

Measuring Equity in Transportation: Digging into the Measures that Matter for Your Neighborhoods

December 9, 2020



NLC NATIONAL
LEAGUE
OF CITIES
CITIES STRONG TOGETHER

Transportation Equity in Practice



Kristin Hull, Planning Division Manager



PBOT
PORTLAND BUREAU OF TRANSPORTATION

Connecting people to places.

PBOT manages the roads, sidewalks, bike lanes, transit and trails that help Portlanders get from place to place easily, safely and sustainably.



THREE MAIN GOALS



Safety



Moving People and Goods



Asset Management



Transportation Justice

In achieving these goals, we are committed to transportation justice. Our streets belong to everyone. All Portlanders deserve the same access to safe, reliable and affordable transportation options. They also need transportation policies, programs and projects that help us lower Portland's carbon footprint.

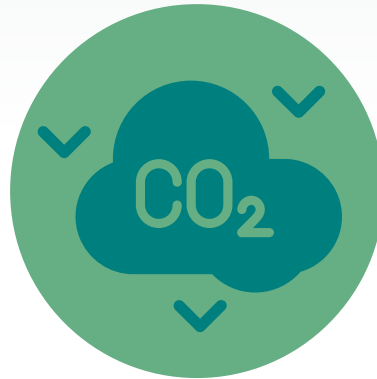


Questions
we are
always
asking



Will it advance equity and address structural racism?

Questions
we are
always
asking



Will it reduce carbon emissions?

Equality



Equity



CITYWIDE RACIAL EQUITY GOALS & STRATEGIES



**OFFICE of EQUITY
and HUMAN RIGHTS**
CITY OF PORTLAND

EQUITY GOAL #1

We will end racial disparities within city government, so there is fairness in hiring and promotions, greater opportunities in contracting, and equitable services to all residents.

EQUITY GOAL #2

We will strengthen outreach, public engagement, and access to City services for communities of color and immigrant and refugee communities, and support or change existing services using racial equity best practices.

EQUITY GOAL #3

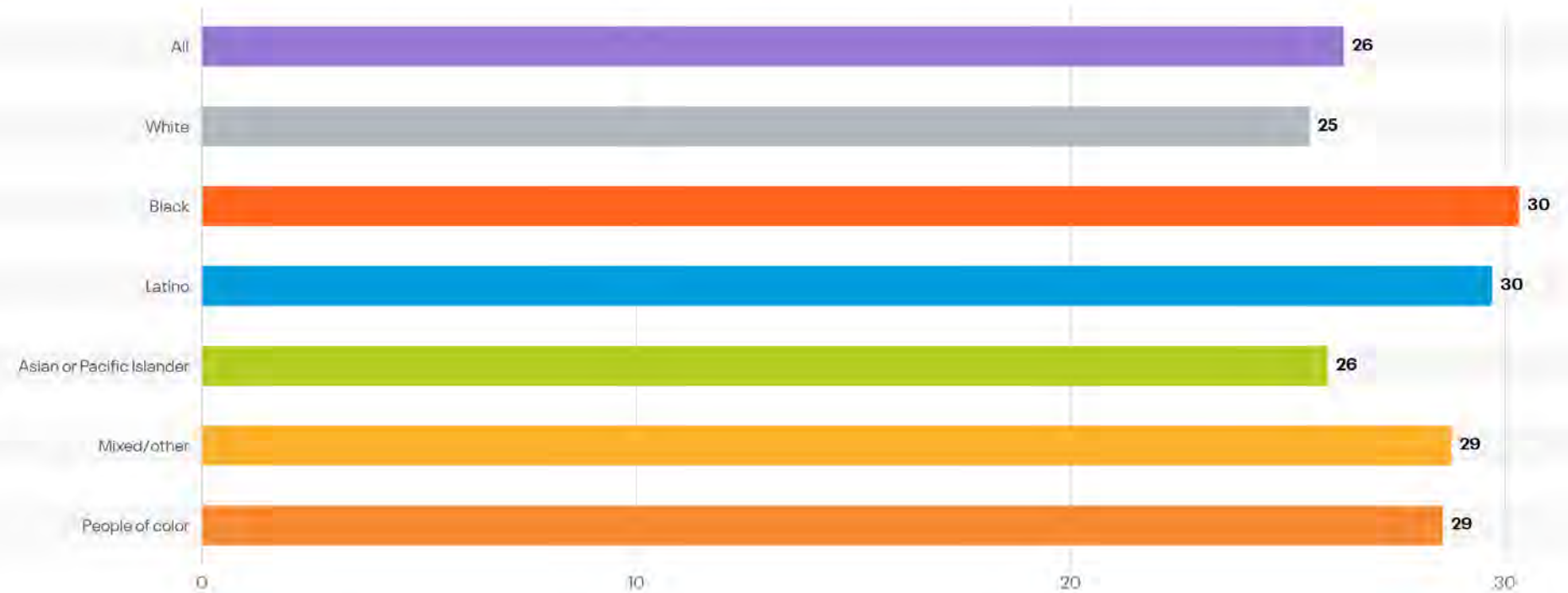
We will collaborate with communities and institutions to eliminate racial inequity in all areas of government, including education, criminal justice, environmental justice, health, housing, transportation, and economic success.

OVERALL STRATEGIES

- 1 Use a racial equity framework:**
Use a racial equity framework that clearly articulates racial equity; implicit and explicit bias; and individual, institutional, and structural racism.
- 2 Build organizational capacity:**
Commit to the breadth and depth of institutional transformation so that impacts are sustainable. While the leadership of electeds and officials is critical, changes take place on the ground, through building infrastructure that creates racial equity experts and teams throughout the city government.
- 3 Implement a racial equity lens:**
Racial inequities are not random; they have been created and sustained over time. Inequities will not disappear on their own. It is essential to use a racial equity lens when changing the policies, programs, and practices that perpetuate inequities, and when developing new policies and programs.
- 4 Be data driven:**
Measurement must take place at two levels—first, to measure the success of specific programmatic and policy changes; and second, to develop baselines, set goals, and measure progress. Using data in this manner is necessary for accountability.
- 5 Partner with other institutions and communities:**
Government work on racial equity is necessary, but insufficient. To achieve racial equity in the community, government needs to work in partnership with communities and institutions to achieve meaningful results.
- 6 Operate with urgency and accountability:**
When change is a priority, urgency is felt and change is embraced. Building in institutional accountability mechanisms using a clear plan of action will allow accountability. Collectively, we must create greater urgency and public commitment to achieve racial equity.

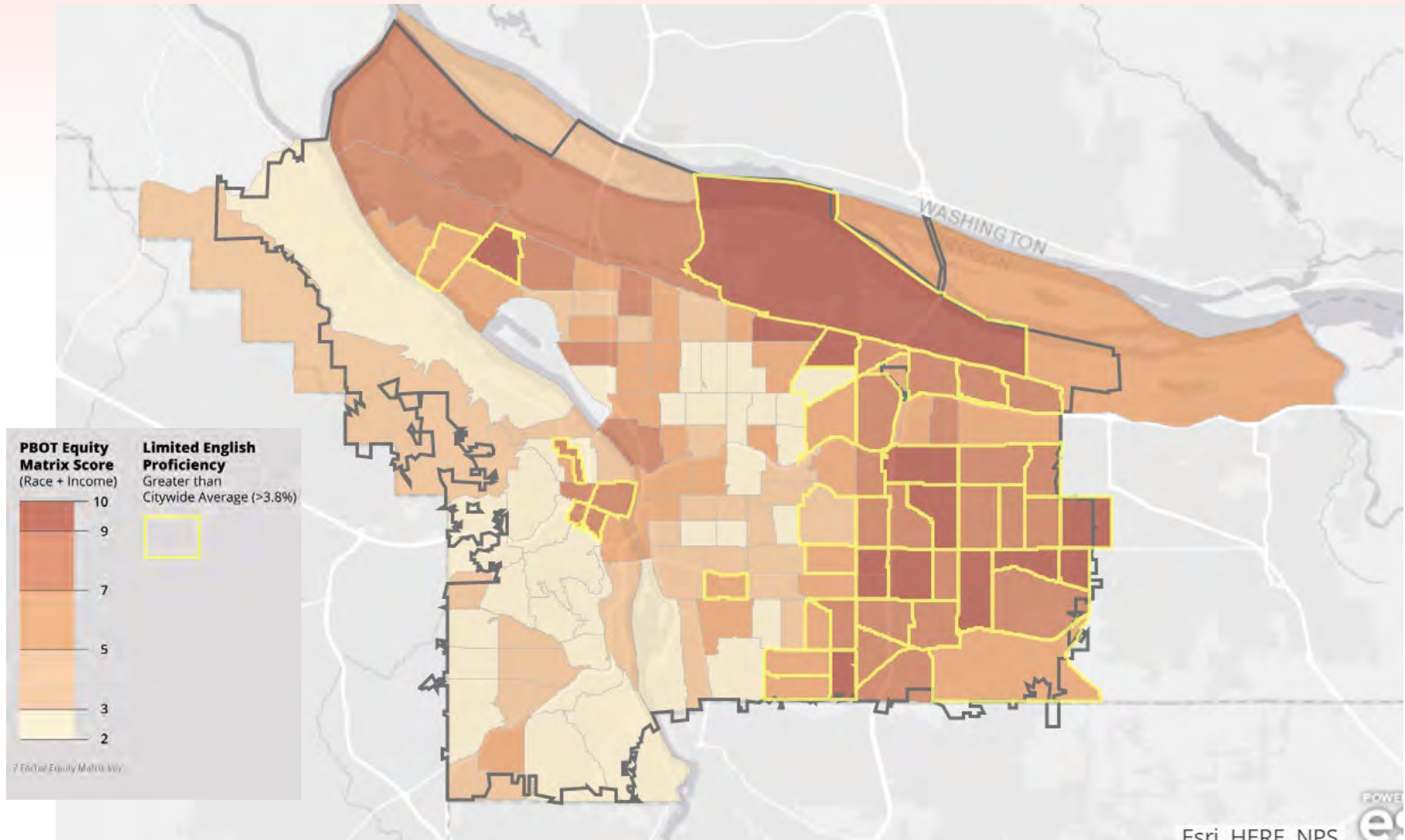
Key tools: Understanding Racial Disparities in Transportation

Average travel time to work (minutes) by race/ethnicity: Portland, OR; **Mode:** All modes; **Poverty:** All income levels; **Year:** 2017



Data source: IPUMS USA (National Equity studies)

Key Tools: Equity Matrix



Key Tools: Results Based Accountability for Racial Equity

- Developing population-wide outcome statements
- Understanding disparities in outcomes and the root causes that lead to these disparities
- Developing projects and programs that center racial equity and address disparities
- Track data over time to address disparities

Key Tools: Partnerships



Overview of Current Community Partnerships

SHORT-TERM PARTNERSHIPS

1. **COVID-19 Frontline Communities Partnership (June - November 2020)** \$50,000+ resources available to fund proposals from multiple groups (projects staffed by Safe Streets, Health Businesses, Planning, ATS)
2. **Pandemic Mobility Support (June-November 2020)** \$50,000 total resources available; Interest forms accepted in June 2020 and will be addressed on a rolling basis (facilitated by Regulatory Division)
3. **Black Lives Matter Art + Placemaking Initiative (2020+)** Providing resources and public space for Black-led art and placemaking projects around the City of Portland (led by E+I, to be transitioned to DPT/Portland in the Streets)

TWO-YEAR PARTNERSHIP

Transportation Justice Partnership Program (August 2020 - June 2022) Facilitated as an on-call contract up to \$100,000 per partner, per service category over two years; Applications due July 2020

Three examples of racial equity in planning

- Rose Lane Project
- Pricing Options for Equitable Mobility
- Safe Streets Initiative (COVID response)



