Regional Congestion Pricing Study

Joint Committee on Transportation May 27, 2021

Regional Congestion Pricing Study

Regional Transportation Plan

- Planning context, MPO Role, Engagement

Project Overview

- Methods and outcomes expected
- High Level Findings

Expert Review Panel Feedback

Next Steps

Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council oversee Metro's MPO Functions

Primary functions of the Metro MPO:

- **Regional Planning -** development of the Regional Transportation Plan and implementing plans, policies and projects
- **Funding** – allocation of federal funds and coordination of all urban area transportation funding allocations
- **Congestion Management Process** – development of a CMP and coordinating implementation; demonstrate compliance with Clean Air Act, federal laws
- **Climate Smart Strategy** – planning and coordination of implementation of Climate Smart to reduce greenhouse gases, required by state law

2018 Regional Transportation Plan

Regional Transportation Plan vision:

"In 2040, everyone in the Portland metropolitan region will share in a prosperous, equitable economy and exceptional quality of life sustained by a safe, reliable, healthy and affordable transportation system with travel options."

Many meaningful opportunities to listen, learn and collaborate


Regional Leadership Forum | 2018


Regional Leadership Forum | 2016

Nearly 19,000 individual touch points from 2015-18


Regional Leadership Forum |

On-line surveys | 2018


Community Leaders Forum | 2018

Discussion groups | 2015


JPACT meetings | 2015-18


Regional Leadership Forum | 2016

Regional Snapshots | 2016-18

What we heard from partners and the public: 2018 RTP investment priorities

Equity

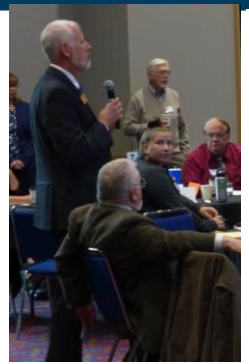
Climate

Safety

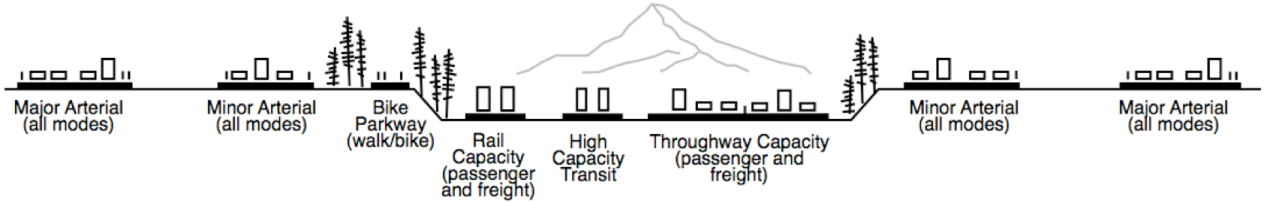
Congestion

What we also heard from partners and the public

- Changing times call for changing approaches to transportation funding
- Put equity at the forefront of work
- Show how individual projects advance regional goals
- Interest in building a regional pipeline of multi-modal projects

