Agenda

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

Meeting:	**RTP Transit work group meeting**
Date:	Wednesday, April 26, 2017
Time:	1-3 p.m.
Place:	Metro Regional Center, Room 401
Purpose:	For Transit Work Group to share potential system expansion policy criteria and discuss transit supportive elements
Outcome(s):	Highlight potential prioritization criteria for the system expansion policy; provide an updated transit vision map; and start the discussion regarding the transit supportive elements.

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1 p.m.	**Welcome & introductions**	Jamie Snook
1:05 p.m.	**Partner Updates** *Who have you talked to about this work? What have you heard?*	Everyone
1:15 p.m.	**System Expansion Policy Peer Review** *Provide an overview of the peer review research regarding how other regions are prioritizing major transit investments (see attached memo)*	Mathew Berkow
1:45 p.m.	**Potential System Expansion Policy suggestions** *Based on the Consultants review and expertise, discussion at our last transit work group and the peer review, discuss potential criteria that seems to be rising to the top*	Mathew Berkow
2:15 p.m.	**Transit vision map** *Provide an update on the transit vision map*	Jamie Snook
2:25 p.m.	**Transit supportive elements** *Discuss transit supportive elements and how to include these elements into the regional transit vision, strategies and system expansion policy*	Jamie Snook
2:55 p.m.	**Next steps** *Discuss next steps and meeting schedule over the summer*	Jamie Snook
3:00 p.m.	**Adjourn**	

Meeting Packet	Next Meeting
• Transit Work Group Agenda	Wednesday, May 24, 2017 1-3 p.m., Metro, Room 401
• February 2017 RTS meeting summary	
• DRAFT Memorandum Transit Investment Prioritization Practices	
	June TBD

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

Meeting minutes

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

Meeting:	**RTP Transit work group meeting**
Date/time:	Thursday, February 23, 2017 | 1-4 p.m.
Place:	Metro Regional Center, Room 401
Purpose:	For Transit work group to share and discuss transit priorities, vision ideas and introduction to the Transit System Expansion policy

Work Group Attendees	**Affiliate**
Dan Bower	Portland Streetcar, Inc.
April Bertelsen	City of Portland
Karen Buehrig	Clackamas County
Mike Coleman	Port of Portland
Eric Hesse	TriMet
Jay Higgins	City of Gresham
Jon Holan	City of Forest Grove
Stephan Lashbrook	SMART
Maurico LeClerc	City of Portland
Kate McQuillan	Multnomah County
Alex Page	Ride Connection
Luke Pelz	City of Beaverton
Jamie Snook, Work Group Lead	Metro
Gregg Snyder	City of Hillsboro
Dyami Valentine	Multnomah County
Dayna Webb	City of Oregon City

Interested Party	**Affiliate**
Teresa Christopher	Clackamas County
Radcliffe Dacanay	City of Portland
Steve Dickey	Cherriots – Salem/Keizer Transit
Lidwien Rahman	Oregon Department of Transportation
Michael M.	Port of Portland

Presenters	**Affiliate**
Mathew Berkow	Nelson Nyggard
Tom Brennan	Nelson Nyggard

Staff Attendees
Grace Cho, Metro
Lake McTighe, Metro
Marie Miller, Metro
Michael Serritella, Metro
Yanna Stannik, Metro
Paige Williams, Metro

Welcome & introductions

Jamie Snook welcomed members and interested parties to the meeting starting at 1:05 p.m. Everyone shared their first jobs as an introduction. An overview for the meeting was given with the purpose of discussing the policy framework:

- Building a transit strategy process
- Draft transit related policies
- Draft transit vision
- Transit system expansion policy

Policy Framework

Building a transit strategy was discussed with a graph shown with the Call for Projects at the center of the design, following many agencies, partner and public input. Through series of meetings and communications, a list of transit priorities has evolved. These include:

- Expand and improve service
- Maintain our existing aging system
- Improve the capacity of our existing system (fix bottlenecks)
- Invest in capital improvements on our system
- Coordinate investments with other land use and transportation improvements

The group was asked to compare these priorities to the RTP Transit Policies. Do they match?

- Build the total transit network and transit-supported land uses to leverage investments
- Expand high capacity transit
- Expand regional and local frequent transit service
- Improve local transit service
- Support expanded commuter rail & intercity transit service to neighbor communities
- Improve pedestrian and bicycle access to transit

Transit Vision and Maps

Referring to Attachment B, *Regional Transit Strategy Vision* to make transit more frequent, convenient, accessible and affordable for everyone, the group discussed existing and potential new policies. One important improvement for accessibility was jobs. A question on where in the plan enhancement policies might cover. It was agreed that service enhancement plans could be folded in to current policy plans. The group also agreed that the potential new policy "Support the implementation of local and regional land use and transportation visions" could be expanded.

A question was raised on the structure of the RTP. The group expressed the view that the level of strategies not be too specific on policies if they don't fit every instance. It was pointed out the more issues balancing policy and strategies would be in the plan without any necessary restructuring needed.

It was suggested that any policies reflecting expansion should also reflect the funding of the expansion. Customer service, while important, may be placed at a lower level of importance in this framework. The group discussed how we can design strategies without being too specific. Jamie Snook reminded the group the RTP places transit plans in broad terms. Lake McTighe mentioned similar discussions and

work with the Active Transportation work group, which could be followed as an example. Jamie Snook will bring this material to the next Transit work group meeting.

The Regional Transit Spectrum (taken directly from the 2040 Plan) was shown. It provides a range of transit from Mixed traffic, to Priority treatments, to Exclusive guideway. Generally, this goes from neighborhoods, town and regional centers, and central city and regional centers in the same flow. The mix of transit on the spectrum overlaps, which was a concern with the group, with a possible disservice to diversity. The group agreed that the line at the bottom showing areas would be best eliminated.

The group discussed enhanced transit corridors, defined as transit service that provides increased capacity and reliability yet is relatively low-cost to construct, context-sensitive, and able to be deployed more quickly throughout the region where needed. Maps of the Regional Transit Network, 2014 RTP Plan, and Going Place Map, adopted by Metro Council in 2009 were discussed.

Member comments:

- BRT is light rail perspective and corridor based. Future growth may not be addressed.
- Extra regional transit (bright blue lines showing HCT) would like added
- Adding more inter-regional areas
- The streetcar is limited to a single city. Could this be expanded?
- Canby/Salem/Oregon City areas; should be shown as functional capacity
- We sometimes look from a small lens, need to broaden our view for operational input
- It helps to show the big picture for regional/state funding ask
- Less expensive projects to more expensive (shown on the chart) for capital investments could be challenging to fit strategy/funding when the cross lines of identification
- SW Corridor connected to town centers, yet fails to make the current regional policy
- Moving local land use designations to regional designations could help overcome these challenges.
- The transit policies are to help guide us, not restrict us. With planning, a balance of current reality and future projections needs to be reflected.

Transit Vision Map Exercise

Using these transit typologies, the work group added comments and ideas to several maps around the room.

- Commuter rail
- Light rail
- Streetcar (streetcar and rapid streetcar)
- Bus Rapid Transit (Corridor-based BRT and Exclusive BRT)
- Regional Bus (Peak only service, Standard service, Express bus and Frequent service)
- Local bus/Community job connectors
- Paratransit
- Tram

Following time where the group drew on the maps and discussed transit related priorities and vision for short, mid and long term strategy, comments were provided.

- Would like to see HCT at Clackamas Community College
- Not all corridors are shown on the maps
- More extensions/connections are desired to be shown
- Text over the Damascus area where more growth can be expected
- Connections to Salem, Sandy, Newberg, etc.
- C-Tran to the north into Washington
- Different buses for varying number of people/express by area to increase speed between less stops
- Streetcar extension further out from central city
- The capacity of transit in city center; analysis for this. Underground or above ground. Layover facilities that are not downtown.
- Powell Street east of I-205 be given stronger capital investment consideration
- More emphasis on core capacity at Gateway transit
- Bus transit operations in Forest Grove, not TV Highway. This area is due to expand by another 50,000 people
- Bus rider transit from Forest Grove and Cornelius areas, with Hillsboro connector
- BRT on TV Highway
- North/South artilleries focus
- Identifying future development for future growth areas, matching transit needs
- Missing Hillsdale to Beaverton section
- Job expansions coming to westside; where can cars park to and from for this commute
- Highway 26 tunnel for mass transit
- Expanding the system while showing all ROI with existing system

Time ran out to discuss the transit vision with needs and planned improvements. This discussion will be rescheduled for the next meeting. Digitalized maps with the drawings and comments will be provided at the next meeting also.

BREAK

Jamie Snook introduced an update on the Transit System Expansion Policy. The Regional High Capacity Transit (HCT) plan and System Expansion Policy support the region's vision defined by the 2040 Growth Concept. Since adoption, TriMet, SMART and other jurisdictions have continued to develop localized plans that support transit improvements and investments in the region. The Federal Transit Administration program, which provides federal funding support for high capacity transit projects, has evolved as part of the Fixing America's Surface Transportation (FAST) Act. Based on these events, it makes sense to evaluate if there are any changes needed to the system expansion policy to support the most current plans and policies.

Overview of Existing HCT Criteria and Regional Trends

Tom Brennan and Mathew Berkow from Nelson Nygaard presented an overview of the existing HCT criteria and recent policies and trends. HCT System Plan uses a multiple account evaluation approach with 26 evaluation criteria grouped into four accounts:

- Community
- Environment
- Economy
- Deliverability (near-term readiness)

With 16 proposed HCT projects prioritized into 4 tiers of readiness:

- Near-term regional priority corridors
- Next phase regional priority corridors
- Developing regional priority corridors
- Vision corridors

The Transit System Expansion Policy (TSEP) is a component of the HCT Plan that provides a framework to advance future regional HCT corridors and gives a process for jurisdictions in regional priority corridors to work locally to advance project's regional priority status. Meeting target criteria in RTP updates provides the opportunity to reprioritize regional funding for HCT based on interim actions taken by local jurisdictions.

While effective for ranking HCT corridors, they have not been applied since. An update can address simplifying criteria, reducing the number of criteria, and expanding the types of projects to which jurisdictions could apply.