Moving to Our Future:

*Pricing Options for **Equitable Mobility***

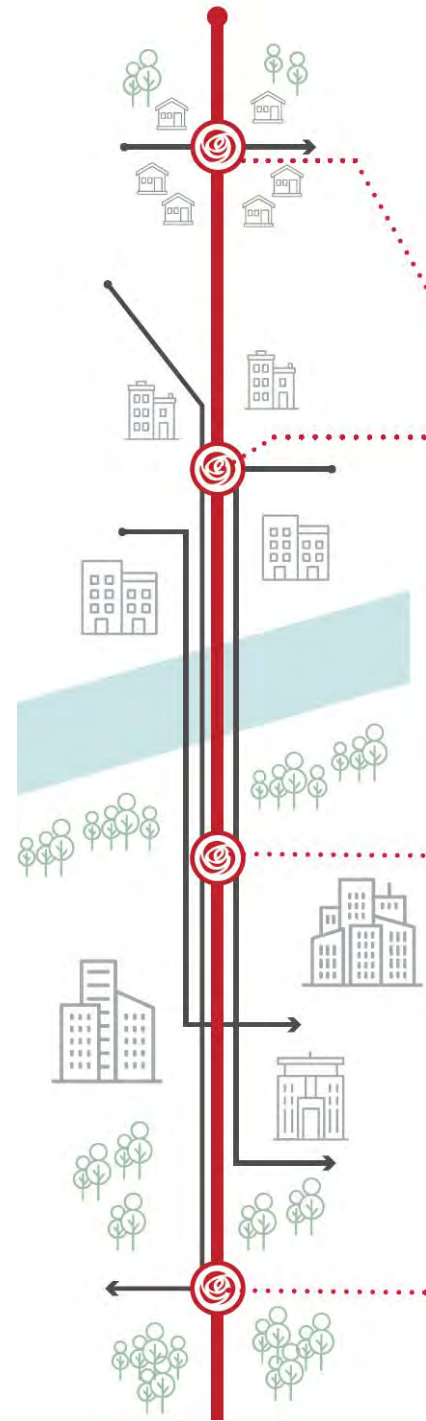


ROSE LANE PROJECT



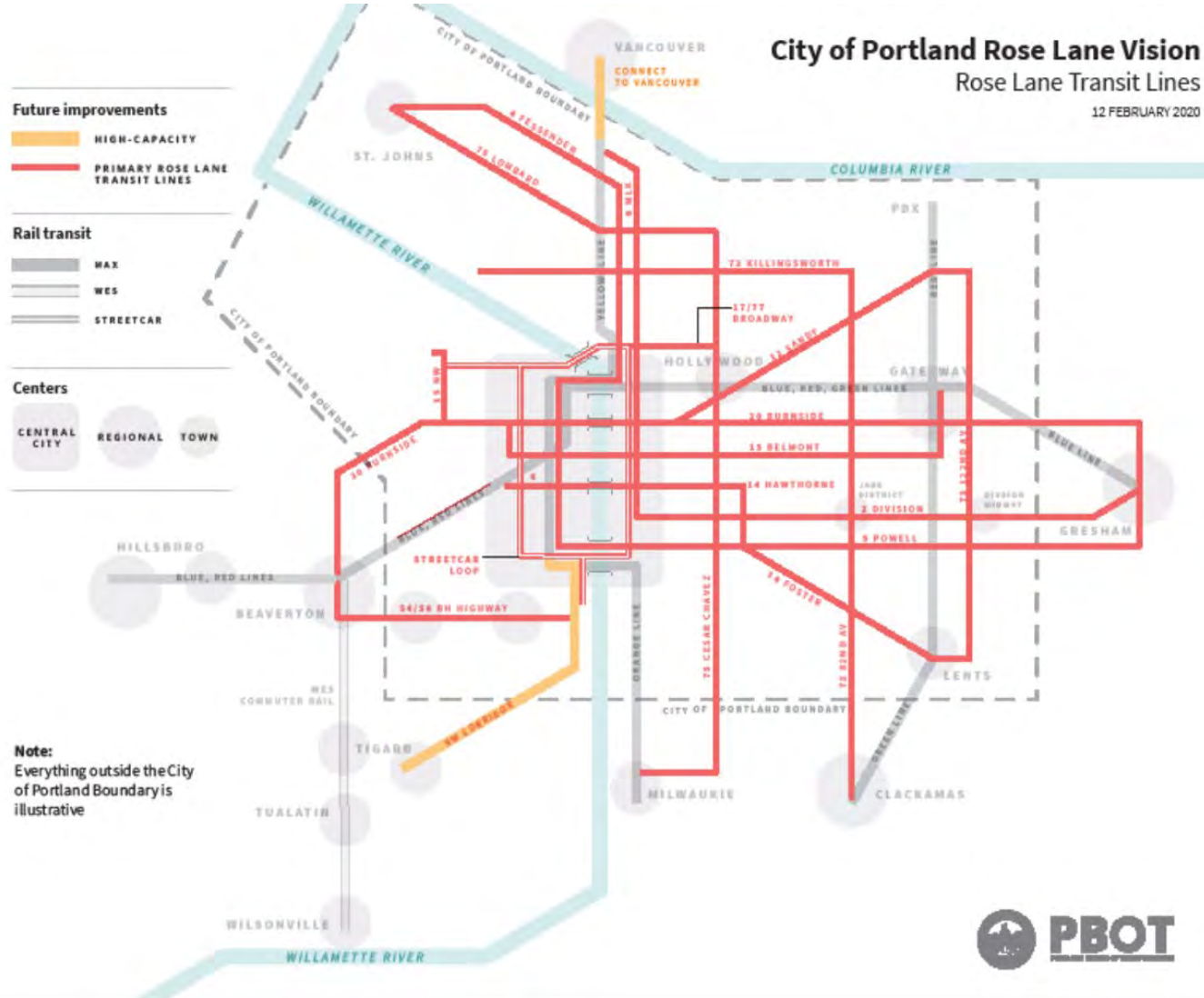
What are “Rose Lanes?”

- Rose Lanes are transit routes **where buses and streetcars get priority on the road in congested areas.**
- There are **over 20 transit priority tools** we can use to make transit faster and more reliable. **Not all Rose Lanes will be bus only lanes.**
- Guided by project better-off measures, we will **determine which treatments best address the needs and context** in specific locations.



The Rose Lane Vision:

Portland's premier, city-wide bus and streetcar network that riders can count on to get where they need to go quickly and reliably.



Putting People First: Project Better-Off Measures



- People of color will experience **average commute times comparable** to white people.
- People will consider public transit to be a **rapid and reliable** choice for **daily transportation**
- People who use public transit will have **more choices for where they want to live and work.**
- People who use public transit will have **lower transportation costs** (time and money)
- People will experience **better health outcomes** through improved air quality.

Better-off measure	Performance metric
People of color will experience comparable commute times to white people	Transit travel time savings.
	Equitable access, such as increased access to jobs, education, healthcare, and daily services. (by demographics)
People will consider transit a rapid, reliable choice	Reduced bus passenger delay.
	Transit travel time savings and improved reliability.
	Increased access to jobs, education, healthcare, and daily services.
People will have more choices for where they want to live or work	Increased access to jobs, education, healthcare, and daily services.
	Transit travel time savings and improved reliability.
	Transit travel times compared to driving an automobile
People will have lower transportation costs (time/money)	Transit travel time savings and improved reliability.
	Transit travel times compared to driving an automobile.
	Increased transit ridership
People will experience better health and air quality	Increased transit ridership
	Less greenhouse gas emissions
	Improved air quality
	Decreased Vehicle Miles Traveled (VMT)

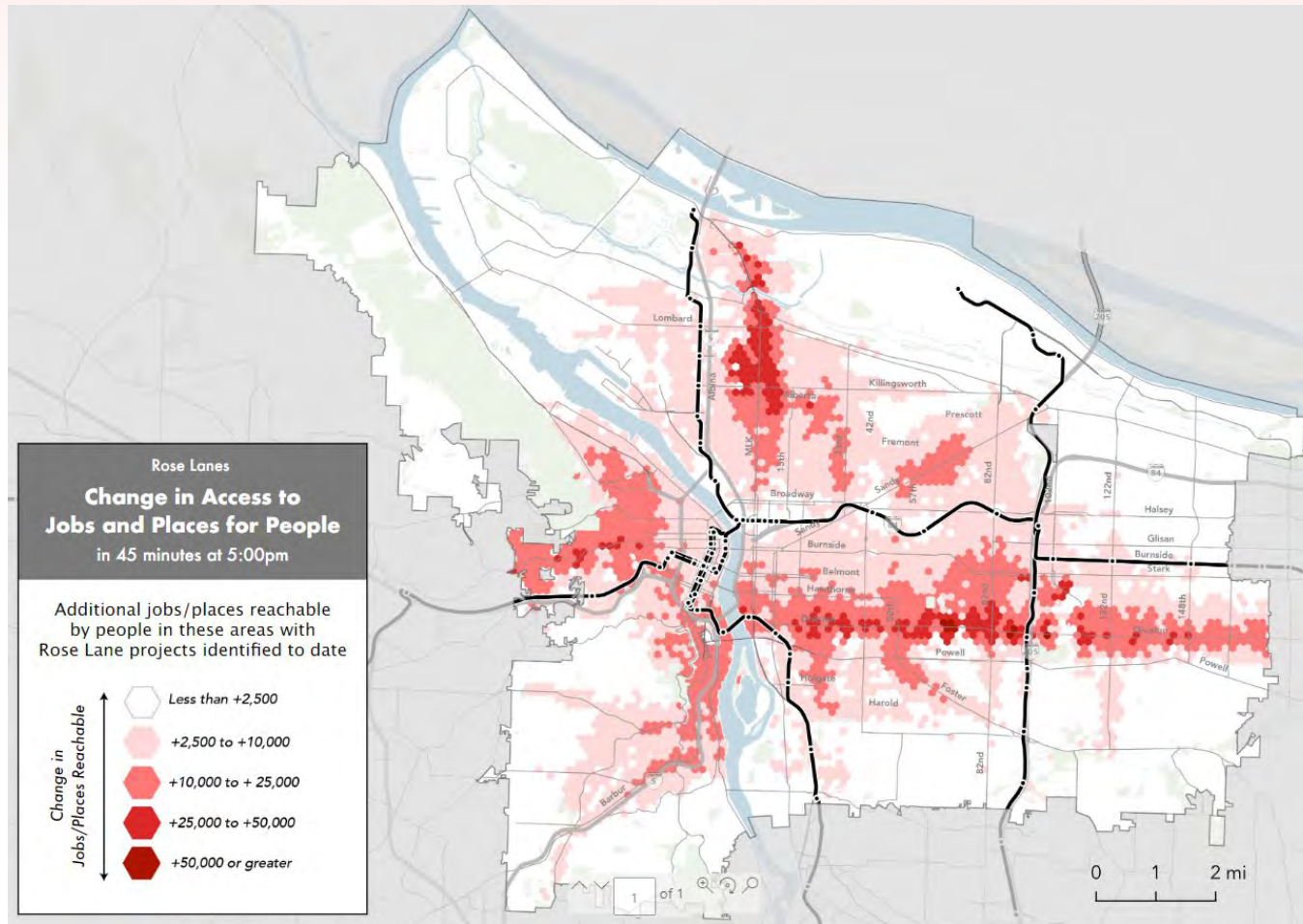
Estimated benefits analysis: System-level perspective

Estimated change in average access to jobs/places in 45 minutes

All Residents	White Residents	People of Color	Black Residents	Households in Poverty
+5,500	+5,600	+5,300	+5,600	+5,600
+4.1%	+4.2%	+4.3%	+4.3%	+4.2%

