



REGIONAL MOBILITY POLICY UPDATE

Stakeholder Engagement Report Appendices

A summary of engagement activities conducted in Spring 2021 by Metro and the Oregon Department of Transportation (ODOT) in support of updating the mobility policy for the Portland region

June 2021

REGIONAL MOBILITY POLICY

STAKEHOLDER ENGAGEMENT REPORT SPRING 2021

APPENDICES

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 - Agenda
 - Discussion group notes
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 - Agenda
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 - Agenda
 - Presentation
 - Discussion group notes

Appendix C: County Coordinating Committees and TransPort meeting notes

- TransPort Meeting: April 14, 2021
- Clackamas County Transportation Advisory Committee: April 27, 2021
- East Multnomah County Transportation Committee: May 5, 2021
- Washington County Coordinating Committee TAC Briefing: May 6, 2021
- East Multnomah County Transportation Committee (policy): May 17, 2021
- Clackamas County C-4 Metro Subcommittee (policy): May 19, 2021
- Washington County Coordinating Committee (policy): June 14, 2021

APPENDIX A

Regional mobility policy 2021 spring engagement schedule

REGIONAL MOBILITY POLICY UPDATE

2021 SPRING ENGAGEMENT SCHEDULE

Dates are subject to change pending availability of agenda time.



Metro Council and Regional Committees

Who	Date
Metro Council	April 13
TransPort Subcommittee to TPAC	April 14
Joint Policy Advisory Committee on Transportation (JPACT)	April 15
Metro Policy Advisory Committee (MPAC)	April 28
County Coordinating Committees	Various dates from April to June
Stakeholder Forums	
JPACT	June 17
TPAC/MTAC Workshop	June 23
TPAC (recommendation to JPACT)	July 9
JPACT (recommendation to Metro Council)	July 15
Metro Council	July 20

County Coordinating Committees

Who	Date
Clackamas County TAC	April 27
East Multnomah County Transportation Committee TAC	May 5
Washington County Coordinating Committee TAC	May 6
East Multnomah County Transportation Committee (policy)	May 17
Clackamas County C-4 subcommittee (policy)	May 19
Washington County Coordinating Committee (policy)	June 14

Stakeholder Forums

Who	Date
Practitioner Forum 1*	April 21, 10 a.m. - noon
Freight and Goods Forum	April 23, 9 - 11 a.m.
Practitioner Forum 2*	April 30, 9 - 11 a.m.
Community Leaders Forum	May 14, 9 - 11 a.m.

* The two practitioner forums will be the same format/content to provide an option for stakeholders to participate on the date that works best for their schedule.

APPENDIX B

Stakeholder Forums

- Stakeholder forums registration lists
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FORUM PARTICIPANT ORGANIZATIONS, COMPANIES, AND AGENCIES

Practitioner Forum 1

Angelo Planning
Cascade Policy Institute
City of Beaverton
City of Gresham
City of Lake Oswego
City of Portland
City of Tualatin
City of Vancouver
City of Wilsonville
Clackamas County
DEA Inc.
Fehr and Peers
Happy Valley
Kittelson and Associates, Inc.

Marion County
Metro
Multnomah County
Nelson Nygaard
ODOT
Oregon City
Port of Portland
Portland State University
Street Trust
SW Washington Regional Transportation
Council
Trimet
University of Oregon
Washington County
WSP

Freight and Business Forum

Central Eastside Industrial Council
City of Portland Bureau of Transportation
Columbia Distributing
Federal Highway Administration
Kittelson & Associates, Inc.
Legwork Local Delivery
Oregon Beer & Wine Distributors
Association

Oregon Trucking Association
Port of Portland
Portland Freight Committee
Sorin Garber & Associates
Urban Land Institute Northwest
FedEx
Oregon Department of Transportation

Practitioner Forum 2

Chris Smith, Citizen Activist
City of Beaverton
City of Hillsboro
City of Portland
City of Tigard
City of Tualatin
City of Vancouver
City of Wilsonville
City of Wood Village
Clackamas County
Clark County
DEA, Inc.
DKS and Associates, Inc.

Fehr and Peers
Homebuilders Association of Metropolitan
Portland
Kearns and West
Kittelson and Associates, Inc.
Metro
ODOT
Oregon City
Oregon Department of Environmental Quality
Portland State University
TriMet
Washington County
WSP

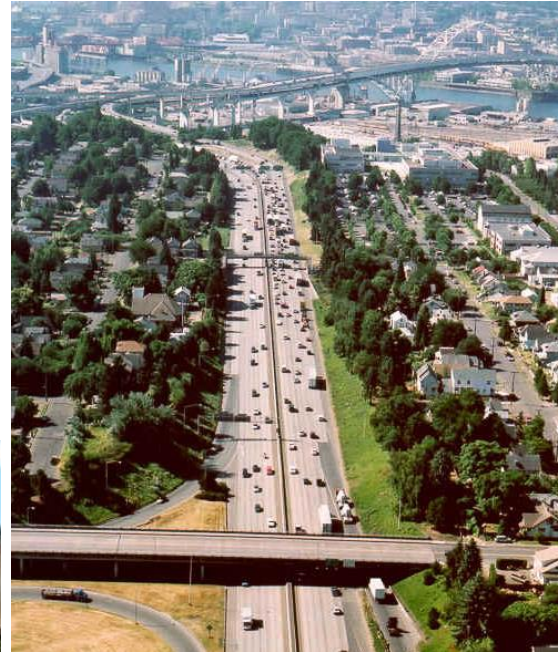
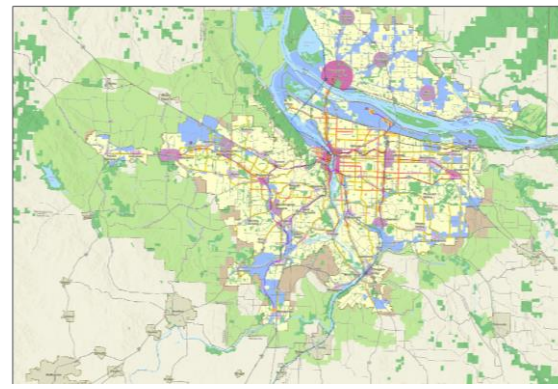
Community Leaders Forum

1,000 Friends of Oregon
Centro Cultural
Clackamas Community College
Clackamas County
Oregon Environmental Council
Oregon Walks
Safe Routes Partnership
The Street Trust
Urban Greenspaces Institute
Verde
Westside Transportation Alliance

Verde
Westside Transportation Alliance

Regional mobility policy update

Practitioner forum
April 21, 2021



Agenda

1. Welcome/workshop purpose
2. Project overview & policy elements
3. Breakouts: draft policy elements
4. Mobility measures overview
5. Breakouts: draft mobility measures to test
6. Recap and overall reflections
7. Next Steps

Workshop purpose

Hear your ideas and feedback about:

- Potential elements of updated mobility policy
- Approaches to measuring mobility

Project status & policy elements

Kim Ellis, Metro

Lidwien Rahman, ODOT

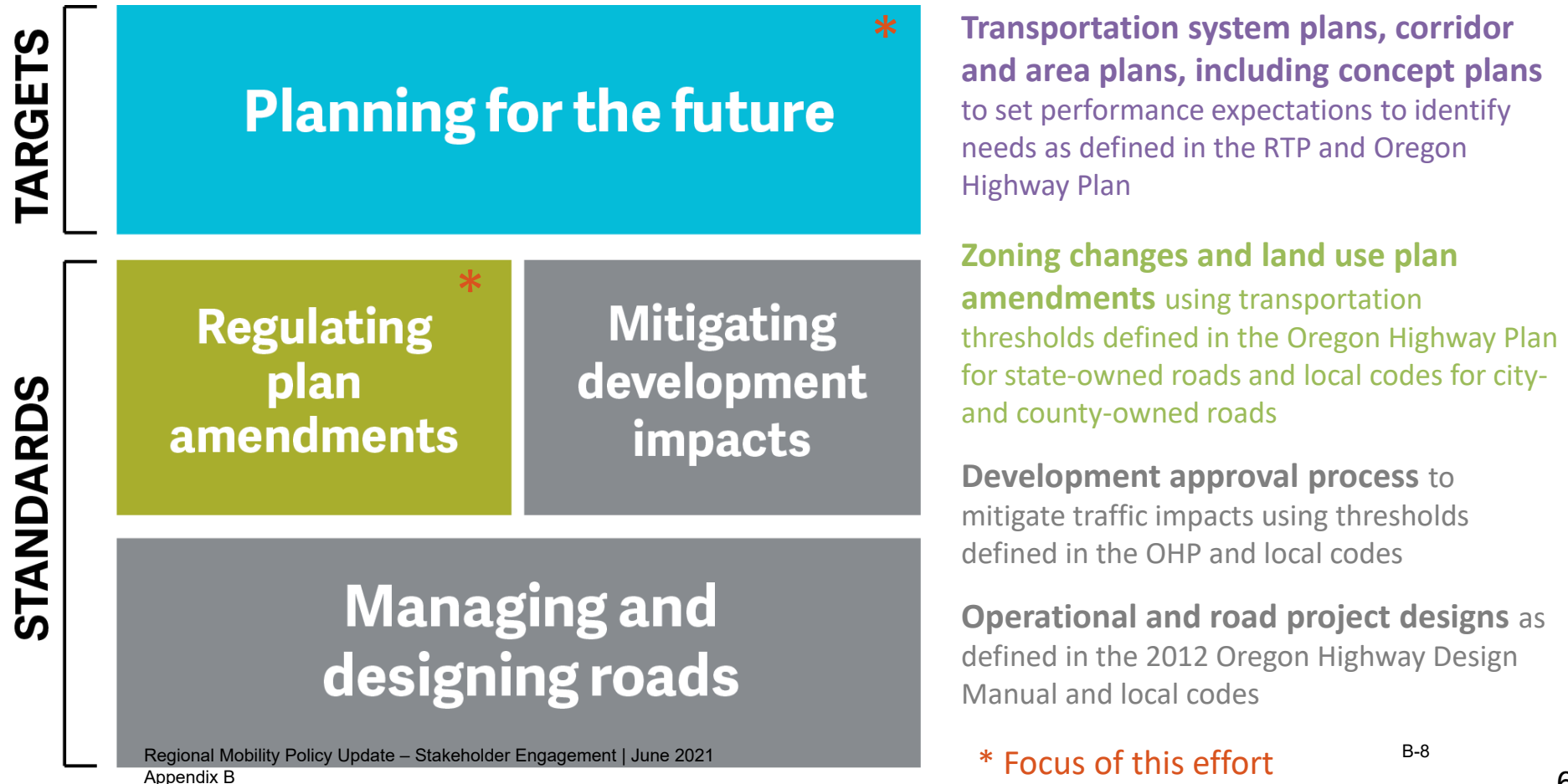
Project purpose

- Update the policy on 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

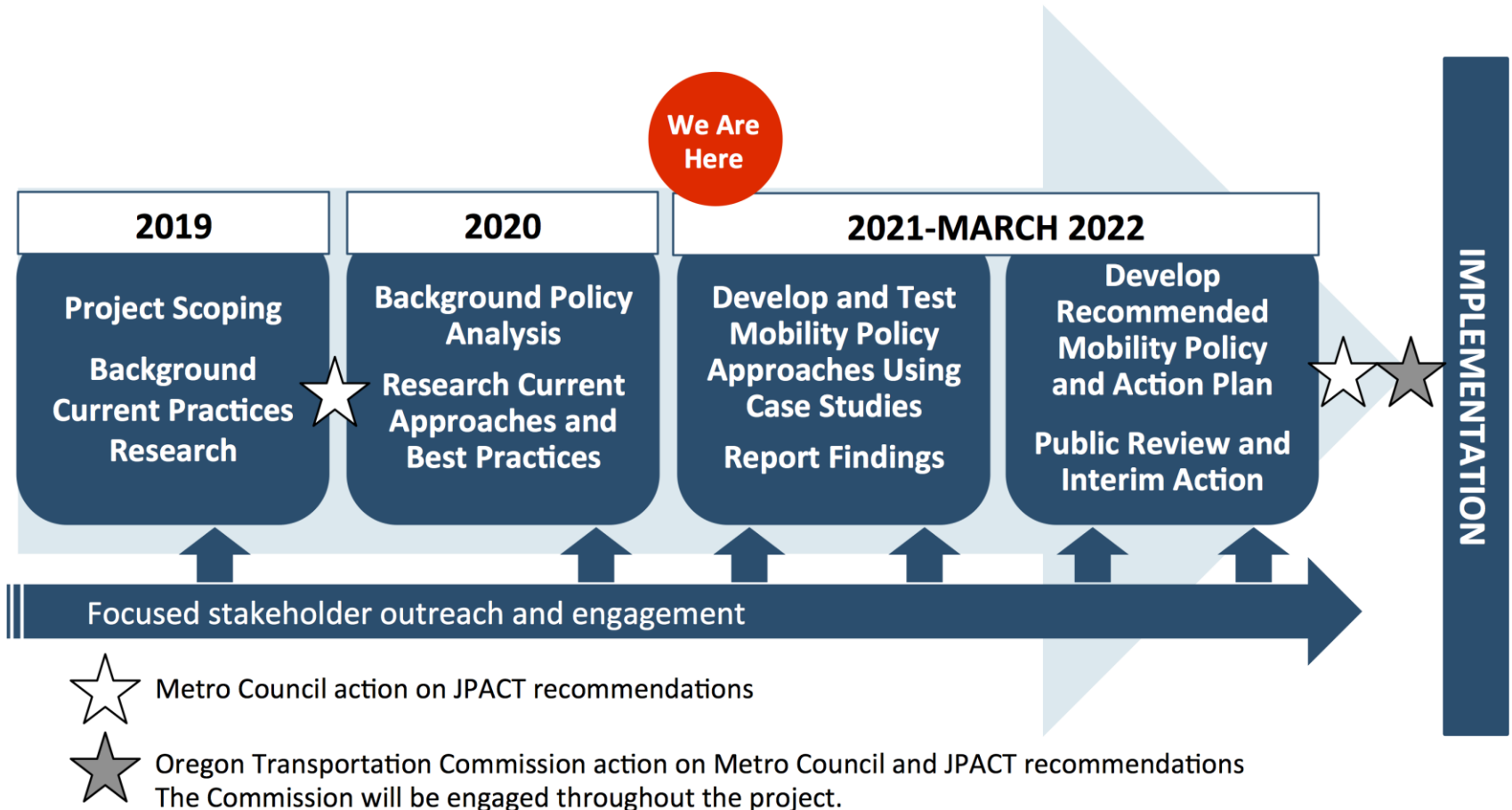


Visit oregonmetro.gov/mobility

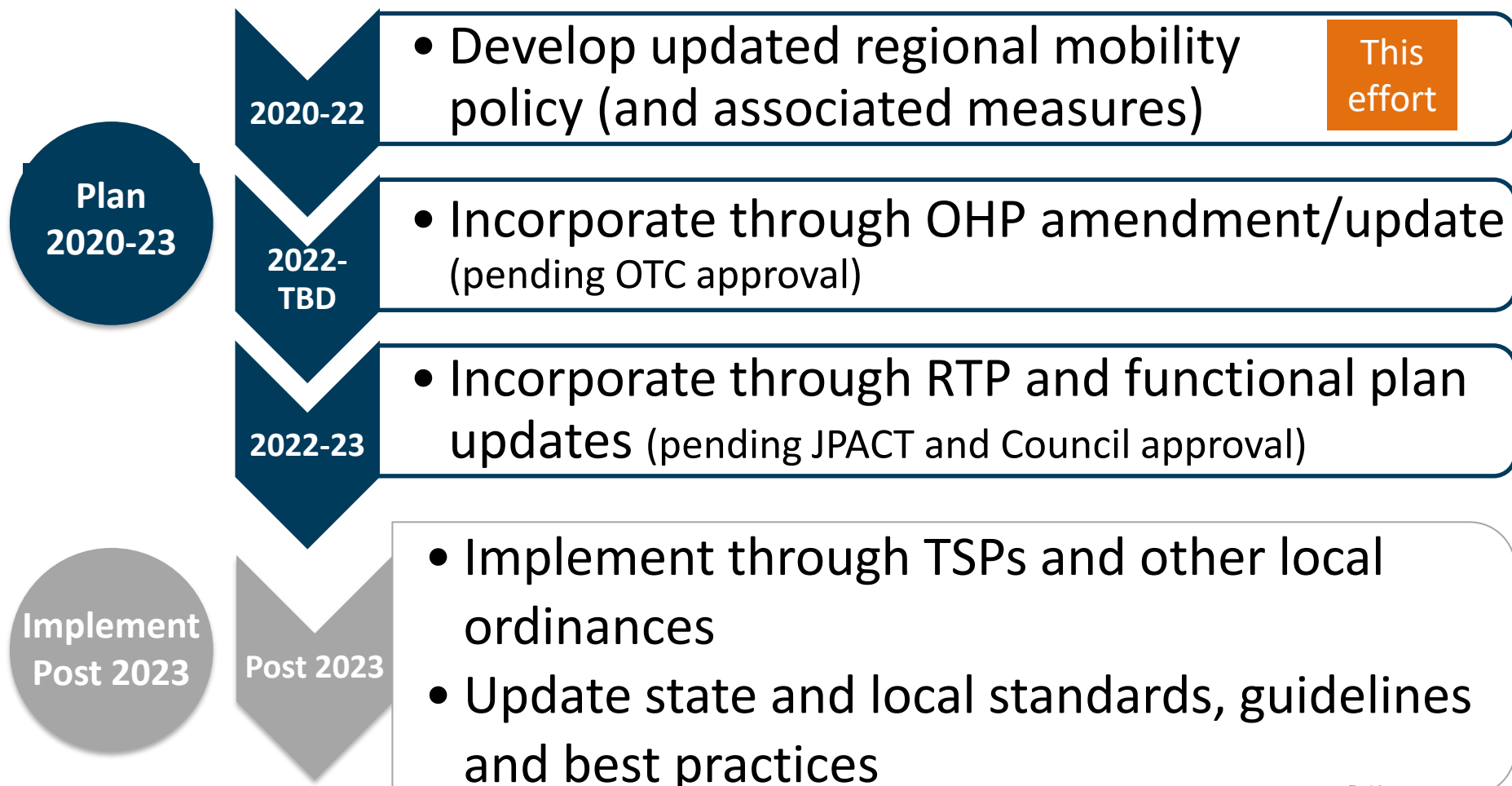
State, regional and local decisions



Project timeline



Where is this headed?

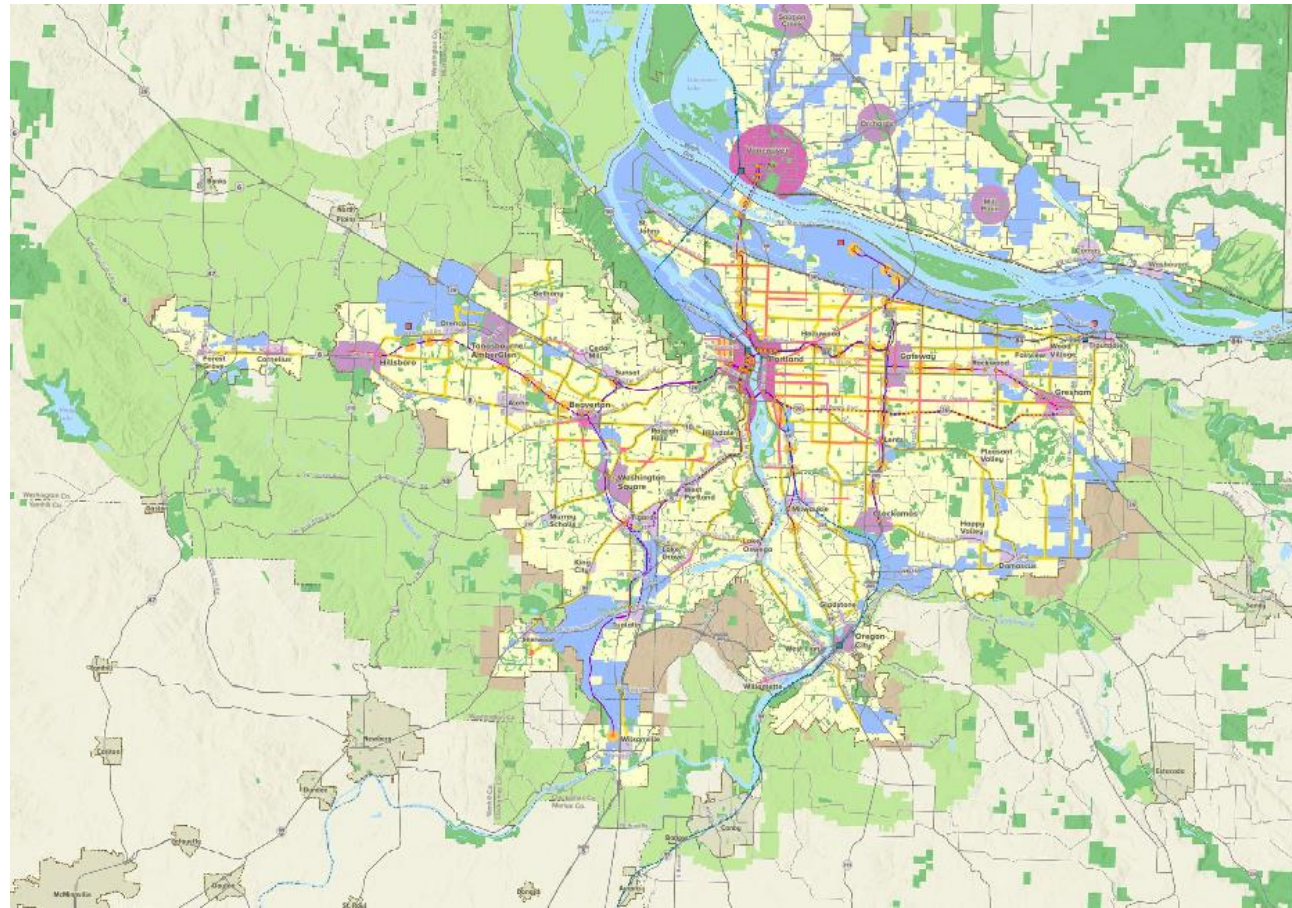


2040 Growth Concept is our foundation

Adopted as the land use plan for the region under state law (ORS 197)

Transportation plans must be adequate to serve planned land uses

Codified in regional plans governing cities and counties



Adopted in 1995 and acknowledged by the Land Conservation and Development Commission under the statewide planning program

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2018 Regional Transportation Plan priorities



Equity



Climate



Safety



Congestion

Oregon Transportation Commission Strategic Action Plan priorities



Equity

Prioritize diversity, equity, and inclusion by identifying and addressing systemic barriers to ensure all Oregonians benefit from transportation services and investments.



Modern Transportation System

Build, maintain, and operate a modern, multimodal transportation system to serve all Oregonians, address climate change, and help Oregon communities and economies thrive.



Sufficient and Reliable Funding

Seek sufficient and reliable funding to support a modern transportation system and a fiscally sound ODOT.