An overview of Federal funding options was presented:

- FTA
  - Capital Investment Grant Program
    - New Starts
    - Small Starts
    - Core Capacity
- US ODT
  - TIFIA Loan Program (Financing Approach)
  - TIGER

FHWA

- Technology and ITS Opportunities

A discussion was held on FTA Capital Investment Grant Program. These funds are discretionary and highly competitive. The average federal share of currently competing projects is approximately 50%, with demands for funds exceeding supply. With such competitive demands for project funds, the FTA wants to see:

- Existing corridor strength
- Political/community support
- Strong Land Use and Economic Development
- Zero car households (not tied to income)
- Operating improvements =higher ridership
- Strong local financial commitment

- Agency experience/technical capability
- Equity and environmental outcomes

Discussion on Current HCT Criteria Relationship to Vision
After providing a handout of existing criteria to evaluate with RTP Transit performance measure recommendations (Frequent, Convenient, Accessible, Affordable), the group broke into small groups to discuss potential new criteria and policies. When the members regrouped, discussion points included which criteria was most important to each transit vision goal, which criteria mattered most and how this could be measured, could it be meaningful in determining between projects/investments, and opportunities for consolidation.

The group agreed that the same set of data could be related to similar criteria, and framework to work with these criteria needs to be simplified. Members were encouraged to provide more feedback on the matter following materials emailed out, and later refined for the next meeting.

Next Steps
Jamie Snook encouraged members to talk to their regional representatives about transit issues. Materials from these presentations and maps can be shared. Jamie Snook is also available to make presentations; please contact her for this arrangement. The Transit work group will plan to meet again in April and May 2017, date to be determined.

Adjourn
There being no further business, meeting was adjourned by Jamie Snook at 4:03 p.m.

Meeting summary respectfully submitted by:
Marie Miller, Administrative Specialist

Attachments to the Record:

Item	Topic	Document Date	Description
1	Agenda	2/23/2017	Feb.23, 2017 Meeting Agenda
2	Meeting Minutes	1/25/2017	RTP Transit Work Group Minutes, Jan. 25, 2017
3	Memorandum	2/23/2017	RTP Memo to Work Group Members, 2/23/2017
4	Presentation	2/23/2017	RTP Transit PowerPoint Presentation, 2/23/2017
5	Handout	2/23/2017	Building a Regional Transit Strategy, Attachment A
6	Handout	Jan. 2017	Regional Transit Strategy Vision, Attachment B
7	Map	Jan. 2017	Regional Transit Network Map, Attachment C
8	Handout	July 2011	High Capacity Transit System Expansion Policy Implementation Guidance
9	Handout	1/30/2017	2018 Regional Transportation Plan Timeline
10	Presentation	Feb. 2017	Metro Transit System Expansion Policy, Presented by Nelson Nygaard
11	Handout	Feb. 2017	Existing Criteria – Potential Additional Criteria
12	Handout	Feb. 2017	Existing HCT Plan Criteria and Regional transit strategy vision exercise worksheets

METRO
TRANSIT SYSTEM EXPANSION POLICY

Tech Memo #3
Transit Investment Prioritization Practices

April 2017- DRAFT

NELSON
NYGAARD

This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Fixing America's Surface Transportation Act (FAST-Act), local government, and the State of Oregon funds.

Table of Contents

Table of Figures

TM #3 TRANSIT INVESTMENT PRIORITIZATION PRACTICES

INTRODUCTION

This memo provides the results of research into how other regions are wrestling with how to prioritize transit investments. The objective of this review was to understand the process for prioritizing transit investments in other regions, how the process was developed, the criteria used and how they are measured, and any lessons learned based on experiences with applying the prioritization processes. The research included a review of available written documentation and interviews with agency staff from peer regions (see Figure 1 for the list of peers).

As described in Technical Memorandum #1, the existing High Capacity Transit evaluation framework was developed in 2009 and is oriented towards ranking high capacity transit (HCT) corridors to advance for federal funding. This review of peer practices is part of an initiative to update and refine the region's process for prioritizing HCT and other transit investments that may be included in the 2018 Regional Transportation Plan. The goal is to prioritize projects that best meet regional outcomes and that are competitive for available federal and other funding opportunities. There are 26 criteria in the existing process, some of which can be difficult for local jurisdictions to apply. As such, this review explores opportunities to simplify and reduce the number of criteria. More generally, the review highlights:

- Which existing criteria are most common amongst the peers - informing which existing measures to keep, as we consider opportunities to reduce the number of measures
- Peers using a similar criterion, but calculating it more simply – informing opportunities to simplify existing criteria and make them easier for local jurisdictions to understand and calculate on their own
- Peers using criteria not currently used locally, but which represent something that the region values – informing potential new criteria
- Implementation challenges and/or lessons learned

This memo includes the following sections:

- Key Findings – the memo leads with the key findings from the transit investment prioritization research, including lessons learned noted in the peer interviews
- Peer Prioritization Processes – describes the general planning context in the peer regions for generating and prioritizing transit investments.
- Peer Prioritization Criteria – identifies the criteria used in each of the peer processes, organized to facilitate a comparison with the current HCT criteria.
- Peer interview questions are provided in Appendix A.

Recommendations for updating the TSEP evaluation criteria based on the peer research will be provided in Technical Memorandum #4.

Figure 1 lists the peer region, agency, and planning process analyzed as part of the peer review. It also identifies the number individual criteria used. Appendix B provides additional background on the peers.

The rightmost column notes the number of criteria that are similar to those in the Portland Metro High Capacity Transit System Plan.

Figure 1 Summary of Peers and Prioritization Criteria

Region	Agency	Plan or Document	Adopted /Updated	Number of Criteria	Criteria Similar to Portland Metro
Portland	Metro	Regional High Capacity Transit System Plan	2009	26	NA
Minneapolis-St. Paul (MSP)	Metropolitan Council	2040 Transportation Policy Plan	2015	28	25
Salt Lake City (City)	Wasatch Front Regional Council (WFRC)	2040 Regional Transportation Plan	2015	14	12
	Salt Lake City	Transit Master Plan	2016	10	10
San Diego	San Diego Assoc. of Governments (SANDAG)	San Diego Forward: The Regional Plan	2015	14	11
San Francisco Bay Area	Bay Area Rapid Transit District (BART)	System Expansion Policy	2002	13	13
		BART Vision Plan	Ongoing	17	13
Seattle	Puget Sound Regional Council (PSRC)	Transportation 2040	2014	22	22
	Sound Transit	Sound Transit 3: Regional Transit System Plan	2015	16	15
	City of Seattle	Transit Master Plan	2016	28	26

KEY FINDINGS

This section summarizes key observations from the peer research, including a synthesis of the criteria and process across the agencies reviewed and reflections offered by staff at peer agencies.

Observations relative to current Metro HCT prioritization criteria

Number and types of prioritization criteria

- Most peers use approximately 15 criteria to prioritize transit projects, though a few use in excess of 20.
- *Several types of criteria are common among the peer agency processes*. These criteria include the supportiveness of existing land uses, equity benefit, operating and maintenance costs, capital costs, and ridership (see Figure 3 and Figure 4).
- *Several of the existing Portland Metro HCT criteria are less commonly used in peer processes*. These include integration with other land uses (freight), safety and security, housing and transportation benefit, and risk of school and parkland disturbance (see Figure 3 and Figure 4).

Opportunities to streamline evaluation process

- Several peers use a multi-stage prioritization process, which could be used to initially "screen" projects using fewer measures.
  - *It's important to have a rigorous analysis, but it is time intensive.* In San Diego, evaluation for all projects using their Activity Based Model can take four months. Alternate options could be to limit the evaluation to projects greater than a designated cost threshold, as the Metropolitan Transportation Commission (MTC) does in the San Francisco Bay Area, or to use the evaluation results from the previous evaluation process, as long as the results are relatively recent.
- Some peers consider funding potential after an initial evaluation of projects
  - *Project scoring is the first step in prioritization in the Salt Lake City region.* After scoring projects, an assessment of funding opportunities and regional significance is used to place projects into phases.

Opportunities to refine equity criteria

- *There may be an opportunity to develop a more nuanced equity criteria*. WFRC (Salt Lake City region) uses a "Ladders of Opportunity" social equity criteria – a term often used by US DOT to refer to opportunities for the economically disadvantaged to achieve success. This measure has two components: (1) disadvantaged communities, and (2) regionally significant centers to which they should be connected to find opportunities.
  - Disadvantaged communities are identified based on densities of low-income households, zero car households, minorities and multi-family housing units.
  - Regionally significant centers are locations with health care opportunities, public college enrollment, and employment.
  - Instead of measuring proximity to disadvantaged communities as a standalone measure, WFRC identifies whether a project connects disadvantaged communities to the areas that are likely to provide them with opportunities.

Additional Peer Lessons Learned

Agency staff from peer agencies were asked to reflect on lessons learned from applying their processes and criteria, which have been organized into general themes. These lessons learned are relative to the criteria in each peer regions.