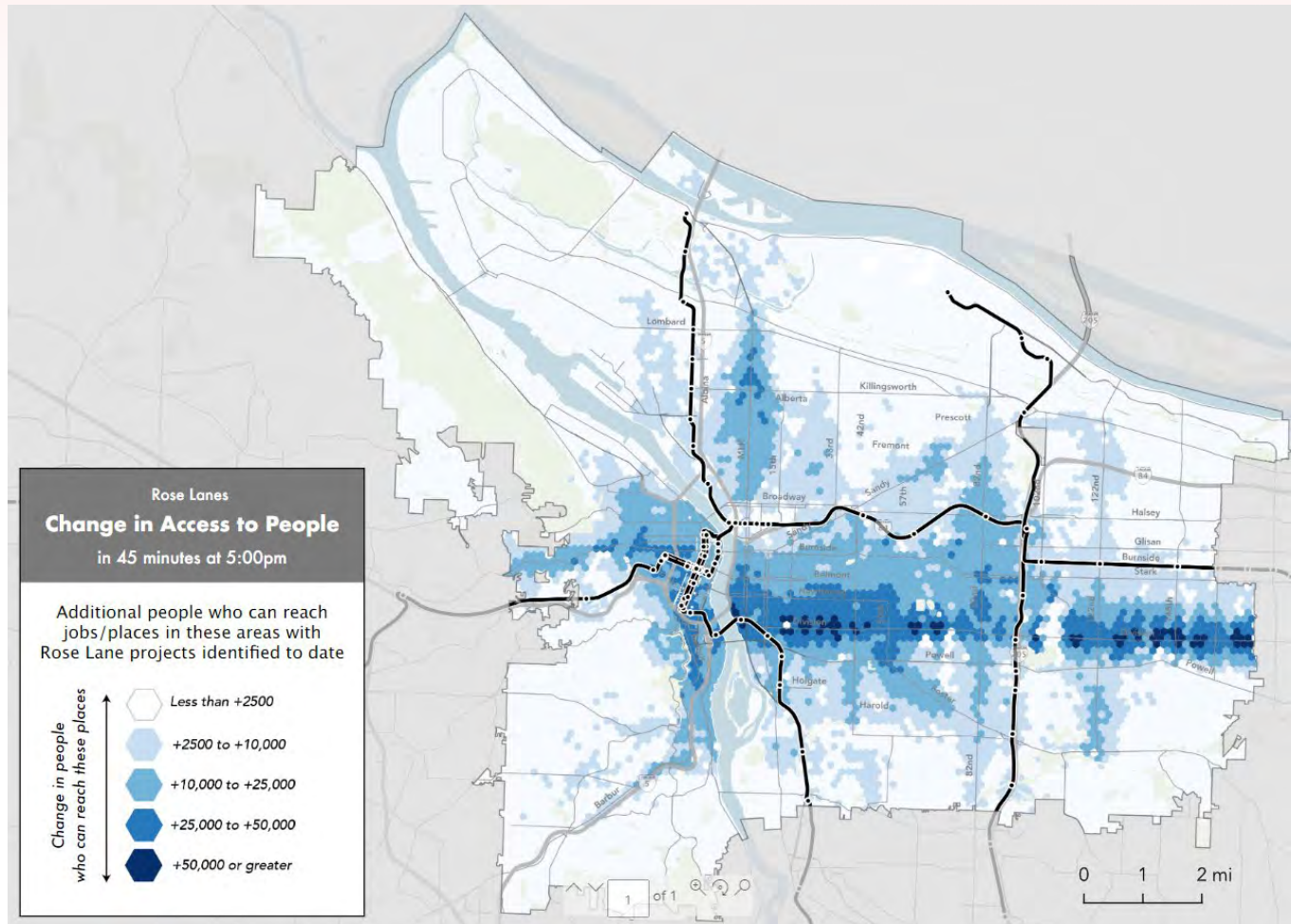
Estimated benefits analysis: System-level perspective

People in these areas can reach more places



Estimated benefits analysis: System-level perspective

Jobs and places in these areas become reachable by more people



Pricing Options for Equitable Mobility



Pricing Options for Equitable Mobility Charge

Determine if and how transportation pricing strategies could be used more intentionally to **improve mobility, address the climate crisis and advance equity** for people historically underserved by the transportation system.

Committee and Community Driven Work

Pricing options for Equitable Mobility is exploring the relationship between pricing policies and **equitable mobility through the work of a diverse 23-member task force**. It intentionally centers racial equity and prioritizes extending benefits and reducing disparities for BIPOC Portlanders.

Equitable Mobility Framework: Moving People and Goods

Moving People & Goods	Efficiency	Improve time and space-efficient movement of people and goods; non-driving trips should be time competitive with driving trips	<ul style="list-style-type: none"> • Vehicle Miles Traveled • Person throughput for key corridors • Travel time by mode
	Transportation affordability	Reduce household expenditure on transportation	<ul style="list-style-type: none"> • Transportation costs as % of household costs (by mode)
	Connectivity	Create ability to get to jobs, services, recreation destinations, and places where you need to go by different modes	<ul style="list-style-type: none"> • % of households living in “complete neighborhoods” • Job access within a 45-minute transit ride
	Availability	Provide an abundance of choice in mobility options, e.g., sidewalks, bus lanes, bike lanes, service frequency	<ul style="list-style-type: none"> • % of households within ¼ mile of frequent transit • Sidewalk completeness • Bike network completeness
	Reliability	Improve predictability of travel time	<ul style="list-style-type: none"> • Transit run time variability
	Accessibility	Increase usability of transportation options by people of all abilities	<ul style="list-style-type: none"> • Sidewalk network completeness in areas of sensitivity
	Quality	Improve comfort of public transit, bike facilities, and pedestrian facilities, e.g. cleanliness, amenities	<ul style="list-style-type: none"> • Qualitative inputs – surveys and focus groups

Equitable Mobility Framework: Sustainability and Health

Sustainability & Health	Climate impact	Decrease contributions to climate change	<ul style="list-style-type: none">• Carbon/GHG emissions from transportation
	Air quality	Decrease air pollution	<ul style="list-style-type: none">• Levels of particulate matter and other pollutants
	Health impacts	Improve human health outcomes resulting from transportation	<ul style="list-style-type: none">• Respiratory and cardiovascular disease rates• Mode share of active modes (biking, walking, rolling)

Equitable Mobility Framework: Safety

Safety	Traffic safety	Improve safety of the system, e.g., crash risk	<ul style="list-style-type: none">• # of crashes• # of fatalities and serious injuries on corridors and system
	Personal safety	Ensure freedom from threat and fear of emotional, psychological, and physical harm when using public space	<ul style="list-style-type: none">• Reports of harassment• Qualitative inputs – surveys and focus groups

Equitable Mobility Framework: Economic Opportunity

Economic Opportunity	Job Creation	Create new, green, long-term jobs in the transportation sector and support training and transition from other industries	<ul style="list-style-type: none">• # of jobs created through transportation investments
	Working Conditions	Support workers in the transportation sector to achieve healthy working conditions, fair labor practices and living wages	<ul style="list-style-type: none">• % of living wage transportation jobs• Race and gender representation in transportation sector jobs
	Connected thriving local economy	Support economic opportunity across the city; mobility is not a barrier to economic development	<ul style="list-style-type: none">• Upward mobility metrics

Equitable Mobility Framework: Process

Equitable Transportation Planning Process	Inclusive engagement and outreach	Collect perspectives from BIPOC communities and ensure they are consulted in decision-making processes	• Response rates from BIPOC residents during outreach opportunities (representative or better)
	Accountability and evaluation	Ensure transparency of decision making and performance evaluation	• Qualitative inputs – assessments from community of how we're doing

Application of POEM Framework

The framework gets applied in the POEM process in three main ways:

1. In understanding the **status quo and baseline conditions** of who is experiencing disproportionate burdens today.
2. In analyzing **pricing policy ideas** that emerge from Task Force discussions.
3. Moving forward, in **evaluating and tracking** the impact of policy and programmatic decisions.



SAFE STREETS

Adapting Portland's Streets for Restarting Public Life



The Safe Streets Initiative

A framework strategy and series of programs designed to adapt Portland streets for restarting public life and responding to COVID-19

<http://safestreetspdx.com/>

Public review draft now available, feedback wanted:

<https://www.portlandoregon.gov/transportation/article/761623>



Path to a Better Future

Stay Home, Save Lives

Businesses are closed and many workers at home. Emphasis on staying home.

Supporting Physical Distancing

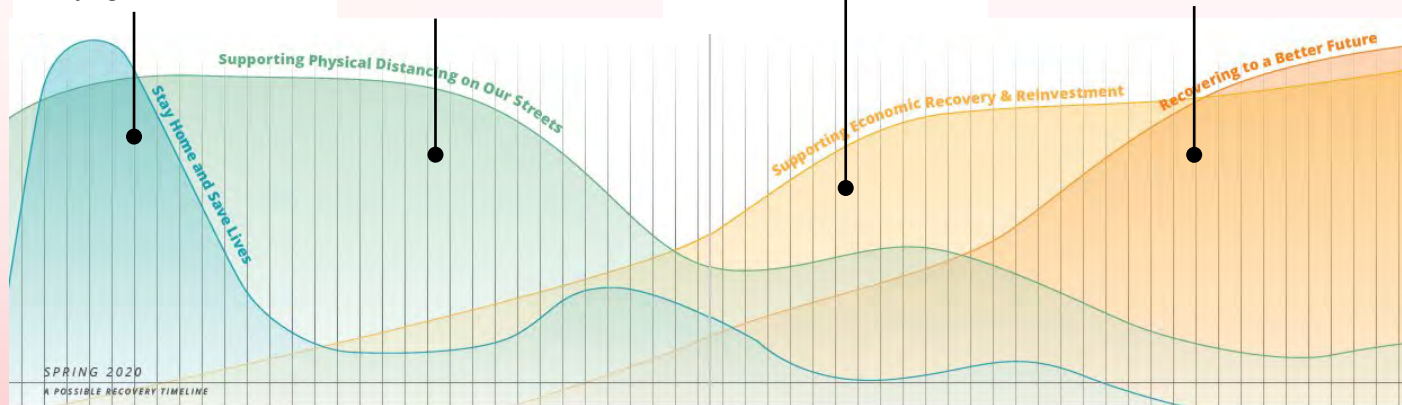
As businesses re-open, careful physical distancing practices continue.

Economic Recovery & Reinvestment

Responding to major economic disruption.

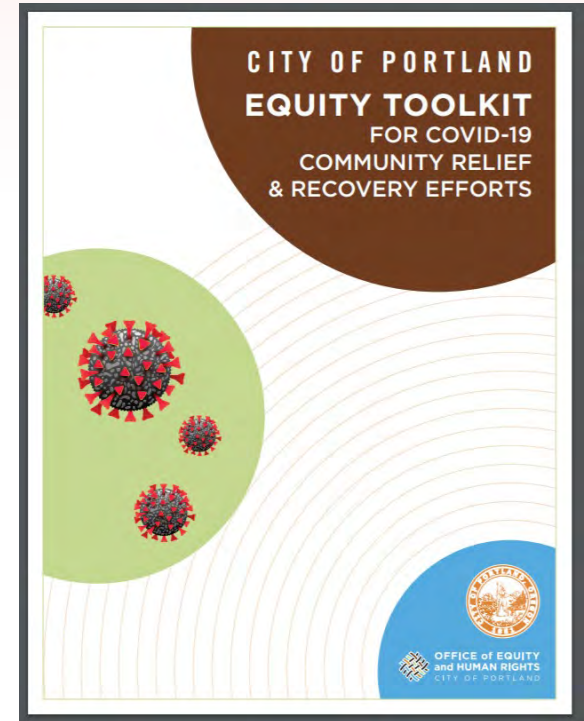
A Better Future

Recovery to a post-pandemic future.