Oregon Transportation Commission Strategic Action Plan priorities

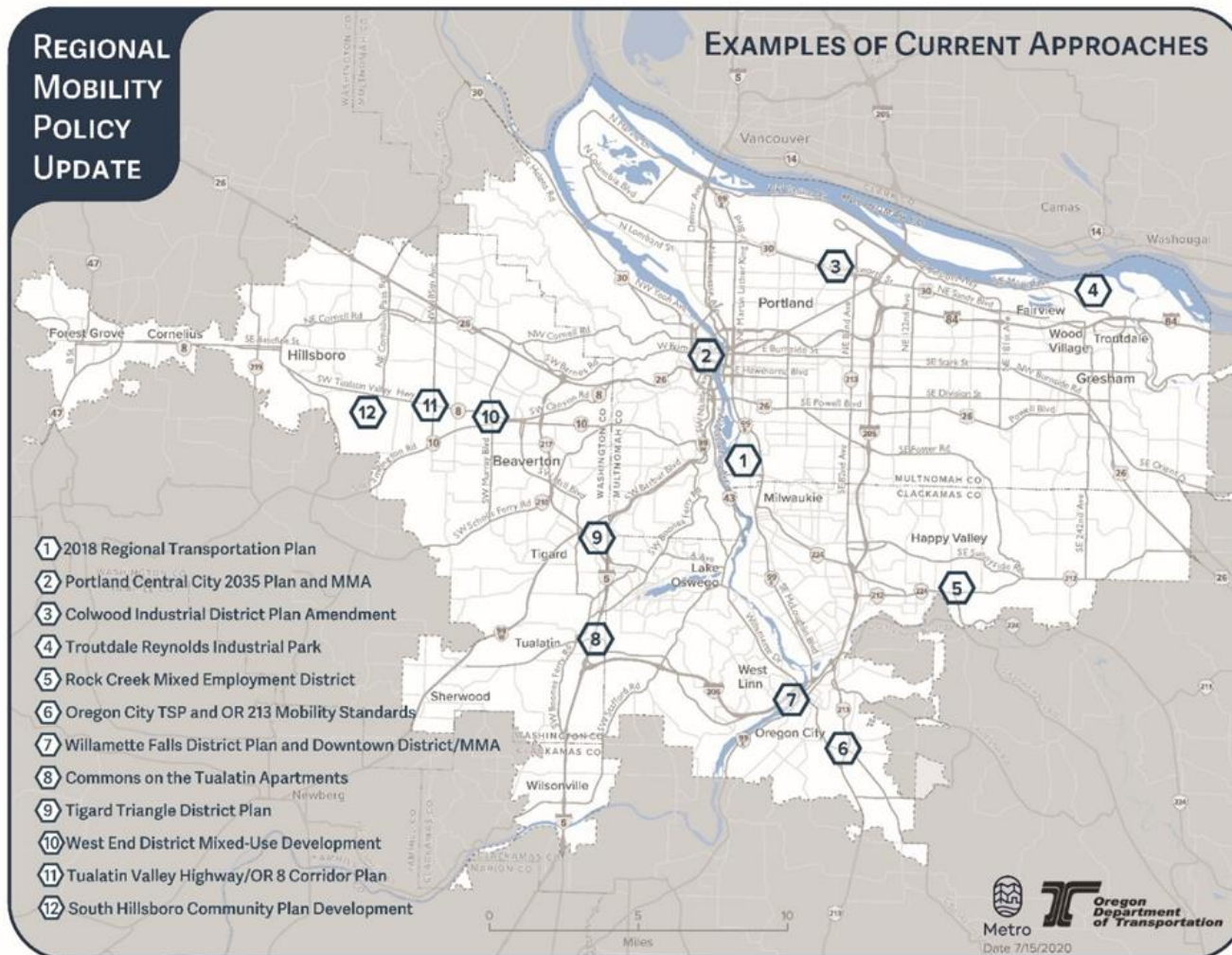


Modern Transportation System

Build, maintain, and operate a modern, multimodal transportation system to serve all Oregonians, address climate change, and help Oregon communities and economies thrive.

- **Preservation and Stewardship:** Preserve, maintain, and operate Oregon's multimodal transportation system and achieve a cleaner environment.
- **Safety:** Prevent traffic fatalities and serious injuries and ensure the safety of system users and transportation workers.
- **Accessibility, Mobility and Climate Change:** Provide greater transportation access and a broader range of mobility options for Oregonians and address climate change.
- **Congestion Relief:** Invest in a comprehensive congestion management strategy for the Portland metropolitan region to benefit all Oregonians. Implement system and operational innovations to reduce traffic congestion throughout Oregon.
- **Project Delivery:** Develop practical solutions to transportation problems in order to address community needs and ensure system reliability and resiliency.
- **Innovative Technologies:** Invest in and integrate technologies to improve transportation services and operations throughout Oregon.

Research on current approaches in the region



Information about all twelve available on the project website

oregonmetro.gov/mobility

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Key themes and observations

- V/C measure is a useful diagnostic tool
- V/C ratio is more strictly applied as we move from system planning to project design



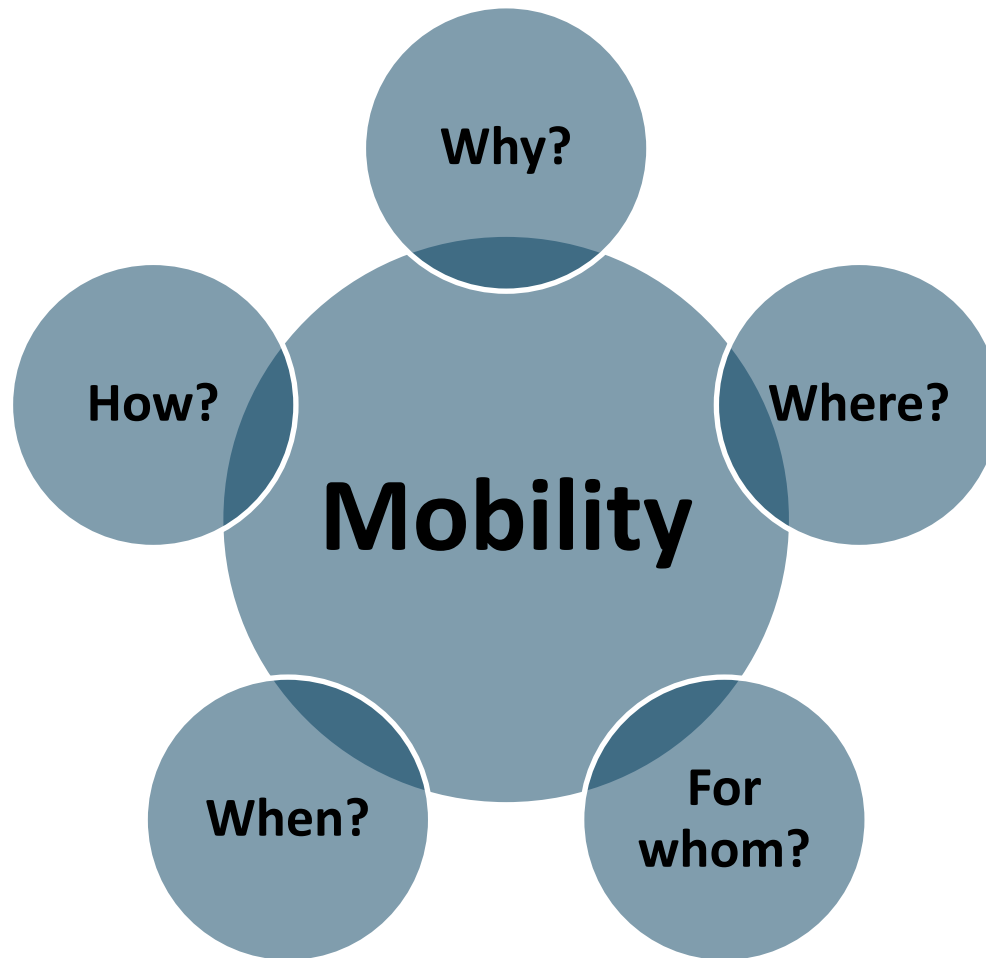
- Mobility is one of many policies and measures considered in system planning
- ODOT and local agencies would like more multi-modal measures that could be applied to plan amendments and development review
- Plan amendments should focus more on consistency with the local plans than the v/c measure

Stakeholder definitions of mobility

- “Getting to where you need to go safely, affordably and reliably no matter your [mode of travel], age, gender, race, income level, ZIP code...”
- "Mobility – focus on moving people and moving goods predictably and efficiently.”
- "Efficient freight movement and access to industry and ports...play a key role in the state’s economic development."



How do you *define* mobility?



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Draft Mobility Policy Elements

Access

- All people and goods can get where they need to go.

Time Efficiency

- People and goods can get where they need to go in a reasonable amount of time.

Reliability

- Travel time is reliable or predictable for all modes.

Safety

- Available travel options are safe for all users.

Travel Options

- People can get where they need to go by a variety of travel options or modes.

Small group breakouts: **draft mobility policy elements**

Discussion

1. Do you have questions about the mobility policy elements? Anything need clarification?
2. Are these mobility policy elements right? Are these the most important elements to include in the updated mobility policy?
3. Is anything missing?

Mobility measures overview

Susie Wright, Kittelson

Mobility policy considerations

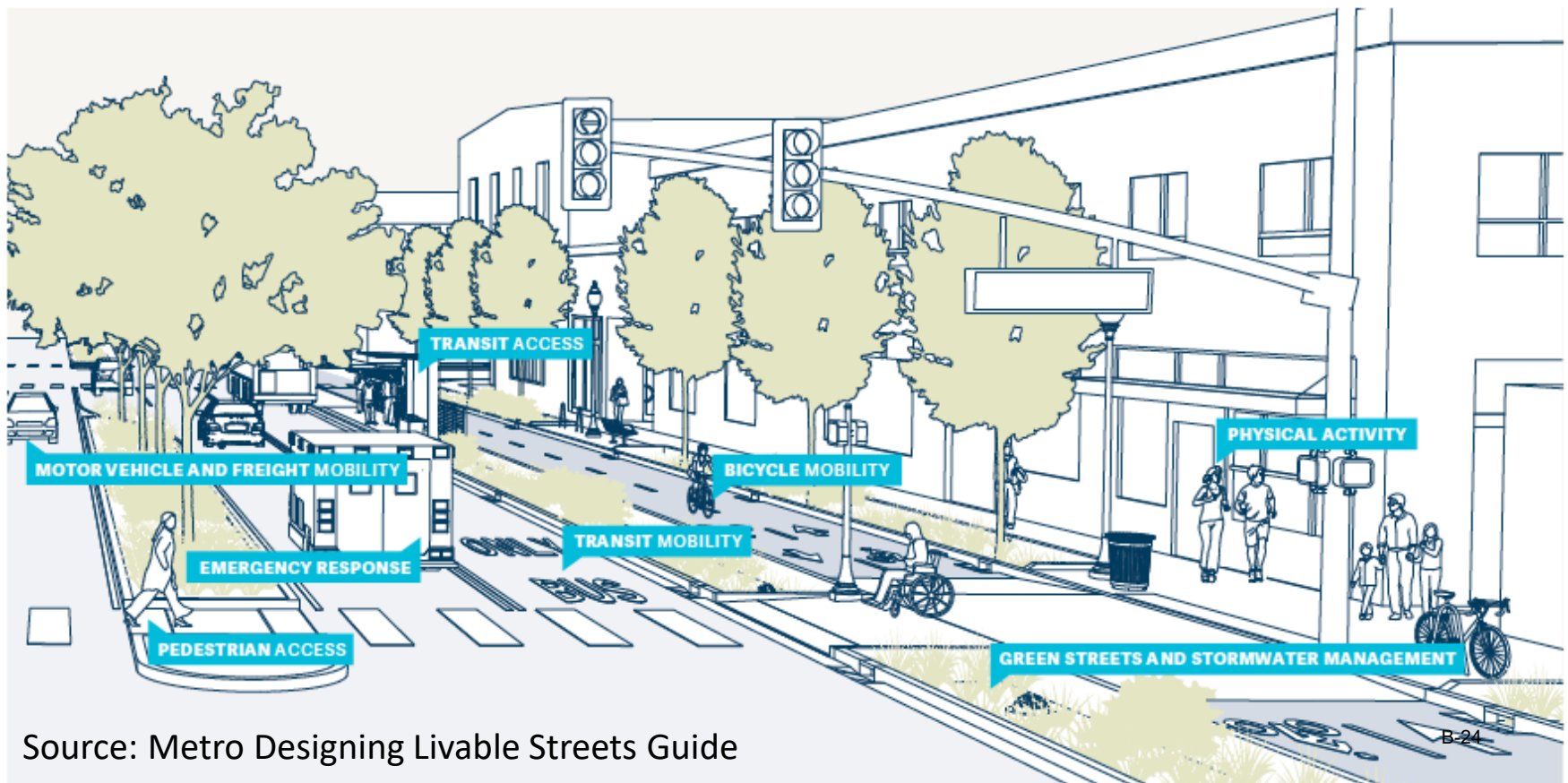
Updated policy needs to:

- Be equitable
- Consider who, why, when, where, how
- Include multiple measures that consider:
 - location and land use context
 - facility type and function(s)
 - user needs
 - time of day
 - travel options
- Consistently inform different planning applications



What does mobility look like?

Streets serve many different functions. Various functions and modes may be prioritized on different streets depending on planned land use context.

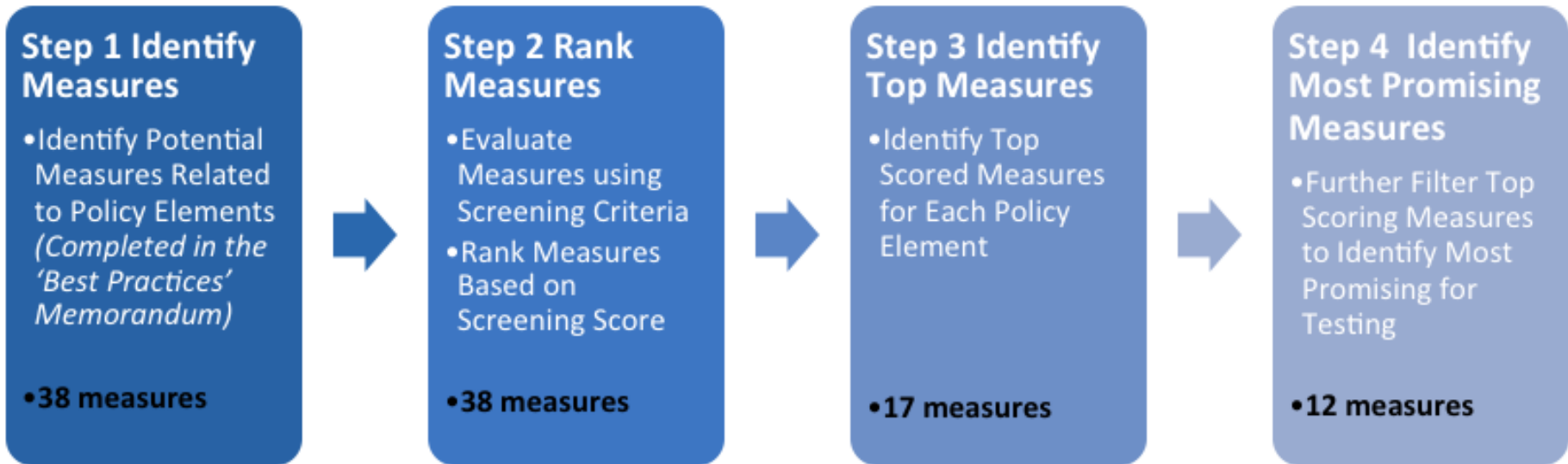


Source: Metro Designing Livable Streets Guide

How should we measure mobility in different contexts?



Screening process



Screening criteria used in Steps 2 and 3 to rank and identify top measures by mobility policy element

Access

- Does the measure help estimate potential increase in access to opportunities, social connections, and goods for all people?
- Does it evaluate access for people and/or for goods at the statewide, regional, and local levels, consistent with functional classification?
- Does it measure if a transportation system provides meaningful access to travel choices for all people?

Travel choices

- Does the measure help evaluate the availability and viability of modal choices?
- Does the measure help evaluate the availability and viability of modal choices for goods?

Reliable & efficient mobility

- Does the measure help evaluate whether the transportation system is used efficiently?
- Does the measure help evaluate whether the people and/or goods are able to travel efficiently?
- Does the measure help evaluate whether people and freight can conduct their regular travel in a predictable and reasonable amount of time?

Safety

- Does the measure help estimate potential reduction in crashes, especially fatal and serious injury crashes?
- Does the measure correlate to factors that are known to increase or decrease safety?

Other regional goals

- Does the measure have a positive correlation to equity goals?
- Does the measure have a positive correlation to climate change and air quality goals?
- Does the measure have a positive correlation to land use goals and support 2040 land use implementation?
- Does the measure have a positive correlation to fiscal stewardship goals?

Note: The screening process utilized the screening criteria established in **Supporting Document C. Appendix B**. The memorandum identified 10 screening criteria categories, which were then pared down to those shown above.

Screening criteria used in Step 4 to identify most promising measures

Technical needs and feasibility

- ✓ Ease of analysis
- ✓ Direct correlation to mobility
- ✓ Overlap with other policy elements

Initial qualitative assessment of evaluation criteria that will be applied during the case studies.

Draft Potential measures

Being considered
for testing and
refinement

Listed in order
from highest to
lowest screening
score

Measure	Mobility Policy Elements				
	Access	Time Efficiency	Reliability	Safety	Travel Options
Multimodal Level of Service (MMLOS)	●			○	All modes
Level of Traffic Stress (LTS)	●	○		●	Bike, Pedestrian
Pedestrian crossing index	●	●		●	Pedestrian
System completeness	●	○		○	All modes
Travel speed			○	●	Vehicle, Freight, Transit
Accessibility to destinations	●	○	○		All modes
Hours of congestion/ duration of congestion		●	●		Vehicle, Freight, Transit
Travel time reliability		○	●		Vehicle, Freight, Transit
Vehicle miles traveled (VMT) per capita	○	●		○	Vehicle, Freight, Transit
Travel time		●			All modes
Volume-to-capacity ratio for roadway links		●	○		Vehicle, Freight
Volume-to-capacity ratio at Intersections		●	○		Vehicle, Freight

● direct measure ○ indirect measure

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Small group breakouts: **draft mobility measures to test**

Discussion

Looking at the list of measures:

1. Which do you want to talk about today, and why?
2. Are these metrics going to produce the information needed to measure success on the five mobility elements?
3. Will these measures work for you in practice/in your community?
4. Do you have any advice we should think about before testing through case studies?
5. What measures make sense in what areas/contexts?

Recap and overall reflections

Allison Brown, JLA

Next steps

Kim Ellis, Metro

Next steps

April to May 2021 – Engage policymakers and stakeholders on potential mobility elements and related mobility measures for testing

June 2021 – Seek JPACT and Council direction on mobility elements and measures to test through case studies

Summer 2021 – Test mobility policy elements and measures through case studies

Fall 2021 – Report case studies findings and recommend updated mobility policy and measures for further public review

Thank you!

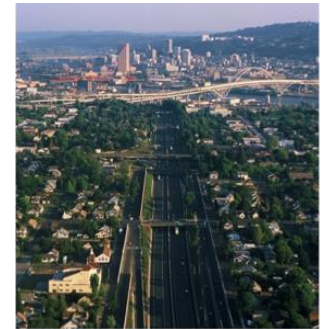
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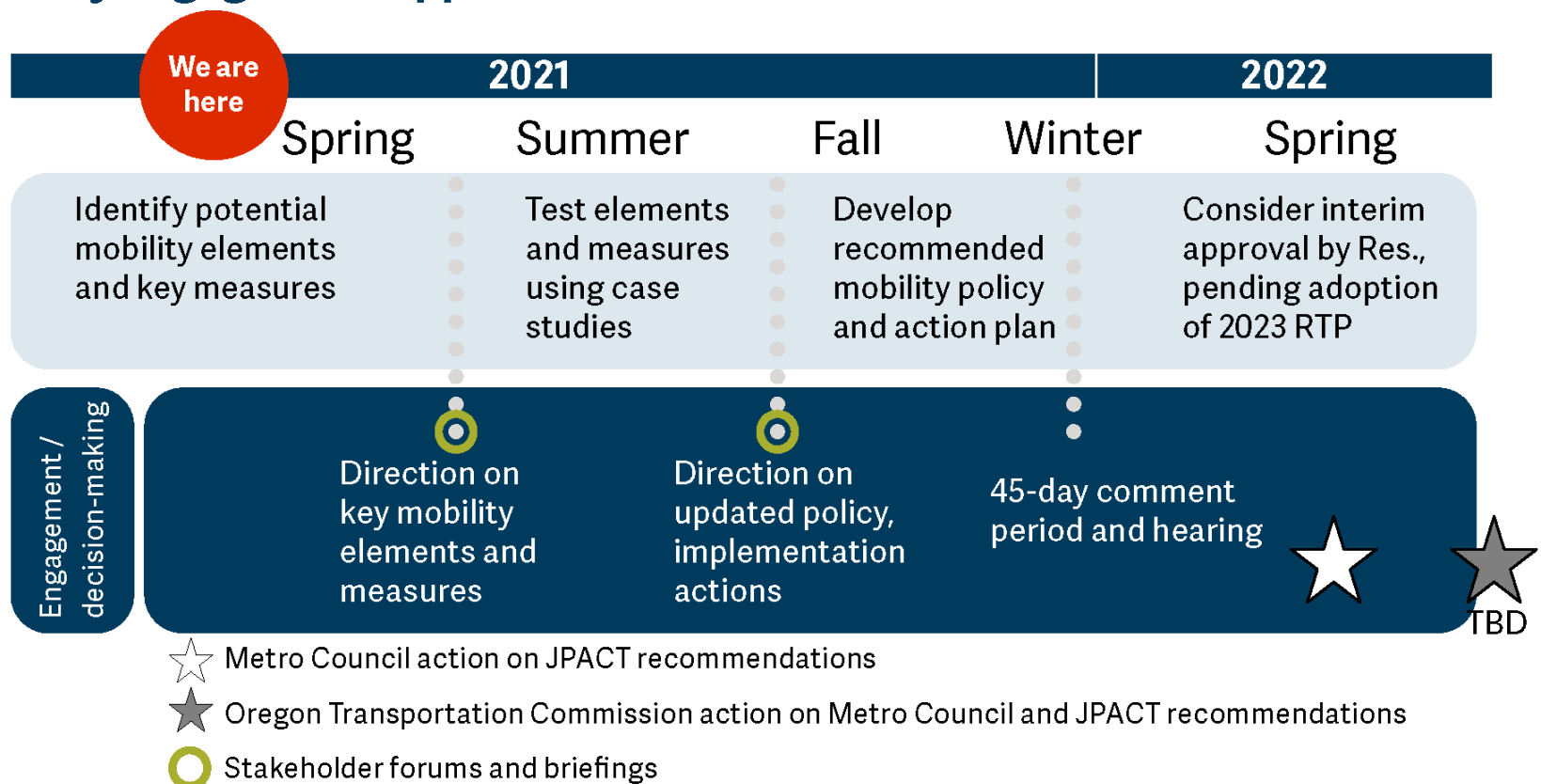


oregonmetro.gov/mobility



Engagement and outreach

Key engagement opportunities



Potential measures descriptions

Measure	Description
Multimodal Level of Service (MMLOS)	MMLOS is a level of service (LOS) system that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.
Level of Traffic Stress (LTS)	Level of traffic stress (LTS) classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.
Pedestrian Crossing Index	The distance between pedestrian crossings compared to a target maximum distance.
System Completeness	The percent of planned facilities that are built within a specified network.
Travel Speed	Average or a percentile speed for a network segment or between key origin-destination pairs, during a specific time period.

Potential measures descriptions

Measure	Description
Accessibility to Destinations	The number of essential destinations within a certain travel time or distance, by different modes.
Hours of Congestion/Duration of Congestion	The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.
Travel Time Reliability	Indicators of congestion severity that assess on-time arrival and travel time variability.
VMT per Capita	The number of miles traveled by motorists within a specified time period and study area, per the study area's population.
Travel Time	Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.
Volume to Capacity Ratio (for roadway links and intersections)	The ratio of traffic volume to the capacity of a roadway link or intersection during a specified analysis period.

Agenda



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

Meeting: Regional Mobility Policy – Practitioners Forum (Session 1)

Date: Wednesday, April 21, 2021

Time: 10:00 a.m. to noon

Place: Zoom virtual meeting

Click the link to join the

meeting: <https://us02web.zoom.us/j/87640371267?pwd=WlFaVW90eWxYYXZkeXZCYkppWWNGdz09>

Passcode: 608690

Phone: (253) 215-8782

AGENDA

10:00 AM	1. Introductions and Workshop Purpose	Allison Brown, facilitator
10:15 AM	2. Large Group: Metro/ODOT Regional Mobility Policy Update & Policy Elements <ul style="list-style-type: none">• Review of project goals, objectives and timeline• Grounding in RTP and OHP• Share mobility policy elements	Kim Ellis, Metro Lidwien Rahman, ODOT
10:30 AM	3. Small Group Breakouts: Policy Elements	Allison Brown, facilitator
10:50 AM	4. Large Group: Mobility Measures <ul style="list-style-type: none">• Overview of the potential mobility measures	Susie Wright, Kittelson & Associates
11:05 AM	5. Small Group Breakouts: Mobility Measures	
11:45 AM	7. Large Group: Re-cap and Overall Reflections	Allison Brown, facilitator
11:55 AM	8. Next Steps <ul style="list-style-type: none">• Additional practitioner forum coming up: tell your colleagues• Other outreach activities	Kim Ellis, Metro
12:00 PM	9. Adjourn	Allison Brown, facilitator

Transportation modeling/transportation operations group

Elements discussion:

Sophia Maletz – what about affordability in goals? People choose their transport by money. What about unbanked people? This affects their mobility and is something Trimet is thinking about.

