

# Agenda



**Metro**

600 NE Grand Ave.  
Portland, OR 97232-2736

Meeting: **RTP Transit work group meeting**  
Date: Thursday, December 14, 2017  
Time: 9:00 a.m. - Noon  
Place: Metro Regional Center, Council Chambers  
Purpose: Transit and transit related policy discussion  
Outcome(s): Review and feedback on transit and technology related policies for the RTP.

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- |            |   |                    |
|------------|---|--------------------|
| 9:00 a.m.  | <b>Welcome &amp; project updates</b><br><i>Who have you talked to about this work? What have you heard?</i>   | Everyone           |
| 9:15 a.m.  | <b>Draft Evaluation results update</b><br><i>Share second round of system performance evaluations results.</i>  | Jamie Snook, Metro |
| 9:45 a.m.  | <b>Regional Transit Vision</b><br><i>Discuss and compare the transit RTP network and our regional transit vision brainstorm.</i>  | Jamie Snook, Metro |
| 10:15 a.m. | <b>Break</b>  |                    |
| 10:25 a.m. | <b>Regional Technology Strategy (RTX) policy discussion</b><br><i>Introduction and discussion of the RTX Policy ideas and the relationship to the RTS.</i>  | Eliot Rose, Metro  |
| 11:15 a.m. | <b>Transit Policies</b><br><i>Review existing transit policies and discuss new transit policies for the 2018 RTP update.</i>  | Jamie Snook, Metro |
| 11:45 a.m. | <b>Next steps</b><br><i>Discuss next steps/January meeting</i> <ul style="list-style-type: none"><li>• <i>Transit System Expansion Policy evaluation</i></li><li>• <i>Transit vision performance overall</i></li><li>• <i>Draft Regional Transit Strategy</i></li></ul> | Jamie Snook, Metro |
| 12:00 p.m. | <b>Adjourn</b>  |                    |

Meeting Packet	Next Meeting
<ul style="list-style-type: none"><li>• Transit Work Group Agenda</li><li>• November 2017 Transit Work Group Summary</li></ul>	January TBD, Metro

## Directions, travel options and parking information

Covered bike racks are located on the north plaza and inside the Irving Street visitor garage. Metro Regional Center is on TriMet bus line 6 and the streetcar, and just a few blocks from the Rose Quarter Transit Center, two MAX stations and several other bus lines. Visit our website for more information: <http://www.oregonmetro.gov/metro-regional-center>

# Meeting minutes



**Metro**

600 NE Grand Ave.  
Portland, OR 97232-2736

Meeting: **2018 RTP Transit work group meeting**  
Date/time: Wednesday, November 15, 2017 | 2:00-4:30pm  
Place: Metro Regional Center, Room 401  
Purpose: Discuss components of the Regional Transit Strategy and initial findings from the RTP System Evaluation.

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## **Work Group Attendees**

Dan Bower  
April Bertelsen  
Karen Buehrig  
Eric Hesse  
Jay Higgins  
Nicole Hendrix  
Alan Lehto  
Kate Lyman  
Glenn Kirsten  
Kate McQuillan  
Randy Parker  
Lidwien Rahman  
Jamie Snook, Work Group Lead  
Greg Snyder  
Charlie Tso  
Dyami Valentine

## **Affiliate**

Portland Streetcar, Inc  
City of Portland  
Clackamas County  
TriMet  
City of Gresham  
SMART  
TriMet  
TriMet  
Clackamas County/TPAC  
Multnomah County  
C-TRAN  
Oregon Department of Transportation  
Metro  
City of Hillsboro  
City of Wilsonville  
Washington County

## **Staff Attendees**

Grace Cho  
Kim Ellis  
Ben Kahn  
Thaya Patton

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## **I. Welcome & introductions**

Jamie Snook called the meeting to order and welcomed the group. Attending work group members introduced themselves and provided updates of their agencies and/or municipalities.

## **II. MAX Red Line Extension and Reliability Improvements Project (Alan Lehto, TriMet)**

Alan Lehto, TriMet provided a briefing on the MAX Red Line Extension and Reliability Improvements Project. The goals of the project is to extend the Red Line west of the Beaverton Transit Center to relieve overcrowding on the Blue Line and fulfill community desires for a direct connection to Portland International Airport (PDX), as well as, increase reliability of operation.

The project also calls for building a double track near Gateway Transit Center. The benefits of the project include an increase of service for the Westside stops and improved performance at Gateway. Mr. Lehto provided specific detail of the proposed improvements at the FairPlex station, Gateway, and PDX. Two options were presented regarding Gateway, both of which have tradeoffs and advantages. Mr. Lehto then discussed the community engagement process project funding, and timeline, which is currently estimated to be \$205 million, and is anticipated to be completed by 2021/2022.

### **III. Growing Transit Communities**

April Bertelsen, from the City of Portland, provided an overview of the Growing Transit Communities (GTC) Plan. The goal of the plan is to “develop transportation investment plans for a few transit corridors that help support both frequent transit service and multi-modal transit-oriented development. All of these help grow transit communities.”

Through this process, there were opportunities to hear from the community, including open houses, online surveys, community advisory group and other table setting events. To select transit corridors, several selection criteria were identified: residential density, opportunity to jobs and education, higher concentration of historically disadvantaged populations, mixed-use land use and gaps in the pedestrian and bicycle networks. The corridors selected are line 77, line 20, and line 87.

Ms. Bertelsen briefly explained the GTC Plan recommendations, which include corridor investment plans that identify prioritize transit supportive projects. The recommendation included bundling of projects and identified tier 1 and tier 2 priorities. She concluded by outlining the early implementation achievements, which include some funding, a transit youth pass, TriMet service increases on lines 20, 77, and 87, and new funding for transit service in HB 2017.

### **IV. First and Last Mile Connections**

Eric Hesse presented on First and Last Mile Connections and how it fits into TriMet’s plans.

Mr. Hesse provided a brief overview of the concept and explained the importance of the relationship between transit and active transportation. Mr. Hesse provided a summary of TriMet’s Pedestrian Network Analysis and Bike Plan Summary.

Mr. Hesse also provided a description of the emerging trends in future mobility and access, particularly how technology could impact transit. Mr. Hesse described some of the implementation tools, like the use of shuttles and community job connectors, which have some use in the region currently. Next, he explained activity and trends regarding autonomous vehicles, including the Fleets of Autonomous Vehicles that are Electric and Shared (FAVES) model, and NACTO guidance. Eric explained how services like Zipcar and ReachNow are expanding their footprint and influence in Portland, the state of park and rides, and the concept of “Mobility as a Service”.

The region is developing a plan to help build an understanding of the implications of technology trends on first/last mile connections. This will inform the RTP and the Regional Transit Strategy. A member stated their enthusiasm and excitement for this topic, and affirms the direction of the work group. Members discussed the importance of an implementation project for first/last mile connections.

### **V. RTS DRAFT Report Outline**

Ms. Snook detailed the initial set of draft evaluation results of the investment strategies and presented an interactive map of the location of all transit projects in the 2018 RTP. The presentation did not include all the performance measures and was a snapshot of what we have completed to date. Ms. Snook briefly described the overall purpose of the RTP system evaluation measures:

- How much do people and goods travel in our region?
- How much do households spend on housing and transportation in our region?
- How safe is travel in our region?
- How easily, comfortably and directly can we access jobs and destinations in our region?
- How efficient is travel in our region?
- How will transportation impact climate change, air quality, and the environment?

The working group discussion focused on the following:

- The model results how progress is being made towards our targets, specifically the mode share target, but they are not as close as hoped or anticipated.
- The model includes improvements to other modes and all modes compete with each other for trips.
- There are three investment strategies: 2027 Constrained, 2040 Constrained and the 2040 Strategic.
- There are gains in transit access to jobs within 45 minutes overall, however there were some underperformance in the model. The group discussed potential factors that may influence this, including the model doesn't factor in displacement or movement in vulnerable populations.

## **VI. RTS DRAFT Report Outline**

Due to the work group meeting going longer than anticipated, the Regional Transit Strategy report outline was not discussed in detail. Ms. Snook briefly explained the contents of each chapter, but assigned work group members to review the report outline on their own before the next work group meeting.

## **VII. Next Steps**

The next work group meeting will take place in December, and will address the RTP network map, system evaluation, transit system expansion policy, RTX policy, and Transit policy.

## **VIII. Adjourn**

There being no further business, meeting was adjourned at 4:35 p.m. by Jamie Snook.

Meeting summary respectfully submitted by  
Ben Kahn, Metro Intern and Jamie Snook, Principal Planner/Transit Work Group Lead

### **Next meeting of RTP Transit work group**

December 14 2017 | 9 - 12

Metro Regional Center, Council Chambers



Attachments to the Record:

Item	Topic	Document Date	Description
1	Agenda	10/15/2017	October 15, 2017 Meeting Agenda
2	Meeting Summary	9/2017	RTP Transit Work Group Summary, September 2017
3	Weblink		City of Portland Growing Transit Communities Plan <a href="https://www.portlandoregon.gov/transportation/68193">https://www.portlandoregon.gov/transportation/68193</a>
4	Project list	10/17/17	2018 Regional Transportation Plan All Project List
6	Project list	10/17/17	2018 Regional Transportation Plan Financially Constrained Project List
7	Project list	10/17/17	2018 Regional Transportation Plan Additional Strategic Project List
8	Factsheet	10/2017	2018 Regional Transportation Plan Call for Projects Update
9	Document - Outline	11/9/17	Regional Transit Strategy DRAFT Outline for report
10	Presentation	11/15/17	MAX Red Line Extension and Reliability Improvement Project
11	Presentation	11/15/17	Growing Transit Communities Plan
12	Presentation	11/15/17	First and Last Mile Connections
13	Presentation	11/15/17	Regional Transit Strategy: Draft Outline and Initial Transit System Performance Evaluation results

ID	Name of RTP System Evaluation Measure
How much do people and goods travel in our region?	
1.	<b>Multimodal travel</b> System-wide # of miles traveled (total and share of overall travel), sub-region # of miles (total and share of overall travel) A) Vehicle Miles Traveled (VMT) <i>(total, per capita, and per employee)</i> B) Bicycle miles traveled <i>(total and per capita)</i> C) Freight miles traveled <i>(total)</i> D) Pedestrian miles traveled <i>(total and per capita)</i> E) Person miles traveled <i>(total)</i>
2.	<b>Active transportation and transit mode share</b> System-wide <i>(total and share)</i> : A) walking B) bicycling C) transit  Non-driving travel <i>(total and share)</i> : A) Central City B) Regional centers C) Mobility corridors D) Sub-regions (three counties and city of Portland)
How much do households spend on housing and transportation in our region?	
3.	<b>Affordability*</b> Combined cost of housing and transportation (Development of this measure has been deferred to next RTP update)
How safe is travel in our region?	
4.	<b>Share of safety projects*</b> Percent of number and cost of safety projects in the RTP investment packages region-wide, in areas with historically marginalized communities, in areas with focused historically marginalized communities, in census tracts with greater than 26.5% people of color, and per person in each area.
5.	<b>Exposure to crash risk*</b> The sum of all non-freeway vehicle miles traveled (VMT) in Transportation Area Zones (TAZ) for RTP investment packages region-wide, in historically marginalized communities, in focused historically marginalized communities, and in census tracts with greater than 26.5% people of color.
How easily, comfortably and directly can we access jobs and destinations in our region?	
6.	<b>Access to travel options – system connectivity &amp; completeness*</b> Miles, network percent complete, connectivity, density and timing of sidewalk, bikeway, trail and new street investments region-wide, in historically marginalized communities, in focused historically marginalized communities, in census tracts with greater than 26.5% people of color, and within 1/2-mile of transit.
7.	<b>Access to jobs*</b> Number of jobs (classified by wage groups – low, middle, and high) accessible within A) 30 minutes by auto B) 45 minutes by transit C) 30 minutes by bike D) 20 minutes by walking
8.	<b>Access to community places*</b> A) Measure access by bicycling, walking, transit, driving B) Adjust the time sheds for each mode C) Define existing “daily needs” consistent with other similar efforts, including the TriMet Equity Index.
9.	<b>Access to bicycle and pedestrian parkways</b> Number and percent of households within 1/4-mile of a bicycle or pedestrian parkway.
10.	<b>Access to transit</b> Number and share of households, low-income households and employment within 1/4-mile of high capacity transit or frequent service transit
11.	<b>Access to industry and freight intermodal facilities</b> Extent that industrial land and freight intermodal facilities are transportation constrained
How efficient is travel in our region?	
12.	<b>Multi-modal travel times</b> Between key origin-destinations for mid-day and 2-hr PM peak
13.	<b>Congestion</b> A) Vehicle hours of delay per person B) Interim Regional Mobility Policy - Locations of throughways, arterials, and regional freight network facilities that that exceed interim LOS threshold C) Freight truck delay D) Total cost of delay on freight network
14.	<b>Transit efficiency</b> A) Boarding rides per revenue hour for HCT & bus B) Revenue hours by transit mode C) Transit ridership system-wide by each transit service type
How will transportation impact climate change, air quality and the environment?	
15.	<b>Climate change</b> Tons of transportation-related greenhouse gas emissions <i>(total and per capita)</i>
16.	<b>Clean air</b> Tons of transportation related air pollutants <i>(e.g. CO, ozone, PM-10)</i>
17.	<b>Habitat impact*</b> Number and percent of projects that intersect high value habitat

\* Reflects the transportation priorities identified by historically marginalized communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis.

# How much transit did we provide?

## TRANSIT AT A GLANCE

	2027 Constrained	2040 Constrained	2040 Strategic	Climate Smart Strategy
Daily revenue hours				
Service expansion (increase from 2010 level)	X% increase	X% increase	X% increase	
Rush hour frequency	10-minute service on X routes	10-minute service on X routes	10-minute service on X routes	
Off-peak frequency	30-minute service on X routes	20-minute service on X routes	15 or 20-minute service on X routes	
New high capacity transit connections				
Other service enhancements				
Public and private shuttles				
Fares				
Estimated capital cost* (2016\$)				
Estimated service operating costs** (2016\$)				

\* Capital costs reflect HCT capital costs plus fleet replacement and expansion costs.

\*\* Operating costs for TriMet service were calculated by annualizing the daily revenue hours proposed for each scenario and applying TriMet's average operating cost per revenue hour, with cost by mode weighted by the proportion of service provided on each mode.

# ROUND 1: TRANSIT ACCESS AT A GLANCE

## HOUSEHOLD ACCESS TO TRANSIT AT A GLANCE

Share of total households near\* transit

SERVICE FREQUENCY	2027 Constrained		2040 Constrained		2040 Strategic		Climate Smart Strategy	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes								
11 – 15 minute service								
16 – 25 minute service								
26 – 45 minute service								
More than 45 minute service								
No fixed-route service								

\* 1/4-mile proximity to bus, 1/3-mile proximity to streetcar and 1/2-mile proximity to light rail

## LOW-INCOME HOUSEHOLD ACCESS TO TRANSIT AT A GLANCE

Share of low-income households\*\* near transit

SERVICE FREQUENCY	2027 Constrained		2040 Constrained		2040 Strategic		Climate Smart Strategy	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes								
11 – 15 minute service								
16 – 25 minute service								
26 – 45 minute service								
More than 45 minute service								
No fixed-route service								

\*\* \$24,999 per year or less

## JOB ACCESS TO TRANSIT AT A GLANCE

Share of jobs near transit

SERVICE FREQUENCY	2027 Constrained		2040 Constrained		2040 Strategic		Climate Smart Strategy	
	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening	Rush hour	Daytime & evening
Every 10 minutes								
11 – 15 minute service								
16 – 25 minute service								
26 – 45 minute service								
More than 45 minute service								
No fixed-route service								



# Regional Transit Strategy

Transit component of the the 2018 Regional  
Transportaiton Plan Update

**DRAFT FOR DISCUSSION V2 12/12/17**

January 2018





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**Metro is the federally mandated metropolitan planning organization** designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

**Project web site:** [oregonmetro.gov/mtip](http://oregonmetro.gov/mtip)

The preparation of this report was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration





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**ATTACHMENTS**

**TABLES AND FIGURES**

## **FORWARD**

The 2018 Regional Transit Strategy (RTS) updates the region's first Regional High Capacity Transit (HCT) System Plan, completed in 2009.

## **EXECUTIVE SUMMARY**

Executive summary will be about 2 pages. Executive Summary could handout for distribution.

## CHAPTER 1: INTRODUCTION

The 2018 Regional Transit Strategy (RTS) sets regional transit policy and provides a framework for working towards implementing a regional transit system that supports our 2040 Growth Concept. This Introduction provides context for the RTS, including ...

### Metro's Role

As the region's metropolitan planning organization (MPO), Metro has a variety of roles in transportation safety planning, including:

- setting regional transit vision, policies, targets, and performance measures;
- reporting on annual transit targets and performance measures;
- planning for high capacity transit projects, environmental planning, project development leading to a locally preferred alternative;
- convening jurisdictions and agencies to achieve better coordination;
- encouraging best practices in transit planning and design;
- supporting and introducing transportation legislation;
- supporting local and state efforts; and
- allocating federal transportation funding.

The 2018 RTS provides the regional transit vision for the Portland metro region, defined as the area within the Metropolitan Planning Area (MPA). The MPA is slightly larger than the region's Urban Growth Boundary.

### Policy Context

Relationship to other plans...

### Transit Policy Framework

Building upon our existing transit investments and plans, **the Regional Transit Strategy vision is to make transit more frequent, convenient, accessible and affordable for everyone.** The transit strategy will coordinate the operational, capital and transit supportive elements to make transit work more efficiently and effectively for everyone. The Regional Transit Vision is in response to the community needs as a whole, and is as much about improving operations and ensuring a state of good repair as it is building new connections and supporting our 2040 Growth Concept and our Climate Smart Strategy.

## **Safety, Equity and Public Health**

## **Planning and Public Engagement Process**

## **Document Organization**

The 2018 RTS is organized into six chapters, with a foreword, executive summary, and back matter such as a glossary and list of acronyms. Supporting documents are provided as standalone appendices. This section provides an overview of the different parts of the document.

### **Foreword**

Introduces the genesis, purpose, limitations, and scope of the strategy.

### **Executive Summary**

Provides a short summary and key elements of the strategy.

### **Chapter 1: Introduction**

Provides an introduction to and context for understanding the strategy.

### **Chapter 2: Regional Transit Vision and Policies**

Describes the Regional Transit Vision and associated policies.

### **Chapter 3: Key Trends, Challenges and Opportunities**

Provides key.

### **Chapter 4: Strategies and Actions**

Describes the strategies and actions to help achieve our transit vision.

### **Chapter 5: Performance, Monitoring and Measuring Progress**

Describes performance and monitoring measures for achieving our vision.

### **Chapter 6: Implementation**

Outlines how to implement the Regional Transit Vision.

### **List of Partners**

Agencies, organizations, non-profits, private entities, industry and the public who will play a role in implementing the 2018 RTS.

**Acronyms**

Defines acronyms used in the document.

**Glossary**

Defines terms used in the document.

**Appendices**

Appendices are stand-alone documents that provide additional technical information for the 2018 Regional Transit Strategy.

2009 High Capacity Transit (HCT) System Plan

## CHAPTER 2: REGIONAL TRANSIT VISION AND POLICIES

This is an important time to update the Regional Transit Vision. With continued regional growth come challenges such as more congestion, higher housing prices, and constrained access to employment and daily needs. Residents, elected officials, and community organizations view increased transit service as a critical part of the overall solution to these challenges. If we want to become the region we laid out in our 2040 Growth Concept, we must continue improving transit's accessibility, service, reliability, and reach.

Through the RTS, we are engaging community leaders and transit providers serving the region in order to develop a shared vision and investment strategy. Building off of the Climate Smart Strategy, the Regional Transit Vision is: ***to make transit more frequent, convenient, accessible, and affordable for everyone***. Investments in the transit system should help achieve the following goals:

- **Frequent:** Align frequency and type of transit service to meet existing and projected demand and in support of local and regional land use and transportation visions.
- **Convenient:** Make transit more convenient and competitive with driving by improving transit speed and reliability through priority treatments (e.g. signal priority, bus lanes, queue jumps, etc.) and other strategies. Improve customer experience by ensuring seamless connections between various transit providers, including transfers, information, and payment.
- **Accessible:** Provide safe and direct biking and walking routes and crossings that connect to stops to make transit more accessible. Improve accessibility for seniors and persons with disabilities. Expand the system to improve access to jobs and essential destinations/daily needs.
- **Affordable:** Ensure transit remains affordable, especially for those dependent on it.

The Regional Transit Vision will be implemented through improving service, investing in infrastructure and expanding transit supportive elements:

1. **Transit service improvements:** local and regional transit service improvements designed to meet current and projected demand in line with local and regional visions and plans.
2. **Capital investments:** new enhanced transit strategies such as signal priority or high capacity transit options such as bus rapid transit or light rail.
3. **Transit supportive elements:** including policies such as Travel Demand Management and physical improvements such as sidewalks, crossings, and complementary land uses.

As we explore our region's transit needs, it is important to remember that limited funding is a challenge faced by regions and transit providers throughout the country. Many jurisdictions have taken to raising funds at the local level as a means to leverage the limited federal funds available. While our region is potentially preparing for a funding



measure to support specific transit capital improvements, this will not address additional needs identified by stakeholders in the Regional Transit Vision, nor will it support increased operations or service investments.

### **Regional Transit Network Map**

This section will include a brief description of how the map was developed and summarize the changes from the existing RTP Regional Transit Network Map.

### **Recommended RTP Transit Policy language**

**Build the total network and transit-supportive land uses to leverage investments**

**Expand high capacity transit**

**Expand regional and local frequent service transit**

**Expand Enhanced Transit network**

New..

**Improve local service transit**

**Support expanded commuter rail and intercity transit service to neighboring communities**

**Improve pedestrian and bicycle access to transit**

**Maintain and update old and aging infrastructure**

New...

**Ensure that transit remains affordable**

New...

