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# Measuring Equity and Justice: Data Considerations

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BLADE WORKSHOP

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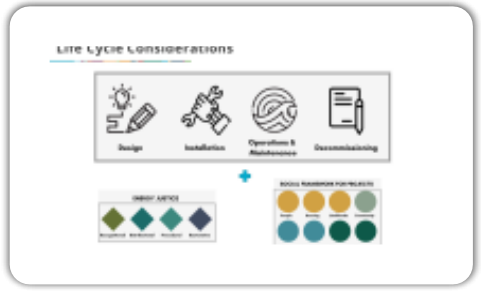
# Outline

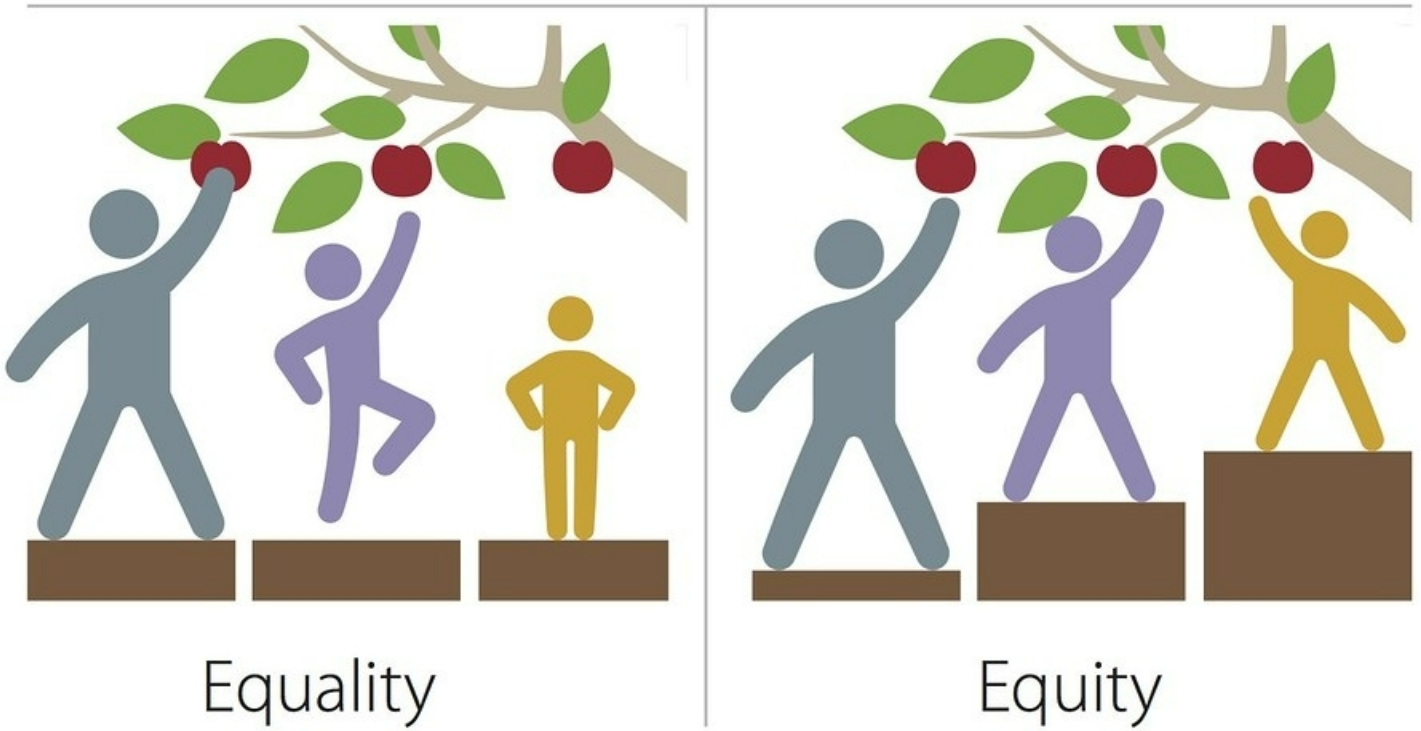