Racial Equity Toolkit for COVID-19 Response

- **Equity is still our priority.** If equity is only a priority in times of ease and surplus, then it was never really a priority.
- Focus on **populations at highest risk** in this health pandemic and most susceptible to the compounding effects of the impending economic crisis.
- Equity-based decisions happen faster when equity practitioners, subject matter experts and the most **impacted communities** are in decision-making spaces.
- Remember that many populations have excellent reasons to be **distrustful of the government** and the medical/public health system.
- Monetary relief and aid packages should go **directly to individuals or community organization** who require it most and have the least infrastructure to withstand this crisis.
- We will account for the **systems and institutions** that produced disparities and inequities as we develop our strategies.
- **Accountability** is a keystone to equity work.



Slow Streets

Keep local street connections slow and safe with messaging and advisory interventions

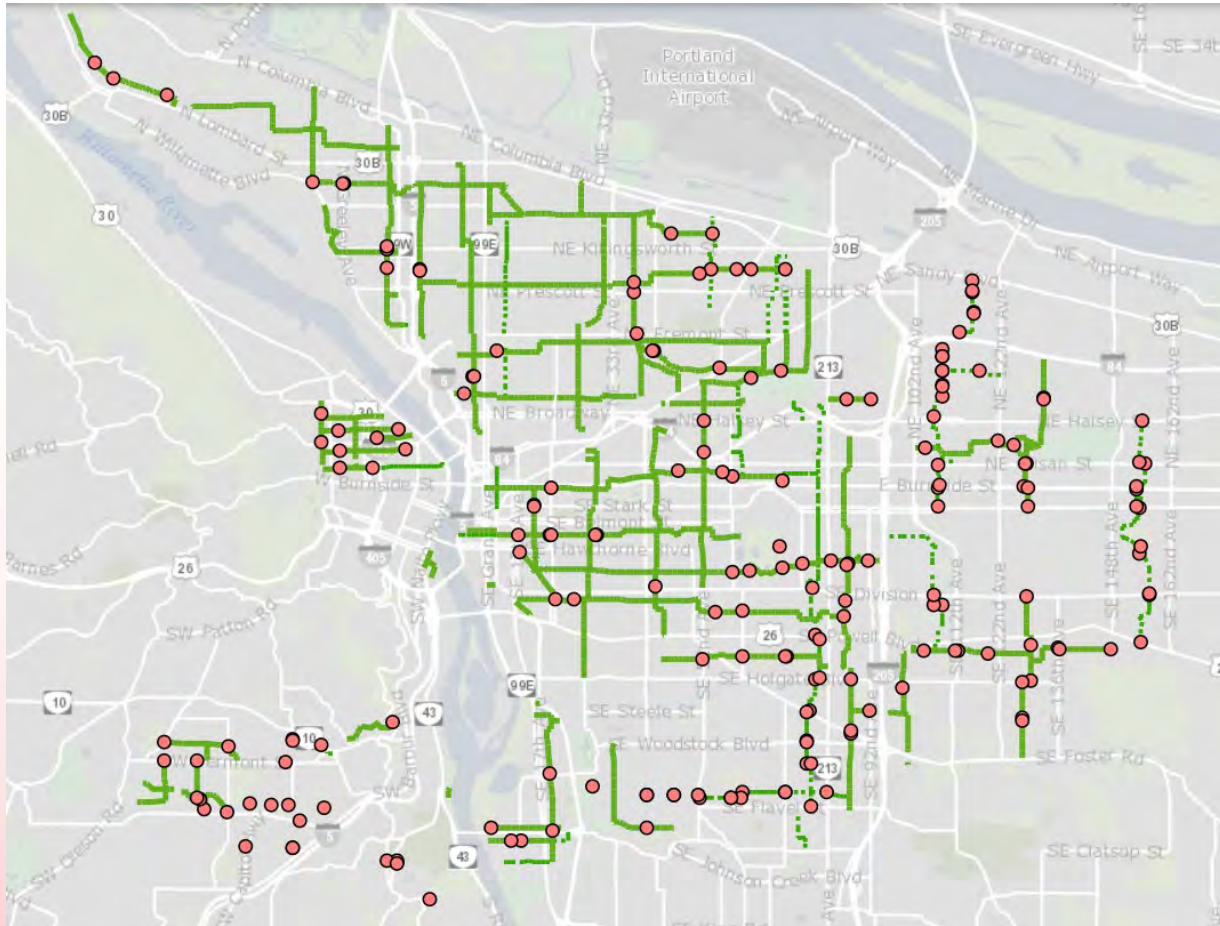


Slow Neighborhood Streets

Keep local street connections slow and safe with messaging and advisory interventions



Slow Streets – 200 Locations



How did we choose these locations?

- On the greenway network
- Missing sidewalks
- Near apartment building
- $\frac{1}{4}$ + mile away from parks
- Higher traffic locations
- Future greenways
- Community feedback
- Funded capital project
- Identified in a recent planning document (e.g. SWIM)

Slow Streets: Future Vision

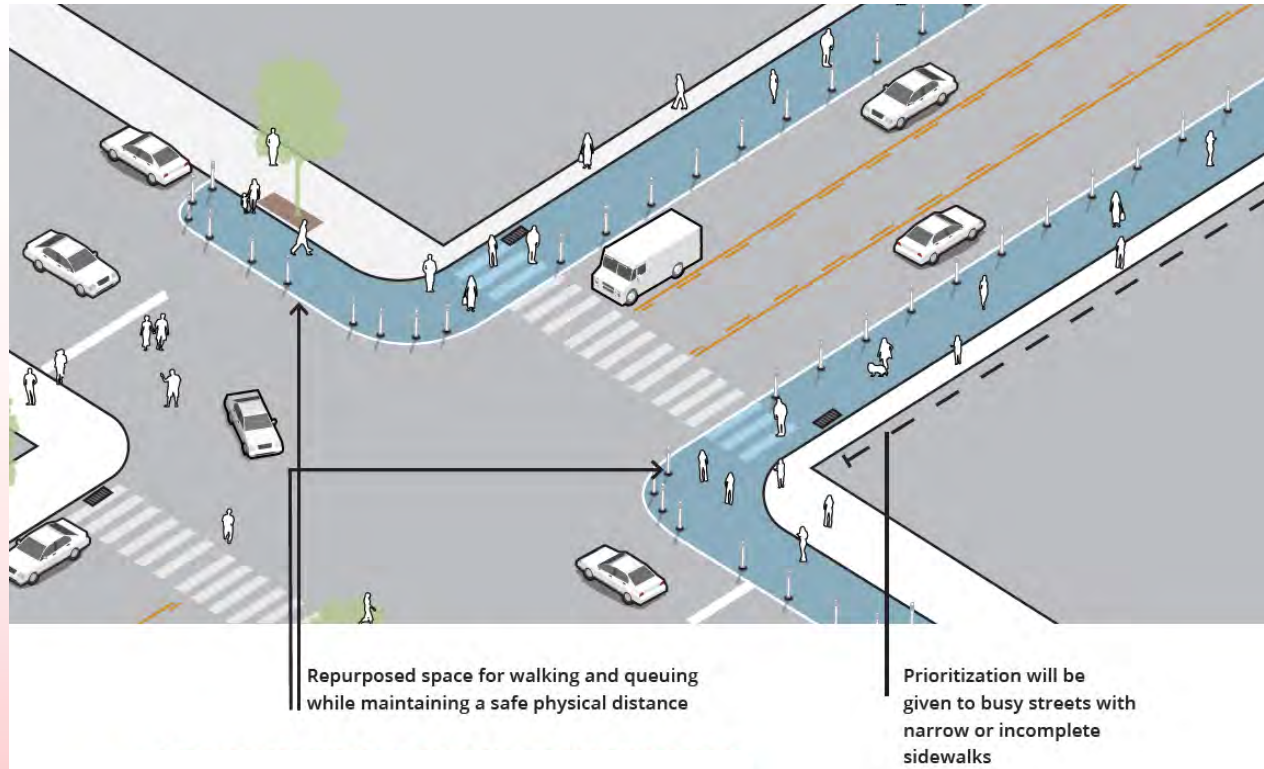
What next?

- Continue installations through the winter
- Continue frontline partnership work.
- Continue to monitor, engage community and adjust.
- Develop more resilient materials and designs.
- Develop locations and designs for Enhanced Traffic Calming.



Safer Busy Streets

Provide space for physical distancing on busy streets with narrow or missing sidewalks

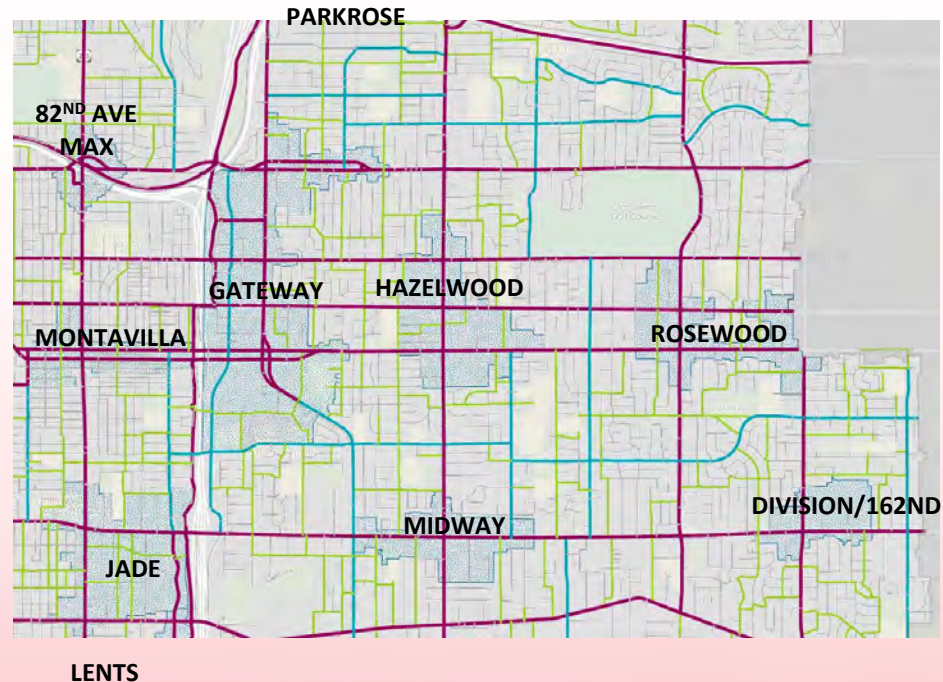


Safer Busy Streets

Leading with equity (and ped demand)

Within East Portland Ped Districts:

1. Curb-tight sidewalks on arterials/collectors (with limited options for diversion at back of walk)
2. Adjacent to ROW that can be quickly claimed for temporary ped space (e.g., on-street parking, buffered bike lane)
3. Priority on mixed-use locations within Ped Districts over single-family streets



Safer Busy Streets

Expanded Walkways -
Gateway



Safer Busy Streets

Expanded Walkways- Montavilla



SE Stark, 82nd-92nd
(Montavilla)