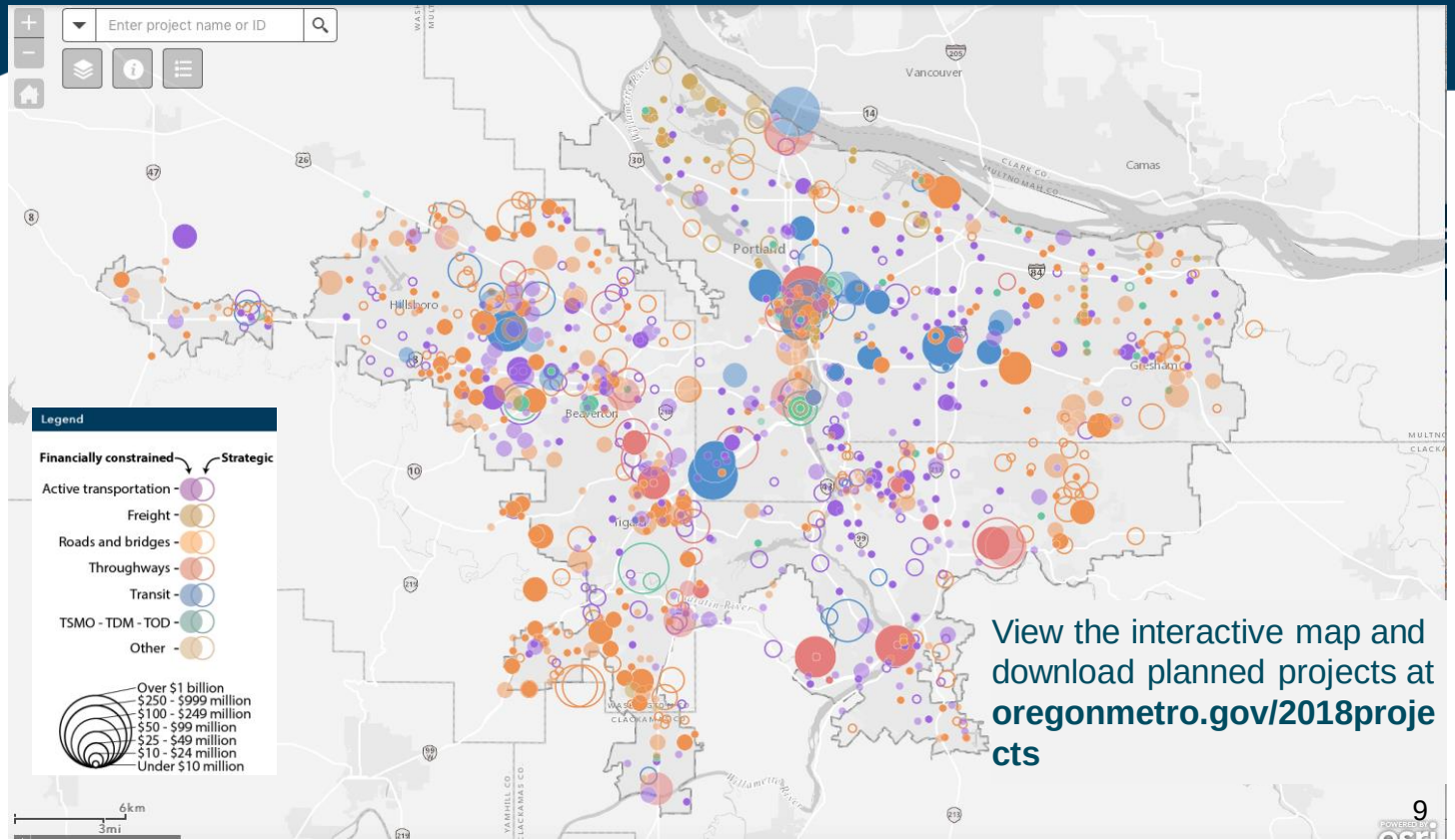


RTP contains multimodal solutions for the region's major travel corridors



RTP Constrained priorities

$42 billion planned by 2040



View the interactive map and download planned projects at **oregonmetro.gov/2018projects**

JPACT and Metro Council adopted policy on pricing

- *Objective 4.6 (Pricing)* – **Expand the use of pricing strategies to manage vehicle congestion and encourage shared trips and use of transit.**

- *Policy 6 (Congestion)* – **In combination with increased transit service, consider use of value pricing to manage congestion and raise revenue when one or more lanes are being added to throughways.**

What is Congestion Pricing?

Congestion pricing is the use of a pricing mechanism (such as tolls, parking fees, road user charges, cordons) to:

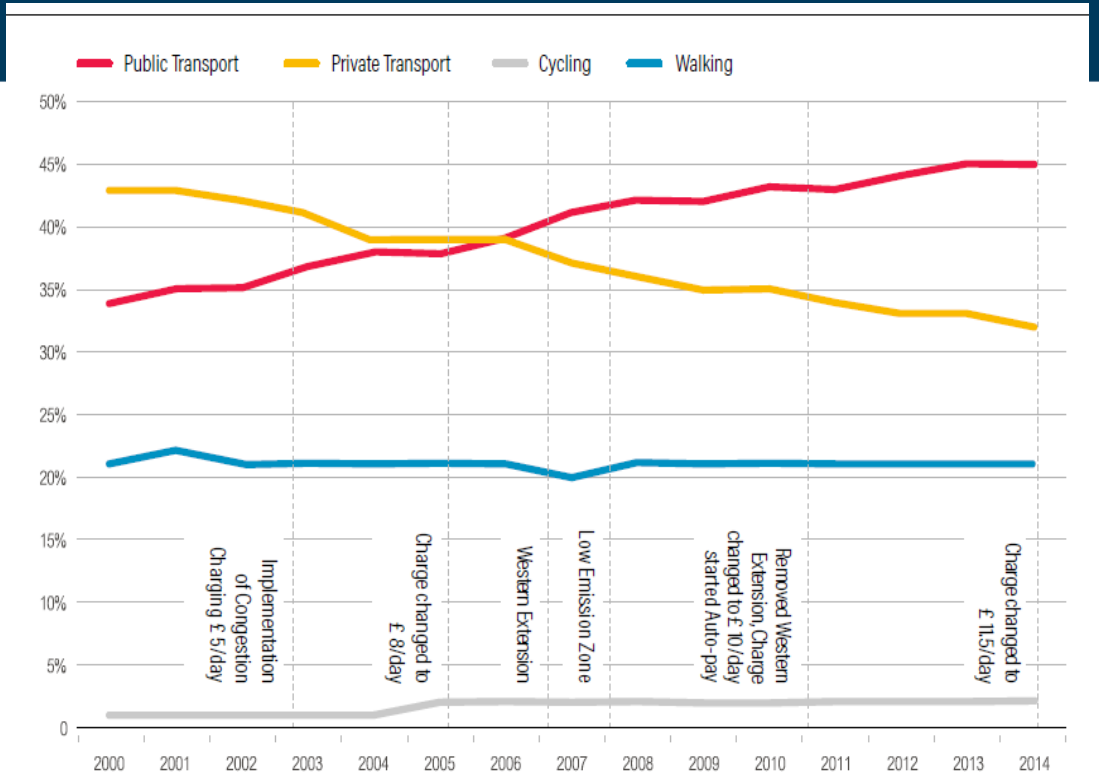
- Reduce traffic congestion and greenhouse gas emissions
- Change traveler behavior (shifting trip times, traveling less often, changing travel modes, carpooling, routes, etc.)

What are the benefits?

	Stockholm	London	Singapore	Milan	Gothenburg
Trip Reduction	-22%	-16% all -30% charged	-15% with new technology -44% in 1975	-34%	-10%
GHG Benefit	-14% CO2	-17% CO2	-15% CO2	-22% CO2	-2.5% CO2
Travel Time Results	-33% delays	-30% delays	Managed by price for 45-65 km/h (expressways) 20-30 km/h (other roads)	-30% delays	-10% to 20% travel time in corridors
Net Annual Revenue	$150M	$230M	$100M	$20M	$90M

What are the benefits?

- In every case, congestion pricing has reduced vehicle trips, reduced CO2 emissions, and lowered travel times
- Businesses have seen economic benefits
- Programs have evolved to meet new challenges



What are the benefits?