Definitions & Datasets




Life Cycle Considerations

Using a Logic Model

# Definitions




Source: Flickr

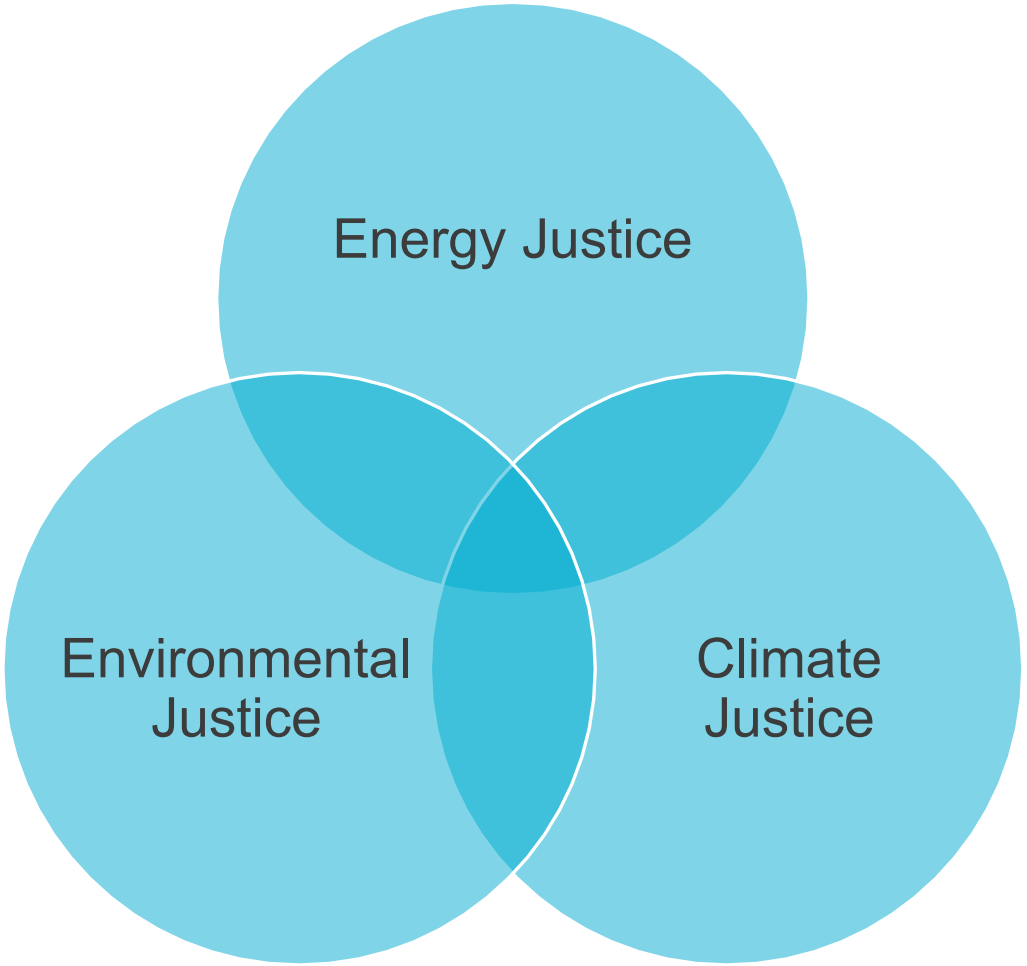
Fair distribution of benefits and costs

# Justice

Addressing historical burdens


Fair distribution of benefits and costs

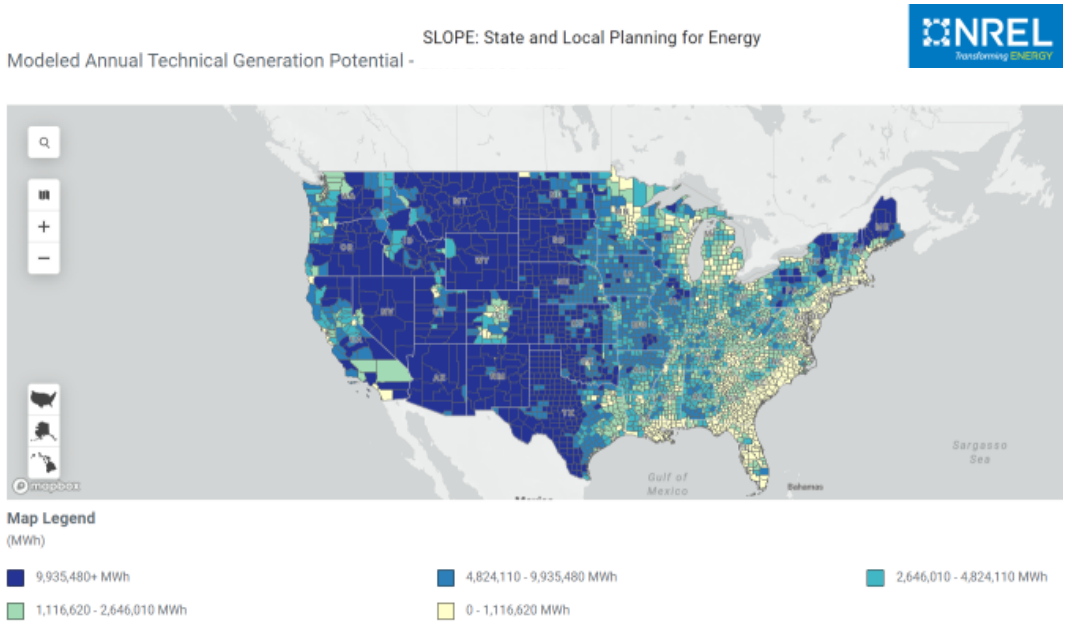