Safer Busy Streets

Expanded Corners – 10 East Portland Intersections



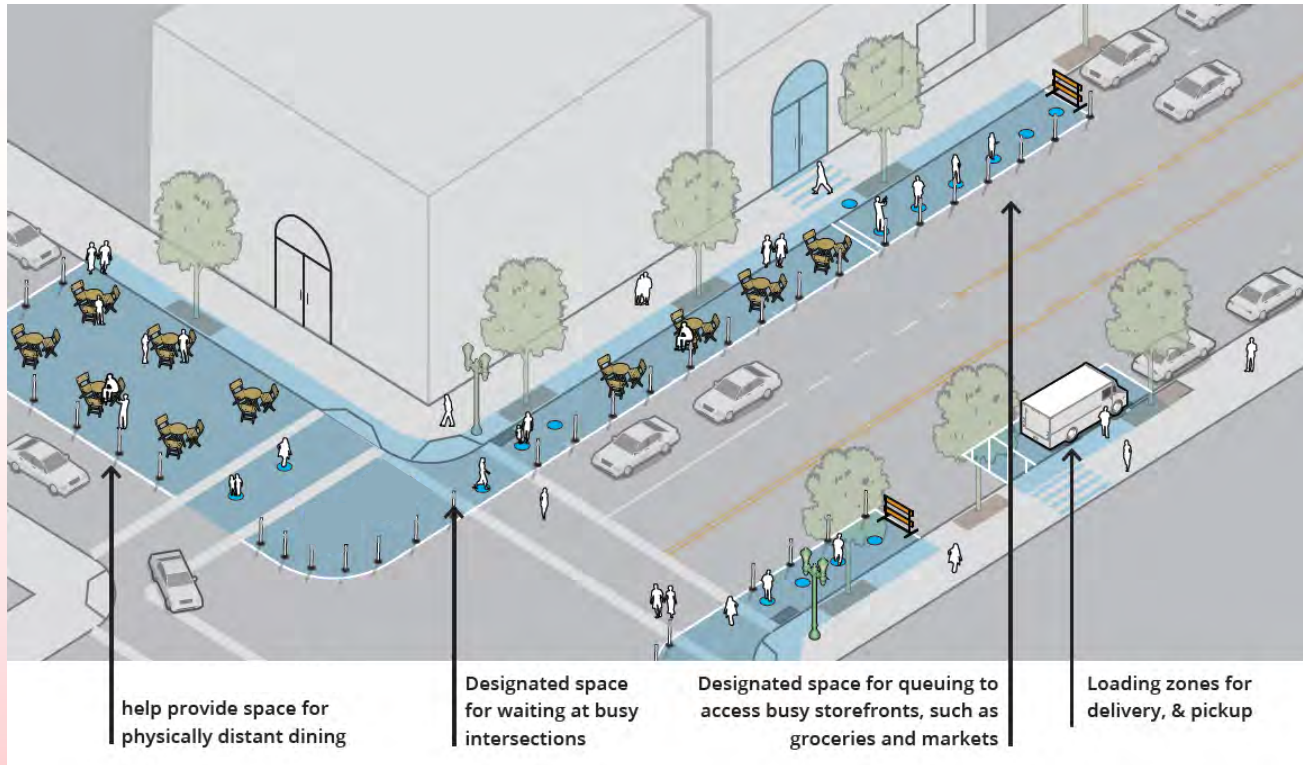
SE 92nd/Stark



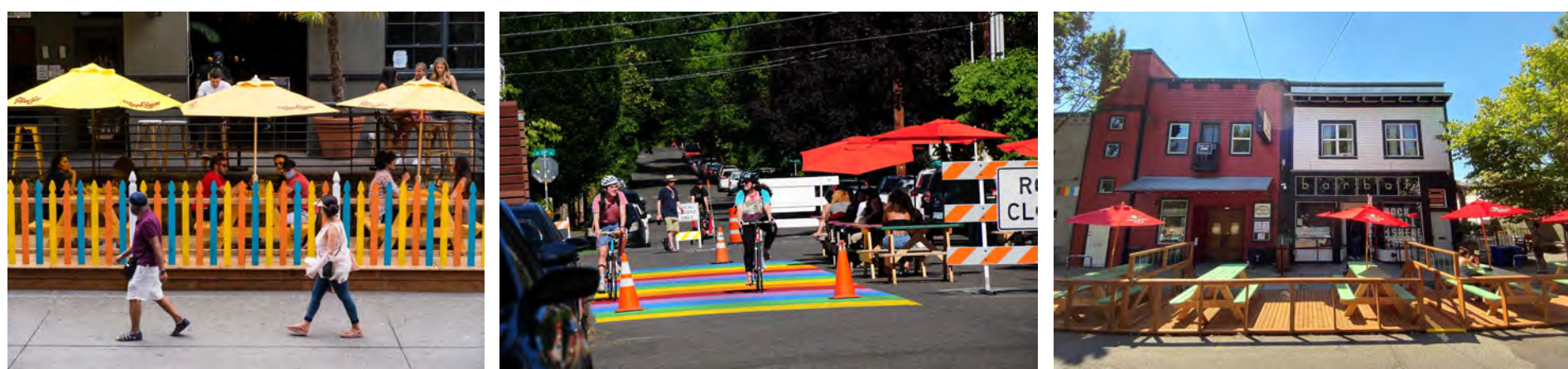
148th/E Burnside

Healthy Businesses

Helping local businesses adapt to physical distancing guidelines



Healthy Business Program



- 683 Healthy Businesses permits issued
- 100, 5-minute pickup/drop-off locations permitted
- 19% or 132 of issued permits identified as BIPOC. 26% or 177 applicants did not indicate if they do/do not identify as BIPOC
- 45% or 59 BIPOC permittees received free traffic control devices for their location.



Dream Street Plaza: Community Partnership



Where do we go from here?



Improve **data collection and system monitoring** to better understand how investments drive outcomes that are in line with transportation justice values



Invest in **long-term partnerships** with community-based and BIPOC focused organizations

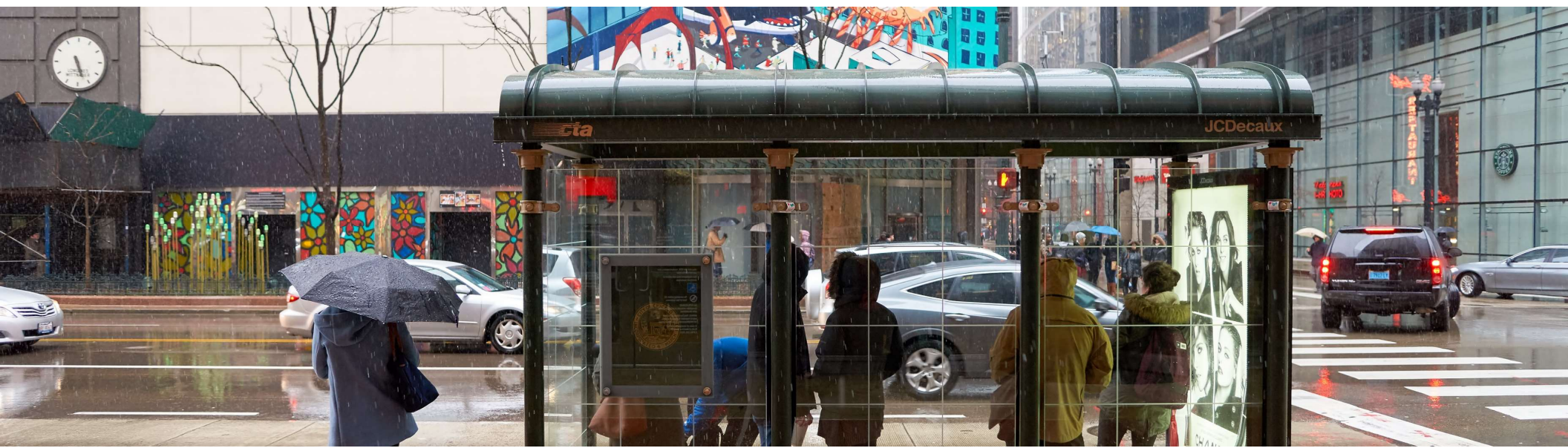


Use **root cause analysis** as the start of planning processes to define and address racial disparities

Thank you!

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December 9, 2020

Access to Opportunity through Equitable Transportation

Christina Stacy, Alena Stern, Kristin Blagg, Yipeng Su, Eleanor Noble, Macy Rainer, and Richard Ezike



This research was funded in collaboration with the [Mastercard Center for Inclusive Growth](#)

High-quality, reliable, and safe transportation is not equally accessible to all

- Wealth differences by race and ethnicity [make it easier for white residents to purchase a car](#), allowing for increased access to jobs
- Public transit that is inaccessible for elderly people and people with disabilities [can leave transit-dependent residents stranded](#)
- A lack of transit options, particularly at off-peak hours, means that people who work irregular schedules often have [no safe or affordable way to get to work](#)



Policymakers can reduce disparities in access to opportunity through investments in transportation

- But many decisionmakers [lack clear definitions and measures of equity](#) needed to make these choices
 - Metropolitan planning organizations often focus more on the local environment (and congestion reduction) than on social equity

“To some communities, particularly those who have been historically victimized by the transportation planning and decisionmaking process, the transportation system can be viewed as a weapon pointed directly at them.”—Anthony Foxx, former US secretary of transportation

What is transportation equity?

- Transportation equity means different things to different people
- We created a definition of transportation equity in collaboration with community and city representatives from four case study regions:

Transportation equity means that transportation decisions are made with deep and meaningful community input that leads to transportation networks and land use structures that support health and well-being, environmental sustainability, and equitable access to resources and opportunities.

Case Study Metropolitan Regions

MSA	Population	Unemployment rate	Sprawl	Racial segregation	Census region
Seattle-Tacoma-Bellevue, WA	Large	Low	Fairly dense	Low	West
Baltimore-Columbia-Towson, MD	Large	High	Fairly dense	High	Northeast
Lansing-East Lansing, MI	Small	High	Average	High	Midwest
Nashville-Davidson-Murfreesboro-Franklin, TN	Large	Low	Sprawling	Low	South



We found that although these regions face very different barriers to providing equitable transportation, they share common challenges



Lack of a shared definition of transportation equity



Fragmented systems and overlapping jurisdictions



A lack of coordination with local land use, zoning, and housing agencies



Insufficient funding and a lack of dedicated funding

Metrics to help center equity in transportation decisionmaking

Job accessibility for low wage workers

- Gravity model that adds up the jobs accessible within a 30-minute commute of each block group, divided by the number of other low-wage job seekers competing for those jobs
- Uses a weighted combination of the traffic-adjusted drive time (for the share of people in the block group who commute via car) and the public transit time (for the share of people in the block group who commute via public transit)