Rhyan Schaub – asked question about alignment with regional goals.

Bob Hart – in regard to affordability, can that fit under “Access”? or is it a separate measure?

Molly – good question, we typically think of access as geography. Bob, includes affordability in addition to proximity.

Mike Coleman – there can be elements that are subsets of the five goals. E.g. mobility at an intersection vs. network level. Then a sixth could be connectivity, but see how they can collapse under these five.

Mike, it's a challenge to make a right of way that is great for all. Efficiency and reliability can compete with each other. Reliability is probably the most important. Building to be efficient at all times will cost a lot more. V/C at peak hour – we can't do that anymore. Sometimes, it will be bad, but at least we know and can plan for it.

Molly - does efficiency still belong?

Sophia – Efficiency is an important element of convenience. I like to think about convenience. Are you moving with kids, have a cold, ...

Bob – Many times a car trip is a lot quicker, whereas a more efficient transit system would allow people to use transit instead of driving.

Mike – Mode Choice in the realm of freight isn't as flexible. Or any others that have to get to a place to do business, i.e. contractor, etc. Reliability ala just in time delivery. Efficiency is need for those that don't have mode choice options.

Rhyan question about data sharing and are these policy goals outward facing? When do the inward facing goals come into play – like data sharing. We are going to need these to implement the outward facing goals.

Molly, yes they re outward facing.

Bob, is equity an umbrella policy or is there a separate distinct equity category/ and measures.

Sophia, as we talk about equity, is there an environmental equity component?

Molly, what is number 1 ?

Sophia – At TriMet safety is often number 1. What do the City of Portland's Vision 0 team consider most important to safety?

Mike, Access rises above as number 1. It's an umbrella elements that captures some of the others. Then the others address the #2 "how to"

Bob – Accessibility is key, with reliability being the place we have access to influence the system via tools such as tismo.

Rhyan, to satisfaction, is it important that a trip is rewarding? This could be naturally rewarding—the joys of talking to neighbors on the bus or rewards such as incentives from employers. Example Rose lane – I got to go first—it's satisfying to go faster.

Mike – interesting vocabulary. We often think of consequence, but now talking about rewards – the positive, is great. TriMet does a great job with that.

How and are we talking into account the joy of moving, "moments of joy" from the trip".

Measures

- MMLOS
 - Bob, does MMLOS include system completeness? Intrigued by this one because it looks like it would cover a lot of needs. It seems the most comprehensive.
 - Mike, Table 7 however, shows that MMLOS only serves access, not the other goals, but am not sure how it's measured. I can see how in a comp plan level of mapping, there would be a transit master plan, bike ped, each mode etc. Could be a great way to evaluate large scale plans like comp plans, district plans, etc. Perhaps more so than for small areas or development.
 - General consensus is that people don't know enough about what goes into MMLOS though.
- System Completeness
 - Mike good tool, wonder about Use to identifying future capital projects.
 - Sophia, this one is tough in that it sounds like this defines the outcome or end goal.
 - Bob – this doesn't tell you how to prioritize to assess needs. Example, FourthPlain blvd has sidewalk gaps, does this help us identify and fix those?
- Travel time
 - Bob – the goal isn't to make it faster, but rather to improve reliability. As a single measure, it makes me uncomfortable. Example of congestion. Unrealistic to say we'll fix it, but we can manage it.
 - Are time and speed the same thing?
 - Molly pointed out link of Speed to safety.
 - Sophia would like to see a consolidated list to know if / how well the metrics are evaluated. E.g. there's nothing here that mentions safety. Is it only speed?

Bob, thinking about things that got screened out. Such as person throughput, hours of congestion. V/C alone doesn't address how long. Glen mentioned F%P Seat Utilization theory.

- Accessibility to destinations

- Accessibility can be measured for all modes. Auto modes require speed for access increase. Diverse land uses support access in a multi-modal system
- Sophia, likes access to opportunity index. Is there something established? Access sounds a little bit vague. Opportunities seems better
- Bob also intrigued by opportunity index.
- GB this was screened out likely because of lack of understanding. PMT should discuss
- Mike, this also touches on land development.
- Travel time reliability
 - Mike, feels similar to hours of congestion. Could be reliably bad. Although in circumstances that might be the best we can do, especially in urban area. Might be a good measure for other modes beyond autos. This measure has some redundancy with others. Could lead to over counting . Is travel time captured in duration of congestion
 - Sophia, looking at the list, could we add some environment and equity factors such as cost burdens or affordability.

Group was curious about what got screened out. They were interested in hours of congestion and people throughput

Mike, Addressing equity via these measures is one thing. On top of that, if you evaluate the whole community considering equity will lead to decisions on how to implement and invest

Bob, Equity comes in when making investment decisions. Sort of the next step after this.

Sophia – interested to know what Portland’s Vision Zero team thinks about this.

Bob, I can see how most of these can be applied to many modes, but a few are purely vehicle based.

Mike, even if each of these applied to each mode, there is overlap and redundancy. Is that intentional? Could over rate some things. For example, travel speed and travel time may not be distinct enough.

Equity discussion:

- Equity comes into the prioritization of projects and budgets.
- A public health perspective would help with the equity perspective – what needs to be measured from a public health perspective

Overall feedback on measures; Most of these feel like vehicle measures not multimodal measures

April 21 Forum Notes

Breakout Room Attendees: Kate Hawkins, Becky Steckler (Urbanism Next UO), Kelsey Lewis (Tualatin, policy analyst), Cody Meyer (DLCD, climate change/mitigation with metro areas across the state), Bill Holmstrom (DLCD, state lead for planning, working on the climate friendly equitable, coordinated transportation planning), Sarah Iannarone (new executive director for the Street Trust), Darci Rudzinski (APG, on the project team), Steve Kelley (Washington County, leads system planning), Lynda David (southwest Washington regional transportation council, focused on Clark County), Lucia Ramirez (ODOT-principal planner, on the project PMT), Molly McCormick (Kittelson, on the project team)

Breakout Session #1:

- With the emphasis on carbon emissions, why doesn't it prioritize lower carbon footprint modes? What about health impacts?
 - VMT would be useful for these points.
 - Would greenhouse gas emissions be part of the time efficiency element?
- Where does the equity area fall? If it is a high priority, it should be explicitly referred to in the mobility definition.
 - Equity should be mentioned in access or as its own category.
 - Same with greenhouse gas emissions.
- Context or community will be important.
 - What should be the purpose of a facility depending on its land use context? This could be tied to equity.
- A big problem with this policy is the name: mobility.
 - Getting people to where they need to go is the most important component.
 - Need a better definition of "mobility". The mobility groups around the state are generally freight-centric but that is not how practitioners use the term.
 - Don't conflate access and accessibility. Consider population with disabilities.
- What about different groups of people (age, gender, race, etc.) and how they use different travel modes? Is that considered?
- System efficiency is another idea – instead of counting cars, can we count people?
 - Take out "time efficiency" and replace with "system efficiency".
 - Time is one component, but there is also a spatial component. It can start to get at those emission impacts.
- Term "for people and goods" – how does the policy incorporate everything from deliveries by traditional truck vehicles to drones and other newer means of freight?
 - Good point that mobility in the future may be more about the movement of goods/services to where people already are.
 - But also do not want to miss that sense of personal freedom, personal mobility, etc. that is important to the region.
 - It seems like it is partially covered in some of the policy elements like travel options and time efficiency.
 - Need to capture the desire to travel about the region or community with limited interference.

- Appreciate the want to include climate change, but not sure that regional mobility is where we should focus our efforts to tackle that issue. The metro region's transportation impact is minor compared to impacts from coal mining in other countries, for example.
 - What we do around development and policy in Portland can influence how China or others develop. "Do what we do" not "do what we say". Our policy leadership is one of our best tools to combat climate change.
 - Its not that our emissions will move the global needle but how we lead can pave the way for others. It is also not just about carbon emissions but also the air particles coming out of tailpipes. Carbon emissions are just one way to measure the externalities.
 - Green leadership is not insignificant for our future economy.
 - To meet the climate issues, we still need to do our part. Don't just put it on others.
- Interested in including economic impacts into the mobility definition as well.
 - Don't want to price people out of travel options.
- Want to know more about if other regions are going through a similar effort.

Breakout Session #2:

- Will the mobility policy be used for capital projects or for influencing behavior at a programmatic level? For example, how does this relate to congestion pricing?
 - This project focus is at the system plan and plan amendment level. There are implications down to the development review level for local agencies.
- MMLOS
 - Sounds good in general but not clear what exactly is being measured. Needs to be better defined. Elaborate on how the measure is exactly applied.
 - How do concepts like Portland's transportation hierarchy factor in as consider levels of service to target for each mode?
 - Concerned this may be too much about congestion, how is this an advancement over today?
 - MMLOS focuses on modes outside of the private vehicle.
 - There are lots of different indexes that could be applied, like a walking score, which do not have to be directly congestion related. They can be based on quality and comfort of the system.
 - Seems like it would work well for a local street system. Seems unrelatable to highways.
 - We do have a lot of highways running through the communities. One of the paradoxes of our regional planning approach is the propensity of high-speed/safety risks in higher-density areas.
 - Congestion on highways could also become a factor for the local systems as people try to bypass delays.
 - We need to think about parking requirements and ROW allocation when considering mobility. Will the region continue to make ROW space useable for restaurants and other uses similar to what has been done during COVID? Might impede mobility but increases our sense of community.
 - Is MMLOS something you could use in your practice/community?

- Is this easy to analyze? Or does it have to be kicked out to consultants every time it is evaluated?
 - Are LTS and MMLOS too similar to include both?
- VMT per capita
 - Critical to reduce VMT for climate and other reasons.
 - Need to plan a transportation system where we don't have to drive.
 - There was general group consensus around moving this measure forward. Pros include:
 - Seems like a helpful measure to support planning and project list development.
 - Good measures for assessing transportation system plans.
 - Supports several regional goals.
 - Easy to understand.
 - Difficult to measure existing conditions, apply to a development, or enforce.
 - Time is an important intervening variable. Be explicit about current demand versus targets.
- LTS
 - Need to take care to address unique needs of people walking, biking, scooting, and using mobility devices. They are not the same.
 - E-mobility use is going to change system demands. Are emerging technology vehicles encompassed in LTS evaluations?
 - The LTS procedure as currently defined in the ODOT Analysis Procedures Manual provides considerations for the context in which facilities are located.
 - Moves metrics toward focusing on the effects on people rather than on cars.
 - Can show easily on a map.
- Other measures of interest that the group did not have time to discuss:
 - Accessibility to destinations
 - System completeness
 - Hours/duration of congestion
- Measures to consider removing from the list for testing:
 - One member said that accessibility to destinations is problematic but did not have time to discuss fully. They noted that destinations will change over time.
 - Travel speed does not seem as important. Do not want to encourage high speeds.
 - Travel time could be removed. Reliability is more useful.
 - Travel time and v/c are measures that we are trying to move away from. We don't have the money to build all the roads to meet those service levels, nor do we want to try to build out of congestion as a region.
 - Other opinion: travel time is a key measure because people want to know how the planned system will support regional travel and remove barriers. It is easily understandable, an important measure at the system planning level, and good for transit and alternatives analysis.

RMP workshop notes

Breakout #1

- Attendees:
 - Keith Liden – LOS is OK but breaks down @ project level.
 - Susie, Kittelson
 - Matthew Berkow, Portland
 - Rick Nys, Clackamas County
 - Khoi Le, Wilsonville
- Policy elements
 - Keith: Need for consistency among jurisdictions – sometimes Metro policies
 - Matt: needs to be multimodal. Climate is not necessarily reflected here.
 - Susie: need definition of mobility that applies to urban environment. Metro and ODOT applies this policy differently – Metro focused on RTP/TSP connection, ODOT using it in the context of plan amendment review – review should be more about consistency with plans from a Metro perspective. ODOT not even on the same page internally about how they apply policy in development review.
 - Rick: A lot of local agencies haven't adopted Metro standard – different standards at play throughout the region. Getting more local agencies onboard with updating standards is important.
 - Keith: Standards are currently applied based on jurisdictional control, not based on context.
 - Matt: level of scale and effort is important. What works at development scale?
 - Susie: broader measures will still be used at system scale.
 - Khoi Le: goals all look good, but the practical impact is to take away ROW from developers. They all say we're asking for too much.
 - Clackamas County – v/c is easy to meet; doesn't require any mitigation right now.
- Measures
 - Eliot: how are measures applied @ development level to build the system we want to see?
 - Rick: good at adding sidewalk in front of a development and offsite intersection type of improvements. We've looked at these measures but the challenging thing is applying them offsite to a developer. Need ped trip generation.
 - Matt: question developers ask is what's my fair-share contribution? ITE is industry standard. What is developers' role in mitigating impacts on through traffic? Spatial constraints work against a lot of good mitigations.
 - Voting – lots of interest/concern on MMLOS, interest in, concern about
 - MMLOS:
 - Khoi: MMLOS seems helpful in justifying why we require mitigations. Impacts the development cross-section.
 - Rick: concerned with how MMLOW is measured – e.g., pedestrian density as measure of pedestrian quality. Has nothing to do w/ safety or comfort. Love the idea, but I don't think that the execution is very good.

- Matt: trying to increase the amount of infrastructure, not the amount of analysis.
- Rick: maybe there's some TSP-level work that needs to be done and then you break that down
- Susie: TPR says that you have to design a facility to facility owner's standards. So this would mainly come up in ODOT's plan review. Might be a model for city's own code.
- Rick: Clackamas county adopts City's standards when working on the facilities and ODOT's standards on
- Susie: it creates an issue where govts sometimes expect development to meet a standard that they've decided is not relevant in their TSP.
- Matt: what outcomes do we want to see?
 - Rick: currently not working for bikes and peds.
 - Eliot: can we use this work to guide where development occurs?
 - Matt: could make a similar argument here – ask developers to reduce VMT by location or mitigation. Could ask ppl to build less parking.
 - Rick: Amenities onsite that provide other transportation benefits could be part of this conversation. Transit is important - no role for transit. Developer should be able to pay for things that serve their site.
 - Susie: development drives implementation of our land use and transportation plans. How do we make sure that development is consistent with that vision?
- Keith: important to have different measures at different scales. In principle, you would apply measures a little differently when you're doing a plan as opposed to when you're looking at the development proposal.

Mobility forum notes - Transportation System Planning 04.21.21

Choya (facilitator), Laura (note-taker)

First breakout notes - elements:

Kim provided clarification of what we are discussing:

- How we start to define the measures. When and where does it apply? There will be more of a measures discussion later.
- What are our mobility goals? What are the outcomes we are seeking to support the actual policy?

Comments included:

- Mobility is part of this list - one of these things. Mobility is the means to move around the system, access, where you want to go, time, reliability – same amount of time every time, safe no matter the rest, travel options – how you do that. Paradigm – not overarching. Mobility is parallel.
- Mobility is defined *by* access, needs to be plan efficient, involves multiple options to get somewhere, so these are the fundamental elements *of* mobility.
- As a 77 white guy uses public transportation on a regular basis, several issues are ignored – getting to a fixed route is very difficult if have physical disabilities. Fixed route can be life threatening. This list ignores needs of people with disabilities and seniors. Mobility is the primary concern for these two groups.
- Access piece needs to be explicitly included.
- Significance to the word “need” – where people need to go? Subjective definition? What is mobility? What are its attributes?
- In Washington County, mobility is a parallel goal to access. Goal 6 accessibility, goal 7 connectivity, goal 8 active transportation. Would be easier to move forward to see the framework laid out.
- How you might measure how well mobility is functioning?
- Functioning – or being provided? If you don’t have access you don’t have mobility. It is a paradigm shift, be more focused on all aspects, not just driving?
- Climate piece is not as explicit of a linkage.
- Where is regional conversation around climate? Challenge that we come up against is around major capital projects and climate – evaluating projects, call from community members to include climate in our decision making, yet is hard to quantify without major time consuming analysis.
- Thinking about the elements: seems like in the past, mobility was heavily weighted on time efficiency for autos. Now we are saying it includes more than time efficiency and the things that impact are these different elements. Mobility is also for it to be reliable, safe and accessible by ALL modes.
- This is challenging! Thinking ahead to how we apply these locally. We have more work to do.
- Regarding all modes – there is inherent conflict once you start evaluating. Which gets priority? Some modes get priority more – from a regulatory standpoint– like freight.

Second breakout notes - measures:

Participants were asked to indicate on the Jamboard two or three measures that they wanted to discuss.

Multimodal level of service:

- Informed, factors that help us judge the level of comfort. Lot of data and info needed to be able to use it as a measure. Do we have that info for our complete network that can then be evaluated?
- I'm a big fan, but how do you quantify? It's a broad term. Change used to be capacity for all modes. Not relevant, for example, are sidewalks or bike lanes. If it is defined very well and contextually specific, can say here is the kind of facility we want in our community. It IS data intensive, especially on non-motorized and access to transit fronts.
- Does multimodal mean everybody, including vehicles? There has to be a way to say what is most important at that location and benefitting the most people at that location.
- Everything else on this list is how we EVALUATE multimodal level of service. Then, how will we measure: e.g. travel time reliability, VMT. Multimodal level of service IS the outcome and goal, the others are quantifiable to know we are moving towards the goal.
- If we based on number of people, there are lots driving, it will be a more auto oriented equation. If we want to shift people to transit, bike, walk – how do we build the system to shift their modes?
- I like the meta scale, looks at multiple modes. On the positive, it is contact sensitive, but it's a liability because it's subjective depending on location.
- What will we be required to do next time we update? How will it translate to plan amendments and regulatory?
- Pedestrian comfort is a priority.
- Don't want us to get hung up on streetscape – that's different than mobility.
- Metrics in list could be a part of mobility. Modal hierarchy or layered network – this is a meta measure for some of the other things in here.

Travel time

- Travel time works with reliability. Reliability of trip is how I make a mode choice decision.
- Applies to transit as well as some of the other modes – the measure will look different. Understand that in relationship to other things – what makes a good travel time for transit?
- Regional model incorporates land use decisions. Forward looking – growth of jobs and housing.
- Accessibility to destinations change over time. What would a town measure compared to what Metro would measure? Hard to define. We are a region, but we jurisdictions develop local plans.
- Difficulty to quantify the right destinations.
- How would we use at a local level? How many measures can we put upon the development review process? Which ones to use at the local level?

Level of traffic stress

Big long pause....

- A lot of focus on network completeness. A useful measure.

- I like this, but under the concept of multimodal levels. We know the dangerous streets – but what attributes are we missing re: safety? We used speed, presence of a buffer (planter strip) and volume.
- As the analysis moves forward, would be helpful to know examples of legal defensibility, development review side, examples of other jurisdictions who has used this.
- We can make ped and bike voluntary but we can't require it. We are using it with developers as a carrot, not a stick. Think about what we are legally required to do.


Accessibility to destinations


- Destinations change over time. Depending on community, have unique destinations. How to keep database of destinations so that you are using them consistently (like in zone changes)?
- Access, time efficiency. How do you look at accessibility to destinations on a system level?
- TSP plan, traffic zones, regional model – would have all kinds of destinations. Different at functional review level than at development review level.


VMT per capita

- Not that travel itself is bad. How can we use this as a valuation tool to evaluate local plans or system wide?
- Travel demand models, not good for things other than cars. Even specific types of vehicles – transit, or bikes, not accurate. Interesting, but not the best one to use here.
- Scale is a problem. We don't divide by study area per capita – we expect people to travel and work across the region. We are one region, we are not looking at sub regions.
- Unclear what this would do.
- California's per capita fundamental transportation planning measure – are we getting people to make more choices to not use cars to get around, because of environmental impacts? California requires using at the plan amendment level too. There is a lot of research happening there.

Focus Area	Facilitator	Note-taker	PMT Staff	JamBoard
6. Transportation system planning	Lakeeyscia Griffin	Jeff Raker		https://jamboard.google.com/d/1R18vhqW-2-ebDShkh20kZqggHGmAbwYNySXPcExn7Es/edit?usp=sharing


Mobility Policy w/ Definitions Group 6





Potential Mobility Policy Elements


Access
All people and goods can get where they need to go.

Time Efficiency
People and goods can get where they need to go in a reasonable amount of time.





Reliability
Travel time is reliable or predictable for all modes.




Safety
Available travel options are safe for all users.

Travel Options
People can get where they need to go by a variety of travel options or modes.

 Mobility Policy w/ Definitions Group 6

< 2 / 3 >



 Set background Clear frame

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NOTES: GROUP 6 – TRANSPORTATION SYSTEM PLANNING

- **Facilitator:** Lakeeyscia Griffin
- **Notetaker:** Jeff Raker
- **Participants:**
 - Allison Boyd -
 - Jeff Owen - TriMet
 - Laura Dawson Bodner - Metro
 - Bob Kellett – PBOT
 - Katherine Kelly – City of Vancouver
 - Eric Hesse – PBOT
 - Kate Bridges – Steer
 - Jaime Huff – City of Happy Valley
 - Garet Prior – ODOT
 -

- **BREAKOUT #1**

- **What questions do you have about the policy elements? What needs additional clarification?**

Jeff Owen – the word access usually refers to getting to a system vs. successfully getting to a destination – just first little piece, not the whole thing

Jaime – Nexus to think about facility conditions – even if there is a sidewalk or bus stop or service... if that facility/service has gaps or is structurally unsound... You may have access to it, but it isn't very convenient.

Eric – Network quality, not solely presence. Access to the networks are key, but not important if they don't connect anywhere. Overlay transit network with other things of community interest/destination... complete networks statement is needed.

Katherine – Typically think about peak hours – how would this process look at different parameters – what are the hours of focus... Moving to less consistent peak hours... how are we addressing this?

- **Are these right? Are these the most important elements to include in the updated mobility policy? Is anything missing?**

Eric – Lift up sticky – Portland would suggest efficiency considerations: reframe for time efficiency, not solely reliability – if it takes 2 hours to get somewhere it matters – Spatial efficiency in use of ROW – And reinforces other two – e.g Bus congestion on Hawthorne bridge...

Garet – Access and Equitable Access – Challenge is don't want to load with so many data points that it is so hard to determine – assumptions in modelling for jobs, social services, school, reduced lunch + other community conditions is important to drill down into. Larger gap between where people live and work in industrial areas and this doesn't show up in residential proximity + job adjacency that we usually do, but instead look at regional job center access.

Katherine – What are the actual destinations – Commute destinations and changes that come with COVID and hybrid virtual work...

Bob – Commute trips generally are actually making up smaller portion of trips...

Jeff O. – for slide 2 are these ranked? – THIS IS FOR NEXT BREAKOUT

Eric – Reference to RTP Equity Evaluation is essential to define destinations, etc...

- **BREAKOUT #2**

- **Measures in need of adjustment:**

1. **MMLOS – 4**
2. **Travel Speed - 4**
3. **Accessibility to Destinations - 4**
4. System Completeness – 3
5. V/C at intersections - 3
6. Travel Time - 2
7. Hours/Duration of Congestion - 1
8. V/C roadway – 1

- **MMLOS**

Kate – Not much clarity on usage here... Link to ODOT?

Eric – As published by TRB or NACTO? – Excellent thinking, but implementation is very challenging – Is Metro and ODOT able to calculate this? Develop our own version? Simplified version? Pedestrian area – fewer walking + higher LOS and could be counter to goals... Quality of service to other modes has merit.

Bob – Tolling project has an attempt at MMLOS – Challenging data and forecasting really difficult.

Garet - Level of Stress vs. service... How robust is this? Consistency of bike/walk counts and standardization would be needed.

Eric – Peter Ferth has simpler measure that could be leading... LTS may already capture what we really care about in an easier way... Links dropped:

https://nacto.org/docs/usdg/nchrp_rpt_616_dowling.pdf

<http://www.northeastern.edu/peter.furth/research/level-of-traffic-stress/>

Theoretically, could assess all emerging technology and would this impact pedestrian environment? Important to think of efficient use of space across modes. We think we know what we should be building – Are we building it? – Could be a form of getting at forecast? Movement to activity based model – how bring in quality concepts for multiple modes...

