REGIONAL MOBILITY POLICY UPDATE

Practitioners Forum 3 Summary Report

A summary of the third practitioners forum convened by Metro and the Oregon Department of Transportation (ODOT) in support of updating the mobility policy for the Portland region

April 2022

oregonmetro.gov/mobility

Metro respects civil rights

Metro fully complies with Title VI of the Civil Rights Act of 1964 that requires that no person be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination on the basis of race, color or national origin under any program or activity for which Metro receives federal financial assistance.

Metro fully complies with Title II of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act that requires that no otherwise qualified individual with a disability be excluded from the participation in, be denied the benefits of, or be subjected to discrimination solely by reason of their disability under any program or activity for which Metro receives federal financial assistance.

If any person believes they have been discriminated against regarding the receipt of benefits or services because of race, color, national origin, sex, age or disability, they have the right to file a complaint with Metro. For information on Metro's civil rights program, or to obtain a discrimination complaint form, visit oregonmetro.gov/civilrights or call 503-797-1536.

Metro provides services or accommodations upon request to persons with disabilities and people who need an interpreter at public meetings. If you need a sign language interpreter, communication aid or language assistance, call 503-797-1700 or TDD/TTY 503-797-1804 (8 a.m. to 5 p.m. weekdays) 5 business days before the meeting. All Metro meetings are wheelchair accessible. For up-to-date public transportation information, visit TriMet's website at trimet.org.

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

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process strives for 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. Together, JPACT and the Metro Council serve as the MPO board for the region in a unique partnership that requires joint action on all MPO decisions. This means JPACT approves MPO decisions and submits them to the Metro Council for adoption. The Metro Council will adopt the recommended action or refer it back to JPACT with a recommendation for amendment.

Project website: www.oregonmetro.gov/mobility

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.

TABLE OF CONTENTS

Appendices

APRIL 2022 PRACTITIONERS FORUM #3 SUMMARY

Project Introduction

Metro and Oregon Department of Transportation (ODOT) are working together to update the existing Regional Mobility Policy and how it defines and measures mobility for the Portland area transportation system. The project will recommend amendments to the Regional Transportation Plan (RTP) and the Oregon Highway Plan Policy 1F for the Portland area.

Forum Overview

On April 7, 2022, from 2:00 to 4:00 PM Metro and ODOT held the third in a series of virtual forums with transportation industry practitioners.

The purpose of the forum was to receive feedback on draft mobility measures and discuss methods of evaluation to inform the updated Regional Mobility Policy. Prior to small group discussions, a presentation was shared with the group that reviewed the following:

- Review of project goals, objectives, policy applications and timeline
- Update on project progress
- Overview of draft mobility policy measures and how they could be used/applied
- What kind of feedback we're looking for today

A copy of the full agenda for the forum can be found in **Appendix A**. The Jamboards for each participant group can be found in **Appendix B**. A list of participants is provided in **Appendix C**. The full PowerPoint presentation can be found in **Appendix D**. Materials provided to participants in advance of the forum are provided in **Appendix E.**

Key Themes

A number of key themes arose during the discussions at the forums. Across all of the recommended measures practitioners, have questions and concerns about how local staff will model these measures and whether there is sufficient capacity to do so. For each theme, there were a few topics that emerged across discussion groups, including:

Multi-modal measure - System completeness

- There is a strong desire to not limit completeness to just bike/ped network. A holistic and complete approach is needed.

- There were concerns about applying system completeness at different scales and in different contexts.
- Practitioners were concerned about applying system completeness to plan amendments: how to demonstrate significant impact.
- Participants discussed how to prioritize the mode when right of way is limited and also discussed how to account for the quality of the facility in considering compleness.

Congestion measure – Travel Speed

- Participants wanted to see a reliability measure rather than a congestion measure.
- There were concerns about travel speed contradicting other regional goals—especially related to safety on arterial streets and not reflecting human experience of getting around (ie. travel time and travel reliability vs. travel speed)

Land Use Efficiency Measure – Vehicle Miles Traveled (VMT)

- There were concerns about usability of VMT at smaller scales as well as discussion about how to measure impacts and identify a nexus.
- There was support for VMT for ssytem plannig and large land use amendments.

Participation

Including project staff, a total of 90 people registered for the forum, including project team members. Out of the 70 participants, 49 of the participants identified themselves as city, county, or state agency employees, 11 identified as consultants or employees of a private firm, three identified as an employee of a transit agency, and seven selected the option "other" to explain their affiliation. The specializations of work that participants indicated described them included:

- Long-range planning (38)
- Transportation engineering (14)
- Transportation modeling (5)
- Transportation operations (5)
- Current planning / development review (8)

Discussion summary

Each discussion group was facilitated by a member of the project management team and accompanied by a notetaker. For the six breakout groups, participants were placed in groups based on their focus of work. These practitioner groups included:

- Long-range planning (3 groups)
- Transportation engineering
- Transportation modeling / operations
- Current planning / development review

Highlights from the small groups are summarized in this document, organized by measure. Some of the discussion questions were asked across all groups and others were specific to the practitioners' work focus.

The Jamboard Discussion for these groups can be found at the end of this document in **Appendix B**.

Multi-modal Measure – System completeness

Long-Range Planning Discussions (Groups 1, 2 and 3) – System completeness

Completeness looks different in different contexts and for different modes.

- System completeness should be a target but with context as to the situation. (most frequently mentioned)
    - Change criteria/target based on location and type of facility.
    - Prioritization of modes in different locations/facilities.
- Not all systems are accessible; for example, freeway on and off ramps have limited options for crossing for modes other than vehicles.
- Type of bicycle facility and pedestrian. TSMO requires a definition of what a complete street is to make the system complete and effective. Need choices with safety management in mind.
- Urban growth expansions and retrofitting current streets are different. Many times retrofitting existing streets is not a good option.
- Arterials with holes in their networks. Completeness has different grades. Bicyclists don't always need bike lanes if there is a paved street. Sidewalks many times suffer and don't meet ADA when bike lanes are prioritized.

Long-range planning participants voiced a variety of questions and comments about how the measure will be implemented.

- Policy vs. the measure – are they separate? Policies inform the development of a system, they are not a measure of system completeness.
- Network connectivity is complicated to measure. Will this measure require a prohibitive amount of analysis? (multiple mentions)
- Concerns with silo-ing rather than intent; having measure that attempts to achieve multiple outcomes for bigger picture questions.
- Zone change and comprehensive plan amendments – How do we figure out worst case scenario non-vehicle trip generation numbers? Modal split?
- This work will highlight needs on the existing system; may take more effort to find solutions.
- What are we measuring and how is consistency evaluated (mitigation)?
- Policy on turn lanes?
- Pricing on street parking?
- Demand vs use - mitigations?
- Define a set of potential mitigations and the measurability of that (even if Y/N), and could also relate to the policies/other TPR requirements.
- Use and accessibility of system- there are going to be requirements for people with disabilities, etc.
- How does activity-level and cost-effectiveness get factored in?
- Need to define expectations and desires, never going to get 100% of what you want, never going to entirely eliminate congestion, speed, increase in delay. So need to set standards for your systems, and define system completeness in terms of what that gets you with your goals

Long-range planning participants commented on what should be included or excluded in defining a complete system. Suggestions included:

- Support for type of bicycle facility and pedestrian crossing spacing.
- Some concern for including bicycle facility and transit streets.
- Completeness and TSMO/TDM are important to define.
- Number of through lanes on arterials – adding lanes can diminish walking and biking – how to take into consideration safety and comfort to get across those lanes.
- Include existence of sidewalks.

- Transit service headways.
- Parking regulations/pricing.
- First/last mile connections.
- Trail network should be part of the complete system.

Participants responded to: What suggestions do you have and what needs additional clarification?

- How do we prioritize? How would you prioritize different facilities within a limited right of way if multiple are found to be deficient? Ex: Number of through lanes on arterials/adding lanes on arterials diminishes use of pedestrians and bikes…how would a system completeness measure take into consideration how one component could degrade the function of other components? Shouldn't be at the expense of other measurements like comfort and safety.
- Seems like something that assesses ADA element sufficiency is needed: e.g. how many accessibility elements over the scale of the project. How easy would the system be for someone to use if they were not an English speaker, had one or more disabilities, etc.
- Question: City of Portland focusing on access, better understanding of how many people can benefit, how would the number of people and things like route directness play into this? You could have a mile of sidewalk but if you have it in the wrong place, not benefiting many people. How could cost effectiveness & access be captured in a way that system completeness might not quite capture?
- Clackamas bike facilities on arterials and collectors that are 80s standard; how would we address something that may complete the system but not be up to date on standards?
- There's a difference between a system and the use of a system. For example, TDM has to do with the use of the system, not building the system.

Participants commented about the experience on the ground of people using the transportation system.

- Drivers are confused in Portland with all the new street colors many times driving the wrong way in colorful new lanes.
- Bus lanes many times make it difficult to make turns which make it difficult to get off the street you are on.
- East county pedestrian deaths have been high.

System completeness and plan amendments

Transportation Engineering, Transportation Modeling / Operations Discussions, Current Planning / Development Review Discussions (Groups 4, 5 and 6) – System completeness

Participants discussed proportionality.

- If we do ask for proportionate share, how do we decide where it goes?
- Proportionality - can think of % increase in walking and biking? Needs might not be changed associated with this plan amendment.
- Concerns around proportionality – what we can/cannot require.
- ODOT does not have a funding tool. If something is an impact on their system, reliant on cities/counties to collect, but doesn't necessarily go to their system – ODOT needs to look at that.
- Needs to address how an impact on an ODOT system proportional share is kept within the state system since ODOT does not collect proportional share funds.
- Needs to address nexus and proportionality on quasi-judicial.
- Concerns about proportionality, requiring bike and ped off-site; maybe a fee that goes into an account for future improvements.
- Always struggled with off-site bike and ped only if something is big enough to require it, typically just frontage, if we had a good answer could apply to current development.
- There should be a fee for future development, cannot require it at time of development.

There were many questions and comments related to the radius of impact in relation to establishing proportionality. Multiple comments suggested using a radius along the system network (not at as the crow flies).

- If a sidewalk is missing, easy to achieve. Sometimes within that system, some areas have gaps. How far are you planning to go from that property to check what needs to be done?
- Transit stops, schools? Radius? Certain distance? Ped trips assigned to the network if meets a certain threshold, needs to be a part of the network area.
- Radius and proportionality - Push for doing walking distance. If a radius hitting the other side of industrial development, no way to tie it.
- Traffic analysis - would be ideal to have a radius of analysis of multiple things. How people are used to moving around can change from county to county.

- Shouldn't just be single intersection/corridor. Setting up a radius – for example, a couple of blocks/intersections, do it little by little to eventually cover the entire Metro area.
- Currently we go 1,000 feet from access point/center of property. Good measure, ¼ mile, can walk that distance.
- Transit network only criteria – leaves opportunities for persistent gaps.
- Assurance there is no threshold expectation placed on cities and counties since cities and counties are limited on funds. Recommend walking distance instead of radius to better support nexus and proportionality.

Considerations for implementation

- Some local jurisdictions using planned mode split to estimate it. To get trip generation, that is more multimodal. That's where you get challenged - you cannot pin it down.
    - Right now we use ITE trip generation, suggestion to use planned mode split to convert vehicle trips to active transportation trips.
    - Significant impact based on ITE vehicle trip generation scenarios; how do you calculate it for bike and ped?
- Prioritization: What right of way is available?
- Often developments are going to be a main way that small pieces of incomplete bike/ped infrastructure are built. Wouldn't want this to inadvertently be a disincentive to development in incomplete areas.

Participants discussed control and access to right of way.

- If no control of right of way, how do gaps get filled?
- If not in public right of way? How do you move that project forward? We try to get them to do it but not always successful.
- Need to address availability of right-of-way.

There were several comments in the current planning and development review group regarding why an increase in bike and pedestrians would be considered a negative impact when policies encourage mode-split.

- Why would increase in bike and walk be considered a significant impact? More walk and bike trips are desirable; should not require mitigation for increasing walking and biking.
- Should not require mitigation for increasing walking and biking.

There were several comment and questions related to setting system completeness targets/standards.

- Do not see how we can have different standards for different planning levels (system, plan amendment, development review), feels inconsistent, if developer is on the hook for the V/C impacts, even though at the plan and plan amendment level is not looking at it, how does it work?
- Be ok with incremental enhancements. Clearly define "completeness". Cooperate with adopted agency roadway standards.
- Actual policy should be flexible and adaptable to land/use, or jurisdictions, as they adopt/implement such policy. Since not all the areas of the bigger area (Metro area) are equal; not all parameters can be use the same way on the different jurisdictions.
- If there are new performance standards/targets/thresholds developed from this policy and/or subsequent planning work, those need to be easy and clear to find and reference for agencies and consultants. For example, if a definition of "system completeness" is created for specific facilities.
- How does "system completeness" differ from most or all jurisdiction's policies that include the need to develop complete ped/bike/ADA networks?
- System Planning "complete system" definition: interested in how the quality of a facility (width of sidewalk, bike facility, crossing enhancements) would fit into the complete system definitions? If these are defined in the system plan, is it responsive to changes in user volume or current conditions (if it varies from the planned mode share).
- Maybe the measure should look at increase in number of ALL trips, and if there are not enough increase in walk, bike, transit determine what needs to change in plan amendment to support increase in non-drive alone trips.

Participants commented on what should be included or excluded in defining a complete system. Suggestions included:

- Transit completeness is important. Transit "completeness" is a consideration. Could be transit running speed, frequency, stop amenities and accessibility, etc.
- Also roadway network connectivity is important to shorten trips & address congestion.
- Are there offsite things associated with traffic control for walking/biking that can show that there is a need for a more protective crossing that don't require a lot of additional right of way?

- Any project based on V/C is a complete project – improvement is always a complete street. Trying to find a new system but also do we have the tools to use this system to get qualitative data out of it that we can apply?

Participants discussed system completeness for transportation system planning.

- Through system planning, define what is complete.
- Jurisdictions are doing system completeness within TSPs. It is more tied to funding that we have.
- If you target 100% of the plan network, you might identify roadways that will never be complete.
- If system is not always funded, what is the financially constrained?

Congestion Measure – Travel speed

Long-Range Planning Discussions (Groups 1, 2 and 3) – Congestion measure

Long-range planning participants encouraged this measure to be called a reliability measure not a congestion measure and voiced a range of concerns with speed, especially on arterials.

- This should be travel time reliability and not speed? What is a reasonable amount of time to take you to get somewhere and not tie it to a speed? Reliability is a good measurement but hard to communicate to the public.
- Very uncomfortable with this – prefer travel time.
- How much time does it take to get from Point A to B? Rather than speed.
- Significant concern around using travel speed, especially for arterials - undermines vision zero goal. This is the wrong measure and shouldn't be applied to arterials.
- Studies show strong positive correlation between economic vitality and levels of congestion, so putting a travel speed measure would undermine safety and climate.
    - If we're trying to find additional housing capacity, arterials are a source of capacity that is strained, so high speeds may discourage building in those corridors.

Long-range planning participants discussed considerations for applying travel speed.

- Three different possibilities to approach this measure – freeways, hours of congestion, throughways and arterial targets.
- Legal defensibility of some measures? Declining travel. How to apply to a smaller agency? Apply difference to different locations (freeways, in centers, etc.). Understand only throughway (Time of day)? Use travel time as a defensible to broad public reception.
- Posted speed doesn't account for time of day, delay.
- Might help change behavior if people are able to understand this- where TSMO comes in.
- Can we look at travel speed for other modes? Is this just SOVs or does it include transit, freight?
    - Travel speed could be focused on transit corridors to prioritize transit speed and reliability improvements, not SOV speed improvements.