- London invested revenues in new buses and active transportation projects
- Road space has been prioritized to move more people
- Traffic collisions have fallen by 40%
- Health benefits

Why now? Our challenges.

- Transportation creates greenhouse gas emissions (40% in Oregon)
- Congestion is/was growing. 500,000 new residents by 2040
- Congestion pricing supports efficient use of infrastructure
- Our current transportation system is inequitable

Regional Congestion Pricing Study

RCPS Goal:

To understand how our region could use congestion pricing to manage traffic demand to meet climate goals without adversely impacting safety or equity.

Not recommending project or implementing any pricing measures

Expected Outcomes

RCPS findings will:

- Inform future discussions on implementing congestion pricing and policy recommendations
- Outline next steps for evaluation and further study

Evaluate technical feasibility and performance of 4 different pricing tools

- Focused on 4 tools with multiple possible program designs
- Provide assessment of overall value, not a recommendation
- Model outcomes focused on 2 scenarios from each type

VEHICLE MILES TRAVELED FEE (Road User Charge)

Drivers pay a fee for every mile they travel

CORDON PRICING

Drivers pay to enter an area, like downtown Portland (and sometimes pay to drive within that area)

ROADWAY PRICING

Drivers pay a fee to drive on a particular road, bridge or highway

PARKING PRICING

Drivers pay to park in certain areas

Evaluation –

Modeling, Mapping, Research

1. Test for reducing congestion and GHG emissions
2. Review for potential impacts to equity and safety
3. Explore strategies to maximize benefits
   - Improve mobility, equity, safety
   - Increasing transit service in key areas
   - Adding pedestrian, bike, and transit infrastructure (2040 RTP Strategic investments)
   - Fee structures
   - Other?

Expert Input and Advice

- Experts in congestion pricing programs and modeling hired to help shape the study and evaluate analysis
- Targeted stakeholder engagement
  - Jurisdictional partners, Equity experts (CORE, POEM Task Force, EMAC)
- Expert Review Panel provided outside review

Detailed analysis focused on 2 scenarios from each type of pricing

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- Focused on 4 tools with multiple possible program designs
- Provide assessment of overall value, not a recommendation
- Roadway A & B charged for every mile on the freeways in the region

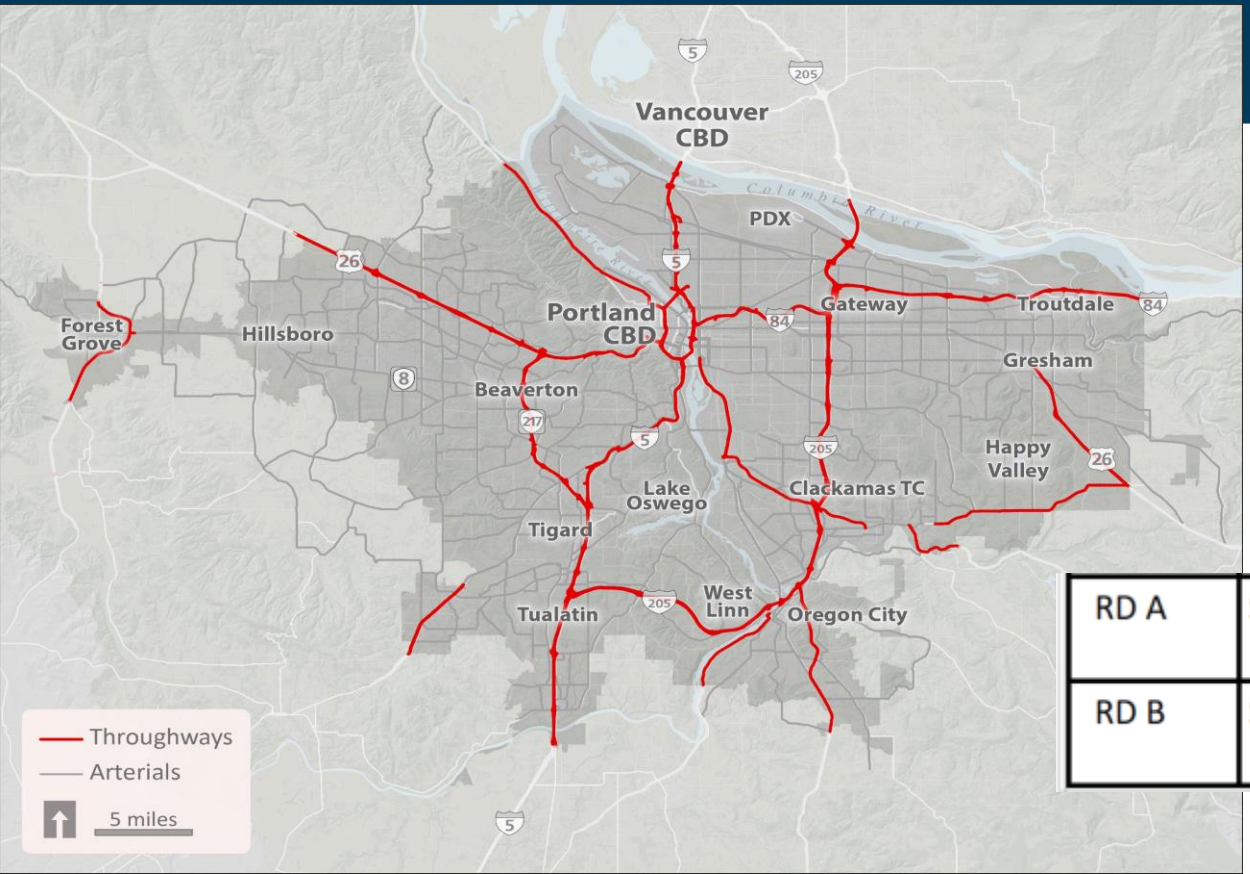
Summary of Scenario Performance

- All four pricing types **addressed climate** and **congestion** priorities.
- **All eight scenarios** reduced the drive alone rate, vehicle miles traveled, and emissions, while increasing daily transit trips.
- Geographic distributions of **benefits and costs varied** by scenario.
- There were **tradeoffs** for implementing pricing scenarios.

