

**BEST PRACTICES FRAMEWORK FOR  
USING GIS FOR ISSUES RELATED TO  
EQUITY AND SOCIAL JUSTICE**

Greg Babinski, 2019-2020 EthicalGEO Fellow

King County GIS User Group Meeting

December 4, 2019

## King County Equity and Social Justice



**Building equity and opportunity for all**

### Balancing a bold vision with actionable and measurable objectives.

King County has many strengths and assets, including a strong business sector and diverse communities. But many of our people are too often left behind.

King County is expanding access to opportunity in eight areas—child and youth development; jobs and economic development; environment and climate; health and human services; housing; information and technology; transportation and mobility; and the justice system.

# GIS FOR ESJ BEST PRACTICES

## American Geographical Society – Past Focus on Exploration



Robert Peary (left) and Matthew Henson (right)



AGS Fliers and Explorers Globe



AGS Executive Director Isaiah Bowman



# GIS FOR ESJ BEST PRACTICES

## American Geographical Society – Focus on the Future of Geography

**REGISTER NOW!**  
 AMERICAN GEOGRAPHICAL SOCIETY  
 FALL SYMPOSIUM

**GEOGRAPHY 2050**  
**BORDERS AND A BORDERLESS WORLD**

November 21 - 22, 2019  
 Columbia University

Registration is open at  
[www.geography2050.org](http://www.geography2050.org)

*Geography Teachers*  
 Start Your Class With  
**DailyGeo**

Free subscription for current headlines, detailed maps, and more.

**SPRING 2020 INTERNSHIP**  
 American Geographical Society

**All majors welcome!**

- Geography & Mapping
- Journalism & Communications
- Social Media
- Urban & Environmental Studies
- Graphics & Web Design
- Website & Marketing

**Submit Your**

- Resume
- Cover Letter
- Unofficial Transcript
- Writing Sample
- GIS project sample (optional)

To apply, email your materials to: [ags@americangeo.org](mailto:ags@americangeo.org)

\*Fall internships comprise 15 weeks for 15 hours per week. A local transportation stipend will be provided and an AGS Scholarship will be awarded upon completion.



2018

Powering Our Future Planet



2017

The Future of Mobility



2016

Envisioning a Sustainable Planet



2015

Exploring our Future in an Urbanized World



2014

Mounting an Expedition to the Future

**AGS COUNCIL FELLOWSHIP**  
 Now accepting applications!

OPEN TO GRADUATE AND DOCTORAL STUDENT MEMBERS OF AGS PURSUING A DEGREE IN GEOGRAPHY OR RELATED FIELD.

Deadline: November 1, 2019.

Four \$1,500 Scholarships will be awarded in 2020!

Learn about the program here:  
[www.americangeo.org/initiatives/ags-council-fellowship/](http://www.americangeo.org/initiatives/ags-council-fellowship/)

# GIS FOR ESJ BEST PRACTICES

## American Geographical Society – Ethical GEO Fellowships



Announcing the 2019-2020 EthicalGeo Fellows



Mr. Greg Babinski



Mr. William Evans



Dr. Alfredo Giron Nava



Ms. Erica Hagen



Dr. David Padgett



Fr. Michael Rozier



Dr. Dara Seidl

<https://gisandyou.org/2019/11/14/ags-awards-seven-ethical-geo-fellowships/>

## **GIS FOR ESJ BEST PRACTICES**

**American Geographical Society – Ethical GEO Fellowships**

**My big idea: to pursue a ‘best-practices’ framework for using GIS for issues related to equity and social justice.**

**[https://www.youtube.com/watch?v=\\_WK9D3YLb1E&feature=youtu.be](https://www.youtube.com/watch?v=_WK9D3YLb1E&feature=youtu.be)**

**Much of the material for this presentation is based on my presentation to AGS and to the other Ethical GEO Fellows at Columbia University on Nov. 20, 2019.**

# **GIS FOR ESJ BEST PRACTICES**

## **Why GIS for ESJ Best Practices?**

- **To answer, I have to answer three questions...**
  - **What led me to be passionate about this topic?**
  - **What will be achieved with GIS for ESJ Best Practices?**
  - **How will we develop and sustain GIS for ESJ Best Practices?**



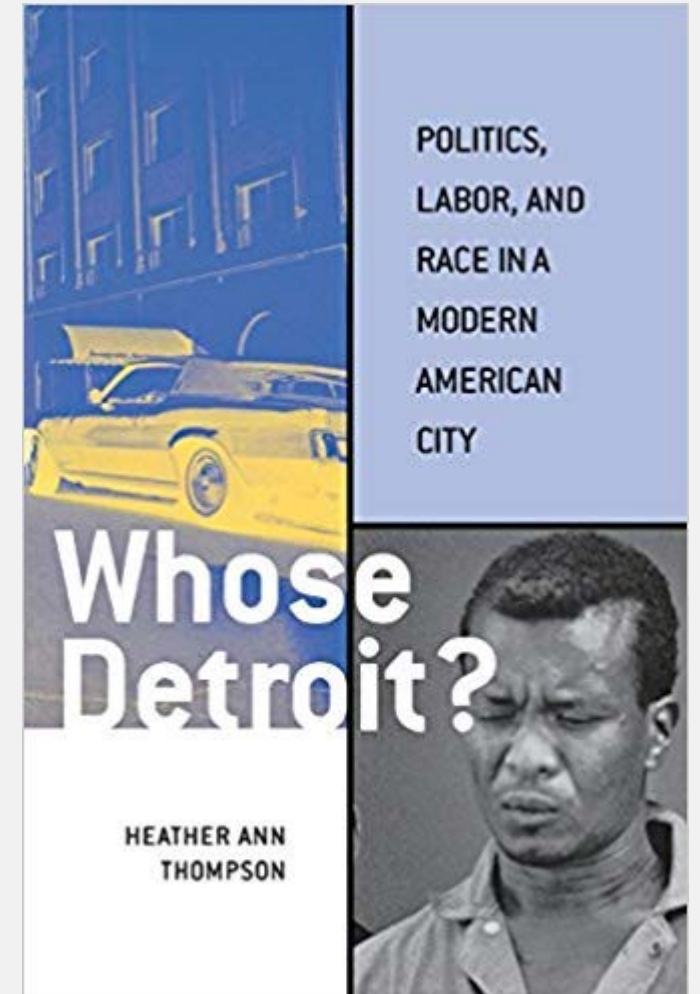
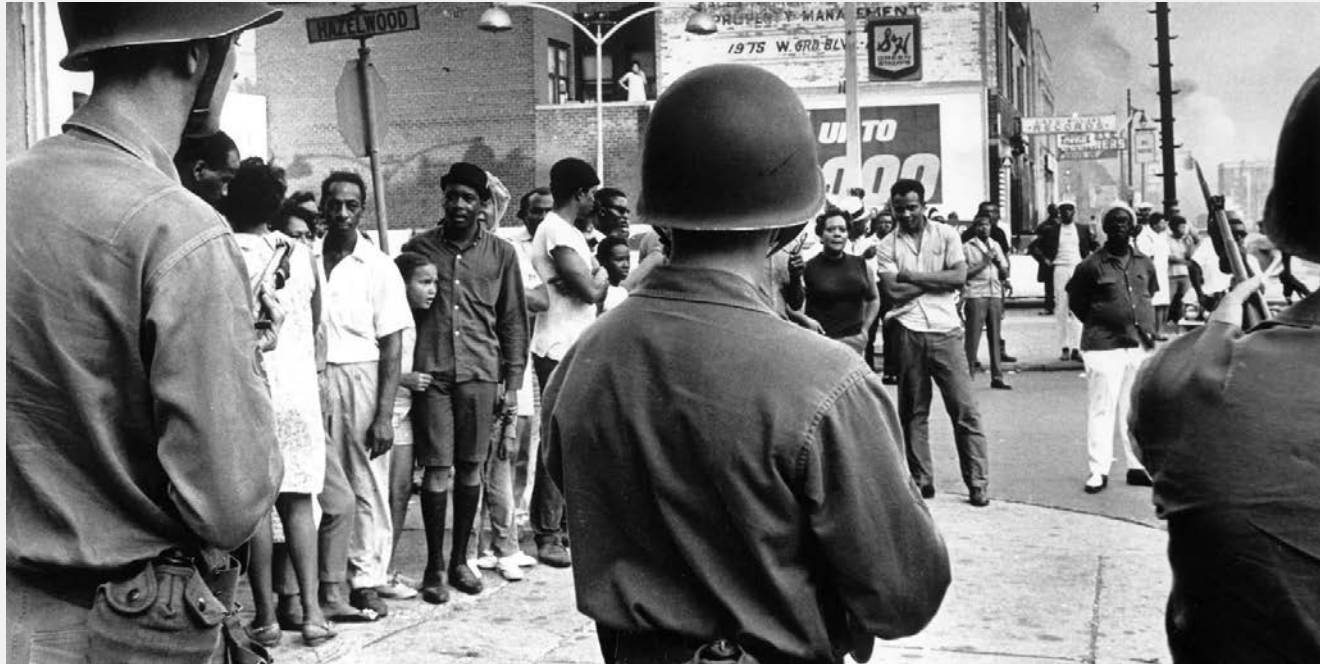