Spatial mismatch between low-wage workers and jobs

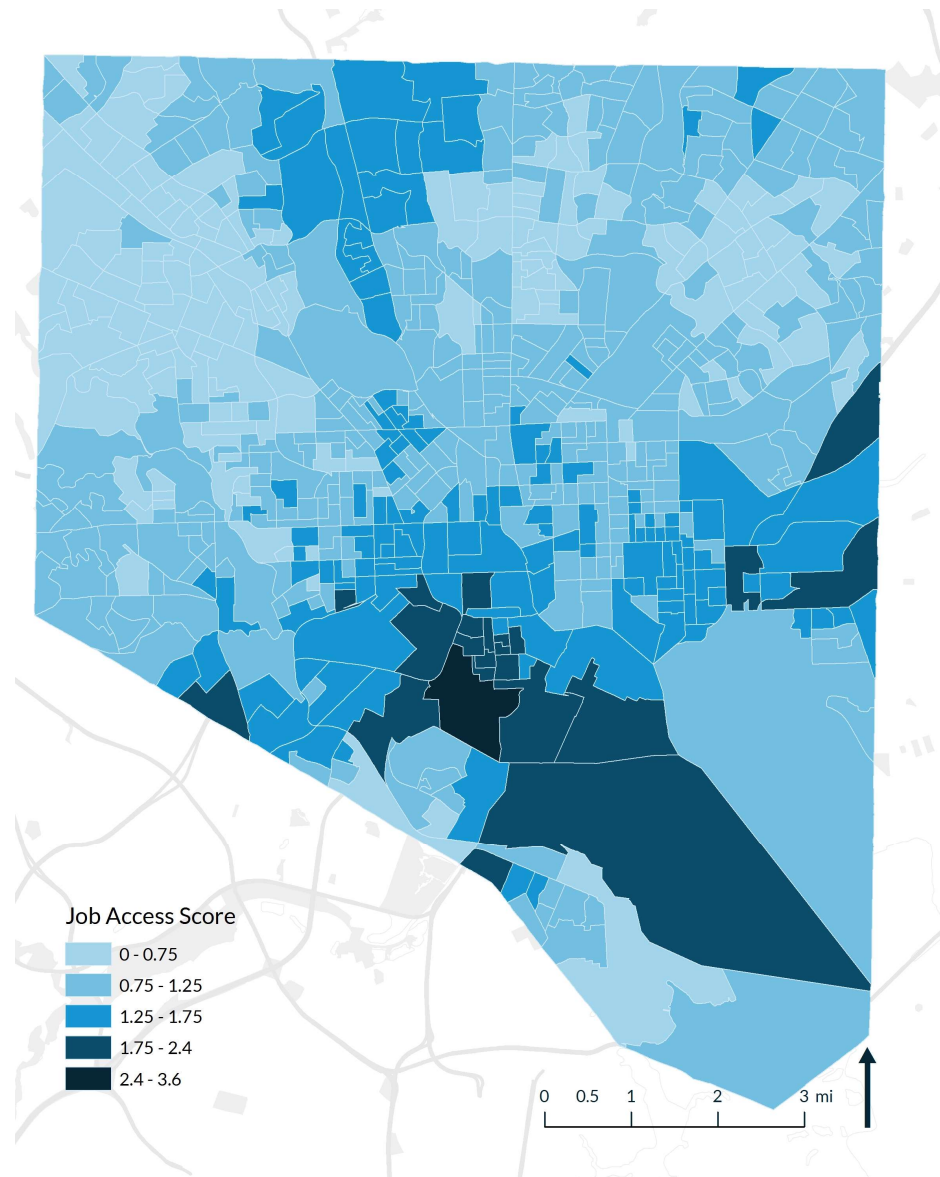
- This tells us which neighborhoods have the most low-wage workers in need of better access to jobs
- Standardize the job accessibility measure, subtract it from 1 so a higher value signifies worse access, and multiply it by a standardized measure of the low-wage labor force

Access to Jobs

"One of the things that affects access in Baltimore is safety—safety is a big issue."
—Public employee, MTA Maryland

Job Accessibility in Baltimore

Source: Authors' analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.
Note: Darker colors denote neighborhoods with a better access to jobs than other neighborhoods in our analysis.



Spatial Mismatch for Low-Wage Workers

"Our housing market in the past eight or so years has shot up. In the city, transit actually reaches a lot of people, but with gentrification and displacement a lot of people in the rest of the county don't have nearly as good transit service."

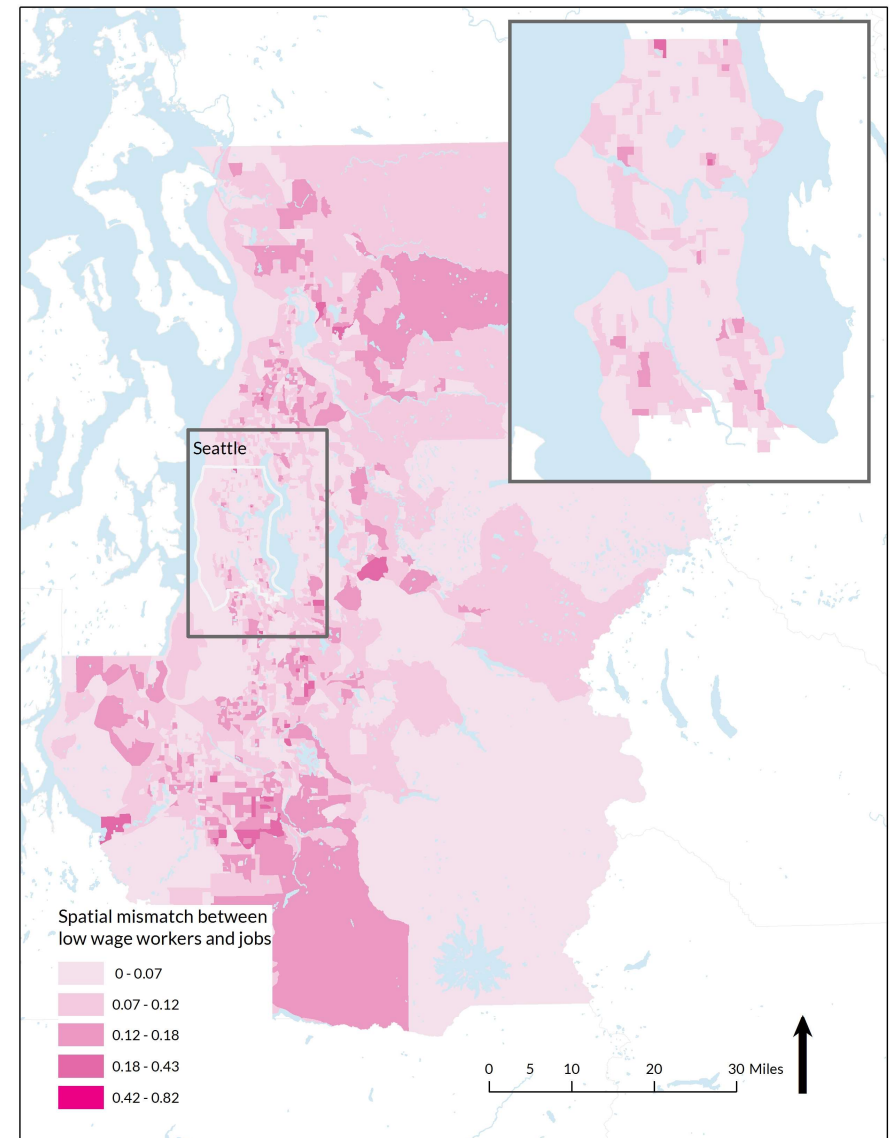
—Katie Wilson, campaign coordinator at Transit Riders Union in Seattle"

Spatial Mismatch between Low-Wage Workers and Jobs in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area

Source: Authors' analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with a larger number of low-wage workers and worse access to jobs than other neighborhoods in our analysis.

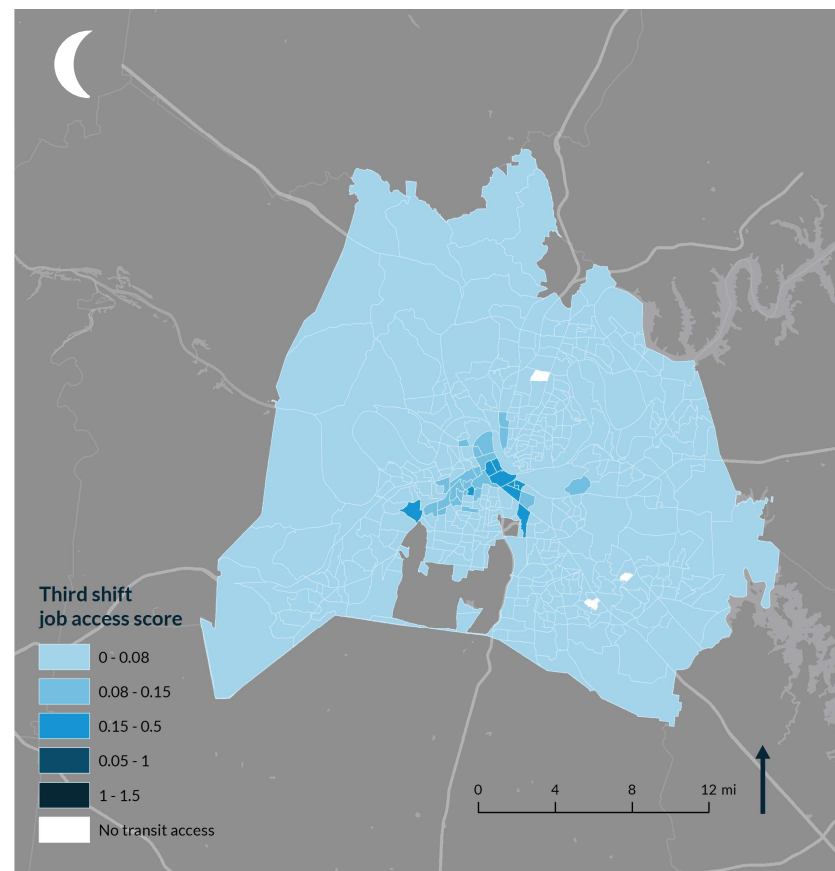
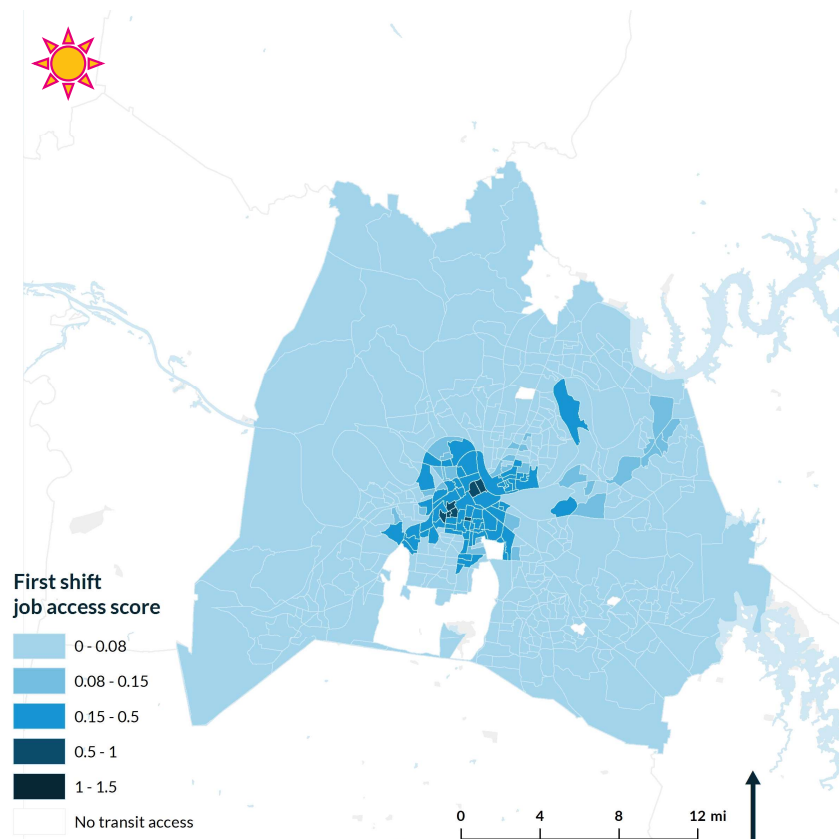
• URBAN • INSTITUTE •



Access to jobs via public transit for day and night shift workers

Access to Jobs via Public Transit at Peak and Late-Shift Hours in Nashville

*"Our region is growing so fast... It's a car culture so there's a reluctance to pay more in taxes even though we are one of the lowest taxed areas, for our population, in the country."
Transportation Advocate, Nashville*



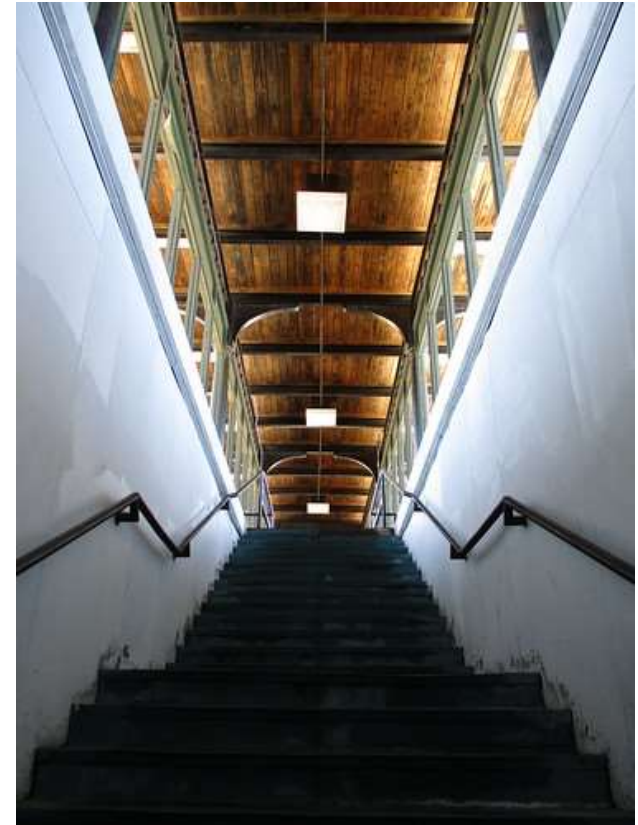
Source: Authors' analysis of LEHD data, decennial census data, American Community Survey data, and GTFS data.