Summary of Cost Impacts and Benefits

- All eight scenarios increase the **overall cost** for travel for the region.
- Overall regional transportation **costs** and individual traveler costs **vary by scenario**.
- Distribution of **costs and benefits** have implications for **where** (people and geography) fee discounts and revenues could be targeted.

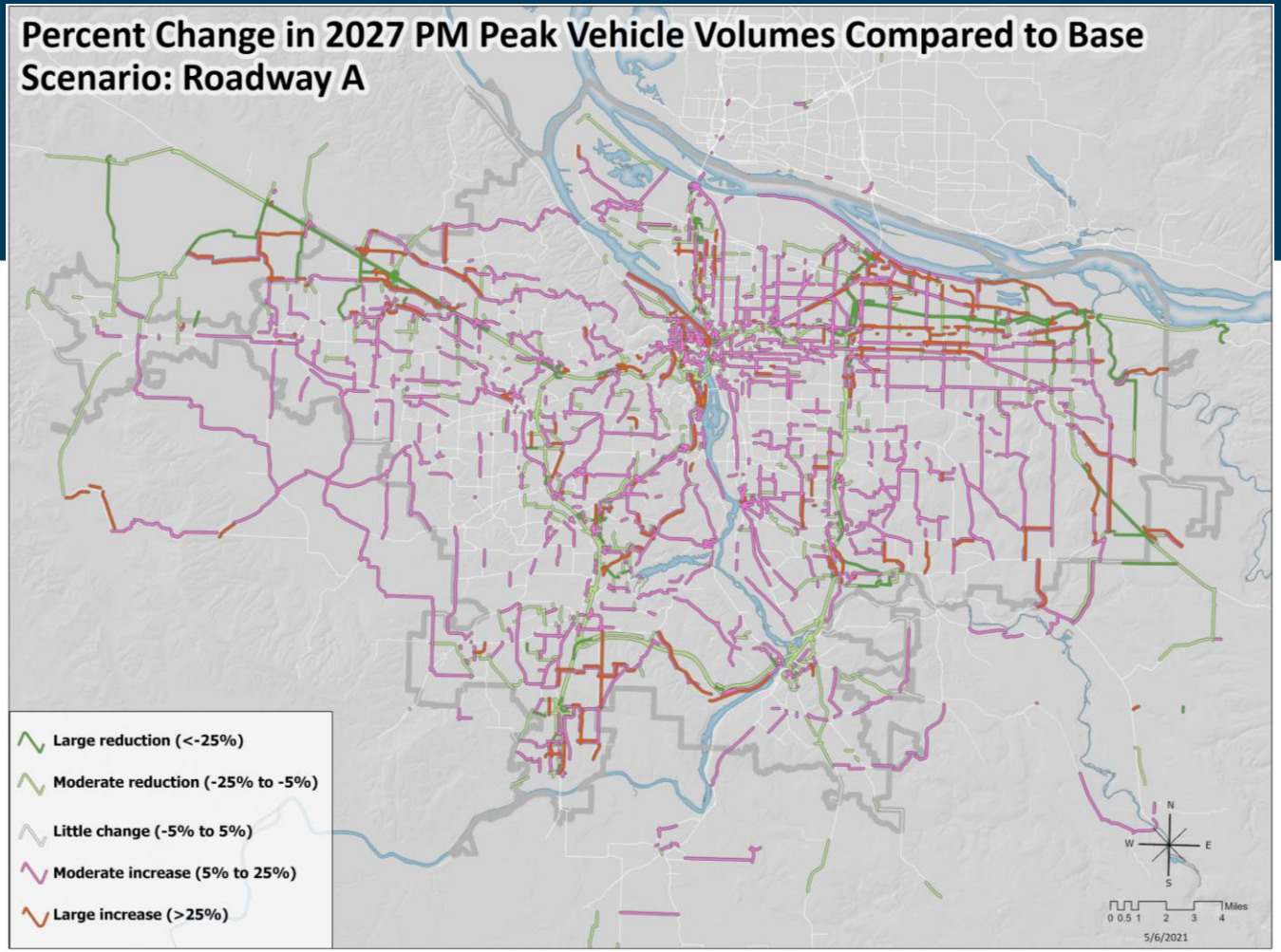
Roadway Scenarios