# GIS FOR ESJ BEST PRACTICES

## What led me to be passionate about this topic?

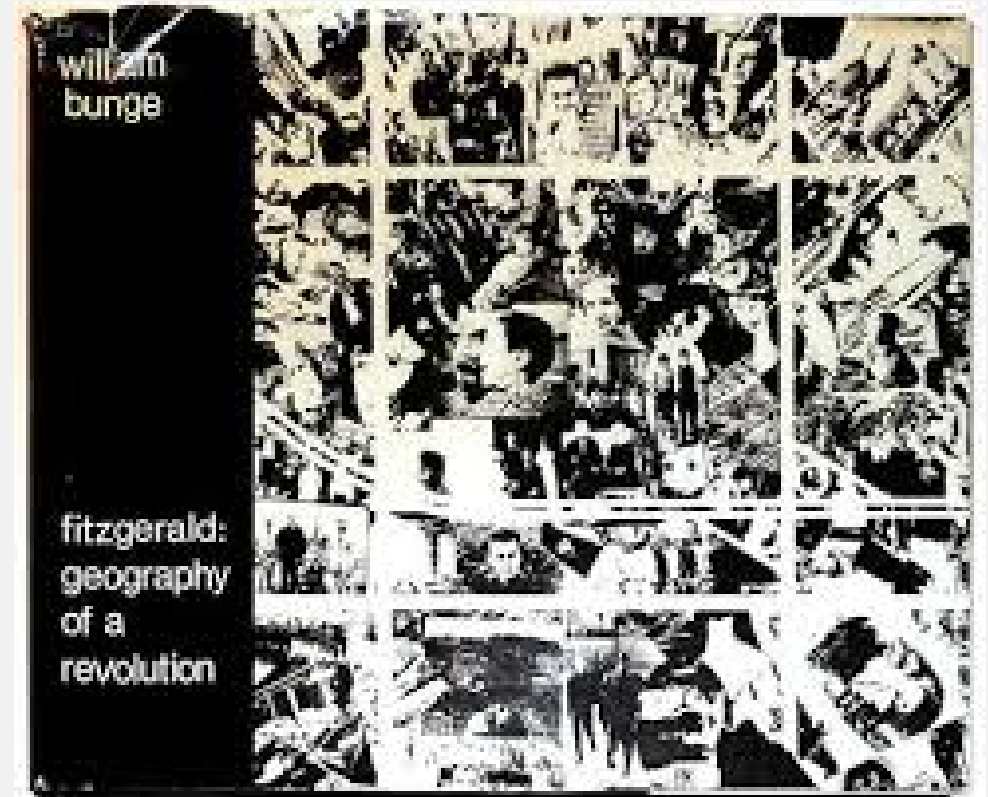
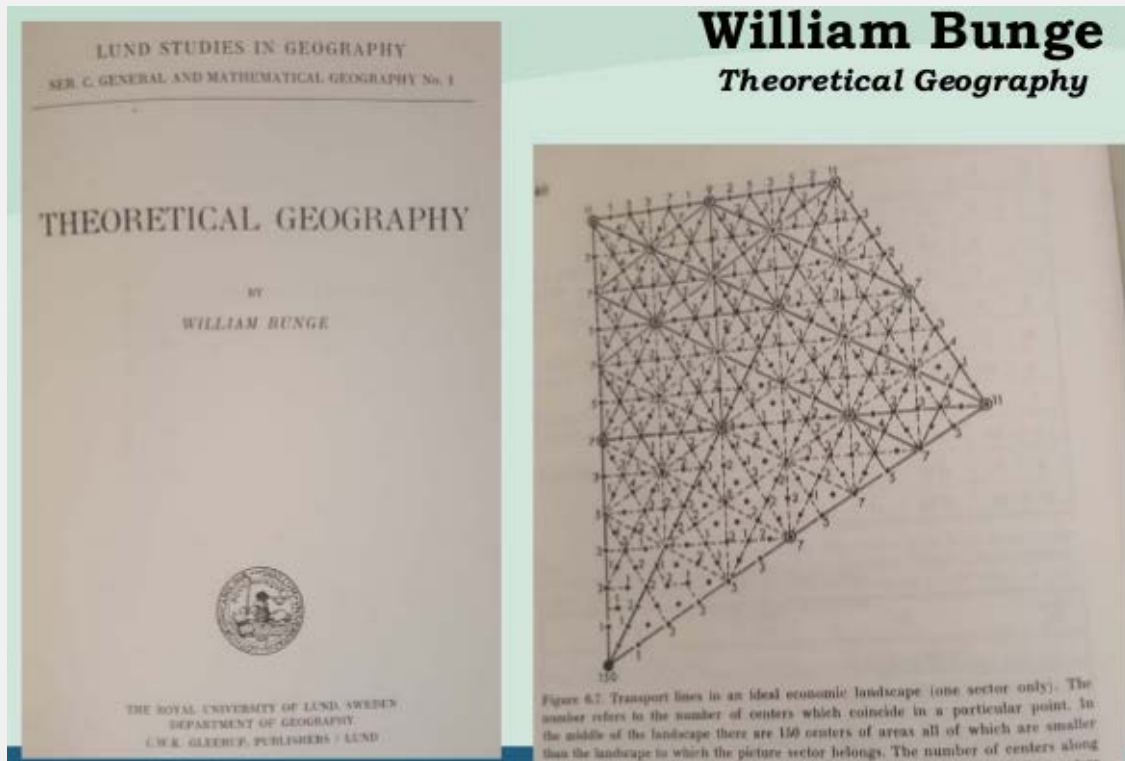
- Detroit in the late 1960s and 1970s was a period of *social* turmoil because of *inequity* and *injustice*.