Katherine – Generalizing multimodal we think of bike/ped and access to transit – How explicitly is this looking at all modes? Vehicles and freight? Emerging technologies? Short haul delivery and automation? How deep go into this definition and how could you ever forecast this? Even ferries...

Garet – Multimodal does encompass umbrella of all modes...

- **Travel Speed**

Jeff O. - Harder to connect to Metro's pillars – Speed is problematic as it intersects with safety... speed itself

Katherine – More throughput than speed... speed is a challenging conversation... think of other ways to talk about this.

Bob – Really this policy is land use... if evaluating auto speed in densely populated areas with lots of movement – think about how policy supports growth objectives

Jeff O. – Combine with reliability of network...

Eric – Core function of access – should be embedded in discussions regarding disparity between modes – Could capture appropriate speed – clear that car/vehicle speed can diminish safety – reliability index – need understand relative to actual target

Jeff R. – Disparity between modes is key – should include discussion of delivery and freight efficiencies as well. Clear safety conflicts, but important to economic performance...

Allison – Need more writeup on what this includes – is safety part of this already?

Eric – More interest in reliability...

Jeff R. – Mostly reliability, but also some measure of longer haul trips from/to region and its distribution assets (e.g. PDX cargo)

Garet – Transit as competitive option...

- **Accessibility to Destinations**

Garet – Safe routes to daycare – With Multnomah County measure – tracking better data on this?

Katherine – side note on this – not just early education – 2-6th grade after care is essential as well. – AFTER Hours

Eric – Current practice... 30 NAICS codes for access to certain industry... Childcare draw out? Changing role in transportation? Understanding what the network lets you get to... Layering in of bike share and other tech...

https://www.oregonmetro.gov/sites/default/files/metro-events/Mobility-Measures-for-Testing-DRAFT_0.pdf

Jeff R. – Opportunity for additional information on childcare in economic development discussions and resources to support improved data... Important to link distribution networks to our local system – affiliated TAZs with EVA modelling data not included in final version.

Jeff O. Get closer to travel time and reliability when talking about destinations... spatial efficiency to/from destinations.

Eric – MISSED THIS – might need follow up.

- **CHAT Export:**
 - Eric: The RTP work I referenced previously on assessing access to jobs and community destinations (see .pdf p. 204: <https://www.oregonmetro.gov/sites/default/files/2019/03/13/Transportation-Equity-Evaluation-Final-3.12.19.pdf>)
- **SEE Jamboard:**

Region Mobility Policy Forum Notes

Theresa Rohlf (ODOT Traffic Ops)

Chris Strong (Trans. System Manager Gresham)

Dayna Webb (City Engineer – Oregon City)

Mike McCarthy (City of Tualatin Transportation Engineer)

Avi Tayar (Dev. Rev. Mgr. ODOT)

Will Farley (City of LO Traffic Engineer)

Peter Schuytema (ODOT trans. Analysis engineer)

I like the goals – devil is in the details and how it is applied. When we get into dev. Review we need a clear policy of whether something meets criteria or not. Say, can we require them to build a ¼ mile of sidewalk?

We need to have objective criteria we can use to apply.

It's a good start and encompassing from a high level

Question about multimodal level of service – ODOT has a suite of measures to address it. Has been used successfully in TSP's

Developers will fight it and agencies will end up in court about it.

Is there a consultant team involved digging into the issues? Kittelson primarily and Fehr and Peers?

Any examples of other metropolitan areas that have implemented this successfully?

Breakout room #2

I don't think we need both travel speed and travel time. They both have the same definition. There is overlap.

We need to see the actual formulas.

One category could be used for travel time and travel time reliability.

One of the key things I don't see here is how do you actually figure out the mode split.

I think we have very different perspectives around the region about this.

I think the key factor is the context of where the trips are coming from. Not sure how to define it though.

System completeness – local jurisdictions may have a different plan than ODOT. Look at general completeness – are we providing accessibility for everyone?

Also, local TSP's may be outdated and not updated to current desires.

IE – In and Out in Tualatin with 7 agencies involved.

Context and jurisdiction is very complex

Could see where a development is large and needing to connect to a relatively close path, etc. It is difficult to get any offsite improvements.

If there are a number of sidewalks within a general area, possibly contribute to a certain area. Come up with a big picture of completeness and then projects in order of priority.

Oregon City does proportional share and collects small amounts into a fund for these types of projects. They may only contribute 10%. Special area SDC.

Will travel time be defined for each mode or only vehicles?

It would be great to have a work group to work through all of these! Mike would love to be part of. Theresa as well.

Struggling to give feedback without more concrete details on how to apply these. What the limitations might be.

There is a lot of room for potential judgment calls as related to context.

Most of these measures haven't been considered in local context.

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Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

























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Jamboard Test: use the sticky note icon (the white square with two lines in it on the left-hand side of this window) to create a sticky note with your name, organization, and a sentence describing how you currently use mobility measures like v/c or LOS in your work.

**from the RTFP and
use LOS for the rural
area. We have
struggled with
implementing
adequate safety
measures as well as
measures that
address
completeness, safety
and crossing for peds**

Regional Mobility Policy Elements

WHAT'S MOST IMPORTANT ON THIS LIST?

Consider how we address new mobility opportunities. i.e autonomous vehicles

WHAT'S MISSING?

We have a tendency to overlook schools and the elderly. Be sure to include these places (equity question)

They will come up differently in different types of development review.

Individuals motivated by different elements. Be aware of how can use that basic motivation to incent/accomplish all the elements.

People can get where they need to go.

Are mode splits included?

Cost efficiency for all household income levels.

New technology - how to incorporate new kinds of mobility.

Sometimes we lose the idea of how we reduce trips or remove needs for trips. These do impact mobility.

People will be motivated by different things/they will value different elements differently.

People can get where they need to go

in a reasonable amount of time.

Travel is reliable or predictable for all modes.

Connect policy to reduction of greenhouse emissions seems to be missing here - please add it.

Equitable distribution of access locations.

Is growth an appropriate policy?

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety

Need to be more explicit about racial equity--vulnerable populations aren't priced out of mobility.

We don't currently have a great way to identify how mitigations impact other goals (ped envir., etc.)

Partially under "Access" - important to think about the place. Need to retain the place we want to go. We don't want to ruin the destinations.

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

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Accessibility of destinations

Good at showing different equity issues around mobility (eg: east portland vs other parts of town. Don't know if it gets at safety though

This is a good measure because it opens the door to multiple travel options.

Ties in the land use better - we won't miss the destinations like we can currently ("20-min neighborhoods")

good application for plan amendments where it might be reflecting changes in land use

Specify groups that have historically not had adequate accessibility that we aim to improve access for with this measure and access to where (i.e. good schools, health services, parks and recreation, shopping etc.) ?

There is a transient nature of land uses (low-income population locations changes over time)

There is a time of day element to accessibility. Consider night time accessibility.

Maybe travel forecasting becomes less important? Focus on present mobility and not necessarily future (which can change).

Need to bring in the safety aspect

Multimodal Level of Service

The devil is in the details on this one --there have been so many attempts at this. Need to think about the need of that mode (eg: # of people on a sidewalk isn't a system failure)

Person-trip basis - need person trip generation numbers rather than vehicle trip numbers to make this work - its a data need.

Full range of multimodal needed to achieve accessibility for all.

Quasi-judicial plan amendments offer an opportunity for flexibility.

Include more opportunity for mini modal modes - importance emerging strongly during Covid.

I advocate for more flexibility --but how do you do that without creating more work?

Fun trip? /Happiness trip? measure (how pleasant is the trip?)

System Completeness

Portland did work on this (Kittleson, DKS and Fehr Peers involved)

There is a data need for this one -- hard to find a discrete measure--need to decide what is "good enough."

Linkages to SDCs and development fees

Hard in areas with vulnerable populations. could make it harder to develop housing in neighborhoods that need it because they are lacking facilities. Would this create a bias?

Big motivator for mode of travel. How encourage what we want

Is this one related to the system completeness measure??

V/C for Roadway Links

Currently, developed areas require a lot of time/money to identify what is at capacity. This is a good early diagnostic tool --low cost at the beginning.

VMT per Capita

See if overall, the system is working better. This is used in Central City MMA, could also work well in Tigard Triangle. Make sure we are looking at how we are operating the system (already developed areas).

How to you predict for the long-term?

For plan amendments, it can show whether the overall impact/efficiency for the system is improved, even if a specific intersection v/c is made worse.

There are software tools available that spit this out.

California uses this for system planning, project planning, and development review.

Can be a proxy for climate/ghg emissions, as long as increased EVs are accounted for

Travel Time

With travel time there is also an equity issue - longer the travel time has an impact, and a bigger impact for those lower on the income scale. Tie to equity.

Potential Mobility Policy Elements

Access

All people and goods can get where they need to go.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable for all modes.

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety of travel options or modes.

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

How would LTS be applied in a development review case?

Most seem to be a good measures, but difficult to develop and apply

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.

Pedestrian Crossing Index

The distance between pedestrian crossings that a pedestrian must get

System Completeness

System Completeness may better be defined as accessibility for desired modes. Does the nearby system have complete sidewalks? Does needed connections provide bike facilities?

of planned facilities that

Would "completeness" include vehicular capacity expansion that has been identified in various plans?

For system completeness, would facilities for each mode be considered separately?

System Completeness could be difficult to evaluate with multiple jurisdictions: RTP, STIP, TSPs, Neighborhood Plans, etc. could all govern "completeness"

Travel Speed

percentile time spent t
specific time period.

Accessibility to Destination

of essential destination
es.

Travel speed is ambiguous: A higher value seems good from a mobility perspective, but not from a safety perspective.

I don't think we need both Travel Speed and Travel Time

Hours/Duration of Congestion

Indicators of congestion severity that assess
variability.

It seems one category could be used for both 'Travel Time' and 'Travel Time Reliability'

Travel Time Reliability

The number of hours within a time period, mo
facility's congestion target is exceeded.

Hours/Duration of Congestion & Travel Time Reliability similar to one another?

VMT per Capita

The number
area, per th
ts with
and study

Travel Time

Average or
during a sp
ling between key origin-destination pairs,

V/C for Roadway Links

The ratio of
period.

I agree - V/C is almost always limited by intersections, so link V/C may not be needed as a criteria

Is there a critical need for V/C of roadway links vs V/C for intersections? Usually (I believe), V/C for intersections controls when evaluating a system

Volume-to-Capacity Ratio (V/C) at Intersections

ratio of traffic volume to the capa
ction during a specified analys

Potential Mobility Policy Elements

Access

All people and goods can get where they need to go.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable for all modes.

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety of travel options or modes.

**Tim: My
comment
is ...**

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.

Pedestrian Crossing Index

The distance between pedestrian crossings compared to a target maximum distance.

System Completeness

The percent of planned facilities that are built within a specified network.

Travel Speed

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance, by different modes.

Hours/Duration of Congestion

Indicators of congestion severity that assess on-time arrival and travel time variability.

Travel Time Reliability

The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population.

Travel Time

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

V/C for Roadway Links

The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.

Volume-to-Capacity Ratio (V/C) at Intersections

The ratio of traffic volume to the capacity of an Intersection during a specified analysis period.

Multimodal level of service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

frequency/coverage of services?

**looks like
it would
cover a lot
of needs**

System completeness

The percent of planned facilities that are built within a specified network.

**Use to
identifying
future capital
projects**

Travel speed

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Accessibility to destinations

Travel time reliability

The number of hours within a time period, most often within a weekday, where a facility’s congestion target is exceeded.

Potential Mobility Policy Elements

Access

All people and goods can get where they need to go.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable for all modes.

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety of travel options or modes.

Discussion questions:

1. What questions do you have about the policy elements? What needs additional clarification?
2. Are these right? Are these the most important elements to include in the updated mobility policy? Is anything missing?

**health
and
safety**

Becky, UO: Health (healthy transportation options (walk/bike/transit) are available for all users, or something like that.

Equity

Economic options: Can we increase the mobility options that are less expensive (than owning a personally-owned vehicle).

Call out equity and emission reduction more clearly

**VMT
Reduction**

**Climate
Impacts**

Becky, UO: Include reducing GHGs.

**How are
we
defining
Mobility?**

Multimodal Level of Service	System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.	
Level of Traffic Stress (LTS)	Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.	
Pedestrian Crossing Index	The distance between pedestrian crossings compared to a target maximum distance.	
System Completeness	The percent of planned facilities that are built within a specified network.	
Travel Speed	Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.	We don't want people driving quickly in most contexts
Accessibility to Destinations	The number of essential destinations within a certain travel time or distance, by different modes.	Accessibility to Destinations seems problematic- as a TSP gets older, the more possibility that the destinations are outdated.
Hours/Duration of Congestion	Indicators of congestion severity that assess on-time arrival and travel time variability.	
Travel Time Reliability	The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.	
VMT per Capita	The number of miles traveled by motorists within a specified time period and study area, per the study area's population.	
Travel Time	Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.	
V/C for Roadway Links	The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.	V/C, by itself, is not good enough anymore
Volume-to-Capacity Ratio (V/C) at Intersections	The ratio of traffic volume to the capacity of an Intersection during a specified analysis period.	

Policy Measures Discussion:

- Looking at the list of measures. Which one stands out to you; which do you want to talk about today, and why?
- Are these metrics going to produce the information needed to measure success on the five mobility elements
- Will these measures work for you in practice/in your community?
- Do you have any measures you feel should be added in??
- Do you have any advice we should think about before testing through case studies?
- What measures make sense in what areas/contexts?

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.



Sounds good, but not clear what exactly is being measured. Which factors? Sounds like multiple measures combined.

Curious how concepts like Portland's transportation hierarchy might factor?

Concerned this may be too much about congestion, how is this an advancement over today?

We need to think about parking requirements when it comes to re/allocation of existing ROW.

Unsure how this would relate to the interstate highways.

Is this measure clear enough for people to understand?

How do we fix this if it is a problem?

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population.

Time is an important intervening variable. Need to be explicit about current demand vs targets we want to achieve and how we arrive at them.

Difficult to measure existing conditions, apply to a development or otherwise enforce. Good measure for assessing transportation system plans.

Gets at climate, system efficiency (reducing demand for roadways, safety, health, and lots of other goals.

Easy to understand

Critical to reduce VMT for climate and other reasons

Need consistent way to measure or estimate. What is in, what is out

I think this is a helpful measure. I did not have concerns about how to use or implement in my work.

Key for plan and project list development.

Need to plan a transportation system where we don't have to drive

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.



Potential Mobility Policy Elements

Access

All people and goods can get where they need to go.

How can we better capture climate in these elements? We should be thinking about impacts on climate.

Jeff: We need a more direct tie to climate impacts

Move focus away from measuring peak hour trips or home to work trips to more of a look at trips where people need to go. Access is more than access to jobs. It is access to key places.

Eric: Access to (safe, attractive) multimodal networks and access from those networks to destinations (jobs and community places)

Access should take into account both access to destination and access to network, including the condition of the network (safe, comfortable, convenient)

Jeff: "Access" to me often means only the first part - accessing a larger system, but not necessarily getting all the way to destinations.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable for all modes.

where we get trapped into looking primarily at peak hour trips and then we build to meet those hours. Increasingly we see reliability challenges that fall outside these hours and people's needs to get around reliably are outside

What are the parameters to define different levels of reliability?

Eric: Very supportive of the efficiency concept, but wondering why not extended to Spatial Efficiency and Energy/Emissions efficiency.

Safety

Available travel options are safe for all users.

and performance measures, such as VMT reduction (can improve safety), improves equitable access (by addressing traffic safety and beyond traffic safety concerns), and makes more efficient travel options more attractive (supporting

Travel Options

People can get where they need to go by a variety of travel options or modes.

There is a quality element of travel options. Need to also take into account that a 45-minute headway bus line and a 4-foot bike lane on an arterial are not really options for most people

Eric: This is where MMLOS might show up, though implementation has been challenging.

Multimodal Level of Service

Level of Traffic Stress (LTS)

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

MMLOS is a good concept but it is very difficult to implement. There isn't a great track record of this working for cities and regions.

Pedestrian Crossing Index

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.

The system will never really be "complete", right? Can we instead focus on system effectiveness, with some aim for an effectiveness ratio of the network?

System Completeness

The distance between pedestrian crossings compared to a target maximum distance.

We are trying to slow down auto speeds to improve safety. Anything that promotes faster auto speeds could negatively impact safety of system users. Reliability should be prioritized over speed.

Travel Speed

The percent of planned facilities that are built within a specified network.

Average or a percentile time spent traveling between key origin-destination during a specific time period.

Wrap "Travel Speed" underneath "Travel Time Reliability" or "Accessibility to Destinations" instead of having Travel Speed on its own

Access to destination + access to multimodal networks.

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance from different modes.

Hours/Duration of Congestion

Indicators of congestion severity that assess on-time arrival and travel time variability.

Travel Time Reliability

The number of hours within a time period, most often within a weekday, that a facility's congestion target is exceeded.

Looks like the description of Travel Speed and Travel Time Reliability may be inadvertently duplicated

VMT per capita is good because it gets at climate, access, and safety

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population.

Travel time could include Travel Time Disparity (between modes and demographically)

Travel Time

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

V/C for Roadway Links

The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.

Volume-to-Capacity Ratio (V/C) at Intersections

The ratio of traffic volume to the capacity of an intersection during a specified analysis period.

If we continue to use v/c that will likely be the default because that is what people know how to measure. It will continue to trump everything else. This will undermine the movement away from just caring about cars at intersections.

Multimodal Level of Service

MMLOS is a good concept but it is very difficult to implement. There isn't a great track record of this working for cities and regions, especially the full NHCRP version).

MMLOS could be really difficult to forecast.

easier to implement and be more focused on reducing barriers for travel options (particularly walk, bike, roll and access to transit). Could also connect to system completeness and design guidelines of what we should be building to reduce

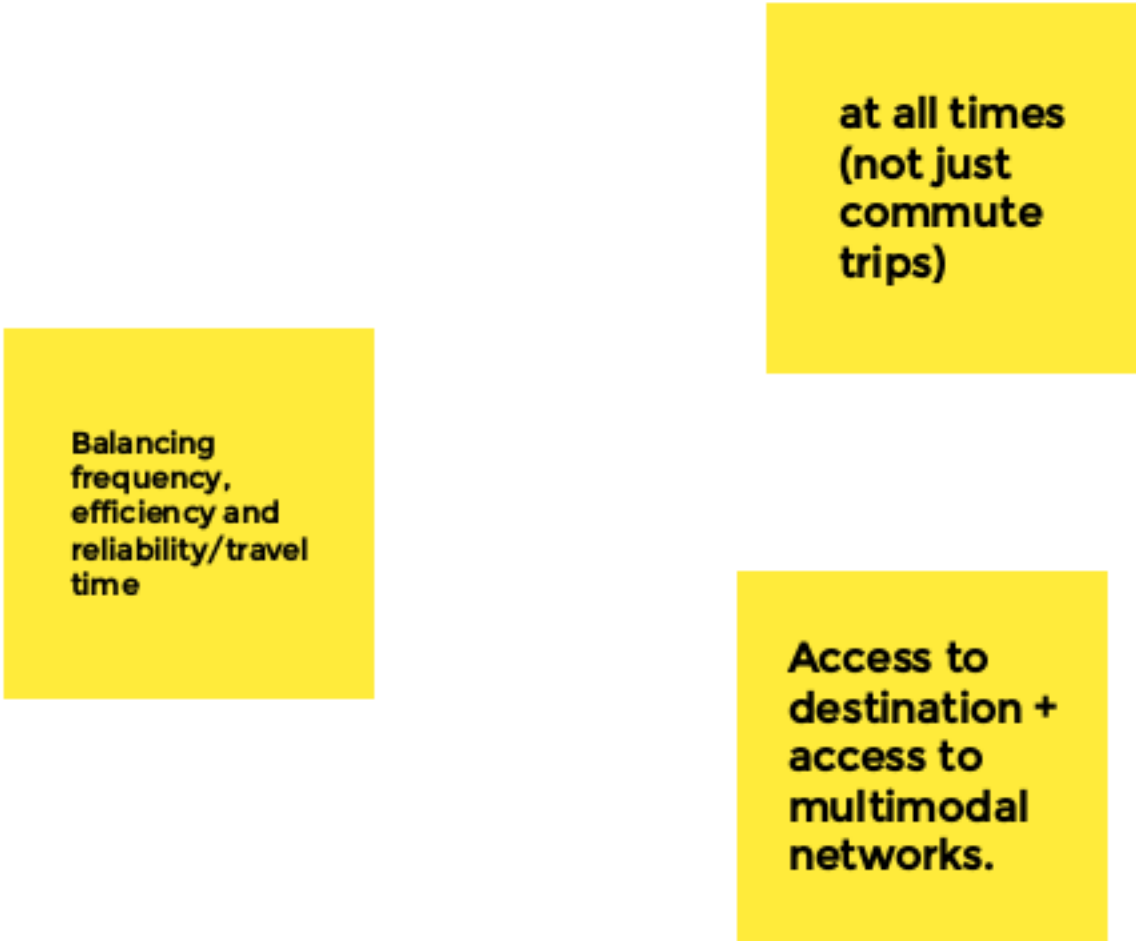
Need for improved bicycle and pedestrian data in order to monitor and forecast

Travel Speed

We are trying to slow down auto speeds to improve safety. Anything that promotes faster auto speeds could negatively impact safety of system users. Reliability should be prioritized over speed.

If we value travel speed then it could penalize growth in already built, denser environments where we auto speeds are going to be reduced.

Accessibility to Destinations



kim ten **ten** Mobility Policy Elements

Chris
D

Access

All people and goods can get where they need to go.

Access as defined here seems difficult to quantify and measure.

Climate not rising to the same level as other central themes - An element about mobility needing to "Support environmental health" could get at this.

Climate is a parallel high level policy that mobility options could be measured against. Similar to impacts to the built environment and social impacts of new mobility options.

Building off of Michael's comment, first and last mile transit to access

This is a good point!

Does cost effectiveness need to come into these? Or not? Does affordability need to be considered? How? ~ Jean

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable for all modes.

Mobility make look different depending on how these different elements are emphasized

Do we claim that it's for ped, bike, transit first over the other modes? How do we manage the sometimes conflict with freight mobility? ~ Jean

Time efficiency may be challenging to quantify. It looks different depending on mode. Perhaps time efficiency for autos use to dominate how mobility was defined in the past.

Agree with challenges of time efficiency.

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety of travel options or modes.

Is this a variety (single mode per trip) or a mixture (potentially multiple modes per trip)

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively. ✓

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility. ✓

LTS is an element of MMLOS. If we are looking to simplify, I think this could be deleted.

Pedestrian Crossing Index

The distance between pedestrian crossings compared to a target maximum distance.

System Completeness

The percent of planned facilities that are built within a specified network.

Travel Speed

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Travel Speed could be problematic....slow speeds in a downtown/mixed use area can make a great place for people walking and biking. How do we set what speed is right?

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance, by different modes. ✓

Hours/Duration of Congestion

Indicators of congestion severity that assess on-time arrival and travel time variability.

Travel Time Reliability

The number of hours within a time period, most often within a weekday, where facility's congestion target is exceeded. ✓

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population. ✓

VMT does not need only apply to motorists - transit VMT (by person, not vehicle) and active transportation VMT are also quantifiable.

VMT / capita is a system measure, not a mobility measure

Travel Time

Average or a percentile time spent traveling between key origin-destination pairs during a specific time period. ✓

time and speed are two of the same coin. Probably only need one.

V/C for Roadway Links

The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.

Volume-to-Capacity Ratio (V/C) at Intersections

The ratio of traffic volume to the capacity of an Intersection during a specified analysis period.

Multimodal level of service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

How do we quantify quality?

I am concerned that trying to weight which mode's LOS is most valuable by looking at current use furthers the current auto bias that most communities are trying to shift.

Yes! This is what I was trying to say

Travel time

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.



Level of traffic stress

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.



Accessibility to destinations

The number of essential destinations within a certain travel time or distance, by different modes.