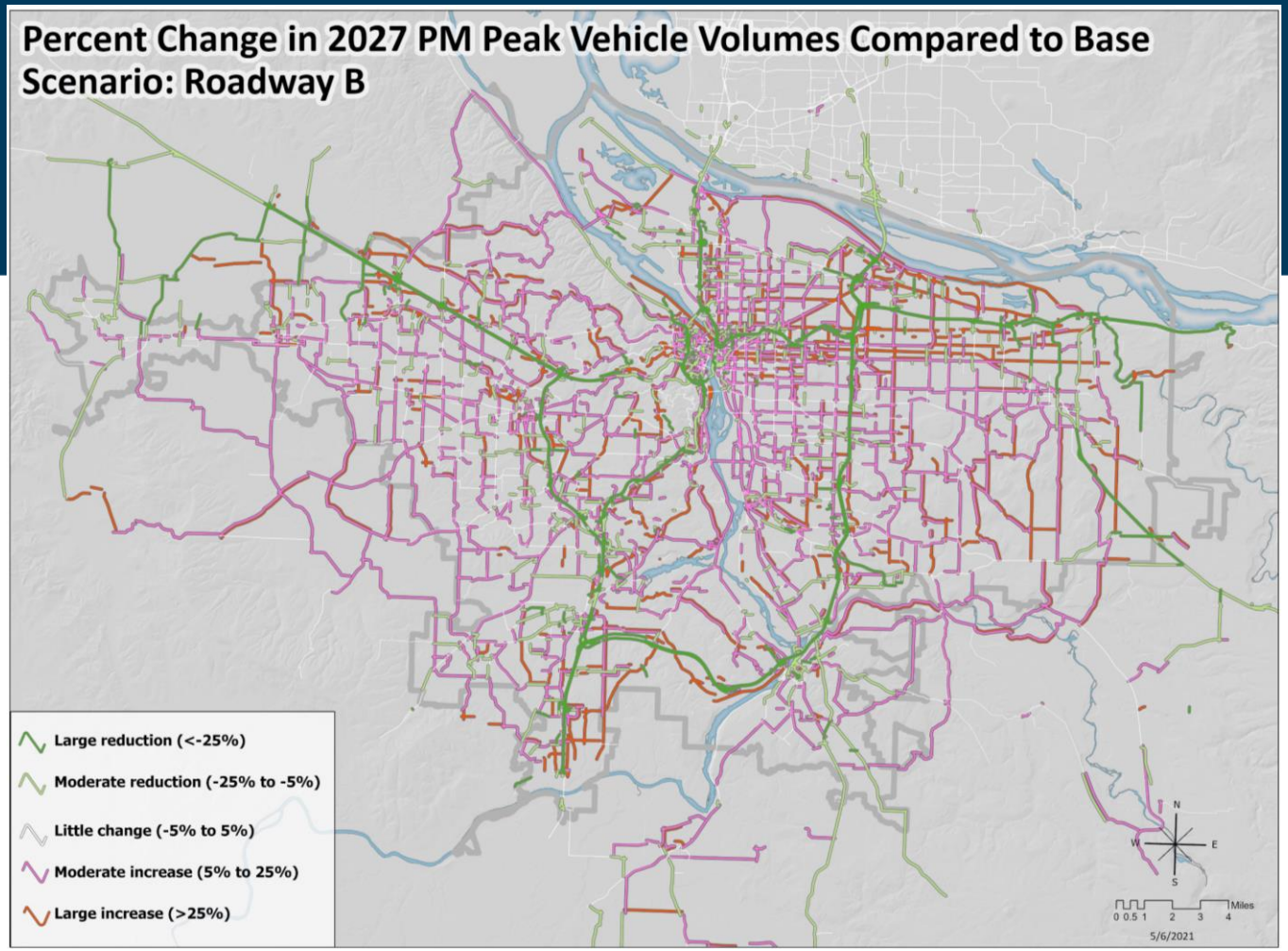
- All throughways (shown in red) within MPA boundaries are charged in Roadway A and Roadway B

RD A	$0.132/mile	Charge per mile driven on highways
RD B	$0.264/mile	Charge per mile driven on highways

Roadway A



- Volumes drop across the freeway network as drivers divert to arterials to avoid charge.
- Most arterials near freeways see an increase in volumes.