- Concerned with Highway Freeway (longer segments). Threshold for using lots of local roads vs. Limited access highway.
- Need to define expectations and desires for each and recognize you won't get all. Set standards for system and what people are willing to pay for. Then figure out how to make that work.
- Standard vs speed limit? Need clarity that standard is less than posted limit.
- Is the speed monitored or modeled?

Transportation Engineering Discussions (Group 4) - Congestion measure

Participants expressed concerns about the challenges of measuring/modeling speed on arterials with the variability it's less representative.

- A challenging tool. Re: macro modeling, needs to be calibration on that side.
- Calibrating the future model is harder.
- Concern with the level of work and calibration involved with deriving travel speed for both deterministic analysis and travel demand model on arterials. v/c ratio has less work involved in calibration.
- For user experience, speed reliability is a big component. Unfortunately, it's very challenging to forecast reliability in the context of long range planning.
- Travel speed will be thrown off at critical points such as a traffic incident or queuing at railway crossings.

Participants compared the V/C measure to speed.

- "Important elements of mobility." This statement may be true to the extent that v/c is a measure of vehicle capacity, but it overlooks that the Highway Capacity Manual analysis process that leads to v/c in project delivery can also produce performance measures for people walking, biking, and using transit. Removing v/c entirely may incidentally make it more challenging to produce the related multimodal measures.
- In Washington County, Sunset Tunnel speed is more challenging to calibrate than V/C. More in favor of V/C.
- Travel speed does not fulfill the same role as v/c in all contexts, esp. for operational purposes Off-freeway and at point/short locations.
- Looking at from V/C side, the moment V/C goes up, speed goes down.

Participants had varying perspectives and ideas about if/how Travel Speed could be best used on arterials and thruways.

- Should be using data we have in the region as a baseline - anything we have as a model needs to make sense relative to the baseline.
- Directly measure speeds as a baseline from Bluetooth, Wejo, INRIX. This will be more accurate.
- Important on arterials for gauging queuing and queue spillback.
- Travel speed is only a relevant metric for freeways and expressways. It's problematic to use for arterials and intersections, and should not be used.
- In some cases there may be a desire to keep speeds low, for example to increase ped/bike safety in an STA.

Transportation Modeling / Operations Discussions (Groups 5 and 6) - Congestion measure

Modeling participants discussed a number of questions, concerns and suggestions related to how speed would be modeled.

- Would like to see a bifurcated approach. Understanding delay from intersections vs. overall capacity delay.
- Speed is quite messy. It depends on segment length, what segments you are measuring, average of what length makes a difference, existing and modeled speeds. Model not calibrated for speed, need a tool, tools will need to be calibrated and refined so that it will be applicable, SYNCRO or what model, do we know, has it been tested?
- We have existing – what we can measure today, future no build, future build. There are tools to get the existing speeds, but not for future build and no build.
- Will need to be careful not to use raw travel model speeds for this - will need to be post-processed with on-road probe data.
- In general, modelers do not use design speeds that engineers use. Input speed can be the same as the posted speed, but what really clarifies and defines a model input speed will be using a combination of speeds. Caution: If input speed is set above posted speed, theoretically you could have a congested speed above the posted speed, which will cause confusion.
- Speed is an input to modelling as well as an output.
- The takeaway should be the difference between the model input speed and the actual.

- For at-grade arterials (not throughways), consider using a bifurcated approach using Synchro's outputs at intersections AND along arterial segments. Metro does not use Synchro but it is useful to City/County/ODOT project modelers.
- What capabilities are available to model max speeds, such as keeping CBD speeds at 25 or less.
    - Design speed is NOT a model input.
    - We are currently using "free flow" as an input for speed.
- Thresholds need to be defined - for example posted speed is used as the free-flow speed.
- Consider the impact of incidents: some places have incidents as the norm which are not modeled.
- Speed should include differences by mode. Transit, freight and SOV, etc.

Participants generally agrees lower speeds are more desirable on arterials and aligned with safety goals.

- Speed is counter to policy goals – aren't we trying to slow speeds?
- There is a huge difference between speed on freeways and arterials.
- Faster the cars go the less safe for other users on arterials.
- Relationship between pedestrians and arterials. Congestion and slower traffic may be what we are going for on arterials (except for buses).
- Broad agreement that bus travel speed also matters in new tools for travel speed: bus on shoulder, etc.
- Desire to have max speed for safety for survivable crashes. It's possible to model with a lower input speed. We talked a bit about using BUD/Livable Street Handbook max speeds for safety in urban areas.
- In some locations we could want to slow things down for policy reasons. The model would allow a congested speed that is greater than the posted.

Land Use Efficiency Measure – VMT per capita

Long-Range Planning Discussions (Groups 1, 2 and 3) – Land use efficiency measure

Long range planning participants discussed the need to disaggregate VMT to understand who is being well served and who's being left out. There's a desire to understand specific trips and kinds of employment, sectors and employee demographics.

- Apply market segmentation of models and combine tools (cell phone data) to answer more difficult questions.
- Modeling tools that are used now aren't made to be disaggregated, needs to stay at high level.

Participants discussed that it is a good measure for system planning and large land use amendments. Site scale is a concern.

- Could see it at the regional and county level, but curious as to how that would apply to actual application in a smaller city level.
- Consider applying at a TSP level.
- Good measure at the system level (or very large geography level). Not good at smaller scales.
- An analysis of different subarea levels would be helpful to understand applicability.

There are concerns about local staff capacity to model VMT.

- Is it anticipated that local jurisdictions would have the tools to do the VMT/capita analysis, or is this type of analysis typically done by Metro or consultants?
- How much modeling would be involved? If significant amount of modeling, it would be difficult for smaller jurisdictions to do - how can a planner look up a map of book to do the calculation.
- Concern is that a standard is set that requires modeling, it might be extremely hard to apply except in the largest cities; not sure if a city in say Clackamas that could apply, it needs to be something simpler or used from analysis that Metro does or TSP; find a way that an entry level planner can look in a book or on a map.
- City of Portland having a calculator built where you enter basic information that would tell you the VMT, moving away from VC or LOS standard, easier to implement and see outputs, putting finishing touches on.
    - It may be interesting to have some tests, give people at various sized localities to test that and see if that could work for them.

Participants discussed how VMT is being applied in California. (California related comments from all groups listed below.)

- Are there lessons learned from California's transition from level of service to VMT for environmental studies (SB 743)? How does Oregon's planning context differ from California's?
- SB743 California established opportunity for project streamlining, if in an area that exhibits below a certain VMT.
- California established opportunities for streamlining if building something in low VMT area and likely to generate lower VMT/capita.
- California Office of Planning and Research guidance: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf
- Current resource for off-model VMT mitigation strategies: https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod
- In California, some cities are basing impact fees on VMT. Some are requiring mitigations through multi-modal improvements, TDM programs, parking, on-site improvements (e.g., bike room at multifamily developments). Example: Fresno, California VMT calculator for development applications.
- Fresno COG example of a project-level VMT impacts calculator, used for environmental impacts review.

VMT is tied to multiple desired outcomes.

- VMT tied land use to transportation and also relates safety and mobility.
- VMT/capita is broader than a land use efficiency measure, since it is itself the strongest indicator of the benefits of multimodal travel balance (more efficient use of ROW than SOVs).
- Are there negative equity implications to VMT per capita, as an increase in VMT per capita can indicate households that previously didn't own a vehicle now have access to one?
- The City of Portland supports measures that would apply to multiple outcomes.

Participants offered suggestions and questions about how VMT should be applied.

- A better measure might be VMT per acre.
- Encourage plan amendment level comparisons be made to regional level target.
- Housing in low VMT areas, one of several concerns is idea of increasing speeds on arterials could discourage people living adjacent to them, could affect safety.

- Portland is trying to tie measures/standard at TSP, Comp plan and Development review levels.
- Won't the anticipated VMT reduction requirements for TSPs from CFEC still apply? How will these requirements, the updated regional mobility policy and the Climate Smart target reductions interact?

Transportation Engineering and Transportation Modeling/Operations (Groups 4 and 5) – Land use efficiency measure

There were several comments about the relationship of VMT and land use density.

- Challenging to establish a nexus. Especially if the VMT/capita or VMT/employee as determined by the RTDM varies from empirical or on-the-ground sources.
- Does that relate directly to density of land use? Shortness of trips?
- Depends where density is – do we have the right mix of land uses, what are the better locations to do it?
- Land use – we don't have land use to support the idea. Until you change land use, that will allow change. For example, Cooper Mountain – all residential. Almost impossible - compare to old Europe. It's completely different. Other cultures happy with a few things in a shop. Culture change of land use is the key.

Participants made suggestions for collecting VMT data.

- DEQ requires employers with 100+ workers to collect commute data and provide commute trip reduction programs.
- Add VMT/Student.
- Household VMT - a note that you will need to pay very close attention to the demographics and household size for these areas, that will have a big impact on the household VMT. That is an area you may need to develop clear and consistent guidance around to get constituent analysis.

Participants voices questions and considerations for modeling VMT.

- Is household size and resulting variation in per capita rates something that the model can examine?
    - It is possible to consider household size in combination with VMT/capita.
- Can we assume certain Transportation Demand Management actions and get constant factor for it?

    - Depends on the specific action – some, such as building in telecommute rates, will work in model.
    - Household surveys inform model too and more frequent data can inform TDM impact on behavior.
- Current practice: TPR review sometimes relies on logic/engineering judgment more than a scientific/purely quantitative approach.
- Consideration of the size of the reference area (single TAZ, multiple TAZs, entire jurisdiction) is needed to evaluate the plan/project against the mobility policy.

Participants voiced concerns and suggestions about VMT.

- Shouldn't be focused on a single parameter. Need to focus on many. Policy has to be flexible for land use and use a combination of parameters.
- Not supportive of VMT/capita. Does not provide meaningful information regarding how the transportation system is functioning.
- General concern about VMT per capita, particularly that it might be too broad, insensitive, or difficult a performance measure to implement, especially when the OHP mobility targets are used in the project delivery process.
- It's also important to consider ways that VMT/capita might not correspond 1:1 with GHG/capita or GHG overall for the region.
- Small efforts are hard to evaluate into long term.

Current Planning / Development Review Discussions (Group 6)

Group did not get to this question.

Large Group Discussion

The groups returned to the large group and were offered an opportunity to share some of their key thoughts. The following represents ideas shared with the larger group:

There were several comments about speed:

- Implications of speed - speed is not neutral, reference to speed and safety on arterials.
- As a region, we are grappling with housing, providing sufficient housing - concern with travel speed. Is idea of increasing, the desire for higher speeds, to discourage people living adjacent to those arterials?

- Broad agreement in one group to look at travel speed, look at bus travel, desire to have a max speed re; safety and survival. Something has to be worked out.

Big picture comments for consideration:

- We don't want to lead to measures that discourage biking and walking trips.
- There has been a fundamental shift in human behavior in our country – don't know full implications yet. Distribution of freight, where people work, how they behave, how they receive products - will play out over next 5-6 years.
- Measures need to be related to residents and lived experience.
- Importance of thinking across levels, how do things align in a bigger system? Make sure outcomes are aligning at a system level. How do the layers fit together?

Oregon Department of Transportation

Metro

Appendix A – Meeting Agenda

Meeting: Metro/ODOT Regional Mobility Policy Update – Practitioners Forum (Session 3)

Date: Thursday, April 7, 2022

Time: 2:00 to 4:00 p.m.

Place: Zoom virtual meeting

If you haven't already, click the link to register for this meeting: https://us02web.zoom.us/meeting/register/tZIvceCvrTkuG9YKd73i9qdm_TWMmDBBJjcm

AGENDA

2:00 PM	**1.**	**Introductions and Workshop Purpose**	**Allison Brown, facilitator**
2:15 PM	2.	**Large Group: Metro/ODOT Regional Mobility Policy Update & Policy Measures** • Review of project goals, objectives, policy applications and timeline • Update on project progress • Overview of draft mobility policy measures and how they could be used/applied • What kind of feedback we're looking for today ○	**Kim Ellis, Metro** **Susie Wright, Kittelson & Associates**

2:55 PM	**3.**	**Small Group Breakouts: Policy Measures Discussion Questions:**
		• **Multi-modal Measure – System completeness**
		  ○ **For current planning group, modeling and engineering:** How could plan amendments that increase walking and biking on an incomplete but adequately planned network be considered to have a significant impact and how could you require mitigation at the plan amendment stage?
		  ○ **For long-range planning, modeling and engineering:** In system planning, what else
			Facilitated discussion

would you include or exclude in defining a complete system?

- network connectivity
- number of through travel lanes
- policy on turn lanes
- type of bicycle facility
- target pedestrian crossing spacing
- TSMO/TDM elements
- Transit streets and type

- **For all groups:** What suggestions do you have and what needs additional clarification?

- **Congestion Measure – Travel speed**
  - How could Travel Speed be best used on arterials? On thruways?
  - What suggestions do you have and what needs additional clarification?
- **Land Use Efficiency Measure – VMT per capita**
  - **For current planning group, modeling and engineering:** How could VMT/Capita and VMT/Employee be used to determine how a plan amendment gets evaluated for significant impact?
  - **For long-range planning, modeling and engineering:** How could VMT/Capita and VMT/Employee best be used to inform system planning?
  - **For all groups:** What suggestions do you have and what needs additional clarification?

3:40 PM	**7.**	**Large Group: Re-cap and Overall Reflections** • Review themes from breakouts • Gather final thoughts and reflections from the	**Allison Brown, facilitator**

group

3:55 PM	**8.**	**Next Steps** • Additional engagement opportunities to help shape the updated policy for recommendation to policymakers next fall	**Kim Ellis, Metro**
4:00 PM	**9.**	**Adjourn**	**Allison Brown, facilitator**

Read more about the draft mobility policies and measures: here.

More information is available on the project webpage: oregonmetro.gov/mobility

If you have any questions or would like to request accommodations for this forum, please email molly.cooney-mesker@oregonmetro.gov.

Oregon Department of Transportation

Metro

Appendix B – Jamboards Group 1 (Long-Range Planning)

1. Multi-modal Measure – System completeness

In system planning, what else would you include or exclude in defining a complete system? (network connectivity, number of through travel lanes, policy on turn lanes, type of bicycle facility, target pedestrian crossing spacing, TSMO/TDM elements, Transit streets and type)

What suggestions do you have?

What needs to be clarified?

2. Congestion Measure – Travel speed

How could Travel Speed be used on arterials and/or thruways?

What suggestions do you have?

What needs to be clarified?

3. Land Use Efficiency Measure – VMT per capita

What suggestions do you have?

What needs to be clarified?

How could VMT/Capita and VMT/Employee best be used to inform system planning?

5. What suggestions do you have and what needs additional clarification overall?

Appendix B – Jamboards Group 2 (Long-Range Planning)

What suggestions do you have?

What needs to be clarified?

2. Cong Mea Trave ed

How vel Spe ed on a nd/or thruways?