Some important criteria or project types are not included in prioritization process

- *Important benefits, including development/redevelopment opportunities, or the amount of vacant or under-developed land, are not included in RTP criteria.* Institutional and private sector investments and development occurring in station areas and along transit corridors are major benefits and indicators of success. (It should be noted that Salt Lake City used such a prioritization criteria in its recent Transit Master Plan.) [SLC]
- *Some projects that may have the greatest benefits to the region's transportation system are not included in the evaluation.* Operations and programs (i.e., transportation system management, intelligent corridors, rideshare programs and transportation demand management) could greatly increase the efficiency of the system, but are not included in the model, as the model is limited to regionally-significant capital projects. [San Diego]
- *A narrow focus on project types may limit opportunities for other effective projects.* Agency focus on particular modes or projects with a designated level of dedicated guideway can limit investments in other projects that could be very beneficial for the public (such as BRT lite and enhanced bus). [MSP]
- *As systems mature and age, prioritization processes can shift priorities.* As the high capacity transit system in the Bay Area has begun to age and reach its ridership capacity, the process has been updated to focus more investment into the existing system rather than expanding into less viable corridors. [San Francisco - BART]
- *Some staff from the regional transit agency would like to focus on the busiest bus lines.* The busiest bus lines are the locations where transit has demonstrated success and where there is existing demand. Some staff would prefer capital projects that focus on reducing travel time, increasing reliability, and reducing operating costs on these successful lines, which they think would offer a greater return on investment. [SLC]

Some cities have developed locally-focused transit plans and funding sources

- *A city-focused transit plan can help a regional transit agency understand local needs and desires.* The Utah Transit Authority *(*UTA) often receives ambiguous and conflicting perspectives from officials and the public about desired types of transit investments, services and outcomes. UTA appreciates the Salt Lake City Transit Master Plan (TMP) because it provides a single voice about what SLC wants in terms of transit service, and what it wants its transit network to do. The TMP incorporates both service and capital project recommendations. [SLC - UTA]
- *Local transit funding sources can help a City implement local priorities.* The City of Seattle developed a Transit Master Plan (TMP) to identify transit needs and projects, as the regional transit provider was not able to keep pace with Seattle's transit needs. A city-wide sales tax increase and vehicle license fee increase passed and, with the TMP as a guide, the funds were invested to provide a longer span of service and increased frequency, and to pay for the additional capital needs of operating the service. In November 2015, voters approved an additional transportation levy (Move Seattle) which funds improvements to streets, transit stops, traffic signals, and street and bridge

maintenance. After developing its TMP, the City developed a new Transit and Capital Funding Division to start working on these projects, as well as a bus speed and reliability program for bus improvements. The City has taken on many responsibilities that would usually be handled by a transit agency, such as FTA coordination, design, and analysis. Some projects identified in the TMP were forwarded for inclusion in the regional transit funding ballot measure (ST3). [Seattle – City]

Prioritization processes are seen as providing objective assessment of project value

- *There is a tradeoff between geographic and social equity*. Transit projects are often pursued to provide geographic equity in regional transit system investments. This reduces the ability to provide more investment in areas that need it most for social equity reasons (e.g., poverty, automobile availability and physical ability) or demand (density and ridership potential). [MSP]
- *Project evaluation and scoring independent of politics.* An objective assessment and ranking of the projects consistently applied ensures the process remains independent of politics and shields the process from geographic equity concerns. The regional Activity-Based Model is used to score projects and identify those that have the most merit and positive impacts on the region. [San Diego]

PEER PRIORITIZATION PROCESSES

Below is a brief overview of the general transit planning landscape for each peer region, provided as context to the peer evaluation criteria described in the following section of this document. Additional describing the purpose of each prioritization process reviewed, how the list of projects are generated, and which types of projects are included in the evaluation is found in Figure 2.

The regions vary in terms of which entities undertake planning for and prioritize transit projects. Of note is the work of two peer cities (Salt Lake City and Seattle) to generate their own Transit Master Plans to identify local priorities for transit and provide a clear vision for transit that can be used by the regional transit agencies. In the case of Seattle, it is also using local funding to implement some of its transit priorities.

- **Minneapolis-St. Paul.** This region is unique in that it has a County-Transit Improvement Board (CTIB) with a dedicated funding source for regional transit infrastructure and operations. Transit projects advanced to the Metropolitan Council, the MPO, once CTIB completes the alternatives analysis, at which point the Metropolitan Council takes over responsibilities for the environmental impact statement, engineering work and final design. The Metropolitan Council has been lobbying the state legislature for its own dedicated revenue source for transit projects, and developed an as of yet unused set of prioritization criteria.
- **Salt Lake City.** The Wasatch Front Regional Council (WFRC) is the MPO for the Salt Lake City region. It uses its transit prioritization process to categorize transit projects in the RTP. Salt Lake City developed its own Transit Master Plan in 2015-2016 to identify improvements to transportation options and provide a single vision for transit services in the city.
- **San Francisco.** The Bay Area Rapid Transit District (BART) is the regional rapid transit provider for the San Francisco Bay Area. Its projects have historically been prioritized to complete segments identified in long-term system planning initially developed in the 1960s. More recently, projects have been generated based on the need to fix aging infrastructure, handle increased ridership, and capacity constraints.
- **San Diego.** SANDAG is the MPO in the San Diego Region. In 2003, it assumed transit planning, funding allocation, project development and construction responsibilities from the two local transit agencies (MTS and NCTD). Every four years, SANDAG runs all potential projects (including transit) through its Activity Based Model, the results of which feed into several of the project evaluation criteria.
- **Seattle.** Several agencies are involved in transit planning in the Seattle region. The Puget Sound Regional Council (PSRC), the MPO, evaluates projects for inclusion in the regional transportation plan (Transportation 2040). Sound Transit, which constructs and operates light rail and commuter rail and operates express buses, developed a prioritization process to identify projects for inclusion in the $54 billion ST3 ballot initiative. The City of Seattle developed its own Transit Master Plan (TMP), which included a process used to select corridors with the greatest needs and identify the appropriate level of investment to support mobility and other factors in each. In 2015, Seattle voters approved the 9-year, $930 million Levy to Move Seattle, which provides 30% of the City's transportation budget, some of which will fund transit priorities identified in the TMP.

Figure 2 Summary of Peer Prioritization Processes

Metro Area	Agency	Agency Type and Role	Purpose and Scope of Evaluation Process	Project Generation	Project Types
Minneapolis-St. Paul	Counties Transit Improvement Board (CTIB)	The Counties Transit Improvement Board (CTIB) is a joint-powers board represented by five counties in the metro area. The CTIB generates revenue for transit projects with a ¼-cent sales tax and motor vehicle tax, which are used for regional transit infrastructure and operations.	Projects are advanced to the Metropolitan Council once CTIB has completed the Alternatives Analysis (see below).	Counties play a lead role in planning for future major regional transitways, acquire land, and fund the capital and operating costs. Counties frequently lead station area planning and implementation efforts. Potential projects begin as specific routes identified by local counties. The counties evaluate potential alignments and modes and identify the locally preferred alternative. Projects are then handed over to MTC for adoption into the TPP and other work including the EIS, engineering, and final design.	Transitways are the name given to the large transit investments in the region, including LRT and BRT. They are defined as corridors sponsored by a member county, identified in the CTIB Transitway Map, and the corridor must be in a dedicated ROW for the majority of the line with online or inline stations (or must be the LPA for a county-sponsored alternatives analysis that is consistent with the Board's vision and policies).
	Metropolitan Council	Metropolitan Council is the MPO for the Minneapolis-St Paul region. Metropolitan Council, by resolution, accepts transit projects from the CTIB to be included in the Transportation Policy Plan (TPP) – the region's RTP. Projects must be in the TPP to be eligible for federal funding. Once accepted into the TPP, the Metropolitan Council takes over responsibility for the environmental impact statement, engineering work and final design. Nearly all local funding for these projects comes from CTIB, and construction begins if federal funds are received.	Despite the inability to fund and develop projects, Metropolitan Council developed its own prioritization criteria for transitway projects (in the event the Council is able to get state approval to develop a dedicated revenue source for transit) and to help guide the development of a regionally balanced system. The proposed process is for projects to be evaluated with preliminary set of criteria (known as Technical Investment Factors), then to be refined with more detailed and qualitative factors (known as Policy Investment Factors).	Metropolitan Council does not generate projects.	Projects are modal and corridor specific projects that have already developed into a locally-preferred alternative.
Salt Lake City	Wasatch Front Regional Council (WFRC)	WFRC is the MPO for the Salt Lake City region.	Project prioritization scoring results and funding availability are used to categorize transit projects in the RTP into one of three funded phases, or into a fourth phase for projects without confirmed funding. WFRC does not use the scoring results to indicate priority. Scores are used as a guideline, and along with consideration of funding and regional significance, WFRC places projects into different timeframes.	The process beings by developing a list of all transit projects needed for the region by the end of the RTP horizon. Projects are developed by WFRC based on regional travel demand needs, and suggestions made by state and local jurisdictions. Transit projects are specific projects that already have the transit technology and alignments selected by the transit agency or local jurisdictions through scenario evaluation, analysis and other processes.	Project types include: ▪ Line projects – transit improvements, including construction and operations of light rail, BRT or enhanced bus, and corridor preservation. Each segment of a transit line is included as a separate project (this segmentation becomes valuable in the funding phase, allowing segments to be phased separately). ▪ Point projects – transit investments, including hubs, park-and-rides, transit offices, and maintenance facilities ▪ Programmatic projects – groupings of projects that are not regionally significant when analyzed individually; includes maintenance of assets and system service increases
	Salt Lake City	Salt Lake City developed its own Transit Master Plan in 2015-2016 to identify improvements to transportation options and to provide a single vision for transit services in the city.	The purpose of the TMP evaluation process was to develop a list of corridors in the city that are likely to support high-quality transit services. The final product was a draft frequent transit network and recommendations for capital investments in some corridors (including upgrades to Enhanced Bus, BRT or rail).	Project were generated by analyzing major roadway segments within the city based on various factors, including demographics, land use patters, and population and employment densities. This eliminated corridors unlikely to support high-quality transit services. A broader set of evaluation criteria were used to analyze the remaining corridors to narrow the projects down to a final set of recommended corridors.	Projects start as arterial corridors and segments, and the final project list includes a recommended frequent transit network and capital improvements for bus enhancements, with recommendations for level of transit investments in the corridors.

