Agenda

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

2018 REGIONAL TRANSPORTATION PLAN UPDATE

RTP Performance Work Group - Meeting # 7

Date: October 12, 2017
Time: 9 a.m. to 10:30am
Place: Metro Regional Center, Council Chamber
600 NE Grand Avenue, Portland, OR 97232
Purpose: Discuss RTP performance targets and monitoring measures

*Working together across interests and communities can help ensure every person and business in the Portland metropolitan region has access to safe, reliable, affordable and healthy ways to get around. Find out more at **oregonmetro.gov/rtp**.*

Agenda

9:00	**Welcome & introductions**	Tom Kloster
9:05	**Partner Updates** *Who have you talked to about this work? What have you heard?*	Everyone
9:10	**Brief update on RTP and role of work group**	Kim Ellis
9:25	**Review adopted RTP Performance targets, state-required performance monitoring requirements, MAP-21 performance measures and federal Congestion Management Process reporting requirement to prepare for November 8 and December 7 workgroup discussions**	John Mermin
10:15	**Next Steps**	John Mermin
10:30	**Adjourn**	Tom Kloster

Meeting Packet	Next Meeting
• Agenda	**November 8, 2-4 p.m. Room 401**
• Summary from December 12, 2016 meeting	
• RTP Performance Measures Scoping Report (October 2017)	
• Performance Measures Work Plan	
• Performance work group upcoming agenda topics	

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2018 REGIONAL TRANSPORTATION PLAN UPDATE

RTP Performance Work Group - Meeting # 6

Date: December 12, 2016
Time: 10am - noon
Place: Metro Regional Center, Room 401

Committee Members Present:

Name	Affiliation
Jessica Berry	Multnomah County
Phil Healy	Port of Portland
Christina Fera-Thomas	Hillsboro
Abbot Flatt	Clackamas County
Eric Hesse	TriMet
Karla Kingsley	Kittelson & Associates
Bill Holstrom	Oregon Dept. of Land Conservation & Development
Steve Kelley	Washington County
Peter Hurley	Portland
Lidwien Rahman	Oregon Department of Transportation
Chris Rall	Transportation 4 America
Lynda David	RTC

Metro Staff Present
John Mermin
Tom Kloster
Peter Bosa
Lake McTighe
Grace Cho
Tim Collins
Jamie Snook

I. Partner Updates

The Portland City Council has initial performance measures – city council will adopt on Dec 21st (VMT, Mode Share, Greenhouse Emissions). A second round of measures, including congestion will be released as a discussion draft in January.

A member inquired about the Portland speed limit signage and relationship with ODOT. The City is seeking additional flexibility for city owned facilities. Other local jurisdictions are interested as well, e.g. Wilsonville.

II. Review Agenda & Brief Update on RTP

Tom Kloster summarized the outcomes/goals of the third regional leadership forum. One takeaway was Portland Mayor-elect Wheeler urging regional leaders to be bigger and bolder when developing a package of projects then past efforts, and added that voters needed to hear a compelling, well-articulated vision. A workgroup member added another takeaway that a coalition needs to form around what a funding package could look like. The leader of this coalition is yet to be determined.

Tom added that this RTP needs to outline a group of investments that could provide the basis for a regional funding measure. A workgroup member posed the question regarding the relationship between the system evaluation measures we've been discussing and any project evaluation criteria that may be developed? Tom responded that's to be determined, but there will be a connection – Tyler Frisbee is leading up our efforts and has been discussing with electeds how they want to include performance measures in the evaluation criteria. Metro is exploring the process for how projects are submitted to the RTP – providing a clear filter for what comes into the plan. The goal is not to 'kill' projects, but to help improve projects and provide guidance/feedback.

III. Review Updated Goals and Measures Comparison Table

John Mermin framed the desired outcomes of the meeting: 1) provide updates on measures under development 2) finalize recommendations that will be discussed at TPAC on January 27. He reminded the group that although we are wrapping things up today, there will still be another chance to discuss measures next fall when we are reviewing the results of the evaluation of the updated RTP project list. Refinements may be needed based on what we learn by using the measures.

John then described the updated table displaying a crosswalk of the system evaluation measures and the RTP Goals. It has been reorganized around themes and simplified based on feedback from this workgroup, TPAC and MTAC.

John clarified that staff is still working on developing an affordability measure. The boxes (for which RTP goals it relates to) will be filled in if the measures goes forward.

A member suggested suggests that the dots should be dynamic to show the extent to which each of these measures aligns with the goal. e.g. solid, half-filled, empty

IV. Discuss Recommended Refinements to 2018 RTP System Evaluation Measures

Update on the RTP Freight system evaluation measures under development.

Tim Collins presented to the group and explained that the RTP Freight workgroup met on 11/12 and there will be a sub-committee of that workgroup meeting later today to further discuss the "access to industry and freight intermodal facilities" measure. They are trying to develop a new measure that looks at the extent that industrial land and freight intermodal facilities are "transportation constrained." They'd like to know where in our region (beside just state owned facilities) are constrained.

Regarding travel time periods of importance to freight, Tim shared that the workgroup has been discussing with freight operators to see when they're traveling and to set any congestion measures based on when they're using the system. For congestion (cost of delay) they'd be looking at the general delay at multiple hours and calculate the cost of delay by truck.

A member asked what is meant by "constrained" Tim clarified that "constrained" is the way the state defines a bottleneck based on (V/C), travel times and unreliability . We intend to identify the bottlenecks in the system and the number of acres and facilities that are impacted.

Regarding reliability, Tim clarified that we can't yet project it into the future, but we can describe current conditions. It was noted by a workgroup member that in general, reliability is better to measure than hours of delay – and this point of view is consistent with the region's comments to USDOT on their draft congestion rules.

A workgroup member asserted that while there are issues with our inability to project reliability, that we should not let that get in the way of measuring it somehow. USDOT has stated that crashes and response to crashes is the leading cause of unreliability. We can manage that and if we measure reliability we can address it more directly. If we can look at what is causing unreliability, then we can address those directly.

Tim mentioned that the State was planning to measure present-day reliability for freight based on a measure in a statewide bottleneck study. He believes that it's trying to match the guidelines from USDOT. Tim is trying to tie this to the regional freight routes.

A workgroup member reminded us that we need to include reliability in our storytelling, even if we don't have an ability to forecast it. Another member offered that the group will get more comfortable once they can see which other measures (beyond system evaluation measures) get at the goals more broadly (e.g. showing how monitoring connects to project selection).

A member described that the freight industry is currently planning around those key bottlenecks on the state system. They plan shipments to avoid certain locations at certain times. A tool that would forecast the extent of time of congestion and was connected to reliability (is it a reliable bottleneck?) and safety (what's the frequency of crashes at this bottleneck?) would be valuable.

Regarding freight travel times, Tim mentioned that we need to make a professional judgment around what are the most essential routes to measure. We're really trying to measure the connection between the most important origins and destinations.

A workgroup member mentioned that the route shown through Gresham is not the locally preferred route *(Note – she clarified after the meeting that she was mistaken, she thought the route was showing 257th. The route shown is actually correct – 242n/Hogan to 238th)*

A member raised issues with the routes shown on the Westside and offered to help provide more relevant routes that match Washington county data regarding truck travel patterns.

A member inquired whether Cornelius Pass Rd should be included, since it's the hazardous material route. (Those materials are not allowed through Hwy 26 tunnel).It was noted that Cornelius Pass Rd is part of a mobility corridor (if you can't get through the tunnel).

Update on VMT, Mode share, Multimodal travel times, Congestion & Interim regional mobility policy (John Mermin)

#1 Multimodal Travel
This measure will now include Person miles traveled (in addition to VMT, BMT, Freight miles traveled and pedestrian miles traveled). VMT will now be calculated at the sub-regional level as requested. (Portland, urban Washington Co, Urban Clackamas Co, East Mult Co). As one in the past for smaller than regionwide geographies, this calculation will include travel to, from, and within the boundary of the sub-region. For TAZ that are between two zones, we'll assign it to the jurisdiction it's mostly in.

#2 Active Transportation & Transit Mode share
In addition to regionwide, central city, regional centers, and mobility corridors, we will all also report this at the sub-regional level as requested.

#12 Multimodal Travel Times
In past RTPs we only looked at auto/transit travel times. For, this RTP we'll be adding bike pedestrian and freight as well. We have a lot of overlap between auto, transit and bike modes in terms of origin/destination pairs which will allow us to make comparisons between two modes to see where modes are competitive and which ones are suffering.
Jamie Snook added that the transit workgroup we added about 10 O/D pairs (not shown on the handouts) – mostly suburb to suburb. As much as possible they wanted Metro to compare all modes.

Lake McTighe mentioned that she'd be getting input from regionwide bike coordinators on the proposed O/D pairs for bike travel times.

A workgroup member raised the issue of suburb to suburb connections e.g. Wilsonville to Sherwood to Wilsonville to Canby.

Tom responded that we can do any of these, but which corridors do you want to be formally reported on as part of the RTP? (vs. local TSP analyses that you do with the data we provide)

A workgroup member noted that the Portland CBD to Milwaukie O/D pair was missing from the transit map and recommended that it get added (given the new light rail connection).

A workgroup member asked about the opportunity to add in more suburban centers in Washington County that are developing now or have developed recently. He noted that the bike O/D pairs included more than the auto.
John responded that it's a balance – we'd like to report on the most important pairs from a regionwide perspective, and that if we added too many pairs the volume of data outputs gets to be overwhelming.

A workgroup member suggested provide some criteria about which ones are key? That would allow him to provide more informed feedback on the draft list.

Tom reminded the group that the purpose of the travel time measure is about providing some guidance about how the system is functioning.

A workgroup member asked how the model accounts for the total travel time (e.g. parking a car or waiting for transit to arrive. Cindy responded that historically just at the in-vehicle time only, but that the goal is to include out of vehicle time when we have a tour-based model in the future. For now, there are just standard assumptions for parking times.

A workgroup member recommended adding Cornelius Pass as an auto corridor (St John's to Hillsboro via Cornelius Pass)

A workgroup member recommended highlighting connections that don't currently exist because of system gaps. Potential for creating/using a system completion map?

Lake noted that by looking at time by modes would help highlight gaps by modes (i.e. why is it taking so long to bike from here to here?)

A workgroup member asked if bicycle travel times are restricted to bike facilities or all possible routes. Lake replied that the model accounts for attractiveness of the facility and routes people accordingly – weighting time/ out of direction travel vs. attractiveness of the facility type.

A workgroup member noted it is important to extract/tell the story about what we can take away from the system measures

<u>#13 Congestion & Interim regional mobility policy</u>
John described that we're recommended keeping hours of delay per capita, even though hours of delay is not the preferred method of congestion. At least it is on a per capita basis so it factors in (and allows the region to take credit for) those using other modes who are not necessarily stuck in the delay.
John noted that the Interim Regional mobility policy will be kept in the plan for now, but that ODOT has agreed to help fund a refinement plan following the 2018 RTP that will update this policy.

A workgroup member noted that many local jurisdictions would like to be involved in these discussions, since those perspectives can differ from ODOT's/ Salem. Another addec that having scoping discussions for the refinement plan sooner rather than later would be desirable. A workgroup member noted that he'd like to explore with Metro additional flexibility to local jurisdictions regarding the IRMP within Metro's regulatory document – the Regional transportation Function Plan – prior to the refinement plan completion.

Safety System Evaluation Measures (Lake McTighe)

Lake provided an update for two measures.

<u>#5 Exposure to Crash Risk</u>

She clarified that this is measuring non-freeway miles (VMT will be excluded on specific limited access routes). VMT/TAZ Area as opposed to per capita

#6 Access to Travel Options
She is still trying to assess whether ADA/accessibility will be included.

Equity System Evaluation Measures (Grace Cho)
Grace provided an update for three measures.
#8 "Access to Community Places"
She clarified that name had changed to "Access to Community Places".
#3.Affordability
Metro planning staff is working with Research Center to develop a methodology around this (still scoping) – focuses on 'out-of-pocket-consumer-costs'.

#16 Clear Air
Metro staff has identified a list of 9 air toxics. Metro Staff is exploring with DEQ the potential to do sub regional evaluations on air quality and emissions as requested by this workgroup.

Next Steps

Peter Hurley emphasized that there are a number of things that we can't model/forecast but are really important when thinking about how we tell the story. He has concerns about congestion measures not considering reliability, etc. He recommends spending more time looking about how to tell the reliability story using the factors that research identifies as determinants of reliability. This will help us identify how improvements will impact the system as a whole.

Tom responded that he did not think we're retreating from the concept – but we may need to circle back and think about how we're communicating/telling the story, etc. Lake offered that increased VMT creates increased crashes, climate change impacts. She offered that we should consider how resilient/flexible the system is when there is an event (accident, weather, etc.)

Other next steps include presentations to TPAC on 1/27 and MTAC 2/15 and recommendation from TPAC to JPACT on 2/24. John instructed members to communicate with their TPAC and MTAC representatives in advance of those meetings.

John noted that methodologies for each member are being developed my Metro staff and will be shared with TPAC on 1/27 (and will be sent out to the workgroup as well). John thanked workgroup members for their time spent to date and Tom adjourned the meeting.

Getting there with a connected region

2018 REGIONAL TRANSPORTATION UPDATE

Performance Measures Scoping Report

October 2017

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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/rtp

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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INTRODUCTION

Cities and regions around the country are facing important choices about how and where they want to grow and invest in their communities. Faced with limited funding and significant infrastructure needs, the desire for getting the most out of our transportation investments has increased. Performance-based planning has emerged over the past decade as an effective way to understand the consequences and benefits of the choices facing regions. Performance measurement is a way to build accountability and transparency into the transportation planning process.

When used effectively, performance measures can enable more comprehensive evaluation across multiple issue areas and help communicate tradeoffs and funding decisions to stakeholders. It allows stakeholders and decision-makers to understand whether the region's investment priorities are helping create a great place to live, work and play in an efficient, fiscally-responsible and equitable manner. Applied effectively, performance management can be a powerful tool for building public confidence that the available funds are well spent.

The purpose of this scoping report is to provide background and context to inform a focused review and refinement of adopted performance measures and targets as part of the 2018 Regional Transportation Plan (RTP) update.

PERFORMANCE-BASED PLANNING AND THE RTP

Background

With its adoption, the 2010 Regional Transportation Plan (RTP) introduced a framework for an outcomes-driven, performance-based planning approach intended to better link investment decisions to plan goals. The goals adopted in the RTP reflect values and priorities identified by the public and other stakeholders during development of the plan.

During development of the 2010 RTP, Metro convened a performance measures technical work group and worked with regional partners through an extensive process to develop the RTP performance management system. The RTP's performance management system identifies three layers of measurement to establish an on-going evaluation and monitoring cycle.