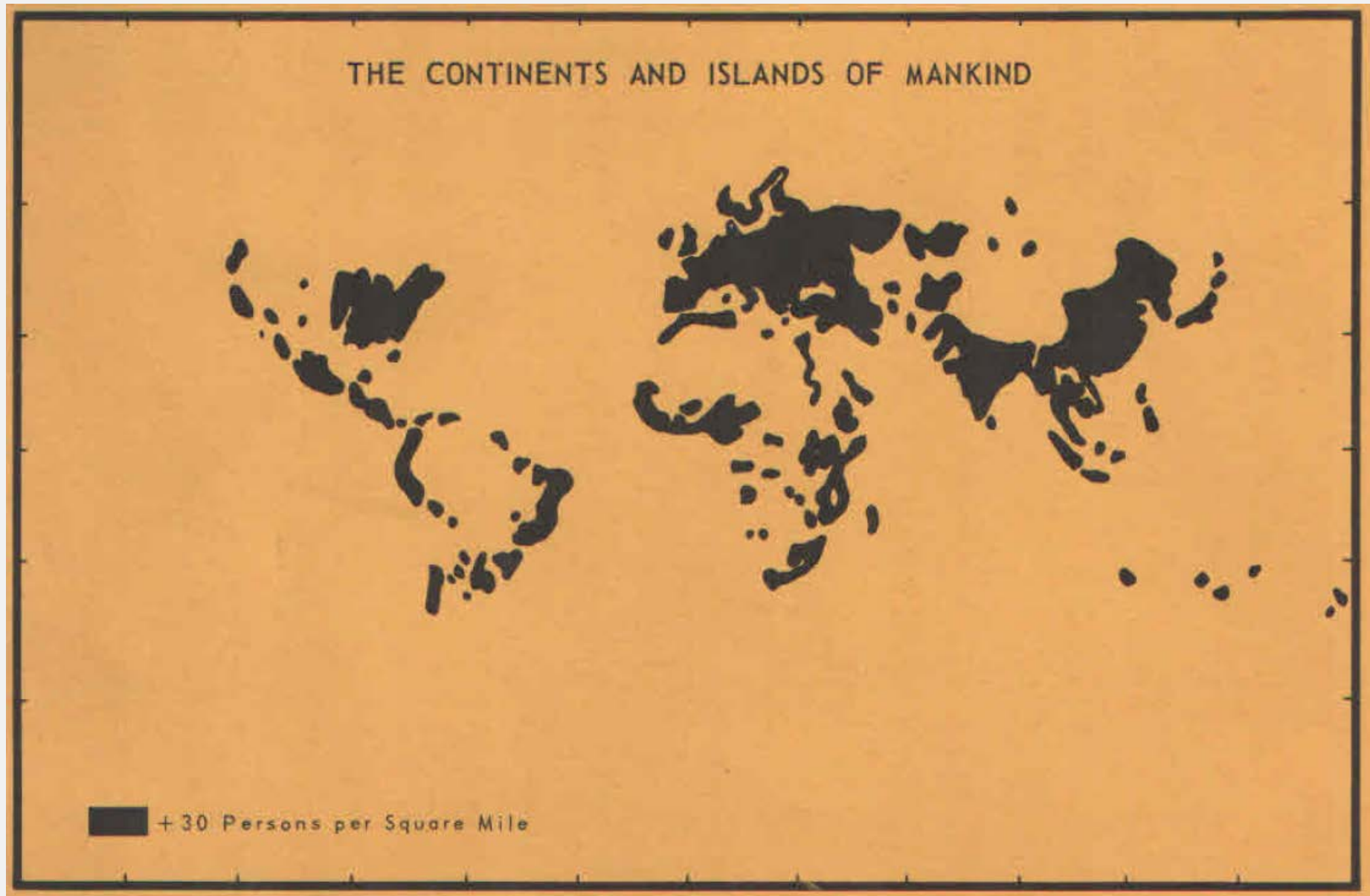
# GIS FOR ESJ BEST PRACTICES

## What led me to be passionate about this topic?

- I wanted to study geography at Wayne State University
- But William Bunge and Gwendolyn Warren disrupted my concept of what geography is
- Why was I helping to map rat infestations in Detroit?
- The Society for Human Exploration and the Detroit Geographical Expedition



# GIS FOR ESJ BEST PRACTICES





# GIS FOR ESJ BEST PRACTICES

*Relevance to the contemporary society must rank high on the list of characteristics [of geography].*