Metro Area	Agency	Agency Type and Role	Purpose and Scope of Evaluation Process	Project Generation	Project Types
San Diego	SANDAG	SANDAG is the MPO in the San Diego Region. In 2003, SANDAG assumed transit planning, funding allocation, project development and construction responsibilities from the two local transit agencies (MTS and NCTD). Every four years, SANDAG takes the list of all potential projects (including transit) and develops a network in its Activity Based Model for each individual project. It runs a single no-build model that includes the existing network and any programmed projects that will be completed by the analysis year. It next runs each project network individually. The difference between the no-build and the project network shows how each project will impact mobility, transportation, and other factors. The process is time-intensive, taking three to four months to analyze all projects.	Projects are scored based on a set of evaluation criteria. Projects are then phased based on the scoring results, along with the availability of funding (both funding projections and an understanding of available resources). SANDAG staff consider various factors in addition to the scoring criteria, such as connectivity and readiness, to recommend the final list of projects.	Projects are generated by SANDAG and the transit agencies working together to identify all potential transit projects in the region. This includes projects, large and small, that address a transit need that is considered regionally significant. $14 billion worth of highway, roadway, transit and active transportation projects approved and funded by voters in 2004 as part of the TransNet program are automatically included, as the measure requires them to be included in the region's transportation plan.	Projects include all capital projects that are regionally significant. Individual bus stop projects or service/operations are not included.
San Francisco	BART	BART is the regional rapid transit provider for the San Francisco Bay Area.	The existing System Expansion Policy is designed to evaluate extensions and new stations. The results of the evaluation process are intended to inform staff and policy-makers, who make the final recommendation on whether or not to advance a project.	Projects have historically been prioritized to complete long-term system plans initially developed in the 1960s. More recently, projects have been generated based on the need to fix aging infrastructure, handle increased ridership and capacity constraints. Recent planning processes have developed projects by meeting with BART board members, BART executives, staff and other stakeholders to identify all potential project needs.	Projects include infill stations, new tunnels, new corridors, conversions of existing lines to different technologies, and other infrastructure improvements.
Seattle	Puget Sound Regional Council	PSRC is the MPO for the Seattle region.	PSRC identifies projects for inclusion in the regional transportation plan (Transportation 2040).	PSRC member jurisdictions submit projects for inclusion in the Transportation 2040 RTP project list. They complete a questionnaire with qualitative multiple choice questions where each potential multiple choice response is directly tied to a score. The results are compiled into a Scorecard Report that allows for a comparison between projects by category of project type. A second level of analysis (Regional Growth Strategy Cross-Check) is conducted to provide PSRC with data to evaluate how well the projects reinforce the Regional Growth Strategy. The analysis compares the distribution of investments, costs and benefits to the distribution of population and employment.	Projects are categorized into three categories (state of good repair, expansion, and programmatic investments). The expansion projects are further categorized into four types: arterials, bike/pedestrian, highways and transit. Transit expansion projects in the 2018 update (2017 call-for-projects) include park-and-ride lots with more than 250 spaces, new or relocated transit centers and stations, new dedicated right-of-way, or bus stops in highway right-of-way. Other transit projects (including new bus routes, vehicles, bus stop amenities and improvements, transit maintenance facilities, park-and-ride lots with less than 250 spaces, and TDM programs) are categorized as programmatic investments.
	Sound Transit	Sound Transit is the public agency responsible for constructing and operating light rail and commuter rail in the Seattle metropolitan area, as well as operating express buses.	In anticipation of asking voters to approve the Sound Transit 3 (ST3) funding initiative in 2016, Sound Transit developed a list of projects that the proposed $54 billion ballot measure would fund. Sound Transit utilized its Candidate Project Evaluation methodology to evaluate a list of proposed projects for inclusion in ST3 ballot initiative. Voters approved the ST 3 System Plan Project List and tax increase in November 2016.	An initial list of projects (Draft Priority Projects List) was identified by the Sound Transit Board (some projects recommended from the Seattle TMP described below were included in the list). Feedback from the public, stakeholders and local jurisdictions were used to make changes and additions to the project list, resulting in the Candidate Project List. This revised list was then run through an evaluation process to develop the final list.	Projects include specific corridors with modes, alignments and degree of grade separation already selected (for light rail, bus and commuter rail projects). Additional projects include planning studies for additional HCT projects, policies and programs that support bike/pedestrian access to stations, TOD planning, and technology analysis and implementation.

Metro Area	Agency	Agency Type and Role	Purpose and Scope of Evaluation Process	Project Generation	Project Types
	City of Seattle	The City of Seattle developed its own Transit Master Plan (TMP) to identify opportunities to fund and invest in its transit network to fulfill needs not fully being met by King County Metro, the regional transit provider. Many buses were at capacity, and there were a significant number of pass-ups.	As part of its Transit Master Plan (adopted in 2012), which helped the City secure voter approval for a transit funding measure (Move Seattle), the city developed its own transit corridor evaluation process. The Seattle TMP evaluation process is not a prioritization process, but a process to determine the level of investment in each corridor in the city. The methodology was used to select corridors with the greatest needs and identify the appropriate level of investment to support mobility and other factors. In 2016, the City updated the TMP to refine some of the priority corridors and reflect different mode priorities for some corridors, but it did not re-run the full corridor prioritization process.	Projects were developed by analyzing all the major arterial corridors in the city, using a-three stage process. Stage I Evaluation Criteria, applied to all corridors, focus on ridership, land use and travel time (the 15 highest scoring corridors are forwarded to Stage II, eliminating corridors with poor land use or limited market demand to support transit services). Stage II used a broader set of measures to evaluate the corridors. The top five scoring corridors were forwarded to Stage IIIa to undergo modal analysis and determine alignments (some modes are eliminated based on a screening of capacity, constructability, and corridor/system compatibility). The remaining 10 corridors were forwarded to Stage IIIb to be evaluated for speed, reliability and other transit service enhancements.	Corridors were analyzed without an assigned mode or a specific alignment identified. Final projects ranged from high-capacity transit investments such as rapid streetcar, bus rapid transit, and local streetcar projects, to smaller transit capital projects including arterial BRT and other speed and reliability improvements. One of the key outcomes of the 2016 TMP update is that it changed the suggested level of investment for several bus corridors; these were elevated to BRT and this process led to the City's current RapidRide Enhancement Program.

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PEER PRIORITIZATION CRITERIA

This section is organized to facilitate a comparison of the transit prioritization criteria used by different agencies.

An overview illustrating which of the peer processes utilize a criteria similar to each of those in the existing HCT process is provided in Figure 3. Note that multiple agencies are listed for those peer regions were multiple agency processes were available for review. In addition, a given peer criteria was sometimes similar to more than one of Portland Metro's criteria. Therefore, the number of matching criteria may be greater than the number of criteria used by the peer. This figure illustrates that many of the HCT plan criteria are also utilized by peers, while a few are much less common.

A more detailed review of the peer evaluation criteria, which includes the actual measures, is provided in Figure 4. The peer criteria are organized to facilitate a comparison with the Portland Metro High Capacity Transit System Plan criteria, which are listed in the first three columns. The remaining columns indicate the criteria measures for each peer, with each peer criteria listed in the row of the most relevant local criteria. This table allows for a comparison of the similarities and differences between peers. Note that some agencies have a multi-stage screening process, which utilize an initial set of criteria during earlier stages of the process, with others applied later after many projects have been removed from the initial project list.

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Figure 3 Criteria Common among Peer Agencies

Portland Metro HCT Evaluation Criteria			Peer Agencies								Peer Agencies with Matching Criteria
Category	Number	Evaluation Criteria	Minneapolis-St. Paul	Salt Lake City		San Diego	San Francisco	Seattle			
			Metropolitan Council	City of Salt Lake City	WFRC	SANDAG	BART	City of Seattle	Sound Transit	PSRC	
Community	C1	Supportiveness of existing land uses	X	X	-	X	X	X	X	X	7
	C2	Local aspirations	X	-	X	-	X	-	X	X	5
	C3	Placemaking and urban form	X	-	-	X	X	X	-	X	5
	C4	Ridership generators	X	X	X	X	-	X	X	-	6
	C5	Support of regional 2040 Growth Concept	-	-	-	X	X	X	X	X	5
	C6	Integration with regional transit system	-	-	-	-	X	X	X	X	4
	C7	Integration with other land uses (freight)	-	-	-	-	-	X	-	X	2
	C8	Congestion avoidance benefit	-	X	X	X	-	-	X	X	5
	C9	Equity benefit	X	X	X	X	-	X	X	X	7
	C10	Health (promotion of physical activity)	X	-	X	X	-	X	X	X	6
	C11	Safety and security	-	-	-	-	-	-	-	X	1
	C12	Housing and transportation benefit	-	-	-	-	-	X	X	-	2
	C13	Transportation efficiency or travel time benefit to individual user	-	X	X	X	X	-	X	X	6
	C14	Transportation efficiency or travel time benefit to all corridor users	-	X	X	X	-	-	X	X	5
Environment	EN1	Reduction in emissions and disturbance	X	-	X	X	-	X	-	X	5
	EN2	Risk of natural resources disturbance	X	-	X	X	-	X	-	X	5
	EN3	Risk of resource disturbance	X	-	X	X	-	X	-	X	5
Economy	EC1	Transportation efficiency (operator)	-	-	X	-	X	X	-	X	4
	EC2	Transportation efficiency (user)	X	X	X	-	X	X	-	-	5
	EC3	Economic competiveness	X	X	-	X	-	X	-	X	5
	EC4	Rebuilding/ redevelopment opportunity	X	X	-	X	-	-	-	-	3
Deliverability	D1	Total project capital cost (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	X	-	5
	D2	Capital cost per mile (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	X	-	5
	D3	Operating and maintenance cost	-	X	X	X	X	X	X	-	6
	D4	Ridership	X	X	X	-	X	X	X	X	7
	D5	Funding potential	X	-	-	-	-	-	-	-	1