# Justice Intersections




- All justices have a slightly different lens
  - Energy: affordability
  - Environmental: pollution
  - Climate: crisis impacts
- Advancing one can have positive spillover effects into others

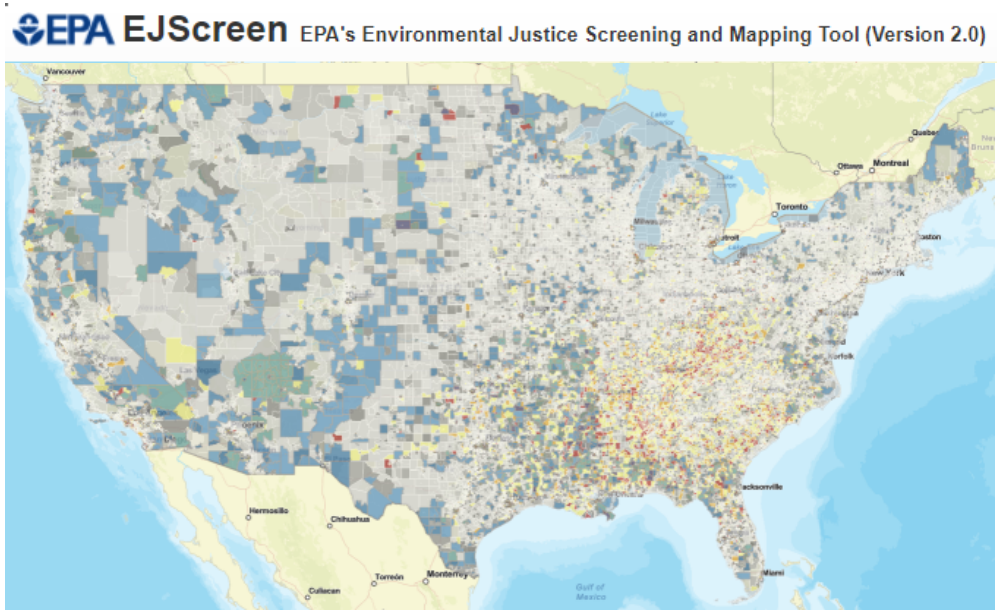
***How do we move these largely academic/theoretical conversations into practice?***