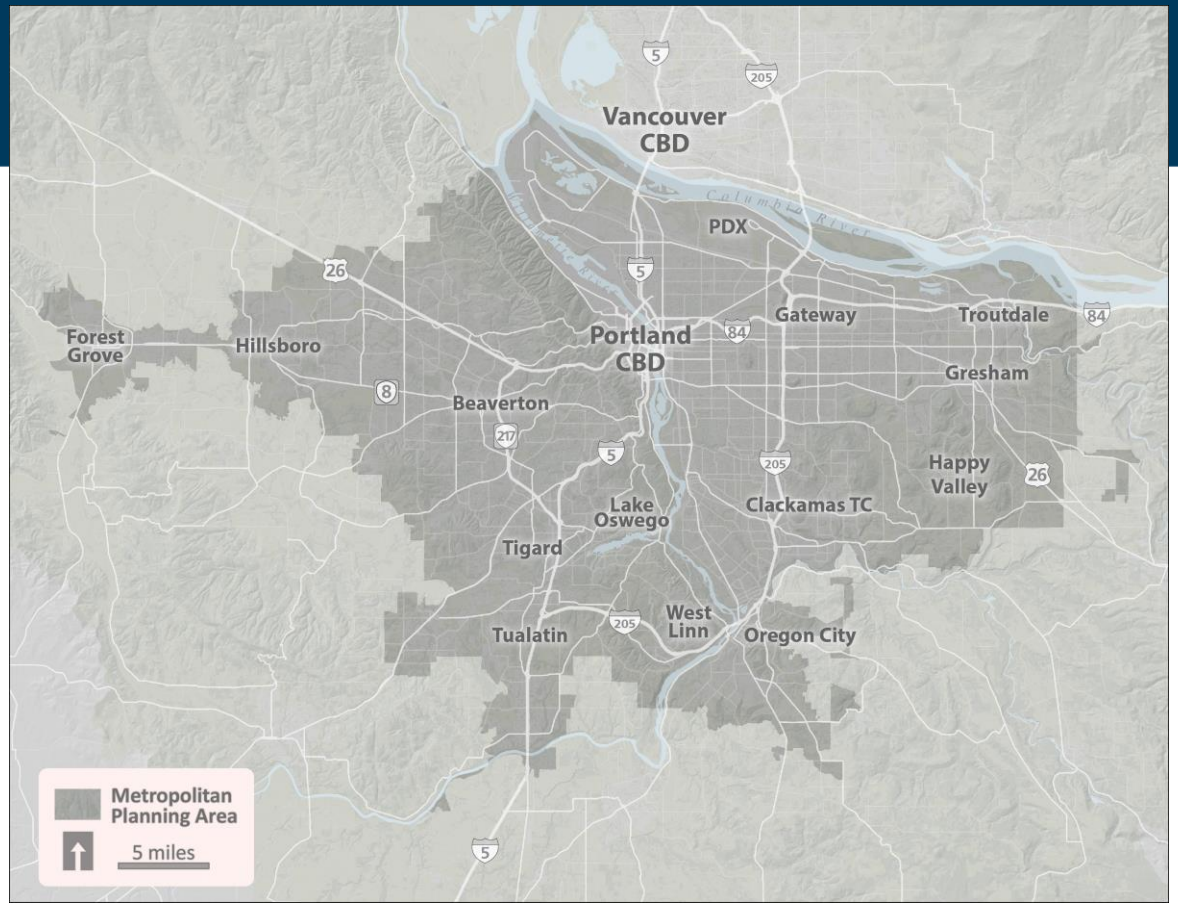


Roadway B

Changes are magnified

- more arterials see volume increases
- increasingly lower freeway volumes
- *Implications for investments/ discounts*

VMT Scenarios (Road User Charge)



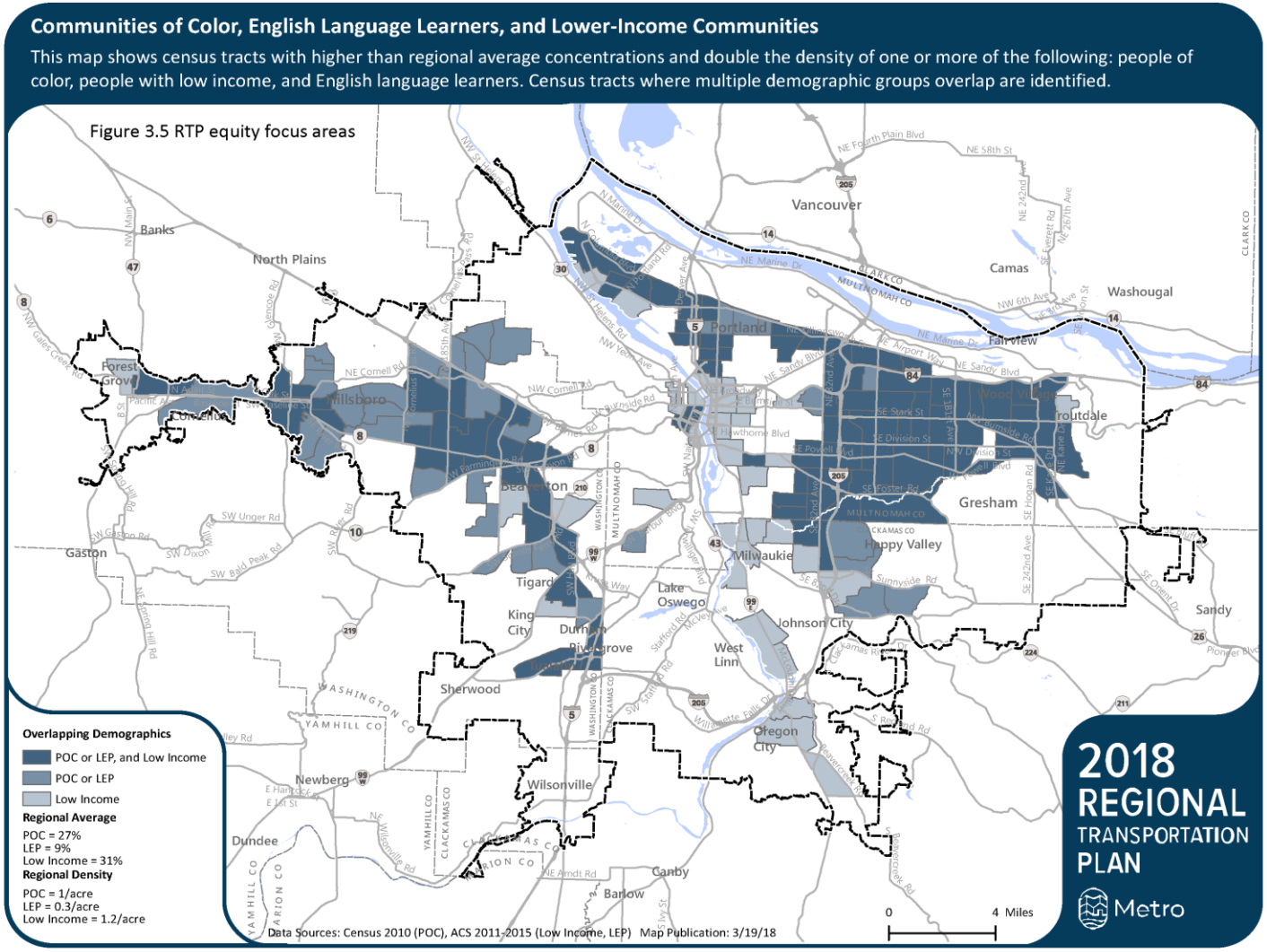
- Charges assessed within MPA boundaries for each mile driven for VMT scenarios
- VMT B = $0.0685/mile
- VMT C = $0.132/mile

VMT/Road User Charge Performance-

Metrics	VMT B	VMT C
Daily VMT		
Drive Alone Rate		
Daily Transit Trips		
2HR Freeway VHD		
2HR Arterial VHD		
Emissions		
Job Access (Auto)		
Job Access (Transit)		
Total Regional Travel Cost	Medium-High	High