## **CHAPTER 3: TRENDS AND CHALLENGES**

**Climate Change**

**Economic Growth**

**Aging Infrastructure**

**New Technology**

**Public Health**

**Aging Population**

**Affordability**

**Changing Travel Behavior**

**Public Funding**

## **CHAPTER 4: STRATEGIES AND ACTIONS**

### **Strategies**

**Climate Smart Strategy**

**TriMet's Service Enhancement Plans**

**SMART's Transit Master Plan**

**Enhanced Transit**

**Streetcar Master Plan**

**High Capacity Transit (HCT) System Plan**

**Growing Transit communities**

**First and last mile connections**

**Coordinated Transportation Plan**

### **Actions**

#### **Best Practices**

**Service Improvements**

**Capital Investments**

**Transit-Supportive Elements**

## **CHAPTER 5: MONITORING AND MEASURING PROGRESS**

### **Performance Measures**

How much do people and goods travel in our region?

How much do households spend on housing and transportation in our region?

How safe is travel in our region?

How easily, comfortably and directly can we access jobs and destinations in our region?

How efficient is travel in our region?

How will transportation impact climate change, air quality and the environment?

### **Targets**

### **Monitoring process and measures**

## **CHAPTER 6: IMPLEMENTATION**

### **Setting Transit Priorities**

#### **Transit Service Investments**

Transit service within our MPA

Service outside MPA

#### **Enhanced Transit**

Process and criteria for moving enhanced transit projects forward.

#### **Transit System Expansion Policy**

Process and criteria for moving high capacity transit projects forward.

### **10- Year Investment Strategy**

Recommended service and capital investments through 2027

#### **Long term investment strategy (2028-2040)**

Recommended service and capital investments through 2027

#### **Investments beyond 2040**

Recommended service and capital investments in the Strategic Investment Strategy and beyond.

### **Funding**

#### **HB 2017**

#### **MTIP**

#### **Local Funding**

#### **FTA Capital Investment Grant Program**



If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we’ve already crossed paths.

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Metro

*Getting there*



*by transit*

# Regional Transit Strategy

*a component of the 2018 RTP*

Regional Transit Strategy Work Group

Meeting #17

December 14, 2017



# Today's agenda...

- I. Welcome and introductions
- II. Draft evaluation results
- III. Regional transit vision
- IV. Regional technology strategy policy discussion
- V. Transit policy discussion
- VI. Next steps



# RTP System Performance Evaluation

*This information is for research and discussion purposes only and does not reflect current or future policy decisions of the Metro Council, MPAC or JPACT. The information is subject to change pending final modeling and analysis in 2018.*

**Metro**

# Draft phasing of RTP projects

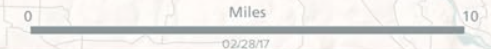
\*% cost = share of costs for all projects in that RTP investment category

Costs have been rounded in 2016 dollars

RTP Investment Category	Draft 2018-2027 Financially Constrained RTP Projects			Draft 2028-2040 Financially Constrained RTP Projects			Draft 2028-2040 Strategic RTP Projects		
	Cost	Count	% cost*	Cost	Count	% cost*	Cost	Count	% cost*
Active transportation	\$674M	133	25%	\$875M	160	32%	\$1.2B	101	43%
Transit capital	\$3.4B	30	50%	\$1.9B	17	28%	\$1.5B	26	22%
Roads & bridges	\$1.3B	149	27%	\$1.5B	160	32%	\$1.9B	123	41%
Throughways	\$650M	14	11%	\$4B	10	65%	\$1.5B	14	24%
TSMO/TDM/TOD	\$177M	27	29%	\$182M	23	29%	\$257M	17	42%
Freight access	\$132M	20	28%	\$94M	16	20%	\$249M	12	52%
Other-planning	\$5M	1	9%	\$10M	2	19%	\$38M	2	71%
All RTP projects	\$6.3B	374	29%	\$8.5B	388	40%	\$6.6B	295	31%



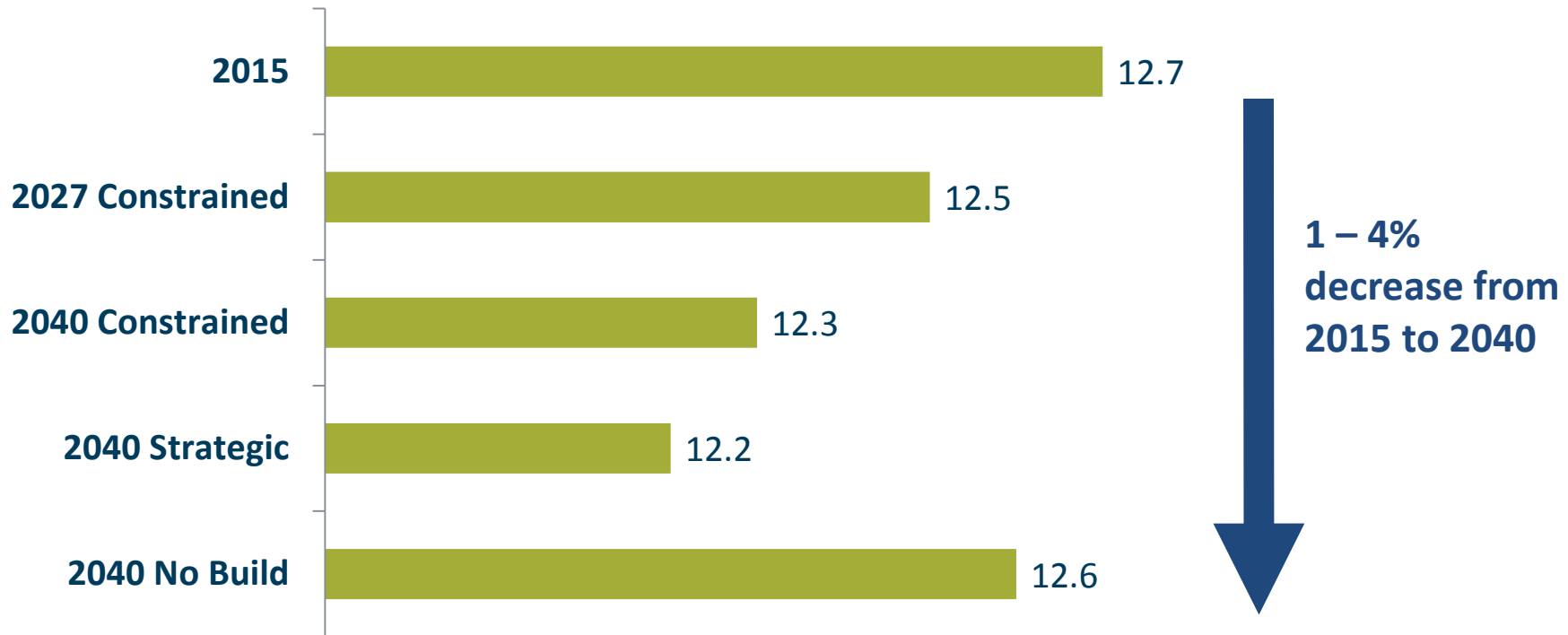
**How much do people and goods travel in our region?**



# Individuals drive less...

Measure 1a

## Vehicle miles traveled per person each day



*Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)*

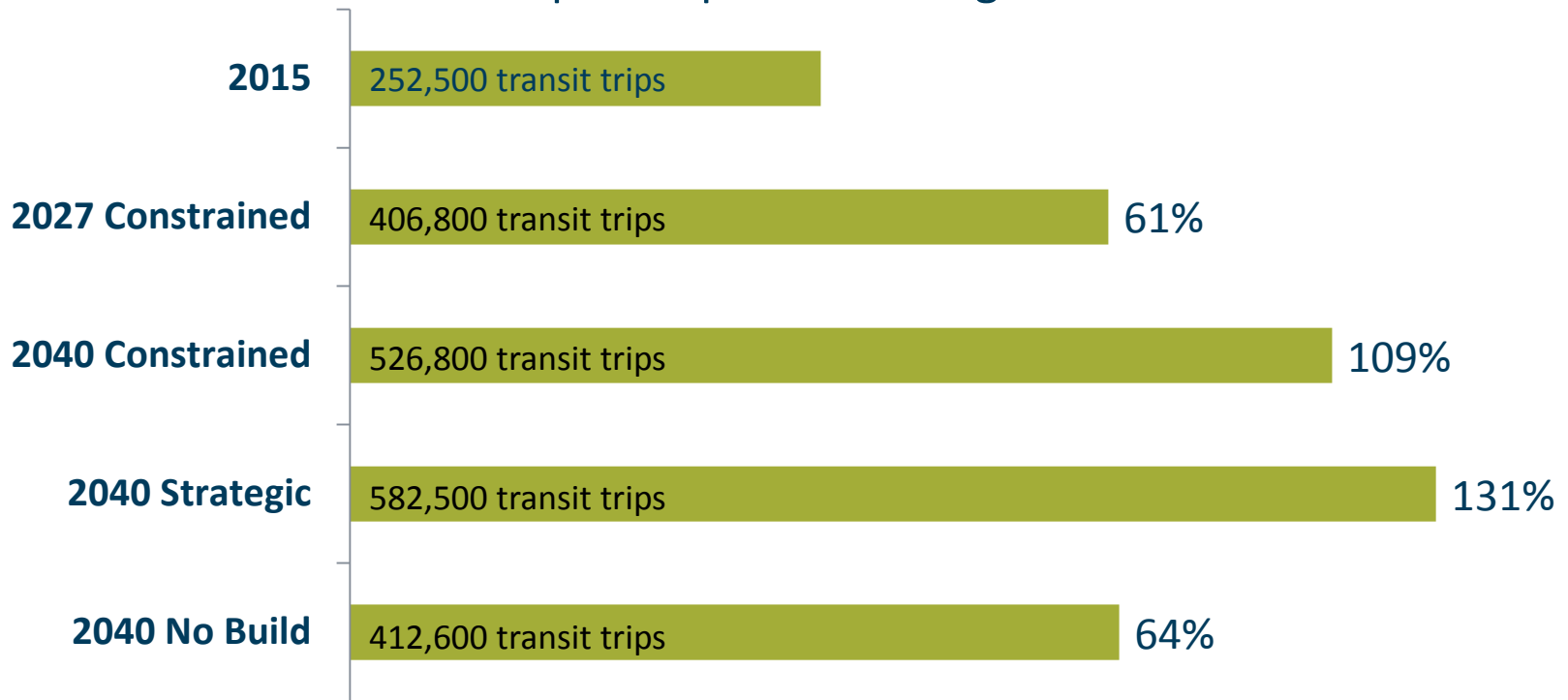
*Source: Metro Travel Demand Model*

# Transit demand is growing

Measure 14c

## Average weekday transit demand

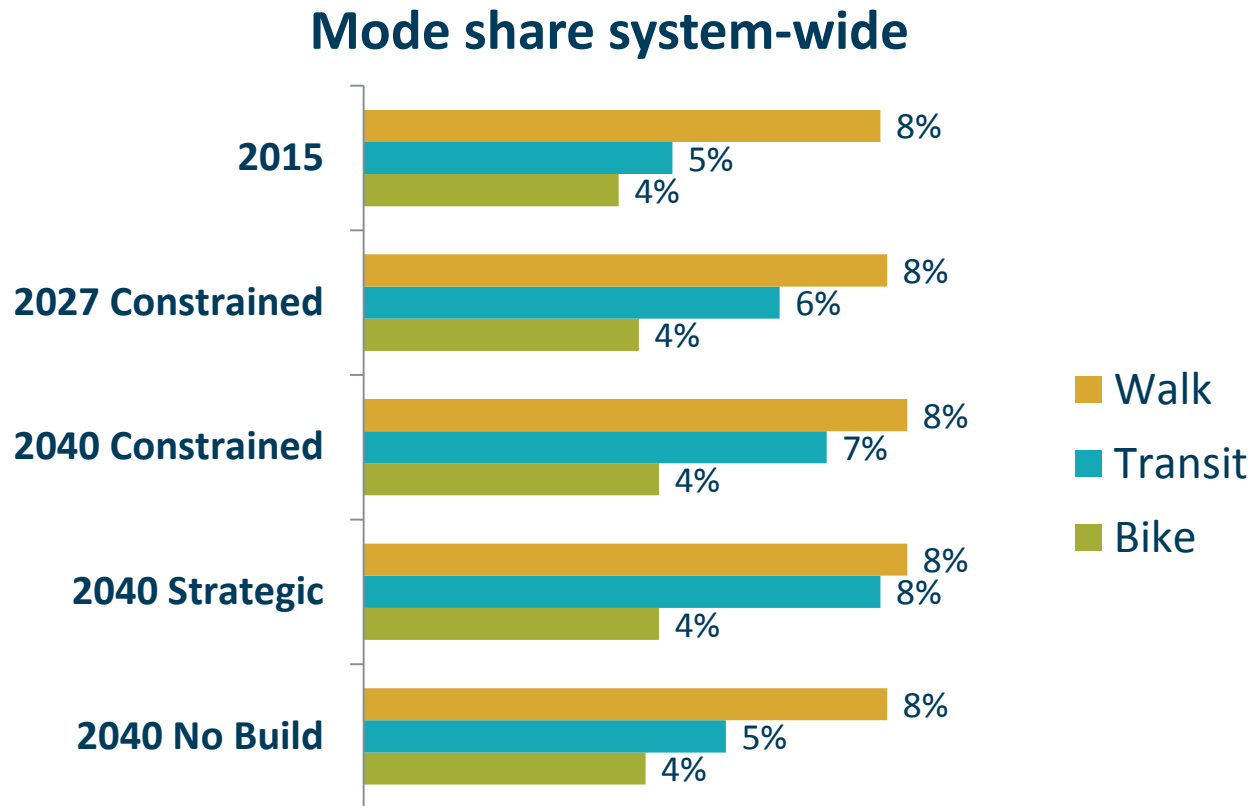
Total number of trips and percent change from 2015



Source: Metro Travel Demand Model

# Individuals walk, bike and use transit more

Measure 2



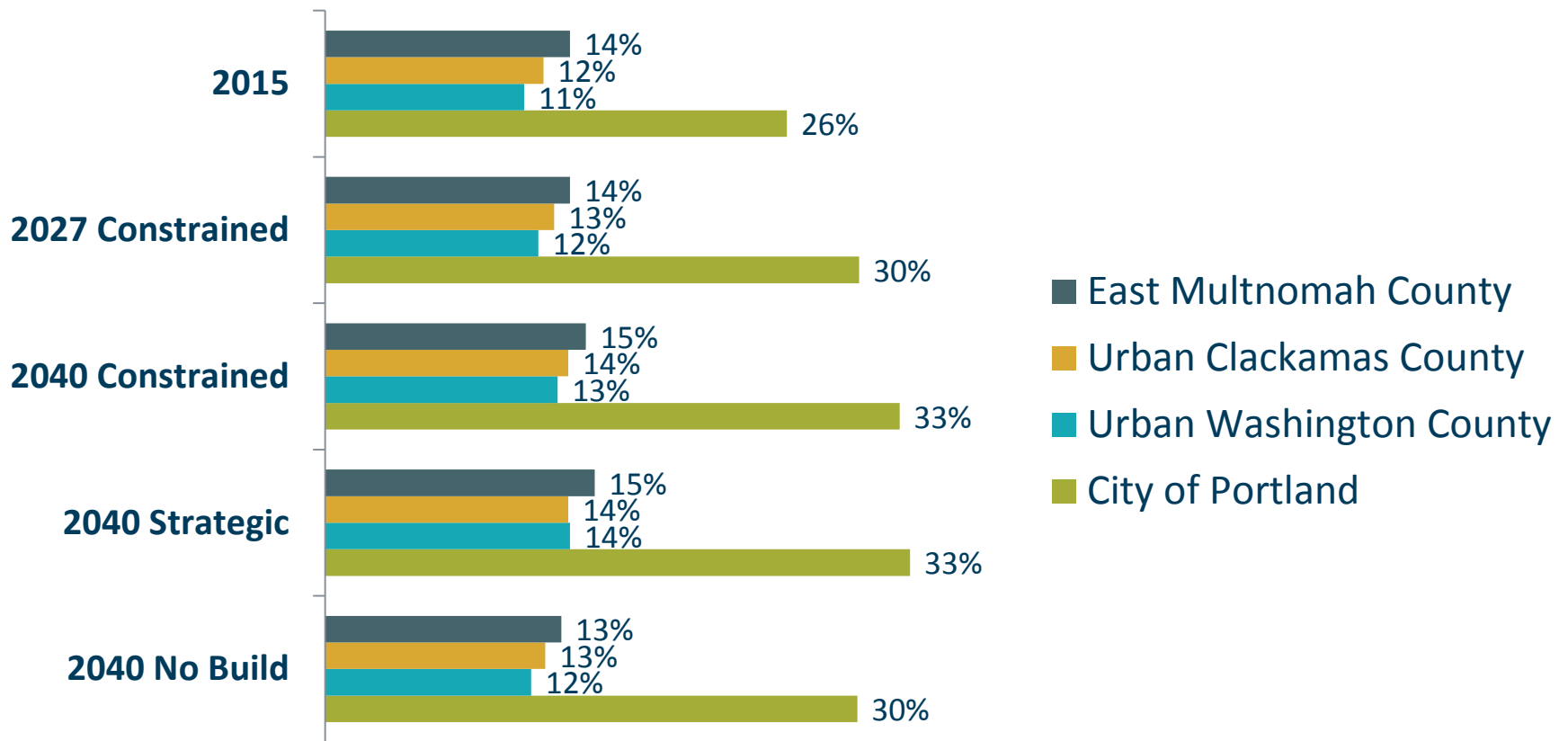
*Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)*