Figure 4 Summary of Peer Measures

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C1	Supportiveness of existing land uses	▪ Readiness of existing land use plans to support HCT investment ▪ Transit Orientation Index (transit demand based on residential density, employment density, and retail employment density)	Existing Land Use: ▪ Total population, employment, and student enrollment within ½-mile of proposed stations ▪ Intersection density and walkability near stations	City of SLC: Land use density ▪ Current jobs and residents within ¼ mile of corridor (using Census data) ▪ Future jobs and residents within ¼ mile of corridor (using regional projections)		Existing Residential Land Use: ▪ Residential units per gross acre within ½ mile of stations ▪ Residential units per net acre within ½ mile radius of stations ▪ Total residential units within ½ mile radius of stations ▪ Estimated trips (two-way) at 30% mode share, based on 1.2 workers per household Existing Employment Land Use: ▪ Employees per gross acre within ½ mile radius of stations ▪ Million square feet of commercial space within ½ mile radius of stations ▪ Total employees within ½ mile radius of stations ▪ Estimated trips (two-way) at 10% mode share, based on 3 employees per 1,000 square feet	City of Seattle: Ridership potential: ▪ Existing combined population and employment density within ¼ mile buffer ▪ Future combined population and employment density within ¼ mile buffer Compact, walkable neighborhood development: ▪ % of corridor with existing or future transit-supportive zoning ▪ Population density > 15 DU/acre ▪ Employment density > 15 employees per acre Sound Transit: Land Use and Development/TOD Potential: ▪ Density of combined population and employment (existing and future) within ½ mile of potential stations (using PSRC land use forecasts – consistent with the Sound Transit ridership forecasting model) Socioeconomic Benefits: ▪ Existing and future people and employees within ½ mile of stations PSRC: Support for Centers: ▪ Support land use and planning characteristics (transit supportive densities, high capacity transit station area, mix of uses)	Population and employment are the primary ways agencies (and Portland Metro) measure how well existing land use supports a project. Many of the measures used here are very similar to (or directly related to) the measures in C3.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C2	Local aspirations	▪ Is a form of HCT desired by the local jurisdiction? ▪ Did the jurisdiction attend and participate in the HCT/Local Aspiration Workshops? ▪ Does the jurisdiction have adopted population and employment growth aspirations for that would support HCT? ▪ Does the local jurisdiction have plans to update land use policies to help support HCT?	Future Land Use and Development ▪ Land use plans supportive of transitway densities ▪ Official land use controls supporting affordable housing construction ▪ Regulatory, infrastructure, and financing tools supportive of development including shared parking, parking requirement reductions ▪ Strength of development market ▪ Plans and policies to create and preserve a mix of housing affordability Community Commitment ▪ Local government support (Resolutions of support) ▪ Local land use and development commitments ▪ Public support	WFRC: Project Readiness: ▪ Is project included in the planning documents of local municipality? ▪ Has a corridor specific study been completed? Is there a completed environmental study and adopted recommendation? ▪ Is there official consensus in support of the project and how detailed are the plans?		Land Use Plans and Policies: ▪ Plans and policies to increase corridor and station area development ▪ Plans and policies to enhance transit-friendly character of station area development ▪ Commitment to inter-jurisdictional consensus on land use ▪ Community outreach in support of land use planning ▪ Regulatory and financial incentives to promote transit support development ▪ Concentration of development around established activity centers and regional transit ▪ Zoning that increases development density in transit station areas ▪ Zoning that encourages mixed-use development ▪ Zoning that enhances transit-oriented character of area, and pedestrian access ▪ Zoning that reduces parking and traffic mitigation Community and Stakeholder Support: ▪ Qualitative assessment of support	Sound Transit: Land Use and Development/TOD Potential: ▪ Assessment of the degree to which regional and local land use plans and policies support future development at station areas	Most peers have a criteria reflecting local aspirations.
C3	Place-making and urban form	▪ Street Density (street miles per corridor mile) ▪ Block Density (blocks per corridor mile) ▪ Urban Living Infrastructure (urban amenities per corridor mile)	Existing Land Use: ▪ Intersection density and walkability near stations			Station Context ▪ Qualitative Assessment of location supportiveness of transit-oriented development and station experience for patrons		Minneapolis-St. Paul is the only peer that similarly measures urban form.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C4	Ridership generators	▪ Hospital & medical centers ▪ Major retail sites I Major social service centers ▪ Colleges / universities ▪ Major Federal / State Government offices ▪ Employers > 500 employees ▪ Sports sites / venues		City of SLC: Anchor/generator strength ▪ Presence of and accessibility to major institutions, high visitation cultural/ recreational sites, large employers WFRC: Activity Center Support: ▪ How significant are the activity centers this transit project would serve? ▪ Significance was determined through employment and household density, size of area, and intersection density	Accessibility: ▪ Acres of parkland and recreational areas within ¼ mile of project		City of Seattle: Anchor/generator strength: ▪ Presence of major institutions, high visitation sites, Commute Trip Reduction (CTR) affected employers, and TDM affected buildings ▪ Presence of paid on-street parking; high average parking cost and percent of corridor with paid parking (off-street parking price data is not available for the entire city) Urban and Commercial Centers: ▪ Identification and qualitative assessment of the number, size, and importance of activity nodes (retail and neighborhood activities, main streets and shopping centers)	Several peers utilize a similar measure. Seattle takes it further by identifying sites affected by Commute Trip Reduction (CTR) rules, high parking costs or low availability, and other factors separate from land use and attractors that are also likely to generate ridership.
C5	Support of regional 2040 Growth Concept	▪ Central City, Regional Centers, Industrial areas, Freight and Passenger Intermodal facilities ▪ Employment areas, Town Centers, Station Communities, Corridors, Main Streets ▪ Inner and Outer Neighborhoods			Serves Smart Growth Areas: ▪ Share of trips on transit service serving all existing/planned or potential Smart Growth Areas		City of Seattle: Supports Urban Village Strategy: ▪ Corridor connects urban centers, urban villages and/or major generators ▪ Holistic review of a corridor in relation to other corridors and transit notes to promote multidirectional connections to urban villages Sound Transit: Connections to PSRC-designated Regional Centers: ▪ Number of regional growth and manufacturing or industrial centers served by the project PSRC: Support for Centers: ▪ Project provides increased mobility and accessibility for regional growth centers	Many peers have similar measure that award points for supporting key land use designations (centers, smart growth areas, etc.)