# National Datasets




https://maps.nrel.gov/slope/data-viewer

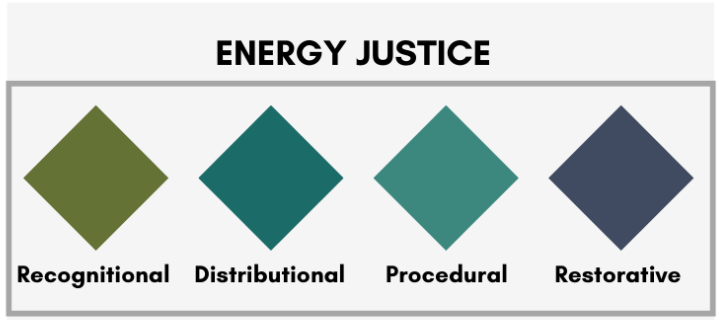
- Consolidates various energy and environmental indicators
- Includes generation potentials for specific energy sources
- Captures cost of energy, social vulnerability, etc.

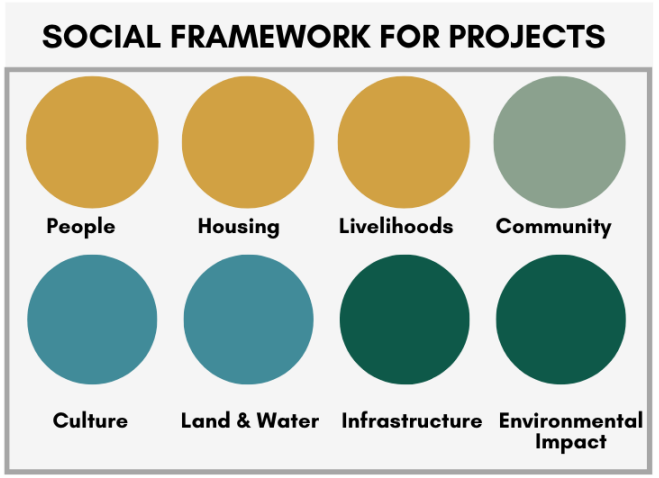



https://ejscreen.epa.gov/mapper

- Focus on pollution burden
- Scoring relative to other spatial regions
- Social demographics are embedded within calculations