*Source: Metro Travel Demand Model*

# Portland sees greatest increase in walking, biking and transit use

Measure 2

## Non driving mode share by subarea



*Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)*

*Source: Metro Travel Demand Model*

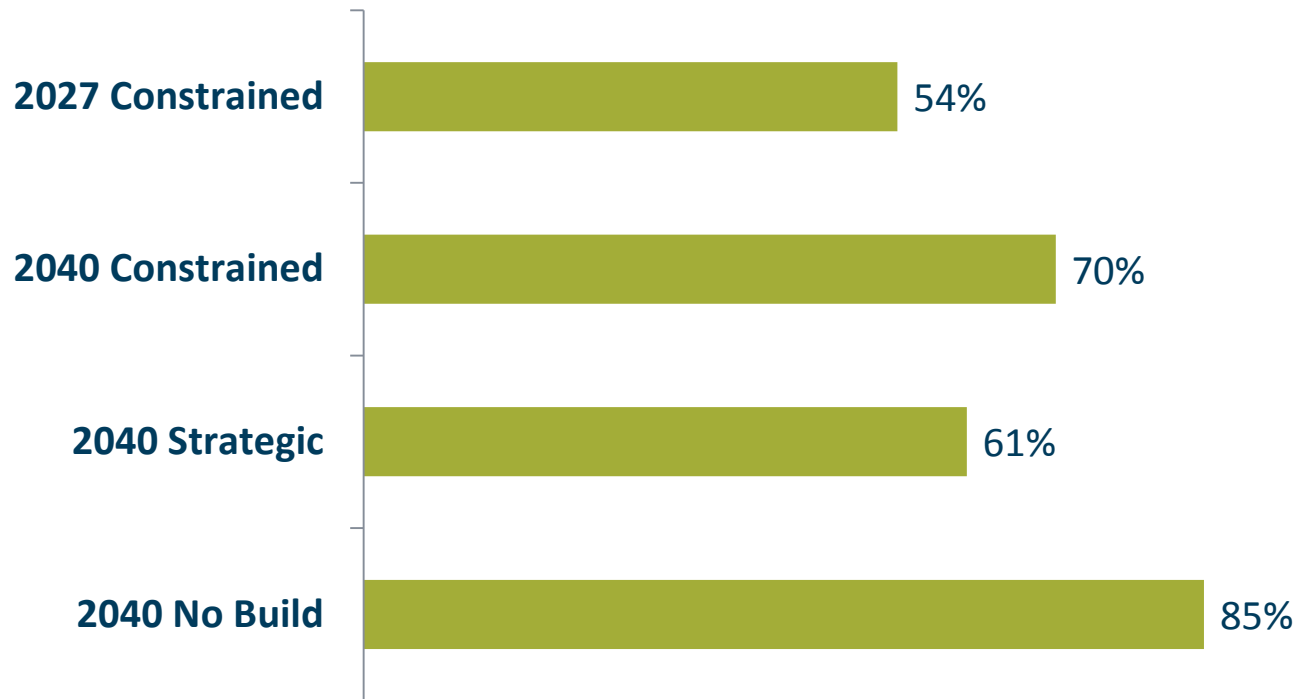


# Drivers spend more time in traffic than today

Measure 13

## Motor vehicle hours of delay per person

Percent change from 2015 in PM 2hr peak



*Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)*

*Source: Metro Travel Demand Model*

# How efficient is auto, freight and transit travel in our region?



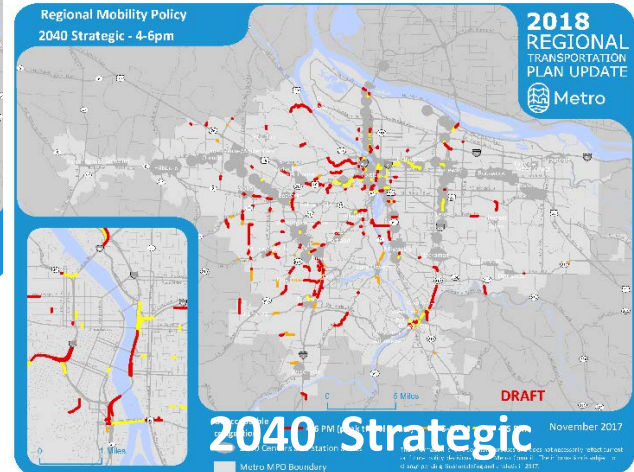
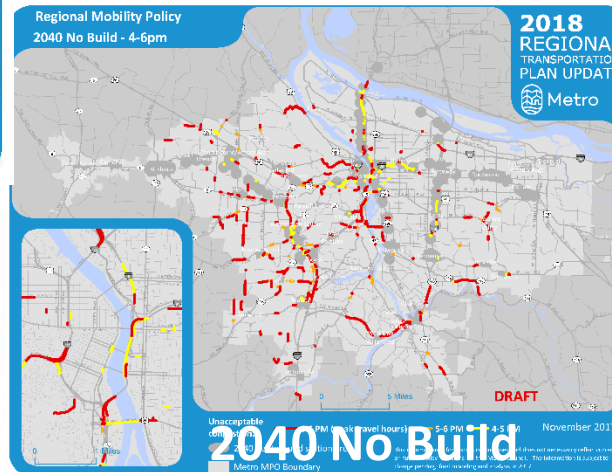
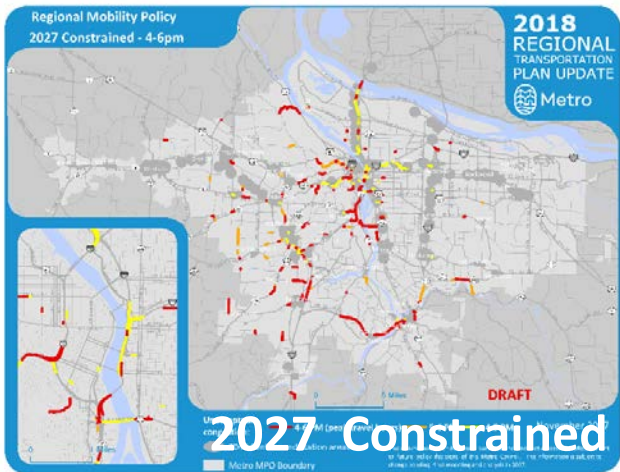
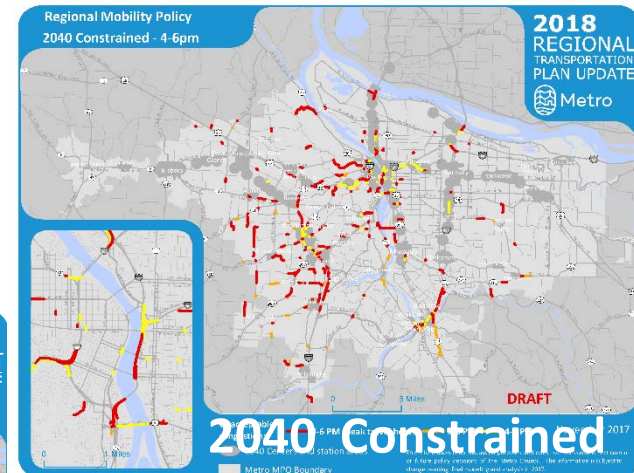
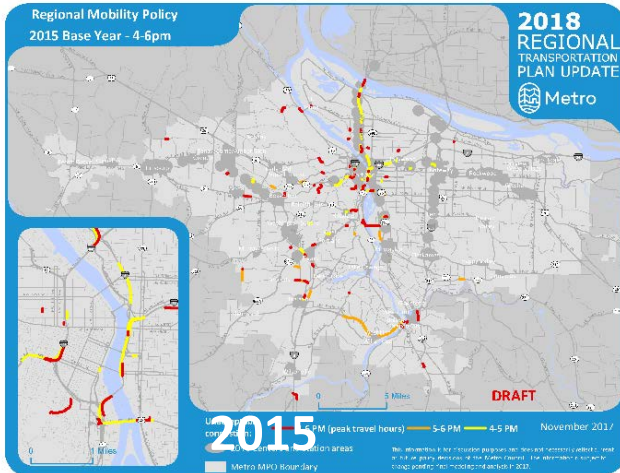
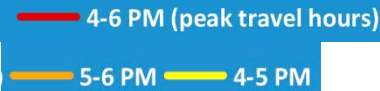


# Congestion continues to increase

Measure 13

## Evening Peak 4-6pm

Unacceptable congestion:



Unacceptable congestion as defined by the 2014 RTP Interim Regional Mobility Policy

Source: Metro Travel Demand Model

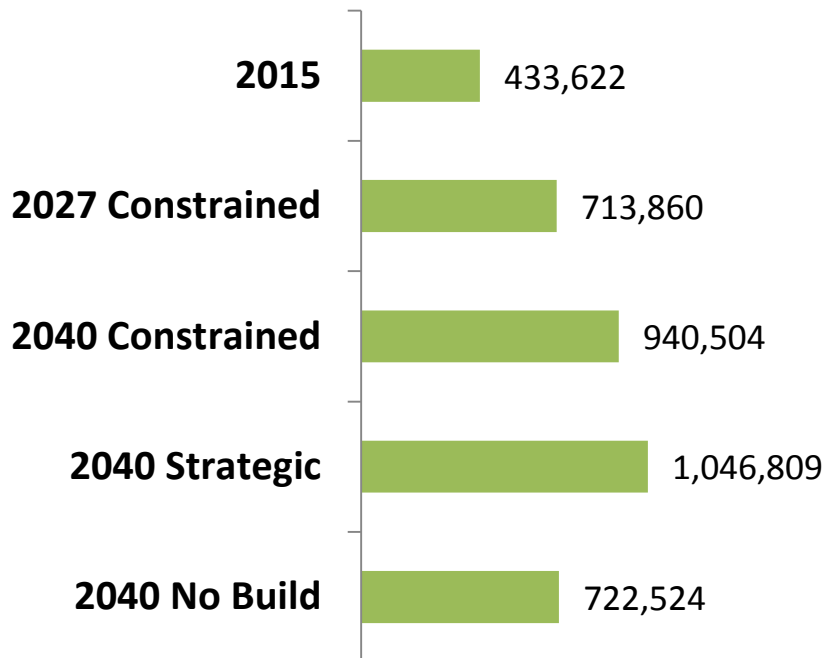
This information is for research and discussion purposes only and does not reflect current or future policy decisions of the Metro Council, MPAC or JPACT. The information is subject to change pending final modeling and analysis in 2018.

Transit travel time (minutes) between locations (walk + wait + in-vehicle time)		2015 Base		2040 No Build		2040 Constrained		2040 Strategic	
Mobility Corridor	Origin --> Destination	12-1pm	4-6pm	12-1pm	4-6pm	12-1pm	4-6pm	12-1pm	4-6pm
1	CBD to Vancouver CBD	46	32	50	39	44	32	44	31
2	CBD to Tigard								
2	CBD to Tualatin								
2	Tigard to Tualatin								
3	Tigard to Wilsonville	80	53	79	53	75	53	49	46
4	CBD to Rose Quarter	18	17	18	17	16	15	16	15
5	CBD to Gateway	34	32	34	32	32	30	32	30
6	Gateway to Gresham	35	31	35	31	35	31	35	31
6	Gateway to Troutdale	65	51	56	51	54	55	47	47
7	CBD to PDX	51	51	51	51	49	47	49	47
7	Gateway to Vancouver Mall	97	92	96	99	87	83	87	83
8	Gateway to Oregon City	75	76	67	67	67	64	63	64
8	Gateway to Clackamas Town Center	30	30	30	30	30	26	30	26
8	Clackamas Town Center to Oregon City	51	51	41	41	41	42	37	42
9	Oregon City to Canby	54	40	55	44	54	43	54	43
10	Tualatin to Oregon City	117	98	101	107	85	91	85	88
11	Tigard to Sherwood	54	36	62	42	42	42	42	41
11	Tualatin to Sherwood	90	67	92	46	71	45	65	44
12	Beaverton to Washington Square	27	27	26	27	26	27	24	24
12	Washington Square to Tigard	20	20	20	21	19	21	18	18
12	Beaverton to Tigard	33	30	33	30	32	30	23	23
13	CBD to Beaverton	30	28	30	28	30	28	30	28
14	Beaverton to Hillsboro	36	32	36	32	36	32	36	32
14	Amberglen to Hillsboro	42	36	42	36	37	37	36	34
14	CBD to Hillsboro	59	55	59	55	59	55	59	55
15	Hillsboro to Forest Grove	36	37	37	39	33	34	32	29
16	CBD to Sauvie Island	81	83	84	90	76	76	76	76
16	CBD to St Johns	57	55	55	57	51	51	50	51
17	no route specified	--	--	--	--	--	--	--	--
18	no route specified	--	--	--	--	--	--	--	--
19	CBD to Lents	49	49	49	49	48	44	48	44
20	Lents to Gresham	53	49	53	49	43	45	43	45
21	CBD to Oregon City	71	64	68	71	67	70	67	70
22	Milwaukie to Clackamas Town Center	29	29	28	29	28	29	29	30
23	Clackamas Town Center to Happy Valley	38	39	39	42	38	40	38	34
24	Wood Village to Gresham	32	32	27	24	33	28	25	24
24	Gresham to Happy Valley	91	88	92	91	91	85	63	61
24	Gresham to Sandy	45	45	45	46	45	46	45	46

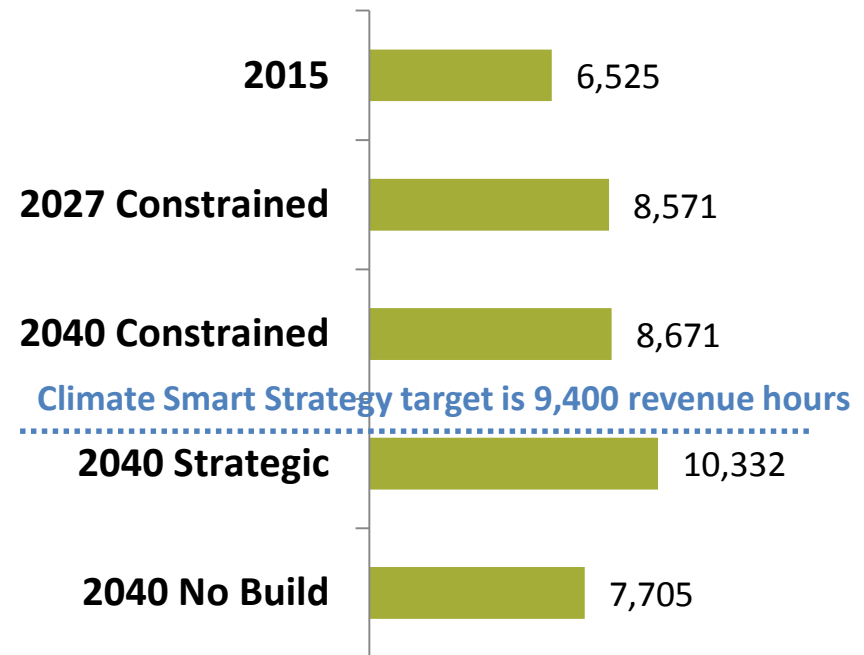
# Transit is productive, but falls short of Climate Smart transit service

Measure 14

## Boardings



## Revenue hours of service



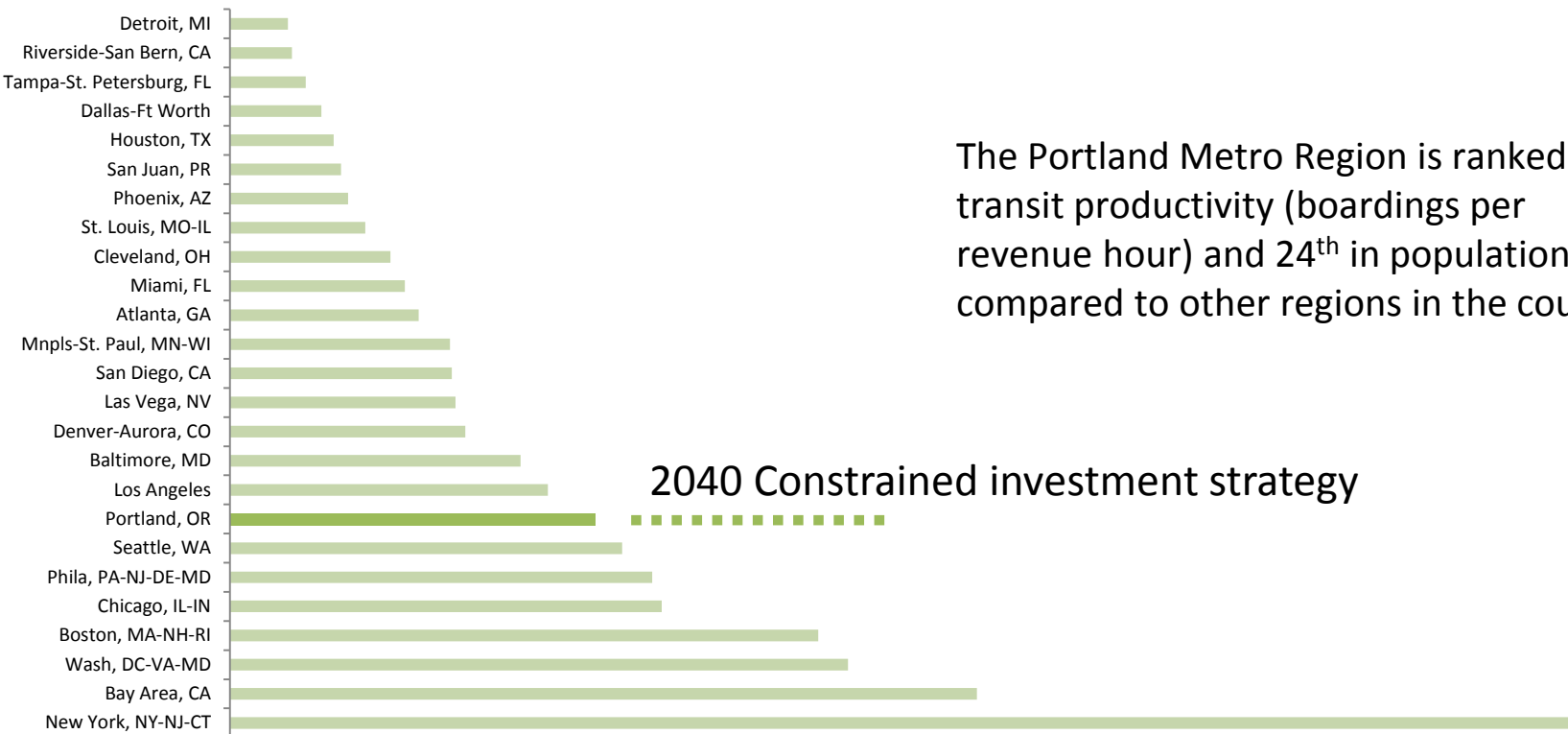
\* The 2040 Strategic Investment Strategy exceeds the revenue hours target adopted in the Climate Smart Strategy

Source: Metro Travel Demand Model

# Transit is productive

Measure 14

## Boardings per revenue hour



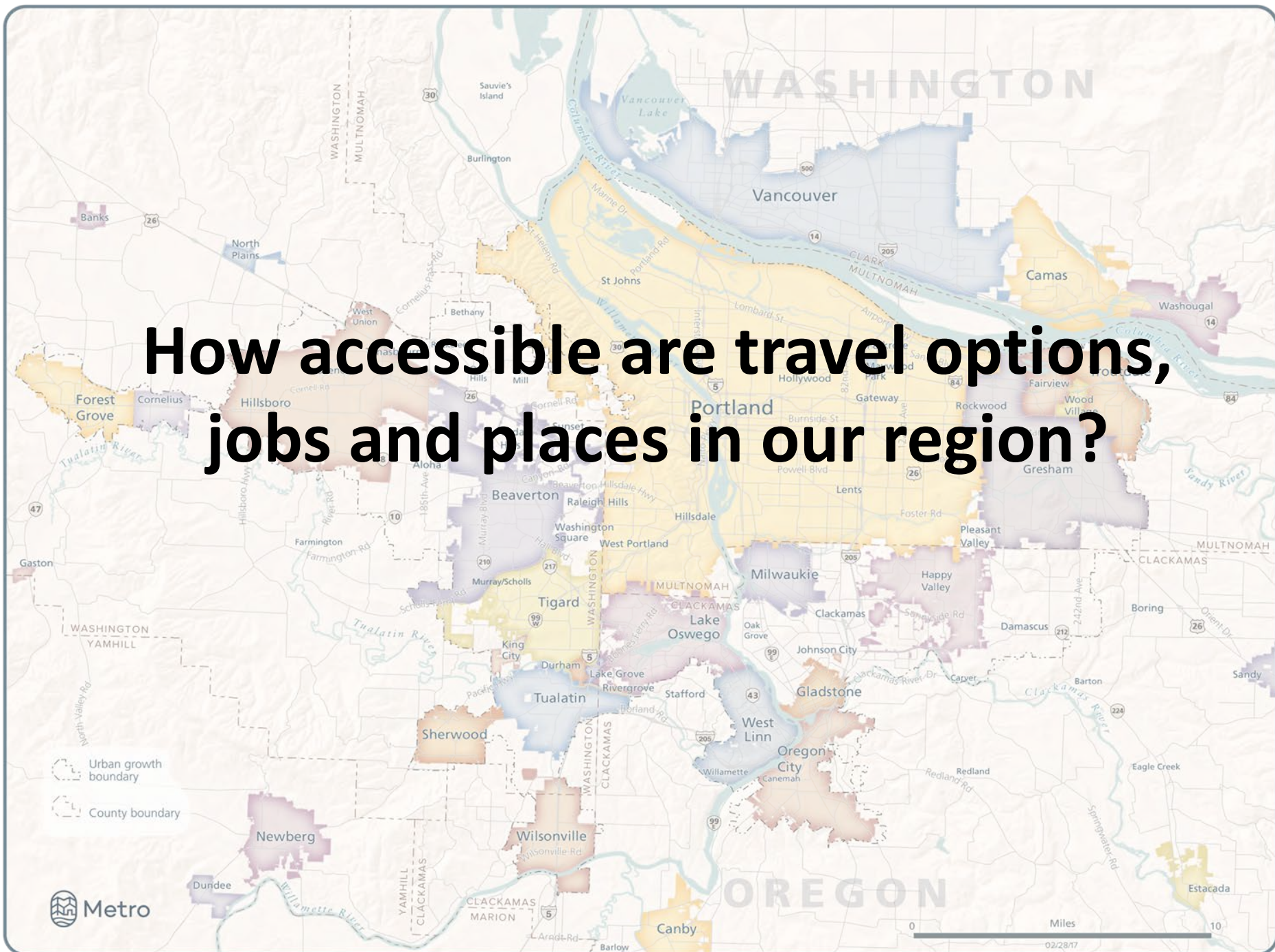
The Portland Metro Region is ranked 8<sup>th</sup> in transit productivity (boardings per revenue hour) and 24<sup>th</sup> in population compared to other regions in the country.

2040 Constrained investment strategy

Source: National Transit Database (NTD) 2015 Peer Review Summary



# How accessible are travel options, jobs and places in our region?



# Region's households with access to transit

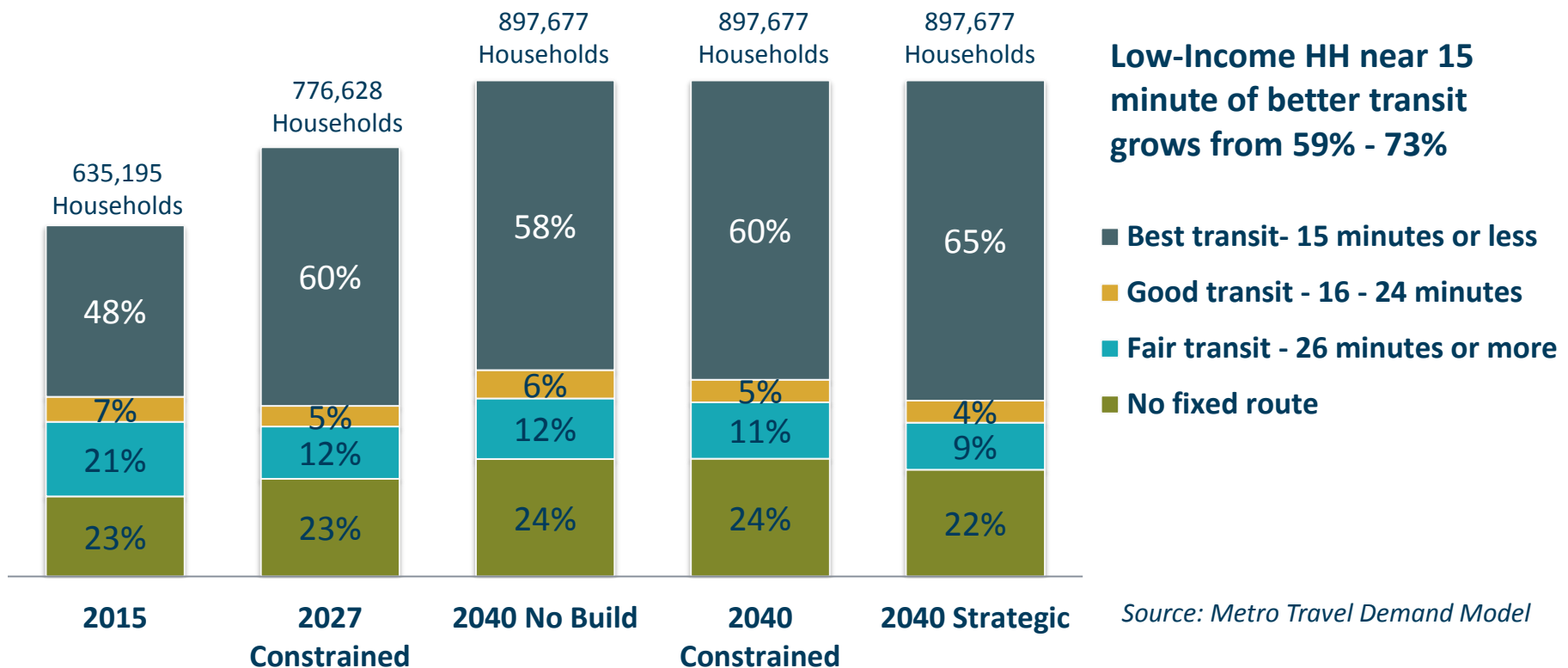


Metro

Measure 10

## More than $\frac{3}{4}$ of the region's Households have access to transit

(1/4 mile proximity to bus, 1/3 mile proximity to streetcar and 1/5 mile proximity to light rail)