Note: Darker colors denote neighborhoods with greater access to jobs via public transit than other neighborhoods in our analysis.

Public transit access for people in wheelchairs

- Adults with disabilities twice as likely to have inadequate transportation as adults without disabilities, and transportation challenges cause [over half a million people](#) with disabilities to never leave their homes.
- Across our four metro regions, only one transit agency reported information on wheelchair accessibility
- Paratransit users feel restricted by the prescheduled pickups and wait times and that they would prefer fixed route options

More data are needed on the accessibility of transit systems

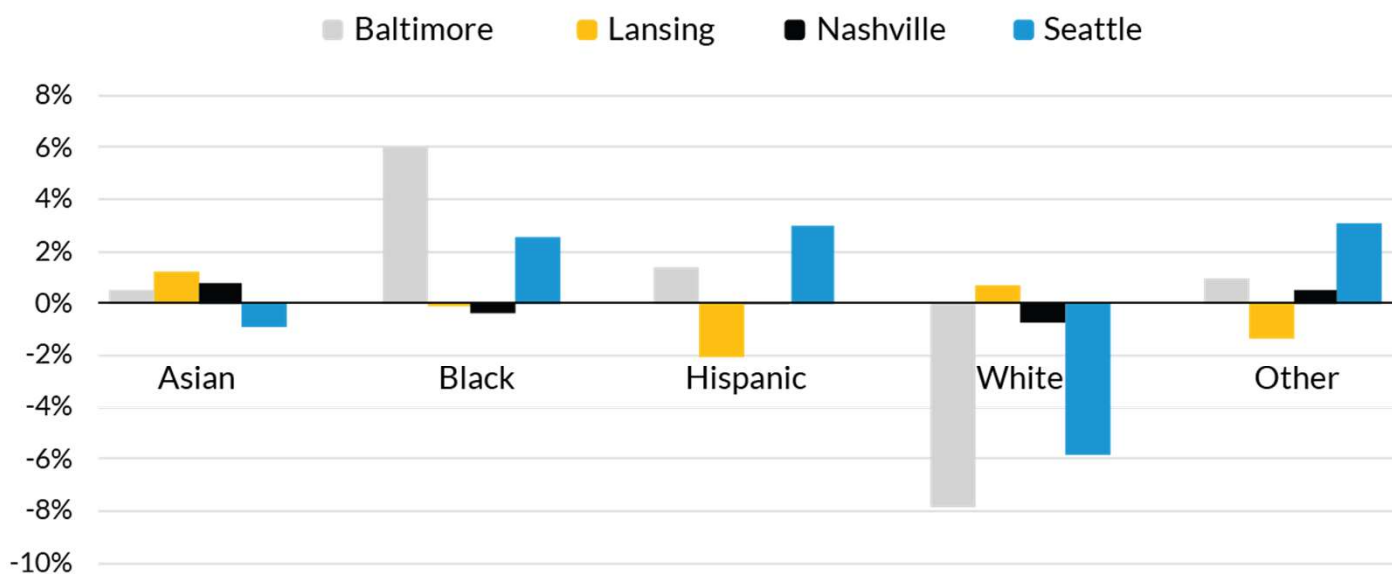


Racial Disparities in Spatial Mismatch

People of color are overrepresented in Neighborhoods with High Rates of Spatial Mismatch In Seattle and Baltimore

Mismatched Access to Opportunity by Race and Ethnicity

Difference between share of residents in areas with the worst spatial mismatch and the urbanized area as a whole



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Notes: For each metro region, we compare the racial and ethnic composition of the 10 percent of block groups with the highest spatial mismatch scores in the urbanized area with the racial and ethnic composition of the urbanized area as a whole. For example, 41.3 percent of people in the block groups with the worst spatial mismatch in the Baltimore urbanized area are Black, while the urbanized-area population is 35.3 percent Black. We take the difference to show that the Black population is 6 percent overrepresented in neighborhoods with worse spatial mismatch. As communities of color are concentrated in the urbanized areas of each of our metro regions, we restrict our focus to the urbanized area for a more comparable measure of access by race and ethnicity group.

How do we move toward a more inclusive transportation network?

Opportunities to further transportation equity



Define transportation equity in partnership with **historically excluded residents**



Dedicate funding sources to transportation



Undertake **meaningful community engagement**



Coordinate with **local land use, zoning, and housing agencies**



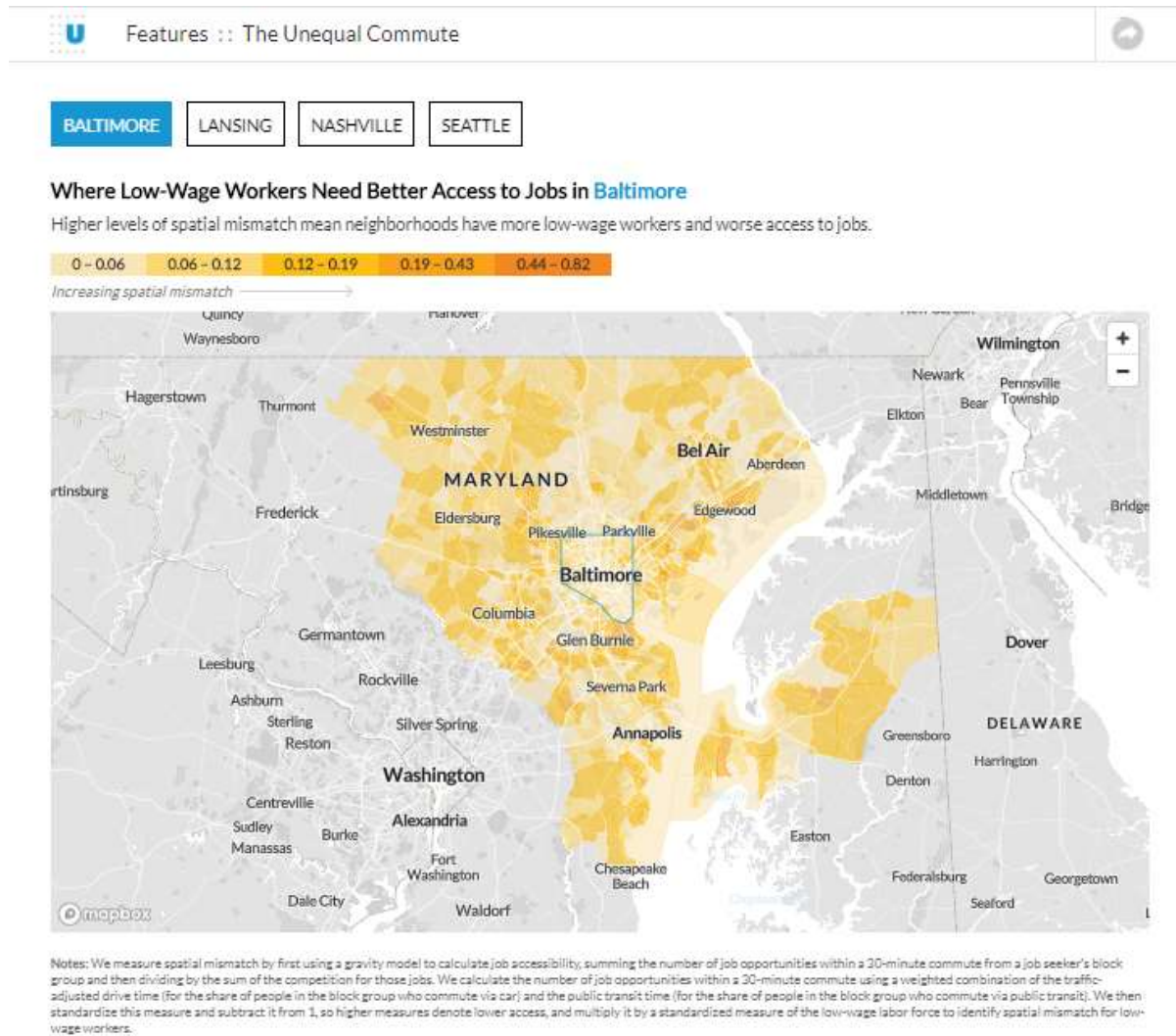
Center equity in land use planning



Collect better data to track transportation equity

Using the data tool:

- <https://www.urban.org/features/unequal-commute>



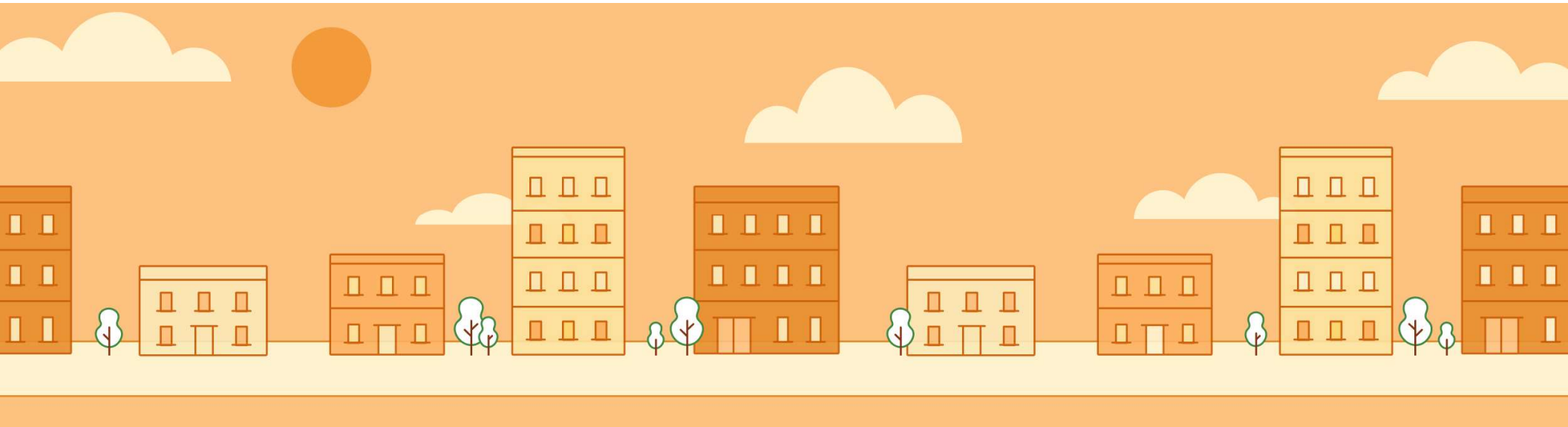
Next Steps

- Build out the tool to include:
 - The entire nation
 - Data during and post COVID
 - More opportunity points such as grocery stores, open access higher education, k-12 schools, hospitals, libraries, parks, etc
 - New mobility and micromobility like scooters and bike share
 - Measures of quality, safety, and reliability
 - Housing data
- Undertake community engaged research to identify and evaluate solutions for spatial mismatch, including investments in:
 - Transit
 - Affordable housing
 - Community and Economic Development
 - Workforce training
 - Small businesses and entrepreneurship

For help using this tool or measuring transportation equity in your region, please contact me at cstacy@urban.org

To use the tool: <https://www.urban.org/features/unequal-commute>

**To read the report:
<https://www.urban.org/research/publication/access-opportunity-through-equitable-transportation>**



December 9, 2020

Spatial Equity Data Tool

Ajjit Narayanan, **Alena Stern**, Graham MacDonald



This research was funded in collaboration with the [Mastercard Center for Inclusive Growth](#)

Background & Motivation

- Many cities are committing to incorporating equity analysis into policy and program decisions
- But standardized measures of equity/representativeness are hard to produce

What does our tool do?