The **RTP performance targets**, described in Chapter 2 of the RTP[1] set time-bound, quantifiable goals for achieving the region's desired policy goals for investment in the region's transportation

Adopted RTP Policy Goals

What We Want to Achieve

1. Vibrant communities
2. Economic competitiveness
3. Transportation choices
4. Efficient travel management
5. Safety and security
6. Environmental stewardship
7. Public health
8. Leadership on climate change

How We Get There

9. Equity
10. Fiscal stewardship
11. Accountability

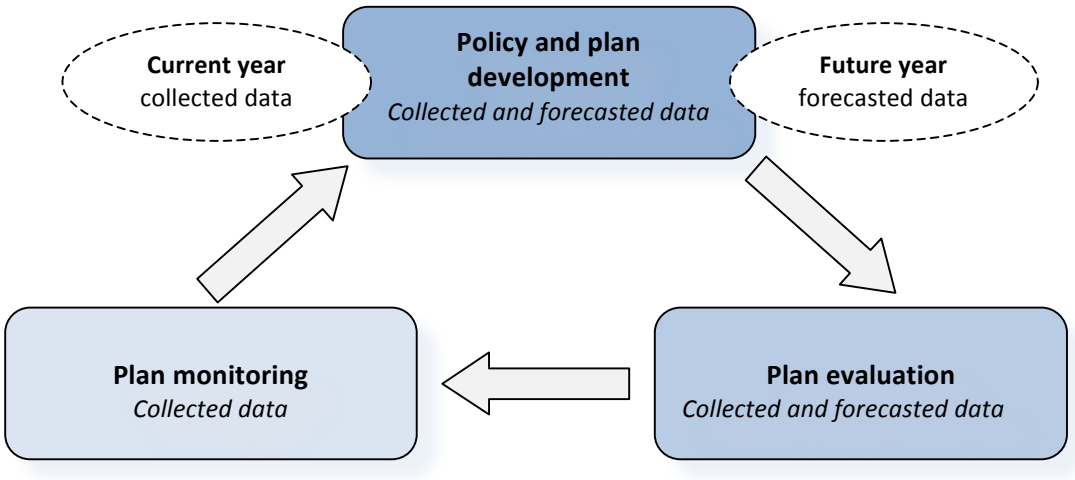
First adopted in 2010 RTP and amended in 2014.

[1] Shown in table 1 on following page & in 2014 Regional Transportation Plan, p. 2-17, available at: http://www.oregonmetro.gov/sites/default/files/RTP-2014-final.PDF

system. The RTP performance evaluation and monitoring framework, described in Chapter 4 of the plan, include the **RTP system evaluation measures** which compare the base year conditions with alternative investment packages (projects) to document how well each package of transportation investments performs on an array of measures that are linked to the RTP goals, and in most cases, overlap with the RTP performance targets[2]. The final measurement layer is the **RTP monitoring measures** that support the region's federally-required Congestion Management Process reporting between the RTP update cycles.[3] Some of these measures also overlap with the performance targets and system evaluation measures, but rely on collected (observed) data rather than forecasted data. To date, most CMP data has only been available as forecasted data on a consistent basis.

The performance measures will serve as the dynamic link between RTP goals and plan implementation by formalizing the process of target-setting, evaluation and monitoring to ensure the RTP advances toward achievement of the region's transportation, land use, economic, and environmental goals. The RTP defines to the process of plan development, evaluation and monitoring over time as the performance measurement system, as shown in F**igure 1.**

Figure 1. RTP Performance Measurement System



Source: 2014 Regional Transportation Plan

This outcomes-focused performance–based planning approach remains in the plan today. Minor updates were made to the safety performance target during the 2014 RTP update to reflect recommendations from the 2012 Regional Transportation Safety Plan. Through evaluation and monitoring, the region can better understand the extent to which investments in the transportation system achieve desired outcomes and provide the best return on public investments. Development of a performance measurement system also satisfies benchmarks

[2] See Appendix E for System evaluation measures and linkages to the RTP goals.
[3] See Appendix F for System monitoring measures.

mandated by the Oregon Transportation Planning Rule (TPR) and federal requirements to use performance monitoring as part of the region's Congestion Management Process (CMP). Additional refinements to the RTP performance measurement system are anticipated in the 2018 RTP update to address recent national, regional and local efforts.

Table 1 summarizes the current RTP performance targets.

Table 1. 2014 RTP Performance Targets

ECONOMY
Safety –By 2035, eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a 16% reduction by 2020 (as compared to the 2015 five year rolling average and a 50% reduction by 2025. ~~2040, reduce the number of fatal and severe injury crashes for pedestrians, bicyclists, and motor vehicle occupants each by 50% compared to 2007 - 2011 average.~~*
Congestion – By 2040, reduce vehicle hours of delay (VHD) per person by 10% compared to 2010.
Freight reliability – By 2040, reduce vehicle hours of delay per truck trip by 10% compared to 2010.
ENVIRONMENT
Climate change – By 2040, reduce transportation-related greenhouse gas emissions per capita below 2010 levels.
Active transportation – By 2040, triple walking, biking and transit mode shares compared to 2010.
Basic infrastructure – By 2040, increase by 50% the miles of sidewalk, bikeways, and trails compared to the regional networks in 2010.
Clean air – By 2040, ensure zero % population exposure to at-risk levels of air pollution.
Travel – By 2040, reduce vehicle miles traveled per person by 10 percent compared to 2010.
EQUITY
Affordability – By 2040, reduce the average household combined cost of housing and transportation by 25 percent compared to 2010.
Access to daily needs – By 2040, increase by 50% the number of essential destinations accessible within 30 minutes by bicycling & public transit for low-income, minority, senior and disabled populations compared to 2010.

*The strikethrough/underscore reflects the revised target recommended by the RTP Safety Work Group and supported by the Metro Council, the Metro Policy Advisory Committee and the Joint Policy Advisory Committee on Transportation in May and June 2017.

2018 Regional Transportation Plan Update

For the 2018 RTP update, Metro has convened a RTP performance work group to conduct a focused review and refinement of the regional performance management system, specifically the performance targets and the measures recommended for system evaluation and monitoring. The update will respect the significant effort and input that went into developing the 2010 framework by building on that foundation. However, staff will seek opportunities to learn from and build on more recent local, regional, state and national performance-based planning efforts and best practices from other regions.

Recent regional efforts

Climate Smart Strategy The RTP performance measures framework guided the evaluation used to inform development of the 2014 Climate Smart Strategy. The adopted strategy[4] included a performance monitoring approach for tracking the region's progress on implementing the strategy. The performance measures identified for monitoring are a combination of existing and new measures, most of which are drawn from the Regional Transportation Plan and the Urban Growth Report, that track existing land use and transportation policies. The measures and monitoring approach are summarized in **Appendix G**.

The Climate Smart Strategy monitoring and reporting system relies on existing performance monitoring requirements per ORS 197.301 and regularly-scheduled updates to the RTP and Urban Growth Report. The Climate Smart Strategy recommended further review of the measures and performance monitoring targets before being incorporated into the 2018 Regional Transportation Plan. The recommendation recognized the measures and targets may need to be further refined to address new information, such as new MAP-21 performance-based planning provisions and recommendations from Metro's Equity Strategy Baseline Report which was under development at the time of the Climate Smart Strategy adoption. The Climate Smart Strategy also called for the region to advance the consideration of public health, equity and economic benefits of investment in the region's transportation system as part of the 2018 RTP update.

Metro Equity Strategy Baseline Report: A Framework for Regional Equity (January 2015) **and Strategic Plan to Advance Racial Equity, Diversity and Inclusion** (June 2016). The Baseline Report and Strategic Plan are the products of a multi-year process that Metro Council initiated in 2010 by adopting the six desired regional outcomes, which included equity. The process sought to better define and evaluate "equity" in the region. The research shows that,

[4] The 2014 Climate Smart Strategy is available at http://www.oregonmetro.gov/climatesmart

like most of the nation, the Portland region's communities are becoming more diverse.[5] It is projected that by the year 2045, communities of color will be the majority[6].

The two major transportation equity findings in the Baseline Report are that:

- Transportation, housing, and other policies that increase car-dependency in our region by not providing adequate transportation options promote cycles of poverty, segregation, and displacement.
- Decision makers should prioritize lowest-cost transportation options such as public transit, walking, and biking that safely and effectively connect people to jobs, housing, places of worship and education, services and social activities.

The Strategic Plan adopted by the Metro Council in 2016 focused on eliminating the barriers that confront people of color of the region as part of increasing equity for all. The plan shows that the Portland metropolitan region is undergoing significant demographic change, with people of color becoming a greater percentage of the local population while, at the same time, experiencing great challenges in many areas.

The Metro Council recognized communities of color in our region face the most pervasive barriers in all areas of social well-being. Many of the same barriers are shared by other groups such as people with low incomes, young people, seniors, women, individuals with disabilities and the LGBTQ community. At the same time, research shows that by addressing the most widespread barriers that keep communities of color from thriving, Metro will be addressing many of those same barriers that affect other historically marginalized groups. Additionally, national, regional and local equity research reveals that regions that intentionally focus on improving economic, social, and civic outcomes for communities of color are more successful overall. In other words, everyone benefits in regions that reduce racial disparities. The 2018 RTP update provides an opportunity to identify and address transportation-related racial disparities experienced in the region and begin measuring progress in a more systematic way, including the distribution of investments in the RTP.

Recent national efforts

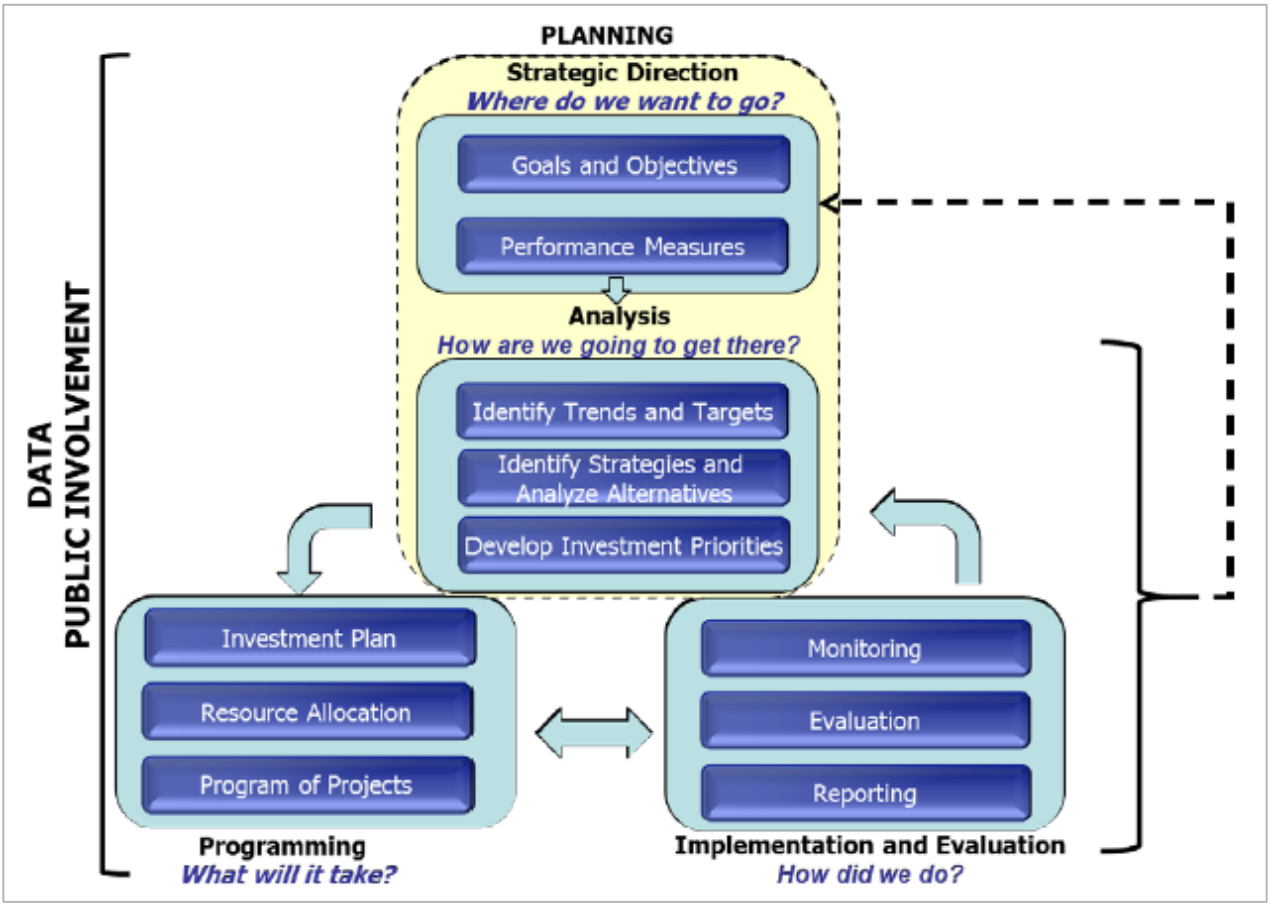
Since passage of the Moving Ahead for Progress in the 21st Century (MAP-21) in 2012 and the Fixing America's Surface Transportation ACT in 2015, the US DOT, Transportation Research Board and others have been conducting research and developing best practices, case studies, guidebooks and other tools to support implementation of performance-based planning and programming (PBPP) by MPOs, state DOTs and transit agencies. Links to these efforts and tools are provided in **Appendix A**. Performance management is credited with improving project delivery, informing investment decision-making, focusing staff efforts on public priorities, and providing greater transparency and accountability to the public.

[5] U.S Census Bureau, 2010.

[6] Metro Equity Strategy Baseline report, available at http://www.oregonmetro.gov/equity-framework-report

Figure 2 demonstrates how PBPP stages fit within a traditional planning and programming process.

Figure 2. Performance-Based Planning Framework



Source: Performance-Based Planning and Programming Guidebook. US Department of Transportation (September 2013)

In Spring 2015, Transportation For America published *Measuring What We Value: Setting priorities and evaluating success in transportation*. This report describes the various ways performance measures can be used in long-range planning, project selection and alternatives analysis - including methods successfully in use across the country. It highlights innovative efforts of DOTs and MPOs and covers a wide array of measures that address the public's interest in the transportation system.

Recent local efforts

In early 2016 Metro hosted a Measuring Success workshop. More than sixty transportation staff, public officials and community advocates from across the Metro region met to share ideas

and learn how to best bring performance measures into transportation planning. Guest presenters from Transportation for America, Washington County and the cities of Wilsonville and Portland shared both local and national models for performance-based planning and decision-making. Presentation topics included:

- The city of Portland Transportation System Plan update used multi-modal performance measures for evaluating and prioritizing transportation projects and programs
- The city of Wilsonville Transportation System Performance Report[7]
- Washington County Multimodal Performance measures & standards for different levels of planning: TSP, Corridor / Project Plan, Development Review/Plan Amendments[8]
- Transportation For America's best practices on performance measures & experience from other regions[9]

Takeaways from the workshop include:

- There is significant interest in advancing how the region measures performance of the overall transportation system and individual projects to inform transportation planning and investment decisions.
- It is important to consider how various local jurisdictions are using and applying performance measures. While application approaches and scales varied, all were working towards a common goal or set of goals.
- There are valuable lessons that can be learned from local application of performance measures as well as peer regions like the Bay Area.

Best practices from other regions[10]

Over the course of 2015 and early 2016, Transportation for America worked with Metro and four other MPOs to explore ways to integrate health and equity into their performance measure frameworks. One product of that work is a report, *Planning for a Healthier Future*.[11] The report outlines the utility and trade-offs of various specific performance measures and their potential application to consider health and equity impacts of transportation investments. Links to national resources for performance-based planning can be found in **Appendix A**.

[7] Accessed at http://www.ci.wilsonville.or.us/DocumentCenter/View/9681
[8] Accessed at https://www.oregon.gov/LCD/TGM/TGMProducts/1F-12_1.pdf
[9] Accessed at http://t4america.org/maps-tools/performance-measures-report/
[10] Transportation For America. Measuring What We Value, http://t4america.org/maps-tools/performance-measures-report/, accessed 12/30/15, and phone conversations with MPO staff.
[11] Transportation For America. Planning for A Healthier Future, http://t4america.org/2016/06/22/introducing-planning-for-a-healthier-future/, accessed 6/30/16.