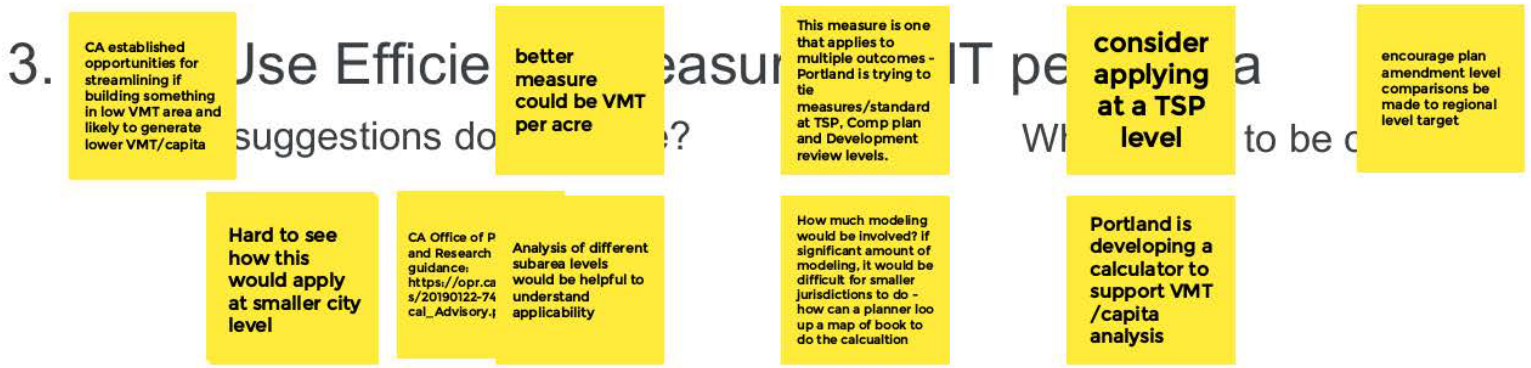
Significant concern around using travel speed, especially for arterials - undermines vision zero goal. wrong measure and shouldn't be applied to arterials

Arterials - housing capacity are constrained because of high speeds. High speeds will make it difficult to build housing and other commercial activities in these areas.

need to define expectations and desires for each and recognize you won't get all - Set standards for system and what people are willing to pay for. Then figure out how to make that work

What suggestions do you have?

What needs to be clarified?



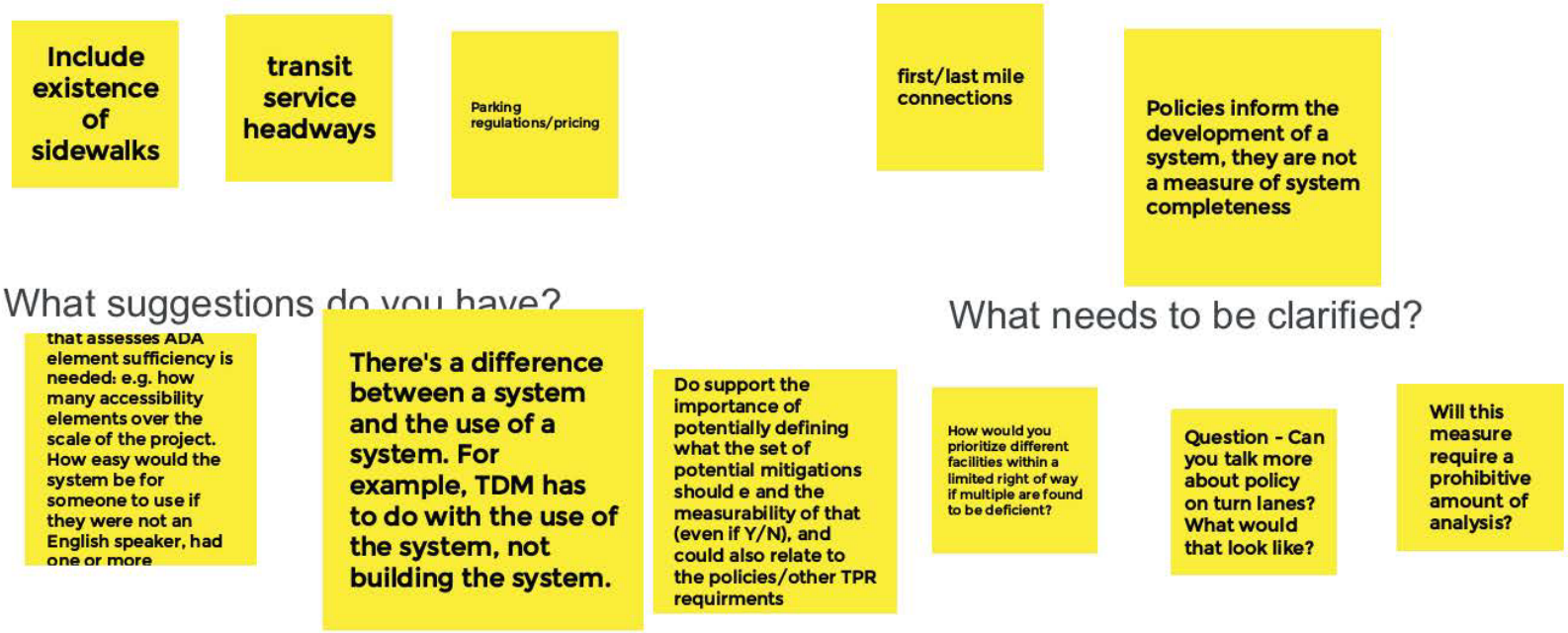
How could VMT/Capita and VMT/Employee best be used to inform system planning?

5. What suggestions do you have and what needs additional clarification overall?

Appendix B – Jamboards Group 3 (Long-Range Planning)

1. Multi-modal Measure – System completeness

In system planning, what else would you include or exclude in defining a complete system? (network connectivity, number of through travel lanes, policy on turn lanes, type of bicycle facility, target pedestrian crossing spacing, TSMO/TDM elements, Transit streets and type)



2. Congestion Measure – Travel speed

How could Travel Speed be used on arterials and/or thruways?

Travel speed could be focused on transit corridors to prioritize transit speed and reliability improvements, not SOV speed improvements.

What suggestions do you have?

What needs to be clarified?

And is the speed monitored or modeled?

Can it be clarified the impacts of only applying to throughways and not arterials?

Continue to have preference for Travel Time (and Reliability) vs Speed, and would like to keep clarifying how much of it is the model output/ease vs what we need to figure out how to do

Standard vs speed limit? need clarity that standard is less than posted limit

3. Land Use Efficiency Measure - VMT per capita

What suggestions do you have?

Good measure at the system level (or very large geography level). Not good at smaller scales.

Continue to suggest that VMT/capita is broader than a LU efficiency measure, since it is itself the strongest indicator of the benefits of multimodal travel balance (more efficient use of ROW than SOVs)

What needs to be clarified?

Are there negative equity implications to VMT per capita, as an increase in VMT per capita can indicate households that previously didn't own a vehicle now have access to one?

reduction reqs for TSPs from CFEC still apply? So maybe a negative direction is the TSP target? Though how all the cities/counties have less than the Climate Smart target reductions and the region demonstrates it remains a

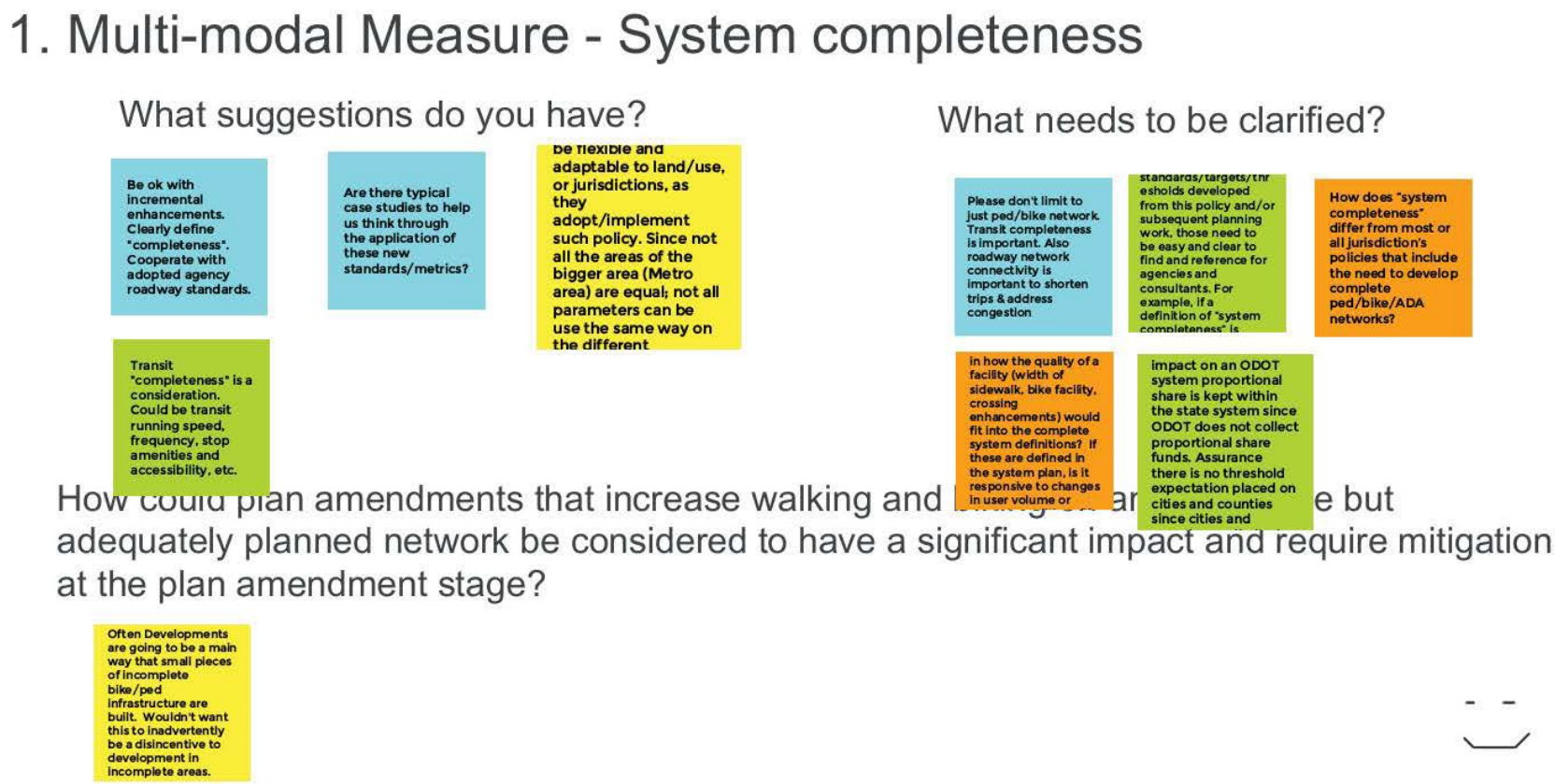
How could VMT/Capita and VMT/Employee best be used to inform system planning?

It would be helpful to be able to disaggregate VMT/employee to what kinds of employment/sectors/employee demographics. Again - it's about who is being well served and who's being left out.

Modeling tools that are used now aren't made to be disaggregated, needs to stay at high level.

5. What suggestions do you have and what needs additional clarification overall?

Appendix B – Jamboards Group 4 (Transportation Engineering)



2. Congestion Measure - Travel speed

How could Travel Speed be used on arterials and/or thruways?

Directly measure speeds as a baseline from Bluetooth, Wejo, INRIX. This will be more accurate.

Important on arterials for gauging queuing and queue spillback.

Travel speed does not fulfill the same role as v/c in all contexts, esp. for operational purposes
Off-freeway and at point/short locations.

Concern with the level of work and calibration involved with deriving travel speed for both deterministic analysis and travel demand model on arterials. v/c ratio has less work involved in calibration.

For user experience, speed reliability is a big component. Unfortunately, it's very challenging to forecast reliability in the context of long range planning.

What suggestions do you have?

be true to the extent that v/c is a measure of vehicle capacity, but it overlooks that the Highway Capacity Manual analysis process that leads to v/c in project delivery can also produce performance measures for people

Travel speed is only a relevant metric for freeways and expressways. It's problematic to use for arterials and intersections, and should not be used.

What needs to be clarified?

In some cases there may be a desire to keep speeds low, for example to increase ped/bike safety in an STA.

3. Land Use Efficiency Measure - VMT per capita

What suggestions do you have?

Not supportive of VMT/capita. Does not provide meaningful information regarding how the transportation system is functioning.

What needs to be clarified?

General concern about VMT per capita, particularly that it might be too broad, insensitive, or difficult a performance measure to implement, especially when the OHP mobility targets are used in the project delivery process.

and proxy for GHG reduction may be prescribed in updates to the TPR. More info about this context could be helpful for practioners to understand the measure. It's also important to consider ways that vmt/capita might not correspond

How could VMT/Capita and VMT/Employee be used to determine how a plan amendment gets evaluated for significant impact?

capita as a performance measure, are there lessons learned from California's transition from level of service to VMT for environmental studies (SB 743)? How does Oregon's planning context differ from

Challenging to establish a nexus. Especially if the VMT/capita or VMT/employee as determined by the RTDM varies from empirical or on-the-ground sources.

4. What suggestions do you have and what needs additional clarification?

from chat:
15:32:20 From Joseph Auth - City of Hillsboro to Everyone : ITE does have some trip generation for peds and bikes.
15:36:44 From Joseph Auth - City of Hillsboro to Everyone : I agree with Shaun.
15:37:46 From Chris Strong, City of Gresham to Everyone : I agree with Joseph and Shaun. V/c is also much more meaningful to us when we're developing our capital projects. We typically improve nodes more than we do segments.
15:43:42 From Ben Chaney (he/him), ODOT R1 Trafffic to Everyone : for VMT/Capita, this is another measure where there are an increasing number of probe or empirical data sources available. Big focus on calibration between model/ground.

Group 4 Agreements

- Mute when you are not speaking.

- Share your video if able, especially when speaking.

- Contribute in ways that work for you. Tools today include the Jamboard, zoom chat, and sharing verbal comments. We want to hear from you!

- Be okay with non-closure. There may be questions that come up that we can't answer today, and that is okay! We might not get to a place of final resolution today, but we still want to hear those questions.

- Approach different opinions with curiosity, seeking to understand rather than judge.

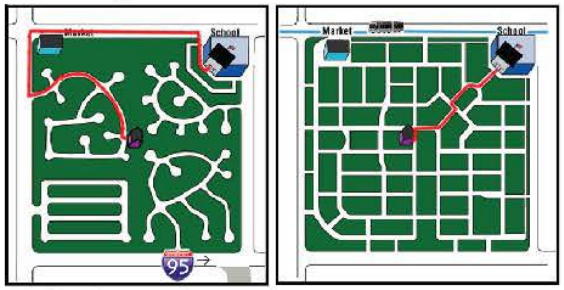
Appendix B – Jamboards Group 5 (Transportation Engineering/Modeling/Operations)

1 Multi-modal Measure - System completeness

What suggestions do you have?

What needs to be clarified?

Issue - once we have allowed uses it's difficult to get these mitigations



Driving-only transportation pattern

Walkable connected transporation network

What is complete as far as quality - width, condition for sidewalks for example?

How could plan amendments that increase walking and biking or
adequately planned network be considered to have a significant i ation
at the plan amendment stage?

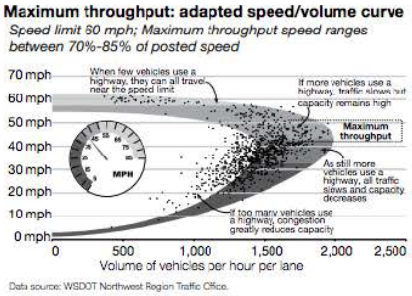
2. Cong Measure - Travel speed

Thresholds need to be defined - for example posted speed is used as the free-flow speed

How vel Speed be used on arterials and/or thruways?

FHWA recommends microsimulation to get speeds right.