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# Region's jobs with access to transit

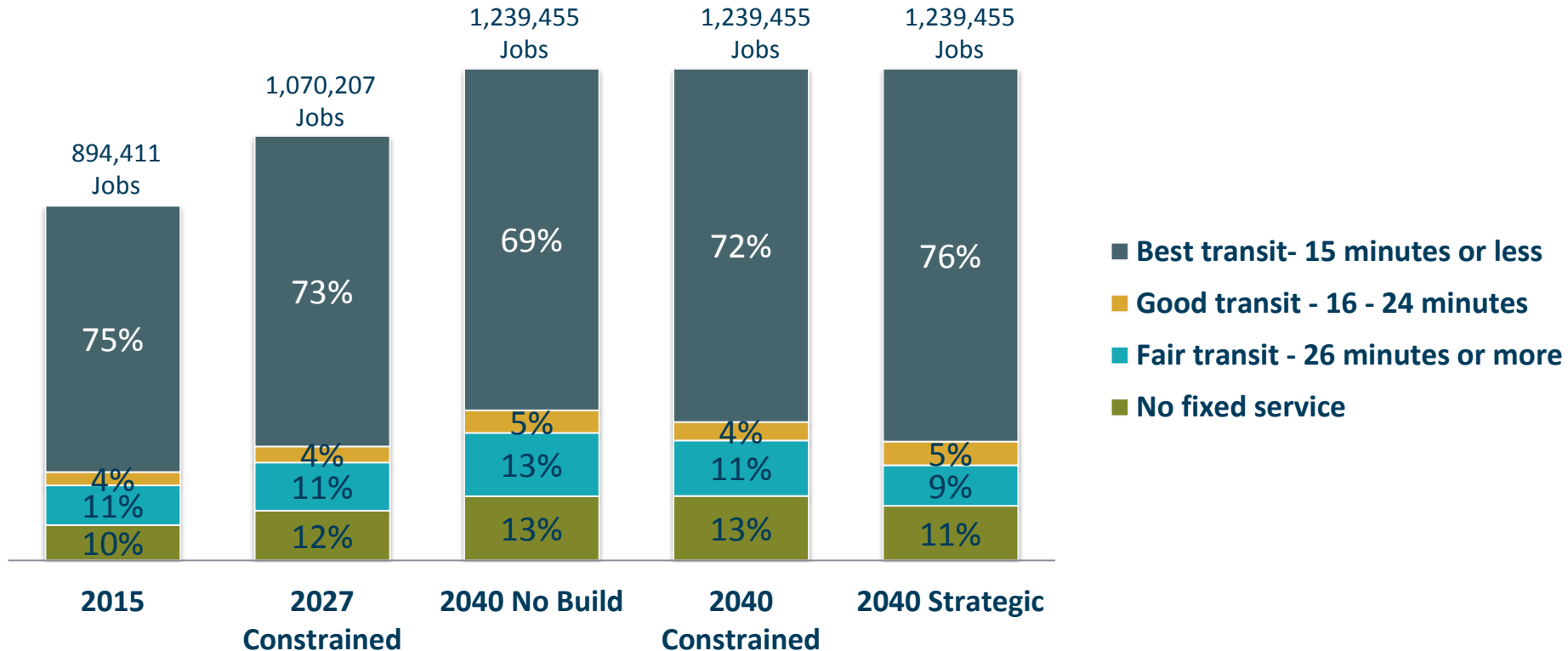


Metro

Measure 10

## Almost 90% of the Region's jobs are within access to transit

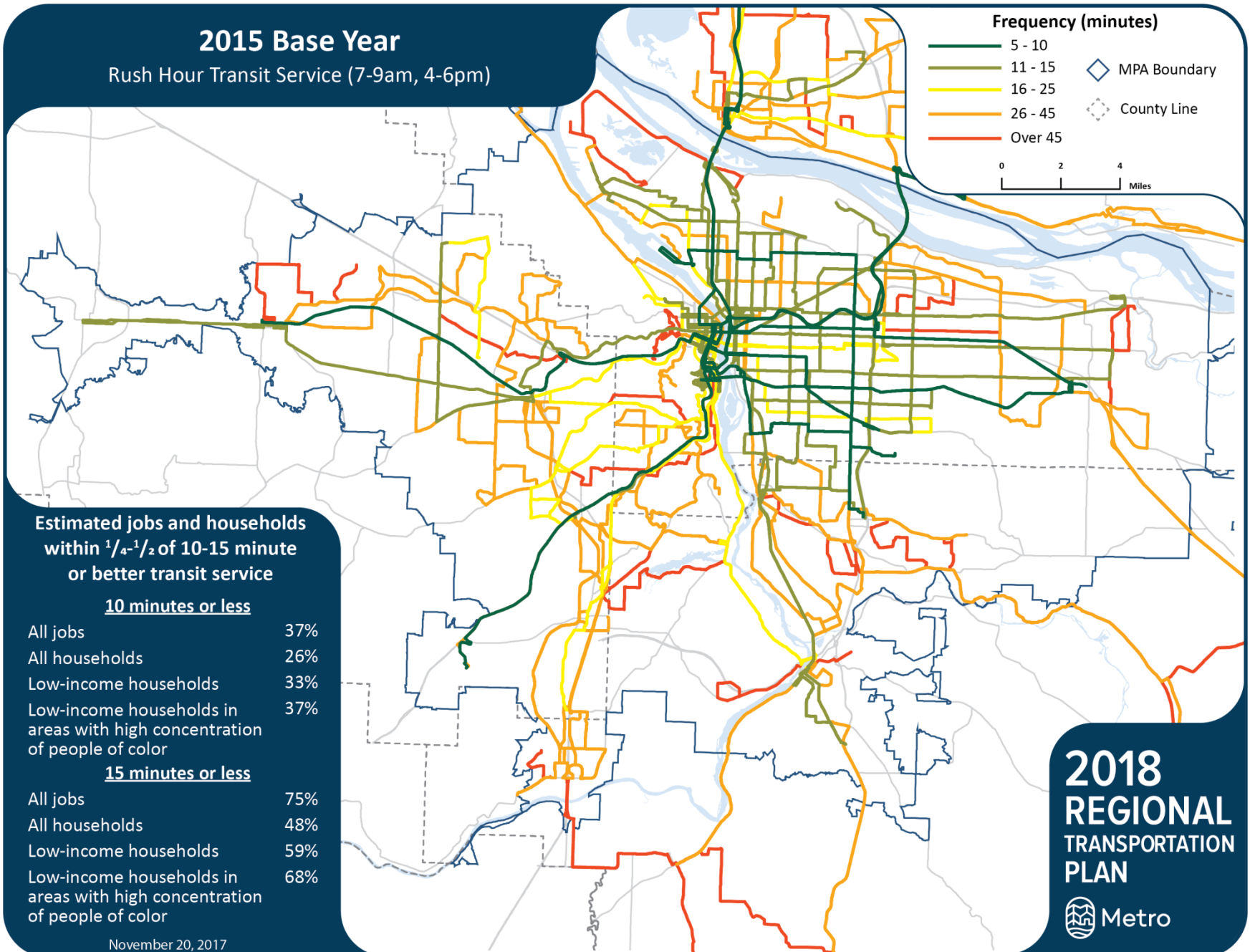
(1/4 mile proximity to bus, 1/3 mile proximity to streetcar and 1/5 mile proximity to light rail)



*This information is for research and discussion purposes only and does not reflect current or future policy decisions of the Metro Council, MPAC or JPACT. The information is subject to change pending final modeling and analysis in 2018.*

## 2015 Base Year

Rush Hour Transit Service (7-9am, 4-6pm)



Estimated jobs and households  
within  $\frac{1}{4}$ - $\frac{1}{2}$  of 10-15 minute  
or better transit service

### 10 minutes or less

All jobs	37%
All households	26%
Low-income households	33%
Low-income households in areas with high concentration of people of color	37%

### 15 minutes or less

All jobs	75%
All households	48%
Low-income households	59%
Low-income households in areas with high concentration of people of color	68%

November 20, 2017

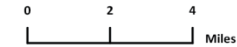
**2018  
REGIONAL  
TRANSPORTATION  
PLAN**



# 2027 Financially Constrained

Rush Hour Transit Service (7-9am, 4-6pm)

## Frequency (minutes)



## Estimated jobs and households within 1/4-1/2 of 10-15 minute or better transit service

### 10 minutes or less

All jobs	36%
All households	25%
Low-income households	31%
Low-income households in areas with high concentration of people of color	35%

### 15 minutes or less

All jobs	73%
All households	60%
Low-income households	69%
Low-income households in areas with high concentration of people of color	78%

November 20, 2017

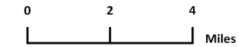
**2018  
REGIONAL  
TRANSPORTATION  
PLAN**



## 2040 No Build

Rush Hour Transit Service (7-9am, 4-6pm)

### Frequency (minutes)



### Estimated jobs and households within 1/4-1/2 of 10-15 minute or better transit service

#### 10 minutes or less

All jobs	39%
All households	29%
Low-income households	36%
Low-income households in areas with high concentration of people of color	39%

#### 15 minutes or less

All jobs	69%
All households	58%
Low-income households	68%
Low-income households in areas with high concentration of people of color	77%

November 20, 2017

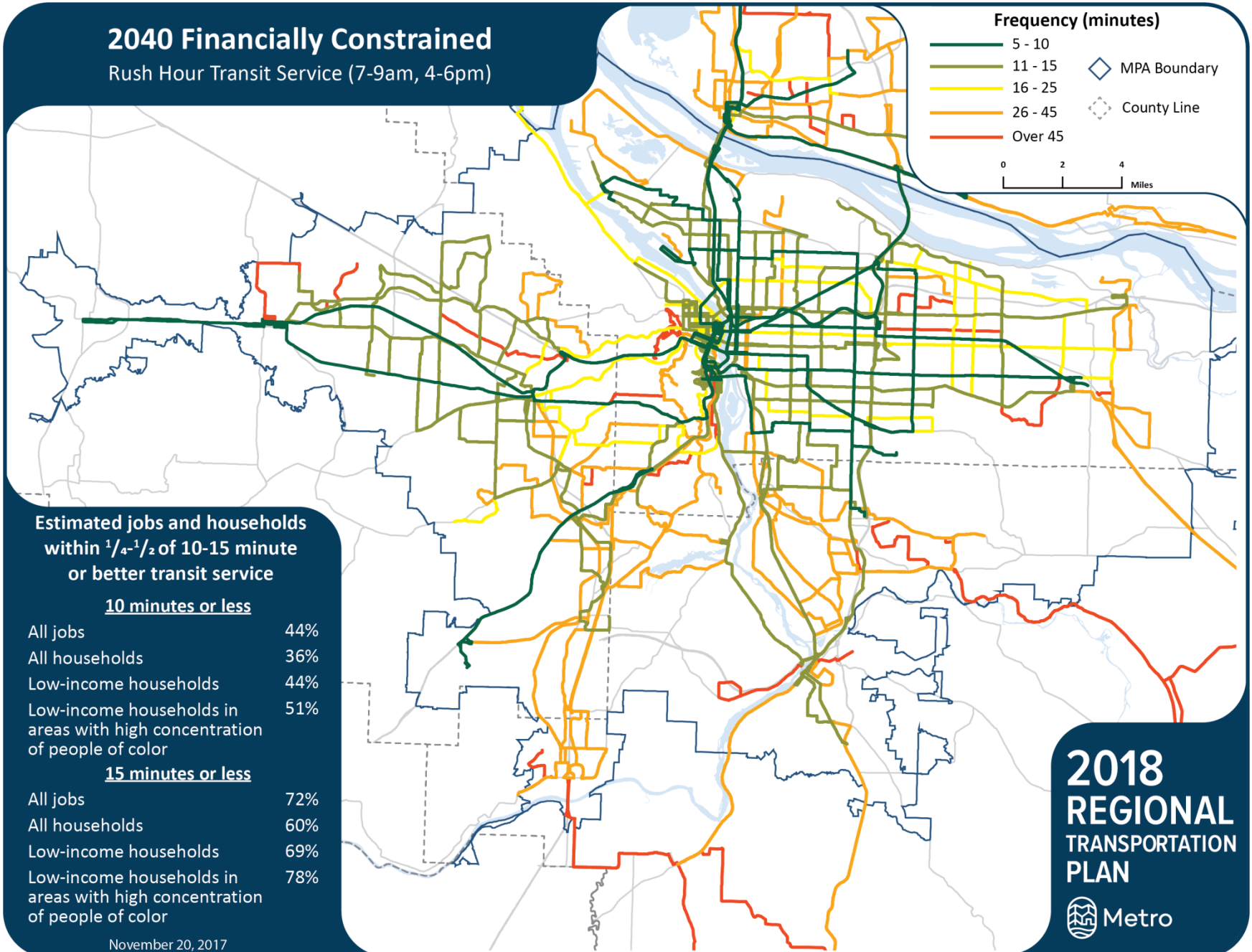
**2018**  
**REGIONAL**  
**TRANSPORTATION**  
**PLAN**





## 2040 Financially Constrained

Rush Hour Transit Service (7-9am, 4-6pm)



Estimated jobs and households  
within  $\frac{1}{4}$ - $\frac{1}{2}$  of 10-15 minute  
or better transit service

### 10 minutes or less

All jobs	44%
All households	36%
Low-income households	44%
Low-income households in areas with high concentration of people of color	51%

### 15 minutes or less

All jobs	72%
All households	60%
Low-income households	69%
Low-income households in areas with high concentration of people of color	78%

November 20, 2017

**2018  
REGIONAL  
TRANSPORTATION  
PLAN**

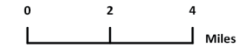


Metro

## 2040 Strategic

Rush Hour Transit Service (7-9am, 4-6pm)

### Frequency (minutes)



Estimated jobs and households within  $\frac{1}{4}$ - $\frac{1}{2}$  of 10-15 minute or better transit service

#### 10 minutes or less

All jobs	64%
All households	55%
Low-income households	63%
Low-income households in areas with high concentration of people of color	72%

#### 15 minutes or less

All jobs	76%
All households	65%
Low-income households	73%
Low-income households in areas with high concentration of people of color	82%

November 20, 2017

**2018**  
**REGIONAL**  
**TRANSPORTATION**  
**PLAN**



# Climate Smart Strategy monitoring targets for transit

Measure	2015 Baseline	2035 Monitoring target	2040 Constrained	2040 Strategic
Daily transit service revenue hours	6,525	<b>9,400</b>	8,671	10,332
Share of households within ¼ mile all day frequent service*	38%	<b>37%</b>	52%	56%
Share of low-income households with ¼ mile of all day frequent transit *	46%	<b>49%</b>	61%	65%
Share of employment within ¼ mile of all day frequent service*	68%	<b>52%</b>	65%	69%

\*Climate Smart Strategy calculated the access to transit as a ¼ mile from any transit stop or station, the RTP analysis was more tailored and calculated the access for a ¼ mile from bus stop, 1/3 mile from streetcar station and ½ mile from light rail station

# For historically marginalized communities...

Measure 7

# of households and jobs are within a short walk to frequent transit increases

Getting to jobs and places within a reasonable timeframe see greater gains in the first 10 years, but less by 2040

Making progress on completing and connecting the planned regional active transportation network

- But more investment is slated for 2028-2040



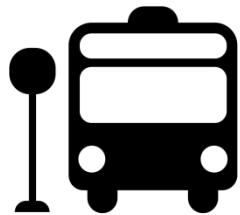
# More jobs are within a reasonable commute

Measure 7

Historically marginalized communities and communities of color see increased number of jobs within a reasonable commute in the first 10-years of investment across modes

*All Jobs*

33,002 – 41,657



*Transit:*  
45 minutes

*Middle-Wage*

9,022 – 11,394

*Low-Wage*

15,758 – 19,830

*All Jobs*

34,162 – 35,045



*Bicycle:*  
30 minutes

*Middle-Wage*

9,348 – 9,609

*Low-Wage*

16,312 – 16,653

*All Jobs*

5,206 – 5,572



*Walk:*  
20 minutes

*Middle-Wage*

1,427 – 1,514

*Low-Wage*

2,500 – 2,691

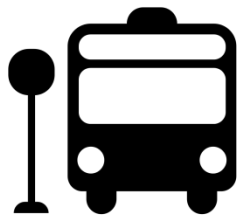
# But traffic will be an issue at rush hour in the future

Measure 7

By 2040, gains access to jobs in a reasonable commute gets narrowed to transit

- Mainly in FHMC and sometimes in communities of color
- Less change in access to jobs by bike and walking
- Better facilities may = more active travel

*All Jobs*  
40,950 – 59,235



*Middle-Wage*  
11,051 – 16,237  
*Low-Wage*  
18,980 – 27,991

*All Jobs*  
39,643 – 40,532



*Middle-Wage*  
10,888 – 11,137  
*Low-Wage*  
18,787 – 19,208

*All Jobs*  
6,171 – 6,652

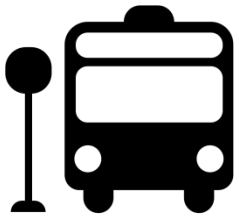


*Middle-Wage*  
1,705 – 1,821  
*Low-Wage*  
2,917 – 3,181

# Getting to community places is getting a little easier...

Measure 8

...but it differs by time of day, where you're going, and mode of travel



Biggest Gains: To all community places and medical services  
+ 1% – 6% over the region (10-year investment strategy – HMC & CoC )  
+ 3% – 7% over the region (2040 FC and Strategic – FHMC & CoC)



Biggest Gains: To all community places and medical services  
+ 4% over the region (10-year investment strategy – HMC)



Biggest Gain: To medical services and grocery stores  
+ 3% – 4% over the region (10-year investment strategy - HMC)

# Overall, access to community places improves, but varies for historically marginalized communities

Measure 8

## **2027 Financially Constrained 10 –Year Strategy:**

- Perform at a greater rate for HMC and communities of color across most modes, most places, and during rush hour and/or all day

## **2040 Financially Constrained:**

- Transit all day and sometimes at rush hour performs at a greater rate for FHMC and communities of color
- Access stays steady in biking and walking

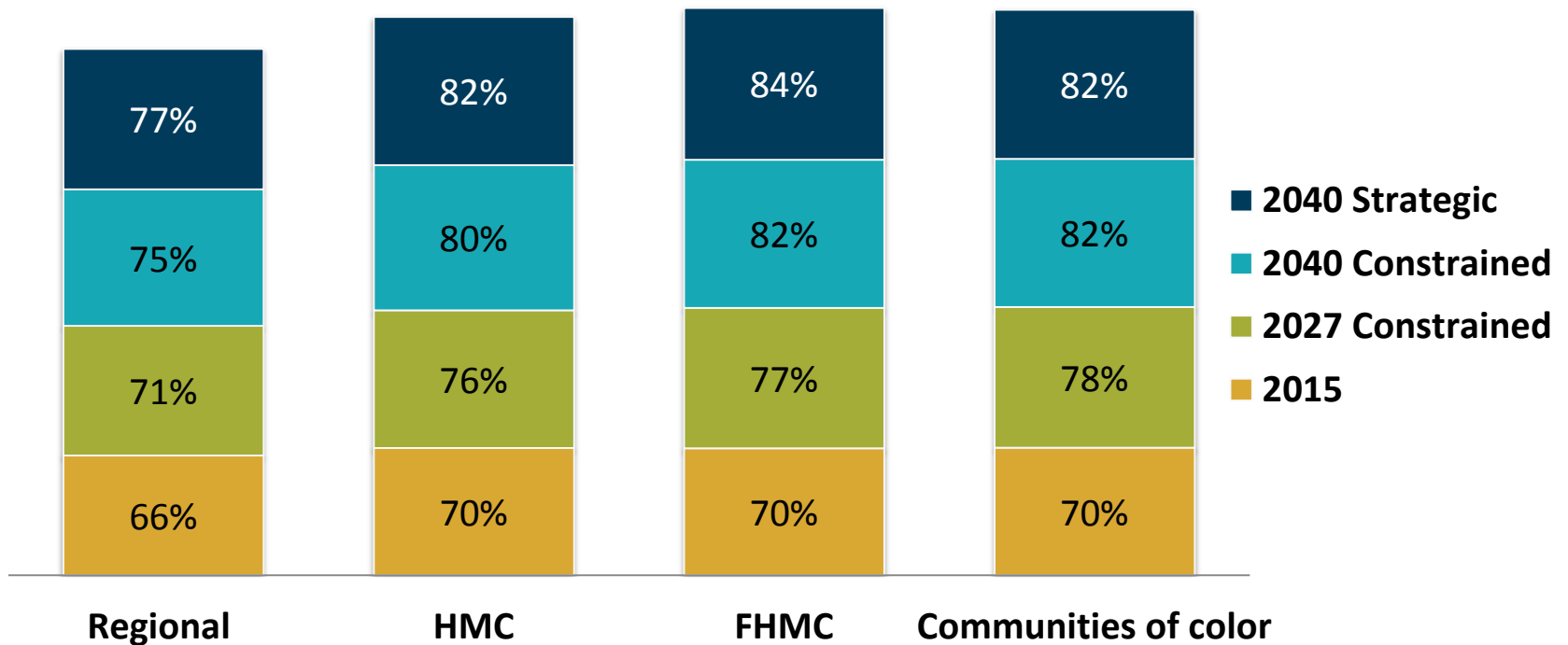
## **2040 Strategic:**

- FHMC and communities of color see increased access by transit during rush hour and all day

# Sidewalk completion near transit is higher compared to overall sidewalk planned network completion AND in marginalized communities

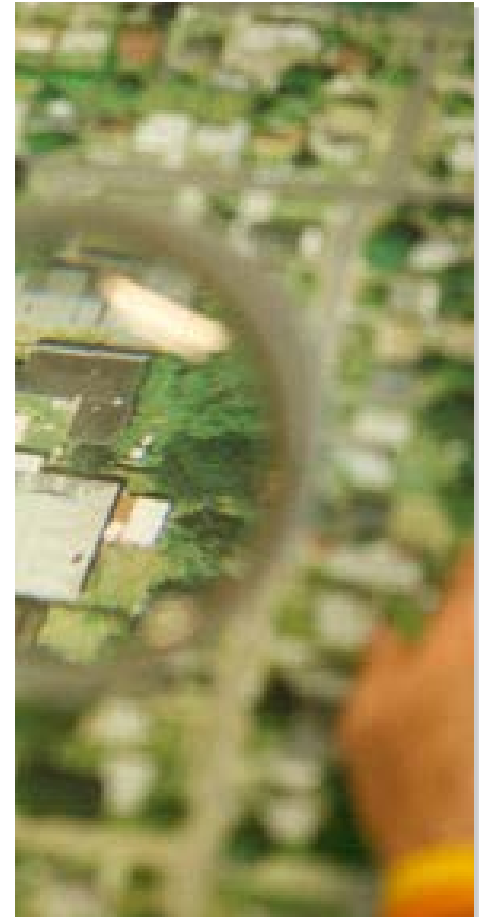
Measure 6

**Percent of sidewalks completed within 1/2-mile of light rail stops, 1/3-mile of street car line, 1/4-mile of bus line**



# Analysis still underway

- Health impact assessment by the Oregon Health Authority and Multnomah Co. Public Health staff
- Travel times in regional mobility corridors – auto, bike, freight, transit
- Auto access to jobs
- Connectivity measures
- Transit analysis in support of transit strategy and Enhanced Transit Corridors work
- Costs



# What we learned from the transportation equity evaluation

- **The region is investing at a greater rate in safety and active transportation in historically marginalized communities**
  - But 75% of active transportation investment is in 2028-2040 time period
- **With investments, the projected accessibility (i.e. getting to jobs, services) produced some gains for historically marginalized communities**
  - By 2040, traffic congestion will impact accessibility by transit for historically marginalized communities
- **Population growth and economic activity will increase vehicle miles traveled and the potential for more conflicts**

# Communicating what we learned and shaping recommendations for 2018

What does the data suggest to you?