Additionally, Metro staff has compiled best practices from other MPOs as a way to help inform the discussions of the 2018 RTP Performance work group on how to update Metro performance based planning techniques. A summary of key best practices follows.

Who: Sacramento Area Council of Governments (SACOG)
What: Congested Vehicle Miles Traveled (VMT) per capita
Why: Evaluating different scenarios in its Regional Transportation Plan

SACOG, the MPO in the Sacramento, CA area, uses Congested VMT per capita to focus on the biggest bottlenecks that affect the most people for the largest amount of time, rather than viewing all delay as equally problematic. Congestion is defined as a demand to capacity ratio of more than 1. Because the measure is per capita, it gives the region credit for the people that are not in that traffic, due to using other forms of travel and land use planning creating trips closer to home. Additionally, compared with typical congestion measures, e.g. total delay in a region, this congested VMT per capita is something that an individual can relate to on a more personal basis– "How many miles per day does an average person spend in the worst congestion". SACOG compares this measure regionally with different levels of investment of funding and project types.

Who: Bay Area Metropolitan Transportation Commission (MTC)
What: Project screening
Why: Deciding what projects to include in Regional Transportation Plan

MTC, the MPO in the San Francisco, CA area, conducts a project level assessment for all potentially eligible projects to its regional transportation plan. Low-cost projects are screened qualitatively based on how well they achieve regional goals. High-cost projects undergo a quantitative benefit-cost analysis.

Who: The Metropolitan Transportation Commission (MTC)
What: "Vital Signs" website - Monitoring transportation related outcomes
Why: Communicating how they're doing to the public

The MTC has established a monitoring initiative to track trends related to transportation, land and people, the economy and the environment. Measurements in these areas help the region understand where it's succeeding and where it falls short. A user friendly website (http://www.vitalsigns.mtc.ca.gov/) compiles indicators, each presented with interactive visualizations that allow an exploration of historical trends, differences between cities and counties, and comparisons with other peer metropolitan areas.

Who: Virginia Department of Transportation (VDOT)
What: Project Selection Process
Why: Direct funding to the most cost-effective projects

In 2014 and 2015, the State Legislature passed two laws that significantly change how transportation projects are funded in Virginia. These laws are expected to bring transparency and objectivity, replacing a process that was considered confusing, opaque and overly political. House Bill 2, adopted in 2014, creates a process where projects will be screened and ranked based on five priority outcomes: economic development, safety, accessibility, congestion mitigation and environmental quality. House Bill 1887, adopted in 2015, reforms the state's funding formulas, directing more funds for maintenance and repair. It splits the remaining funds between priority state projects (using the new HB2 ranking process) and local projects selected through regional competitions. More information can be found at: http://vasmartscale.org and http://t4america.org/maps-tools/state-transportation-funding/capital-ideas-2/virginia/

Moving forward in the 2018 RTP update

Updating the RTP's evaluation framework will include working with partners to advance the region's performance based planning efforts to address requirements and recommendations of MAP-21, the 2014 Climate Smart Strategy for the Portland metropolitan region and Metro's equity work and 2016 Strategic Plan for Racial Equity, Diversity and Inclusion.

It is anticipated that this work will further align the region's investment priorities with the plan's goals, performance targets, and expected resources. In addition, this work will help demonstrate how investments in the transportation system will help achieve the six desired regional outcomes and the goals of the RTP. This work will inform recommendations on further development of data, methods and analytic tools needed to improve our ability to measure the impacts of investment options across economic, equity and environmental goals to demonstrate the return on investment across multiple outcomes.

The refined RTP evaluation framework and related performance targets will be used for three purposes:

(1) to identify where the region is meeting its transportation policy goals or falling short;
(2) to identify how the region will assess the benefits and impact of projects and programs that are identified for inclusion and/or prioritization in the plan's shared investment strategy, to be developed in 2017-18; and
(3) to identify how the region will monitor and track progress in between RTP updates as part of the federally-required Congestion Management Process (CMP) and MAP-21 reporting.

Two key principles are guiding updates to the RTP Evaluation Framework:

Simplify and reduce the number of measures, while remaining comprehensive. The current performance-based planning framework is overly cumbersome and complicated to administer and be meaningfully used in the regional decision-making process. Any adjustments to the RTP targets and measures need to be easily understood by the public and elected officials and reflect the topic areas that they value most in order to be useful for decision-making. New and updated data collection, management and reporting protocols will likely be needed.

Balance monitoring of previously defined measures with the development of new measures over time. Monitoring the same measures cyclically over time is a fundamental requirement of a performance-based planning and measurement program so that the region can track its progress. However, the current RTP identifies several measures that are essentially "to be determined," and the current national discussion surrounding federal performance measure rule-making has highlighted the desire and need for meaningful and comprehensive accessibility and reliability measures, two areas that are not adequately addressed in the current RTP. The RTP update provides an opportunity to advance development of accessibility and reliability measures.

FEDERAL REQUIREMENTS

This section describes federal requirements that must be addressed through the 2018 RTP performance measures work.

Title VI of the Civil Rights Act of 1964 and Executive Order 12898 on Environmental Justice

As a recipient of federal transportation funds, Metro is obligated to meet the requirements set forth by Executive Order 12898 on Environmental Justice and Title VI of the 1964 Civil Rights Act. For both Environmental Justice and Title VI, there are public involvement and analytical requirements that must address specific populations including:

- racial and ethnic minorities;
- people with low-income; and
- limited English proficiency populations.

In demonstrating compliance with Title VI and the executive order on environmental justice, Metro conducts targeted outreach to environmental justice and Title VI communities throughout its transportation planning and prioritization processes and at key decision points with the draft RTP. Metro also includes persons living with disabilities, youth and older adults in its engagement and assessment work.

Additionally, Metro conducts demographic analysis and an environmental justice and Title VI disparate impact analysis to determine, at a regional programmatic level, whether transportation investment cause a disproportionate burden on environmental justice

communities as well as unintentional discrimination based on race, color, or national origin. The assessment differs from the project-specific analysis conducted during the planning and project development phases of a project, where the results look at systematic impacts rather than project-based. Based on the results of the assessment, Metro must justify, mitigate or make adjustments to policies, programs or investments to prevent disproportionate burdens and unintentional discrimination to environmental justice communities.

MAP-21 and FAST Act

Signed into law in 2012, the Moving Ahead for Progress in the 21st Century (MAP-21) created the most significant federal transportation policy shift since the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). A fundamental element of the legislation was its focus on performance-based planning and programming. Fixing America's Surface Transportation (FAST Act) passed Congress in December 2015, replacing MAP-21. The FAST Act did not make any major changes to the performance requirements of MAP-21 and did not add any new performance measures.

A summary of the MAP-21 performance-based planning provisions and rulemaking follows.

Performance-based planning

For the first time, MAP-21 established a performance-based planning framework intended to improve transparency and hold state transportation departments, transit agencies and metropolitan planning organizations (MPOs) accountable for the effectiveness of their transportation planning and investment choices. The objective of the new framework was to ensure States and MPOs invest federal resources in projects that collectively will make progress toward the achievement of the national goals identified in MAP-21.

National performance goals

The legislation established seven national performance goals for the federal-aid highway program and directed the USDOT to develop performance measures for each goal area:

- **Safety** – *To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.*
- **Infrastructure condition** – *To maintain the highway infrastructure asset system in a state of good repair.*
- **Congestion reduction** – *To achieve a significant reduction in congestion on the National Highway System.*
- **System reliability** – *To improve the efficiency of the surface transportation system.*
- **Freight movement and economic vitality** – *To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.*

- **Environmental sustainability** – *To enhance the performance of the transportation system while protecting and enhancing the natural environment.*
- **Reduce project delivery delays** – *To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agency work practices.*

MAP-21 also mandated the Federal Transit Administration to conduct rulemaking to develop transit asset management (TAM) performance measures requiring transit agencies to maintain—and document—minimum TAM standards. Transit asset management is a data-driven decision-making approach that prioritizes funding based on the condition of transit assets, in order to achieve or maintain transit networks in a state of good repair (SGR) through their entire life cycle. The new requirements are intended to help transit agencies keep their systems operating smoothly and efficiently.

In addition, MAP-21 directed state transportation departments, transit agencies, and metropolitan planning organizations (MPOs) to incorporate a performance-based approach in their planning, including measures and targets, that are to be used in transportation decision-making. States, transit agencies and MPOs must set targets for measures specified by USDOT and track and report progress toward meeting these targets. The 2018 RTP update will address all of these new provisions consistent with the FHWA-FTA Final Rule on planning (Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning).

Status of Federal MAP-21 Performance-Based Planning Rulemaking

USDOT released and received comment on seven different rules to address performance-based planning requirements contained in MAP-21. The federal rulemaking was completed in 2017 and is summarized in **Table 2**.

Table 2. MAP-21 Rulemaking Status

MAP-21 Related Rules	Rule Effective Date	ODOT Target-Setting Due Date	Transit agency Target-Setting Due Date	RTP Target-Setting Due Date
Safety Performance Measures	4/14/16	8/31/17	n/a	2/27/18
Highway Safety Improvement Program	4/14/16	8/31/17	n/a	n/a
Statewide and Metropolitan Planning; Non-Metro Planning	6/27/16	n/a	n/a	n/a
Transit Asset Management	10/1/16	n/a	10/1/18	3/30/19

MAP-21 Related Rules	Rule Effective Date	ODOT Target-Setting Due Date	Transit agency Target-Setting Due Date	RTP Target-Setting Due Date
Highway Asset Management Plan for National Highway System	10/2/17	n/a	n/a	n/a
Pavement and Bridge Condition Performance Measures	5/20/17	5/20/18	n/a	11/16/18
System Performance Measures for National Highway System, Freight and Air Quality	5/20/17	5/20/18	*n/a*	11/16/18

Source: Compiled from Federal Highway Administration Transportation Performance Management website (www.fhwa.dot.gov/tpm/) and Federal Transit Administration Transit Asset Management website (www.transit.dot.gov/TAM).

Performance measures have been identified through MAP-21 and subsequent USDOT rulemaking that must be reflect in the 2018 RTP. **Table 3** summarizes the performance measures identified for each national goal area.

Table 3. MAP-21 National Goal Areas, Federal Performance Measures, and Existing RTP Measures

National Goal Areas	Federal Performance Measure(s)	2014 RTP Target(s) / Measure
Safety	Fatalities (number and rate per 100 million vehicle miles traveled) [12] Serious injuries (number and rate per 100 million vehicle miles traveled) [13]	"By ~~2040~~ 2035, eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a 16% reduction by 2020 (as compared to the 2015 five year rolling average and a 50% reduction by 2025.~~reduce the number of fatal and severe injury crashes for pedestrians, bicyclists, and motor vehicle occupants each by 50% compared to 2007 - 2011 average.~~"[14]
Infrastructure condition	Condition of pavements on the Interstate System and on the non-Interstate National Highway System Condition of bridges on the National Highway System	None

[12] Number of motorized and non-motorized fatalities.
[13] Number of motorized and non-motorized serious injury crashes.
[14] The strikethrough/underscore reflects the revised target recommended by the RTP Safety Work Group and supported by the Metro Council, the Metro Policy Advisory Committee and the Joint Policy Advisory Committee on Transportation in Spring 2017.

National Goal Areas	Federal Performance Measure(s)	2014 RTP Target(s) / Measure
	State of good repair for public transit assets for rolling stock, equipment, facilities and infrastructure	
Congestion reduction	Annual hours of peak hour[15] excessive delay (PHED) per capita[16] on the National Highway System. Percent of Non-Single Occupancy Vehicle (SOV) travel[17]	By 2040, reduce vehicle hours of delay per person by 10% compared to 2010. By 2040, triple transit, walk, bike mode share compare to 2010.
System reliability	Percent of reliable person-miles traveled[18] on Interstate System and on the non-Interstate National Highway System	None – though reliability is called out as recommended as a system monitoring measure. Also, there's a target labeled "freight reliability" but it measures delay, not reliability.
Freight movement and economic vitality	Percent of Interstate System miles with reliable truck travel times[19]	By 2040, reduce vehicle hours of delay per truck trip by 10% compared to 2010.
Environmental sustainability	Total emissions reduction for CMAQ funded projects by applicable pollutants[20] Percent change in CO_2 emissions from 2017, generated by on-road mobile sources on the National Highway System	By 2040, ensure 0% population exposure to at-risk levels of air pollution. By 2040, reduce transportation-related greenhouse gas emissions per capita below 2010 levels.

[15] The morning peak period is 6-10 a.m. local time on weekdays. The afternoon peak is 3-7 p.m. or 4-8 p.m. local time, providing flexibility to State DOTs and MPOs

[16] Excessive delay based on travel time at 20 miles per hour or 60 percent of the posted speed limit travel time, whichever is greater, in 15-minute intervals per vehicle. If an affected urbanized area overlaps with more than one State DOT or MPO, all parties must coordinate and report on a single, unified target.

[17] A minimum option for measurement will be use of the American Community Survey (ACS) Journey to Work data from the U.S. Census Bureau. State DOTs and MPOs also may use localized survey or measurements. Finally, State DOTs and MPOs may use volume counts for each mode to determine the percent non-SOV travel, and will be encouraged to report any data not available in national sources today (such as bike counts) to FHWA. This measure may include travel avoided by teleworking.

[18] Reliable defined as the ratio of the 80th percentile travel time of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's free National Performance Management Research Data Set or equivalent. Data are collected in 15-minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant NHS areas that are reliable

[19] The ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.)

[20] Applicable pollutants include: nitrogen oxide (NOx), volatile organic compounds (VOCs), carbon monoxide (CO), and particulate matter (PM10 and PM2.5)

Congestion Management Process

Federal transportation legislation also requires Metro, as the region's designated MPO, to develop a comprehensive strategy for managing congestion through a process called the Congestion Management Process (CMP). A CMP is a performance-based, systematic process for managing congestion that relies on data and analysis tools to diagnose locations with unacceptable congestion and select appropriate strategies through the regional transportation planning and decision-making process. At the very minimum the CMP must:

- Measure multi-modal transportation system performance
- Identify the causes of congestion
- Assess alternative actions
- Implement cost-effective actions
- Evaluate the effectiveness of implemented actions

The region's CMP recommends a range of actions to minimize congestion and enhance the mobility of people and goods to levels that meet state, regional and local needs. [21] These multimodal strategies include, but are not limited to, safety and operational improvements, transportation demand management, pricing and other policy approaches, new transit service, new biking and walking connections, and additions to road capacity, such as auxiliary lanes and general purpose lanes. The region's CMP advances the goals of the RTP and further strengthens the connection between the RTP and the Metropolitan Transportation Improvement Program (MTIP).

The region continues to advance its integration of the CMP in the RTP and the MTIP. The RTP defines the CMP transportation network elements (e.g, freeways, arterials, regional transit routes, regional freight routes, and regional bike and pedestrian routes), policies and performance measures to monitor congestion, safety, mode share, regional transit service coverage and active transportation network completion in the RTP. Documentation of current CMP network performance for each of the region's mobility corridors is provided through supporting documents, primarily the Atlas of Regional Mobility Corridors. The atlas provides an in-depth look at characteristics of 24 travel corridors throughout the region. The performance data reported in the Atlas are drawn from the RTP performance measures and are consistent with MAP-21. However, as noted previously, to date most data is forecasted data rather than collected data. Recommendations for moving toward systematic use of collected data for monitoring purposes will be made through the 2018 RTP update.

