Canada Excellence Research Chair
Network for Equity in Sustainability Transitions

**Harnessing the Equity Fostering Potential for Climate Action
In Toronto, Mexico City and Los Angeles**

## THE CHALLENGE

Our societies must transform to address climate change. Cities are climate hotspots with the capacity to foster transformations. Still, sustainability transitions can reinforce existing inequalities or create new ones.

## OBJECTIVES

Using a transdisciplinary, equity, and comparative approach, the CERC NEST team will examine inequities in

a) Participation in decision-making about policies, technology, and practices (procedural justice)

b) Regulations, investment, lending, planning, and technological innovations (recognition justice) and

c) Access to benefits and protection from harm, exploring how addressing procedural (a) and recognition justice (b) can contribute to distributional justice

## KNOWLEDGE COPRODUCTION

To contribute to equity in sustainability transitions, we will engage with underserved populations and city partners to...

(1) Frame research questions relevant to local partners and theoretical and methodological debates

(2) Co-design knowledge to address problems and foster equitable actions

(3) Reflect on the results, lessons and action implications

(4) Refine and adapt our methodologies to initiate the next cycle (see Figure 1).

**Fig. 1. Knowledge Co-production &
Learning Cycles**



OUR APPROACH

Our co-production methodology connects the micro or local with the city-relevant levels.

At the micro level, we will combine participatory methods (e.g., listening sessions) with community art and science to examine residents' aspirations, barriers and solutions to enhance...

   (a) Community resilience and auto-determination

   (b) Access to affordable, healthy energy, housing and transport.

We will create equity indicators at the city-wide level to assess current inequities in resilience and access.

We will combine an inventory of climate policies and initiatives with semi-structured interviews with governmental and non-governmental actors to assess the equity performance of city initiatives, resources and supports.

We have identified four **CERC NEST COMMUNITY CASES** with our community and city partners.

   1. UNLEASHING CREATIVITY

Unleashing creativity involves collaborating with underserved communities by *actively listening* to their perspectives, articulating their needs, and acting on the findings rather than merely 'extracting' their knowledge.

Our objectives around procedural, recognition and distributional justice will help structure the artistic activities, listening sessions, and data coding and analysis.

We will curate participants' artwork into singular large-scale works (e.g., photo voices) that will be exhibited at cities' hubs.

Data and art will be digitalized and available at UTSC for further research, programming, and enjoyment.

2. COMMUNITY SCIENCE

Community science, a method for examining problems and solutions in residents' neighbourhoods, can support local capacities to understand and mitigate climatic risks.

Community science will start with air quality monitoring and create actionable knowledge to mitigate wildfire health risks if funded.

Community members will participate in data collection and analysis of exposure to particulate matter (PM), nitrogen oxides (NO, $NO_2$), ozone, and carbon monoxide (CO).

Research-grade instruments at UTSG Lab will measure volatile organic compounds (VOCs), which are more toxic air pollutants.

The team will analyze census data on residents' sensitivity (e.g., age and pre-existing health conditions) with co-created data on residents' capacity to manage health risks (e.g., use of warning systems and local support networks).
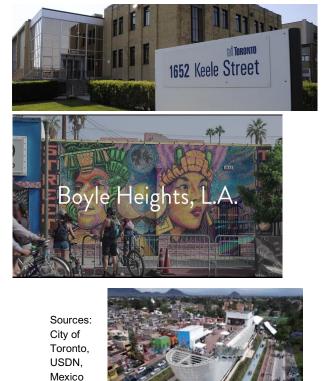
3. MOVING THE YOUTH

Decarbonizing vehicles and technology alone, without user-tailored mobility modes and fundamentally rethinking transport ecosystems, will not be enough to meet climate, sustainability and equity goals.

Moving the Youth will use community science and art with college students to understand their transportation lived experiences and examine how to...

a) Foster equity in access to affordable, safe, reliable Net-Zero mobility for different users.

b) Develop transportation planning, implementation and evaluation to engage with everyone – particularly underserved communities.

Sources: City of Toronto, USDN, Mexico City News Daily



## 4. "UTOPIAN" HUBS

Cities are harnessing the community hub model's potential for disaster response and long-term community building and resilience.

We will partner with the city of Toronto to realize the potential of the Keele Community Hub.

We will examine how hubs can foster effective action in the short term to protect and shelter residents during heatwaves or floods and in the longer term to prepare for and recover in ways that promote thriving communities.

We will conduct a Toronto-wide analysis of how different community hubs work, i.e., their focus areas and equity approaches.

We will reflect on, learn from, refine, and scale our work to other hubs in Los Angeles, e.g., Esperanza Community Housing's Mercado la Paloma and Mexico City, e.g., Utopias.

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