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C6	Integration with regional transit system	▪ Does the corridor make a new system connection? ▪ Is the corridor compatible with the existing HCT system? ▪ Does the corridor further the completion of the HCT system? ▪ Does the corridor expand the coverage of the HCT system and does this further the goals of the 2040 Growth Concept? ▪ Does the new corridor contribute to capacity relief of other transit services in the region? ▪ Does the new corridor improve routing choice in the region? ▪ Does the new corridor contribute to regional mobility?				Existing Intermodal Connections: ▪ Qualitative assessment of intermodal connections between the following modes: – Pedestrian (Comprehensiveness of pedestrian network; safe access to station sites; topography) – Bicycle (bicycle network connectivity; existing bicycle usage; comprehensiveness of bicycle network) – Transit (peak-hour transit routes; peak-hour routes w/ headways 15 minutes or less; evening and weekend routes) Note – the above is also listed in C10 Regional Network Connectivity: ▪ Assess the interconnected relationship of the transit expansion project and the existing transportation network, identifying opportunities for major gap closures (i.e., airport, inter-city rail, commuter rail, light rail).	City of Seattle: Contribution to Center City Circulation ▪ Intensity of travel demand to/from Center City ▪ Ability of corridor to feed/intersect with regional transit nodes or stations Sound Transit: Regional Light Rail Spine: ▪ Whether project contributes to the completion of a regional light rail system to Everett, Redmond and Tacoma. System Integration: ▪ Quantitative assessment of number of existing daily transit trips at bus connections within 0.5 miles of potential stations; and the potential for future integration opportunities	Only two peers have a similar measure. Portland's measures focus on how a transit project connects to other parts of the high-capacity network. BART's measures are similar, but also looks at how well the project integrates with pedestrian and bicycle networks, which the HCT Plan criteria evaluate as part of C10. Seattle's measures, being applied at the city rather than regional level, look at how well a project connects with the Center City and connections at regional transit centers and high-ridership areas.
C7	Integration with other land uses	Assess impacts of HCT on freight corridors					City of Seattle: Freight and goods movement: ▪ Extent of corridor in high-volume freight corridor ▪ Potential traffic impacts from lane reductions or transit treatments ▪ Curb space/loading zone impacts PSRC: Freight: ▪ Provide benefits to freight-related system users by improving travel time, reliability and efficiency for freight ▪ Support planned development in Manufacturing and Industrial Centers and other freight-related areas ▪ Project serves designated Freight and Goods Transportation System Routes	Most peers do not have a measure to assess impacts to freight corridors, though Seattle does. If maintained, C7 could be made more intuitive by explicitly mentioning freight in the name.
C8	Congestion avoidance benefit	Ability to bypass congested areas compared to non-HCT transit in mixed traffic		WFRC: Transit User Delay Avoidance: ▪ How many transit users along a segment if project is in its own right-of-way? ▪ How much congestion delay is forecast for that corridor?	Time Competitive Reliable Transit Service: ▪ Percent of route located in priority treatment (dedicated guideway, dedicated lane) Note – this measure also listed in C13/C14		Sound Transit: Reliability: ▪ Assessment of the corridor that is in an exclusive right-of-way (and level of separation)	Several peers have a similar measure. Multiple agencies use the length of a project corridor operating in a dedicated or exclusive right-of-way as a proxy for the ability to bypass congested areas.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C9	Equity benefit	▪ Catchment analysis for social groups (low income and minority census tracts) within walking access (1/4 mile) to a stop ▪ Analysis of percent of households with no vehicle available	Existing Land Use: ▪ Number and relative share of affordable housing units within ½ mile of proposed stations; community housing performance score Future Land Use and Development ▪ Official land use controls supporting affordable housing construction ▪ Plans and policies to create and preserve a mix of housing affordability (see Housing Policy Plan) Equity ▪ Average weekday project boardings by transit-dependent households ▪ Income and affordable housing ▪ Opportunity access for low-income population and people of color	City of SLC: Transit Propensity Index ▪ Transit dependent residents within ¼ mile (low-income, seniors, students and disabled) using Census and network analysis Lack of access to a vehicle ▪ Residents without access to a vehicle within ¼ mile of corridor (using Census data) WFRC: Ladders of Opportunity: ▪ Does project serve areas with large concentrations of disadvantaged people? Disadvantaged people includes existing densities of low income households, zero vehicle households, minorities, multi-family housing units ▪ Does the project link people to regionally significant job, education and health care centers? Regionally significant centers were identified based on (1) ratio of current health care workers to surrogates for health care, (2) forecast public college enrollment, (3) forecast employment	Accessibility: ▪ Change in total trips by disadvantaged community populations		City of Seattle: Benefits to vulnerable communities: ▪ Transit Dependency Index within ¼ of corridor (seniors, people with disabilities, low income populations) ▪ Percent with no access to automobiles within ¼ mile Access to service sector and living wage jobs: ▪ Number of service sector and living wage jobs (existing and future) in ¼ mile of corridor Sound Transit: Socioeconomic Benefits: ▪ Percent of population who are minority (non-white and/or Hispanic) or low-income (median household income below DHHS poverty guidelines) within 0.5 miles of potential stations PSRC: Social Equity and Access to Opportunity: ▪ Project mitigates existing, eliminates previous or avoids creating new negative impacts for minority, low-income, elderly, youth, people with disabilities, and households without vehicles	Most agencies look at similar criteria (percent of people who are low income, minorities, or no vehicle households within a distance of transit) to assess equity. Seattle also considers access to service sector and living wage jobs. The Metropolitan Council looks at the presence of existing affordable housing units in proximity to stations and other land use controls and plans that may enable or support future affordable housing. San Diego, alternatively, looks at the change in total trips made by these communities. This measure models actual use by these populations, whereas the other measures focus solely on proximity.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C10	Health (promotion of physical activity)	▪ Comprehensiveness of pedestrian and cycling network ▪ Increase in average bicycle and pedestrian mode share		WFRC: Multi-Modal Support ▪ Measurement of the length of existing and proposed bike lane facilities within a ½ mile of the project ▪ Qualitative results of survey given to region's planners regarding local support for multi-modal planning (direct support for active transportation and Complete Streets policies) City of SLC: Multimodal Connectivity ▪ Qualitative measure of improvements to bicycle and pedestrian access to transit, first/last mile connections, etc.	Physical Activity ▪ Increase in time engaged in moderate transportation-related physical activity Accessibility: ▪ Project located within ¼ mile of pedestrian and bike facilities	Existing Intermodal Connections: ▪ Qualitative assessment of intermodal connections between the following modes: – Pedestrian (Comprehensiveness of pedestrian network; safe access to station sites; topography – Bicycle (bicycle network connectivity; existing bicycle usage; comprehensiveness of bicycle network) – Transit (peak-hour transit routes; peak-hour routes w/ headways 15 minutes or less; evening and weekend routes) Note – this criteria is also listed in C6.	City of Seattle: Active transportation/human benefit: ▪ Pedestrian Master Plan "Along and Across Roadway" analysis tiers within ¼ mile of corridor ▪ Seattle Bicycle Master Plan analysis related to presence of facilities, demand and human health indicators Sound Transit: Ease of non-motorized access ▪ Connectivity of street system (number of intersections within 0.5 miles of each station) ▪ Qualitative rating of each station based on barriers to non-motorized access ▪ Station measures were aggregated to the segment or project level Percent of non-motorized access ▪ Station typologies were used to estimate percent of riders accessing stations by non-motorized modes (using urban, urban CBD, suburban, and intermodal transit center station types) PSRC: Multi-Modal: ▪ Improves mobility through non-SOV modes. ▪ Improves connections between modes, especially for bicyclists and pedestrians accessing transit	Most peers have a similar measure. City of Seattle used data from other city plans, illustrating the opportunity to use existing data and resources to support regional analysis. The ways to measure active transportation differ between all agencies. Some use a qualitative assessment of the networks, others look at intersection density (similar to C3), or percent of people using active transportation to access a station.
C11	Safety and security	▪ Assess personal safety of users on the system and those using facilities that support system operations (i.e., streets and stations) ▪ Qualitative, based on adherence to good design standards					PSRC: Safety and System Security: ▪ Project supports safer travel by all modes ▪ Project improves security	Few peers have a similar measure. Portland Metro's safety measures focuses on design, which is different than Seattle's measure, which identifies safety for all travel modes, and improvements in security.
C12	Housing and transportation benefit	Analysis of housing and transportation costs as percent of total household income	See C9 for related measures.				City of Seattle: Corridor housing and transportation cost: ▪ Combined housing and transportation cost (using CNT Housing and Transportation Affordability Index)	Only the City of Seattle uses this measure, although other peers have related equity measures that are categorized under C9. The City of Seattle uses external data compiled by CNT to support its efforts at calculating the cost of housing and transportation. However, Portland normalizes these costs to total household income.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
C13	Transportation efficiency or travel time benefit to individual user	▪ Average travel time benefit per rider ▪ Distribution of benefits across the line and the system. ▪ Comparison to non-HCT transit through congested areas		City of SLC: Potential for travel time savings or improved reliability ▪ Potential percent change in corridor travel time based on infrastructure improvements WFRC: Transit User Delay Avoidance: ▪ How many transit users along a segment if project is in its own right-of-way? ▪ How much congestion delay is forecast for that corridor?	Time Competitive Reliable Transit Service: ▪ Percent of route located in priority treatment (dedicated guideway, dedicated lane) Note – this measure also listed in C8	Cost Effectiveness: Cost per transportation system user benefit (perceived travel time for all transportation users divided by the recommended cost of the project)	City of Seattle: Potential for travel time savings: ▪ Qualitative assessment of speed treatments to date, and ratio of traffic volume to lane capacity Sound Transit: Travel Time: ▪ In-vehicle travel time along the project segment (end to end) based on assumed average speeds PSRC: Travel: ▪ Project addresses existing travel problems. ▪ Reduction in future travel problems ▪ Improve throughput	Several peers have a similar measure, but without a clear line between travel time and efficiency for users (C13) versus all corridor users (C14). There is overlap between these measures (C13/C14) and the congestion avoidance benefit measure (C8). Some agencies look at actual travel time (and/or changes in travel time) and others look at the level of separation from general traffic.
C14	Transportation efficiency or travel time benefit to all corridor users							
EN1	Reduction in emissions and disturbance	▪ Change in VMT ▪ Change in CO_2 and other pollutants (NO_x and SO_x)	Environment: ▪ Water supply – suitability and local policies supporting groundwater recharge ▪ Air quality – emissions reduction Note – this measure also listed in EN2	WFRC: Air Quality: ▪ Number of riders expected to forgo automobile use by walking or biking to transit ▪ This measure is used as an indicator for vehicle emissions reductions from mode changes	Greenhouse Gas and Pollutant Emissions: ▪ Reduction in CO_2 emissions ▪ Reduction in smog forming pollutants		City of Seattle: CO_2 reduction and improvement to air quality ▪ Reduction in per capita VMT and related GhG and particulate reductions ▪ This is calculated as a proxy measure and is not an exact calculation Vehicle lifecycle emissions ▪ Projected emissions generated through vehicles used in service along corridor PSRC: Air Quality: ▪ Reduction in air pollutants (including GhG and criteria pollutants) relative to a non-build scenario ▪ Use of alternative and cleaner fuels and less energy	Most peers have a similar measure. Some agencies provide actual reductions in VMT and GhG emissions. WFRC in Salt Lake City, alternatively, uses the reduction in SOV trips expected with the project as a proxy to calculate environmental benefits of projects.
EN2	Risk of natural resources disturbance	Length of alignment impacting identified sensitive habitats and/or natural resources	Risk Assessment: ▪ Potential risks through project implementation Environment: ▪ Water supply – suitability and local policies supporting groundwater recharge ▪ Air quality – emissions reduction Note – this measure also listed in EN1				PSRC: Land and Water: ▪ Minimize loss, alteration and fragmentation of critical areas and habitats in designated lands. ▪ Minimize impacts to forest and agricultural lands ▪ Improve hydrological functions and reduce stormwater runoff	Some peers have a similar measure.
EN3	Risk of (4f) resource disturbance	▪ Acres of resources impacted ▪ Intended to assess the risk of encountering school and park lands in aligning high capacity corridors						No peers have a similar measure related to impacts to school or park lands.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
EC1	Transportation efficiency (operator)	Operating cost per rider			Daily System Utilization ▪ Daily passenger miles per daily service seat miles (system wide)	Cost Effectiveness: ▪ Cost per new rider ▪ Cost per new rider with TOD	City of Seattle: Operating cost: ▪ Change in operating cost in corridor from existing service Efficiency/Productivity ▪ Estimated operating cost per rider and per net new rider	Several peer agencies looked at similar operating efficiency measures as Portland Metro; several agencies included annualized capital costs. See also D1, D2, and D3. The City of Seattle also looked at the change in operating cost from existing services to help analyze the impact of projects on their finances. San Diego's is unique in measuring how well service would be utilized (in terms of passenger and seat miles) rather than cost per rider.
EC2	Transportation efficiency (user)	Annualized capital and operating cost per rider	Cost Effectiveness: ▪ Annualized capital and operating cost per annual boarding ▪ Annualized capital and operating cost per new annual system linked trip on transit	City of SLC: ▪ Cost effectiveness: ▪ Cost per net new rider (operating, capital or annualized capital/operating)				
EC3	Economic competiveness	▪ Changes in employment catchment (1/2 mile)	Access to Jobs and Activity: ▪ Increase in access to jobs on transit within 45 minutes ▪ Number of job concentrations served				City of Seattle: Access to employment: ▪ Number of jobs (existing and projected) within ¼ mile Access to service sector and living wage jobs: ▪ Number of service sector and living wage jobs (existing and future) in ¼ mile of corridor Note – this measure is also listed in C9 PSRC: Jobs: ▪ Improves access to areas of high job concentrations ▪ Provides access to job-related training and educational opportunities (vocational schools, community colleges, universities) Social Equity and Access to Opportunity: ▪ Project improves access to areas of opportunity	Several peers have a similar measure to look at job access, though there is variation in what is calculated. Seattle also measures access to service sector and living wage jobs (also noted in the Equity measure C9). The Metropolitan Council looks at the change in jobs accessible via transit within 45 minutes, whereas most other agencies look at simply the number of jobs or whether a project links job centers together.
EC4	Rebuilding/ redevelopment opportunity	Total area of vacant and re-buildable land within a half mile buffer of project corridors		City of SLC: Redevelopment potential: ▪ Percent of corridor in a redevelopment area ▪ Percent of re-developable land (improvement to land value ratio of 1.0 or greater) area within ¼ mile of corridor			City of Seattle: Ability to shape development or urban form: ▪ Amount of vacant, re-developable and undeveloped land in corridor within ¼ mile of corridor Sound Transit: Land Use and Development/TOD Potential: ▪ Estimate of land in stations areas that can be developed or re-developed with high-density mixed use development based on existing zoning ▪ Real estate market support for development within 1 mile of potential corridor	Several peers have a similar measure while several do not.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
D1	Total project capital cost	Capital cost of project (based on per mile estimates from comparable national projects)	See annualizing capital and operating costs measures listed under EC1 and EC2 above	WFRC: Cost Effectiveness: ▪ Total capital cost divided by sum of all other criteria scores (ridership, air quality, activity center support, transit user delay avoidance, and multi-modal support)	Project Cost Effectiveness: ▪ Measure incorporating project cost, fuel costs, greenhouse gas emissions, smog-forming pollutants, physical activity and safety.	Operating Finance Plan ▪ Estimated farebox recovery ▪ Stability, reliability and availability of proposed operating subsidy.	Sound Transit: Capital Cost: ▪ Capital cost estimate	▪ All agencies have some form of capital cost measure. Some use multiple, related capital cost measures, e.g., total or per mile, but generally do not have separate criteria for these measures. ▪ Some agencies use cost-effectiveness measures that evaluate capital costs per rider or new rider, or monetize benefits. ▪ Some agencies have cost-effectiveness measures that use operating costs and/or combine annual operating and maintenance costs with annualized capital costs (see EC1/2 above).
D2	Capital cost per mile	Normalization of capital cost per mile						
D3	Operating and maintenance cost	Fully loaded annual cost to operate and maintain the line; does not consider other routes that might be replaced or necessary to feed the line					Sound Transit: Annual O&M cost: ▪ Annual cost of operations and maintenance based on assumed operating characteristics	
D4	Ridership	Total daily ridership for entire project corridor (developed by Regional Travel Demand Model)	Ridership: ▪ Average weekday project boardings ▪ New weekday system linked trips on transit	City of SLC: Existing ridership: ▪ Boardings in corridor (peak and off-peak, all modes) Ridership potential: ▪ Ridership potential based on current/future land use, current ridership, travel demand patterns, and type of investment WFRC: Ridership: ▪ Potential to produce enough riders to support high capacity transit ▪ Forecast transit riders based on regional travel demand model	Serves Daily Trips: ▪ What is the number of additional daily transit trips resulting from the project (change in daily linked transit trips)? Accessibility: ▪ Change in daily transit linked work and school trips ▪ Change in total transit trips from Indian Reservations	Ridership Threshold: ▪ Potential ridership in station area (based on local development, access and station capacity/functionality)	City of Seattle: Ridership and productivity: ▪ Peak and off-peak corridor ridership and productivity Efficiency/Productivity ▪ Estimated passenger trips per revenue service hour Sound Transit Ridership: ▪ Future 2040 ridership forecasts ▪ Projection of daily riders (including those who boarded at a station outside the corridor)	All peers have a ridership measure, though there is variability in how it is calculated. Some agencies use total ridership for the corridor and others look at the change in trips for the entire system. Salt Lake City and Seattle analyze ridership during peak and off-peak travel times.
D5	Funding potential	▪ Assessment of each corridor's potential to qualify for funding under FTA programs ▪ Comparison of non-HCT mode to proposal ▪ Use other measures as inputs: C13, D1, D2, D3, D4	Funding Viability ▪ Viability for revenues being considered ▪ Timing of spending expectations and revenues available			Capital Finance Plan: ▪ Level of funding committed ▪ The stability, reliability and availability of proposed funding sources	The City of Seattle's 2016 TMP Update refined analysis of bus corridor investments and assigned priorities to BRT corridors based on an evaluation of federal funding viability.	Not all peers have a separate measure reflecting FTA funding potential. Some agencies look at funding viability as a later step after the evaluation process.