Glen asked about the ability to model max speeds, such as keeping CBD speeds at 25 or less. Chris - design speed is NOT a model input. Cindy, currently using "free flow" as an input for speed



speeds usually pretend there aren't incidents, but there are always incidents.

The takeaway should be the difference between the model input speed and the actual

What suggestions do you have?

Would like to see a bifurcated approach. understanding delay from intersections vs. overall capacity delay

Will need to be careful not to use raw travel model speeds for this - will need to be post-processed with on-road probe data

In some locations we could want to slow things down for policy reasons. the model would allow a congested speed that is greater than the posted

What needs to be clarified?

Speed should include differences by mode. Transit, freight and SOV...

3. Land Use Efficiency Measure - VMT per capita

What suggestions do you have?

in CA some cities are basing impact fees on VMT. Some are requiring mitigations through multi-modal improvements, TDM programs...

DEQ requires employers with 100+ workers to collect commute data and provide commute trip reduction programs.

As a transportation planner for a college, add VMT/Student.

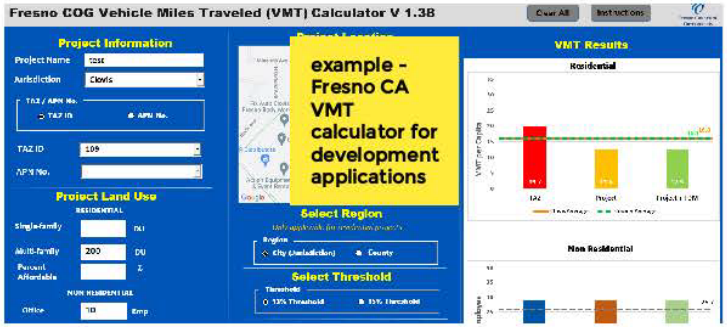
What needs to be clarified?

Is it anticipated that local jurisdictions would have the tools to do the VMT/capita analysis, or is this type of analysis typically done by Metro or consultants?

need to pay very close attention to the demographics and household size for these areas, that will have a big impact on the household VMT. That is an area you may need to develop clear and consistent guidance around to

How could VMT/Capita and VMT/Employee be used to determine how a plan amendment gets evaluated for significant impact?

Current resource for off-model VMT mitigation strategies: https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod



example - Fresno CA VMT calculator for development applications

5. What suggestions do you have and what needs additional clarification overall?

Appendix B – Jamboards Group 6 (Current Planning/Development Review)

1. Multi-modal Measure – System completeness

What suggestions do you have?

What needs to be clarified?

How could plan amendments that increase walking and biking on an incomplete but adequately planned network be considered to have a significant impact and require mitigation at the plan amendment stage?

2. Congestion Measure - Travel speed

How could Travel Speed be used on arterials and/or thruways?

What suggestions do you have?

What needs to be clarified?

3. Land Use Efficiency Measure - VMT per capita

What suggestions do you have?

What needs to be clarified?

How could VMT/Capita and VMT/Employee be used to determine how a plan amendment gets evaluated for significant impact?

5. What suggestions do you have and what needs additional clarification overall?

Appendix C – List of Participants

Name	Agency/Affiliation	Which of the following best describes your work? (Please select one):	Which of the following best describes your employer?:
Barbara Fryer	City of Cornelius	Long-range planning	City/County, State agency
Carl Springer	DKS Associates	Long-range planning	Private firm/consultant
Alicia Wood	Metro	Long-range planning	City/County, State agency
Kristin Hull	City of Portland	Long-range planning	City/County, State agency
Mark Lear	City of Portland	Long-range planning	City/County, State agency
Adrian Pearmine	DKS Associates	Long-range planning	Private firm/consultant
Alexis Biddle	1000 Friends of Oregon	Long-range planning	Other
Dave Roth	City of Tigard	Long-range planning	City/County, State agency
Greg Dirks	City of Wood Village	Long-range planning	City/County, State agency
John Williams	City of West Linn	Long-range planning	City/County, State agency
Peter Finley Fry	N/A	Long-range planning	Private firm/consultant
Eliot Rose	Metro	Long-range planning	Other
Scott Turnoy	ODOT	Long-range planning	City/County, State agency
Allison Boyd	Multnomah County	Long-range planning	City/County, State agency
Lynda David	Southwest Regional Transportation Council	Long-range planning	City/County, State agency
André Lightsey-Walker	The Street Trust	Long-range planning	Other
alex Steinberger	Cascadia Partners	Long-range planning	Private firm/consultant
Guy Benn	TriMet	Long-range planning	Transit agency
Peter Hurley	City of Portland	Long-range planning	City/County, State agency
Tammy Lee	PSU – Transportation Research and Education Center	Long-range planning	Other
Scott Hoelscher	Clackamas County	Long-range planning	City/County, State agency
Daniel Riordan	City of Forest Grove	Long-range planning	City/County, State agency

Brett Setterfield	Clackamas County	Long-range planning	City/County, State agency
Bill Johnston	ODOT	Long-range planning	City/County, State agency
Idris Ibrahim	N/A	Transportation operations	City/County, State agency
Steve Williams	Clackamas County	Long-range planning	City/County, State agency
Karen Buehrig	Clackamas County	Long-range planning	City/County, State agency
Tom Armstrong	City of Portland	Long-range planning	City/County, State agency
Emily Benoit	City of Vancouver	Long-range planning	City/County, State agency
Jamie Stasny	Clackamas County	Long-range planning	City/County, State agency
Jay Higgins	City of Gresham	Long-range planning	City/County, State agency
Michael Walter	N/A	Long-range planning	City/County, State agency
Erik Havig	ODOT	Long-range planning	City/County, State agency
Briana Calhoun	Fehr and Peers	Long-range planning	Private firm/consultant
Brooke Jordan	WSP	Long-range planning	Private firm/consultant
Eric Hesse	City of Portland	Long-range planning	City/County, State agency
Erin Wardell	Washington County	Long-range planning	City/County, State agency
Jessica Engelmann	City of Beaverton	Long-range planning	City/County, State agency
Karen Williams	Oregon DEQ	Long-range planning	City/County, State agency
Katherine Bell	ODOT	Transportation engineering	City/County, State agency
Jabra Khasho	City of Beaverton	Transportation engineering	City/County, State agency
Ali Eghtedari	ODOT	Transportation engineering	City/County, State agency
Ben Chaney	ODOT	Transportation engineering	City/County, State agency
Alyssa Cameron	ODOT	Transportation engineering	City/County, State agency
Camilo Alvarez Tuta	Fehr and Peers	Transportation engineering	Private firm/consultant
Shaun Quayle	Washington County	Transportation engineering	City/County, State agency
Arthur O'Connor	TriMet	Transportation engineering	Transit agency
Joseph Auth	City of Hillsboro	Transportation engineering	City/County, State agency

Chris Strong	City of Gresham	Transportation engineering	City/County, State agency
Peter Koonce	City of Portland	Transportation engineering	City/County, State agency
Don Odermott	City of Hillsboro	Transportation engineering	City/County, State agency
Kate Freitag	ODOT	Transportation engineering	City/County, State agency
Peter Schuytema	ODOT	Transportation engineering	City/County, State agency
Cindy Pederson	Metro	Transportation modeling	Other
Bill Stein	Metro	Transportation modeling	Other
Christopher Johnson	Metro	Transportation modeling	City/County, State agency
James Powell	Oregon DEQ	Transportation modeling	City/County, State agency
Ted Trepanier	INRIX	Transportation operations	Private firm/consultant
Carl Olson	Clackamas County	Transportation operations	City/County, State agency
Ray Atkinson	Clackamas County	Transportation operations	Transit agency
Mat Dolata	N/A	Transportation modeling	Private firm/consultant
John Charles	N/A	Transportation operations	Private firm/consultant
Laura Terway	City of Happy Valley	Current planning/development review	City/County, State agency
Jennifer Hughes	Clackamas County	Current planning/development review	City/County, State agency
Graham Martin	Multnomah County	Current planning/development review	City/County, State agency
Marah Danielson	ODOT	Current planning/development review	City/County, State agency
Kate McQuillan	City of Beaverton	Current planning/development review	City/County, State agency
Brad Kilby	HHPR	Current planning/development review	Private firm/consultant
Justin Bernt	ODOT	Current planning/development review	City/County, State agency
Chris Smith	N/A	Current planning/development review	Other

Appendix D – Power Point Presentation

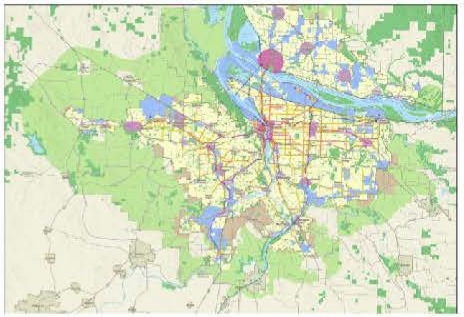
Regional mobility policy update

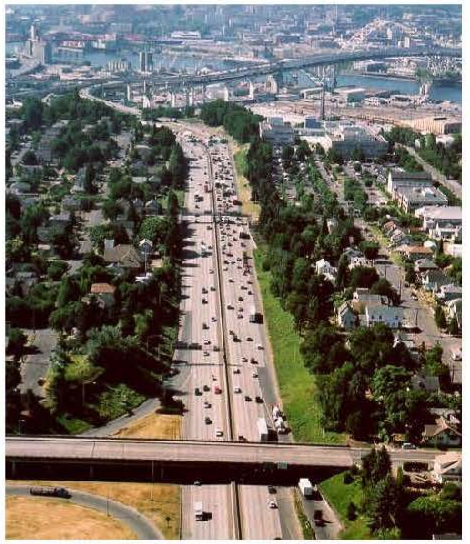
Practitioner Forum #3

April 7, 2022

Metro

Oregon Department of Transportation



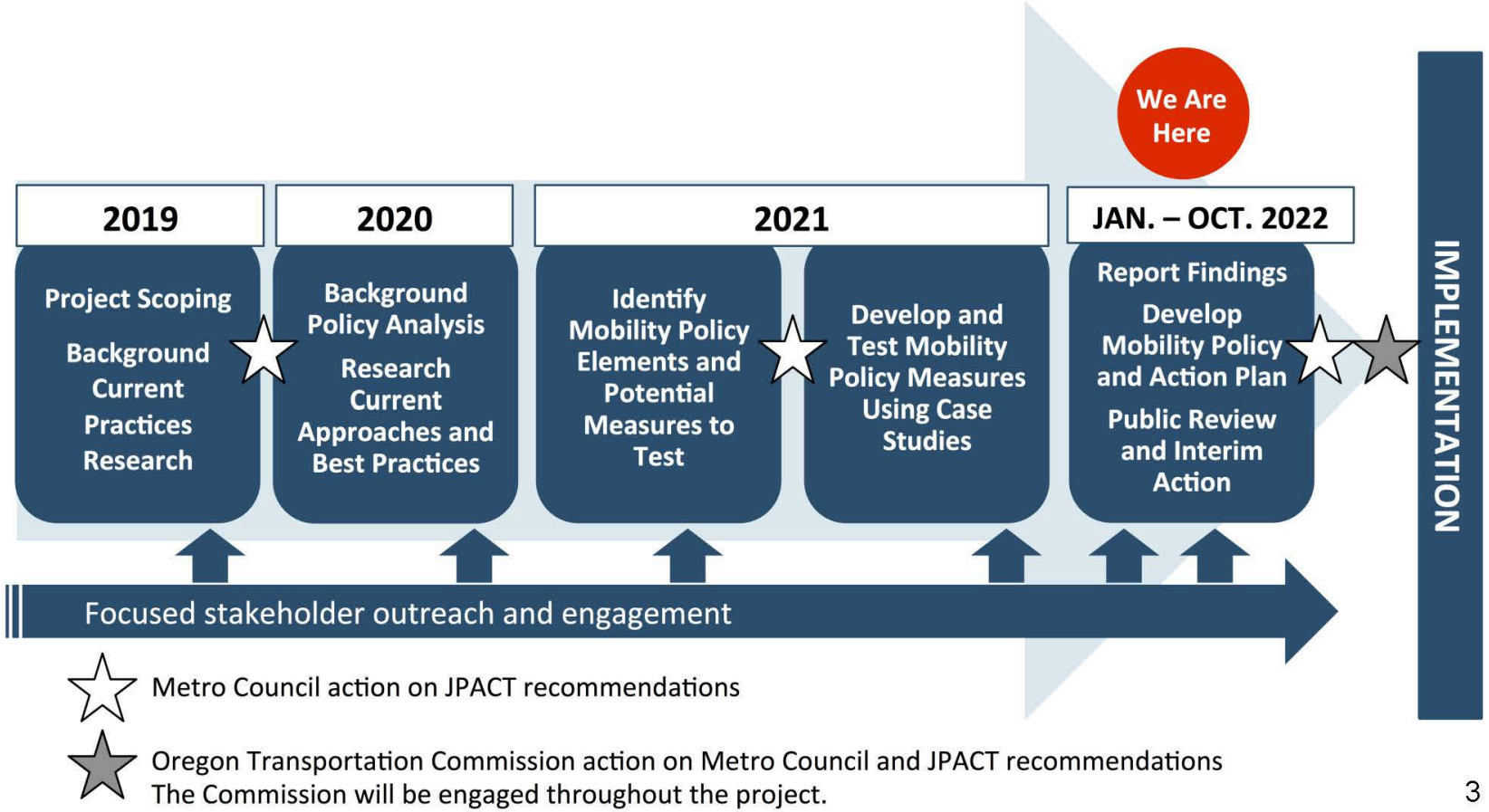


Project purpose

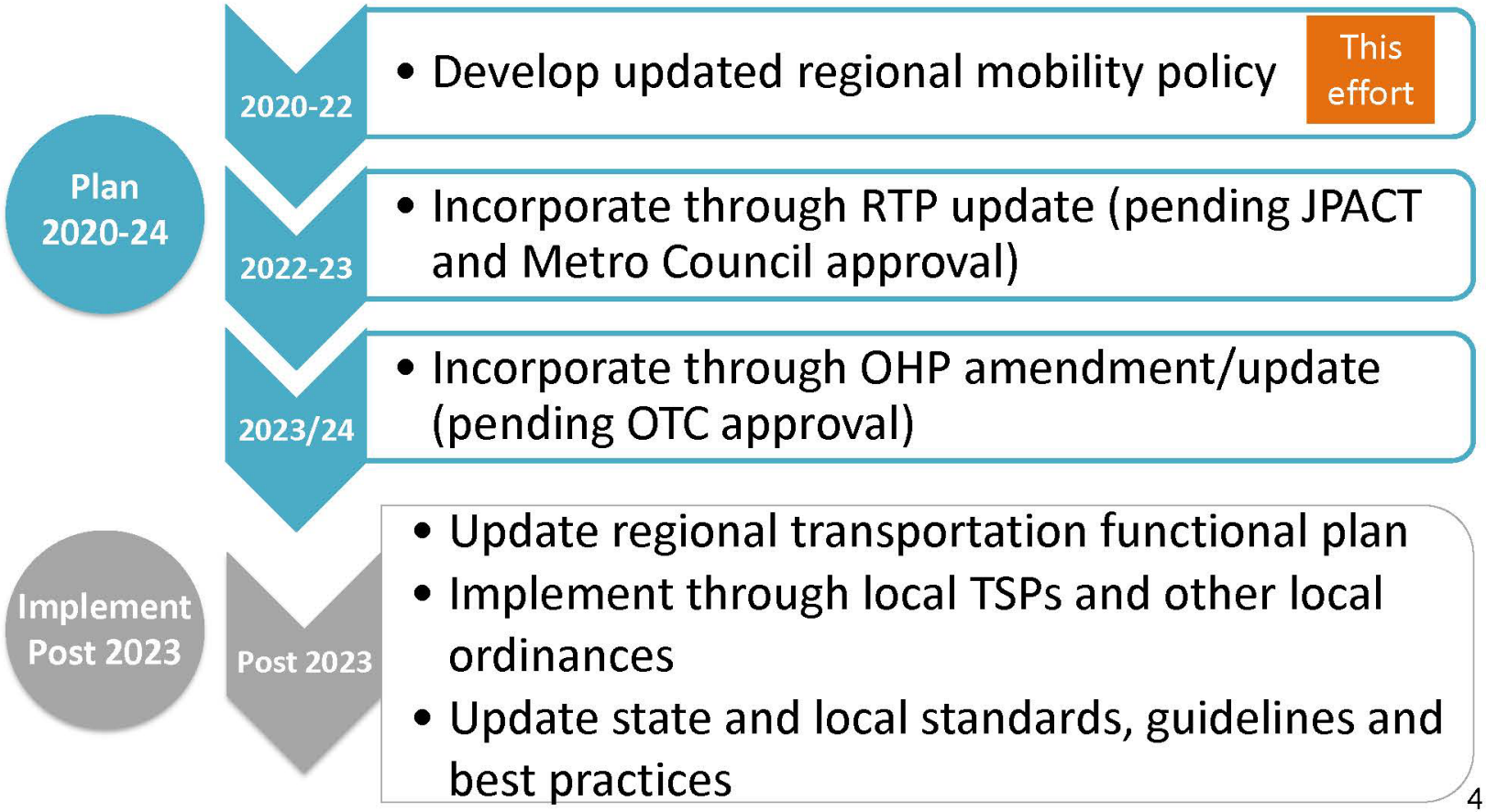
- Update the mobility policy and how we define and measure mobility for the Portland area transportation system
- Recommend amendments to the RTP and Oregon Highway Plan Policy 1F for the Portland area

Visit oregonmetro.gov/mobility

Project timeline



Where is this headed?