In support of the region's CMP, ODOT published its first Traffic Performance Report[22] in 2017, establishing a baseline for long-term monitoring of the region's freeway system for three key performance measures: congestion, reliability and safety. The report covers the 2013-2015

[21] The region's current strategies are reflected in the 2014 RTP Technical Appendix 3.1. More information on the region's CMP can be found in the 2014 RTP Technical Appendix 4.3 at: oregonmetro.gov/regional-transportation-plan

[22] Accessed at: http://www.oregon.gov/ODOT/Regions/Documents/Region1/2016_TPR_FinalReport.pdf

time period and will be updated periodically as new data become available. In addition, TriMet compiled travel data in 2017, documenting regional transit corridors experiencing delay and reduced reliability due to congestion and other system bottlenecks in support of the region's CMP.

Finally, in 2017, the US DOT conducted a formal review of Metro's transportation planning processes to certify consistency with federal requirements. Several recommendations were identified to improve the region's CMP and performance-based planning processes to better meet federal requirements, including:

- determine what are the basic requirements for CMP evaluation and monitoring and create a sustainable data collection approach that meets the CMP requirements;
- document the tools and data used in the CMP and how they are applied to development of the RTP and MTIP; and
- further develop data needs and review RTP and MTIP project prioritization and decision-making processes to ensure future RTP and MTIP updates implement an objective-driven, performance-based planning process.

Clean Air Act Amendments

Due to the region's past history of exceeding the National Ambient Air Quality Standards (NAAQS) for the certain regulated air pollutants, the region has been required to demonstrate the transportation investments in the region will not have detrimental impacts to air quality. As part of the region's demonstration, it has committed to conducting assessment, monitoring, and mitigation activities.

These include:

1. Conducting transportation conformity assessments for a 20-year time frame;
2. Implementing transportation control measures (TCMs)[23]; and
3. Monitoring certain air pollutants and transportation activities and if triggered, implementing any anti-backsliding air quality measures.

The region will continue to ensure it is meeting any performance standards required for federal air quality compliance purposes.

[23] The Second Portland Area CO Maintenance Plan, approved by the Oregon Environmental Quality Commission and US EPA, includes three TCMs: 1) Transit Service Increase - Regional transit service revenue hours (weighted by capacity) shall be increased 1.0% per year; 2) Bicycle Paths - Jurisdictions and government agencies shall program a minimum total of 28 miles of bikeways or trails within the Portland metropolitan area… A cumulative average of 5 miles of bikeways or trails per biennium must be funded from all sources in each Metropolitan Transportation Improvement Program (MTIP); and 3) Pedestrian Paths - Jurisdictions and government agencies shall program at least nine miles of pedestrian paths in mixed use centers… including the funding of a cumulative average of 1.5 miles in each biennium from all sources in each MTIP.

Implications for 2018 Regional Transportation Plan update

Metro has been working on performance-based planning since the 2010 RTP update. Performance measures and targets in the current adopted Regional Transportation Plan cover Title VI, environmental justice and all federal national performance goal areas to some extent, except for infrastructure condition, reliability and project delivery delays.

Now that there is a federal framework and requirements around performance-based planning, Metro will reorganize its approach to more effectively implement MAP-21 and address federal CMP requirements as recommended through the region's 2017 Federal Certification Review.

The 2018 RTP update will also refine transportation equity-related performance measures and performance targets to better reflect priority outcomes identified by historically marginalized communities during Phase 2 of the 2018 RTP update. These outcomes include: access to jobs, community destinations and travel options, exposure to high levels of vehicle traffic, and impacts to the environment.

With rulemaking for each performance area now complete, State DOTs and MPOs are required to set performance targets and measures consistent with the USDOT goal areas and final measures. States have one year following the effective date of the final rules to set statewide targets and MPOs have 180 days following the State DOT deadline. Metro will coordinate with ODOT, TriMet and SMART to ensure consistency between performance measures and targets. This coordination will occur as part of the 2018 RTP update and through other means.

Metro's CMP is intended to bring current data into the region's transportation planning and decision-making process. Currently, the data is primarily model based, rather than relying on collected data – an issue that must be addressed moving forward to address MAP-21 reporting requirements. The region, including ODOT and TriMet, continues to grow data collection capabilities to support the ability to monitor performance in the region's mobility corridors. A more effective data collection, sharing and management plan is needed to further advance the region's CMP and MAP-21 implementation in collaboration with ODOT, TriMet and other transportation providers. Recommendations for future data collection, sharing, management and reporting will be made through the 2018 RTP update.

Finally, since the region's designation from non-attainment to attainment status of the National Ambient Air Quality Standards (NAAQS), the region has demonstrated with each RTP and MTIP that future transportation investments will not cause air pollution levels to exceed the NAAQS and transportation control measures are being implemented in a timely manner. On Oct. 2, 2017, the region reached attainment status. As a result, the region is no required to conduct an air quality conformity determination as part of the RTP system evaluation work. Nonetheless, the region will continue to measure and report future emissions as part of RTP system evaluation work, implement the identified transportation control measures, and work with

partners to monitor air pollution levels. These transportation control measures may get incorporated "as-is" as part of the RTP performance monitoring and/or serve as a monitoring tool or help shape potential modification to existing RTP performance targets.

Metro anticipates moving toward a simplified Goals-Objectives-Targets-Measures structure as shown below.

Sample of Refined RTP Performance Measures Framework

RTP Goal	RTP Objective	RTP Target	RTP Measure(s)

STATE REQUIREMENTS

This section describes state requirements that must be addressed by the 2018 RTP performance measures work.

Oregon Transportation Planning Rule

The Oregon Transportation Planning Rule requires the RTP to include performance measures that ensure the transportation system is adequate to serve planned land uses and demonstrate progress toward increasing transportation choices, reducing reliance on the automobile and increasing biking, walking, sharing rides and use of transit. Specifically, TPR Section 660-012-0035(5) states:

"(5) MPO areas shall adopt standards to demonstrate progress towards increasing transportation choices and reducing automobile reliance as provided for in this rule:

(a) The commission shall approve standards by order upon demonstration by the metropolitan area that:

(A) Achieving the standard will result in a reduction in reliance on automobiles;

(B) Achieving the standard will accomplish a significant increase in the availability or convenience of alternative modes of transportation;

(C) Achieving the standard is likely to result in a significant increase in the share of trips made by alternative modes, including walking, bicycling, ridesharing and transit;

(D) VMT per capita is unlikely to increase by more than five percent; and

(E) The standard is measurable and reasonably related to achieving the goal of increasing transportation choices and reducing reliance on the automobile as described in OAR 660-012-0000."

The RTP performance targets (shown in Table 1), the regional modal targets (described below and shown in Appendix C), the interim regional mobility policy (described below and shown in Appendix D), and the system evaluation measures (found in Appendix E) have served as the basis for meeting Section 660-012-0035(5) and determining whether the proposed transportation system adequately addresses the RTP goals[24] and planned land uses during the plan period.

2040 Regional Modal Targets

The RTP non-drive alone modal targets (shown in Appendix C) reflect the region's current approach for complying with Oregon Transportation Planning Rule's requirement to reduce reliance on single-occupancy vehicles and vehicle miles traveled by 10 percent per capita. The targets are goals for cities and counties to work toward as they implement the regional land use vision, the 2040 Growth Concept, at the local level. The most urbanized areas of the region, such as regional centers, town centers and main streets, have higher non-drive alone modal shares (for travel to and within them) than less developed areas closer to the urban growth boundary. Progress toward the modal targets are reported as part of updates to the RTP.

Implications for 2018 Regional Transportation Plan update
Given the overlap with the RTP performance target for a tripling of walking, biking and transit mode share region-wide and an expectation that the region will continue to experience reductions in vehicle miles traveled per capita, the 2018 RTP update presents an opportunity to consider consolidating the two Non-SOV modal targets to aid in simplifying the RTP performance-based planning approach.

Oregon Highway Plan

The Oregon Highway Plan (OHP) Highway Mobility Policy (Policy 1F) sets targets for identifying state highway mobility performance expectations for regional and local planning and plan implementation purposes. Table 7 of the OHP defines acceptable Volume to Capacity Ratio targets within the Portland Metro region. Table 7 reflects a level of performance in the region that the Oregon Transportation Commission (OTC) deemed tolerable at the time of its adoption. At the same time the Metro and the OTC also recognized the policy as an incremental step toward a more comprehensive set of measures that consider congestion, safety and other aspects of system performance, as well as financial, environmental and community impacts. It was intended for interim use only, with the expectation that Metro would work with ODOT and stakeholders to explore a variety of measures to assess mobility and to develop alternative targets that best reflect the multiple transportation, land use, and economic objectives of the region.

[24] Shown within Appendix E of this report and in 2014 Regional Transportation Plan, p. 2-12, available at: http://www.oregonmetro.gov/sites/default/files/RTP-2014-final.PDF

Interim Regional Mobility Policy

Table 7 of the OHP is incorporated into the RTP as the interim regional mobility policy[25], shown in Appendix D. The interim regional mobility policy shows the minimum performance level desired for major roadways within the region. It describes operational conditions that are used to evaluate the quality of service of the road network, using the ratio of traffic volume to planned capacity (referred to as the volume/capacity ratio) of a given roadway. The measures are used to diagnose the extent of roadway congestion during different times of the day in order to identify deficiencies, i.e. roadway facilities and services in the plan that do not meet the mobility target.

The OTC adopted amendments to the OHP in December 2011. Action 1F3 recognizes that where it is infeasible or impractical to meet the mobility targets in Table 7, ODOT, regional and local jurisdictions may explore different target levels, methodologies and measures for assessing mobility, while balancing mobility with other policy objectives.

ODOT Region 1's "*Portland Metro Area Highway Performance Project*" aims to make recommendations for:

- A small set of performance measures for mobility and safety for application in the Portland metropolitan area.
- A decision-making framework that shows where, under what circumstances, and how certain performance measures could apply in long-range planning and development review.

Implications for the 2018 Regional Transportation Plan update
No changes are recommended to the interim regional mobility targets. Metro will be working with ODOT to scope a refinement plan for the region's mobility policy, post-adoption of the 2018 RTP. In the interim, guidance will be provided in the RTP and in Section 3.08.230 of the RTFP on how the mobility policy applies to planning decisions, and how it relates to and complements other regional targets and policies. The mobility policy is principally an issue for the freeways and statewide highways on the region's principal arterial system. Findings and recommendations from ODOT's Portland Area Highway Performance Project are anticipated in late Spring 2016. ODOT region 1 staff will engage stakeholders in this work. ODOT's staff representative on Metro's performance measures work group will help ensure that the state and regional efforts stay coordinated.

[25] Described as "interim" since the State and region have recognized this policy is not a comprehensive way to measure performance of the road system. The OTC has indicated a desire to advance beyond the traditional mobility performance measure used to guide investment decisions. See description of the "Portland Metro Area Highway Performance Project" on following page.

Metropolitan Greenhouse Gas Reduction Targets Rule

Oregon's long-term goal is to reduce the state's greenhouse gas emissions to 75 percent below 1990 levels by 2050 as direction by House Bill 3543 (passed in 2007). House Bill 2001 (passed in 2009) and Senate Bill 1059 (passed in 2010) directed Oregon's Land Conservation and Development Commission (LCDC) to adopt rules by June 1, 2011 that set targets for Oregon's metropolitan areas for reductions in greenhouse gas emissions from cars and light trucks.

HB 2001 required Metro in conjunction with local governments in the Portland metropolitan area to prepare and cooperatively select a preferred land use and transportation scenario for achieving prescribed GHG emission reductions. SB 1059 directed the Oregon Department of Transportation (ODOT) and the Department of Land Conservation and Development (DLCD) to develop a statewide transportation strategy to reduce greenhouse gases, among other requirements. A summary of key implementation milestones follows.

- In 2011, LCDC adopted targets for each of Oregon's metropolitan areas for per capita reductions from 2005 to 2035.
- In 2013, the Oregon Transportation Commission accepted the Statewide Transportation Strategy for greenhouse gas emissions reductions.
- In December 2014, the Metro Council and JPACT adopted the region's Climate Smart Strategy, fulfilling HB 2001 requirements. The strategy, if fully implemented, would achieve a 29 percent reduction in per capita light-duty greenhouse gas emissions from 2005 to 2035, exceeding the region's 20 percent reduction target. Metro is required to monitor and report on implementation through regularly-scheduled updates to the Regional Transportation.
- On May 21, 2015, the LCDC reviewed and approved the region's adopted Climate Smart Strategy.
- In May 2015, LCDC also completed a required review of the rules and agreed that the rules should be updated to incorporate new information and to set targets for the years beyond 2035. In updating the target rules, the department worked with the Oregon Department of Transportation, Department of Environmental Quality, and Oregon Department of Energy to gather the necessary technical information.
- In January 2017, the Land Conservation and Development Commission (LCDC) adopted amendments to the greenhouse gas (GHG) reduction target rules replacing the 2035 targets with targets for 2040 through 2050.

2040 GHG target for Portland metropolitan area

Figure 3. 2040 GHG targets for Oregon Metropolitan Areas

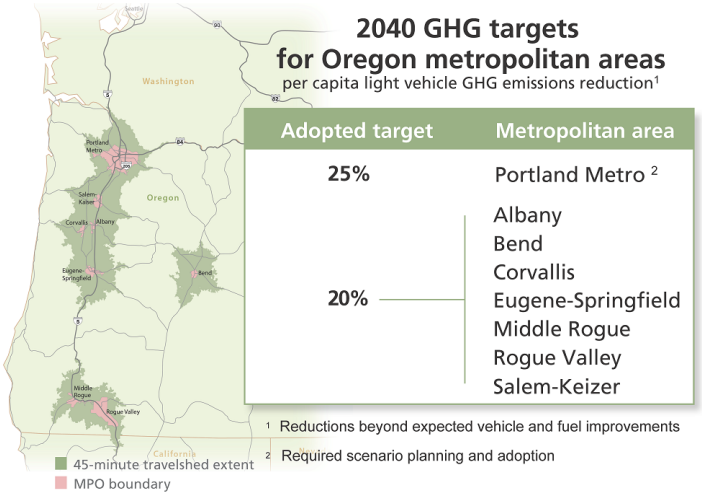


Figure 3 shows the per capita light-duty vehicle GHG emissions reduction target for the Portland region and other metropolitan areas in the Oregon. The reductions are beyond reductions expected to occur due to improvements to vehicle technology and fuels.

Implications for 2018 Regional Transportation Plan update

The RTP performance work group will assess how to update the existing greenhouse gas reduction target included in Chapter 2 of the RTP and plan monitoring measures to be consistent with State rules and the 2014 Climate Smart Strategy. Additionally, Metro and ODOT staff are working together to support the region's transition to using the EPA-approved MOVES model for reporting this measure.

ORS 197.301 Metropolitan Service District Report of Performance Measures

This state requirement covers transportation, land use and the environment. It is addressed in Metro's Regional Framework Plan, which states that it is the policy of the Metro Council to use performance measures and performance targets to measure progress and to evaluate the effectiveness of policies and strategies. Transportation performance is covered in the Regional Transportation Plan updates, and the Regional mobility corridor atlas, which also serves as the region's federally-required CMP performance documentation.