What information and takeaways are most important to highlight in discussion materials?

What are the implications for the 2018 RTP?

- Think about refinements for Round 2?
- Think about future work needed – post-RTP?



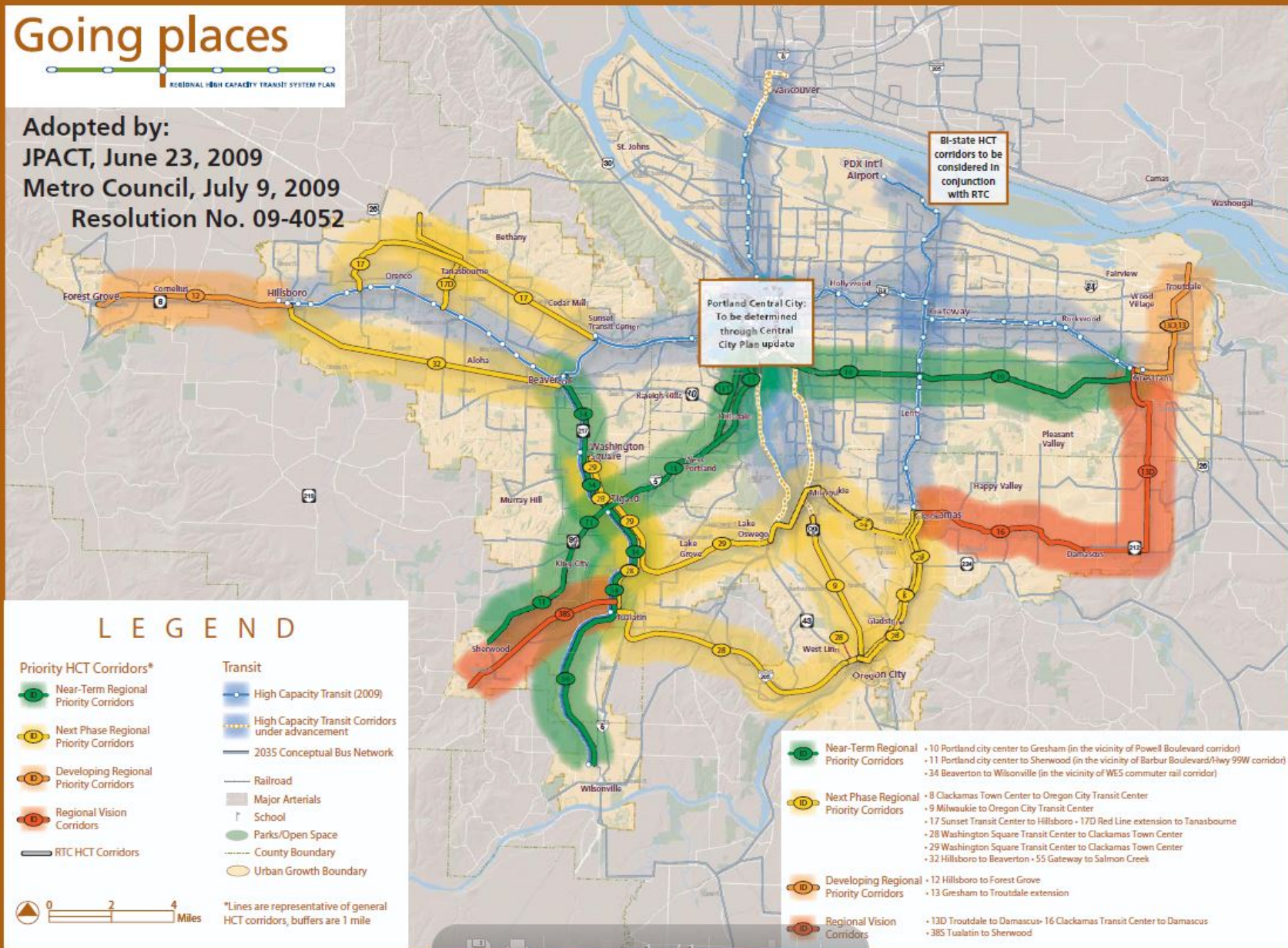
Map of the Portland, Oregon metropolitan area showing urban growth boundaries and county lines. The map includes labels for various cities and towns such as Forest Grove, Hillsboro, Beaverton, Tigard, Tualatin, Sherwood, Wilsonville, Newberg, Dundee, Canby, Gladstone, West Linn, Oregon City, Canby, and Troutdale. Major highways like I-5, I-205, and I-84 are shown. The map also displays the Willamette River, Clackamas River, and various creeks. A legend in the bottom left corner defines the symbols for urban growth boundary and county boundary. The Metro logo is in the bottom left corner.



# Going places

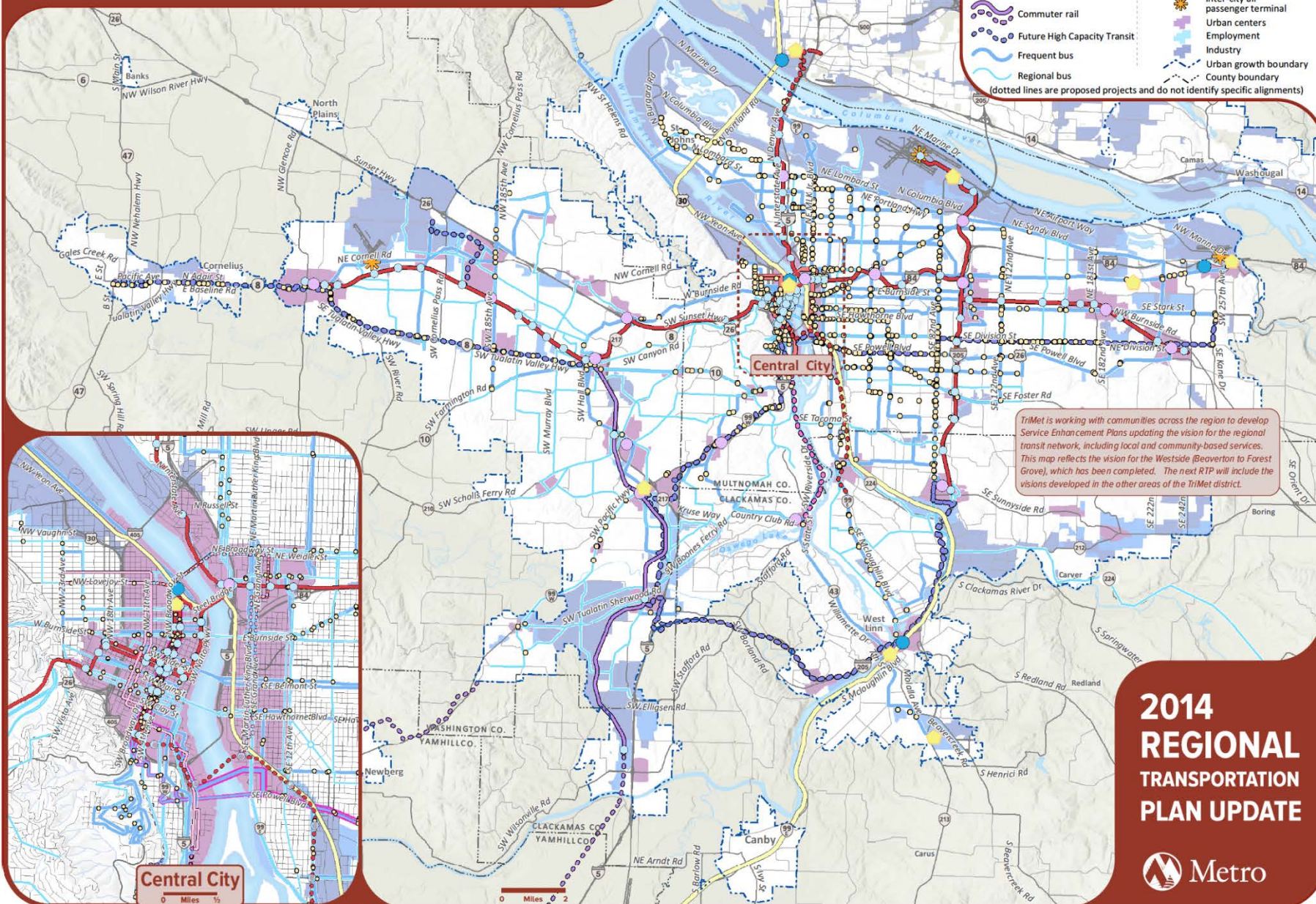


Adopted by:  
JPACT, June 23, 2009  
Metro Council, July 9, 2009  
Resolution No. 09-4052





# Regional Transit Network



**2014  
REGIONAL  
TRANSPORTATION  
PLAN UPDATE**



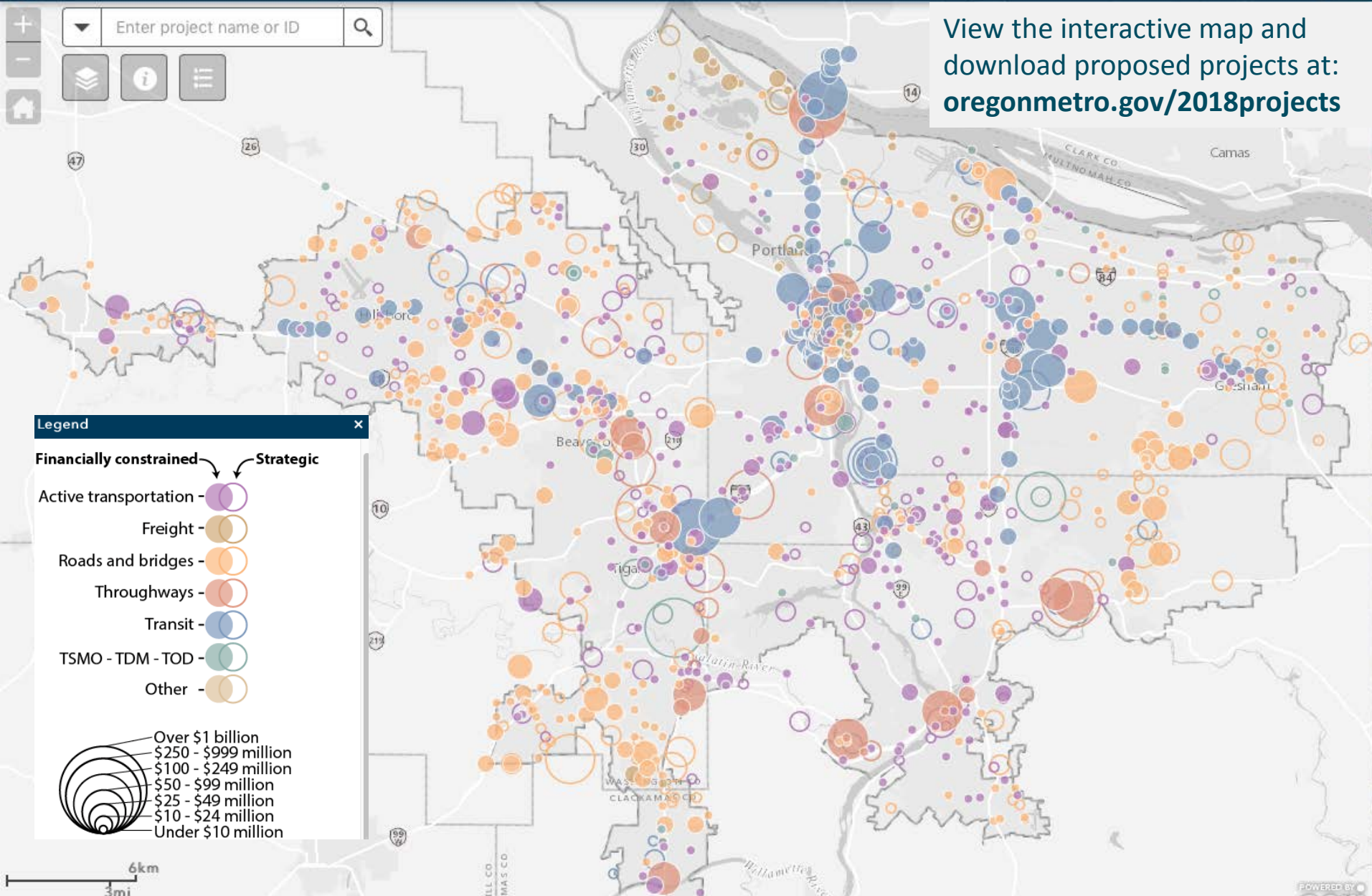


# 2018 REGIONAL TRANSPORTATION PLAN



Note: includes HCT Corridors and Tri Met's Service Enhancement Plans

View the interactive map and download proposed projects at: [oregonmetro.gov/2018projects](http://oregonmetro.gov/2018projects)

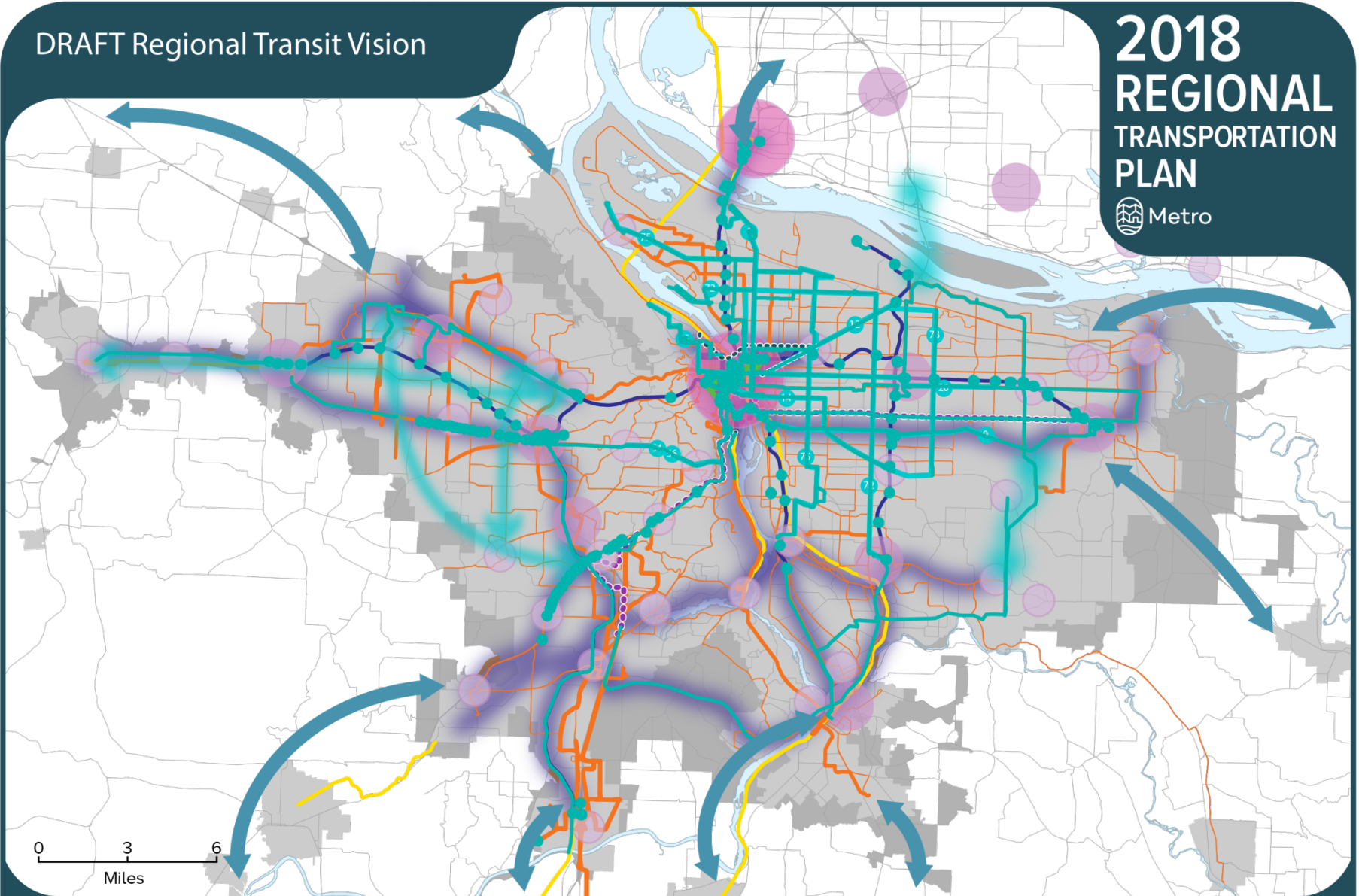


**More than than \$21 billion proposed for investment from 2018-2040**



# DRAFT Regional Transit Vision

## 2018 REGIONAL TRANSPORTATION PLAN



- High capacity transit
- Future bus
- Future frequent bus





















- HCT Project Development
- Future/potential HCT corridor
- Neighboring transit

- 2018 RTP projects
- Future rail transit

- New ideas to consider

## Potential legend for Regional Transit Network Map

---

	Inter-city high speed rail		Inter-City air passenger terminal
	Commuter rail		Inter-city rail passenger terminal
	Light rail		Inter-city bus passenger terminal
	Future High Capacity Transit (HCT)		Regional bike-transit facility
	Future rapid streetcar		Transit centers/HCT stations/Major bus stops
	<b><i>Future enhanced transit</i></b>		Urban centers
	Streetcar		Employment
	Frequent bus		Industry
	Regional bus		Urban growth boundary
	<b><i>Local bus</i></b>		County boundary

### Notes:

- dotted lines are proposed projects and do not identify specific alignments
- ***bold/italic*** items are new
- does not include the transit supportive elements