I struggle with "destinations" - the more common measures I've seen are access to employment, transit and commercial

And community facilities

This is similar to the 20 minute neighborhood concept and provides a good link to land use decisions and promoting mixed use and strategic density

Could be tricky to use for system planning or development review

Off-site destinations likely to attract bicycle, pedestrian and/or micromobility trips to and/or from the proposed development and may include schools, transit stops, parks, commercial centers, medical facilities,

As a measure, destinations are "existing conditions" focused instead rather than looking towards future.

VMT per capita

The number of miles traveled by motorists within a specified time period and study area, per the study area’s population.

VMT does not need only apply to motorists - transit VMT (by person, not vehicle) and active transportation VMT are also quantifiable.

VMT is equally important when looking at climate, equity and efficiency goals.

Is this used to measure existing system conditions? Or is it a predictive measure?

Seems to be more of an indicator than a evaluation tool

Agenda



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

Meeting: Regional Mobility Policy – Freight & Goods Forum

Date: Friday, April 23, 2021

Time: 9:00 a.m. to 11:00 a.m.

Place: Zoom virtual meeting

Click the link to register for the meeting:

<https://us02web.zoom.us/join/zoom/register/tZUrfuyorjljHNGYHSNDQnK6nO51u-XWQdmK>

AGENDA

9:00 AM	1.	Introductions and Workshop Purpose	Allison Brown, facilitator
9:15 AM	2.	Metro/ODOT Regional Mobility Policy Update & Policy Elements	Kim Ellis, Metro Lidwien Rahman, ODOT
9:35 AM	3.	Discussion: Policy Elements Discussion questions: <ul style="list-style-type: none">• Are these the right elements? Are these the most important elements to include in the updated mobility policy? Is anything missing?• Which elements are most important in these three different contexts, especially regarding the movement of freight and goods?	Facilitated discussion
10:20 AM	4.	Mobility Measures <ul style="list-style-type: none">• Overview of the potential mobility measures	Susie Wright, Kittelson & Associates
10:30 AM	5.	Discussion: Policy Measures Discussion questions: <ul style="list-style-type: none">• Are these measures going to produce the information needed to measure success on the five mobility elements?• Is there anything missing that we should be measuring?• Which measures are most important in these three different contexts, especially regarding the movement of freight and goods?	Facilitated discussion
10:55 AM	8.	Next Steps <ul style="list-style-type: none">• Other outreach activities• Technical work ahead	Kim Ellis, Metro
11:00 PM	9.	Adjourn	Allison Brown, facilitator

Mobility Policy – Freight movement group

Policy elements

Are these the right elements? Are these the most important elements to include in the updated mobility policy? Is anything missing?

- What about other modes like air, train, etc. – do their requirements get met if these are the policy elements? Is there a policy element that could reflect the needs of these other modes?
- Reliability at specific times of day is biggest concern for intermodal. Early morning, late afternoon and evening are crucial.
- E-commerce: impacts beyond freight corridors and districts across whole system, including residential areas.
- Emissions in residential areas from increased e-commerce.
- Movement of freight both in and out of region has implications.
- Need to include climate and air quality considerations in these elements.
- Draft Mobility Policy Elements should include (in its own bullet): CLIMATE -- All Transportation Modes are Environmentally Beneficial
- Small businesses have trouble paying for new technologies that help with environmental impacts/emissions.
- Corporations change practices and have impacts on regional systems (e.g., possibility of trains blocking transit).
- Trucks from construction trades have impact on freight access.

Which elements are most important in these three different contexts, especially regarding the movement of freight and goods?

- Reliability for deliveries: Last mile matters; signal delay impacts; finding parking at delivery destination (in corridors, downtowns, more dense mixed-use areas)
- Is it actually a policy problem to have delivery trucks parked in travel lane in residential areas? Maybe a safety issue, but doesn't seem to be an access issue.
- Getting to and from freeway is an issue for freight.
- Parking for truck drivers to rest (can only drive 11 hours out of 24).
- Access – parking matters for commercial districts; parking in neighborhoods is getting more constrained because of spillover from commercial districts.

Measures

Are these measures going to produce the information needed to measure success on the five mobility elements?

Is there anything missing that we should be measuring?

- Vehicle hours travelled – impacts on air quality and emissions. EPA models use VHT

- We need to think about how a no-carbon transportation system affects mobility and what to measure.
- Impediments (e.g., incomplete sidewalks, lack of bike lanes, weight restrictions, height restrictions, at grade rail crossing). Need to measure system completeness.
- Travel speed, reliability, travel time – redundant, but useful for communicating system completeness. Opinions: travel time and reliability most important.

Which measures are most important in these three different contexts, especially regarding the movement of freight and goods?

- System completeness
- Travel time
- V/C
- Reliability

Mobility forum notes – Freight and goods 04.23.21

Eryn (facilitator), Laura (note-taker)

Large group chat

What about planes and trains?

First breakout notes: Elements

- Equity, safety public health, environment, vibrant communities do not seem to be on this list.

Kim: Mobility is one of many policies in the plan and we need to do it in such a way to further the above goals.

- Looking at how the elements interconnect. Keeping highways small and narrow is not an effective strategy. When looking at climate impact, hope the plan is not to restrict vehicle travel.

Kim: Looking at options to have destinations closer to where they live and work, ways to use system them more efficiently, holistic approach to manage congestion.

- While we don't need wider highways for cars, we do need that for trucks.
- Time efficiency and reliability are key. Gave example of travelling across town at 3 p.m. during rush hour.
- Safety is also important. The top four are the most important. Reliability and time efficiency change because of congestion patterns. Example: If changing a truck's schedule from one truck with 14 stops to two trucks with 8 stops, there is an increase to congestion. To have optimization to stay within DOT regulations, have to have predictable travel time.
- Access is important. Example: looking at the slide of high density bus lane/car and industrial area, we have to be able to access all of those areas. Stores, where people live and shop, we have to go everywhere.
- Range of types and sizes of trucks play into access.
- Bike lanes were referenced.
- Safety is important. People depend more on e-commerce and they expect next day delivery. Increase in package delivery services. Look at transportation infrastructure in terms of freight mobility. Rate of e-commerce- induced delivery traffic is increasing due to people staying at home. How will this play out over the next few years?
- Travel options language should be more specific to delivery and trucks. Use the term vehicle operators (instead of people) to cover all types of vehicles. The current wording would apply to people getting to work, NOT getting into their truck to go make deliveries.
- Use the phrase "people and goods"

Eryn showed a slide of three images: arterials in mixed use and transit corridors, arterials in industrial areas and throughways.

- In a pedestrian friendly neighborhood – how to deliver, nowhere to park our trucks or vans, we are forced to park in suicide lanes: then have to cross traffic, bus lane, bike lane to complete the delivery. Safety is an issue. All three photos show what we encounter in one delivery route.
- In all three examples, capacity planning should strive for efficiency. We take 50% of the capacity so we constrain the use of the road, pushing freight demands into the space of personal travel. 90% of people travel on 50% of the capacity.

- Have experienced access for all shown in the slide of arterials in mixed use centers/transit corridors. I think we should expand access for freight specifically without removing access from other modes. For example, dedicating street parking for freight only.
- Big vehicles need more space. There is safety concern.
- Time efficiency and safety. Safety is very important.
- Access and reliability are subsets of time efficiency.
- Time efficiency applies to all scenarios. Take into account climate issues - the more congestion you have, the more carbon is emitted. Efficiency improves safety, climate and reduction in traffic.
- Apply time efficiency to freeways - having a freight only lane (like a carpool lane) could make a big difference. Reduce interaction with passenger vehicles.
- Regarding the mixed use slide: Time efficiency and access reliability may depend on creating access for different types of vehicles. Trike delivery downtown works well; ensure that they have access to roads and spaces.

Kim asked about times of day most important for doing business?

- Routes leave early, grocery stores are first stop at 4 a.m. through early morning. 90 routes in Portland metro area are done by 1:00-2:00 p.m. – but sometimes by 6 p.m. After 2:30 p.m. we have to add time to the base time.
- Downtown area stores are not open early so it gets tight there during the day. Worse time is the end of the day.
- Avoid southern California strategy of limiting the times trucks *can* enter cities. This increases the amount of congestion during those time periods. Planners think it's a great idea but don't look at the business cycle; it could push more freight traffic into the commuter cycle.
- Limiting trucks during commute time, there are big pushes in very early morning hours, many trucks during one time of day vs hours of service requirements. Trucks build up on outskirts, then there is a mad rush to make deliveries. Does not work.
- Customers may not be open early mornings so need to have all times of day available as it depends on their business hours.
- Avoid business operating constraints, for example no deliveries over noon hour.
- Long beach containers going out and back - delineate between over the road traffic delivery and appointment times when coming from far away. We can't get there three hours early and then wait for a delivery appointment.
- Some companies choose Portland peak hour time to avoid Seattle peak hour time; we have to watch out for unintended consequences.
- Freight is more nuanced than other travel. The materials for this project need to reflect this.

Chat comments from the breakout group:

Kim asked are there particular times of day that are most important to your business.

Our routes initiate out of Canby as early as 2am, but those are to get to outer markets. As you gravitate toward Portland proper, those routes get on the road at 5-6 am. Many return by 1-2 pm but several return as late as 6pm. Especially during our peak season from Memorial Day to Labor Day (speaking for Columbia Distributing).

From Kim Ellis, Metro (she/her) to everyone: 09:51 AM

People and goods can get where they need to go by a variety of options?

From Glen Bolen to Everyone: 10:06 AM

Mark, do they limit trucks during the commute time, or during quiet zone hours?

From Becky Knudson to Everyone: 10:08 AM

Hours of service also impact demand for parking when they are required to stop for the day. Parking supply is short and illegal parking has safety implications as well.

From Mark Gibson to Everyone: 10:08 AM

Absolutely

From chat in the large group:

Becky

Travel time and speed are directly related, yet the policy elements identified do not overlap. These two also directly relate to travel time reliability. All three of these have time-of-day implications, but the time-of-day and day-of-week aspects are different for freight movement vs passenger movement.

From Bill Burgel to Everyone: 10:34 AM

If we are planning 20 years into the future and, according to Biden's recent policy and the State of California's planned mandate, gas & diesel propulsion will be phased out, shouldn't this group be discussing the implementation of these potential changes?

Becky

The fastest way to reduce VMT is to go into a major recession. We know Oregon will grow and so will the demands on our limited infrastructure. These measures should monitor performance with respect to policy goals and intent.

Second breakout notes: Measures

The group commented on the following measures.

Accessibility to destinations

- Gateway is an example of super accessible.
- In first discussion, we talked about downtown and focused more on vehicle access. A person's daily need access means different things for different people.
- Looking at people, and businesses/employers (access to goods and access to do their business) - this is a big one.

System completeness

- Struggling with the language. Planned facilities are limited by our budget. We will have an incomplete system which will impact our performance. We can complete the system but at a much slower pace given competing needs.
- This is an incomplete definition.

Level of stress

- Looking at definition of safety of bicyclists and pedestrians. Trucks that share a lane or bike lane with no buffer creates a great amount of stress for a truck driver and is a safety concern. Is this measure just about bikes/peds? This measure should include more than bikes.
- Technical analysis only done for bikes, and are now adding pedestrians. Would be awesome to do this for freight. If a workplace project could open this door that would be great.
- There is an ODOT and OSU simulator for bikes, cars and trucks to look at trucks and how they interact in roundabouts. Differences in how trucks operate and react - there are many different variables.
- Mandate to go to EVs cars and vans – businesses will have to put in car chargers - if technology changes in 5 years, there is a heavy burden on businesses.

Travel time/trip variability

- Reference to earlier discussion about truck driver operating hours.
- Where to locate origin facilities? Leaning towards neighborhood level, zip code based, smaller freight hubs because of unpredictability of travel times across the Metro area. Goal to complete deliveries in smaller zones to avoid traffic complications. In terms of land use – where could these origin facilities be located? There is a gap – closer in distribution facilities could offer efficiencies.
- Access to destinations could be a companion to accessibility to origins.

Chat comments from the breakout group

Kim

Very cool Dan. I've seen examples online of European cities that have small "breakdown" yards at the edge of old cities that weren't designed in the automobile age.

Glen

Kim, we should chat with Tim about this - possible TGM grant?

Potential Mobility Policy Elements

Access

All people and goods can get where they need to go.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.

Reliability

Travel time is reliable or predictable.

Safety

Available travel options are safe for all users.

Travel Options

People can use a variety of travel options.

Freight isn't one thing - there is a diversity and variety of types

Travel Options in terms of freight: measure types and numbers of vehicles on the road.

Access is important too. --we are using trucks through ALL types of roads

Freight is increasing as a result.

Freight specific ones: time efficiency and reliability

The more congestion you have, the more climate impacts. Efficiency really impacts this.

get to outer markets. As you gravitate toward Portland proper, those routes get on the road at 5-6am. Many return by 1-2pm but several return as late as 6pm. Especially during our peak season from Memorial Day to

depend more on commerce. Safety expects (last mile) very.

CHANGE WORDING: "People and goods" can get where they need to go by a variety of options

Safety is important for freight too

Access and reliability are most important - in ALL contexts

Starting the travel options starts with "people" diminishes the freight aspect. Could be "people and goods" instead.

time efficiency is really important in their business

yet the policy elements identified do not overlap. These two also directly relate to travel time reliability. All three of these have time-of-day implications, but the time-of-day and day-of-week aspects are different for

Time of day is important (reliability and predictability changes)

Time of day?

Hours of service also impact demand for parking when they are required to stop for the day. Parking supply is short and illegal parking has safety implications as well.

There are some companies will hit Portland traffic to avoid Seattle traffic.

Limiting times when freight can enter the city (like in CA) this has a negative impact on us.

Important times of day can depend on the customer's hours.

Mixed-use area context

The mixed-use center: often there is no place to park the delivery truck in this environment. It's a safety issue.

The mixed-use has expanded access for bikes, buses and people walking. Can it expand access for delivery trucks too? Dedicate some parking areas to deliveries?

Highway context

Time efficiency is most important in the highway example -- how about a dedicated lane for freight.

Pushing this has tangential impacts - EV's need power stations, powering up an EV' takes longer, power stations at businesses would create a significant capital investments and require long term planning (and

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.

Pedestrian Crossing Index

The distance between pedestrian crossings compared to a target maximum distance.

System Completeness

The percent of planned facilities that are built within a specified network.

Travel Speed

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance, by different modes.

Hours/Duration of Congestion

Indicators of congestion severity that assess on-time arrival and travel time variability.

Travel Time Reliability

The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population.

Travel Time

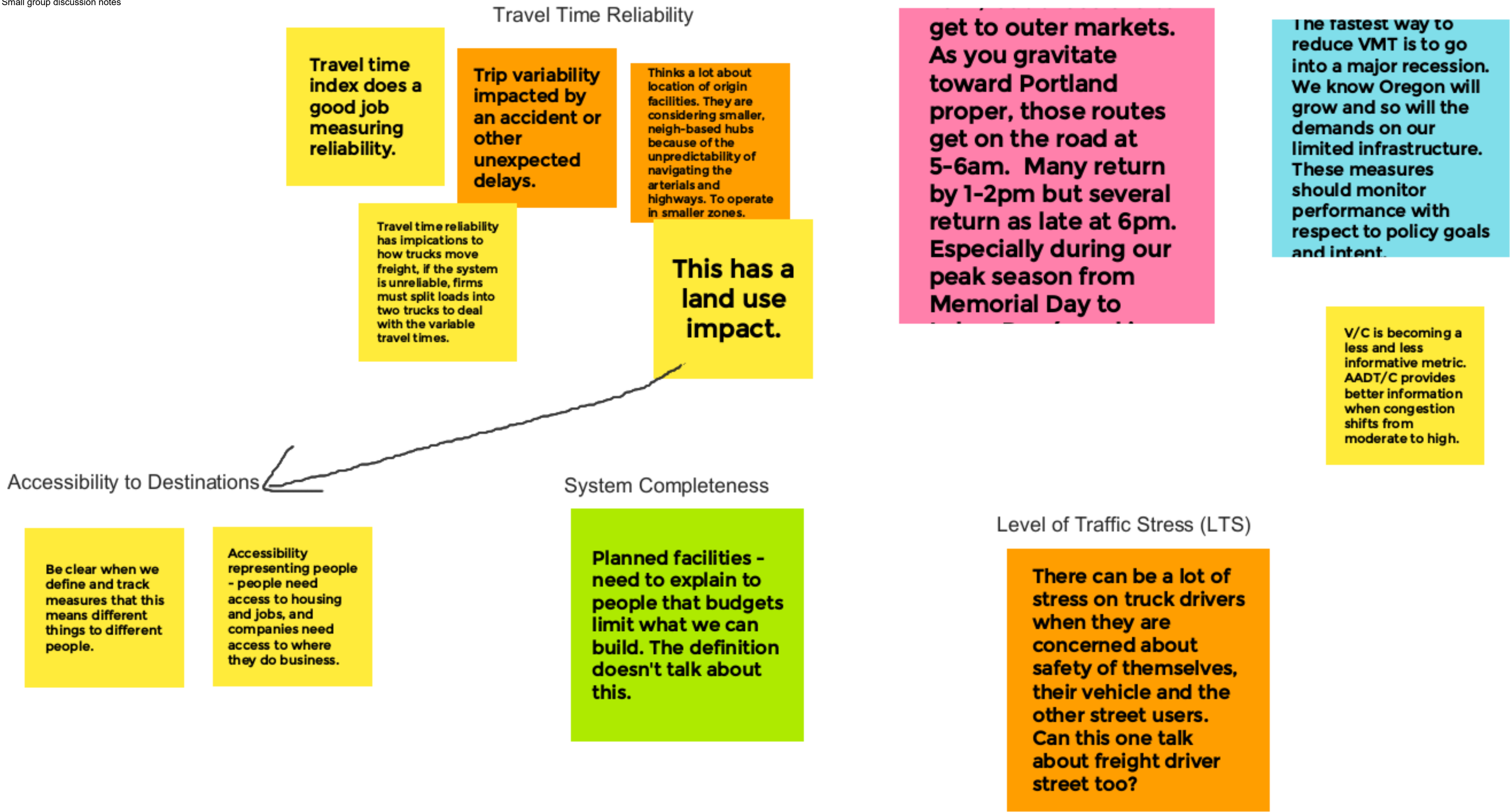
Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

V/C for Roadway Links

The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.

Volume-to-Capacity Ratio (V/C) at Intersections

The ratio of traffic volume to the capacity of an Intersection during a specified analysis period.





Metro

600 NE Grand Ave.
Portland, OR 97232-2736

Agenda

Meeting: Regional Mobility Policy –
Practitioners Forum (Session 2)

Date: Friday, April 30, 2021

Time: 9:00 to 11:00 a.m.

Place: Zoom virtual meeting

Click the link to register for this meeting:

<https://us02web.zoom.us/j/84451234567>

AGENDA

9:00 AM	1.	Introductions and Workshop Purpose	Allison Brown, facilitator
9:15 AM	2.	Large Group: Metro/ODOT Regional Mobility Policy Update & Policy Elements <ul style="list-style-type: none">Review of project goals, objectives and timelineGrounding in RTP and OTC prioritiesShare mobility policy elements	Kim Ellis, Metro Lidwien Rahman, ODOT
9:30 AM	3.	Small Group Breakouts: Policy Elements	Facilitated discussion
9:50 AM	4.	Large Group: Mobility Measures <ul style="list-style-type: none">Overview of the potential mobility measures	Susie Wright, Kittelson & Associates
10:05 AM	5.	Small Group Breakouts: Policy Measures	
10:45 AM	7.	Large Group: Re-cap and Overall Reflections <ul style="list-style-type: none">Review the topics coveredGather final thoughts and reflections from the group <p>Poll:</p> <ul style="list-style-type: none">What are your top 3 measures from the list we covered?	Allison Brown, facilitator
10:55 AM	8.	Next Steps <ul style="list-style-type: none">Other outreach activitiesTesting measures and technical work	Kim Ellis, Metro
11:00 AM	9.	Adjourn	Allison Brown, facilitator

April 30 Forum Notes

Breakout Room Attendees: Ted Reid (Metro's planning department, land use planner), Ryan Makinster (Home Builders Association [HBA] of Metro region, handles government collaboration), Roseann Johnson (HBA of Metro region), Susie Wright (Kittelson, on the project team), Molly McCormick (Kittelson, on the project team)

Breakout Session #1:

- Most interested in how the technical aspects of this project will impact master planning, comprehensive planning, UGB concept planning efforts into the future. Looking forward to walking through the case studies in the future to share more of these application impacts.
 - Interested in how the new criteria and definitions for mobility could be applied to potential areas with future housing and population growth.
- Want to update the mobility policy because it currently focuses on measuring mobility through by vehicle delay at intersections. To move forward, we need to define what is mobility and what the region wants the mobility policy to look at.
- For their more policy-focused work, more about community members voicing concerns about mobility and growth. Not part of the group that is considering if the v/c ratio target or standard is met.
 - If new homes come in, how will the existing community be impacted? More people that don't have sidewalks to use. More people to drive down a two-lane road.
- Rock Creek area in Happy Valley is one place where HBA is working. There is discussion of how this new policy will hopefully help get them past the finish line.
- Anything missing from this elements list? What are the ones that come up most when talking to the public?
 - Definitely hear a public focus on safety and access, including goods access for businesses/restaurants.
 - Travel options and access to travel options. As part of an equity lens, want to address needs for different people. Not everyone has the access to all modes.
 - Don't design just for cars, thinking about connections for mass transit, bikes, and other modes. Not just cars.
- Often forced to analyze in a trade-off perspective. Either shave off a few minutes of delay or make investments in safety enhancements. Will often hear from the community that safety is more important.
- HBA considers access in different buckets based on the housing product (mixed-use, ADUs, remodels, new single family detached, etc. they cover the full housing product spectrum)
 - Mixed use – access for both residents and site patrons. Long-term and short-term parking
 - Mixed income subdivision (attached and detached products such as Orenco Station) – more people having their own vehicles and wanting access to the roadways.
- As looking at a definition of mobility that is more holistic, we will still need to think about how and where that ability to move in a car is most important and how to balance that investment.

- After defining mobility, there will be different priorities in different contexts. It will be focused on these five elements, but how are they applied in different land contexts.
- And that is where the transportation experts can be very useful. Know how close a development is to a certain of transportation facility or how the network is laid out.
 - From a policy making perspective, it could change the rules for whether a development is feasible. Want it flexible enough so that can consider future growth in an already urban setting.
- Access and travel options seem to have some overlap. Both include “people can get where they need to go”. Travel options may be more of an expansion of the access element.
- The actual home builders may have a different answer around the element consideration. HBA is involved more at a planning level.
- Access, safety, and travel options are the easier ones to define and work with developers on. They are simpler so can check the box. Reliability is a subjective term that will need to be well defined.

Breakout Session #2:

Added Brad Choi to the group (with DEA, previously with Hillsboro as a transportation planner)

- Measures most interested in discussing:
 - Accessibility to destinations is important to HBA. Where people live highly depends on access to the things they need.
 - LTS – this is a desire of mixed-use developments; access to parks is an emphasis and people would rather walk than drive to those recreational uses.
 - System completeness seems like a fundamental measure, and it will be important for different reasons in different settings.
 - Pedestrian crossing index will be important from a development perspective. Getting to the multimodal aspect.
 - Travel speed and hours of congestion are less important.
 - There are going to be so many changes around how/when/where people work in a post-pandemic world. Think these measures should be deemphasized considering don’t know how many vehicles will be back for commuting reasons.
- Ease of measurement for these measures vary. It makes sense in spirit but some of them will be challenging to measure.
- How many measures is conceptually ideal?
 - Hoping for less than 12 for testing. Testing will think through how practitioners would use these measures and hopefully pare down to 3-4 with clear guidance around contexts: for the freeway system, X measures are most important; for the arterial system, Y are most important; in a specific land use, Z are most important, etc
- Already know that the freeway is focused on vehicular mobility.
- Echo note that different measures for different contexts is so important. When looking at a downtown, v/c isn’t as useful a measure because already built out and expect congestion.
 - Want to be able to apply different measures depending on the context.
- What is the difference of v/c for roadway links versus at intersections?