2020-22 Engagement

Metro Council

Regional advisory committees

County coordinating committees

1 community leaders forum

1 freight and goods forum

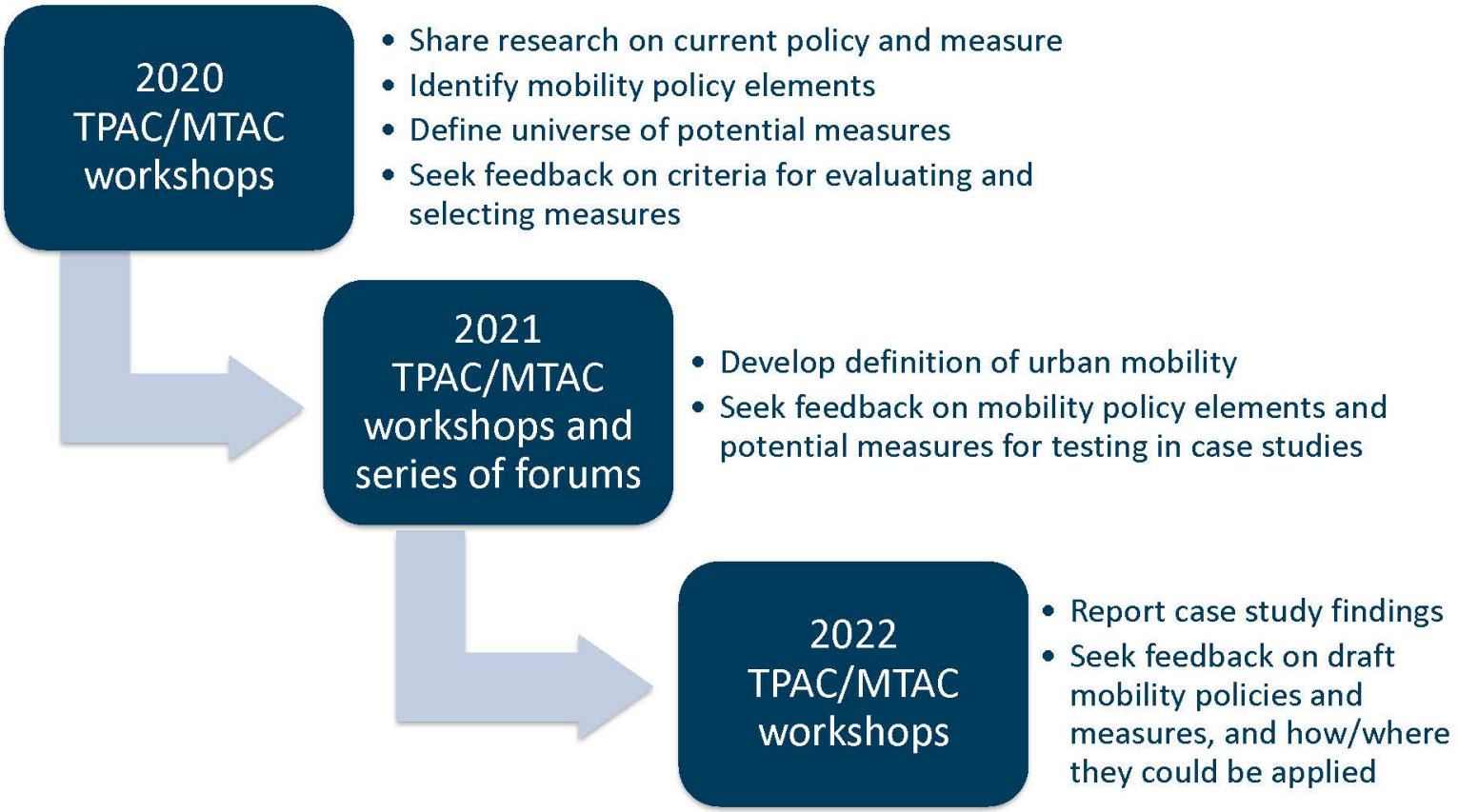
2 practitioner forums – planners, engineers, modelers

6 TPAC/MTAC Workshops

More than **500** participants

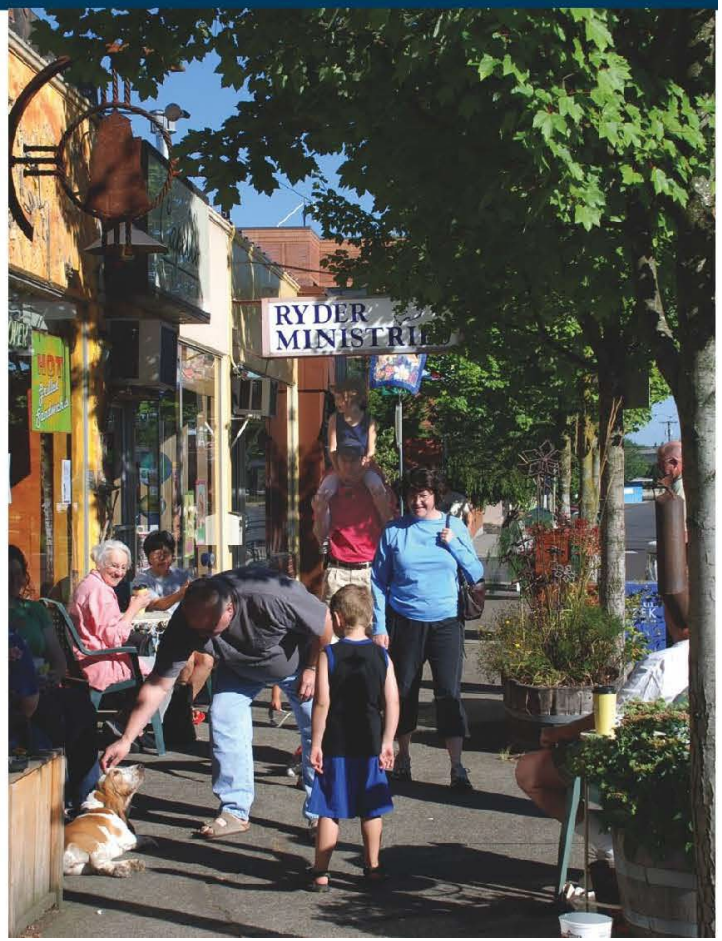
zoom

Looking back: 2020 to today

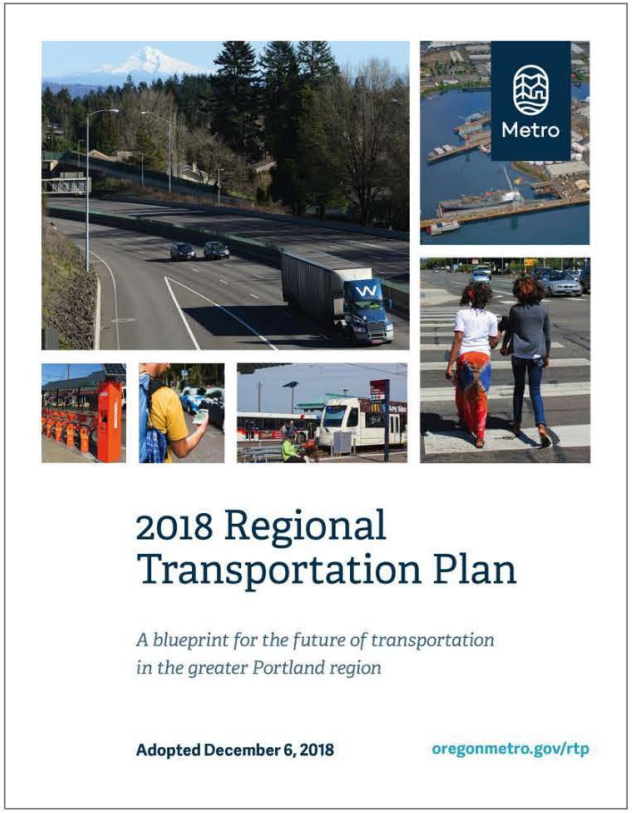


Today's forum purpose

- Review goals, timeline, and progress to date
- Overview draft measures and how they could be used/applied
- Gather feedback on potential uses of the measures



Why Now?



ODOT, Metro, cities and counties are increasingly unable to meet current mobility policy

Better align policy with state, regional and community values, goals and desired outcomes:

- Desire to shift focus from vehicles to people and goods
- Cannot afford what it would take to meet policy
- Impacts to meet current RTP/OHP congestion targets/standards remain a top concern

Regional Mobility Policy and Oregon Highway Plan Policy 1F

Regional Mobility Policy (Regional Transportation Plan)

- RTP networks, including ODOT highways and city and county arterials
- System planning only

Highway Mobility Standards (OHP Policy 1F)

- ODOT highways only
- System planning, plan amendments
- *Development review requirements where adopted in local development codes; guiding operations decisions such as managing access and traffic control systems (not part of this project)*

VOLUME TO CAPACITY RATIO TARGETS INSIDE METRO[A, B]		
Locations	**Target**	
	1st hour	**2nd hour**
Central City Regional Centers Town Centers Main Streets Station Communities	1.1	.99
Corridors Industrial Areas Intermodal Facilities Employment Areas Inner Neighborhoods Outer Neighborhoods	.99	.99
I-84 *(from I-5 to I-205)*	1.1	.99
I-5 North *(from Marquam Bridge to Interstate Bridge)*	1.1	.99
OR 99E *(from Lincoln Street to OR 224 Interchange)*	1.1	.99
US 26 *(from I-405 to Sylvan Interchange)*	1.1	.99
I-405[C] *(from I-5 South to I-5 North)*	1.1	.99
Other Principal Arterial Routes I-205[C] I-84 *(east of I-205)* I-5 *(Marquam Bridge to Wilsonville)*[C] OR 217 US 26 *(west of Sylvan)* US 30 OR 8 *(Murray Blvd to Brookwood Avenue)*[C] OR 224 OR 47 OR 213 242nd/US 26 in Gresham OR 99W	.99	.99

Table 7: Volume to Capacity Ratio Targets within Portland Metropolitan Region

Potential application of the measures tested

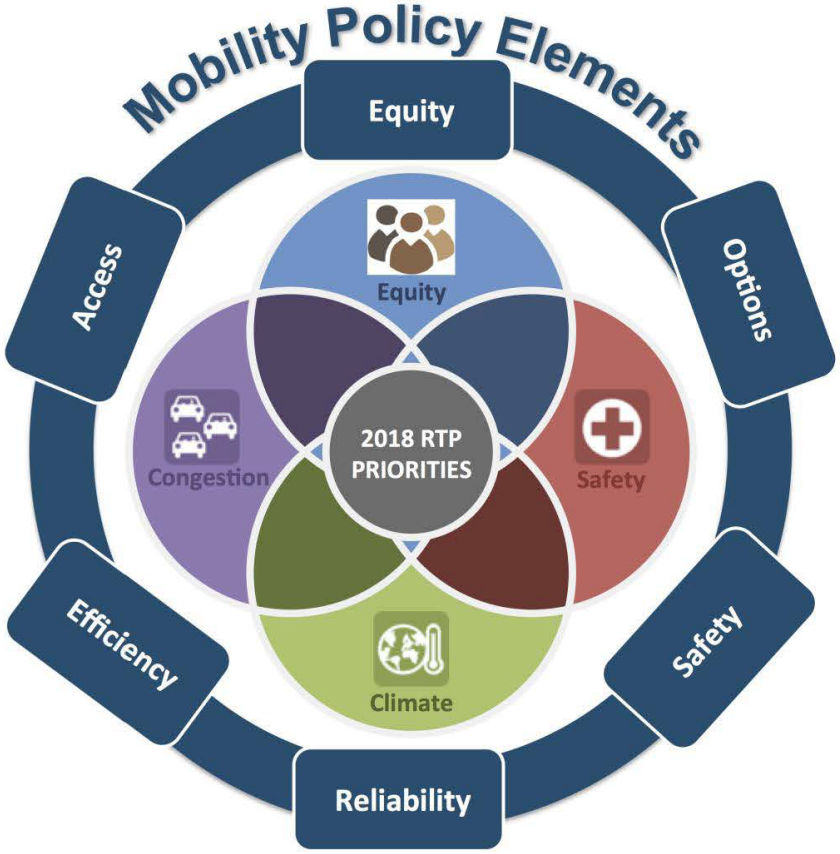
System Planning

- Apply as target in planning
- Define the planned complete transportation system
- Set standards based on what the plan is able to achieve

Plan Amendments

- Identify if there is a measurable change in performance
- Compare to standard
- If significant impact, identify mitigations

DRAFT Vision for urban mobility for the Portland area: *People and businesses can safely, affordably, and efficiently reach the goods, services, places and opportunities they need to thrive by a variety of seamless and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable.*



Mobility **elements**

Equity
Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other historically marginalized and underserved communities experience equitable mobility.

Access
People and businesses can conveniently and affordably reach the goods, services, places and opportunities they need to thrive.

Efficiency
People and businesses efficiently use the public's investment in our transportation system to travel where they need to go.

Reliability
People and businesses can count on the transportation system to travel where they need to go reliably and in a reasonable amount of time.

Safety
People are able to travel safely and comfortably and feel welcome.

Options
People and businesses can choose from a variety of seamless and well-connected travel modes and services that easily get them where they need to go.