*Admitting ignorance leads to its cure.*

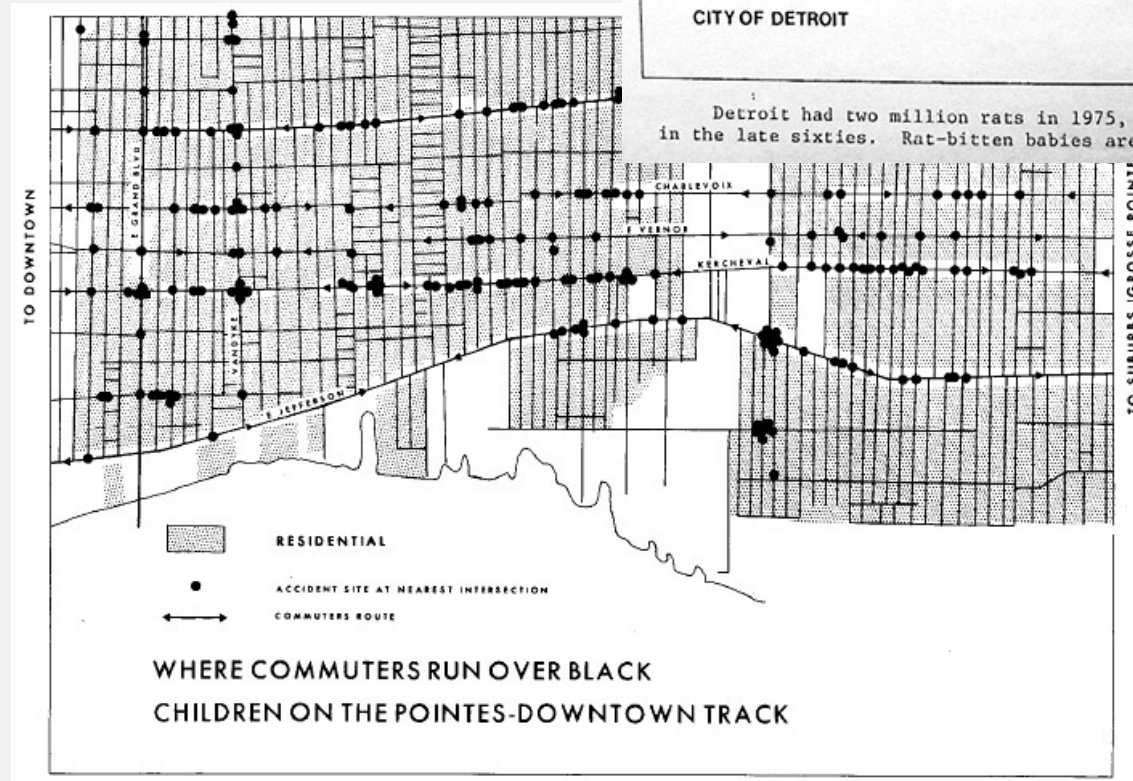
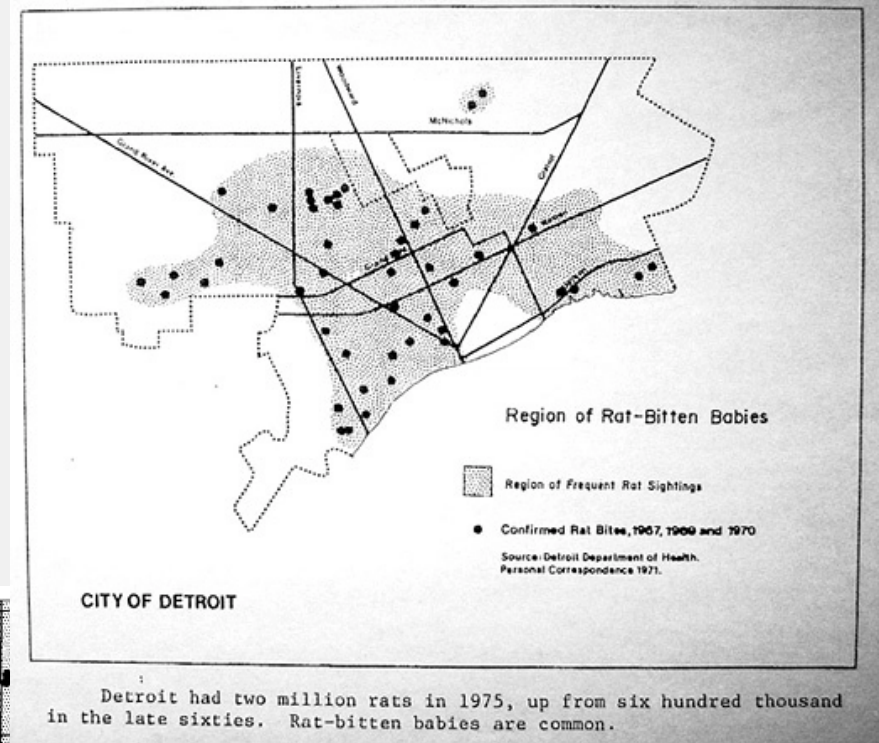
*Exploration facing geographers today is infinitely more vital than that facing Columbus.*

*We must locate on the map at least, and then spatially classify (regionalize) and then spatial predict the human condition.*

*Local people are to be incorporated as students and as professors.*

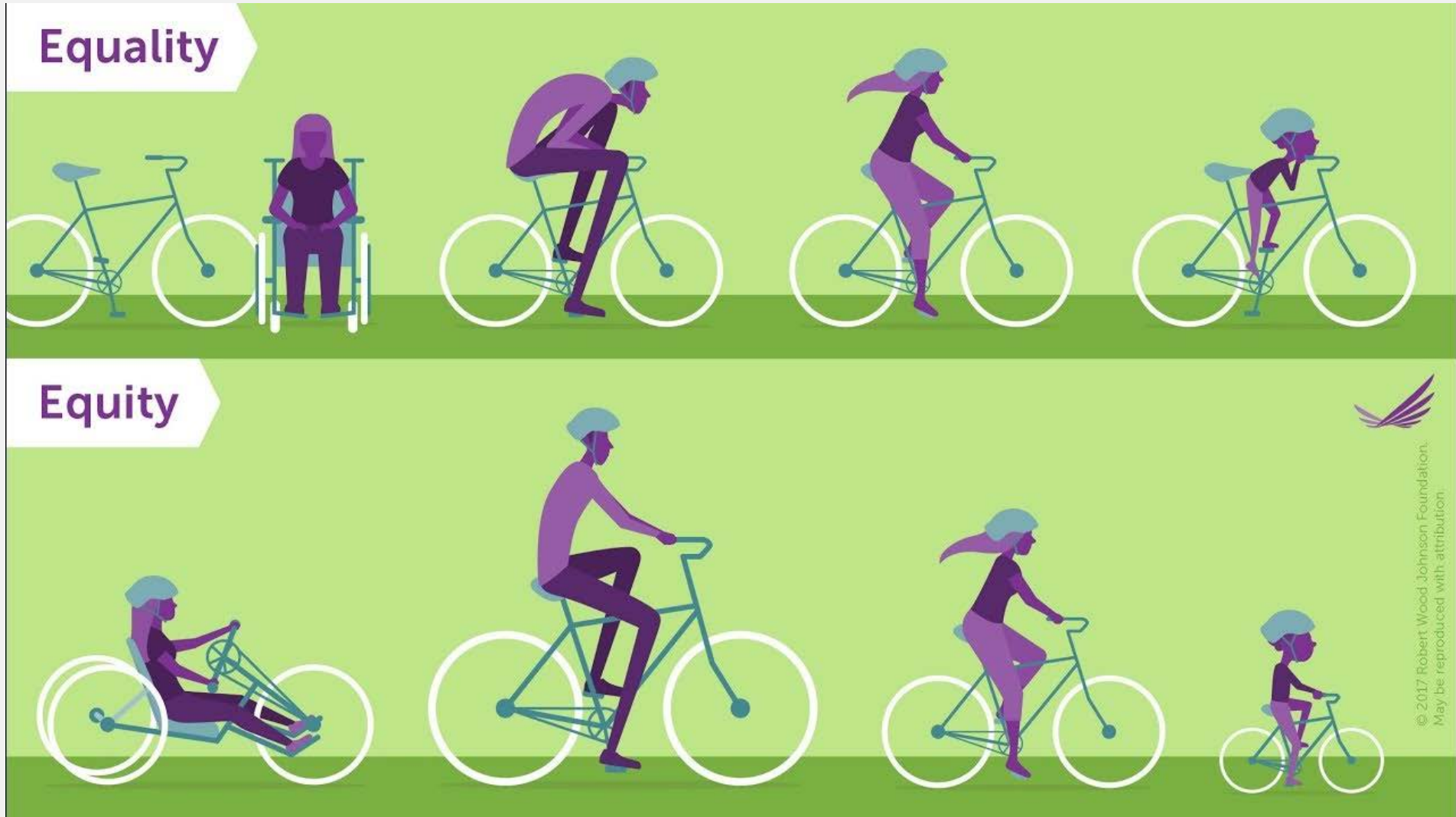
*Unlike earlier expeditions...which were exploitative...human explorations are 'contributive'...The world of geography is stood on its head.*