- Roadway links can look more at a network level and identify link bottlenecks in the system. Identifies roadway network needs such as better connectivity or additional thru capacity.
- It is much easier for an intersection to be a bottleneck.
 - Could have a roadway that has plenty of capacity with one intersection that causes delay.
 - Sometimes don't want to build out an intersection because of it being very wide for pedestrian crossing or being a designed stop on the corridor.
- Accessibility to destinations will need further definition of "accessibility" when focused on a more localized area versus the whole region or city.
- System completeness only works if have a "complete" system in mind. Is it just a sidewalk and bike facility for certain roadway classifications? Is it a low-stress network? Will get more out of this measure when the planning gets more nuanced.
- See two buckets across the measures
 - Measures that are foundational – these need to be the starting point of our transportation system
 - There should be a complete system, it should not be stressful to travel, etc.
 - Measures that get at degradation of the system
 - v/c and travel speed
 - As there is regional growth, the same system starts to see degradation of the experience.
 - Considers how do you have growth pay for its fair share.
- The more those foundational measures are the focus, the more the region is looking ahead in terms of development in all its forms. Land is not just sitting as consider whether the v/c rat.
 - For example, the Rock Creek area is caught in a v/c-created travel cap that couldn't be addressed because it says that this is a car-dependent area.
 - Have to start building in measures that say system completeness and modal choices are a priority.
 - Want to be able to develop instead of having land sit there when so much effort has been put into planning. Waste of resources and time.
 - Should be are chasing the land use vision, not a v/c target.
- If can't afford the transportation facility to meet v/c for that land use, what do you do?
 - Sunrise corridor as an example. Planned land use and transportation system including this facility but was not always in the financially constrained plan. Then developments that try to meet the planned land use are unable to meet v/c standards.
 - Important to note the financially constrained list is still theoretical and not tied to a specific funding source.
- The v/c measure at the link level is important for system-planning. Example of sunrise phase 2 being in the constrained plan and that having important reasons for being included, one of which being future growth

Mobility Policy Forum 2 – Transportation System Planning Group2

FACILITATOR: LAKE McTIGHE

Breakout #1 – Policy Elements

What questions do you have about the policy elements? What needs additional clarification? Are these right? Are these the most important elements to include in the updated mobility policy? Is anything missing?

Scott: thinking about how new elements apply to the mobility policy, wanting to make sure that the volume and capacity measure is still proposed to be included in the mix, maybe it's weighed differently, maintaining some of the old; there's a fair amount of overlap with the elements, I'd like to see how VC is built in to some of these

Lake: sounds like you're saying that the policy elements are moving in the right direction, and want to include VC

Scott: open to seeing if other measures or a combination of those that encompasses it; fits within any of the policy elements

Lidwina: I agree Scott, there's a lot of overlap

Scott: Yeah and I think that's okay

Dave: it's been interesting thinking about all these over the last year; I think the elements are pretty comprehensive; I think you're covering important areas we need to cover; I don't know that I would say we need to change them

Lake: one thing we hear is that climate is not reflected enough in these elements

Dave: that's a good point to raise; when I think about performance measures and outcomes, I'm always thinking about climate; our transportation system has biggest impact on climate

Lake: what are your thoughts about folks saying access is the most important element for mobility?

Scott: at the state level, we have goal areas for each, for accessibility as a whole category and mobility separately; depending on how you define them and what context, they are absolutely tied together, but I think it depends on the context; like access through and within

Dave: often times we start to get into semantics; one of my interests in this whole process is when it gets down to the practitioner level, I'd like to see the ability to not rely on overseeing; having more tools to look at system impacts

Lake: I'd argue that safety is multifaceted; what we're seeing in the pandemic is that free flowing roads aren't always safe; for example more congested roads

Scott: I'd agree that the oversee isn't the only way to get at these categories; with this kind of set of policy elements, we're able to bring the multimodal perspectives to mobility; these policy elements can help us find a good balance to better understand impacts

Breakout #2 – Policy Measures

Dave: I like system completeness and thinking about all modes

Carl: I agree, I like system completeness; the bottom 5 or 6 are tried and true and have demonstrated their effectiveness; VMT, curious about this one and how we hope to apply it because the needle doesn't move very much

Dyami: I have questions about VMT as well; accessibility to destinations is another challenging one to potentially work through

Scott: I like the ones that have been mentioned; the only one I'm thinking of is travel speed; it's a data point that's important to be considered, but I'd like to know more about how it would be applies

What's challenging about accessibility to destinations

Dyami: the tools used for this are usually a travel demand model; usually it's been a 30 minute travel time between destinations; I'm not sure if you can really get at all modes that way; you can use GIS for other network analysis; I think just providing a little more definition about what that is; there's a number of things in there; it's an interesting measure

Scott: In the effort to try to get at some of the regional goals, it could help provide some of that information; providing mobility that enables access to a community; it's a valuable one; a number of these measures will have the challenge of what data is available; there will have to be standard way to measure to apply it

Carl: it comes down to what questions you want to answer; we've used it as an equity analysis to measure job destination accessibility; you usually have to go to GIS; we find it helpful to find weakness in the systems; the other measures don't get at that; it's a layer of analysis that we typically haven't done it in the past (at the local planning area)

Scott: how are destinations expected to be categorized?

Carl: we had a checklist

Dyami: we used "essential destinations" which is the term we used

Scott: I wouldn't just want to leave it up to me or a practitioner; I'd like for the community to provide some feedback; I'd have my own biases; how does the community that it impacts feel about their essential destinations

Carl: I agree but there's probably a core set that we might have to start from; generalize across communities and how do they compare to each other; it'd be interesting to be able to compare community accessibility

Dyami: access to transit, is a potentially a key destination

Lidwina: I think we'll start with essential destinations in RTP, I agree you need to do both, travel demand model & GIS; one thing about access, when you get to smaller destinations like hospital or grocery it's difficult to forecast; when it comes to equity, if certain groups don't have access to certain destinations we need to work on that now; time is another dimension that I wanted to point out; switching to accessibility is a profound change because it gets to the why people drive, walk or take the bus

Scott: it also brings more attention to barriers besides congestion, I think that's a really good thing

Dyami: want to add that taking from the plan amendment and the impacts that it would have; set standards and parameters and be clear; reduce the amount of discretion and have some uniformity across the region; the challenge will be having those be clear by mode and time spent;

Lake: so another way to say that, clearly define the destinations and the area by which what is included in that

Dyami: so we think about school walk zones being a mile, is that realistic?

Lake: what is the travel shed that should be included in that analysis?

Scott: I'd be curious to see how this one pans out in the case studies (accessibility)

Scott: I'm thinking of some of the ones we deleted that have crossover; we could dwindle them down and collapse to address multiple outcomes depending on which mode you're thinking about; pedestrian crossing index & system completeness

Dyami: travel time & travel shed could also combine

Lidwina: and it depends on system planning or planning amendments; any particular system planning could have more amendments; there's more wiggle room for jurisdictions

Lidwina: VMT; they use regional planning model, create spreadsheets, for plan amendments and travel models, find significant impacts to see if you're above or below average; the metro model can calculate VMT; question is how do we apply it at a smaller level

Lake: in vibrant downtown, you have high congestion but lower VMT, and in other places it's the opposite; so it's trying to bring in a little acceptability of congestion if VMT is lower

Scott: it seems like it would have to be combined with consideration of travel options and other levels; it might be hard to bring value from it in the way you want to, but if it's combined with accessibility, pedestrian crossing index

Dyami: it seems like an incomplete picture; mode switch could be more telling

Carl: is VMT to reduce emissions?

Lake: applies to safety, lower VMT = less traffic

Scott: could be in combination with speeds & VMT

Lake: urban areas/larger cities with low VMT have lower fatality rates

Notes from Mobility Policy Forum

What question do you have about the policy update?

Karen - Measures for getting to work fell off from Access. How will we take into account the background information where the points that ppl need to get to, the relationship, how will that influence mobility.

Glen - to get access you need to have diversity of land use, so you can have accessibility. It's an evolving category.

Dyami - a space and time issue. Behind this there is context, how will we apply these in context. Depending on time of day and local. Those are important to consider.

Glen - we are talking about more what do find important, then use the case studies to show how we can get there. We need to be looking at the roadway classifications. Where we use mobility now, so often in planning amendments. New policy is so we can look at that. Current policy can hinder a number of processes for UGB

Marty - is there a hierarchy or are they equally weighted. Access and Safety are the two that speak to equity. The other ones are about movement of vehicle. How she is organizing. How does Climate fit in, is TO the only one that addresses?

Karen - how is air quality factored in, a subset is climate pollutants. Not that it wasn't included, the impact are examine in other processes and required policies. While Mobility was related, it wasn't the place to measure air quality. I think it would be beneficial to call them out or explain where they fit.

Glen - there are a lot of goal, how we define this as the mobility policy?

Dyami - it kinda muddies the water. Mobilty warrants its own goal. Reliability is the most important in the list. He see other areas, being reached through Reliability.

Glen - we can be reliably bad. Freight is very interested in this.

Anna - encouraged to have WA in the group, good to have their perspective.

Hector - what are we missing?

Steve - a broader picture of mobility itself including livability of our neighborhoods. Cut-through neighborhood, through policies or tolls that impacts the quality of life. How do we capture that? It's implied, but not stated.

Session 2

Marty - system completeness is getting at the livability that Steve brought up. We have areas that have significant transportation deficits.

Will these metrics provide us with the right information?

Karen - how does hours of congestion include bikes, walking and transit. Can see a little with transit as they get stuck in traffic too, but others it's not much impact.

Will these measure be useful and will they capture community need?

Will these be too hard to calculate, secondary, primary?

Steve – TSP work says the hours of congestion is useful to understanding livability. It's a different story that peak time than it will be congested all day. We will soon have areas that will be congested all day, which can help tell that story. What's missing – something to identify safety, more than bike/ped safety. Majority is rear-ended are injury crashes.

Marty - questions about travel speed, travel time, and Multi-Modal Level of Service. Is this saying higher speeds are good or bad? Why measure speed rather than reliability?

Anna – the question is often “for whom”. Disaggregating that data is important. Is it impacting folks who are already experiencing delays due to other factors?

Hector – what measure should be added?

Anna – one could be a vulnerability metric that could overlay, that could help get at the question for whom.

Marty – I like that idea, are there bands that address, or is there a hierarchy. I want to sort or rank them. And wants to see the direct connection for Climate, Mobility, Equity. We have a regional benefit – the MAX – and we can't access it because of LOS and mobility plan barriers. It was in 2008/09. There were also ODOT and some community opposition at SE 60th and Glisan is the example.

Glen – we don't know what wasn't adopted. That would be a case study. If we had accessibility as a factor we would have an easier path. It was an onramp on 60th that ODOT was able to block it.

Steve – (back to crashes). Someone is stopped in the right of way, and someone doesn't realize they are. I'm sure it applies to ODOT facilities. Congestion, turning. WE need to be aware of and consider how we incorporate those issues in this process. WashCo also have those issues, due to community opposition. Highest density allow is around the Sunset Transit Center.

Hector – previous implementations are a barrier.

Glen – there was a bill to make that development is allowed within a certain distance of transit.

Hector – what could we be more equitable? How do we increase benefits to areas that have been historically underserved.

Marty – like what Anna said. Ped deaths at crossings is really top of mind, maybe a case study on that highlights that.

Glen – social equity and pedestrian injury. This policy can help with STIP.

Karen – Maybe environmental impacts is an outcome/cost to enhance mobility. Hearing if phrased as an outcome from Susan. I can see VMT per capita. We can get those numbers elsewhere. VMT is probably the closest of what pollution implications. Important to keep that one. What data are we using? We

need to be transparent and flexible and be willing to consult different data sources. You can pick and choose your data to tell the story you want to tell.

Marty – Closing statement - Is this aggressive enough, when we think of equity and climate change? Just an overarching question.

Glen – what I'm hearing is different part of the region, and their priorities.

Hector – how innovative are we being.

Glen – a lot of folks say make it simple. It needs to be measurable. We have to trust the models. Diversity over Density wins, and it's complicated. You can put a value to things that are important and measure them.

Practitioner Forum #2 Small Group Discussion

Facilitator: Eryn Kehe, Metro
Notetaker: Kim Ellis, Metro

Steve Williams, Clackamas County
Jamie Stasny, Clackamas County
Matt Herman, Clark County
Peter Hurley, City of Portland
Jon Makler, ODOT Region 1

Elements Discussion

Peter Hurley, City of Portland

- Travel options – it is one thing to provide travel options, but the options must be viable (e.g., bike lane next to high volume/higher speed traffic vs. cycletrack that is separated from motor vehicles).
- Add modifier to travel options statement, e.g., “...variety of effective/viable travel options. The viability/effectiveness could be measured using mode share – if drive alone trips are shifting to other modes, then they must be viable.
- Trying to understand the practical applications of the measures and their implications. We want to address existing deficiencies in equitable way that reduces existing disparities/inequities in the system.
- Space efficiency is missing in the elements – without that we are unlikely to have travel time reliability or time efficiency.

Matt Herman, Clark County

- For whom is missing in the elements – we are trying to provide the same transportation system in all areas for all people but likely needs to be different in different areas based on user needs as well land use and transportation context.
- Elements so not reflect the integration of modes/connectivity between modes – this is an important element of mobility.
- Example given of walkshed to transit – who can get to transit within a 10-min. walk of homes and job centers.

Someone asked whether we should be bringing emergency preparedness into this work.

Measures Discussion

Peter Hurley, city of Portland

- Access throughout the day is more important than duration of congestion
- Reliability is more important than duration of congestion or travel time
- Missing: person throughput and mode split
- PT – if you are looking at a finer grain, it is more valuable than vehicle throughput - it gets to time and space efficiency

- Mode share – there are pros/cons but it is an effective measure to look at the quality and availability of options and whether we are using the system efficiently - tends to look at past investments and doesn't model future investments well
- How do you ensure you are measure the quantity and quality of system – system completeness – perhaps combining system completeness with some sort of quality measure.
- Is travel speed the right measure – shouldn't we be looking at the whole trip?
- Volume-to-capacity ratio doesn't measure time or space efficiency

Matt Herman, Clark County

- We know how to count cars - counting bikes and peds not yet standardized and needs to be
- Difficult to get the infrastructure in place to be able to count them – need to be practical about the data available
- Access to destinations – worry about going the other way – 15-min. drive time vs. 30-min walk time
- v/c issue – commercial to residential – the v/c improves under this zone change so they can't challenge the change which, in effect, takes away jobs

Steve Williams, Clackamas County

- Instead of having single multimodal LOS – have a LOS for each mode
- The LOS that is appropriate for each mode for different land uses varies
- Needs to be nuanced enough to tailor for different land use and transportation contexts

Jon Makler, ODOT Region 1

- Accessibility is my number 1 measure – converting industrial land to residential example – if you say in our region, how many people can get to work within 20-min., v/c test doesn't tell us that in a land use decision
- If we are talking about the thoroughway system - we need to ensure it is functioning well in terms of speed – for thoroughways, speed is a value. Speed isn't a high value in a downtown area.
- Inadequacy of basic transit service an issue in Clackamas county – within a certain transit commute you may have a lack of transit service and/or poor access to transit – how many people can get to work by different modes within a certain period of time. This is also applicable to freight in terms of access to ports, marine terminals, through the region

Matt Herman, Clark County

- Data collection is an issue but there are advances
- Out of direction travel is an impedance – having well-connected street, bike and pedestrian networks is important.

Jamie Stasny, Clackamas County

- Modeling – regional model doesn't get at queuing well – what tools will be used to support the transportation analysis needed?

Regional Mobility Policy – Practitioners Forum (Session 2) April 30, 2021 notes for transportation and engineering group.

1st Breakout – Policy Elements

- **What comments/questions do you have about the policy elements?**

Judith Grey: Transportation Systems Planning has lots of other measures than volume to capacity ratios. Reliability is very important for TSPs and these plans encourage other modes and improved safety.

- **Are these right? Are these the most important elements to include in the updated mobility policy? Is anything missing?**

Brian Hurley (ODOT): All the elements listed are great and I can't think of anything that is missing. ODOT's climate office is looking at balancing economic and environmental goals. Measures should include access and network completeness for all modes of travel.

Dominique Huffman: We should keep elements as simple as possible to understand. For the different elements listed, I think they are great. Possible to combine some of the measures.

Chris Johnson: I would add to travel options – travel time, efficiency, and reliability. Some measures are hard to get at.

2nd Breakout – Policy Measures

- **Are these metrics going to produce the information needed to measure success on the five mobility elements?**

Judith Grey: MMLOS is a good measure and has been looked at in other places. The definition of this measure is hard to get to and have agreement around.

Dominique Huffman: I thought maybe the first three measures could be grouped, but now I'm thinking they are defined differently.

Judith Grey: The RTP has standards for pedestrian crossings that are important. VMT per capita is useful.

Aaron Breakstone: Yes, we also use VMT per capita.

Brian Hurley: I agree with this set of measures that has 3 pedestrian oriented categories and 8 more auto oriented categories. The one thing missing is a transit oriented measure. Are there data gaps in the Systems Completeness Measure?

Chris Johnson: That attribute is pretty locked down. While we were not quite there on pedestrian measures.

Are travel time and speed redundant? In urban areas, travel time is likely more important, whereas speed might be more important in urban areas

- **Will these measures work for you in practice/in your community?**

Dominique Huffman: I think the elements capture the goals. The measures are quite a bit to cover. How are we determining if the measure has indirect or direct impact? (Grace asked the question in the chat)

Judith Grey: We will have to see how these measures work with development review and give our feedback.

- **What measures make sense in what areas/contexts (urban areas vs. industrial areas, for example?)**

Judith Grey: We could add transit context to some of these measures, like including specific transit travel time.

Brian Hurley: Will there be benchmarks and targets for some of these measures? Geographic context could be a positive or negative. ODOT climate looks at a whole region for context.

Chris Johnson: I'm trying to see if travel time and travel speed may be redundant.

Aaron Breakstone: Accessibility is an important measure, but can be hard to model and measure. Shopping opportunities are a hard thing to quantify and are an example of something related to accessibility that is hard to get at.

Brian Hurley: Level of Traffic Stress combined with volume to capacity ratios for roadways would be a good set that shows a balanced approach.

Regional mobility policy practitioner forum – Group 1 (Kate & Noel)

Group members:

Laura – City of Oregon City

Marah – ODOT Development Review planning lead

Kate – City of Beaverton planning

Roseann – ODOT, OHP policy amendments

Joseph – City of Hillsboro

Discussion 1: Mobility policy elements

Discussion questions:

1. What questions do you have about the policy elements? What needs additional clarification?

Context of how we got to these

V/C measured differently at Metro travel demand model then Dev Review/Land Use – being treated as if it's the same. Should we be creating two different standards as they are calculated differently?

- State and local can strive to meet Metro policy. Locally we are looking at things at finer locations vs. regionally
- Disconnect between long range planning and how it gets implemented through TSPs and actual development – are they translating down?

How do these trickle down to local level?

Travel options – how to make them more equal to access, not just that they exist

2. Are these the right elements? Are these the most important elements to include in the updated mobility policy? Is anything missing?

Might be missing larger connection to other policy areas like land use and housing, very specific to transportation.

Missing equity as a policy element

Climate

Being able to pinpoint policy that we could adopt in our code – it is powerful to require in development review that is legally defensible

Discussion 2: Mobility policy measures

Discussion questions:

1. Looking at the list of measures. Which one stands out to you; which do you want to talk about today, and why? Then, for each measures selected ask:

Accessibility to destinations

- Will there be a bias against suburbs?
- Is this a land use thing or a transportation thing?
- How would this be implemented?
- This is a good measure – it gets to the crux of what we want to do; but how do we do it
- Which modes, what are ‘essential destinations’ – will that change over time
- Creates more questions than answers
- Let’s say we are measuring for pedestrians: ½ mile walk on a 7 lane arterial vs. ¾ mile walk on separated paths? Perhaps the measure could be broken down by better assumptions
- Using travel time for destinations will be very difficult to do – where do you measure travel time from? Delay could be better
- Hillsides/streams – it might not make sense to add connections to make things more accessible
- If climate/equity was clear in policy – maybe this measure would only apply for modes outside of motor vehicles.
 - o Ambiguity in the policy allows for us to wiggle around and not address what we actually want to achieve
- Transit service relies on density/destinations – gaps in the network could be useful for this. TriMet has it’s way of measuring, how to bring that in as well.

Is Metro doing a look back – we’ve had these policies in place for awhile (2040 plan, RTP updates); what is the problem we are trying to solve and do we think we are actually going to get outcomes? What are the outcomes going to be as a result of this work? What are the lessons we have learned?

Pedestrian Crossing Index

- Fear of liability that we are setting in place – might be other reasons for not putting a crossing from an engineering perspective
- State law of every intersection being a crossing
- This is looking at enhanced crossings – correct?
- Need to define enhanced crossing based on the type of road
- Is it too narrowly focused by just looking at distance instead of quality/connectivity/ADA etc.
- Define an area and how many crossings should be in that area vs. specific distance between crossings

Travel Time

- Our minds often go straight to freight/vehicle travel times – is the idea to think broader about different modes? Not clear in current language
- Can have unintended consequences if not clear
- Interrelation between modes, too – if one goes up and one goes down, what does that mean?

- Could potentially be a good measure for equity – the amount of time people have to spend commuting, time/money spent on transportation.
- Time is a precious resource – it really matters if you are low income and traveling long distances, shift work, multiple jobs, etc.
- More transit is needed in suburban contexts – which is outside of control of local jurisdictions, need TriMet to expand. Would love to have more of a standard, but issue is getting TriMet on board and funding so we can expand it
- Systemwide – are we looking at gaps in transit?
- Looking at Portland’s equity framework on transit gaps & PedPDX – is Metro doing that?

Potential area for case studies:

- Cooper Mountain planning area

Potential Mobility Policy Elements



Hi

Access

All people and goods can get where they need to go.

Time Efficiency

People and goods can get where they need to go in a reasonable amount of time.



test

Reliability

Travel time is reliable or predictable for all modes.



Nice to be
with you.

Safety

Available travel options are safe for all users.

Travel Options

People can get where they need to go by a variety of travel options or modes.

Policy Element Discussion Questions

What questions do you have about the policy elements? What needs additional clarification?

Are these the right elements? Are these the most important elements to include in the updated mobility policy? Is anything missing?

**Surprised
not to see
climate
listed**

**Hooray for
multimodal
performance
measures that can be
adopted at the local
level which would
support current
planners writing
nollan/dolan findings
where exactions are
required.**

**Equity is
missing**

**We need to ensure
these measures can
be implemented,
not manipulated,
and the ability to tell
a story. These
measure should be
run by engineers for
input.**

**travel demand model
(Metro assigns
capacity) versus how
it is calculated on land
use application (HCM
assigns capacity).
Based on this, is it
worth looking into
having a regional
policy that is different
than what we apply
on the land use**

**Consider how
policies trickle
down to the
local level**

**All travel
options need
to be
considered
equally.**

**Difficult to
implement
regionally-focused
measures at a local
level. Do we need
multiple sets of
standards for
different scales?**

**Does this
adequately capture
the context of urban
design and
tradeoffs made?**

Multimodal Level of Service

System that measures the quality and level of comfort of facilities per mode based on factors that impact mobility from the perspectives of pedestrians, cyclists, and transit riders, respectively.

Level of Traffic Stress (LTS)

Classifies points and segments on routes into different categories of stress ranging from 1 (low stress) to 4 (high stress) based on factors that correlate to the comfort and safety of the bicyclist or pedestrian using that facility.

Pedestrian Crossing Index

The distance between pedestrian crossings compared to a target maximum distance.

System Completeness

The percent of planned facilities that are built within a specified network.

Travel Speed

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance, by different modes.

Hours/Duration of Congestion

Indicators of congestion severity that assess on-time arrival and travel time variability.

Travel Time Reliability

The number of hours within a time period, most often within a weekday, where a facility's congestion target is exceeded.

VMT per Capita

The number of miles traveled by motorists within a specified time period and study area, per the study area's population.

Travel Time

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

V/C for Roadway Links

The ratio of traffic volume to the capacity of a roadway link during a specified analysis period.

Volume-to-Capacity Ratio (V/C) at Intersections

The ratio of traffic volume to the capacity of an Intersection during a specified analysis period.

Cities, like Hillsboro, is lacking transit due to limited funding. We may need a regional policy to focus on gaps of transit.

Accessibility to Destinations

The number of essential destinations within a certain travel time or distance, by different modes.

How do we determine what is an essential destination?

that benefits a certain party. The length of the travel time can also wash away a congested point that needs more focus by having a moving section and congested section within the same link making the link look

This is related to travel time. Where do you measure travel time from? Delay may be a more effective measure than accessibility.