# Emerging technologies: principles, policies, and implementation actions

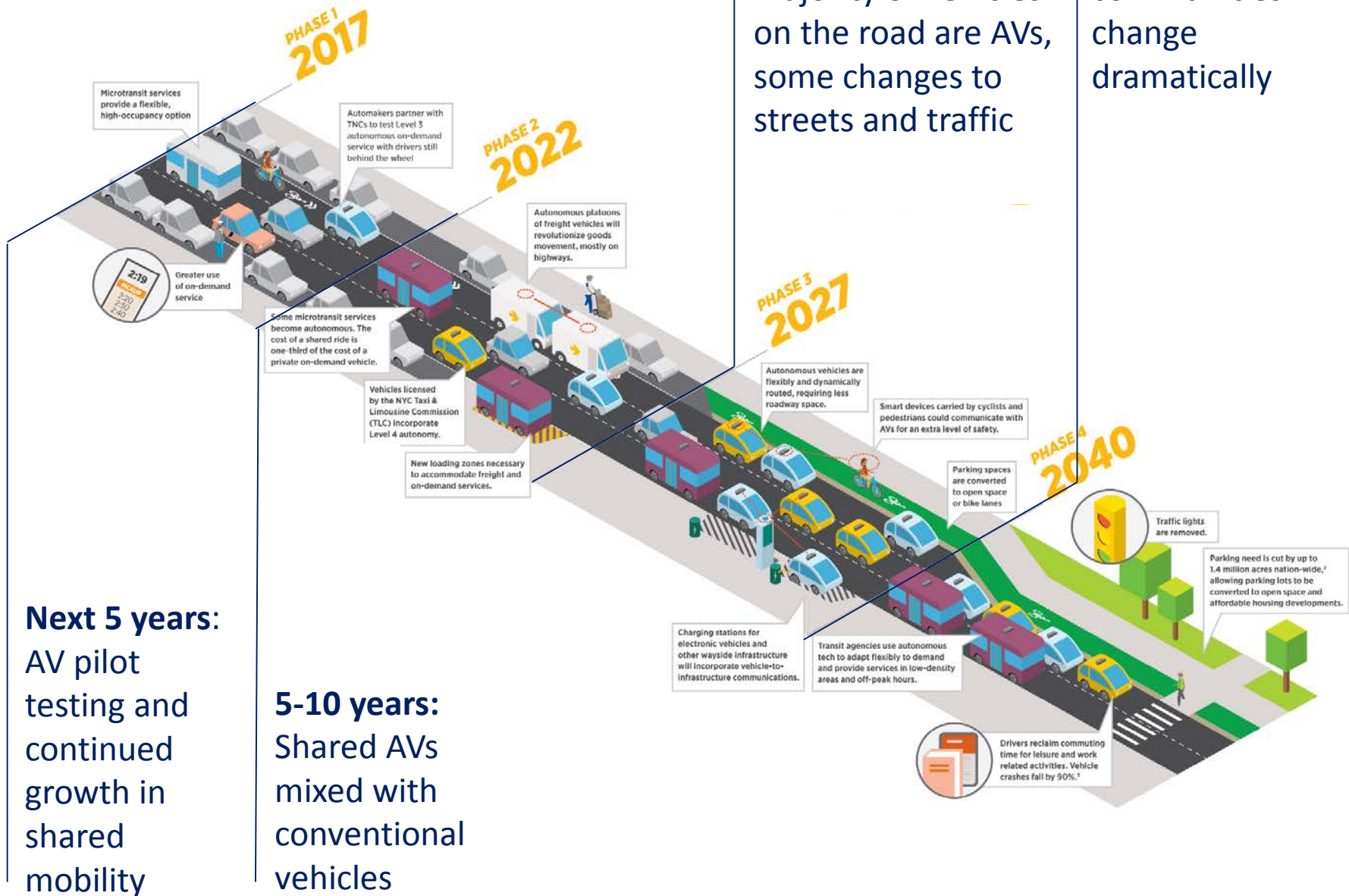
Transit Strategy Working Group



# What does the future look like?

**10-25 years:** AV ownership increases, majority of vehicles on the road are AVs, some changes to streets and traffic

**25+ years:** Our streets and communities change dramatically



# Shared AVs will hit our streets





# People will use TNCs more—and there will be more TNCs





# Technology will advance without much local oversight





# Congestion will get worse





# Disadvantaged people will fall farther behind



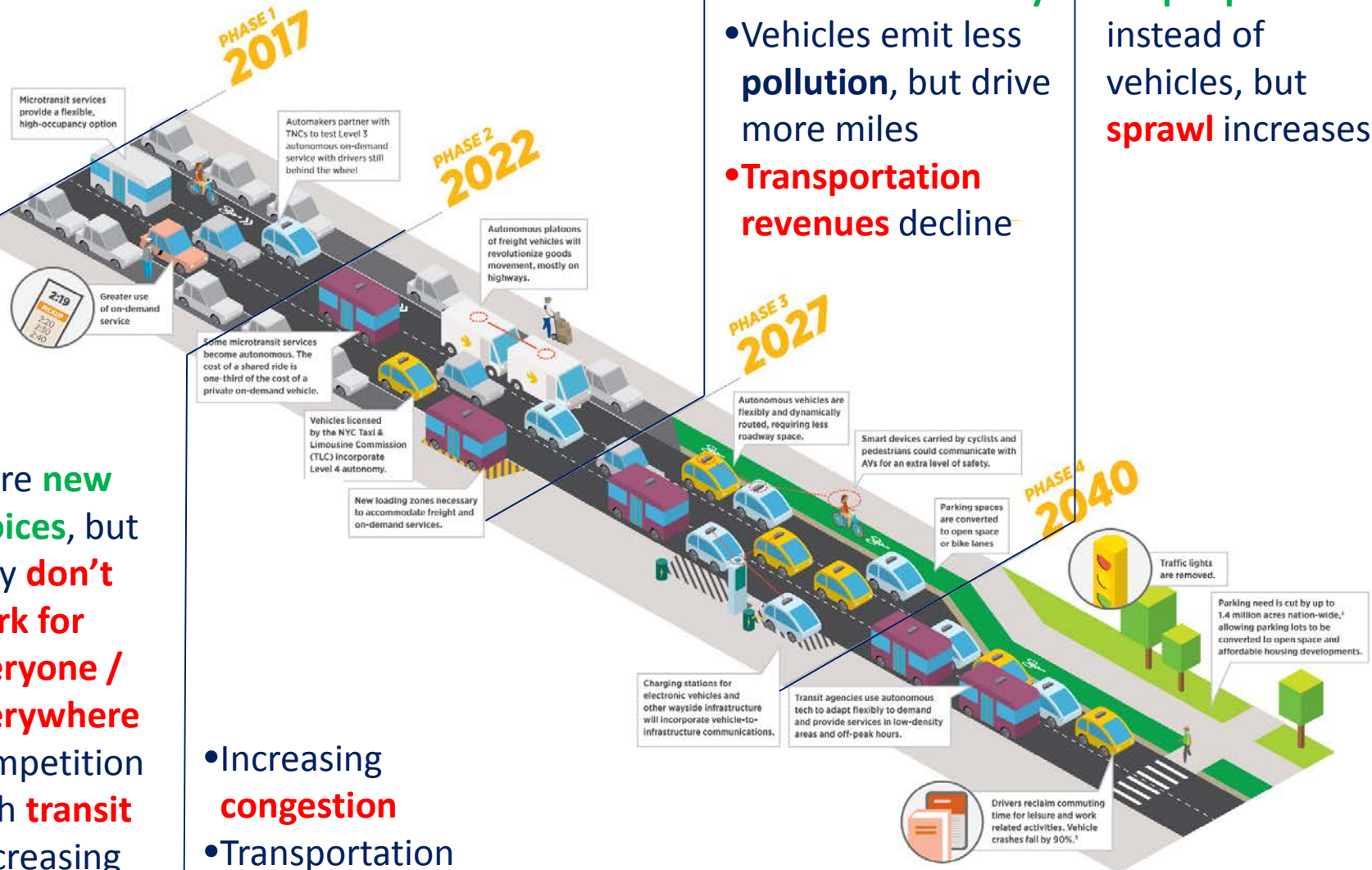
# When will impacts occur?

- Congestion might increase or decline
- AVs increase **safety**
- Vehicles emit less **pollution**, but drive more miles
- **Transportation revenues** decline

- Communities have more **space for people** instead of vehicles, but **sprawl** increases

- More **new choices**, but they **don't work for everyone / everywhere**

- Competition with **transit**
- Decreasing **accountability**
- Increasing **congestion**
- Transportation **jobs** are eliminated



# Transportation choices

	If we act	If we don't
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# What technologies are going to shape transit in the years to come?



**AV transit**



**EV transit**



**Microtransit**  
(auxiliary and luxury)



**Travel information  
and payment**



**Passenger AVs**



**TNCs**

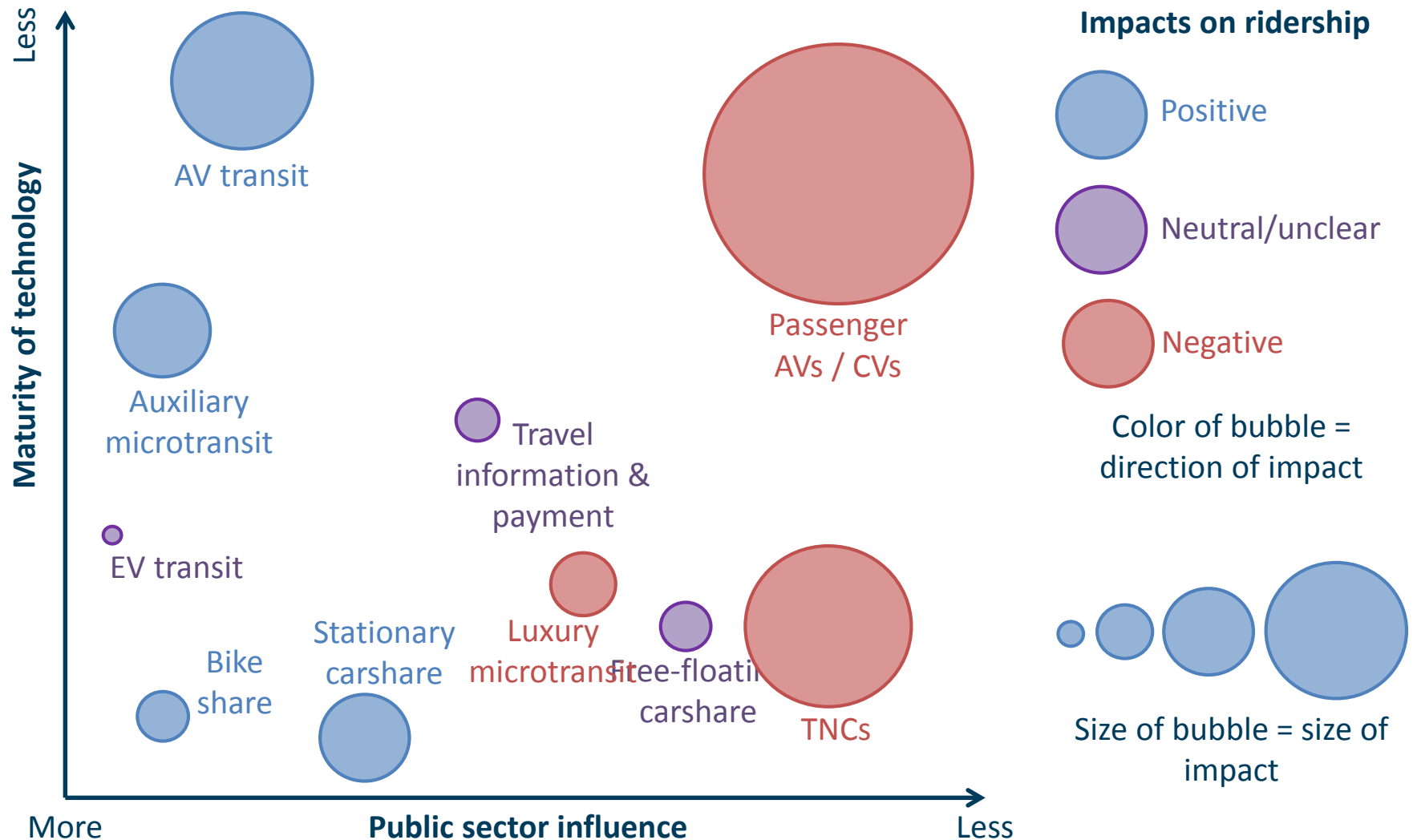


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(stationary and free-floating)

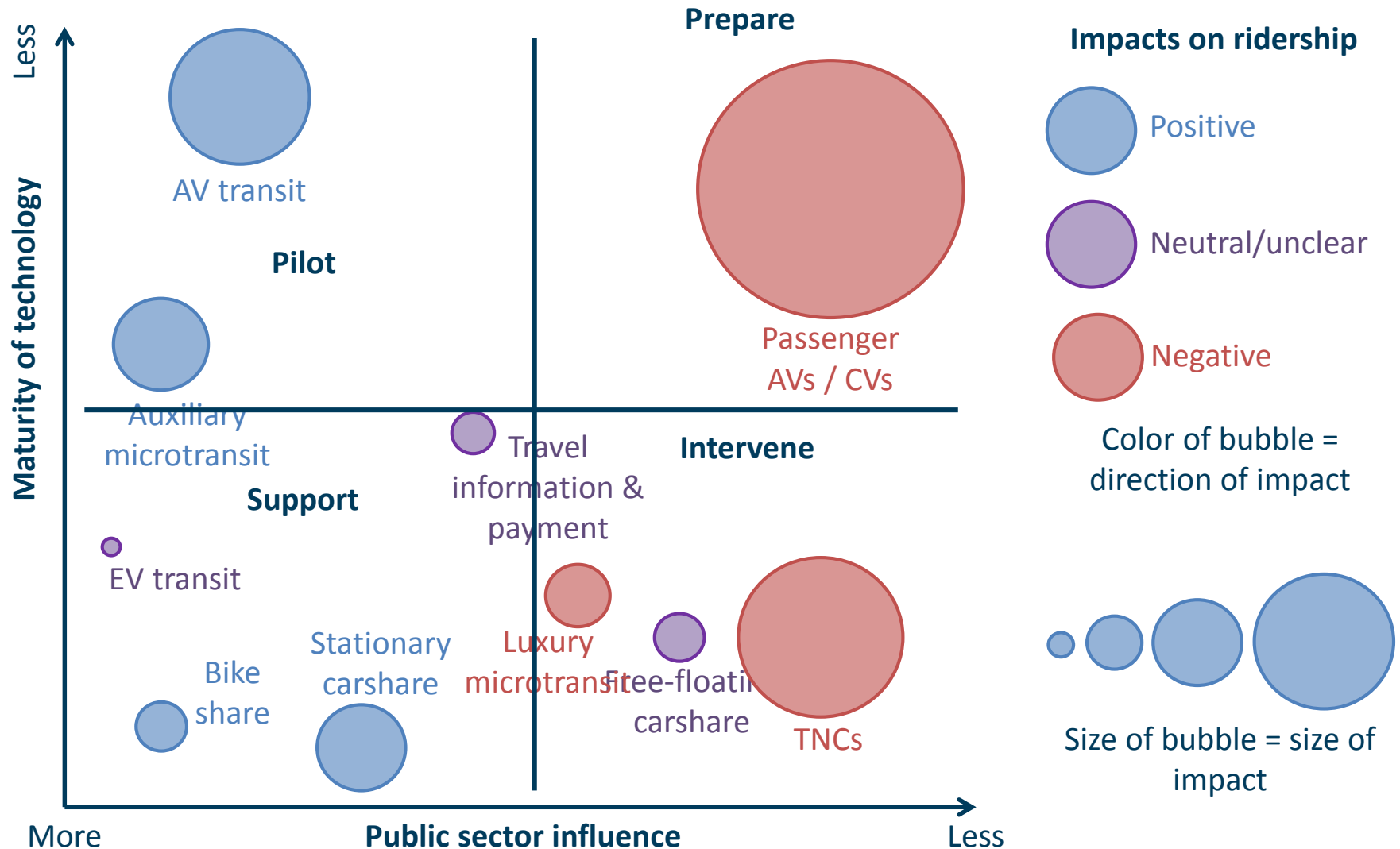


**Bike share**

# Are these technologies good for transit?



# What should we do about them?



# The journey to MaaS

## What transit agencies (and private companies) do

Paper maps  
& schedules

Online trip  
planning,  
GTFS data

Integrated  
transit  
payment

APIs for 3<sup>rd</sup>-  
party apps

Integration  
with data on  
other modes

Integrated,  
competitive  
booking

The 1980s

Mobility as a service

Progressively easier  
transit trip planning  
and payment

Progressively  
easier multimodal  
trip planning

Seamlessly pick  
and book the best  
option

## What travelers are able to do

# ...is not without peril

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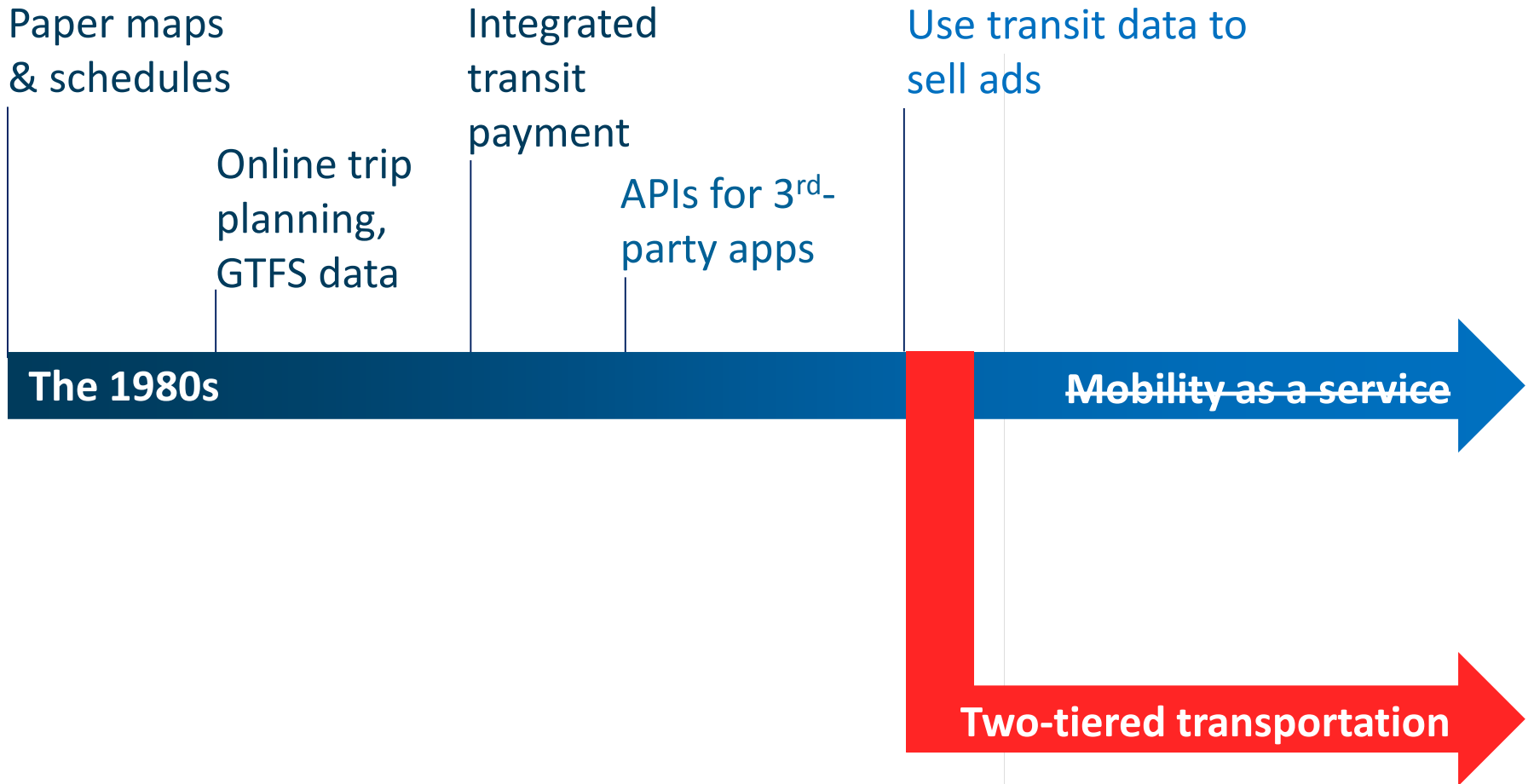
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Two-tiered transportation





# Potential tech-related transit strategy policy changes

Policy language	Potential tech-related strategies
Improve <del>pedestrian and bicycle access</del> <i>first and last-mile connections</i> to transit	<ul style="list-style-type: none"> <li>• Develop model policies for emerging technologies to discourage competition with transit.</li> <li>• Implement pilots that use emerging technologies to make first/last-mile connections to transit.</li> <li>• Assess which options for first/last-mile connections to transit service, including emerging technologies, are appropriate for different communities.</li> </ul>
<i>Make it easy to plan and book trips using transit and complimentary travel options (new)</i>	<ul style="list-style-type: none"> <li>• Support public agencies in developing data and resources to help travelers to learn about and pay for transit.</li> <li>• Support the development of third-party apps and services that provide comprehensive, unbiased, and multimodal travel information to users.</li> </ul>

Map of the Portland, Oregon metropolitan area showing urban growth boundaries and county lines. The map includes labels for various cities and towns such as Forest Grove, Hillsboro, Beaverton, Tigard, Tualatin, Sherwood, Wilsonville, Newberg, Dundee, Canby, Gladstone, West Linn, Oregon City, Canby, and Troutdale. Major highways like I-5, I-205, and I-84 are shown. The map also displays the Willamette River, Clackamas River, and various creeks. A legend in the bottom left corner defines the symbols for urban growth boundary and county boundary. The Metro logo is in the bottom left corner.

# Four new transit policies

Add 4 new policies:

- Expand Enhanced Transit Network
- Maintain our aging infrastructure
- Ensure that transit remains affordable
- Make it easy to plan and book trips using transit and complimentary travel options

Modify 1 existing policy:

- Improve ~~pedestrian and bicycle access~~ *first and last-mile connections* to transit

Edit existing policies - streamline

# Expand enhanced transit network

- Build capacity and reliability in our frequent service transit network
- Make investments in our system that are relatively low cost to construct and context sensitive
- Investments should be deployed quickly
- Build partnerships
- Serving growing mixed use centers , corridors and employment areas





# Maintain our aging infrastructure

- Maintaining new infrastructure to limit wear and tear
- Improve aging components as new technology emerges
- Phasing out and replacing old elements as they the end of their normal life span



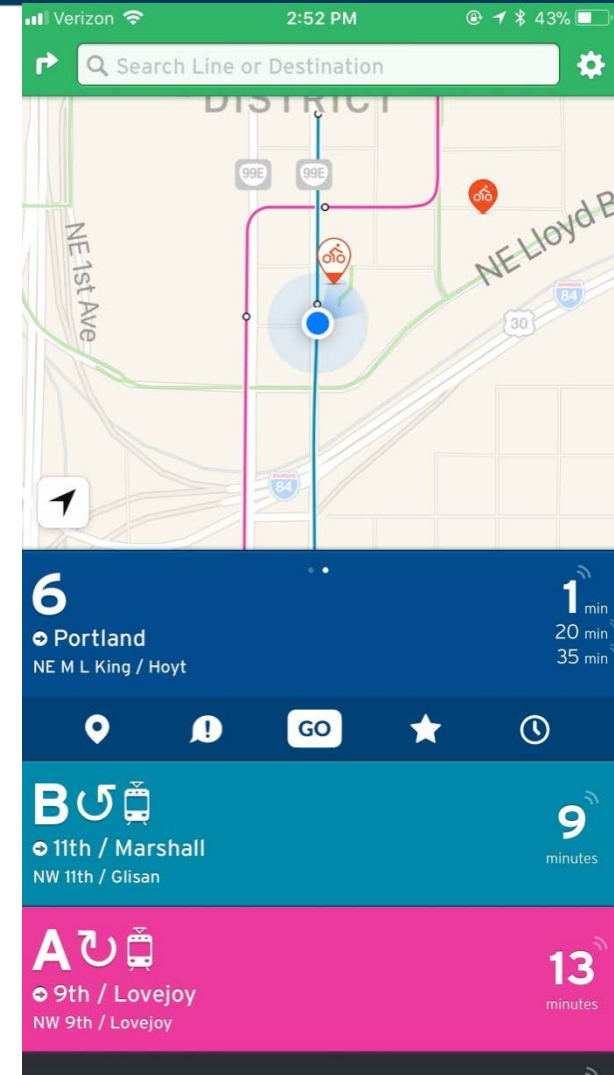
# Ensure that transit remains affordable

- Provide reduced fare for seniors and youth
- Provide student passes for those in high school or pursuing a GED
- Provide a low income fare program
- Provide payment options, like the Hop Fastpass



# Make it easy to plan and book trips using transit complimentary travel options

- Support public agencies in developing data and resources to help travelers to learn about and pay for transit.
- Support the development of third-party apps and services that provide comprehensive, unbiased, and multimodal travel information to users.