Metro HCT Plan Evaluation Criteria		Portland Metro (HCT Plan)	Minneapolis-St. Paul (Metropolitan Council)	Salt Lake City (multiple agencies)	San Diego (SANDAG)	San Francisco Bay Area (BART)	Seattle (multiple agencies)	Findings
	Other criteria		Regional Balance: ▪ Investment levels across the region (geographic and per capita considerations) ▪ Investment levels that promote prosperity at the community's stage and level of development Technical Readiness: ▪ Stage of technical readiness, project development	City of SLC: User experience: ▪ Qualitative measure of user experiences based on user amenities, access to information and station design features WFRC: Project Readiness: ▪ Is land being preserved for this project?	Provides Access to Evacuation Routes: ▪ How will the project provide evacuation access for regional hazards? ▪ Proximity analysis of hazard areas (dam failure, earthquake, flood, landslide, liquefaction, tsunami, and wildfire), weighted by population and employment	Core System Improvements: ▪ Enhances or minimizes demands on yard/support facilities, redundancy/recovery capabilities, station and line haul capacity		Geographic equity, level of project development/readiness and operational efficiencies/ enhancements are other measures that could be considered by Portland Metro.

Appendix A Interview Questions

1. What process is used for prioritizing transit investments (e.g., what steps are involved, what entities are involved at different stages in the decision-making process, etc.)? Is project readiness a factor? Is geographic equity a factor?
2. What criteria are used to evaluate transit investments? How are criteria weighted? Can you direct us to or share documentation of your prioritization criteria and scoring methodologies?
3. What policy guidance (e.g., desired outcomes), precedents, or funding programs (e.g., New/Small Starts or state and local funding programs), if any, were used in developing the prioritization process and evaluation criteria?
4. How well has the transit prioritization process worked in your region? Are there example projects that illustrate how it has worked well or could be improved? How successful has the process been in securing state and federal grant funds? Are there things that didn't work at all?

Appendix B Peer Details

Figure 5 Peer Summary

Region	Regional Planning Agency	Primary Transit Agency	Population[1]	Plan or Document Name	Measures Last Adopted/Updated
Portland	Metro	TriMet	2,320,000	Regional High Capacity Transit System Plan	2009
Minneapolis	Metropolitan Council	Metro Transit	3,459,000	2040 Transportation Policy Plan	2015
Salt Lake City	WFRC	UTA	1,140,000	2040 Regional Transportation Plan	2015
				Salt Lake City Transit Master Plan	2017 (Planned)
San Diego	SANDAG	MTS	3,223,000	San Diego Forward: The Regional Plan	2015
San Francisco	MTC	Muni / BART	4,529,000	System Expansion Policy	2012
Seattle	PSRC	KCM / Sound Transit	3,614,000	Sound Transit 3: Regional Transit System Plan	2015
				Seattle Transit Master Plan	2016

[1] Source: US metro areas: US Census ACS 5-Year Estimates (2011-2015)

Regional transit strategy vision and strategies for achieving vision

To make transit more frequent, convenient, accessible and affordable for everyone

FREQUENT	CONVENIENT	ACCESSIBLE	AFFORDABLE
GOAL: 1. Align frequency and type of transit service to meet existing and projected demand in support of adopted local and regional land use and transportation plans.	GOALS: 1. Make transit more convenient and competitive with driving by improving transit speed and reliability through priority treatments (e.g., signal priority, bus lanes, queue jumps, etc.) and other strategies. 2. Improve customer experience by ensuring seamless connections between various transit providers, including transfers, route and schedule information and payment options.	GOALS: 1. Provide safe and direct biking and walking routes and crossings that connect to transit stops to ensure transit services are fully accessible to people of all ages and abilities. 2. Expand community and regional transit service across the region to improve access to jobs and Community places.	GOAL: 1. Ensure transit remains affordable, especially for those dependent upon it.
STRATEGIES: • Implement TriMet's Future of Transit Service Enhancement Plans. • Implement the SMART Master Plan. • Implement the Portland Streetcar Strategic Plan and expansion. • Implement and coordinate with C-TRAN's Transit Development Plan. • Implement and coordinate with state, regional, neighboring cities and rural transit providers future service plans. • Invest in Enhanced Transit Corridor improvements. • Invest in High Capacity Transit corridors. • Implement TriMet's Coordinated Transportation Plan for Seniors and Persons with Disabilities, in conjunction with Special Transportation Fund Advisory Committee (STFAC) and service providers. • Coordinate transit investments with local and regional land use and transportation visions as service improvements are prioritized	STRATEGIES: • Implement TriMet's Future of Transit Service Enhancement Plans. • Implement the SMART Master Plan. • Implement the Portland Streetcar Strategic Plan and expansion. • Implement and coordinate with C-TRAN's Transit Development Plan. • Implement and coordinate with state, regional, neighboring cities and rural transit providers future service plans. • Invest in Enhanced Transit Corridor improvements. • Invest in High Capacity Transit corridors. • Invest in repair and maintenance and critical transit bottleneck improvements to ensure the existing system functions effectively and efficiently. • Facilitate service connections between transit modes and transit providers at transit hubs. • Implement and coordinate the HOP Fastpass program across multiple service providers. • ~~Invest in next-generation transit signal priority and targeted right-of-way~~	STRATEGIES: • Coordinate transit investments with improvements to pedestrian and bicycling infrastructure that provide access to transit as service improvements are prioritized, in line with Regional Active Transportation Plan and TriMet's Coordinated Transportation Plan for Seniors and Persons with Disabilities. • Provide new community and regional transit connections to improve access to jobs and community services and make it easier to complete some trips without multiple transfers. • Enhance transit access to jobs and other daily needs, especially for historically marginalized communities[1], youth, older adults and persons living with disabilities. • Provide biking, walking, shared ride and park-and-ride facilities that help people access the transit system. • Coordinate efforts with shared mobility and ride-sourcing providers to support better first and last mile connections. • Coordinate and link transit-oriented development strategies with transit investments.	STRATEGIES: • Expand existing reduced fare program to low-income families and individuals in line with Metro/TriMet Low Income Fare Task Force recommendations. • Expand transit payment options (e.g., electronic e-fare cards) to increase affordability and convenience. • Expand student pass program

[1] Historically marginalized communities areas with high concentrations (compared to regional average) of people of color, people with low-incomes, people with limited English proficiency, older adults and/or young people.

FREQUENT	CONVENIENT	ACCESSIBLE	AFFORDABLE
	~~improvements~~Implement the TriMet Regional Transit Sign Priority Study recommendations, especially in congested corridors to improve on-time performance and reliability. • Provide programs and adopt policies that help increase transit usage and reduce drive alone trips, such as travel options information and support tools (e.g., trip planning services, wayfinding signage, bike racks at transit stops), individualized marketing, commuter programs (e.g., transit pass programs), and actively managing in downtowns and other mixed-use areas. • Improve the availability of transit route and schedule information. • Coordinate efforts between transportation providers to increase information sharing and ease of use (e.g., transfers and payment integration.	• Coordinate transit investments with the regional Equitable Housing Initiative. • Coordinate and link transit investments with local and regional land use and transportation visions as service improvements are prioritized.	