Destinations will be different for different modes.

Love it. But this raises more questions than answers.

Frustrating to not see equity or climate being very explicitly called out as policy elements. If they were, we could say for sure that accessibility is about walking and walking (not improving accessibility for vehicles).

Natural barriers (hillsides, streams) will always impact accessibility. How do we factor that in?

Pedestrian Crossing Index

The distance between pedestrian crossings compared to a target maximum distance.

Is this too narrow focused?

Does this provide a new tool, allowing local govs to require developers to build new crossings as conditions of approval.

Plug to look at Cooper Mountain area as case study. Lots of hillsides and natural resource areas that create barriers to connectivity.

Creates a liability. What happens if someone is hit at a unmarked crosswalk. Attorneys can look at this index and say there should have been an enhanced crossing.

that benefits a certain party. The length of the travel time can also wash away a congested point that needs more focus by having a moving section and congested section within the same link making the link look

Travel Time

Average or a percentile time spent traveling between key origin-destination pairs, during a specific time period.

Need a measure that calls out areas lacking transit service.

This conversation typically revolves around vehicles and freight. How will we think more holistically to think about other modes?

This is a good measure for equity.

Agenda



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

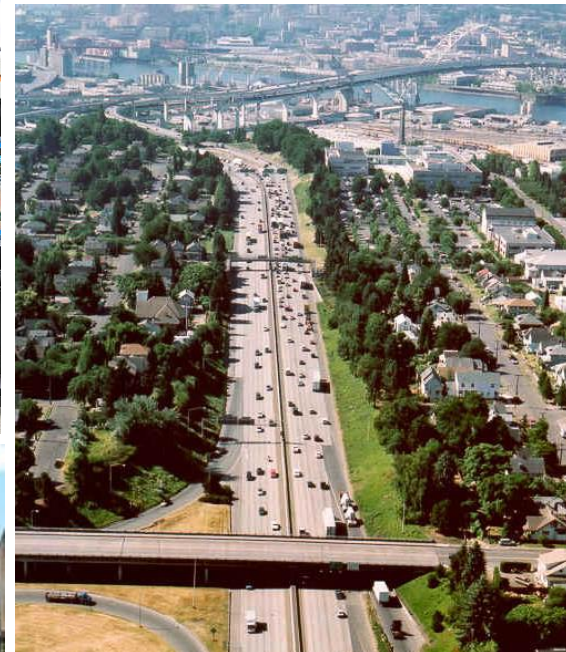
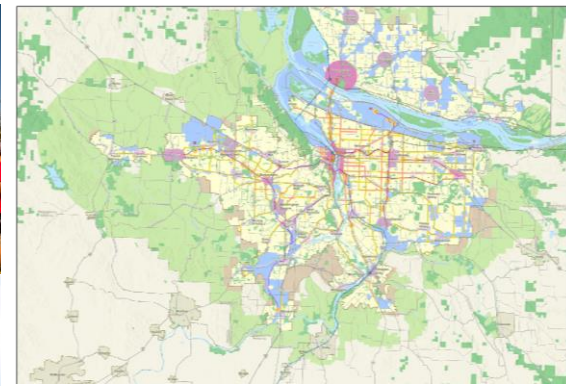
Meeting: Community Leader's Forum—Transportation
Date: Friday, May 14, 2021
Time: 9 to 11 a.m.
Place: Zoom virtual meeting
<https://us02web.zoom.us/j/84674543701?pwd=SklaaHRXT3NpSnJvcDIwN2ozTmNCZz09>
Meeting ID: 846 7454 3701
Passcode: 345307
888 475 4499 US Toll-free

AGENDA

9:00 AM	1. Introductions and forum purpose	Allison Brown, facilitator
9:05 AM	2. Opening remarks and urban arterials update <ul style="list-style-type: none">• Jurisdictional Transfer Study• Updates on regional legislative efforts• Q&A with participants	Councilor Gonzalez, Metro
9:30 AM	3. Metro/ODOT Regional Mobility Policy Update & Policy Elements <ul style="list-style-type: none">• Review of project goals, objectives and timeline• Share mobility policy elements	Kim Ellis, Metro Glen Bolen, ODOT
9:45 AM	4. Small Group Breakouts: Mobility policy	Allison Brown, facilitator
10:25 AM	5. Metro's Congestion Pricing Study <ul style="list-style-type: none">• Overview of the study purpose• Review of findings• Next steps• Q&A with participants	Alex Oreschak, Metro
10:55 AM	6. Wrap-up and Adjourn	Allison Brown, facilitator

Regional mobility policy update

Community Leaders Forum
May 14, 2021



Project overview & policy elements

Kim Ellis, Metro
Glen Bolen, ODOT

Project purpose

- Update the policy on 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

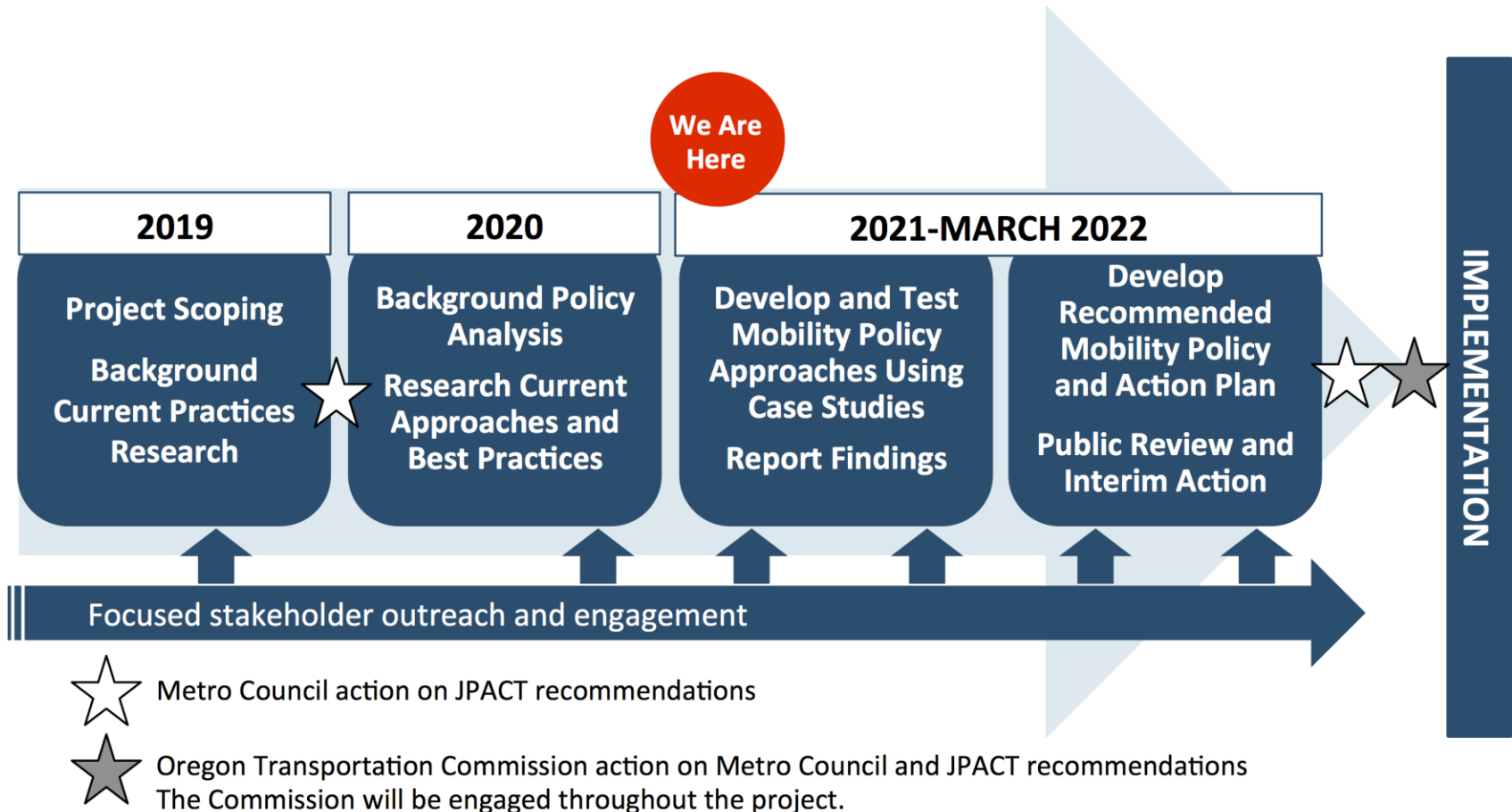


Visit oregonmetro.gov/mobility

State, regional and local decisions



Project timeline

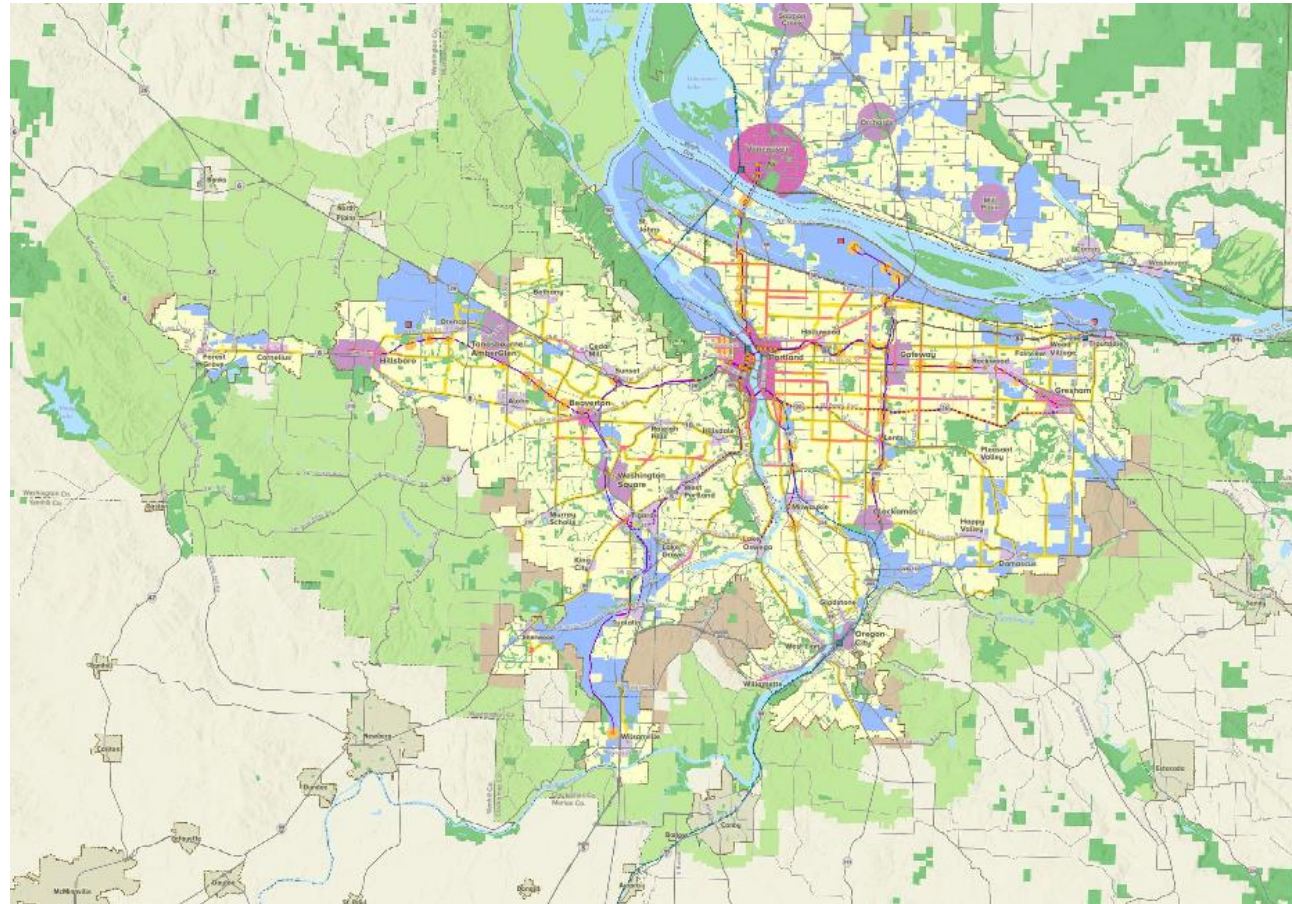


2040 Growth Concept is our foundation

Adopted as the land use plan for the region under state law (ORS 197)

Transportation plans must be adequate to serve planned land uses

Codified in regional plans governing cities and counties



Adopted in 1995 and acknowledged by the Land Conservation and Development Commission under the statewide planning program

B-132

2018 Regional Transportation Plan priorities



Equity



Climate



Safety



Congestion

Oregon Transportation Commission Strategic Action Plan priorities



Equity

Prioritize diversity, equity, and inclusion by identifying and addressing systemic barriers to ensure all Oregonians benefit from transportation services and investments.



Modern Transportation System

Build, maintain, and operate a modern, multimodal transportation system to serve all Oregonians, address climate change, and help Oregon communities and economies thrive.



Sufficient and Reliable Funding

Seek sufficient and reliable funding to support a modern transportation system and a fiscally sound ODOT.

Oregon Transportation Commission Strategic Action Plan priorities



Modern Transportation System

Build, maintain, and operate a modern, multimodal transportation system to serve all Oregonians, address climate change, and help Oregon communities and economies thrive.

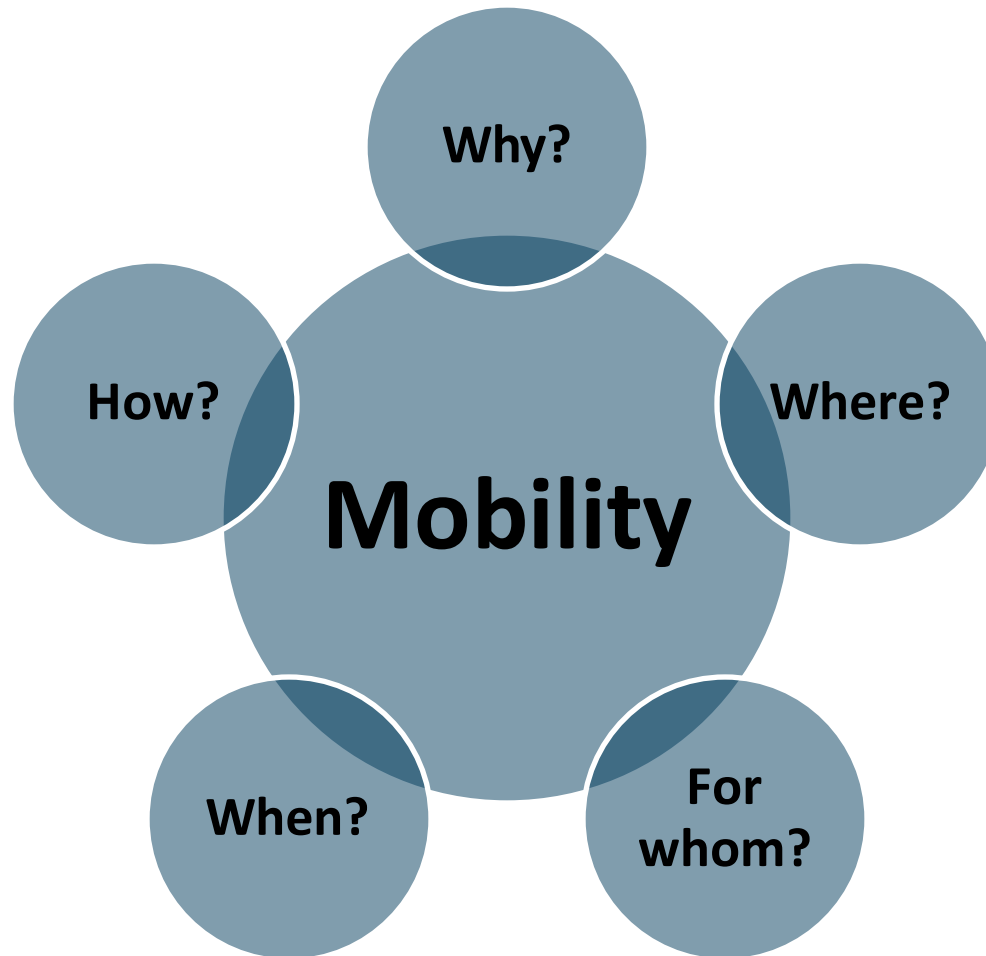
- **Preservation and Stewardship:** Preserve, maintain, and operate Oregon's multimodal transportation system and achieve a cleaner environment.
- **Safety:** Prevent traffic fatalities and serious injuries and ensure the safety of system users and transportation workers.
- **Accessibility, Mobility and Climate Change:** Provide greater transportation access and a broader range of mobility options for Oregonians and address climate change.
- **Congestion Relief:** Invest in a comprehensive congestion management strategy for the Portland metropolitan region to benefit all Oregonians. Implement system and operational innovations to reduce traffic congestion throughout Oregon.
- **Project Delivery:** Develop practical solutions to transportation problems in order to address community needs and ensure system reliability and resiliency.
- **Innovative Technologies:** Invest in and integrate technologies to improve transportation services and operations throughout Oregon.

Stakeholder definitions of mobility

- “Getting to where you need to go safely, affordably and reliably no matter your [mode of travel], age, gender, race, income level, ZIP code...”
- "Mobility – focus on moving people and moving goods predictably and efficiently."
- "Efficient freight movement and access to industry and ports...play a key role in the state's economic development."



How do you *define* mobility?



B-137

Draft Mobility Policy Elements

Access

- All people and goods can get where they need to go.

Time Efficiency

- People and goods can get where they need to go in a reasonable amount of time.

Reliability

- Travel time is reliable or predictable for all modes.

Safety

- Available travel options are safe for all users.

Travel Options

- People can get where they need to go by a variety of travel options or modes.

How should we consider mobility in different contexts?



Downtowns & business districts



Major urban corridors



Industrial areas



Throughways

Source: Metro Designing
LivableStreets Guide

Mobility measures overview

Susie Wright, Kittelson

Mobility policy considerations

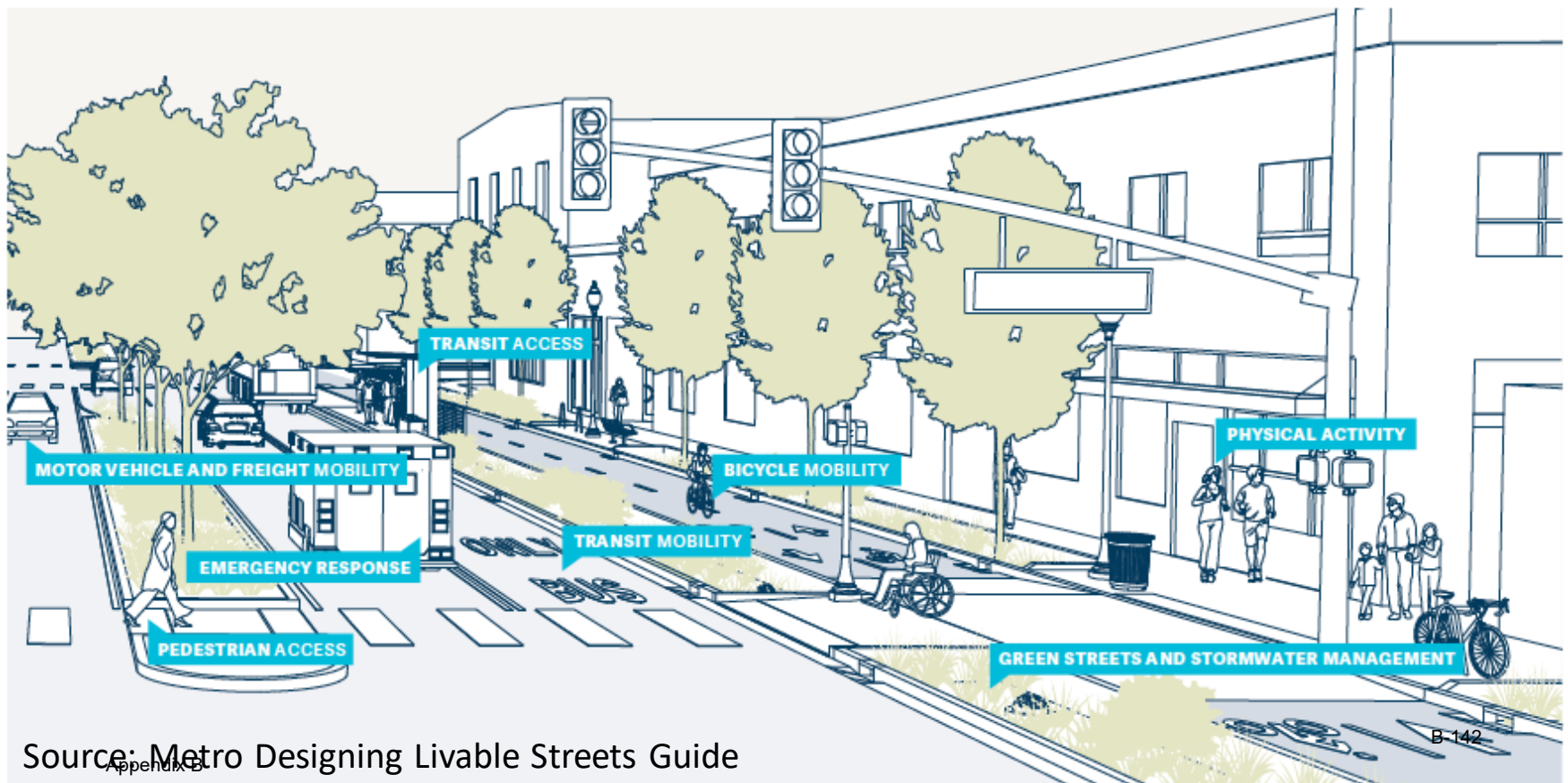
Updated policy needs to:

- Be equitable
- Consider who, why, when, where, how
- Include multiple measures that consider:
 - location and land use context
 - facility type and function(s)
 - user needs
 - time of day
 - travel options
- Consistently inform different planning applications



What does mobility look like?

Streets serve many different functions. Various functions and modes may be prioritized on different streets depending on planned land use context.



How should we consider mobility in different contexts?



Downtowns & business districts



Major urban corridors



Industrial areas



Throughways

Draft Potential measures

Being considered
for testing and
refinement

Listed in order
from highest to
lowest screening
score

Measure	Mobility Policy Elements				
	Access	Time Efficiency	Reliability	Safety	Travel Options
Multimodal Level of Service (MMLOS)	●			○	All modes
Level of Traffic Stress (LTS)	●	○		●	Bike, Pedestrian
Pedestrian crossing index	●	●		●	Pedestrian
System completeness	●	○		○	All modes
Travel speed			○	●	Vehicle, Freight, Transit
Accessibility to destinations	●	○	○		All modes
Hours of congestion/ duration of congestion		●	●		Vehicle, Freight, Transit
Travel time reliability		○	●		Vehicle, Freight, Transit
Vehicle miles traveled (VMT) per capita	○	●		○	Vehicle, Freight, Transit
Travel time		●			All modes
Volume-to-capacity ratio for roadway links		●	○		Vehicle, Freight
Volume-to-capacity ratio at Intersections		●	○		Vehicle, Freight

● direct measure ○ indirect measure

B-144

Next steps

Kim Ellis, Metro

Next steps



April to May 2021 – Seek input on mobility policy elements and measures for testing

Stakeholder forums, briefings to Metro Council, regional advisory committees and county coordinating committees



June 2021 – Seek JPACT and Council direction on mobility elements and measures to test



Summer 2021 – Test mobility policy elements and measures through case studies



Fall 2021 – Report findings and develop draft mobility policy and measures for further review and input

Stakeholder forums, briefings to Metro Council, regional advisory committees and county coordinating committees

Small group breakouts

Discussion

- Do you have questions about the mobility policy elements or measures? Anything need clarification?
- Are these the most important elements to include in the updated mobility policy? Anything missing?
- Which elements are most important in these different contexts – centers, urban travel corridors, industrial areas and throughways?
- Do any of the measures stand out as being especially important to measuring mobility or is anything missing?

Recap and overall reflections

Allison Brown, JLA

Thank you!