- VMT B and C generally perform better than other scenarios, but also have the highest regional costs
- Both scenarios reduced VMT, drive alone rate, delay, and emissions
- Both scenarios improved transit trips and job access (transit & auto)
- Cost and mobility benefits vary depending on location

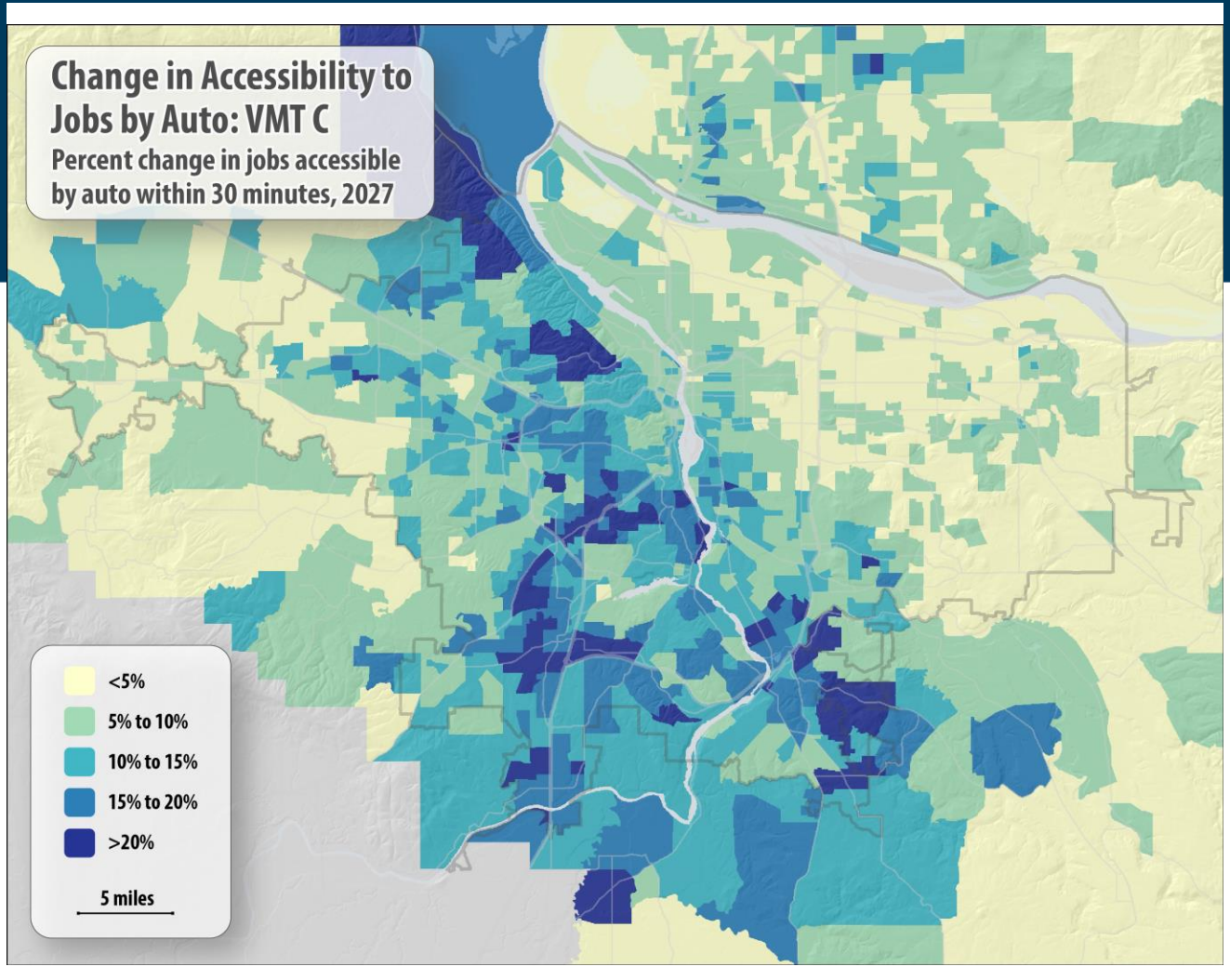
Equity Focus Areas



- Areas with concentrations of low income populations, people of color, and/or people with limited English proficiency

VMT

- Mapping shows access improvements do not include a lot of the Equity Focus Areas.



High-Level Findings from Modeling

RTP Goal	Metrics	VMT B	VMT C	COR A	COR B	PARK A	PARK B	RD A	RD B
Congestion & Climate	Daily VMT								
	Drive Alone Rate								
	Daily Transit Trips								
	2HR Freeway VHD								
	2HR Arterial VHD								
Climate	Emissions								
Equity	Job Access (Auto)								
	Job Access (Transit)								
	Total Regional Travel Cost	Medium-High	High	Medium-Low	Medium-Low	Low	Low	Medium	Medium

Note: *Green indicates better alignment, grey minimal change, and orange less alignnment with regional goals when compared to the Base scenario.*

- VMT and Parking scenarios show the most positive changes, no negative changes
- Cordon and Roadway scenarios see some increases in delay particularly on arterials, and reductions in job access
- These results are before any discounts/exemptions, reinvestment of revenues, or iterations of program design

Pricing programs can be designed for Equity

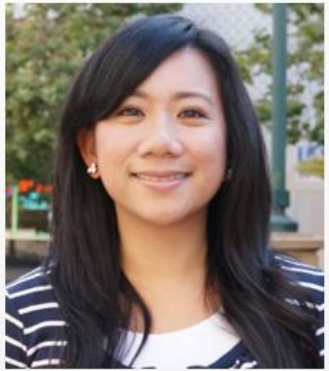
- Affordability can be built into a program
  - More flexible than current funding sources. Can provide discounts or exemption key groups from paying.
- Revenue can be focused on equity outcomes
  - Invest in key neighborhoods or roadways
  - Focus on transit, sidewalks, bike lanes
  - Invest in senior and disabled services
- Targeting pricing benefits to key locations
  - Mobility improvements and air quality