Draft mobility policies for the Portland region

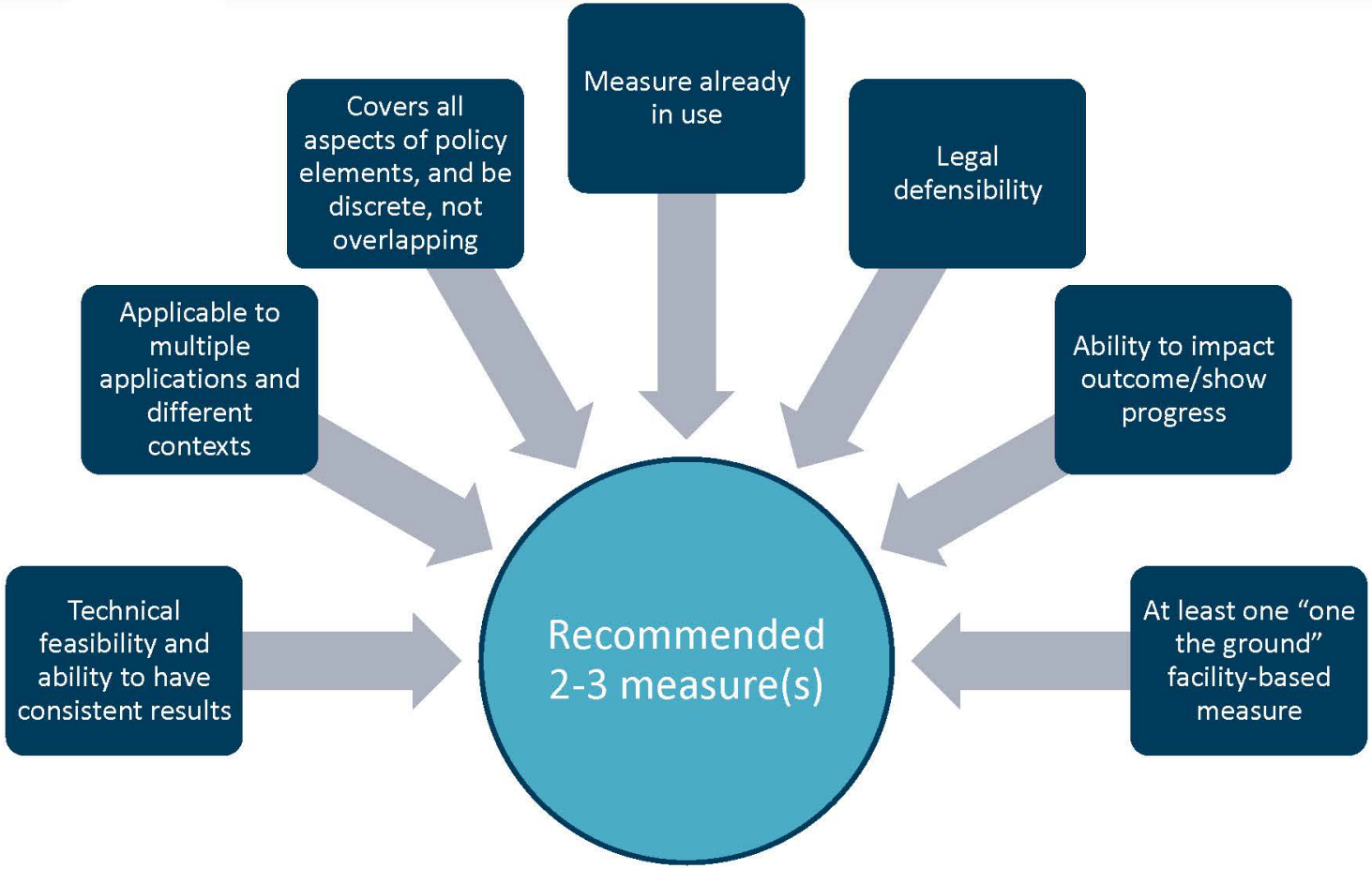
1. Ensure that the **public's investment in the transportation system enhances efficiency in how people and goods travel** to where they need to go.
2. **Provide people and businesses a variety of seamless and well-connected travel modes and services** that increase connectivity, increase choices and access to low carbon transportation options so that people and businesses can conveniently and affordably reach the goods, services, places and opportunities they need to thrive.
3. **Create a reliable transportation system**, one that people and businesses can count on to reach destinations in a predictable and reasonable amount of time.
4. **Prioritize the safety and comfort of travelers in all modes** when planning and implementing mobility solutions.
5. **Prioritize investments that ensure that Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other historically marginalized and underserved communities experience equitable mobility.**

What we heard – Draft Mobility Policies

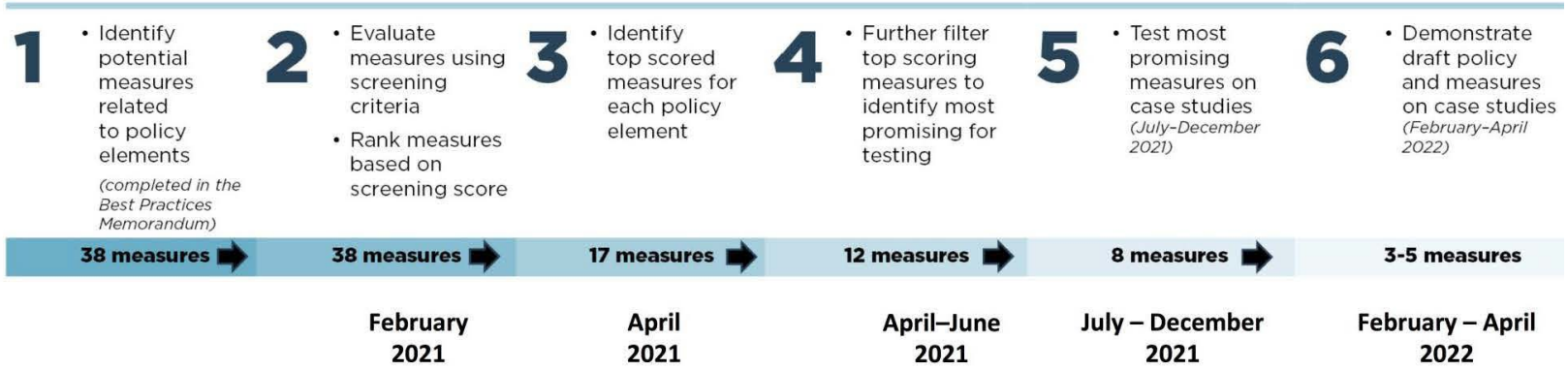
March 2022 TPAC Survey

- Broad support for each of the draft policies
  - 78% - 93% support for each policy
- Concerns Raised:
  - Potential for increased density resulting in congestion
  - Need to consider climate, sustainability, and resiliency
  - Overemphasis on active transportation not realistic in all areas
  - Need to also prioritize electric vehicle infrastructure to lower carbon-based fuel usage
  - Vehicles should be prioritized on arterials
  - Displacement resulting from investment

Criteria for evaluating measures



Draft recommended measures for the updated mobility policy



Draft Recommended Measures:

- **Multi-modal Measure – System completeness** (all modes)
  - Supports equity, safety, expanded travel options
- **Congestion Measure – Travel speed** (with queuing and hours of congestion)
  - Supports reliability, access by vehicle and for longer distance trips
- **Efficiency Measure – VMT per capita** (home-based trips)
  - Supports climate goals, efficient land use patterns, reduced vehicle travel, expanded travel options

What we heard – System Completeness Measure

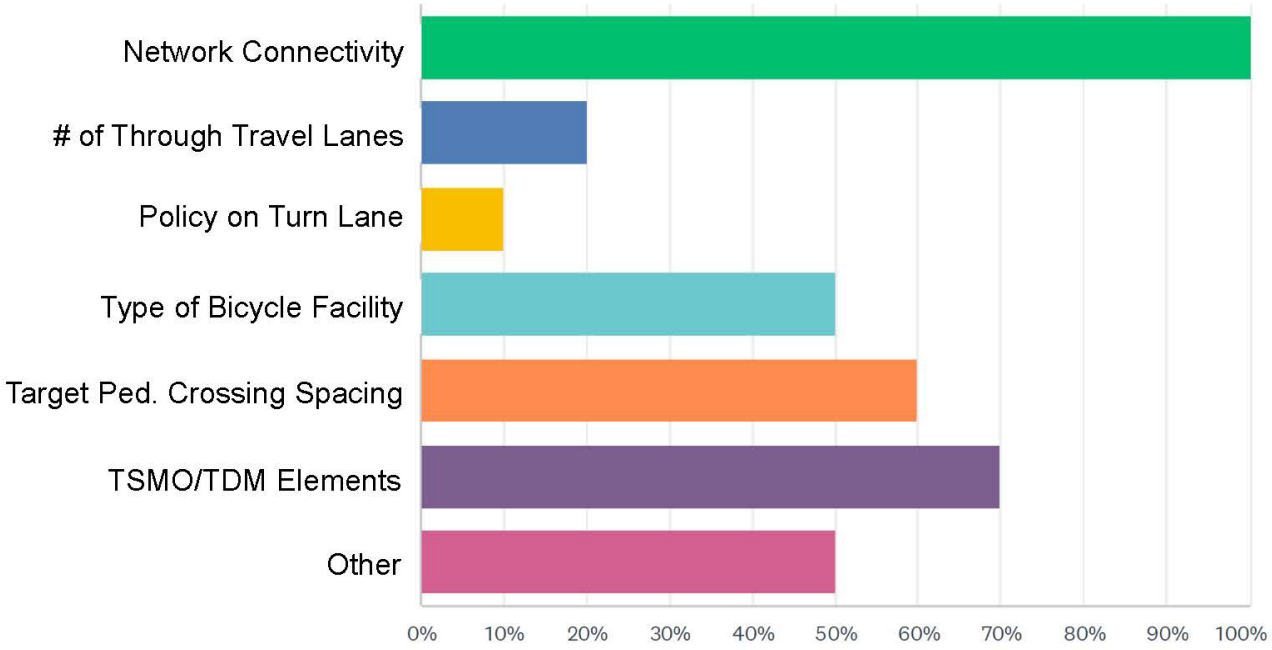
March 2022 TPAC Survey

- Majority support system completeness as a mobility measure
  - Concerns Raised – Need to know more about how completeness of the roadway is measured, can it be quantified vs qualitative, not easy for development review.
- Would like to see system completeness used:
  - In system planning
  - To help prioritize completeness at the local level
  - To prioritize equity
  - To reduce reliance on SOV

What we heard – System Completeness Elements

March 2022 TPAC Survey

What elements should be included in System Completeness?



What we heard – Travel Speed Measure

March 2022 TPAC Survey

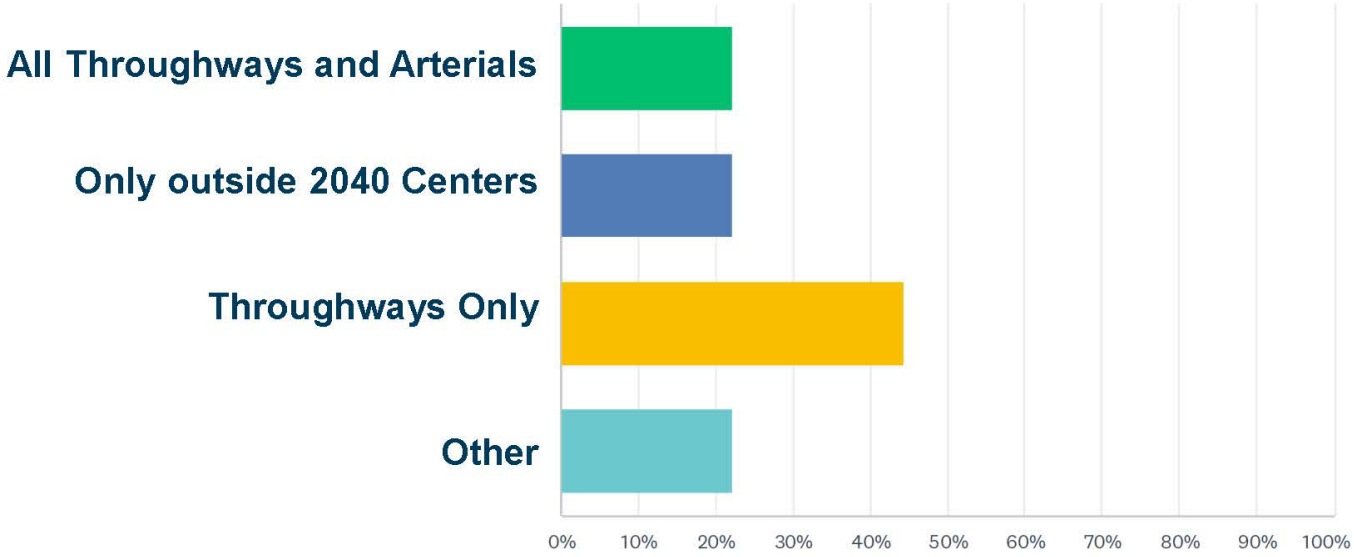
General support but uncertainty about travel speed as a mobility measure

- 50% yes, 10% no, 30% unsure
  - Concerns – Would prioritize freeways and expressways over other facilities, need to know how local agencies could apply it, should focus on moving people and goods not vehicles.
- Would like to see it used:
  - To inform alternatives, not expansion of roadways
  - As an important consideration. Until we balance housing affordability low-income people bear the brunt of congestion
  - To identify where congestion will occur
  - To prioritize improvements to reduce congestion

What we heard – Travel Speed Applications on Facilities

March 2022 TPAC Survey

What facilities should a congestion measure such as travel speed be applied to?



What we heard – VMT/Capita Measure

March 2022 TPAC Survey

Some support but many unsure about how VMT/Capita can be used to assess the land use efficiency of a plan amendment

- 44% yes, 11% no, 44% unsure
  - Concerns – How it would be applied, should total VMT be used
- 83% said the policy should include both home-based trips and work-based trips
- Would like to see it used:
  - To support land use decisions
  - In planning
  - To achieve climate objectives

Draft recommended measures for the updated mobility policy

Measure	What does it tell us?
System Completeness	• Are there travel options and connectivity allowing people to safely walk, bike, drive and take transit to get where they need to go?
Travel Speed (including duration of congestion and queuing)	• Does the facility function reliably and safely for people, goods and services?
VMT/Capita	• Are we moving towards a land use pattern that is more efficient to serve and supportive of travel options?