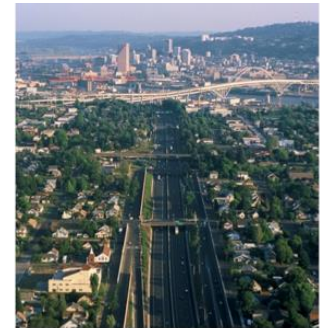
Kim Ellis, Metro

kim.ellis@oregonmetro.gov



Lidwien Rahman, ODOT

lidwien.rahman@odot.state.or.us



Mobility Policy – Community Leaders Forum

Small group notes

Community leaders

- Kari Schlosshauer, Safe Routes to School National Partnership
- Ashton Simpson, Oregon Walks
- Abe , Clackamas County Public Health
- Sara Wright, Oregon Environmental Council
- Ray Atkinson, Clackamas Community College

Project Staff

- Héctor Rodríguez Ruiz (facilitator)
- Ted Reid (notetaker)
- Kim Ellis (knowledgeable project person)

Listener

- Joseph Auth, City of Hillsboro

Policy elements

Are these the right elements? Are these the most important elements to include in the updated mobility policy? Is anything missing?

- Time efficiency in multi-modal transportation (transit, micro-mobility, bike, walking) matters for encouraging their use. They need to be viable.
- Suburban and rural trips – transit needs to be reliable/frequent to achieve climate goals. One person on an hourly bus doesn't help.
- Climate impacts seem missing.
- Missing affordability as an element. Cars may be more time efficient, but how do they impact people's budgets?
- Appreciate this work but it is still anchored in the status quo. This is an opportunity to reframe how we talk about transportation and its impact on the whole community.
- Transportation conversations tend to focus on users. The impacts of the transportation system and how it is used affect everyone (social impact). Transportation should benefit the community and state (not just the individual user). Single-occupancy vehicle trip is the "most anti-social choice." Need a hierarchy that prioritizes the most "pro-social" modes.
- Missing placemaking as an element – mobility policy should support communities/places.
- Land use context matters. Housing and businesses.
- Current vs. desired future land uses. Need to create the conditions for the desired future.
- Tradeoffs between safety and other outcomes/elements. What is the acceptable level of risk? Are we talking about fatalities and injuries or property damage? (Kim's answer: "the RTP safety policies are focused on eliminating fatal and severe injury crashes – getting to Vision Zero – this policy needs to support that")
- Discussion of being careful of unintended consequences of improving reliability – there could be unintended climate impacts – need to find a balance.

Which elements are most important in these three different contexts, especially regarding the movement of freight and goods?

- What about a suburban context with poor connectivity? It seems missing.
- What about collectors in suburban areas? A lot of traffic diverts off of arterials to collectors. This matters for SRTS, access to parks, etc.
- Not sure why some elements would be more important in some contexts and not others. All the elements seem important in all the contexts.
- Speed should not be a priority anywhere.
- Are we just talking about speed for autos (Kim's answer: "no, all modes")
-

Community Leaders Forum

Regional Mobility Policy – Small Group Notes

- Vivian Satterfield
- Ted Labbe
- Jeff Pazdalski
- Bret Morgan

Project Staff

- Glen (knowledgeable project person)
- Molly (facilitator)
- Grace (notetaker)

Do the elements address the types of trips /trip purposes and destinations important to you and the people in your community?

Is anything missing? Reactions? Redundancies?

time efficiency, we tend to prioritize vehicle efficiency and movement, but there isn't the same for pedestrian movement, active transportation

continuity needs to be added; there isn't as much continuity when you travel by any other mode aside from a vehicle; lack sidewalk continuity so a person walking needs to zigzag; when riding transit people have to do a lot of trip chaining and transferring to get where you need to go

Time efficiency is a tricky measure when you talking about Washington County; people in Washington County is traveling a greater distance compared to a person traveling in the City of Portland; so time efficiency is tricky. Also in following up, first-and-last mile is so critical to the success of travel options and make it viable; the MAX is a spine; considering this as a connectivity issue; also look at connectivity not to the urban centers

Important to remember with urban arterials, people live along these facilities. A lot of people living along these arterials are also mixed income, so we are really talking about people's homes. We need to address safety, but not necessarily in the context of traffic violence; recognize all that concrete means greater impacts to heat island; impervious cover related to rainwater; also noting the disparities people who live along the corridors and how their safety related to having cleaner air, open space, impacts of extreme weather, how that affects their safety and health

Which elements are most important in these different contexts – Downtowns & business districts, major urban corridors (ex. McLoughlin Blvd between Milwaukie and Oregon city, TV Highway between Beaverton and Hillsboro, 82nd avenue), industrial areas and throughways. (You can screen share the PDF with illustrations of contexts.)

It seems like transportation agencies have an idea of what the dominant way a people should move through a space for a specific context and that is what takes over. But how do you change behavior. Aside from throughways, all these other context, people are moving in multiple ways. But

the models are not necessarily capturing the issue like the last 100 feet to get to a destination for a bus rider is terrifying. Capturing and measuring that nuance. Move through space in different ways.

Framing is a little problematic because it tries to make one element the focus of the facility; example with TV highway, the element can be this for one area of TV highway, but different say in downtown Corneilius.

Performance measures: which are the most important to you to get to the outcomes we want to see?

The measures have travel speed and travel time; travel speed seems way more car-related; travel time – what does that exactly mean; placing into the context of mode; don't want to set the bar relative to vehicles

Travel amenities, such as a safe place to park a bike, nicer transit stops with shelter and lights; as more people are using different modes, working in those travel amenities. How do the amenities play into the people's use of multiple modes. And not just focusing it on the park and ride; take the barriers away like the questions of "where do I park my bike, charge my vehicle, etc" to be able to make that trip by a different mode viable

Consider e-bike charging and recognize that some parts of the region are deserts for bike shops. From a transit perspective, there is a lot of focus on travel time, but reliability is more important. The focus on travel time isn't getting at the system improvements needed, particularly for other modes and it skews towards vehicles

want to see measures broken down by demographics and understanding profiles of who and how they are getting around.

Overarching Theme/Comment

- Needs to be multimodal and needs to be connected
- Few trips are only one mode

APPENDIX C

County coordinating and advisory committee meetings notes

- TransPort Meeting: April 14, 2021
- Clackamas County Transportation Advisory Committee: April 27, 2021
- East Multnomah County Transportation Committee: May 5, 2021
- Washington County Coordinating Committee TAC Briefing: May 6, 2021
- East Multnomah County Transportation Committee (policy): May 17, 2021
- Clackamas County C-4 Metro Subcommittee (policy): May 19, 2021
- Washington County Coordinating Committee (policy): June 14, 2021

4/14/21 TransPort Meeting - Kim's DRAFT Notes

attendees:

Jason Spencer - Western Systems
Carl Olson, Clackamas County
Maggie Lin - DKS Associates
Caleb Winter, Metro
Tammy Lee - PSU/TREC
Ted Leybold, Metro
Brendan Williams - PSU/TREC
Jim Gelhar, Gresham/Multnomah County
Kate Freitag, ODOT
Bikram Raghubansh (PBOT)
Ryan Lowe - Coral Sales
Patrick Marnell - Q-Free
Alison Tanaka, PBOT
A.J. O'Connor TriMet
Damian Casados Coral Sales
Jana LaFrenier, PBOT
Shaun Quayle, Washington County
Jabra Khasho, City of Beaverton
Michael Burkart, ODOT
Scott Turnoy, ODOT
Adrian Pearmine, DKS
Dominique Huffman, City of Wilsonville
Tu Ho, DKS

Shaun Quayle (Washington Co.)

- Use the SMART acronym to vet candidate metrics. S = Specific, M = Measurable (at a reasonable cost with accuracy), A = Actionable, R = Realistic, and T = Time-bound
- large task to take on – in terms of PMs and how it is implemented in TSPs and land use and developers - Developers are always looking for lowest cost
- Flexibility will be key
- Data is changing so fast – a big challenge – there are new sources, but limited funding for verification and validation of PMs – we will want to have a good baseline before on reliability and accuracy of data before mainstreaming the new policy and measures

Caleb Winter (Metro)

- TSMO – isn't a modal system but is a system network strategy for a completeness –
- Touches on indirect measure – data networks are supporting managing and monitoring system real-time

- Optimal spacing standards for urban contexts – we know intersection density has a direct relationship to walkability
- If in system planning, we can identify what is needed to support development - crossings, etc. – this would allow it to be in capital improvement programs and then could be built out by development

Shaun Quayle (Washington Co.)

- queuing is an important metric for safety – it plays out in adjacent ped and bike travel. Trying to work with crowd source data - an important metric as we become more dense and people are trying to cross streets/intersections and walk and bike more - most is at plan amendment and system planning level and need to be able to model at that scale
- Calibrated model from – if we can demonstrate the spillback – then
- Should be talking about ranges – there are a variety of driver behaviors and users will change – which - want the developer to make the half street improvement but
- Arterial ARCTO – quantifying pedestrian and big delay
- If v/c stays – the cycle lengths can be adjusted –
- There is an inaccurate assumption that the signals are working with 100% detection and communication – need for funding to continue to maintain and bring on line signal upgrades and transition over time – as an implementation action – bike distinguishing detection – can help inform adjustments – counts peds and motorcycles as bikes – uses heat sensing technology that continues to improve

AJ (TriMet)

- looking at new technology that TransPort – ROT project to digitize the LRT vehicles to get better information on MAX train breakdowns to minimize impacts to reliability and system operations. Would also them to extend next gen TSP (transit signal priority) to MAX trains which would impact traveling and transit reliability
- Transit – accessibility to stops and security at stops – street lighting, crossings that develop near a transit stop

Kate Freitag (ODOT)

- connected pedestrian environment and crossing opportunities to/from stops that might not show up in a performance measure is important

Shaun (Washington Co.)

- Space efficiency is also important aspect of mobility – including pick-up/drop-off for transit, uber, bike share – and connection between land uses and use of ROW

Glen Bolen (ODOT)

- Seat utilization – as a efficiency – e.g., if a freeway is full, it is likely only carrying 25% of the seat capacity
- <https://www.fehrandpeers.com/why-travel-efficiency-matters/>

Shaun (Washington Co.)

- As tech changes and you have more fully autonomous vehicles on roads – it may be possible to squeeze more vehicles through
- Reasonable amount of time – Waze and google gives people predictive systems to identify when to travel and best route
- Portland Metro Arterial Performance management implementation guidance document and poster are among the docs here: <https://www.oregonmetro.gov/public-projects/regional-tsmo-strategy/2010-2020-tsmo>
- Is the Portland Arterial Performance Measures Concept of Operations Report reflected in this work? [https://www.oregonmetro.gov/sites/default/files/2015/09/29/Arterial Measures Guide.pdf](https://www.oregonmetro.gov/sites/default/files/2015/09/29/Arterial%20Measures%20Guide.pdf)

Clackamas Transportation Advisory Committee (CTAC) Discussion Notes

April 27, 2021

Project staff: Kim Ellis (Metro) and Glen Bolen (ODOT)

Attendees: Trent Wilson, Karen Buehrig, Steve Williams (Clackamas County), Ray Atkinson, Jaimie Huff, (Happy Valley) Mat Dolata (WSP), Seth Brumley (ODOT), Eve Nilenders (TriMet), Dominique Huffman (Wilsonville), Chi Mai (ODOT), Will Farley (Lake Oswego), Kelsey Lewis (Tualatin), Brett Setterfield (Clackamas County), Jennifer Garbley (Milwaukie), Dan Kaempff (Metro), Donald DeRosia (Estacada) and Lance Calvert (West Linn).

- Karen Buehrig – VMT/capita seems more like an environmental measure and not necessarily a measure of mobility. Would like more information about how this is a measure of mobility and how it might be applied.
- Karen Buehrig – It would be helpful to hear what we heard at the freight forum and other briefings.
- Ray Atkinson – Will low traffic stress (LTS) measure consider intersections? ODOT's analysis methods includes intersections, so would like to ensure following the method developed by ODOT.
- Eve Nilenders – Glad to see pedestrian crossing index measure being considered. The measure doesn't speak to speed or number of lanes at those crossings. This measure would be a good complement to the LTS measure, which accounts for speed, number of lanes and motor vehicle volume.

EMCTC TAC Briefing Discussion Notes May 5, 2021

Project team: Kim Ellis (Metro) and Glen Bolen (ODOT)

Jessica Berry, Multnomah County
Mary JoAnderso, Multnomah County
Allison Boyd, Multnomah County
Chris Strong, Gresham
Jay Higgins, Gresham
Lewis Lem, Port
Amber Shackelford, Troutdale
Eve Nilenders, TriMet
Glen Bolen, ODOT
Hector Rodriguez, ODOT
Kyler Roberts, Wood Village
Chris Damgen, Troutdale
Emily Miletich, Multnomah County
Sarah Selden, Fairview

Allison Boyd, Multnomah County

- What data available? Will that affect which case study locations we select?

Chris Damgen, Troutdale

- Glad to see us thinking about it more qualitatively, less abstract
- Desire to have a more localized mobility policy for TC and possibly broader community
- Policy is what you want to accomplish

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Washington County Coordinating Committee TAC Briefing Discussion Notes

May 6, 2021

Project staff: Kim Ellis (Metro), Lidwien Rahman (ODOT), Glen Bolen (ODOT)

Chris Deffebach, Washington County
Erin Wardell, Washington County
Bob Galati, Sherwood
Brenda Martin, TriMet
Dave Roth, Tigard
Dominique Huffman, Wilsonville
Don Odermott, Hillsboro
Dwight Brahear, SMART
Dyami Valentine, Washington County
Jean Senechal-Biggs, Beaverton
Jeannine Rustad, THPRD
Jessica Pelz, Washington County

Julia Hajduk, Sherwood
Julie Sosnovske, Washington County
Kate Hawkins, ODOT
Katelin Vandehey
Kelsey Lewis, Tualatin
Richard Blackmun, Forest Grove
Terry Keyes, Cornelius
Jeff Pazdaslski, Westside Transportation Alliance
Jabra Khaso, Beaverton
Reza Farhoodi, Washington County
Steve Kelley, Washington County

Don Odermott (Hillsboro)

- This policy should tell us how well the system is moving.
- v/c measure is foundational to understanding how well it is moving, so happy to still see it on the list of measures being considered.
- v/c at regional level is less useful than at localized level
- it is important that our mobility policy meet expectations of the public – and helping them understand tradeoffs, particularly fiscal tradeoffs
- Arterials are important outside centers and industrial areas given Wash County has fewer throughways serving freight travel needs. This should be 4th land use/transportation context we consider.
- Cut-through traffic often occurs in significantly congested areas, which affects safety
- Surprised emissions and environmental impact is missing from the list of measures being considered – there should be an emissions measure to account for the effects of congestion and related queuing on the transportation system and air quality – gave example of 10th avenue queuing that resulted in 70% emissions increase; allowing for more congestion/lowering the bar of performance – while it helps achieve land use objectives, it is a public health and climate issue because of the increase in emissions that results from congestion.
- Nexus proportionality –need measurable data to place conditions of approval on development (which we have for h v/c measure); 80% of infrastructure is through development review, so important that this support that continued practice.
- Raised current challenge facing city with ODOT development review staff requiring them to redo past traffic analysis for South Hillsboro and request a design exception process because they cannot meet v/c .80 in ODHM. Don to follow-up with Glen and ODOT staff separately.

Kelsey Lewis (Tualatin)

- Has discussed the elements and measures with other staff
- Agree with many of Don's comments, including wanting v/c to stay in the mix.
- Planning staff particularly interested in VMT/capita
- Commented that MMLOS seems interesting but not sure how it will work; follow to send link to ODOT APM which defines methods for many of the measures being considered, including MMLOS
- Interested in seeing a 4th "land use context" to the mix – arterials that serve as major routes connecting centers and also connecting to industrial areas

Erin Wardell (Washington County)

- Want to express support and appreciation for work, and previous opportunities to share feedback.
- Would like to have follow-up conversations on some of the details of how this work would be adopted in the RTP and RTFP and the implications for local codes and procedures.

5/17/21 EMCTC

Project staff: Kim Ellis (Metro) and Glen Bolen (ODOT)

Attendees: Commissioner Lori Stegmann (Multnomah County), Metro Councilor Shirley Craddick (Metro Council), Mayor Travis Stovall (Gresham), Councilor John Miner (Wood Village), Councilor Jamie Kranz (Troutdale), Cary Stacey (Multnomah County), Chris Damgen (Troutdale), Amber Shackelford (Troutdale), Tom Bouillion (Port of Portland), Eliot Rose (Metro), Jeff Owen (TriMet), John Niiyama (wood Village), Chris Strong (Gresham), Brian Monberg (Gresham), Jon Henrichsen (Multnomah County), Allison Boyd (Multnomah County), Jessica Berry (Multnomah County), Jay Higgins (Gresham), MaryJo Andersen (Multnomah County), Nathan Clark (Multnomah County), Oscar Rincones (Multnomah County).

Lori Stegmann, Multnomah County

- How will this account for Vision zero and the high number of ped deaths/severe injuries region-wide?
- Rockwood – 45 mph streets that have evolved to downtown streets and need to have bike/ped facilities and slower speed – how will this address how we are using the facilities.
- Provided example of Chick-fil-a in Gresham – bumper to bumper traffic now and will get worse when the development opens.
- Dutch Brothers – significant 257th Avenue traffic backups – highlights that analysis leading to approval of the development didn't accurately forecast traffic impacts being experienced today.

Kim and Glen clarifications

- The mobility policy is one of many policies (including safety). We did not include crash measures because those are used to measure whether we are achieving our Vision Zero safety goals. However, we will be looking to ensure the updated policy does not have unintended impacts and supports our safety goals.
- Transportation planning rule provides flexibility for defining measures for determining adequacy and this work will help inform how local governments determine that adequacy in local codes for their facilities.

Tom Bouillion, Port of Portland

- good process is taking multimodal perspective
- want to make sure the updated standards aren't so prescriptive that they lead to trying to have all modes on all routes
- safe bike ped connections to downtown Troutdale are important and off-street connections may make more sense when traveling through the Troutdale interchange area, for example
- need to allow for creative approach that provides safe bike/ped connection based on the context

Glen clarifications

- Referenced ODOT Blueprint urban Design standards and Metro's Livable Streets guidelines help inform balance user needs and priorities in the design of streets depending on land use context and function of the roadway

5/19/21 Clackamas County C-4 Metro Subcommittee Briefing

Project staff: Kim Ellis (Metro) and Glen Bolen (ODOT)

Members: Commissioner Savas (Clackamas County), Commissioner Martha Schrader (Clackamas County), Councilor Brett Sherman (Happy Valley), Metro Councilor Christine Lewis (Metro Council), Mayor Rachel Lyles Smith (Oregon City), Councilor Valerie Pratt (Tualatin), Ed Gronke, Councilor Joann Linville (Wilsonville), Mayor Joe Buck (Lake Oswego), Mayor Jules Walters (West Linn), Councilor Kathy Hyzy (Milwaukie), Dwight Brashear (SMART), and Martin Meyers (Redland CPO).

Attendees: Trent Wilson (Clackamas County), Chris Lyons (Clackamas County), Dayna Webb (Oregon City), Jaimie Huff (Happy Valley), Jamie Stasny (Clackamas County), Jeff Guman (Lake Oswego), Tom Markgraf (TriMet), John Lewis (Oregon City), John Williams (West Linn), Karen Buehrig (Clackamas County), Mayor Mark Gamba (Milwaukie), Mark Ottenad (Wilsonville), Mike Bezner (Clackamas County), Ramona Perrault (Metro), Sarah Allison, Tracey Moreland and Will Farley (Lake Oswego).

Commissioner Paul Savas (Clackamas County)

- Population is growing and as the state's economic engine, we need a certain amount of throughput – what metric best addresses throughput for our growing economic engine?
 - Kim described people throughput was a good measure of this and that it could be applied holistically to the network. It was not carried forward due to challenges of applying it at a plan amendment level. It is a good measure at the system planning level and allows for consideration of not just vehicles, but the number of people in buses, carpools, people biking and walking in corridors and on parallel routes.

Councilor Valerie Pratt (Tualatin)

- For Clackamas – system completeness is very important, especially for Clackamas County and should be included in measures carried forward.
- Asked question about how current trend of businesses moving from downtown Portland to different places in the region will be accounted for and how the increased transportation needs of these places will be addressed.
 - Kim explained that trends are accounted for in the analysis conducted as part of system planning during RTP updates and TSP updates. The updated mobility policy will be applied in future analysis and help inform identification of future needs.

Councilor Kathy Hyzy (Milwaukie)

- Expressed appreciation for system completion and feedback raising importance of having a connected transportation system. Asked if system completeness is embedded in the feedback we are receiving re: connectivity.
 - Kim explained yes, and that connectivity and system completion is a core measure in the RTP and local plans today and will move forward.
- Ones up at the top of the list seem to be the right ones and don't want to lose them (top 3-4) as the list of measures is narrowed.
- Final mile solutions are important as well as land use context. It is important to Clackamas County that the policy make sure people can take advantage of all the transportation system components for their whole trip – including all the way to their front door.

Councilor Brett Sherman (Happy Valley)

- Used transit to get to Hillsboro for a meeting – walk, bus, two trains, then to a bus – 2 hour process to get to a meeting.
- Supports the goal of system completeness.

061421 WCCC briefing

Project team: Kim Ellis (Metro) and Glen Bolen (ODOT)

Members: Roy Rogers (Washington County), Jeff Owen (TriMet), Jef Dalin (Cornelius), Marc San Soucie (Beaverton), Stephanie Jones (Banks), Teri Lenahan (North Plains), Ken Gibson (King City), Steve Callaway (Hillsboro), Pete Truax (Forest Grove), Frank Bubenik (Tualatin), Gery Schirado, Juan Carlos Gonzalez (Metro), Matt Freitag (ODOT), Jason Snider (Tigard), Keith Mays (Sherwood), Julie Fitzgerald (Wilsonville), Paul Savas (Clackamas County)

Attendees: Stephen Roberts, Erin Wardell, Chris Deffebach, Julia Hajduk, Whitney Hergert, Jeff Gudman, Jeff Pazdalski, Jessica Pelz, Julie Sosnovske, Kelsey Lewis, Kim McMillan, Kristin Akerall, Lacey Beatty, Mark Ottenad, Nafisa Fai, Steve Kelly, Colin Cooper, Dave Roth, Don Odermott, Dyami Valentine, Greg Robertson and Jean Senechal-Biggs.

Councilor Marc San Soucie (Beaverton)

- Always been concerned about strong reliance on v/c ratio to determine transportation impacts
- Request for info that the study developed to better understand:
 - how capacity is defined
 - how congestion is defined
 - are these definitions community specific? Important that locales be able to define these in ways that support community goals.

Mayor Jef Dalin (Cornelius)

- Glad to see we are moving away from v/c ratio - travel time that is reasonable and reliable is important for mobility.
- Cannot afford to lose sight of what causes some of the capacity impediments – e.g. bus pull outs needed so that a bus isn't blocking vehicle travel.
- TV Highway – As we look at different criteria for different areas, TV Highway is a good example with multiple travel needs being served. It's a thoroughfare with a lot of vehicle travel and hazard of freight trucks parking in center turn lane to make their deliveries in the middle of TV Highway. Should think about not just how serviceable the roadway is but also how is it serving the different needs – freight delivery and transit are examples.
- Commented that OR 217 operates at 100% capacity during peak hour everyday.

Mayor Steve Callaway (Hillsboro)

- Appreciate hearing some of the feedback being reflected back and being included in the revised elements and measures.
- Emissions should be considered as a mobility measure; the emissions from mobility have direct impact on public health, esp. in equity areas. While VMT affects emissions, the speed of vehicles and congestion/delay has more of an impact on emissions.

- Engagement – how many of the individuals have been from Washington County – are we hearing from all parts of the region?
- What is definition of reasonable?
- Still want to see v/c ratio retained as one of the measures because of legal nexus that has been established for SDCs and mitigation.

Commissioner Roy Rogers (Washington County)

- Encourage staff to define equity and climate – everyone has different definitions for what it means and references it differently in different contexts.
- Encouraged project to focus on the regional system(s) that connect different parts of region to one another.
- Downtown/business districts, active transportation aren't always regional scale – don't want to silo – this work needs to focus on regional system to inform defining needs and projects that will eventually compete for limited funding.