Metro is required to submit performance monitoring reports to DLCD at least every 2 years.

ASSESSMENT OF CURRENT RTP PERFORMANCE TARGETS AND MEASURES

In order to help focus the efforts of the RTP performance work, Metro staff has prepared an assessment of the existing RTP performance targets, system evaluation measures and system monitoring measures, summarized in Table 4.

Table 4. Assessment of existing RTP Performance Targets and Measures

RTP Measure	Assessment
2014 RTP Performance Targets ***Establish quantifiable goals for what we are trying to achieve with our investments***	
Safety –By 2040, reduce the number of fatal and severe injury crashes for pedestrians, bicyclists, and motor vehicle occupants each by 50% compared to 2007 - 2011 average.	The region does not currently forecast this measure, though this could be explored. Discuss the possibility of establishing a more ambitious, "Vision Zero" target (eliminating all fatalities) with RTP safety work group. The draft state Transportation Safety Action Plan has included a vision zero statement. The city of Portland has adopted a Vision Zero Target. MAP-21 rulemaking also identified additional measures related to the rate of fatalities and serious injury crashes. These measures will need to be included in the 2018 RTP for consistency. The RTP Performance work group will develop a recommendation on this target in coordination with the safety work group.
Congestion – By 2040, reduce vehicle hours of delay * (VHD) per person by 10 percent compared to 2010. **Delay is defined in RTP as time accrued in congested conditions (V/C 0.9)*	This measure can be forecasted. Delay (time spent in traffic) is understandable to public but has an unintended bias that free-flow conditions are the desired performance target and does not account for the travelers who are less exposed to congestion, such as transit riders and people biking and walking. As a result, this measure needs to be placed in context and should not be as a "standalone" measure. The current method of calculating on a per capita basis helps factor in travelers who are less exposed to congestion. MAP-21 rulemaking is anticipated to identify a delay-based measure for MPOs and DOTs. The RTP performance work group should review how this measure is calculated (e.g., maximum throughput speed versus free-flow speed, v/c 0.9 or versus v/c 1.0). The State of California has shifted away from LOS/delay to VMT per capita and per employee to measure project level and development impacts. The RTP performance work group will develop a recommendation on this target.
Freight reliability – By 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010.	This is not a true reliability measure. Reliability is a measure of the variability in travel time, not simply the delay in travel time. SHRP2 and other research have devised feasible, data-driven methods to measure roadway reliability. Staff recommends discussing how the

RTP Measure	Assessment
	region could support and apply such techniques to freight corridors. The RTP performance work group will develop a recommendation on this target in coordination with the RTP freight work group.
Climate change – By 2040, reduce transportation-related greenhouse gas emissions per capita below 2010 levels.	This should be updated through the 2018 RTP update to be consistent with Oregon's more aggressive target for greenhouse gas emissions reduction and the region's reduction target for light-duty vehicles. Metro and ODOT staff are working together to support the region's transition to using the EPA-approved MOVES model for reporting this measure and will make recommendations to the RTP performance work group.
Active transportation – By 2040, triple walking, biking and transit mode shares compared to 2010.	Mode share works well and is a direct outcome of transportation and land use policies and investments. This data is tracked by U.S. Census Bureau and through regional household travel activity surveys and can be forecasted using the regional travel model. Metro's Equity Baseline Framework Report emphasizes the need to prioritize investments in the lowest cost options: walking, biking, & transit. The RTP performance work group will develop a recommendation on tripling the share of trips made by biking, walking and using transit.
Basic infrastructure – By 2040, increase by 50% the miles of sidewalk, bikeways, and trails compared to the regional networks in 2010.	This measure is a good way to track progress in implementing regional vision for completion the region's walking and biking systems. Lack of sidewalk GIS data for all RTP projects prevents estimating whether or not the region is meeting the sidewalk completion target. Lack of regularly updated regional sidewalk data layer also hinders the region's ability to track progress. From an equity perspective, the RTP update should consider a sub-target that addresses the basic infrastructure needs in underserved / low-income communities to advance consideration of equity in investment decisions. The RTP performance work group will develop a recommendation on this target in coordination with the RTP transportation equity work group.
Clean air – By 2040, ensure zero percent population exposure to at-	This measure has mainly been addressed through air quality conformity analysis, but some additional refinements are needed. Currently, the region is focused on federally-regulated mobile source

RTP Measure	Assessment
risk levels of air pollution.	emissions (e.g., ozone, CO and PM 2.5). More discussion is recommended on whether to include non-regulated pollutants such as air toxics as recommended by the Portland Air Toxics Solutions study completed in the DEQ.[26] This measure may also be addressed through a voluntary memorandum of understanding developed by Metro and DEQ once the region's transportation conformity obligations expire in October 2017. The RTP performance work group will develop a recommendation on this target in coordination with the equity work group, specifically whether non-regulated pollutants such as air toxics should be included.
Travel – By 2040, reduce vehicle miles traveled per person by 10 percent compared to 2010.	VMT works well as a target and has emerged as a best practice nationally. This measure captures the full extent of vehicle travel, tracks changes in driving in the region and helps track the potential for increased fatalities. Research has document a strong correlation between fatality rates and annual per capita vehicle miles traveled (VMT), or total miles driven. The TPR seeks to ensure VMT per capita does not increase by more than 5% per year. The Climate Smart Strategy is expected to result in a 6% reduction in VMT per capita by 2035 (from 2010 levels). This measure is useful to use alongside additional measures such as mode share that capture the generally intended goal implied by lower VMT: more travel with other modes like transit, biking, and walking. This measure and the region's travel model do not account for how increasing market penetrations of transport-as-service (e.g. Uber) and automated vehicles may affect achievement of our VMT target. Growth in VMT can be an indicator of economic growth. VMT *per employee* may better factor in fluctuation in VMT due to economic swings. The region also monitors annually for increases in VMT as part of a memorandum of understanding with DEQ and as part of our on-going monitoring to ensure the region is not "backsliding" on its attainment status for ozone pollution. The monitoring of VMT must remain in place unless the region undertakes revision to the State

[26] http://www.deq.state.or.us/aq/toxics/pats.htm

RTP Measure	Assessment
	Implementation Plan with DEQ. The RTP performance work group will develop a recommendation on this target, considering whether 10% reduction is the appropriate target.
Affordability – By 2040, reduce the average household combined cost of housing and transportation by 25 percent compared to 2010.	While observed data is available, this measure is not easily calculated through the regional travel demand model. In addition, the RTP has limited ability to reduce housing costs. The RTP update should consider refining in several ways, e.g. setting a more realistic target given rising housing costs, focusing on renters, and/or considering affordability by different income groups. The RTP performance work group will develop a recommendation on this target in coordination with the transportation equity work group.
Access to daily needs – By 2040, increase by 50% the number of essential destinations accessible within 30 minutes by bicycling & public transit for low-income, minority, senior and disabled populations compared to 2010.	This target needs to be revisited and refined through the RTP update to create a meaningful, measurable and comprehensive accessibility measure. Data and methods necessary to measure this are limited. Metro has previously considered travel-shed accessibility measures (number of jobs within a 30-min commute shed) with limited success. National research has created accessibility measurement methods that show some promise. Metro could test potential methods as part of this RTP update. The RTP performance work group will develop a recommendation on this target in coordination with the transportation equity and transit work groups.
Interim Regional Mobility Policy[27]	While the policy is intended to be used as a diagnostic tool to identify the location and extent of congestion on the roadway network, the policy does not adequately account for safety and availability of other travel options during peak periods. In addition, the policy has caused challenges for local governments considering plan amendments proposals for compact development in centers because it is also being used as a plan amendment review standard. No change is recommended to the mobility targets as part of the 2018 RTP update; however this section will be expanded to provide guidance in the RTP and in Section 3.08.230 of the RTFP on how the mobility policy applies to planning decisions, and how it relates to and

[27] See table in Appendix D.

RTP Measure	Assessment
	complements other regional targets and policies. Additionally, the performance work group may identify recommendations for future work, post-RTP adoption, pending recommendations from ODOT Region 1's Portland Metro Area Highway Performance Project.
Regional 2040 Modal Targets[28]	This measure overlaps with the target to triple walking, biking and transit mode share region-wide. However, the geographic element of this target is helpful for monitoring impacts of investment alternatives on reducing drive alone travel in mixed-use areas. The current target groups all *Non-SOV* modes together (walk, bike, transit, shared ride). It may be helpful to have a *non-driving* target mode share (walking, biking, transit) for different geographies – e.g. regional centers, town centers, etc. Portland Central city performance measure work could help inform this. The RTP performance work group will develop a recommendation on whether to retain or refine this target.
RTP System Evaluation Measures ***Tell us whether the RTP system of investments helps us make progress toward our targets***	
Vehicle and bicycle miles traveled (total and per capita)	VMT is useful as described previously. Bicycle miles traveled (BMT) is a notable new measure as it's an output of the regional bicycle model. *See previous discussion on vehicle miles traveled per person.*
Total delay and cost of delay on the regional freight network in mid-day and PM peak	*See previous discussion on vehicle hours of delay per person.*
Motor vehicle and transit travel time between key origin-destinations for	This measure is currently reported over 12 pages in the RTP. It needs a simpler presentation format. Metro could pilot-test a measure of

[28] See table in Appendix C

RTP Measure	Assessment
mid-day and 2-HR PM peak	potential total travel time savings in key travel corridors.
Congestion - Location of throughways, arterials, and regional freight network facilities that exceed RTP motor vehicle-based level of service thresholds in mid-day and 2-HR PM peak	*See previous discussion on vehicle hours of delay per person and interim regional mobility policy.*
Mode share and non-drive alone trips system-wide, by mobility corridor and for central city and individual regional centers (*Number of daily walking, bicycling, shared ride and transit trips and % by mode)*	*See previous discussion on mode share performance target and regional modal targets.*
Transit productivity *(transit boarding rides per revenue hour)* for High Capacity Transit (HCT) and bus	Consider refining measure to specifically frequent bus service and HCT. The RTP transit work group in coordination with the performance work group will make a recommendation on this measure.
Number and percent of households within ½-mile of regional trail system	This measure helps demonstrate whether access to the regional trail system is increasing over time. *See also previous discussion on access to daily needs.*
Environmental justice measure (under development)	The RTP transportation equity work group will make recommendations on this measure(s) in coordination with the performance work group.
Tons of transportation-related air pollutants (e.g. CO, ozone, and PM-10)	*See previous discussion on air quality related performance target.*
Tons of transportation-related greenhouse gas emissions (e.g. CO_2)	*See previous discussion on greenhouse gas emissions performance target.*
Number and percent of projects that intersect high value habitat	This measure is mapped and used to identify projects in the RTP that may impact high value habitat areas identified in the Regional Conservation Strategy and may require additional environmental analysis as part of future planning and project development activities.

RTP Measure	Assessment
RTP System Monitoring Measures Tell us how the system performs over time to identify whether course adjustments are needed	
Vehicle and bicycle miles traveled (total and per capita)	*Metro has had limited resources and capacity to track these measures every two years as intended, and instead relied on updates to the RTP. Metro will be moving toward a new online tool for system monitoring. The measures most valuable to be tracked online will be discussed with the RTP Performance work group in 2017. The work group will also develop recommendations and an action plan for system monitoring and Congestion Management Process (CMP) reporting, including an approach to data collection, sharing and methods development.*
Average trip length by mobility corridor	
Motor vehicle and transit travel time between key origin-destinations for mid-day and PM peak	
Congestion - Location of throughways, arterials, and regional freight network facilities that exceed RTP motor vehicle-based level of service thresholds in mid-day and PM peak	
Travel time reliability on throughways	
Average incident duration on throughway system	
Number and share of average daily shared ride, walking, bicycling and transit trips region wide, by mobility corridor and for the Portland central city and individual regional centers	
Transit productivity (transit boarding rides per revenue hour) for High Capacity Transit and bus	
Percent of regional pedestrian system completed region-wide and by 2040 centers and RTP transit-mixed-use corridor	
Percent of regional bicycle system completed region-wide and by	

RTP Measure	Assessment
mobility corridor	
Number and percent of households and jobs within 30 minutes of central city, regional centers, and key employment/industrial areas for mid-day and PM peak	
Number of fatalities, serious injuries and crashes per vehicle miles traveled for all modes of travel region-wide	
Average household combined cost of housing and transportation	
Tons of transportation-related air pollutants (e.g. CO, ozone, and PM-10)	

CHALLENGES AND OPPORTUNITIES TO BE ADDRESSED IN 2018 RTP UPDATE

The use of performance measures is an evolving practice and MPOs across the nation have faced significant challenges integrating them into the planning process. Reports for the USDOT and the Transportation Research Board found the following typical challenges:[29] [30]

- **Right-sizing measures to balance relevance, simplicity and coverage.** Selecting the right number and mix of performance measures can be a challenge and is an evolving process. Some types of performance are easier to measure than others.
- **Getting the right data and getting the data right.** Agencies must be creative in dedicating adequate resources to develop and implement an effective performance measurement strategy. Performance measures are only useful if based on credible, consistent, and timely data—and acquiring good data is costly. An agency must manage expectations when embarking on performance based planning given the difficulty in setting up a data collection system.
- **Getting to data-driven decisions.** Developing an effective performance measurement approach takes time and capacity building. Defining how performance data will be used to prioritize resources is critical in implementing an effective performance management program. These decisions cannot be based solely on performance data, however, because

[29] USDOT, Incorporating Performance Measures into Regional Transportation Planning, Accessed 12/30/15 at https://planning.dot.gov/Peer/WashingtonDC/dc_2010.asp.

[30] Transportation Research Board, Performance Management in Practice. Accessed 12/31/15 at http://onlinepubs.trb.org/onlinepubs/trnews/trnews293.pdf

many non-quantifiable factors are at play, and practicalities such as equity must be considered and may not always be quantifiable with data.

- **Making it relevant and communicating effectively.** Many agencies struggle with transforming data into information and presenting the result in a manner that enables meaningful conclusions and helps tell a story that the public and elected officials care about and understand. Data presentation must help to tell not only how the system is performing but why. The information must also be easily understood by the public and elected officials in order to be useful for decision-making.

The Portland metropolitan region has found all of these issues to be present in past discussions and use of performance measurement. Regarding the second challenge listed above, collecting and managing data has indeed proven to be expensive and difficult. Thankfully, with advancements in intelligent transportation systems in the region, more and better data is available today and will continue to grow with the implementation of data collection projects identified in the 2010 Regional Transportation System Management and Operations (TSMO) Plan.[31]

Since 2008, the region has provided ongoing funding for implementation, including an annual Regional Flexible Fund Allocation to fund PORTAL[32], the regional transportation data archive, housed and maintained by Portland State University (PSU) in partnership with ODOT, TriMet, Metro and other agencies. PORTAL provides data aggregation, maintenance and reporting on the region's roadways and transit systems. Metro will continue to work with ODOT, TriMet and other regional partners to expand existing data collection, sharing, performance monitoring and reporting capabilities, in order to better track system performance for all modes of travel and implement MAP-21 performance-based planning requirements and the region's congestion management process.

[31] http://www.oregonmetro.gov/sites/default/files/062010_regional_transportation_system_management_operations_plan_executive_summary.pdf

[32] http://portal.its.pdx.edu/

2018 RTP SCOPE AND TIMELINE FOR PERFORMANCE RELATED WORK

In order to help focus the efforts of the RTP Performance work group, Metro staff has summarized key topics that are included in the scope of the performance measures-related work to be conducted in the 2018 RTP update, as shown in Table 5.