Potential applications of measures in the updated mobility policy

Measure	Application	System Planning
System Completeness	• Throughways (connectivity and travel lanes only) • Arterials	• Identify needs • Define the "complete system" for: -network connectivity -number of through travel lanes -policy on turn lanes -type of bicycle facility -target pedestrian crossing spacing -TSMO/TDM elements -transit streets and type • **Target – 100% of planned system**
Travel Speed (including duration of congestion and queuing)	• Throughways only? • Exclude Arterials? • Consider outside 2040 Centers?	• Identify needs • Determine facility sizing consistent with planned system, region's congestion management process and OHP Policy 1G • **Target - % of posted speed such as 50% not exceed more than X hours per day**
VMT/Capita and VMT/Employee	• Plan area	• Establish baseline for region and/or subareas as part of the RTP • Use to assess if a plan amendment will reduce region or area's VMT/capita or VMT/employee compared to growth in other area • **Target - Not applied as a standard/target for local TSPs**

Role of v/c ratio

- Inform needs but not applied as target
- Identify operational improvements at intersections to benefit corridor safety and reduce vehicle congestion (but not at expense of system completion of other modes)

Plan Amendment – Current Approach Determining Significant Impact

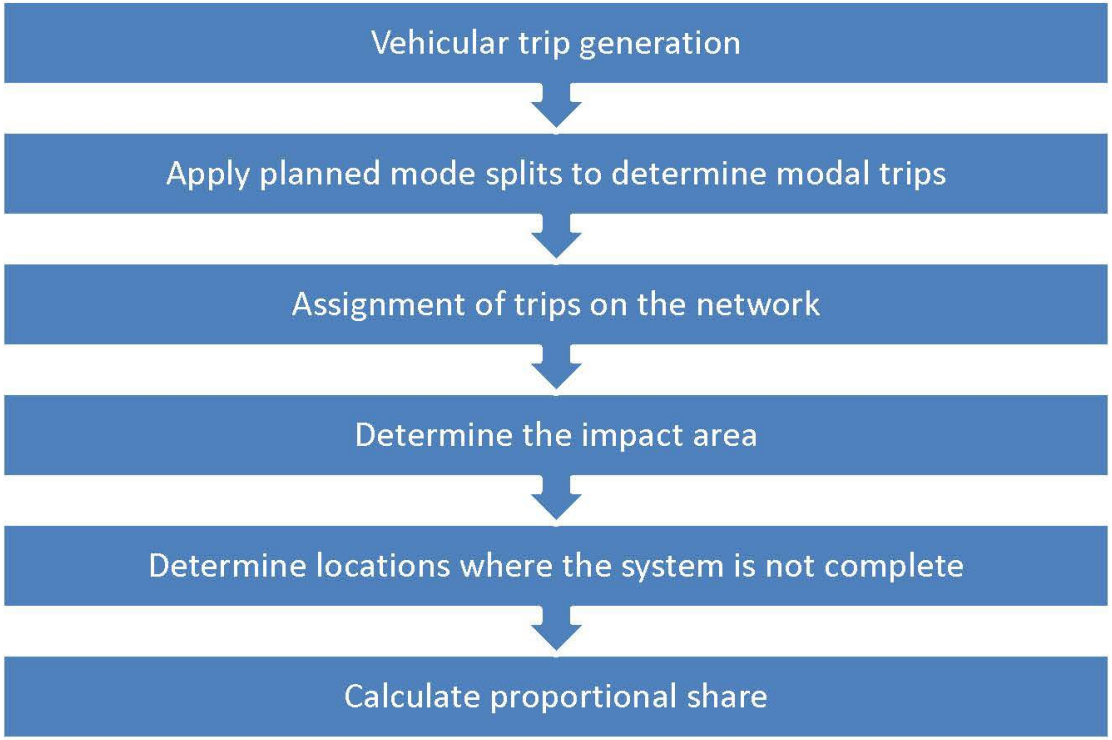
- The TPR requires local governments to ensure comprehensive plan amendments, zone changes and amendments to land use regulations that significantly affect a transportation facility are consistent with the identified function, capacity and performance of the affected state facility.
- The Highway Mobility Policy establishes ODOT's mobility targets for state highways as the standards for system performance in compliance with the TPR.
- An amendment has a significant impact if it is 1) above a certain trip generation and 2) degrades a facility below its target at the planning horizon or worsens a facility already projected to be below its target.
- Significant impacts must be mitigated to within 0.03 of the target or to eliminate the increased degradation.

Plan Amendment – Potential Approach Determining Significant Impact

- If below a trip threshold – no significant impact (consistent with current approach)
- If reduces VMT/Capita or VMT/Employee – no significant impact (address increased local travel at development review)?
- If it increases walking/biking trips in incomplete network
  - is this further degradation that should be mitigated at plan amendment stage?
  - or if it doesn't change the walking/biking network needs, no significant impact?
- If increases vehicle trips on throughways – when is it significant? When impacts travel speed or queuing?

System Completeness – Potential Approach

- Potential process for plan amendments:



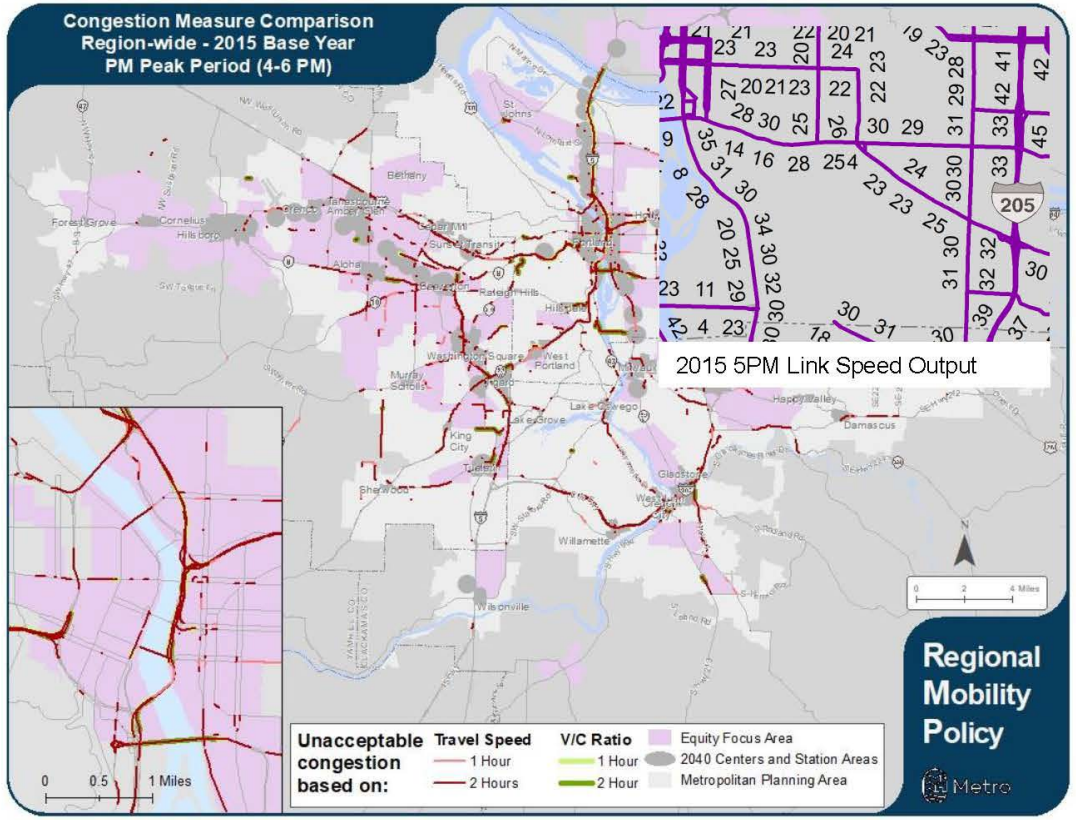
System Completeness – Potential Approach

- How do you define the impact/study area?
  - Path along the network to "essential destinations," including transit stops.
  - A set radius from the plan amendment
  - Walking/biking trip threshold

System Completeness – Potential Approach

- How do you determine required mitigation (proportionate share or amount of degradation)?
  - Estimate increase in trips associated with plan amendment, attribute percent increase to percent responsibility of incomplete networks
  - Look at warrants triggered for specific improvements such as protected crossings, or crossing type upgrades, transit stop amenities, etc.

Travel Demand Model – v/c and travel speed



Metro's model includes volume, capacity (input), and speed outputs.

Compared v/c congestion based on current policy to travel speed.

Similar areas of maximum congestion.

Throughways could be defined as congested when below 75% of posted speed. Arterials when below 50% of posted speed due to traffic signals (or lower with high signal density).

29

Synchro Travel Speed Outputs

- Example output from an Arterial Level of Service report. The report provides entering arterial speeds for signalized intersections along the selected corridor.

Arterial Level of Service: EB OR 214

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-5 Northbound Ramp	III	35	18.4	15.0	33.4	0.14	15.5	D
Evergreen Rd	III	35	21.7	43.1	64.8	0.17	9.4	F
Oregon Way	III	35	15.5	6.9	22.4	0.12	18.5	C
Settlemier Ave	III	35	71.5	92.3	163.8	0.70	15.3	D
5th St	III	35	32.4	12.4	44.8	0.27	21.7	C
OR 99E	III	35	119.4	91.7	211.1	1.16	19.8	C
Total	III		278.9	261.4	540.3	2.55	17.0	D

30

VMT/Capita and VMT/Employee

- **System planning:**
  - Establish baseline for region, cities/counties, and/or subareas as part of the RTP
  - Not applied as a standard/target for local TSPs
    - However ,RTP and TSPs will need to demonstrate a VMT/capita reduction per Transportation Planning Rule (TPR) amendments and could set a target through the TSP.

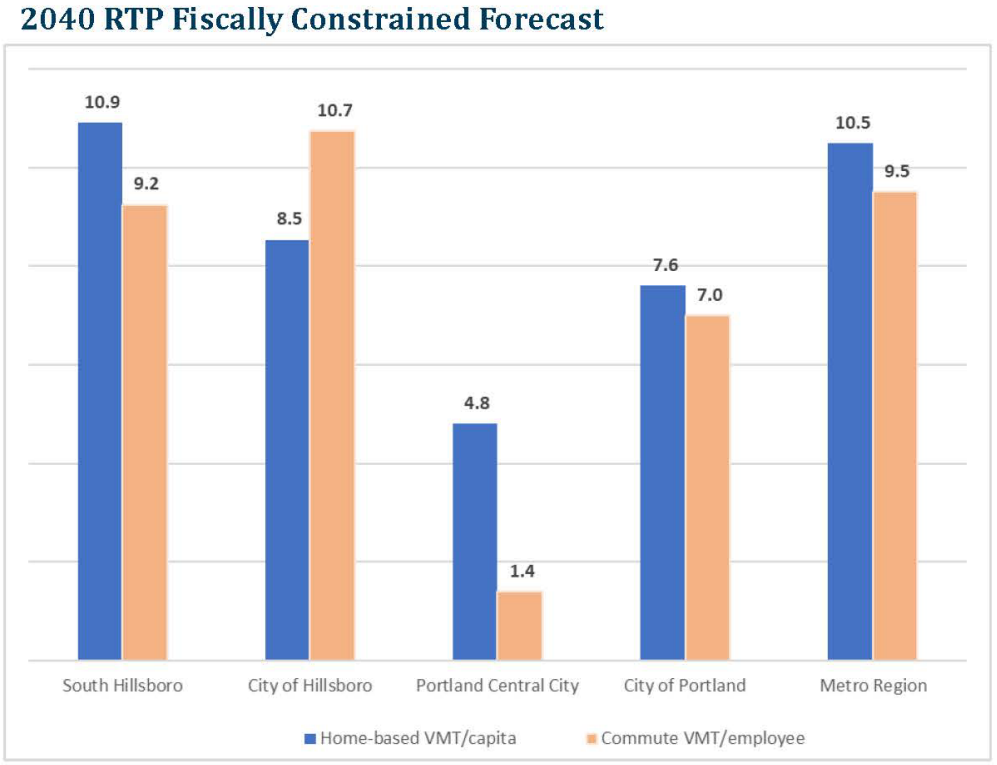
- **Plan amendment:**
  - Minor amendment
    - Assess if plan amendment will reduce area's VMT/capita or VMT/employee compared to no change
  - Urban Growth Area or Large Redevelopment Area Plan
    - Assess if plan amendment will reduce area's VMT/capita or VMT/employee compared to growth in other area or identify ways to reduce increases through mixed uses

VMT/Capita and VMT/Employee

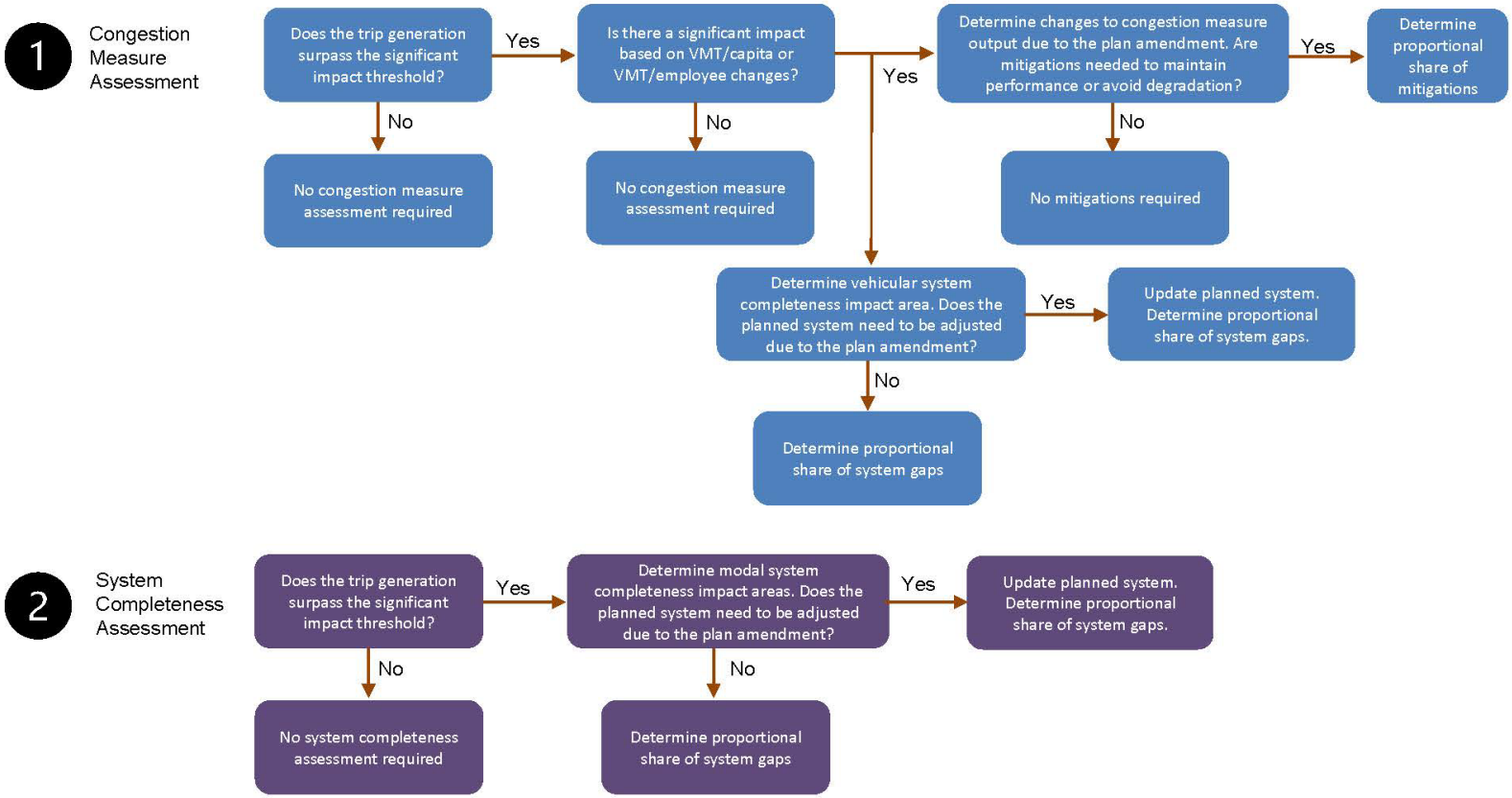
- Potential options for determining "significant impact":
  - Within infill/redevelopment areas: if greater than the local region or subarea VMT/capita or VMT/employee
  - Within urban growth areas: if X% increase above the local region or subarea VMT/capita or VMT/employee

VMT/Capita – plan amendment "significant impact"

Significant impact" will not be based off the existing land use but in comparison to the local jurisdiction or subarea



Potential Plan Amendment Assessment Process



SMALL GROUP BREAKOUTS

System Completeness

- For plan amendments, how could amendments that increase walking and biking on an incomplete but adequately planned network be considered to have a significant impact and how could you require mitigation at the plan amendment stage?

- In system planning, what else would you include or exclude in defining a complete system?