- Automatically assesses racial, economic, and geographic representativeness of user uploaded point data
- Can be used with any geographic **city** level point data (ie datasets with lat/lon points)
- Two Use Cases:
 - Resident generated data (311, transit satisfaction survey)
 - Place based programs (bus stops, bike share stations, public wi-fi hotspots)

Live Demo!

Questions this tool **can** answer

- Compared to the population distribution in a city:
 - Are certain areas of the city over/underrepresented in my data?
 - Are certain demographic groups over/underrepresented in my data?
 - Are these results significant after taking into account margins of error in Census figures?

Questions this tool **can't** answer

- *Why* are certain areas / demographic groups overrepresented in my data?
- Is the quality/accessibility of the services equal across the city?
- Is the population distribution the right measure to compare my data against?

Context

- Our hope is to democratize data analysis capabilities and reduce barriers to incorporating equity analysis
- By standardizing equity measures, comparisons across policy domains, cities, or time become easy!
- Tool is one part of a larger decision-making process including lived experiences, and community input

Future Work

- Additional features for the Spatial Equity Tool
 - Incorporate buffers using drive/transit times
 - Additional geographies (e.g. state, county, metro area)
 - Custom baseline datasets
 - Work with changemakers and community organizations to use tool in policy analysis and advocacy

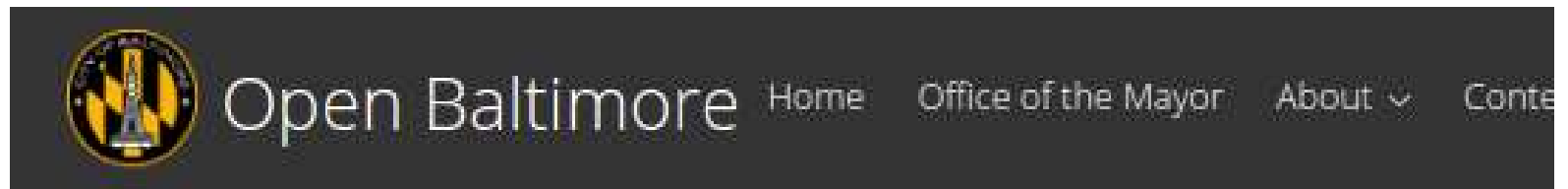
**For help using this tool, please contact me at
astern@urban.org**

To use the tool: <https://apps.urban.org/features/equity-data-tool/index.html>

**For more information:
[https://apps.urban.org/features/equity-data-tool/spatial equity technical appendix.pdf](https://apps.urban.org/features/equity-data-tool/spatial%20equity%20technical%20appendix.pdf)**

Extra Slides

An example: Baltimore Grocery Stores

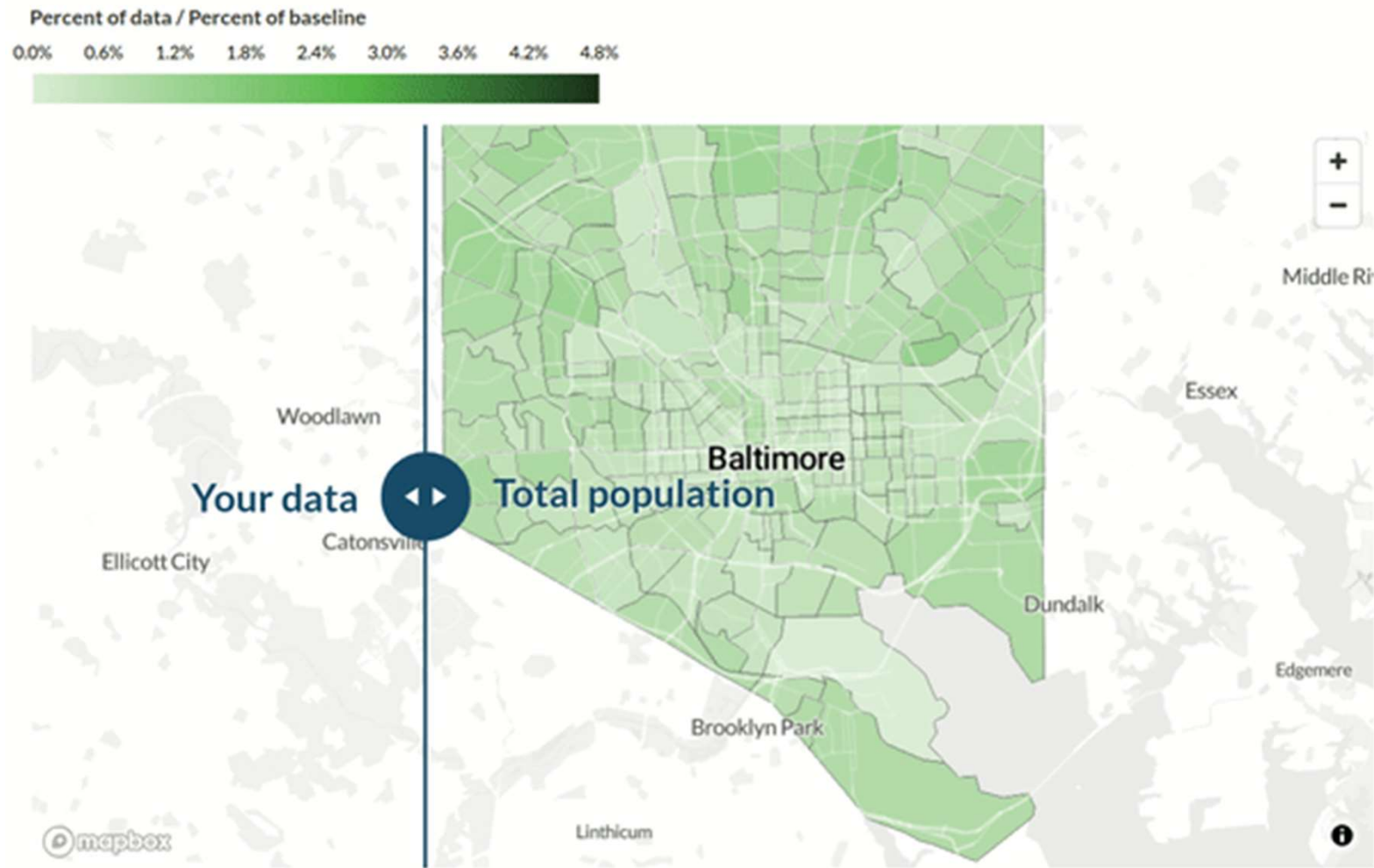


Grocery Stores

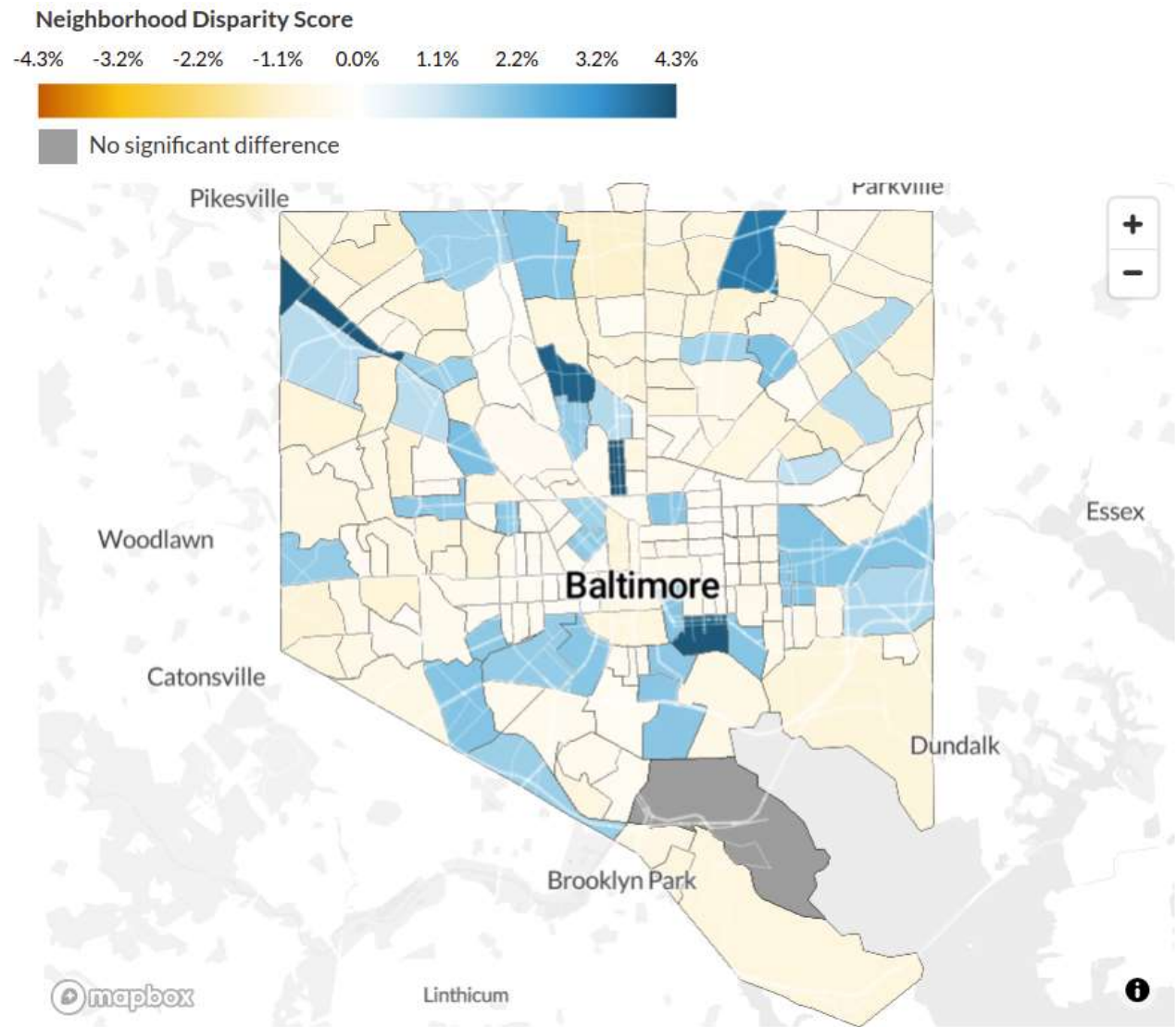
Health

This data lists the locations of grocery stores in the City. This may not be a complete list.

An example: Baltimore Grocery Stores



An example: Baltimore Grocery Stores



An example: Baltimore Grocery Stores