Table 5. 2018 RTP Performance Measures related work – What's in / What's out?

What's in	What's out
Updating RTP existing conditions (Chapter 1)	Developing measures and methods specifically targeted at development review and/ or local plan amendments subject to the TPR -0060 (measures that trigger "significant impact" and measures for evaluating proposed mitigation.) However, measures included in the RTP may also be useful for this purpose.
Updating RTP policy level performance targets (Chapter 2)	Identifying 2019-21 and 2022-24 Regional Flexible Funding project evaluation criteria
Updating RTP System Evaluation Measures (Chapter 4) to be more streamlined	Establishing alternative mobility policy targets, as allowed under Oregon Highway Plan policy 1F.3[33]
Updating definitions and terms related to performance measurement to be more clear	Recommendations for future alternative mobility policy targets work to be conducted post-RTP adoption
Developing a performance-based RTP project evaluation process, e.g. project evaluation criteria better link RTP investment priorities to RTP goals and performance targets	
Action plan for system monitoring and Congestion Management Process (CMP) reporting, including approach to data collection, sharing and methods development	
Consistency with MAP-21 requirements and findings from the 2017 Federal Certification review	
Expanded guidance on how the interim regional mobility policy applies to planning decisions, and how it relates to and complements other regional targets and policies	

[33] ODOT is leading the Portland Metro Area Highway Performance project which is aimed at providing guidance and flexibility in Region 1.

2018 RTP Timeline for performance measures related work

Phase 1: Getting started – Fall 2015

Scope and document challenges to updating RTP performance framework, considering best practices from other regions as well as federal and state requirements.

Phase 2: Framing trends and challenges – January to April 2016

Convene a technical work group to review existing performance measures framework and performance of existing RTP projects relative to adopted performance targets.

Phase 3: Looking forward – May 2016 to May 2017

Convene a technical work group to update RTP performance targets, considering input from regional leadership forums, community members and other RTP technical work groups addressing safety, transportation equity, freight and transit.

Phase 4: Building a shared strategy – June 2017 to December 2017

Convene the technical work group to inform RTP project solicitation process, review system evaluation results using updated performance targets, and discuss how to monitor progress in between RTP updates.

2018 RTP | PERFORMANCE MEASURES WORK PLAN

Getting there by tracking our progress

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
Define work plan	Host workshop on approaches to performance measurement	Review existing RTP performance targets and input from regional forums and community members, on values and priority outcomes for investments in the transportation system	Identify data gaps and updates for RTP monitoring and Mobility Corridors Atlas	Adopt as part of the RTP
Identify work group	Assess 2014 RTP and Climate Smart Strategy system performance with updated land use assumptions		Review Climate Smart Strategy recommendations for performance monitoring	Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 target setting
Research best practices from other MPOs and challenges to be addressed	Prepare Performance Measures Scoping Report of MAP-21 mandates, best practices, and challenges to address	Coordinate with equity, safety, transit and freight work groups regarding updated equity, safety, transit and freight related performance measures	Identify potential refinements to RTP system and project-level evaluation measures	Discuss scope of Regional Mobility Policy refinement planning
Document MAP-21 national goal areas and performance-based planning and target setting mandates and gaps in existing RTP performance framework	Document existing conditions and current plan performance	Review updated draft RTP performance system evaluation measures and methods	Coordinate evaluation with equity, safety, transit and freight work groups regarding system evaluation with updated equity, safety and freight performance measures	
Document performance measure related challenges and issues to be addressed	Coordinate with ODOT, TriMet, SMART and C-Tran on current conditions and MAP-21 performance measures	Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 performance measures	Discuss target setting for system evaluation measures and monitoring measures	
Document challenges with Mobility Corridors Atlas		Inform project solicitation process of the 2018 RTP	Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 target setting	
DELIVERABLES				
Work plan	**Workshop on performance measurement approaches** **Performance Measures Scoping Report** **Existing Conditions & Current Plan Performance Summary**	**Draft updated RTP performance targets and measures** **Draft evaluation methods** **Draft project-level evaluation measures**	**Final draft RTP performance targets and measures** **Final draft project-level evaluation measures** **Recommendations for performance monitoring, including online Mobility Corridor Atlas**	**Updated 2018 RTP** including adopted performance targets, measures and action plan for monitoring

September 2017

APPENDIX

Appendix A. Resources for Performance-Based Planning:

Transportation Research Board. (2000). *NCHRP Report 446 - A Guidebook for Performance-Based Transportation Planning.* Retrieved from http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_446.pdf

Transportation Research Board. (2010). *NCHRP Report 660 - Transportation Performance Management: Insight from Practitioners*. Retrieved from http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_660.pdf

Transportation Research Board. (2010). *NCHRP Report 666 - Target-Setting Methods and Data Management to Support Performance-Based Resource Allocation by Transportation Agencies*. Retrieved from http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_666.pdf

Transportation Research Board. (July 2014). *Performance Management in Practice*. Retrieved from http://onlinepubs.trb.org/onlinepubs/trnews/trnews293.pdf

US Department of Transportation. (September 2013). *Performance Based Planning and Programming Guidebook.* Retrieved from http://www.fta.dot.gov/documents/Performance_Based_Planning_and_Programming_Guidebook.pdf

US Department of Transportation. (March 2016). *Transportation Alternatives Program Performance Management Guidebook.* Retrieved from http://www.fhwa.dot.gov/environment/transportation_alternatives/performance_management/guidebook/

US Department of Transportation. (2016). *Transportation Performance Management Implementation Guidebook.* Retrieved from https://www.tpmtools.org/guidebook/

The focus of this on-line guidebook is to provide "how to" information for agencies interested in implementing or improving the application of transportation performance management. The guidebook is tailored to transportation agencies including state DOTs, MPOs, and transit agencies.

Transportation For America. (2015). *Measuring What we Value – Setting Priorities and Evaluating Success in Transportation*. Retrieved from http://t4america.org/maps-tools/performance-measures-report/

Transportation For America. (2016). *Planning for a Healthier Future: Health, Social Equity and Environmental Performance Measures for Regional Transportation Plan.* Retrieved from http://t4america.org/docs/planning-for-a-healthier-future-0616.pdf

Appendix B. Glossary of Common Terms relating to Performance-Based Planning:

- **Performance-based planning** is the use of goals, objectives and performance trends to drive development of strategies and priorities in the long-range transportation plan and other performance-based plans and processes. The resulting planning documents become the blueprint for how to achieve desired performance outcomes.
- **Performance-based programming** is the use of strategies and priorities to guide the allocation of resources to projects that are selected to achieve goals, objectives, and targets. Performance-Based Programming establishes clear linkages between investments made and expected outputs and outcomes.
- **Monitoring and adjustment** is a set of processes to track and evaluate actions taken and outcomes achieved, thereby establishing a feedback loop to refine planning, programming, and target setting decisions. It involves using performance data to obtain key insights into the effectiveness of decisions and identifying where adjustments need to be made in order to improve performance.
- **Target setting** is the use of baseline data, information on possible strategies, resource constraints, and forecasting tools to collaboratively establish a quantifiable level of performance the agency wants to achieve within a specific time frame. Targets make the link between investment decisions and performance expectations transparent across all stakeholders.
- A **vision** is an aspirational statement of what the region is trying to achieve over the long-term through policy and investment decisions.
- A **goal** states a desired outcome or end result toward which efforts are focused, providing Provides broad strategic direction for policy and investment decisions to make progress toward the vision over the long-term.
- An **objective** identifies a measurable outcome and means for achieving a goal(s) to guide future policy and investment decisions within the plan period.
- A **target** defines a specific level of performance required to achieve objective(s) in the near- and medium-term to ensure we

Key RTP performance-based planning terms

achieve the long-term goal(s) and vision. Currently, the RTP performance targets are not mandatory thresholds; instead they are set for planning purposes as aspirational thresholds.

- A **performance measure** is a *quantitative method of analysis* used to track progress toward meeting target(s).

  Some measures can be used to predict the future as part of an evaluation process using forecasted data, while other measures can be used to monitor changes based on actual empirical or observed data. In both cases, they can be applied at a system level, corridor level and project level, and provide the planning process with a basis for evaluating alternatives, making decisions on future transportation investments and monitoring progress over time. Quantified results from performance measures can be compared to baseline data over time to track progress and to compare between different levels of transportation investments. Tracking progress against the goal or objective allows an assessment of the effectiveness of actions. This is very important for measuring improvement or maintenance of existing conditions. They can also be used to monitor performance of the plan in between updates to determine whether refinements to the policy framework, investment priorities or other plan elements are needed.

- An **action** is a discrete step in policy and investment decisions to move toward vision and goals.

- A **strategy** is a series of actions to get to desired outcomes.

- A **policy** is a clear, simple statement of how an organization intends to conducts its services, actions or business. They provide a set of guiding principles to help with decision-making.

Appendix C. 2040 Regional Modal Targets

For the purpose of complying with the Oregon Transportation Planning Rule, the Regional Transportation Plan (RTP) includes 2040 modal targets as the primary "alternative" standard for evaluating the region's progress in reducing reliance on the automobile. First adopted in the RTP in 2000, the table below summarizes the modal targets and represents an aggressive long-term goal for the Portland metropolitan region to reduce non-single occupancy vehicle (non-SOV) travel in the region. Alternative mode share targets are intended to be goals for cities and counties to work toward as they implement the 2040 Growth Concept at the local level. The targets apply to the share of all trips made by biking, walking, use of transit and shared rides.

2040 Design Type	2040 Non-drive alone modal target
Portland central city	60-70%
Regional centers Town centers Main streets Station communities Corridors Passenger intermodal facilities	45-55%
Industrial areas Freight intermodal facilities Employment areas Neighborhoods	40-45%

Note: *The targets apply to trips to and within each 2040 design type. The targets reflect conditions needed in the year 2040 to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupancy vehicles.*

Development of the targets was informed by the alternatives evaluation conducted during development of the 2000 RTP and observed travel behavior collected as part of Metro's 1994-1995 survey of more than 7,500 households in the Portland metropolitan region. The travel survey found areas with good transit service and a good mix of land uses showed the highest percentage of biking, walking, and use of transit. Conversely, areas of the region that lacked these land use and transportation elements showed the highest percentage of auto use. This indicates that individuals are likely to use the automobile when no other choices exist, but may choose other alternatives when they are available.

The results of this study held true in the region's most recent 2012 travel behavior survey, and continue to support this region's effort to link land use and transportation planning as a means to provide a balanced, multi-modal transportation system to manage congestion and address other goals. Progress toward the non-SOV modal targets is an output of the regional travel demand model, but cannot be generated by local jurisdictions. As a result, progress is evaluated as part of RTP updates.

Appendix D. RTP Interim Regional Mobility Policy

Deficiency Thresholds and Operating Standards

Location	Standard	Standard	
	Mid-Day One-Hour Peak [A]	PM 2-Hour Peak [A]	
		1st Hour	2nd Hour
Central City Regional Centers Town Centers Main Streets Station Communities	.99	1.1	.99
Corridors Industrial Areas Intermodal Facilities Employment Areas Neighborhoods	.90	.99	.99
I-84 *(from I-5 to I-205)*	.99	1.1	.99
I-5 North *(from Marquam Bridge to Interstate Bridge)*	.99	1.1	.99
OR 99E *(from Lincoln Street to OR 224 interchange)*	.99	1.1	.99
US 26 *(from I-405 to Sylvan interchange)*	.99	1.1	.99
I-405 [B] *(I-5 South to I-5 North)*	.99	1.1	.99
Other Principal Arterial Routes I-205 [B] I-84 (east of I-205) I-5 (Marquam Bridge to Wilsonville) [B] OR 217 US 26 (west of Sylvan) US 30 OR 8 (Murray Boulevard to Brookwood Avenue) [B] OR 212 OR 224 OR 47 OR 213	.90	.99	.99

A. The demand-to-capacity ratios in the table are for the highest two consecutive hours of weekday traffic volumes. The mid-day peak hour is the highest 60-minute period between the hours of 9 a.m. and 3 p.m. The 2nd hour is defined as the single 60-minute period, either before or after the peak 60-minute period, whichever is highest.

B. A corridor refinement plan is required in Chapter 5 of the RTP, and will include a recommended mobility policy for each corridor.

Appendix E. RTP System Evaluation Measures

The table below lists the RTP performance measures used for plan evaluation, linking them to the RTP goals they support. Performance is evaluated at the system-wide level. The performance measures rely on data generated by the regional travel demand forecast model and Metroscope, the regional land use model, to generate current and future year findings.

System Evaluation Measures		RTP Goals									
		Foster Vibrant Communities and Compact Urban Form	Sustain Economic Competitiveness and Prosperity	Expand Transportation Choices	Effective and Efficient Management of Transportation System	Enhance Safety and Security	Promote Environmental Stewardship	Enhance Human Health	Ensure Equity	Ensure Fiscal Stewardship	Deliver Accountability
1.	Vehicle and bicycle miles traveled (total and per capita)	●		●		*Unable to predict/forecast system safety. To be addressed in plan monitoring.*	●	●			*Unable to predict/forecast accountability. To be addressed in plan monitoring.*
2.	Total delay and cost of delay on the regional freight network in mid-day and PM peak		●		●						
3.	Motor vehicle and transit travel time between key origin-destinations for mid-day and 2-HR PM peak	●	●	●	●						
4.	Congestion - Location of throughways, arterials, and regional freight network facilities that exceed RTP motor vehicle-based level of service thresholds in mid-day and 2-HR PM peak		●		●						
5.	Mode share and non-drive alone trips system-wide, by mobility corridor and for central city and individual regional centers (*Number of daily walking, bicycling, shared ride and transit trips and % by mode)*	●		●	●		●	●			
6.	Transit productivity *(transit boarding rides per revenue hour)* for High Capacity Transit (HCT) and bus	●		●						●	
7.	Number and percent of households within ½-mile of regional trail system			●			●	●	●		
8.	Environmental justice measure (under development)			●					●		
9.	Tons of transportation-related air pollutants (e.g. CO, ozone, and PM-10)			●			●	●			
10.	Tons of transportation-related greenhouse gas emissions (e.g. CO_2)			●			●				
11.	Percent of projects that intersect high value habitat areas	●					●				

Appendix F. RTP Monitoring Measures

Between plan updates, a system monitoring program periodically assesses how well the region's transportation system is functioning for each of the 24regional mobility corridors – using observed data as much as possible. Recommended monitoring measures include the following (Note – not all of these are actually included in the Regional Mobility Corridor Atlas):

1.	Vehicle and bicycle miles traveled (total and per capita)
2.	Average trip length by mobility corridor
3.	Motor vehicle and transit travel time between key origin-destinations for mid-day and PM peak
4.	Congestion - Location of throughways, arterials, and regional freight network facilities that exceed RTP motor vehicle-based level of service thresholds in mid-day and PM peak
5.	Travel time reliability on throughways
6.	Average incident duration on throughway system
7.	Number and share of average daily shared ride, walking, bicycling and transit trips region wide, by mobility corridor and for the Portland central city and individual regional centers
8.	Transit productivity (transit boarding rides per revenue hour) for High Capacity Transit and bus
9.	Percent of regional pedestrian system completed region-wide and by 2040 centers and RTP transit-mixed-use corridor
10.	Percent of regional bicycle system completed region-wide and by mobility corridor
11.	Number and percent of households and jobs within 30 minutes of central city, regional centers, and key employment/industrial areas for mid-day and PM peak
12.	Number of fatalities, serious injuries and crashes per vehicle miles traveled for all modes of travel region-wide
13.	Average household combined cost of housing and transportation
14.	Tons of transportation-related air pollutants (e.g. CO, ozone, and PM-10)

PERFORMANCE MONITORING APPROACH

The last component of the Climate Smart Strategy is a set of performance measures and performance monitoring targets for tracking progress. The purpose of performance measures and targets is to monitor and assess whether key elements or actions that make up the strategy are being implemented, and whether the strategy is achieving expected outcomes.