Travel Speed

- How could Travel Speed be best used on arterials? On thruways?

VMT/Capita

How could VMT/Capita and VMT/Employee be used to determine how a plan amendment gets evaluated for significant impact?

- How could VMT/Capita and VMT/Employee best be used to inform system planning?

What suggestions do you have and what needs additional clarification?

35

RE-CAP AND OVERALL REFLECTIONS

36

Looking ahead: next 3 months

April 20	TPAC/MTAC workshop
May 6	TPAC
May 17	Metro Council
May 18	MTAC
May 19	JPACT
May 25	MPAC
June 6	Region 1 ACT
June/July	Expert panel with policymakers, on-line survey and target setting discussions with regional advisory committees
Summer	Develop recommended policy and action plan for public review and consideration by regional policymakers and OTC to apply in 2023 RTP update

Learn more at:

oregonmetro.gov/mobility

Metro

Oregon Department of Transportation

37

Thank you!

Kim Ellis, Metro

kim.ellis@oregonmetro.gov

Glen Bolen, ODOT

Glen.A.BOLEN@odot.oregon.gov

Metro

Oregon Department of Transportation






Appendix E – Materials Provided to Participants in Advance of the Forum

Memo

Oregon Department of Transportation

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

Date:	January 20, 2022
To:	Kim Ellis, Metro, and Lidwien Rahman, ODOT
From:	Susan Wright, PE, Kittelson & Associates, Inc. Darci Rudzinski, Angelo Planning Group
Project:	Regional Mobility Policy Update
Subject:	Task 8.1: "Discussion Draft" Mobility Policy Report

Introduction

Metro and the Oregon Department of Transportation (ODOT) are working together to update the regional mobility policy and related mobility measures for the Portland metropolitan area. The mobility policy guides the development of regional and local transportation plans and studies, and the evaluation of potential impacts of plan amendments and zoning changes on the transportation system. The goal of this update is to better align the policy and measures with shared regional values, goals, and desired outcomes identified in Metro's Regional Transportation Plan (RTP) and 2040 Growth Concept as well as with local and state goals, and define expectations about mobility by travel mode, land use context, and roadway functional classification. The updated policy will describe the region's desired mobility outcomes and more robustly and explicitly define mobility for transportation system users in the Portland area.

This document builds upon the draft mobility definition and foundational elements integral to achieving the region's desired mobility outcomes, and presents a "Discussion Draft" mobility policy with options and recommendations for policymakers and stakeholders related to how the performance measure case study findings should influence the policy. The performance measure case studies are documented in Case Study Analysis Memorandum and summarized in the attached document which should be referenced when considering the policy options.

Goal

The following draft policies are intended to help achieve a vision of mobility where *people and businesses can safely, affordably, and efficiently reach the goods, services, places, and opportunities they need to thrive by a variety of seamless and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable.*

Desired Outcomes

The following mobility outcomes were identified by stakeholders as critical to how we plan for, manage, and operate our transportation system. They were crafted to achieve the above mobility goal in alignment with ODOT and Metro strategic goals and priorities.

- **Equity** – Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other historically marginalized and underserved communities experience equitable mobility.
- **Access** – People and businesses can conveniently and affordably reach the goods, services, places, and opportunities they need to thrive.

KITTELSON & ASSOCIATES APG

- **Efficiency** – Land use and transportation decisions and investments contribute to more efficient use of the transportation system meaning that trips are shorter and can be completed by more travel modes, reducing space and resources dedicated to transportation.
- **Reliability** – People and businesses can count on the transportation system to travel where they need to go reliably and in a reasonable amount of time.
- **Safety** – People are able to travel safely and comfortably, and feel welcome.
- **Options** – People and businesses can choose from a variety of seamless and well-connected travel modes and services that easily get them where they need to go.

Discussion Draft Regional Mobility Policy

The following includes the proposed policies along with options and recommendations for how they could be implemented. The basis for these recommendations is included in the Case Study Analysis Memorandum.

Policy 1 Ensure that the public's investment in the transportation system enhances efficiency in how people and goods travel to where they need to go.

Recommended Measure:

-VMT/Capita

Efficiency in this context means that transportation requires less space and resources. Efficiency can be improved by shortening travel distances between destinations. Shorter travel distances to destinations enhances the viability of using other and more efficient modes of transportation than the automobile and preserves roadway capacity for transit, freight and goods movement by truck and longer trips. Efficiently using land, and planning for key destinations in proximity to the end users, contributes to shorter trip lengths.

As demonstrated in the case studies, the transportation efficiency of existing and proposed land use patterns and transportation systems can be measured by looking at "vehicle miles traveled (VMT) per capita" of an area.

The following describes how these could be implemented in the policy. The options could be considered individually or in combination.

Measurement Options

- **Option A1**: Incorporate vmt/capita reduction targets into the policy to ensure that land use decisions and transportation system plans[1] support efficient transportation systems and reduced travel demand.
    - A1.1: Apply to comprehensive plans and TSPs at the regional and local jurisdiction level. (Feasible per case studies)
    - A1.2: Apply to sub-area plans (larger-scale comprehensive plan amendments). (Feasible per case studies)

[1] TSPs and comprehensive plans collectively can achieve reduced vmt/capita; however, the contributions of individual projects are challenging to measure and when considered individually or in a localized area may increase vmt/capita.

- A1.3: Apply to all plan amendments (including smaller-scale or individual property amendments) (Case studies indicate the need to use this measure with caution at smaller scales as the proposed land use change could result in higher vmt/capita for the parcel while still contributing lower vmt/capita for the jurisdiction if it's below the jurisdiction's average indicating it would provide for increased development in an area that is more efficient than other areas. In addition, the measure is not sensitive to small transportation changes and will show increased vmt/capita if trying to isolate individual capacity increasing projects that may be needed to support efficient development.)

Policy 2 Provide people and businesses a variety of seamless and well-connected travel modes and services that increase connectivity, increase choices and access to low carbon transportation options so that people and businesses can conveniently and affordably reach the goods, services, places and opportunities they need to thrive.

Viability of trips made by modes other than automobile can be increased by investing in a connected, multimodal transportation system. Multimodal systems serve all people, not just those that have access to vehicles or the ability to drive them, and provide more route choices, increase safety and efficiency, and reduce congestion.

Potential Measures:

-Access to Destinations

-System Completeness *(recommended)*

Closing gaps in networks, particularly pedestrian and bicycle networks, can change land use and travel preferences, reducing vmt/capita. Progress towards well connected, multimodal networks can be measured by mode with the "system completeness" or "access to destinations" measures.

"Access to destinations" is useful for identifying areas where there are disparities in access to destinations between different modes due to gaps and deficiencies in the transportation network as well as where increases in different types of land uses would increase people's access to destinations. It can also be compared for Equity Focus Areas and non-Equity Focus Areas.

The following describes how these measures could be implemented in the policy. The options could be considered individually or in combination.

Measurement Options

- **Option 2A:** Incorporate "system completeness" targets into the policy to identify needs and ensure that the planned transportation system is increasing in connectivity and safety of the multimodal network. The definition of complete will vary based on the modal functional classification and design classification and can be refined by facility in system plans. (Case studies support system completeness for all levels of planning)

- **Option 2B**: Incorporate "access to destinations" metrics into the policy to identify disparities in access to destinations across modes and identify transportation and land use strategies to increase access to destinations. (Case studies indicate this is challenging other than at the system planning level)

    - 2B. 1: Apply at the regional level. (Feasible per case studies)

- 2B.2: Apply to local jurisdiction and sub-area plans (TSPs and larger-scale comprehensive plan amendments). (Challenging per case studies based on available tools and level of staff time required)
- 2B.3: Apply to small plan amendments (individual property amendments) (Challenging to apply to a small zone change as it's dependent upon the specific land use which can be uncertain during the zone change)

Policy 3 Create a reliable transportation system, one that people and businesses can count on to reach destinations in a predictable and reasonable amount of time.

In a reliable transportation system, all users, including people in automobiles and using transit, can reasonably predict travel time to their destinations. Reliability is impacted by travel conditions, safety, street connectivity, congestion and availability of travel options. Investments in safety, street connectivity, transit, operations management, and demand management could yield the greatest benefits reducing congestion and increasing reliability for vehicle modes.

Potential Measures:

-V/C Ratio

-Travel Speed *(recommended)*

-Off-Ramp Queues *(recommended)*

-Hours of Congestion *(potential component)*

For Throughways, the essential function is throughput and mobility for motor vehicle travel. Throughways serve interregional and interstate trips and travel times are an important factor in people and businesses being able to make long-distance trips to and through the region and access destinations of statewide significance in a reasonable and reliable amount of time.

For most Arterials, depending upon the design classification and freight network classification, the essential function is transit, bicycle and pedestrian travel and access or permeability while balancing motor-vehicle travel and the many other functions of intensely developed areas. On Arterials, reducing congestion through additional roadway capacity should not come at the expense of non-motorized modes and achieving system completeness consistent with modal or design classification or achieving the VMT/capita target for the jurisdiction.

Congestion can be measured in many ways. The measures evaluation process resulted in the case studies focusing on "v/c ratio" and "travel speed" to measure congestion and also looked at "hours of congestion" as a potential metric.

The following describes how these measures could be implemented in the policy. The options could be considered individually or in combination.

Measurement options

- **Option 3A:** Incorporate congestion targets into the mobility policy for throughways. Note all options for throughways would include a target for off-ramp queues to minimize queue spillback into through lanes.
  - 3A.1: Base the congestion targets on link v/c ratio (current metric)
  - 3A.2: Base the congestion targets on travel speed (supported by the case studies) (Shows very similar locations and levels of congestion depending on the threshold compared to v/c, but is more relatable to the public for policy discussions, is

consistent with how systems are managed, and switches to a target that cannot be inappropriately applied at the intersection level.)

  - 3A.3: Base the congestion targets on hours of congestion (needs to be based on either v/c ratio or travel speed) (case studies indicate HOC can be applied effectively with either v/c or travel speed and can be used to look at the severity of congested areas and help prioritize bottleneck improvements and could be part of the target but it would only be sensitive to change at the system planning level or major changes in roadway pricing or capacity)

- **Option 3B:** Include link level congestion targets in the mobility policy for all arterials to identify mobility needs and inform decisions on the number of lanes that will be considered complete for the vehicle mode. Targets would vary based on modal classifications and land use context.
  - 3B.1: Base the congestion targets on link v/c ratio (supported by the case studies)
  - 3B.2: Base the congestion targets on travel speed (supported by the case studies) (Note arterials need lower targets than throughways as a percentage of posted or free flow speed given the presence of traffic signals and signal delay even in uncongested time periods results in average speeds below posted or free flow speed))
  - 3B.3: Base the congestion targets on hours of congestion (needs to be based on either v/c ratio or travel speed) (See 3a.3 case study findings)
- **Option 3C:** Include link level congestion targets in the mobility policy for arterials outside of 2040 centers, station communities and main streets to identify mobility needs and inform decisions on the number of lanes that will be considered complete for the vehicle mode. Targets would vary based on modal classifications and land use context.
  - 3C.1: Base the congestion targets on link v/c ratio (supported by the case studies)
  - 3C.2: Base the congestion targets on travel speed (supported by the case studies)
  - 3C.3: Base the congestion targets on hours of congestion (needs to be based on either v/c ratio or travel speed) (See 3a.3 case study findings)
- **Option 3D:** Do not include congestion targets in the mobility policy for arterials (congestion metrics can be used as diagnostic tools to support system planning). Could make exceptions for enhanced transit or high-capacity transit corridors and regional freight network routes.

Policy 4 **Prioritize the safety and comfort of travelers in all modes when planning and implementing mobility solutions.**

Unsafe travel ways can result in injury and loss of life, and place a strain on emergency responders. Both unsafe conditions and perceived unsafe conditions can impact travel behavior, causing users to choose different routes or modes. Prioritizing investments that reduce the likelihood of future crashes and that improve safety and comfort for all users will increase mode choices and improve reliability. System completeness, queuing, pedestrian crossing index, and bicycle level of traffic stress measures are all metric that are useful in identifying needs and investments that could enhance safety and comfort.

The following describes how these measures could be implemented in the policy. The options could be considered individually or in combination.

Potential Measures:

-System Completeness *(recommended)*

-Queuing *(recommended)*

-Pedestrian Crossing Index

-Bicycle Level of Traffic Stress

Measurement options

- **Option 4A:** Incorporate "system completeness" target into the mobility policy to ensure safety and comfort for all modes. (Metric can be used to identify needs but the definition of "complete" would also be defined through system planning to define the future number of through lanes, policy on turn lanes, type of bicycle facility, target pedestrian crossing spacing, and TSMO/TDM plan elements)
- **Option 4B:** Incorporate "queuing" target into the mobility policy for Throughway ramp terminals to minimize queues spilling onto the Throughway creating safety issues.
- **Option 4C:** Incorporate "pedestrian crossing index" metric into the mobility policy to identify needs and inform facility level planning. (Setting target through the RMP not recommended but recommended that system and facility plans establish targets for each facility based on Livable Streets Guide and adjusting for local context.)
- **Option 4D:** Incorporate "bicycle level of traffic stress" metric into the mobility policy to identify needs and inform facility level planning. (Setting target not recommended but recommended that system plans identify the future low-stress bicycle networks and that be incorporated into the system completeness metric)

Policy 5 **Prioritize investments that ensure that Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other historically marginalized and underserved communities experience equitable mobility.**

BIPOC and other marginalized communities have often experienced disproportionately negative impacts from transportation infrastructure as well as disparities in access to safe multimodal travel options. Addressing these disparities is a priority.

The regional transportation system should support access to opportunities for everyone, not just people in motor vehicles. Equity can be enhanced through providing strong multimodal networks with priority provided to historically marginalized and underserved communities.

The following describes how this could be implemented in the policy.

Potential Measures:

Compare EFA vs. Non-EFA Areas

-Access to Destinations (*recommended if included in the policy)*

-System Completeness *(recommended if included in the policy)*

Measurement options

- **Option 5A**: Include targets for reducing disparities between "Equity Focus Areas" and "Non-Equity Focus Areas". This would result in identification of needed investments to address disparities and prioritization of these investments.

Measurement Options Summary

The measurement options included above identify where the performance measures tested through the case studies could be incorporated into the policy and identifies preliminary recommendations for further policymaker and stakeholder discussion. In summary, three measures are recommended to be incorporated into the policy to encompass overall system efficiency, equitable and complete multi-modal networks of safe and comfortable facilities, and reliability as summarized below in Table 1.

Table 1: Preliminary Mobility Policy Performance Measure Recommendations

Measure	Scale for Application	Purpose
VMT/Capita	Plan Area	Measured for the plan area to ensure that land use and transportation plan changes are working in tandem to achieve VMT/capita reduction targets and resulting in: • reduced need to drive • improved viability of using other and more efficient modes of transportation than the automobile and • preserving roadway capacity for transit, freight and goods movement.
System Completeness	Plan Area and Equity Focus Areas	Used to identify needs. Definition of "complete" would be defined through system planning to define network connectivity, the future number of through lanes, policy on turn lanes, type of bicycle facility, target pedestrian crossing spacing, and TSMO/TDM elements.
Travel Speed	Facility level for throughways and arterials (could exclude 2040 centers or all urban area)	To assess vehicle congestion as one of the major factors impacting travel reliability. On Arterials, reducing motor vehicle congestion through additional roadway capacity should follow the region's congestion management process and OHP Policy 1G on ODOT roadways but should not come at the expense of non-motorized modes and achieving system completeness consistent with regional modal or design classifications or achieving the VMT/capita target for the jurisdiction