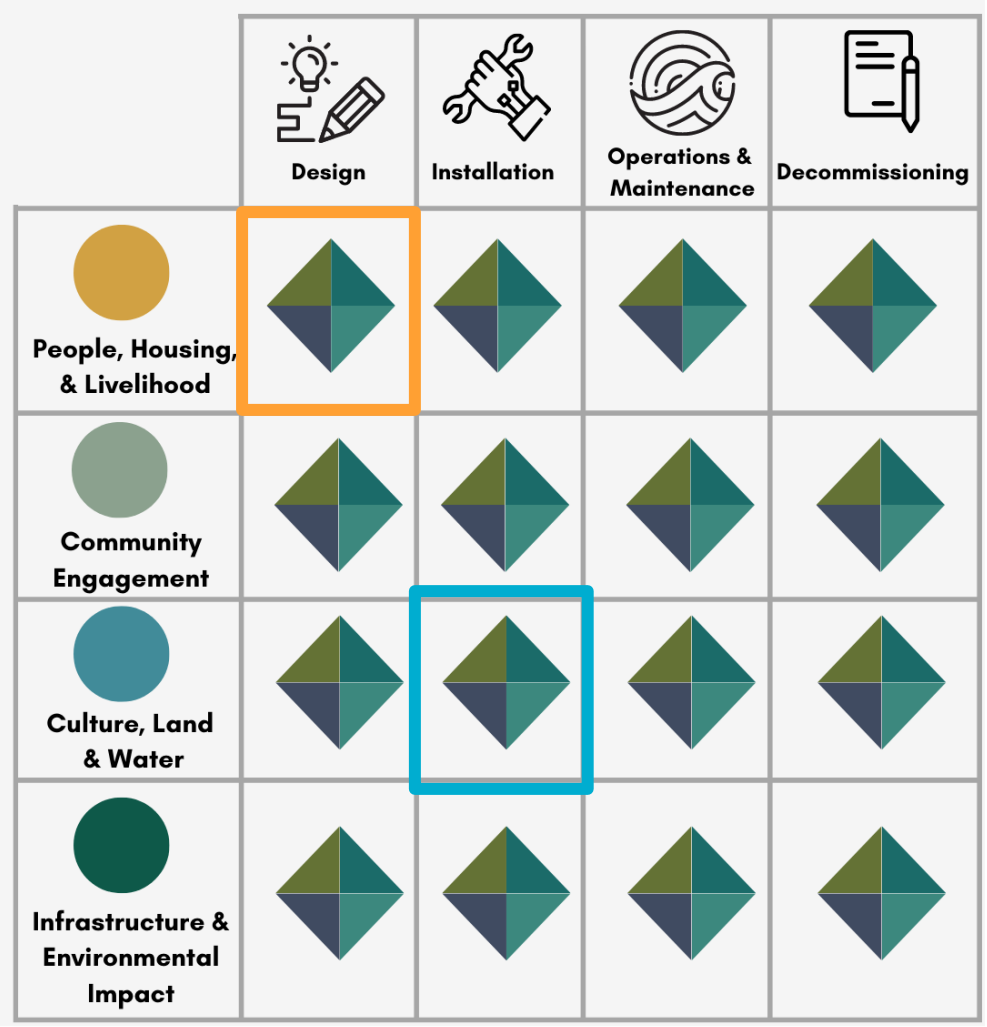
# Life Cycle Considerations


Caballero et al., in review

# Meaningful Development




Caballero et al., in review

> *We are not against the energy transition, we are not against wind power plants [...] but we do not want that we get nothing out of it, and that the energy transition, economically seen, simply passes us by. If we are to have landscape damage here, then at least we want to benefit from it as well!* (Mayor, B2)

Dahl, 2019

> *"We are the closest tribe to the landshelf disturbance; it affects us that the possible destruction of ancient locations and disturbance of resting places of our ancestors will take place during our watch."*
>
> *"I believe the traditional sunrise ritual of the Wampanoag can be respected without disrespecting the rights of others who enjoy the Sound. I would like to suggest that perhaps a new tradition could be added. Perhaps the Wampanoag and Cape Wind could become partners in creating and sharing a new ritual that recognizes nature's gifts of both the sun and the wind, two powerful resources, surely meant to be used to sustain all of our lives."*