**-William Bunge, DGE Field Notes 1969**



# GIS FOR ESJ BEST PRACTICES

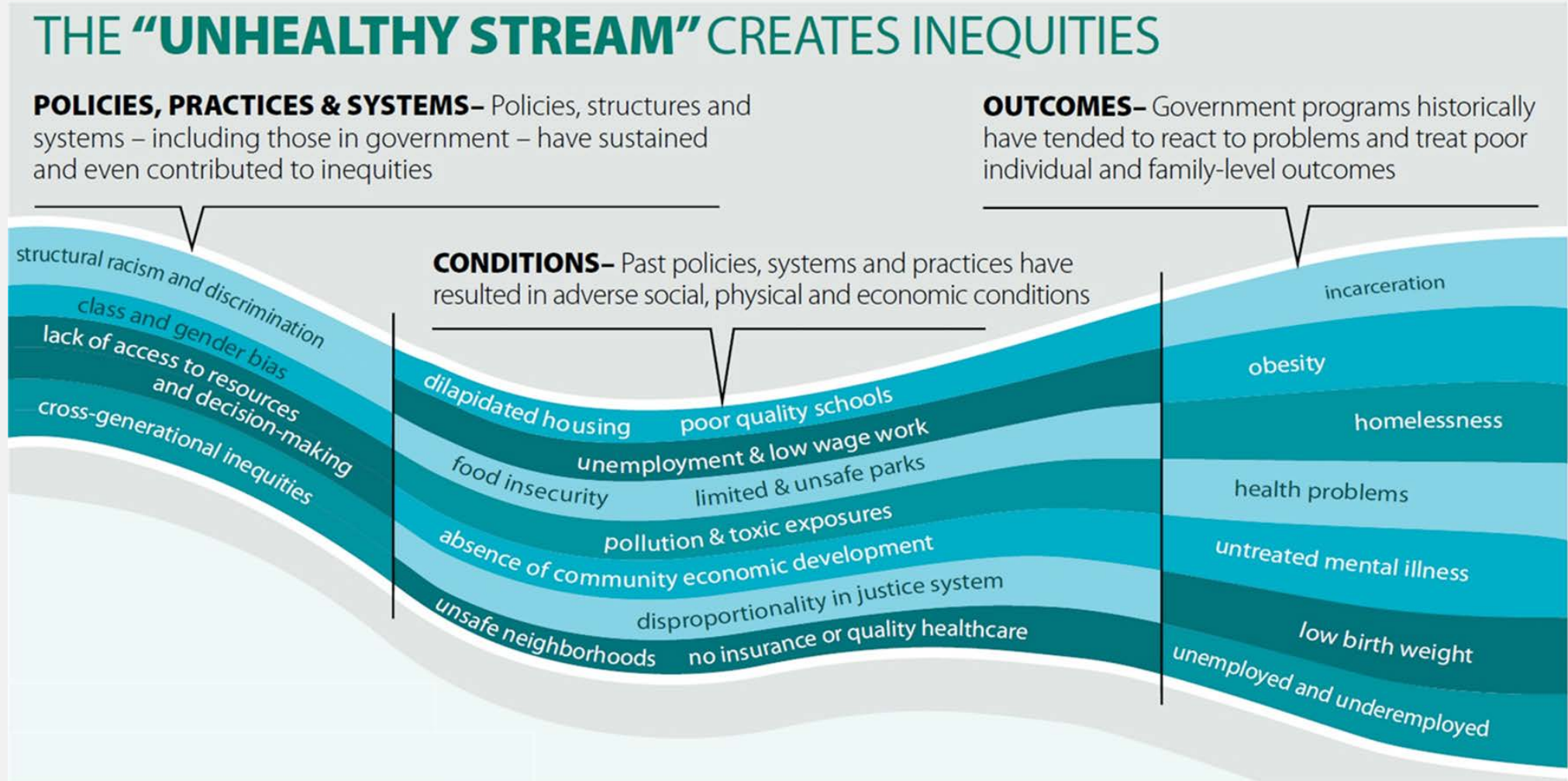
## Equity v. Equality





# GIS FOR ESJ BEST PRACTICES

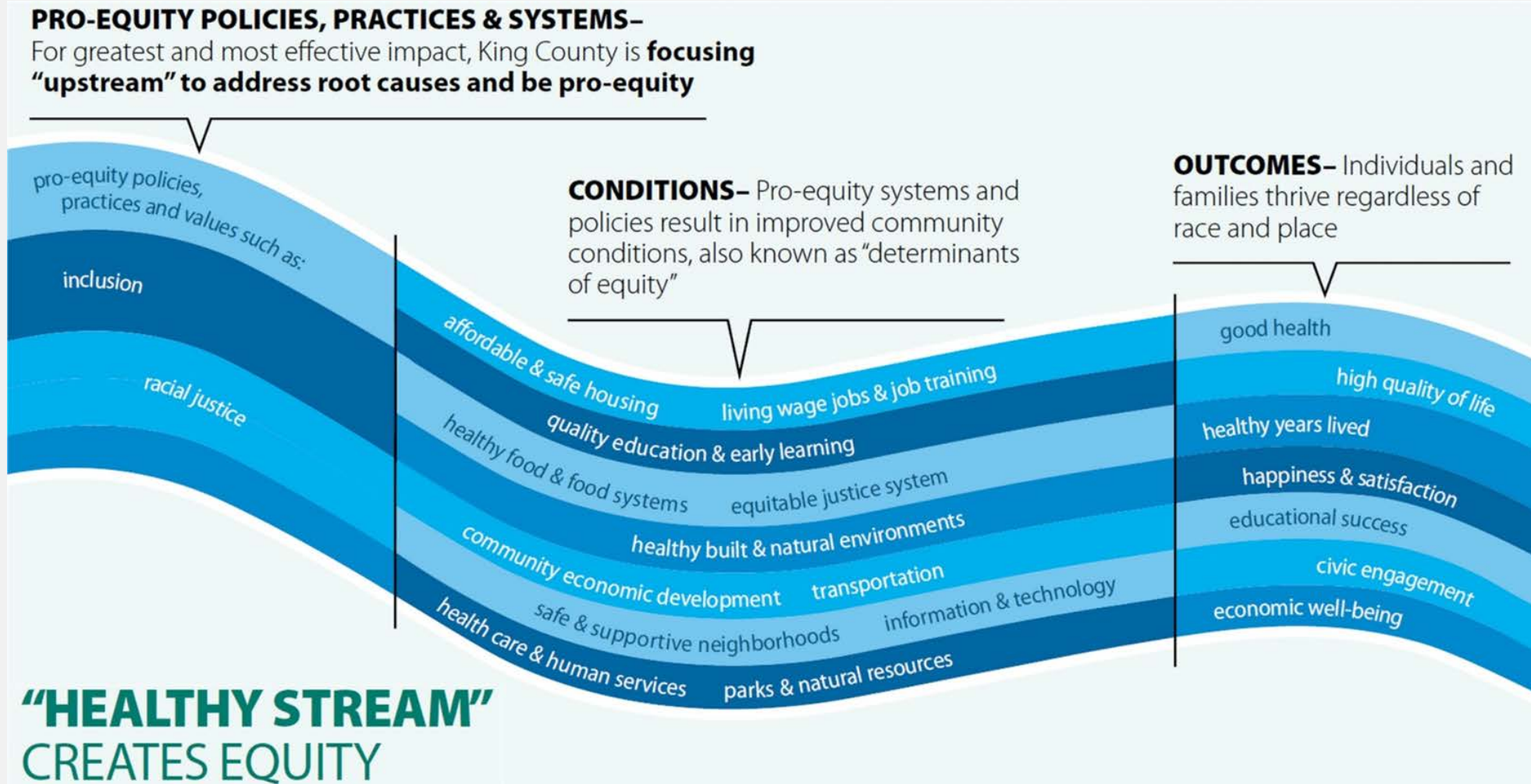
## Upstream policies are the critical point to create equity





# GIS FOR ESJ BEST PRACTICES

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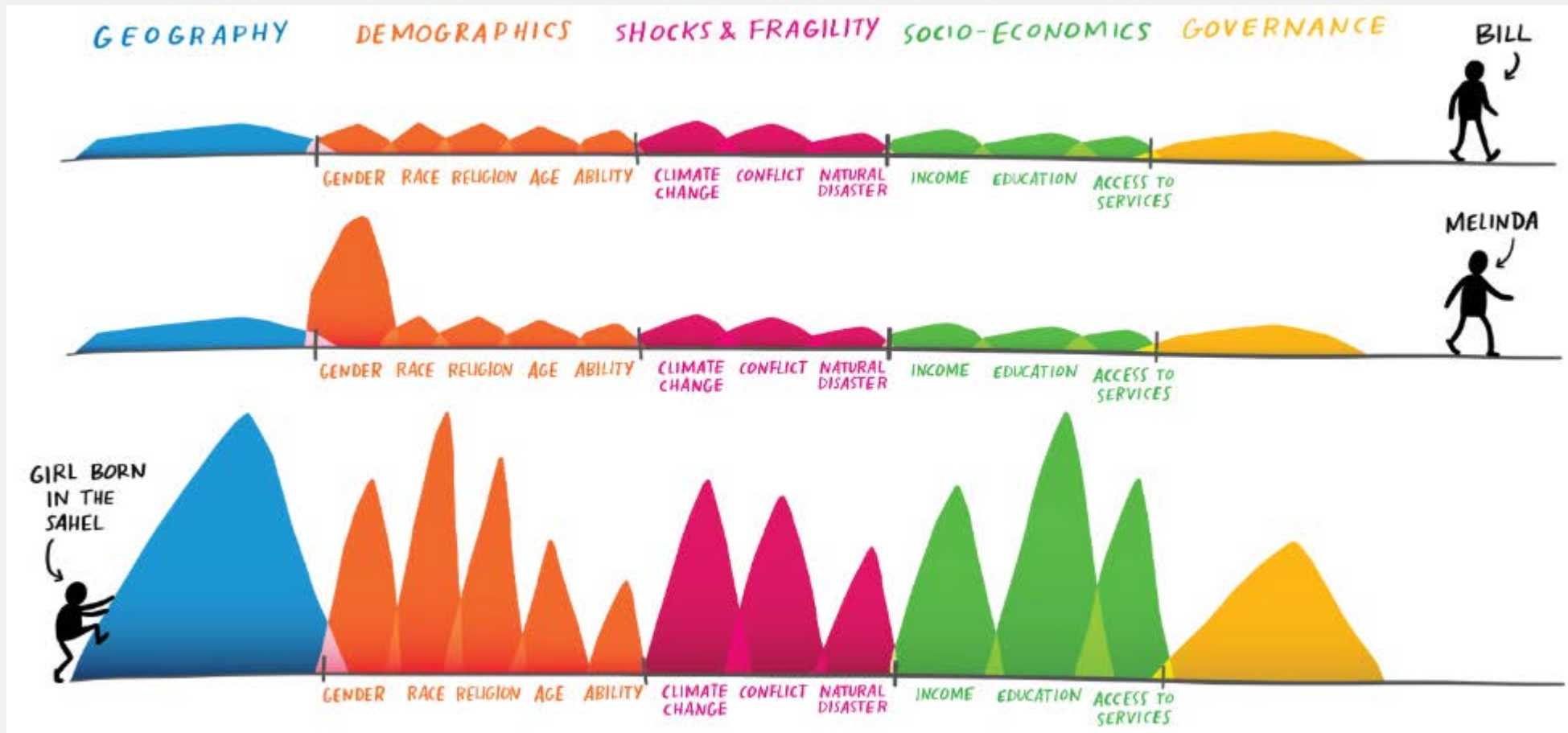


# GIS FOR ESJ BEST PRACTICES

**Race, gender, and location are key factors to achieve racial equity**

*'Every person should have an equal opportunity to lead a healthy, productive life.'*

-Bill and Melinda Gates





# GIS FOR ESJ BEST PRACTICES

## Racial equity cannot be achieved without geographical analysis

Placing Segregation Project: <https://dsps.lib.uiowa.edu/placingsegregation/> (Washington, DC 1860)





# GIS FOR ESJ BEST PRACTICES

## GIS Code of Ethics (extract):

<https://www.urisa.org/clientuploads/directory/Documents/CodeofEthics.pdf>

### I. Obligations to Society

*The GIS professional recognizes the impact of his or her work on society as a whole, on subgroups of society including geographic or demographic minorities, on future generations, and inclusive of social, economic, environmental, or technical fields of endeavor. **Obligations to society shall be paramount when there is conflict with other obligations.***

*1) Do the Best Work Possible, 2) Contribute to the Community to the Extent Possible, Feasible, and Advisable, 3) Speak Out About Issues*

### II. Obligations to Employers and Funders

### III. Obligations to Colleagues and the Profession

### IV. Obligations to Individuals in Society

In 2012, David DiBiase proposed that each GIS Professional should be able to articulate as **Moral Imperative** for the GIS profession.