About the performance measures

The performance measures identified for monitoring are a combination of existing and new measures, most of which are drawn from the Regional Transportation Plan and the Urban Growth Report, that track existing land use and transportation policies.

About the performance monitoring targets

The performance monitoring targets are not policy targets, but instead reflect a combination of the planning assumptions used to evaluate the Climate Smart Strategy and outputs from the evaluation. The measures and performance monitoring targets will be reviewed before being incorporated into the Regional Transportation Plan as part of the next scheduled update. They may be further refined at that time to address new information, such as MAP-21 performance-based planning provisions and recommendations from Metro's Equity Strategy.

About the process for performance monitoring

To monitor and assess implementation of the strategy, Metro will use observed data sources and existing regional performance monitoring and reporting processes to the extent possible. These processes include regularly scheduled updates to the Regional Transportation Plan and Urban Growth Report and reporting in response to Oregon Revised Statutes ORS 197.301 and ORS 197.296. When observed data is not available, data from regional models may be reported.

If the assessment finds the region is deviating significantly from the Climate Smart Strategy performance monitoring target, then Metro will work with local, regional and state partners to consider the revision or replacement of policies and actions to ensure the region remains on track with meeting adopted targets for reducing greenhouse gas emissions.

HOW WILL PROGRESS BE MONITORED?

POLICY AREA	MEASURE	BASELINE 2010 unless otherwise noted	2035 PERFORMANCE MONITORING TARGET
1. Implement the 2040 Growth Concept and local adopted land use and transportation plans	Share of households living in walkable, mixed-use areas[1] (new)	26%	37% A methodology for tracking progress will be developed in 2018 RTP update.
	New residential units built through infill and redevelopment in the urban growth boundary (UGB)[2] (existing)	58% *(average for 2007-12)*	65%
	New residential units built on vacant land in the UGB[3] (existing)	42% *(average for 2007-12)*	35%
	Acres of urban reserves added to the UGB[4] (existing)	0	12,000
	Daily vehicle miles traveled per capita[5] (existing)	19	17
2. Make transit convenient, frequent, accessible and affordable	Daily transit service revenue hours (new)	4,900	9,400
	Share of households within ¼-mile all day frequent transit (new)	30%	37%
	Share of low-income households within ¼-mile of all day frequent transit (new)	39%	49%
	Share of employment within ¼-mile of all day frequent transit (new)	41%	52%
	Transit fares (new)	A baseline for tracking transit affordability relative to inflation and other transportation costs will be developed in the 2018 RTP update.	A baseline for tracking transit affordability relative to inflation and other transportation costs will be developed in the 2018 RTP update.

HOW WILL PROGRESS BE MONITORED?

POLICY AREA	MEASURE	BASELINE 2010 unless otherwise noted	2035 PERFORMANCE MONITORING TARGET
3. Make biking and walking safe and convenient	Daily trips made by biking and walking[6] (existing)	179,000 bike trips 505,000 walk trips	280,000 bike trips 768,000 walk trips
	Per capita miles of bike and pedestrian travel per week[7] (new)	2.1 miles biked 1.3 miles walked	3.4 miles biked 1.8 miles walked
	Bike and pedestrian fatal and severe injury crashes[8] (existing)	35 bike crashes 63 pedestrian crashes	17 bike crashes 32 pedestrian crashes
	New miles of bikeways, sidewalks and trails in UGB[9] (existing)	Bikeways (on-street) = 623 miles Sidewalks (on at least one side of the street) = 5,072 miles Trails = 229 miles	663 new miles Bikeways (on-street) = 1,044 miles Sidewalks (data not available but will be developed in the 2018 RTP update. Trails = 369 miles
4. Make streets and highways safe, reliable and connected	Motor vehicle, bike and pedestrian fatal and severe injury crashes[10] (existing)	398 motor vehicle crashes 35 bike crashes 63 pedestrian crashes	199 motor vehicle crashes 17 bike crashes 32 pedestrian crashes
	Change in travel time and reliability in regional mobility corridors (existing)	A baseline for this measure will be developed in the 2018 RTP update.	A performance monitoring target and methodology for tracking progress will be developed in the 2018 RTP update.
	Share of freeway lane blocking crashes cleared within 90 minutes (new)	Data under development with ODOT staff. A baseline for this measure will be developed in the 2018 RTP update.	100%[11]
5. Use technology to actively manage the transportation system	Share of arterial and freeway delay reduced by traffic management strategies (new)	10%	35% A methodology for tracking progress will be developed in 2018 RTP update.
	Share of regional transportation system covered with transportation system management and operations (TSMO) strategies (new)	A baseline for tracking progress will be developed in 2018 RTP update.	A performance monitoring target and methodology for tracking progress will be developed in 2018 RTP update.

HOW WILL PROGRESS BE MONITORED?

POLICY AREA	MEASURE	BASELINE 2010 unless otherwise noted	2035 PERFORMANCE MONITORING TARGET
6. Provide information and incentives to expand the use of travel options	Share of households participating in individualized marketing programs (existing)	9%	45%
	Share of the workforce participating in commuter programs (existing)	20%	30%
7. Manage parking to make efficient use of vehicle parking and land dedicated to parking	Share of work trips occurring to areas with actively managed parking[12] (new)	13%	30% A methodology for tracking progress will be developed in 2018 RTP update.
	Share of non-work trips occurring to areas with actively managed parking[12] (new)	8%	30% A methodology for tracking progress will be developed in 2018 RTP update.
8. Support Oregon's transition to cleaner, low carbon fuels, more fuel-efficient vehicles and pay-as-you-drive private vehicle insurance	Share of registered light duty vehicles in Oregon that are electric vehicles (EV) or plug-in hybrid electric vehicles (PHEV)[13] (new)	1% auto 1% light truck	8% auto 2% light truck
	Share of households using pay-as-you-drive private vehicle insurance[14] (new)	>1%	40%
9. Secure adequate funding for transportation investments	Address local, regional and state transportation funding gap (new)	A baseline and methodology for tracking progress will be developed in 2018 RTP update.	
10. Demonstrate leadership on reducing greenhouse gas emissions	Region-wide per capita roadway greenhouse gas emissions from light vehicles (new)	4.05 $MTCO_2e$[15]	1.2 $MTCO_2e$[16]

PERFORMANCE MONITORING TABLE NOTES

[1] Data is an estimate from the metropolitan GreenSTEP model based on the land use assumptions described below in Table Notes 2–4.

[2] Data is compiled and reported by Metro every two years in response to Oregon Revised Statutes ORS 197.301 and ORS 197.296. The Climate Smart Strategy assumed the regionally-coordinated 2035 Growth Distribution adopted by the Metro Council on Nov. 29, 2012 as the basis for the population, housing, and employment growth assumptions used in the analysis. The adopted 2035 growth distribution was developed using MetroScope and reflects locally adopted comprehensive plans and zoning as of 2010. The performance monitoring target reflects the adopted growth distribution assumption that 65% of new residential units would be built through infill and redevelopment by 2035.

[3] See Table Note 2. The performance monitoring target reflects the adopted growth distribution assumption that 35% of new residential units would be built on vacant land inside the urban growth boundary by 2035.

[4] See Table Note 2. The performance monitoring target reflects the adopted growth distribution assumption that 12,000 acres of urban reserves would be added to the urban growth boundary by 2035.

[5] Data is from the ODOT Oregon Highway Performance Monitoring System (HPMS) and was the official state submittal to the Federal Highway Administration for tracking nationally. The 2014 Regional Transportation Plan (RTP) target calls for reducing daily vehicle miles traveled per person by 10 percent compared to 2010.

[6] Data is an estimate from the regional travel demand model and does not include walk trips to transit. The 2014 Regional Transportation Plan calls for tripling the share of daily trips made by biking and walking compared to 2010.

[7] Data from Oregon Health Authority Climate Smart Strategy Health Impact Assessment.

[8] Data is for the period 2007-2011 and comes from the ODOT Oregon Highway Performance Monitoring System (HPMS). The data was reported in the 2014 RTP adopted by the Metro Council on July 17, 2014. The 2014 RTP target calls for reducing fatal and severe injury crashes for all modes by 50 percent compared to the 2007-2011 period.

[9] The 2014 RTP financially constrained system includes completing 663 miles of bikeways, sidewalks and trails; progress toward completion of the system of investments will be tracked.

[10] See note 8.

[11] The measure and target reflect an ODOT performance goal.

[12] The measure and performance monitoring target reflect a planning assumption from in 2014 Regional Transportation Plan that was used in the Climate Smart Strategy analysis.

[13] The Oregon Department of Motor Vehicles will track this data through vehicle registration records.

[14] The performance monitoring target is less aggressive than the Statewide Transportation Strategy, which assumed nearly all Oregon households would have pay-as-you-drive insurance by 2035.

[15] Data is a model estimate for the year 2005, using the Metropolitan GreenSTEP model.

[16] The performance monitoring target reflects the state mandated 20 percent reduction per person in roadway greenhouse gas emissions, after accounting for state assumptions for anticipated advancements in cleaner, low carbon fuels and more fuel-efficient vehicles. A transition to the Motor Vehicle Emission Simulator (MOVES) model for tracking progress will be made as part of the 2018 Regional Transportation Plan update. The MOVES model is the federally-sanctioned model for demonstrating compliance with federal and state air quality requirements.

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.

So, hello. We're Metro – nice to meet you.

In a metropolitan area as big as Portland, we can do a lot of things better together. Join us to help the region prepare for a happy, healthy future.

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2018 Regional Transportation Plan

oregonmetro.gov/rtp

October 2, 2017

2018 RTP | PERFORMANCE MEASURES WORK PLAN

Getting there by tracking our progress

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
GETTING STARTED	**FRAMING TRENDS AND CHALLENGES**	**LOOKING FORWARD**	**BUILDING A SHARED STRATEGY**	**ADOPTION**
May to Dec. 2015	**Jan. to April 2016**	**May 2016 to May 2017**	**June 2017 to March 2018**	**April to Dec. 2018**
Define work plan	Host workshop on approaches to performance measurement	Review existing RTP performance targets and input from regional forums and community members, on values and priority outcomes for investments in the transportation system	Identify data gaps and updates for RTP monitoring and Mobility Corridors Atlas	Adopt as part of the RTP
Identify work group	Assess 2014 RTP and Climate Smart Strategy system performance with updated land use assumptions	Coordinate with equity, safety, transit and freight work groups regarding updated equity, safety, transit and freight related performance measures	Review Climate Smart Strategy recommendations for performance monitoring	Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 target setting
Research best practices from other MPOs and challenges to be addressed	Prepare Performance Measures Scoping Report of MAP-21 mandates, best practices, and challenges to address	Review updated draft RTP performance system evaluation measures and methods	Identify potential refinements to RTP system and project-level evaluation measures	~~Discuss scope of~~ Regional Mobility Policy refinement planning
Document MAP-21 national goal areas and performance-based planning and target setting mandates and gaps in existing RTP performance framework	Document existing conditions and current plan performance	Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 performance measures	Coordinate evaluation with equity, safety, transit and freight work groups regarding system evaluation with updated equity, safety and freight performance measures	
Document performance measure related challenges and issues to be addressed	Coordinate with ODOT, TriMet, SMART and C-Tran on current conditions and MAP-21 performance measures	Inform project solicitation process of the 2018 RTP	Discuss target setting for system evaluation measures and monitoring measures	
Document challenges with Mobility Corridors Atlas			Coordinate with ODOT, TriMet, SMART and C-Tran on MAP-21 target setting	
DELIVERABLES				
Work plan	**Workshop on performance measurement approaches** **Performance Measures Scoping Report** **Existing Conditions & Current Plan Performance Summary**	**Draft updated RTP performance targets and measures** **Draft evaluation methods** **Draft project-level evaluation measures**	**Final draft RTP performance targets and measures** **Final draft project-level evaluation measures** **Recommendations for performance monitoring, including online Mobility Corridor Atlas**	**Updated 2018 RTP** including adopted performance targets, measures and action plan for monitoring

September 2017

2018 RTP PERFORMANCE WORK GROUP
FALL 2017 MEETING SCHEDULE

Meeting Date	Agenda topics
Oct 12, 2017	• Review adopted RTP performance targets and monitoring measures, Climate Smart Strategy performance monitoring recommendations, state-required performance monitoring requirements, final MAP-21 performance measures, and federal Congestion Management Process (CMP) reporting requirements.
Nov. 8, 2017	• Discuss data gaps and capacity constraints in meeting state and federally-required measures. Provide feedback on potential options for streamlining how the 2018 RTP addresses state and federally-required target-setting, performance monitoring, and reporting. • Report on RTP pilot project evaluation and begin discussion of refinements to draft project evaluation criteria. • Review preliminary RTP system evaluation results to identify potential refinements to performance measures. This work will be coordinated with equity, transit, safety and freight work groups. • Review draft revisions to RTP targets this work will be coordinated with equity, transit, safety and freight work groups.
Dec.7, 2017	• Wrap up discussion of refinements to draft RTP project evaluation criteria. • Wrap up discussion of refinements to system evaluation measures. • Wrap up discussion of updated targets and monitoring measures.