# Improve ~~pedestrian and bicycle access~~ first and last-mile connections to transit

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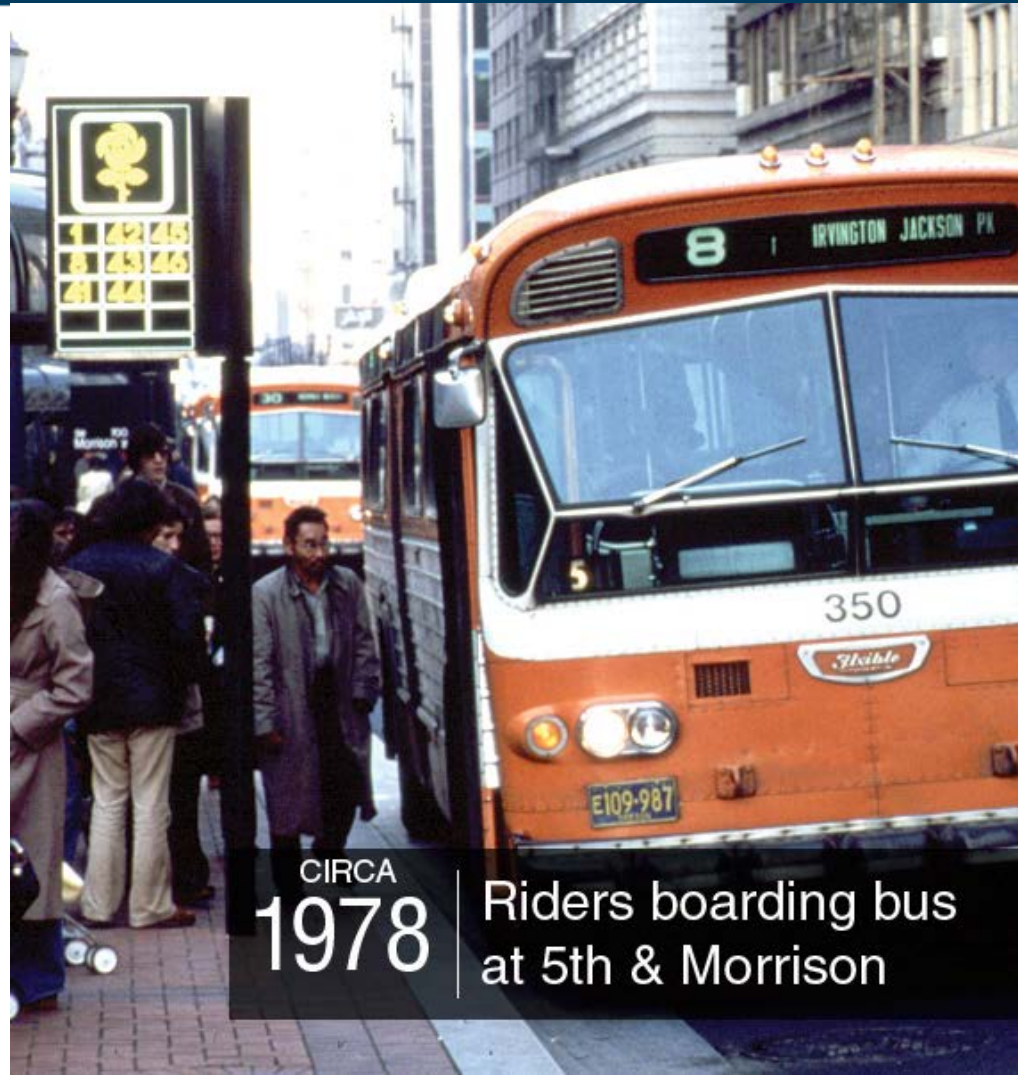




# Next steps

## January meeting:

- Transit system expansion policy
- Draft policy language
- Draft language for report



CIRCA  
1978

Riders boarding bus  
at 5th & Morrison

# Thank you

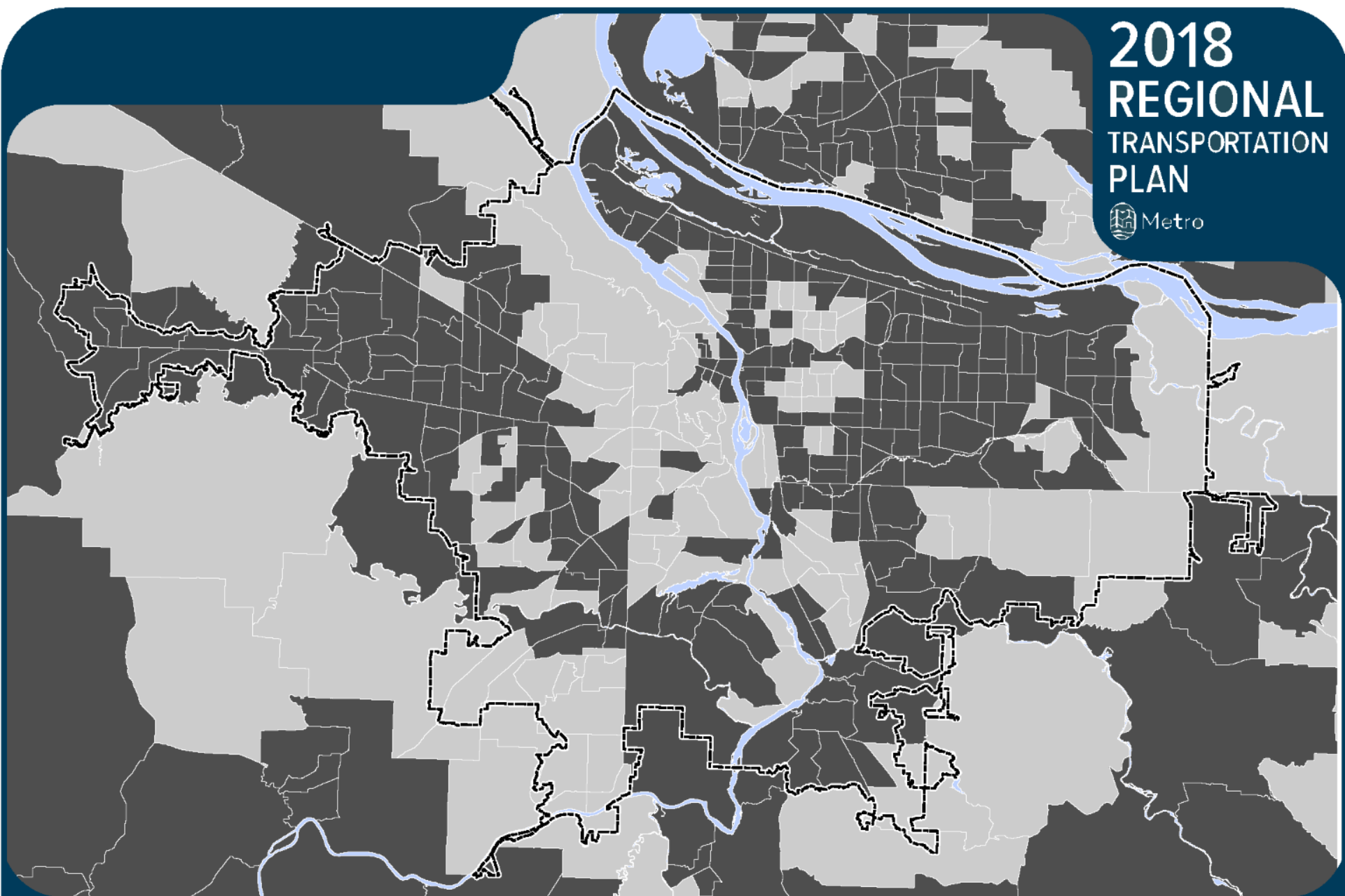




# Historically Marginalized Communities



# 2018 REGIONAL TRANSPORTATION PLAN



## Historically Marginalized Communities



A historically marginalized community (HMC) is defined as exceeding regional rates for low income, people of color or limited English proficiency (LEP), or exceeding regional rates for under 18 or over 65 years of age.

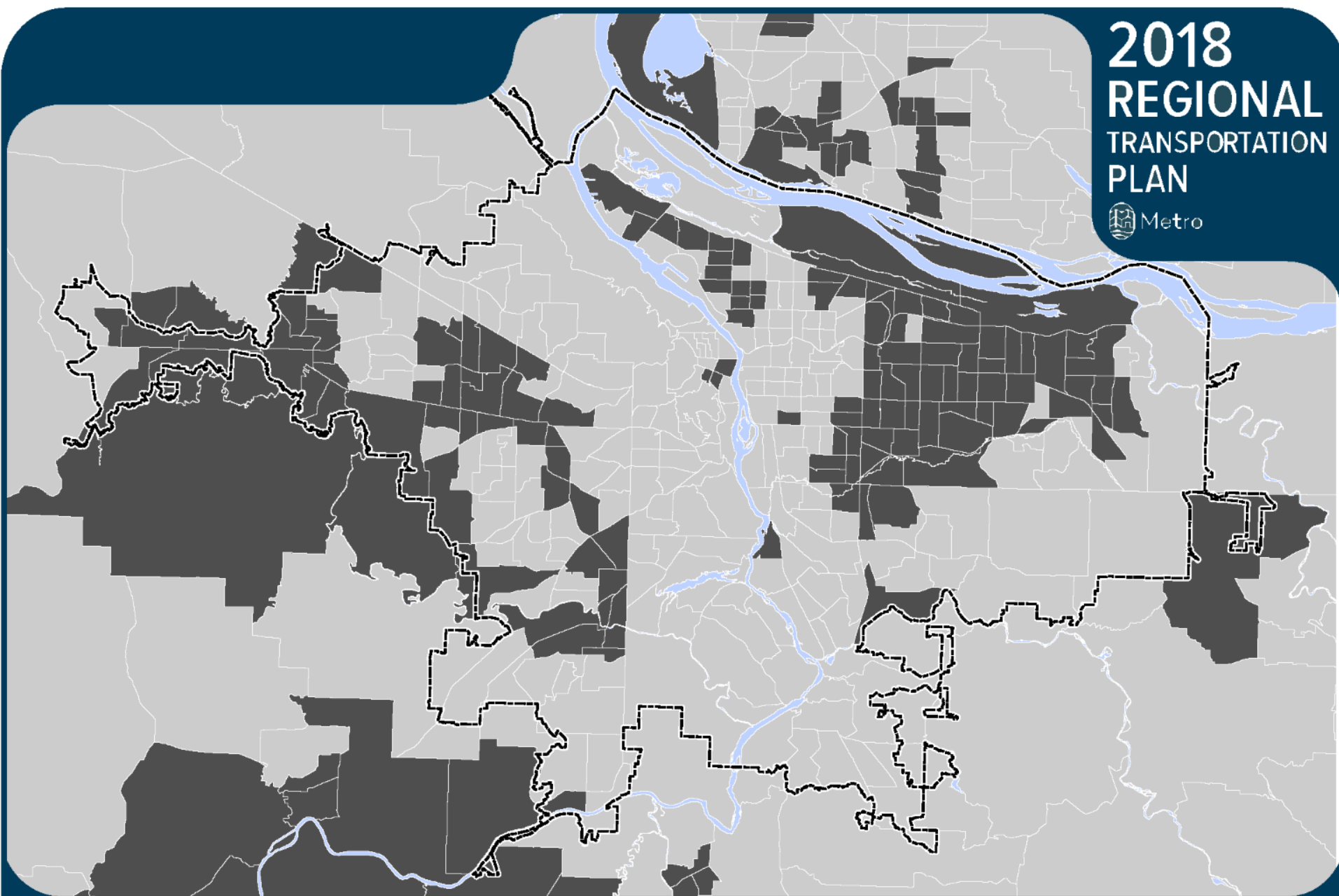
Limited English Proficiency (LEP) and Poverty  
Data Source: American Community Survey  
2011-2015 5-Yr. Average

Age and People of Color (POC) Data Source:  
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Map Publication: 4/21/2017



# 2018 REGIONAL TRANSPORTATION PLAN



## Focused Historically Marginalized Communities

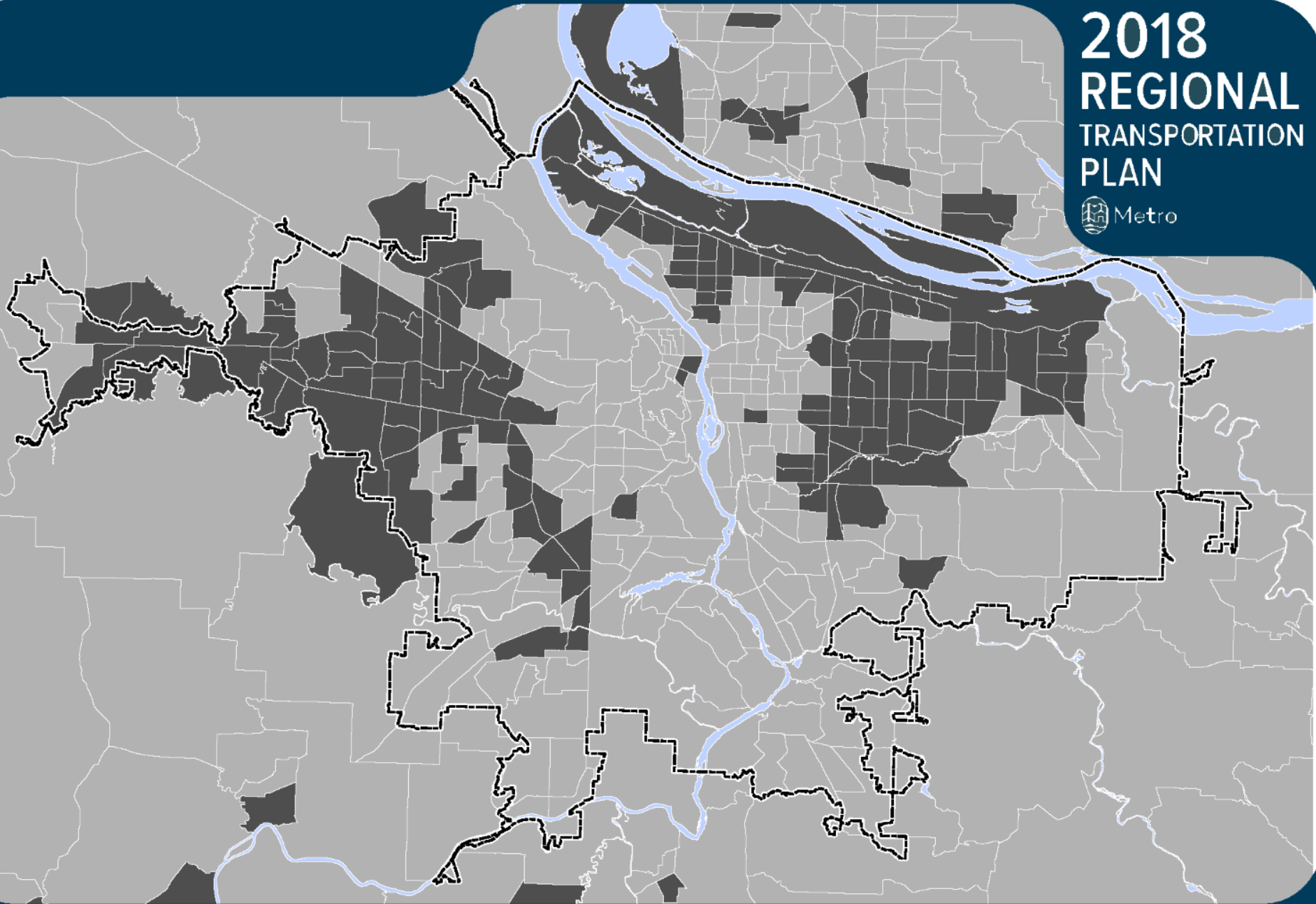


A focused historically marginalized community (FHMC) is defined as exceeding regional rates for low income, and exceeding regional rates for people of color or limited English proficiency (LEP), as well as exceeding regional density rates for each variable. An additional federal safe harbor screen is applied in order to include areas with at

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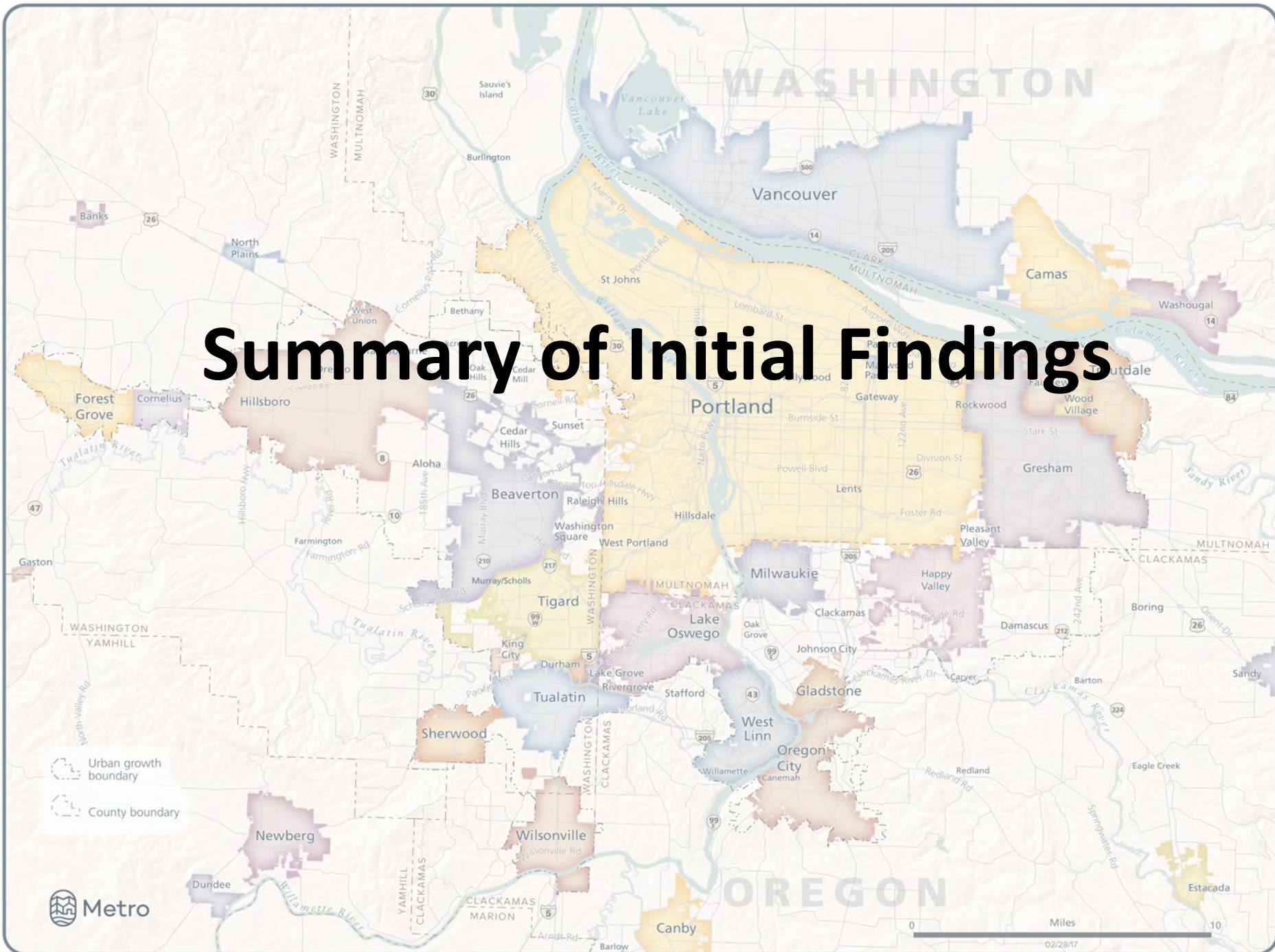


## People of Color



Data Source: Census 2010  
Map Publication: 11/30/2017

# Summary of Initial Findings



# Historically Marginalized Communities Compared to Region

- **The region is investing at a greater rate in safety and active transportation in historically marginalized communities**
  - But 75% of active transportation investment is in 2028-2040 time period
- **With investments, the projected accessibility (i.e. getting to jobs, services) produced some gains for historically marginalized communities**
  - By 2040, traffic congestion will impact accessibility by transit for historically marginalized communities
- **Population growth and economic activity will increase vehicle miles traveled and the potential for more conflicts**

# Initial findings from the transportation equity evaluation

- **Safety investments** – Majority of safety projects are in HMCs
- **Crash risk** – Increased vehicle miles traveled will increase potential conflicts, but by 2040 per capita VMT is decreasing
- **Access to jobs and community places** – More jobs and places are accessible, but growth resulting in more congestion impacting accessibility by transit for HMCs
- **Access to travel options** – Making progress in completing active transportation, but 75% of investment in 2028-2040 time period
- **Habitat impacts** – Roadway investments overlap habitat in HMCs at a greater rate