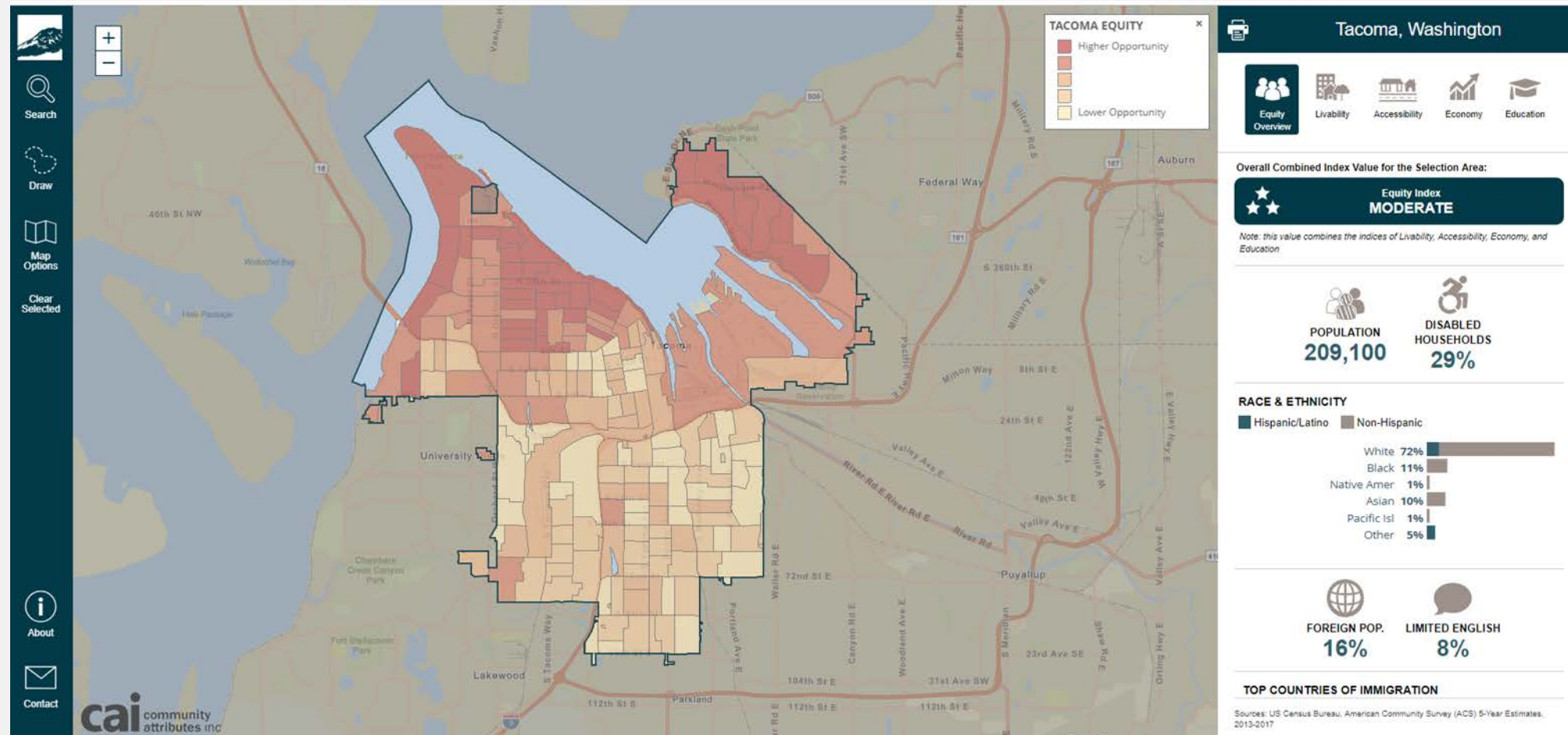
This is Greg Babinski's statement of moral imperative...

*The GIS profession uses geographic theory, spatial analysis, and geospatial technology to help society manage the Earth's finite space, with its natural resources and communities, on a just and sustainable basis for the benefit of humanity.*

# GIS FOR ESJ BEST PRACTICES

Now many local government agencies require that investments and programs be evaluated for their impact on long-term equity, to help achieve eventual social justice.

The best way to analyze the impact of government policies and programs on segments of the population is by geographic analysis. GIS is the geographic analysis tool for this process.