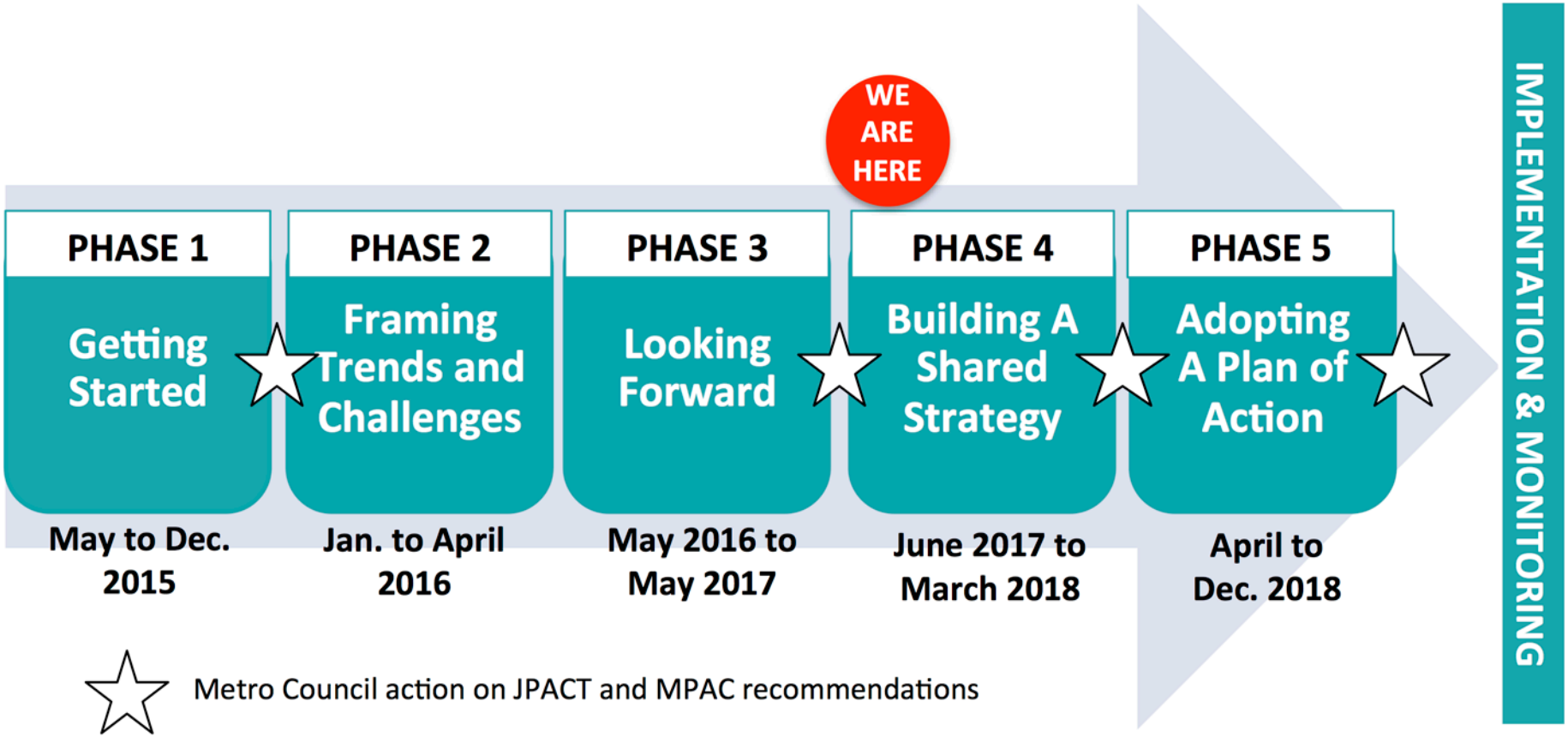
2018 RTP Performance Measures Work Group

John Mermin, Regional Planner

Kim Ellis, Regional Planner

October 12, 2017

RTP timeline



Adopted RTP policy goals

WHAT WE WANT TO ACHIEVE
Vibrant communities
Economic competitiveness
Transportation choices
Travel efficiency
Safety and security
Environmental stewardship
Public health
Reduced greenhouse gas emissions

HOW WE GET THERE
Equity
Fiscal stewardship
Accountability

RTP Goals (first adopted in 2010,amended in 2014, and put forward for 2018)

Call for projects completed in August

- More than $3 billion invested since 2014
- Agencies used on-line RTP project hub to submit $21.5 billion in updated project priorities that address safety, congestion, access and other needs
- On-line interactive map of proposed projects launching soon



Evaluation underway using updated framework

New and existing measures assess how draft investment strategy aligns with RTP goals:

- System-level evaluation *(all projects)*
- Transportation equity analysis* *(all projects)*
- Pilot project-level evaluation *(small number of projects)*

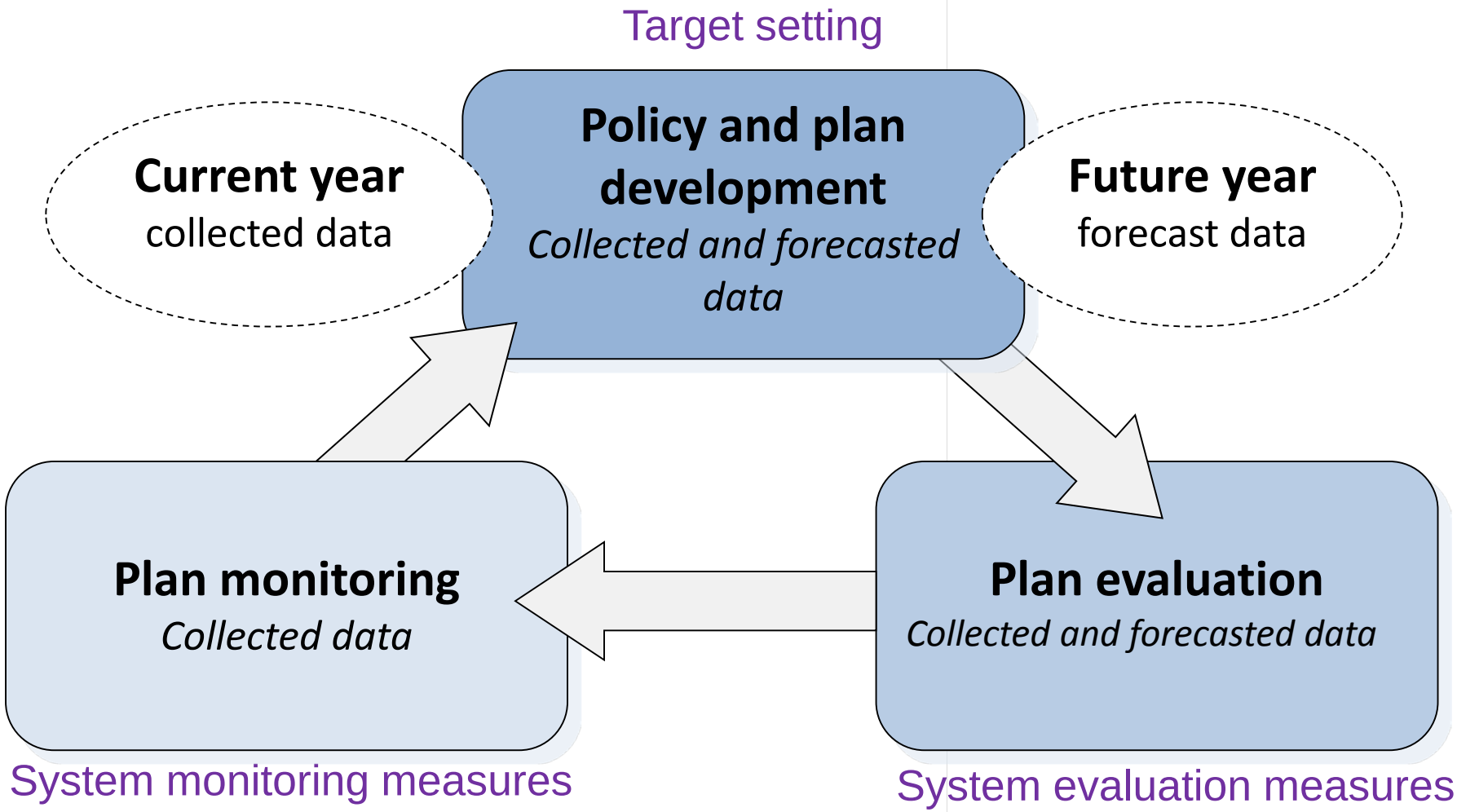
* Transportation equity to be measured across multiple outcomes to support federally-required Title VI and Environmental Justice Analysis.

2018 RTP development
Key elements going forward

Role of RTP performance work group

- Discuss data gaps and capacity constraints in meeting state and required measures
- Provide feedback on options for streamlining how we work together to share and report data (ODOT, TriMet, Metro, local agencies)
- Review preliminary system evaluation results to identify potential refinements to measures
- Discuss refinements to project evaluation criteria
- Review draft revisions to RTP targets

RTP Performance Measurement System



RTP monitoring Measures

- Capacity constraints have limited our ability to monitor these regularly or to use collected data (rather than modeled)
- Our vision is for regularly collected data for mobility corridors provided to the public online
- Our approach will connect our Congestion Management Process (CMP), MAP-21 target-setting, and Climate Smart monitoring

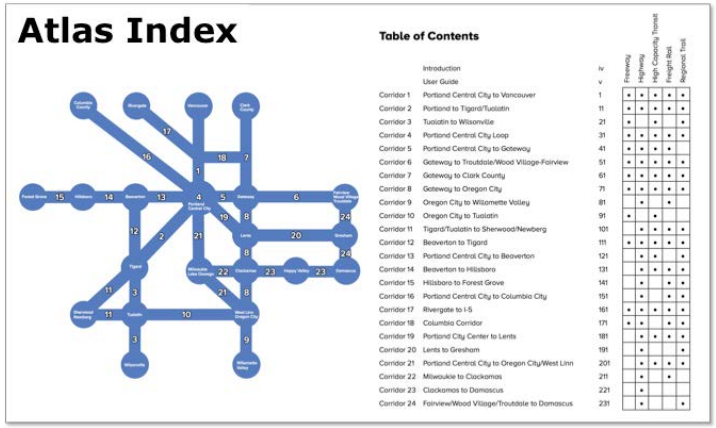
See Appendix F (p.41) to 2018 RTP Performance Measures Scoping Report

Preview of rest of presentation

- Federal requirements
  - Congestion Management Process (CMP)
  - MAP-21
- State requirements
  - Transportation Planning Rule (TPR)
  - Oregon Highway Plan (OHP) mobility policy
  - Greenhouse Gas rule
  - DLCD Performance Monitoring (ORS 197.301)
- Regional policy responses
  - RTP performance targets
  - Climate Smart Strategy
  - Interim regional mobility targets
  - 2040 modal targets

Congestion Management Process

- Federally required process that brings current data into decision-making
- The region does this with its atlas of mobility corridors
- The measures in Atlas are drawn from the RTP and are consistent with MAP-21
- Currently it's mostly forecasted data



MAP-21 Final Measures

National Goal Area	Federal Performance Measure	RTP Coverage
Safety	Fatalities (number and rate per 100 million vehicle miles traveled) Serious injuries (number and rate per 100 million vehicle miles traveled)	Yes, included in 2014 RTP
Infrastructure condition	Condition of pavements on the Interstate System and on the (non-Interstate) National Highway System Condition of bridges on the National Highway System State of good repair for public transit assets for rolling stock, equipment, facilities & infrastructure	Not in 2014 RTP. Add new measure in 2018 RTP
Congestion reduction	Annual hours of peak hour Excessive Delay per Capita on the National Highway System. Percent of Non-SOV travel	2014 RTP includes delay per capita and non-SOV travel. Add new measure of excessive delay per capita.

MAP-21 Final Measures cont'd

National Goal Area	Federal Performance Measure	RTP Coverage
System reliability	Percent of reliable person-miles traveled on Interstate System and on the (non-Interstate) National Highway System	Not in 2014 RTP. Add new measure
Freight movement and economic vitality	Percent of Interstate with reliable Truck Travel Times	Not in 2014 RTP. Add new measure.
Environmental sustainability	Total Emissions Reductions by applicable pollutants under the CMAQ program.	This measure is more relevant to TIP than RTP. 2014 RTP emissions measure was revised based on equity work group recommendation (to focus on air toxics)

Oregon Transportation Planning Rule

- Requires Metro to ensure transportation system adequate to serve planned land uses and demonstrate progress toward increasing transportation choices and reducing auto reliance
- Metro has addressed this with combination of Performance targets, regional modal targets and system evaluation measures, based on RTP financially constrained system

Oregon Highway Plan Mobility Policy (1F)

- Sets Volume/Capacity targets within the Portland Metro region
- Reflects level of congestion that the OTC deemed tolerable at the time of its adoption

Oregon Greenhouse Gas targets for Portland Metro area

2035 GHG targets for Oregon metropolitan areas

per capita light vehicle GHG emissions reduction

Metropolitan area	Adopted target[1]
Portland Metro[2]	20%
Salem-Keizer	17%
Corvallis	21%
Eugene-Springfield[3]	20%
Bend	18%
Rogue Valley	19%

[1] Adopted by the Land Conservation and Development Commission in May 2011

[2] Required scenario planning and adoption

[3] Required scenario planning

2040 GHG targets for Oregon metropolitan areas

per capita light vehicle GHG emissions reduction

Adopted target	Metropolitan area
25%	Portland Metro[1]
20%	Albany
	Bend
	Corvallis
	Eugene-Springfield
	Middle Rogue
	Rogue Valley
	Salem-Keizer

[1] Required scenario planning and adoption

(*Reductions beyond expected vehicle and fuel improvements)*

ORS 197.301 Performance Monitoring for DLCD

- State requirement to report on variety of performance measures every 2 years
- Required transportation measures described as: “mobility, accessibility and air quality indicators”
- Measures & targets in RTP provide basis for addressing this requirement

2014 RTP performance targets…

SAFETY By 2035, eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a 16% reduction by 2020 (as compared to the 2015 five year rolling average and a 50% reduction by 2025.*

CONGESTION Reduce vehicle hours of delay per person by 10% compared to 2010

FREIGHT RELIABILITY Reduce vehicle hours of delay per truck trip by 10% compared to 2010

TRAVEL Reduce vehicle miles traveled per person by 10% compared to 2010

To be achieved by 2040 *(first adopted in 2010 and amended in 2014)*

**Revised safety target recommended by the RTP Safety Work Group and supported by the Metro Council, the Metro Policy Advisory Committee and the Joint Policy Advisory Committee on Transportation in Spring 2017.*

2014 RTP performance targets…

CLEAN AIR Ensure zero percent exposure to at-risk levels of air pollution

CLIMATE CHANGE Reduce per capita transportation-related CO2 emissions below 2010 levels

ACCESS TO DAILY NEEDS Increase by 50% the number of essential destinations accessible within 30 minutes by bicycling and public transit for low-income, minority, senior and disabled populations compared to 2010

To be achieved by 2040 *(first adopted in 2010 and amended in 2014)*

2014 RTP performance targets…

TRAVEL OPTIONS Triple walking, biking and transit mode share compared to 2010

AFFORDABILITY Reduce housing and transportation costs as a share of household budgets by 25% below 2010 levels

BASIC INFRASTRUCTURE Increase by 50% the miles of sidewalk, bikeways, and trails compared to the regional networks in 2010

To be achieved by 2040 *(first adopted in 2010 and amended in 2014)*

Climate Smart Strategy
Performance monitoring approach

1. Relies on existing performance monitoring processes, including:
   - LCDC report to respond to Oregon State Statutes ORS 197.301 and ORS 197.296 (2 years)
   - Regional Transportation Plan updates (4 years)
   - Urban Growth Report updates (5 years)
2. Reports existing & new measures
3. Sets targets that reflect key assumptions and modeled outcomes
4. Informs whether course adjustments are needed

See Appendix G (p.42) to 2018 RTP Performance Measures Scoping Report

Interim Mobility targets

- Do not anticipate meeting interim mobility policy in 2018 RTP
- Metro will be working with ODOT to scope a refinement plan to update the region's interim mobility policy, post-adoption of 2018 RTP

See Appendix D (p.39) to 2018 RTP Performance Measures Scoping Report

2040 Modal Targets

- Non-single occupancy vehicle (SOV) modal targets vary by level of planned mixed-use development
- The region's response to the Oregon TPR requirement to reduce reliance on drive alone travel

Source: 2014 RTP

See Appendix C (p.38) to 2018 RTP Performance Measures Scoping Report

Next Steps

- November 8
  - Discuss data gaps and capacity constraints
  - Provide feedback on options for streamlining how to addresses state & federally-required target-setting, performance monitoring, and reporting.
  - Report on RTP pilot project evaluation and discuss refinements to criteria.
  - Review preliminary RTP system evaluation results to identify potential refinements to performance measures.
  - Review draft revisions to RTP targets
- December 7
  - Wrap up discussions of refinements to project evaluation criteria, system evaluation measure, targets and monitoring measures

Questions

- Initial reactions in preparation for next two meetings?
- Do you have suggestions for how our approach to monitoring & target setting can remain relevant and communicate effectively
- Do you know of locally collected data that could be useful and shared to support monitoring?