Bacchiocchi et al., 2022

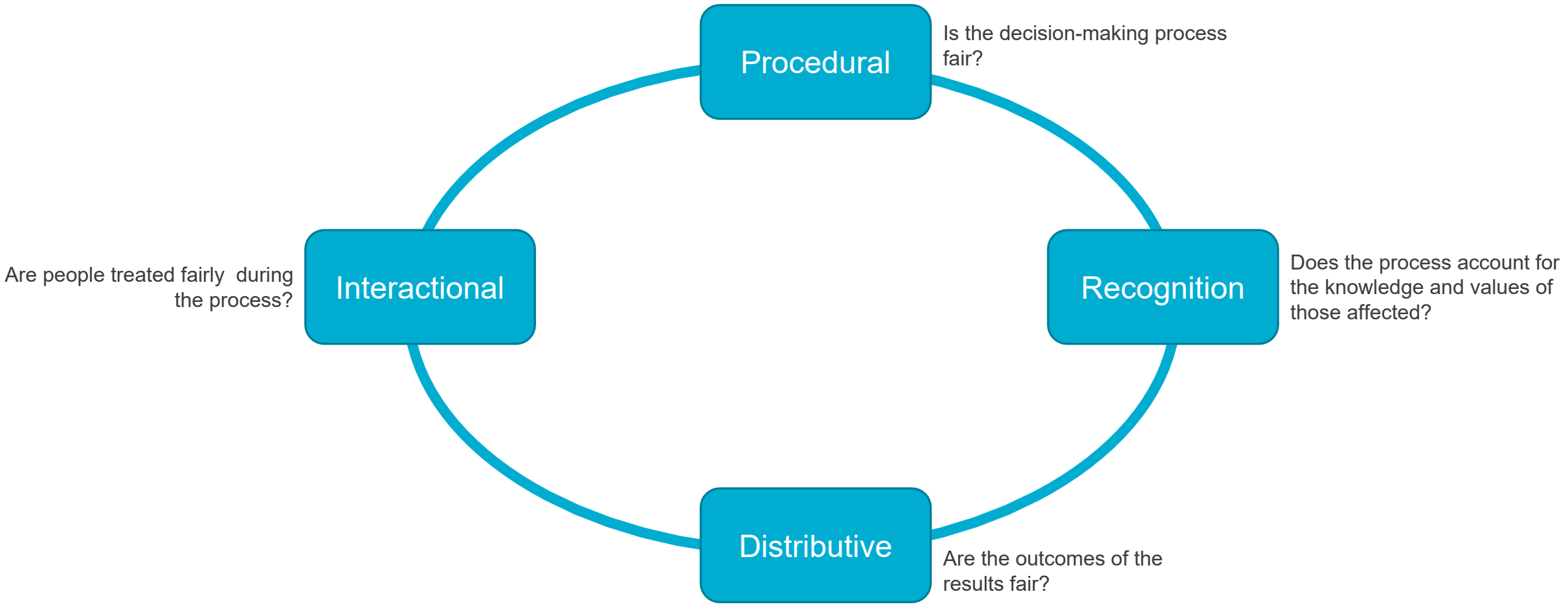
# Meaningful Development

| | Design | Installation | Operations & Maintenance | Decommissioning |
|---|---|---|---|---|
| People, Housing, & Livelihood | ◆ | ◆ | ◆ | ◆ |
| Community Engagement | ◆ | ◆ | ◆ | ◆ |
| Culture, Land & Water | ◆ | ◆ | ◆ | ◆ |
| Infrastructure & Environmental Impact | ◆ | ◆ | ◆ | ◆ |

Caballero et al., in review


Martin, 2020

# Emphasis on Process




https://wendyhirsch.com/blog/fairness-change-management-process

# Dimensions of Interest

- Types and groups of stakeholders engaged
- Economic impact
- Accessibility of resources and mechanisms
- Community acceptance
- Well-being
- …

- Quantitative
  - Number of meetings
  - Jobs created
  - …
- Qualitative
  - Likert scales
  - Reflections
  - …

Procedural | Recognition | Distributive | Interactional

**How do you know where to start?**

# Using a Logic Model

## What are your project objectives re: equity and justice?

- Improve characterization
- Assess impacts from project activities

## What is your logic model?

- What elements of the complex systems does the project target?
- How much do you understand the broader context?
- How will you know you are successful (i.e., measures of success)?

## What datasets are needed for analysis?

- Could existing datasets be used as proxies?
- Does new data need to be collected?

## How can this be done in FAIR manner?

- Are you being respectful of the stakeholders' time?
- Diversity & inclusivity considerations
  - Who or what are you potentially excluding?
  - Are you reducing burden for engagement – meeting them in their local setting, etc.?
- Can the stakeholder find, access, use the info you've collected or generated (post project completion)?

# Limited Data Equity and FAIRness

- Limited datasets for equity analysis reflects inequities within data. E.g.,
  - Accessibility of locations
  - Household wastewater treatment
- Significant opportunities exist to increase
  - Findability
  - Accessibility
  - Interoperability
  - Reusability

    ….of datasets used for equity analysis
- Transparency (vs. privacy) of datasets using in decision-making processes

# Thank you for your time!

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