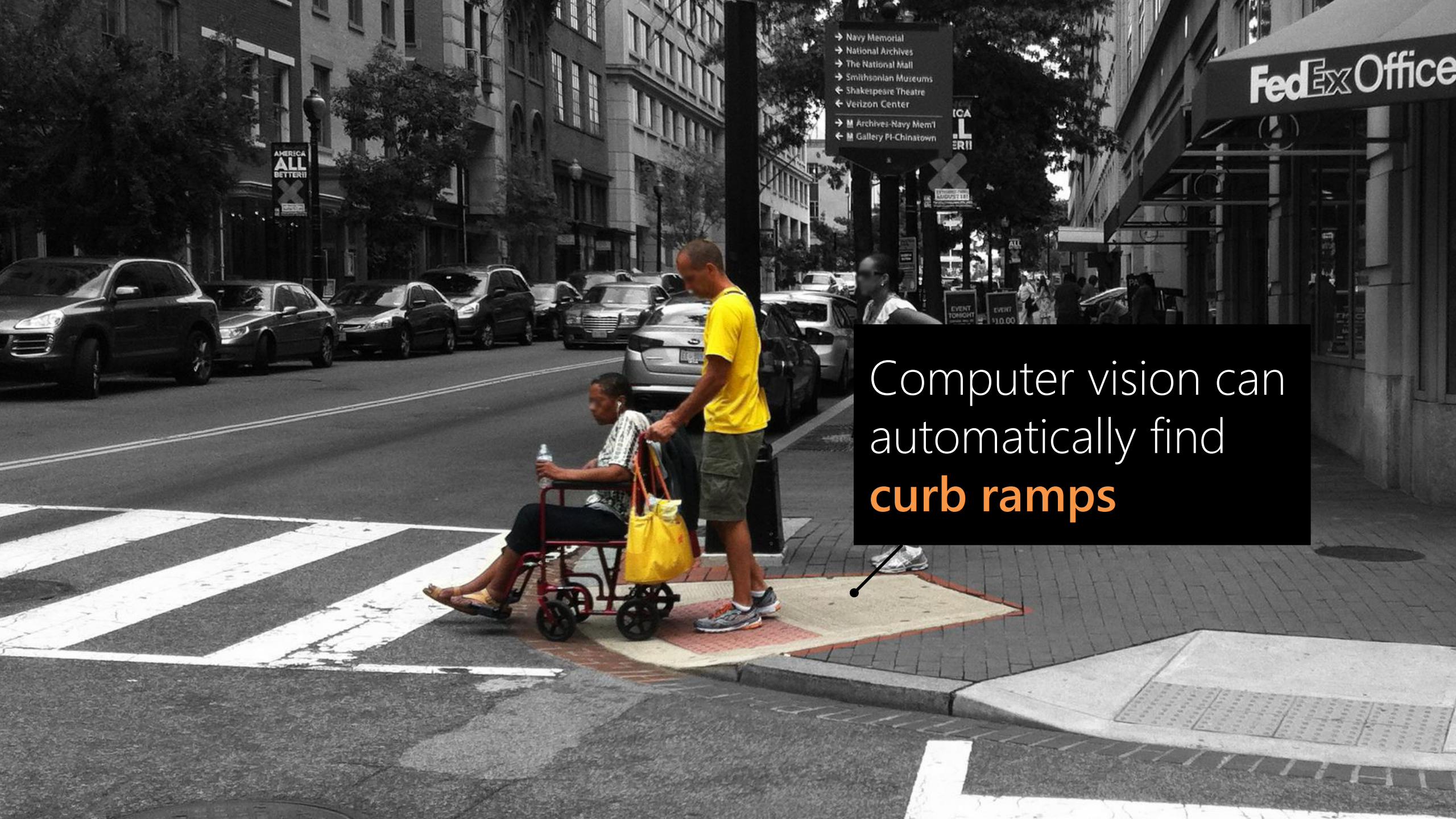
CHALLENGES

TRADITIONAL DATA COLLECTION APPROACHES

Slow, Manual, and Laborious

Huge Cost

Localized


Navy Memorial
National Archives
The National Mall
Smithsonian Museums
Shakespeare Theatre
Verizon Center
Archives-Navy Mem'l
Gallery Pl-Chinatown
FedEx Office
Computer vision can automatically find
curb ramps