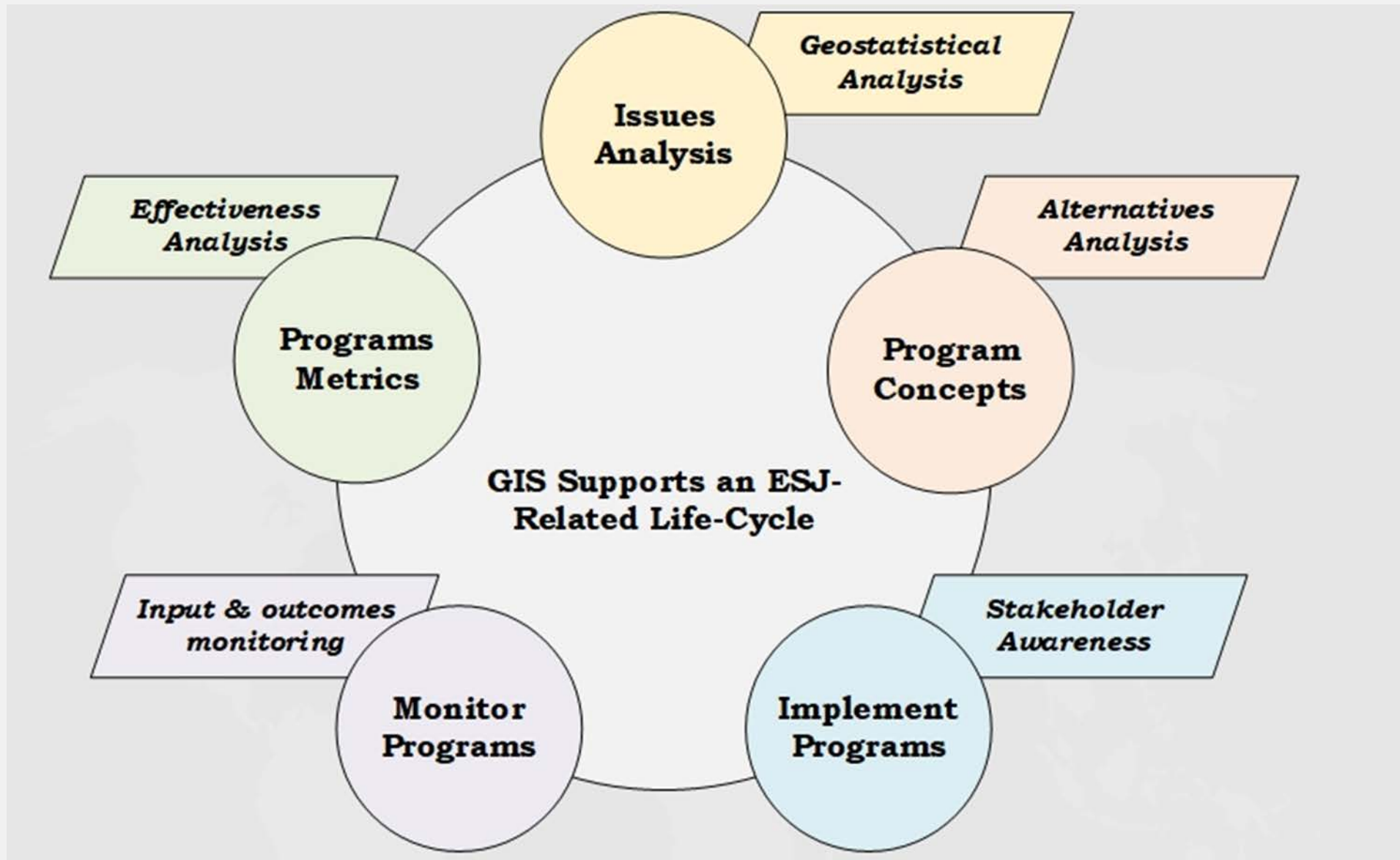


# GIS FOR ESJ BEST PRACTICES

**GIS for ESJ Best Practices will serve many purposes:**

- **Roadmap for doing good ethical work**
- **Help develop products that can be compared meaningfully:**
  - *Against alternatives (Same time, same geography, alternate problem approaches)*
  - *Over time (Same problem approach, same geography, different time)*
  - *Across space (Same time, same or alternate approaches, different geographies)*
- **Support efficiency and lean processes**
- **Enable meaningful critique (by GIS or ESJ professionals)**
- **Consistent standards will support transparency**
- **Guard against ESJ science deniers**





# GIS FOR ESJ BEST PRACTICES

## **Domains of GIS for ESJ “Best Practices”**

A key GIS role is to be the primary resource for ESJ researchers within an agency for data discovery and guidance related to analysis, mapping, and cartographic display

1. **Spatial data management**
2. **Spatial data sources**
3. **Geospatial analytical practices**
4. **Cartographic practices**
5. **General visualization practices**

**This framework was first proposed as part of the Introduction to GIS for ESJ workshop that I developed with Nicole Franklin, KCIT Equity Officer**

**The Intro to GIS for ESJ workshop is now URISA-Certified and has been taught five times across three states to ~100 students**

# **GIS FOR ESJ BEST PRACTICES**

## **Developing GIS for ESJ “Best Practices”**

**Core team**

**Core team advisory**

**Start with a clean paper, or with the draft outline?**

**Scope – keep it narrow.**

**Literature search (GIS for climate change?)**

**Consultation with:**

- **URISA GIS for ESJ workgroup**
- **Esri GIS for ESJ workgroup**
- **LinkedIn GIS for ESJ community**
- **GARE**
- **Ethical GEO Fellows**
- **Others?**



# GIS FOR ESJ BEST PRACTICES

## Developing GIS for ESJ “Best Practices”

### Peer-review – GIS professionals and ESJ practitioners

### Agree what consensus means

### Where do the GIS for ESJ Best Practices ‘live’?

- **GIS&T BOK? – Agreement from USGIS to add GIS for ESJ Topic**
- **Published report**
- **Other?**

### GIS&T Body of Knowledge:

<https://gistbok.ucgis.org/>

#### GS-24 - Citizen Science with GIS&T



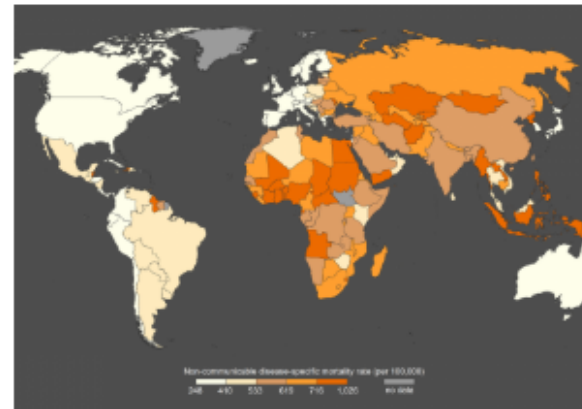
Figure 1. Participant in a BioBlitz records bird observation (Source: Jo Somerfield)

Citizen Science is defined as the participation of non-professional volunteers in scientific projects (Dickson et al, 2010) and has experienced rapid growth over the past decade. The projects that are emerging in this area range from contributory projects, co-created projects, collegiate projects, which are initiated and run by

a group of people with shared interest, without any involvement of professional scientists.

In many citizen science projects, GIS&T is enabling the collection, analysis, and visualisation of spatial data to affect decision-making. Some examples may include:

#### DA-37 - GIS&T and Epidemiology



Location plays an important role in human health. Where we live, work, and spend our time is associated with different exposures, which may influence the risk of developing disease. GIS has been used to answer key research questions in epidemiology, which is the study of the distribution and determinants of disease. These research questions include describing and visualizing spatial patterns of disease and risk factors, exposure modeling of geographically varying environmental variables, and linking georeferenced information to conduct studies testing hypotheses

regarding exposure-disease associations. GIS has been particularly instrumental in environmental epidemiology, which focuses on the physical, chemical, biological, social, and economic factors affecting health. Advances in

# **GIS FOR ESJ BEST PRACTICES**

## **Promoting the future use of GIS for ESJ “Best Practices”**

**URISA – GIS for ESJ tack at the annual GIS-Pro Conference**

**ESRI UC – Esri has agreed to a first-ever ESJ track at the 2020 Esri UC**

**GARE – Annual Conference**

**Articles**

**Possible new GIS for ESJ Best Practices Workshop**

# GIS FOR ESJ BEST PRACTICES

**Comments, questions, discussion?**

**Interested in helping?**

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