Expert Review Panel: April 22, 2021

Christopher Tomlinson
State Road & Tollway Authority, Georgia Regional Transportation Authority, Atlanta Region Transit Link Authority

Rachel Hiatt
San Francisco County Transportation Authority

Sam Schwartz
Sam Schwartz Transportation Consultants



Clarrissa Cabansagan
TransForm

Daniel Firth
C40 Cities

Key Findings: Methods & Outcomes

- Endorsed Metro's technical approach and findings related to potential benefits and impacts of four pricing tools
- Offered recommendations for further study, including a focus on costs and investments, informed by public engagement

"We know pricing works, and it's a flexible tool to respond to changing needs. The challenge is how to make it fair and acceptable to people. That requires additional detail to prove out the concepts."

- Daniel Firth

Key Findings: Clarity of Purpose

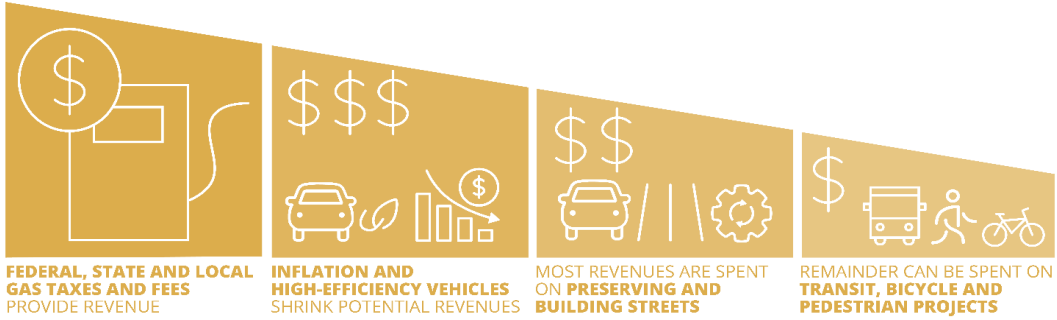
- Be very clear about the purpose of the project or program
- Articulating specific goals or outcomes helps to maintain focus
- Goals inform analysis, program design, and use of revenues

"In Atlanta, we framed the need for pricing around growth and managing demand."

- Christopher Tomlinson

Key Findings: Focusing on Equity

- Think carefully about who most needs access
- Conduct detailed analysis to demonstrate regional and local costs/benefits
- Recognize revenue reinvestment as central to an equitable program



"We can't mitigate our way out of an inequitable pricing program. Focus on those who spend over 50% of their income on transportation."

- Clarrissa Cabansagan

Key Findings: Reinvesting Revenues

- Create options through a fully multimodal system is critical
- Recognize differences in rural and urban needs (the first/last 5 miles)
- Consider quick wins that have a big positive return and build acceptance

"Working with the community, including those who may be impacted, to design a reinvestment strategy tied to your goals will make the revenues and program meaningful."

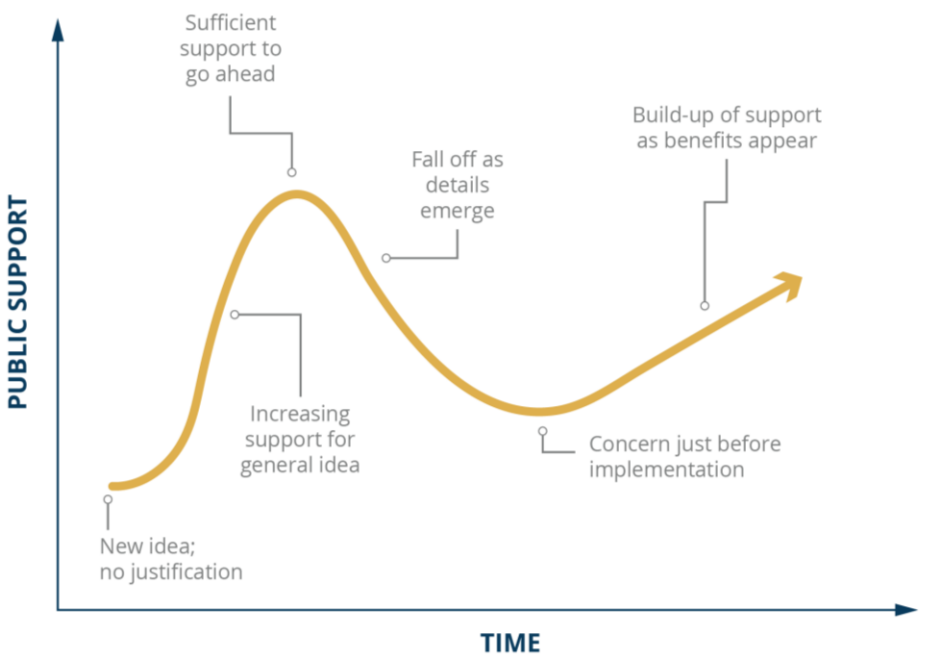
- Rachel Hiatt

Key Findings: Outreach & Communications

- Engaging the community early and often is critical
- Be ready to answer, “What’s in it for me?”
- Use meaningful examples

“Spend time with likely opponents to understand their needs.”

- Sam Schwartz



Next Steps

Wrapping up this summer-

- Technical Report with findings and considerations for future owners/operators and policymakers
- Resolution on considerations recommended to be adopted by Metro Council and JPACT

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