# Information to come

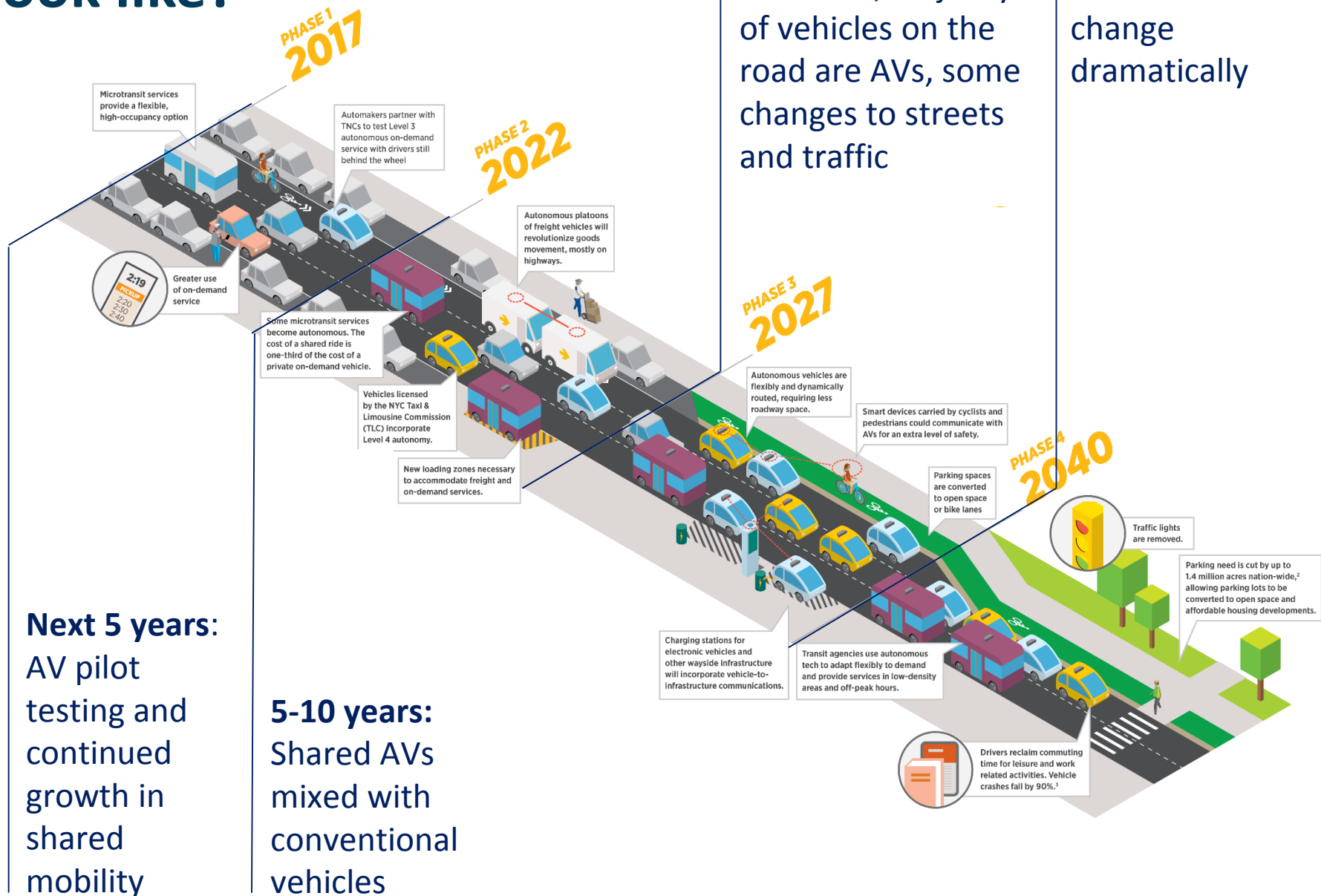
- Urban growth boundary
- County boundary



# **Emerging technologies: principles, policies, and implementation actions**

Transit Strategy Working Group

# What does the future look like?



# Shared AVs will hit our streets





# People will use TNCs more—and there will be more TNCs





# Technology will advance without much local oversight





# Congestion will get worse





# Disadvantaged people will fall farther behind



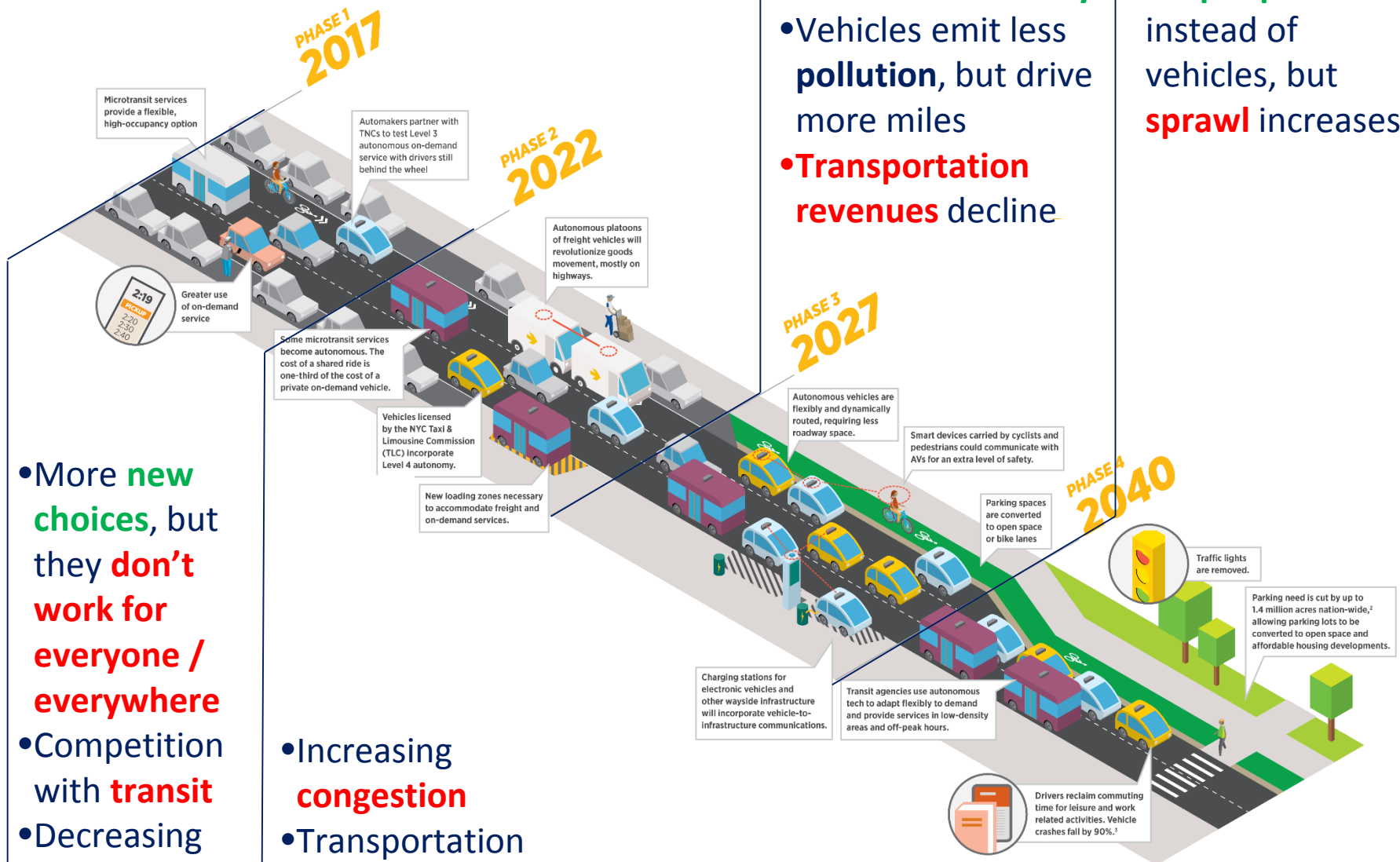
# When will impacts occur?

- **Congestion** might increase or decline
- AVs increase **safety**
- Vehicles emit less **pollution**, but drive more miles
- **Transportation revenues** decline

- Communities have more **space for people** instead of vehicles, but **sprawl** increases

- More **new choices**, but they **don't work for everyone / everywhere**
- Competition with **transit**
- Decreasing **accountability**

- Increasing **congestion**
- Transportation **jobs** are eliminated



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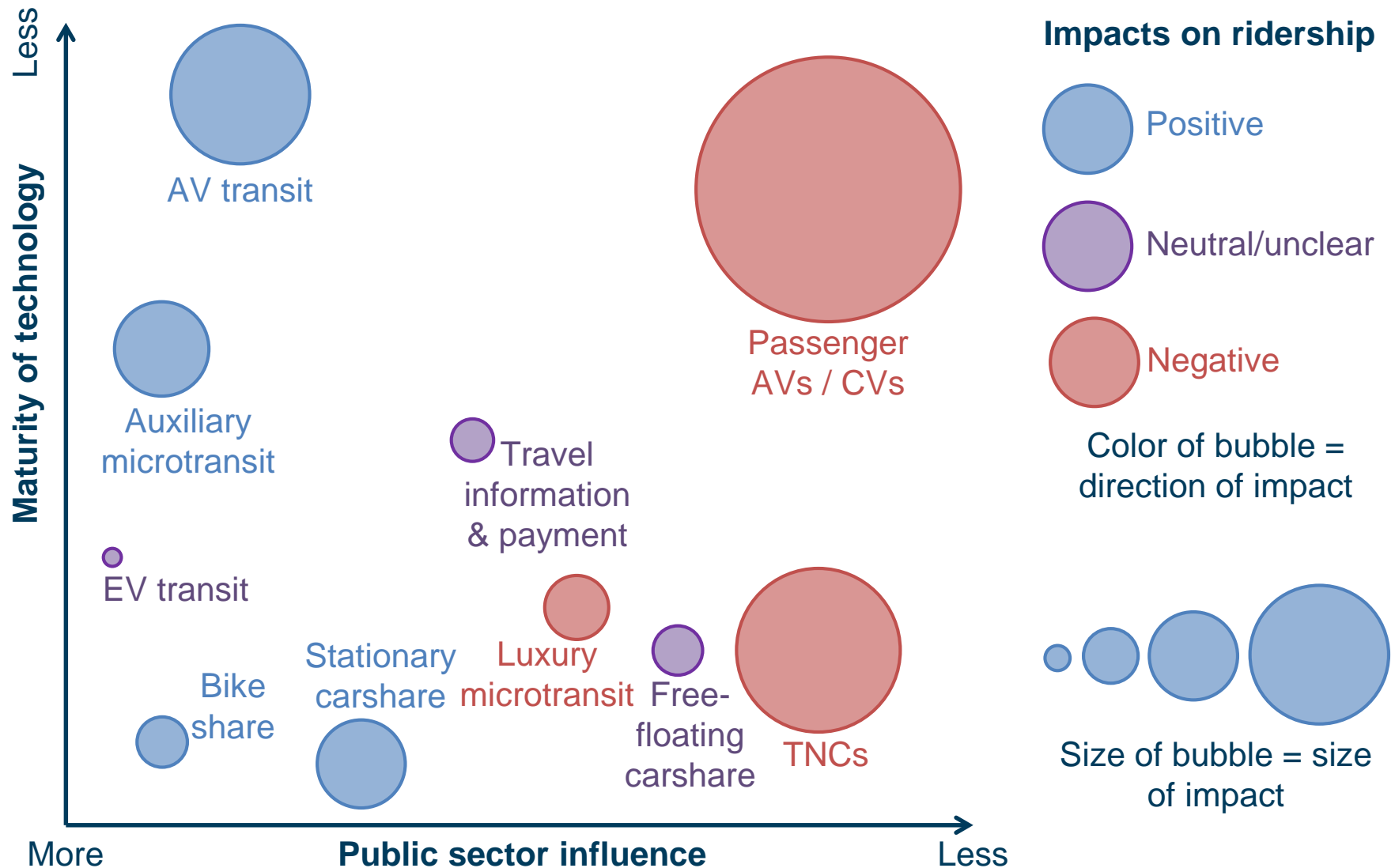


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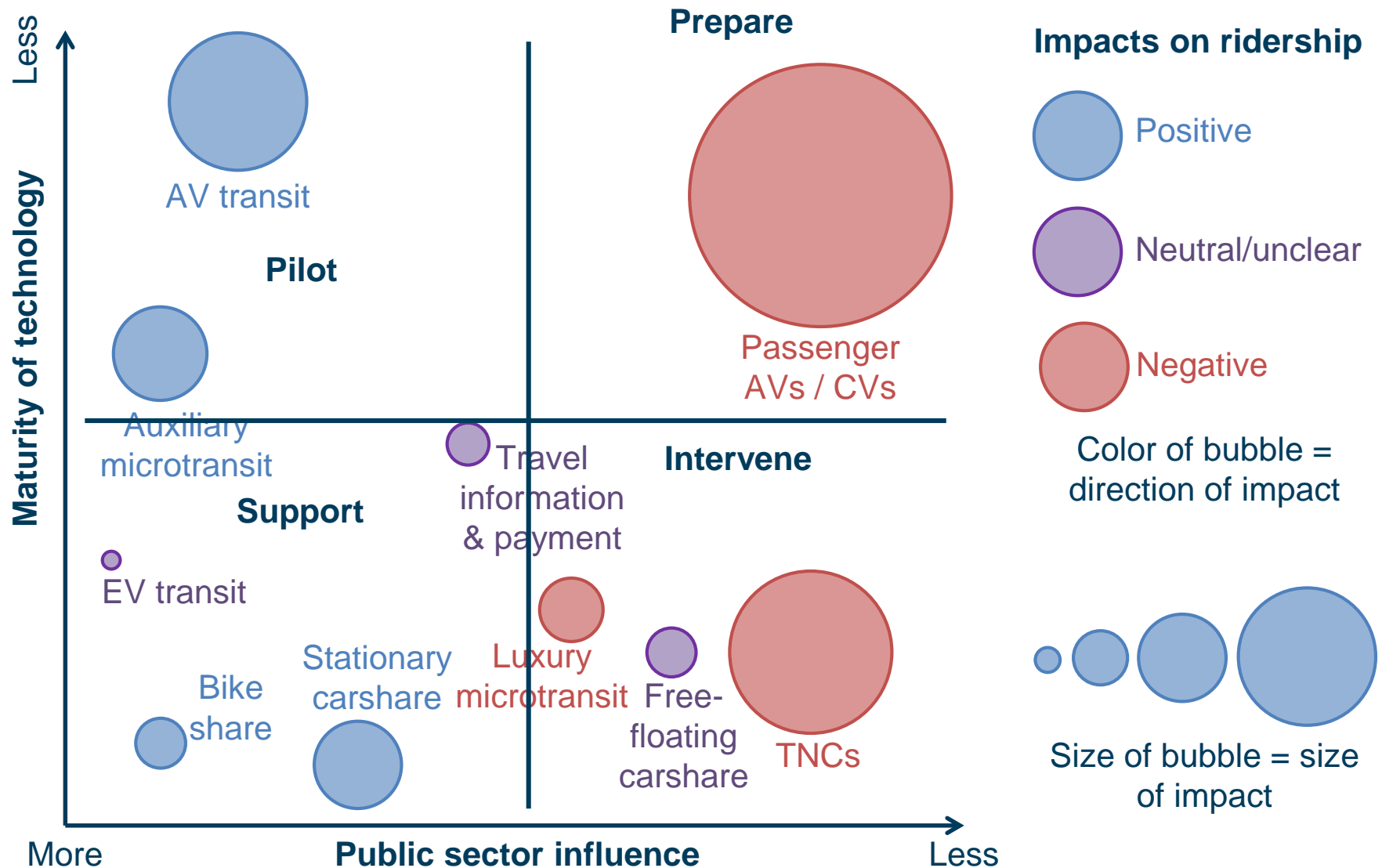


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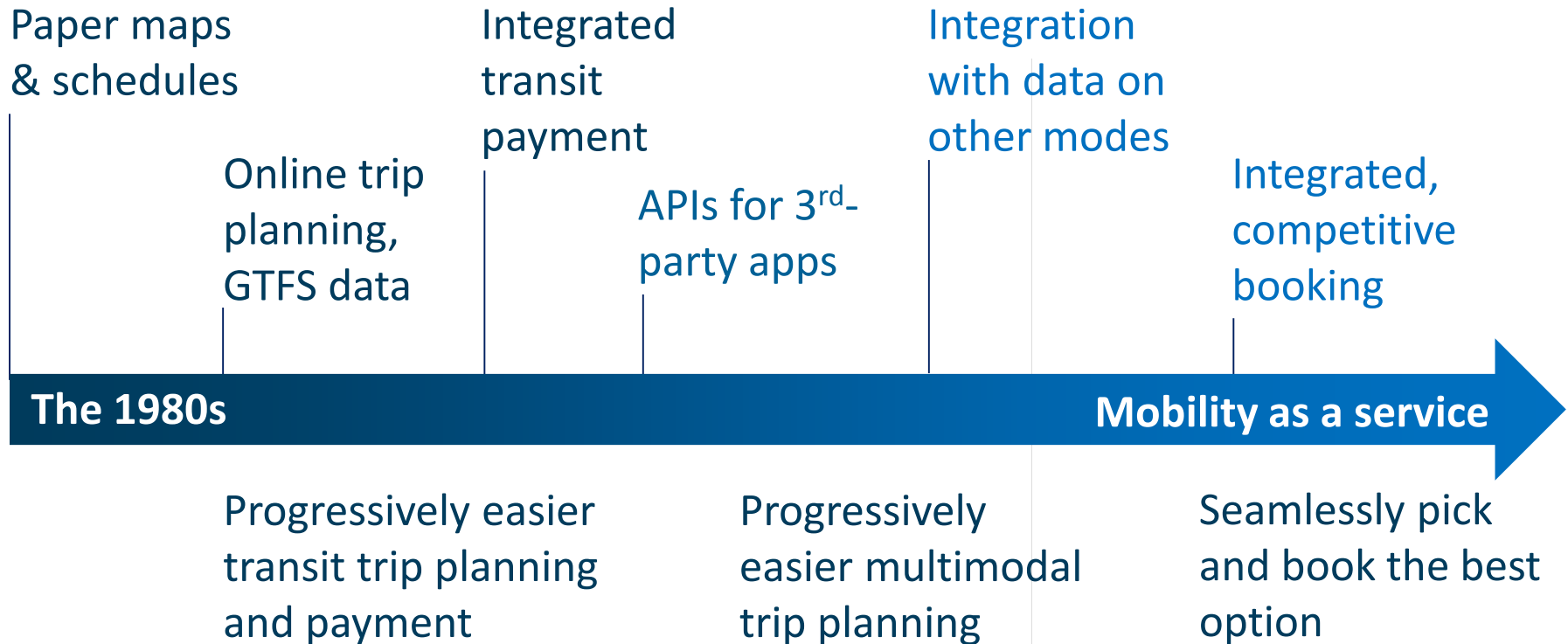
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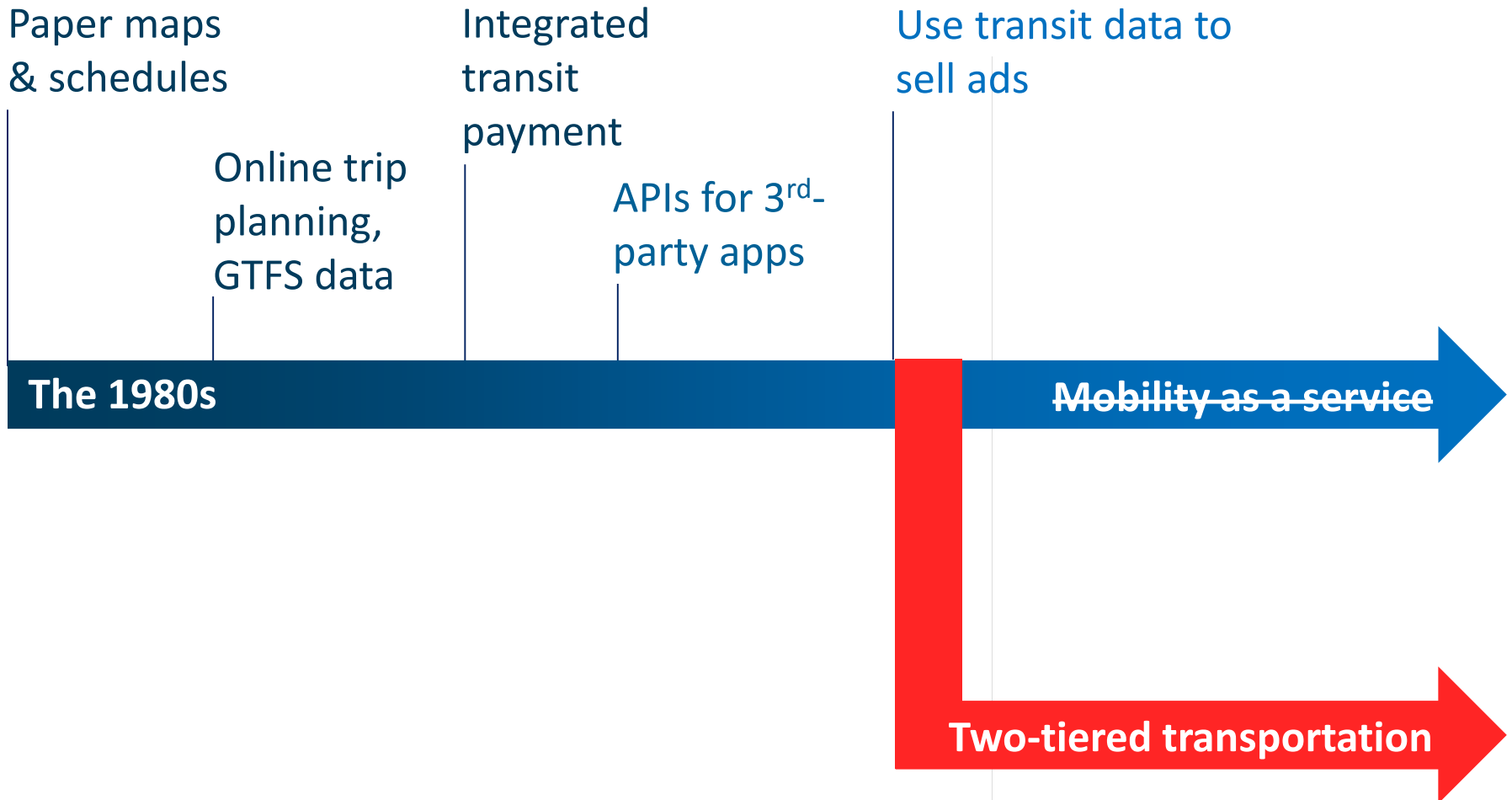
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