Building a Regional Transit Strategy

Adopted

Studies + Plans

Adopted

TSP

In Planning

Big and New Ideas

TWG

Draft Policies

- ——
- ——
- ——
- ——
- ——

Draft Vision

System Expansion Policy

- ☑ ~~~~
- ☑ ~~~~
- ☑ ~~~~
- ☑ ~~~~

TPAC / JPACT

MTAC / MPAC

ODOT

Transit Providers

Call for Projects

County coordinating committees

Port of Portland

City / County review/adoption

Draft Project Lists

DRAFT 2/2017

System Evaluation

Equity Analysis Evaluation

System Expansion Policy

Project Evaluation

Policy Discussion

Tech. Eval

Public Input

Target Projects

2018 RTP

Financially Constrained

2018 RTP

Strategic

Long Term Vision beyond 2040

Transit Service

Project Development

Programs

Additional Planning

PLAN

Transit Supportive

Public Input

COMMENT

Policy Discussion

Tech Eval

Public Input

2018 RTP

Financially Constrained

2018 RTP

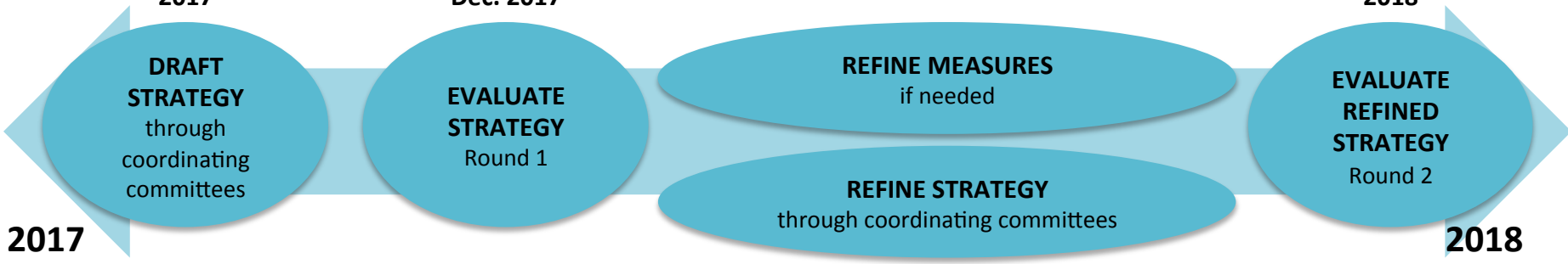
Strategic

Monitoring

DRAFT 2/2017

Building the RTP Investment Strategy

Summary of coordination, evaluation and refinement activities | June 1, 2017 to June 30, 2018



Metro issues Call for Projects on June 1

Cities and counties work with Metro, ODOT, Port, TriMet, and SMART through technical and policy coordinating committees to identify projects to submit

Agencies submit project information on-line to Metro by July 21

Agencies seek endorsement of projects from governing bodies by Aug. 25

All agencies pilot project evaluation to test criteria and provide information to sponsoring agencies

Metro compiles draft project list to review project submittals and project criteria with TPAC and MTAC

Metro evaluates draft strategy and identifies any shortcomings of measures and project criteria

Metro prepares draft regional-level findings on system performance and transportation equity analysis

Metro convenes RTP work groups, TPAC and MTAC and works with coordinating committees to review draft regional findings and deficiencies, and recommend changes, if any, that are needed

Metro packages corridor-level and other technical information for agencies to use to refine projects with coordinating committees

Coordinating committees prepare to refine project lists in response to the system evaluation, transportation equity analysis, and public input

On-line comment opportunity on draft project lists and regional findings

Convene Regional Leadership Forum 4 to:

- Discuss regional findings and deficiencies and public input on draft projects lists
- Discuss updated funding information
- Receive direction on refining investment priorities (e.g., timing and/or constrained/strategic list) and updated evaluation measures and project criteria

Metro convenes RTP work groups to recommend refinements to system performance and transportation equity measures and project evaluation criteria for future use (Round 2)

Cities and counties work with Metro, ODOT, Port, TriMet and SMART through technical and policy coordinating committees to identify investment strategy refinements, if needed or desired

Agencies submit updated projects on-line to Metro by April 29; all project submittals with a cost of more than $10 million apply updated project criteria

Metro compiles refined draft project lists to review with TPAC and MTAC

Metro evaluates refined draft project lists and updates regional-level findings on system performance and transportation equity analysis

Metro reviews updated findings with TPAC and MTAC to frame tradeoffs and choices for Metro Council, JPACT and MPAC policy direction

Metro Council and JPACT recommend which draft project list (Round 1 or Round 2 or Hybrid) to be released for public comment period

Hold 45-day public comment period from June 29 to Aug. 13 *(tentative)*

Metro

600 NE Grand Ave.
Portland, OR 97232-2736
oregonmetro.gov

2018 Regional Transportation Plan

Schedule and timeline for Building the 2018 RTP Investment Strategy

June 1, 2017	Call for Projects released
July 21, 2017	Agencies submit projects and information by 5 p.m.
July-October 2017	RTP Technical Evaluation Process (Round 1)
Aug. 2017	Metro reviews submittals for completeness and compiles draft project lists for TPAC and MTAC review
Aug. 25, 2017	Agencies submit project endorsements from governing bodies by 5 p.m.
Nov. – Dec. 2017	Draft RTP Findings & Recommendations Report released for technical review by TPAC, MTAC, RTP work groups and technical coordinating committees to discuss findings and deficiencies, and recommend changes, if any, that are needed. The technical discussions will inform materials being prepared for discussion by the Metro Council and regional policy advisory committees, through an on-line comment opportunity and at the Regional Leadership Forum 4. Metro provides corridor-level and other technical evaluation information to agencies and coordinating committees to use to inform potential refinements to projects in Spring 2018 Coordinating committees prepare to refine project lists in Spring 2018 in response to the system evaluation, transportation equity analysis, project evaluation and public input
Jan. – Feb. 2018	On-line public comment opportunity on draft projects and key findings
Feb. 2018	Regional Leadership Forum 4 a. Discuss regional findings and deficiencies, project information and public input on draft projects lists b. Discuss updated funding information c. Provide direction on refining investment priorities (e.g., timing and/or constrained/strategic list) and updated evaluation measures and project criteria
Feb. to April 2018	Cities and counties work with Metro, ODOT, Port, TriMet and SMART through technical and policy coordinating committees to identify investment strategy refinements, if needed or desired
April 29, 2018	Agencies submit updated projects and required information by 5 p.m.
May – June 2018	RTP Technical Evaluation Process (Round 2) Metro compiles refined draft project lists and reviews updated project submittals with TPAC and MTAC Metro evaluates refined draft project lists and updates regional-level findings on system performance and transportation equity analysis

	Metro reviews updated findings with TPAC and MTAC to frame tradeoffs and choices to highlight to the Metro Council, JPACT and MPAC
June 2018	Metro Council and JPACT recommend which draft project list (Round 1 or Round 2 or Hybrid) to be released during 45-day public comment period
June 29 to Aug. 13, 2018	Release public review draft RTP, Regional Framework Plan and Functional Plan amendments (if needed), and public review draft modal/topic plans for 45-day comment period & hearing
Sept. 2018	MTAC and TPAC consider public comment and make recommendations to MPAC and JPACT on 2018 RTP and modal/topical plans
Oct. 2018	MPAC and JPACT consider public comment and make recommendations to Council on 2018 RTP and modal/topical plans
Dec. 2018	Council action on 2018 RTP and Regional Transit Strategy, updated Regional Freight Plan, and updated Regional Safety Plan
Early 2019	Submit 2018 RTP to US DOT and LCDC for federal and state review

Agency contacts and Metro staff liaisons

Agency	Agency contact	Metro liaison
City of Portland	Courtney Duke (503) 823-7265 courtney.duke@portlandoregon.gov	Lake McTighe (503) 797-1747 lake.mctighe@oregonmetro.gov
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Multnomah County and cities (excluding City of Portland)	Joanna Valencia (503) 988-3043 x29637 joanna.valencia@multco.us	Jamie Snook (503) 797-1751 jamie.snook@oregonmetro.gov
Washington County and cities	Chris Deffebach (503) 846-3406 christina.deffebach@co.washington.or.us	Kim Ellis (503) 797-1617 kim.ellis@oregonmetro.gov
TriMet	Eric Hesse (503) 962-4977 hessee@trimet.org	Jamie Snook (503) 797-1751 jamie.snook@oregonmetro.gov
ODOT	Lidwien Rahman (503) 731-8229 lidwien.rahman@odot.state.or.us	John Mermin (503) 797-1747 john.mermin@oregonmetro.gov

Timeline | 2018 Regional Transportation Plan

Key
- Materials to support decision-making
- Public engagement incorporated and addressed
- Metro Council direction incorporated

Key Steps in Process
1. Confirm vision and goals
2. Determine regional priorities funding level
3. Conduct call for projects
4. Assess performance
5. Recommend plan and investment strategy

2018 RTP Chapters
1. Regional challenges
2. Vision and policies
3. Funding
4. Investments
5. Performance
6. Implementation

Metro

2016: APR SEP OCT NOV DEC | 2017: JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC | 2018: JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC | 2019: JAN FEB

Public engagement

Public information and targeted engagement opportunities

- Online poll (APR 2016)
- Leadership forum 1 (APR 2016)
- Leadership forum 2 (SEP 2016)
- Leadership forum 3 (DEC 2016)
- Online poll (FEB 2017)
- Online poll (MAY 2017)
- Snapshot (MAY 2017)
- Online poll (JAN 2018)
- Leadership forum 4 (FEB 2018)
- **45-day public review and comment** (JUN–JUL 2018)
- Snapshot (MAY 2018)
- Comment report and staff recommended refinements — September (SEP 2018)
- Leadership forum 5 (proposed) (JAN 2019)

Policy and technical updates

- **Document regional challenges** (APR 2016 – FEB 2017)
- **Update vision and goals** (DEC 2016 – MAR 2017)
- **Update financial assumptions and revenue forecast** (APR 2016 – MAR 2017)
- Draft forecast and recommended regional priorities funding level (MAR 2017)
- **Update performance targets and monitoring measures** (MAY 2017 – JAN 2018)
- Regional targets recommendation (JAN 2018)
- **Develop policy proposal on digital mobility** (MAY 2017 – JAN 2018)
- Policy recommendations (JAN 2018)
- **Modal and topical plans** (APR 2016 – AUG 2018)
  - Update Regional Transportation Safety Plan
  - Develop Regional Transit Strategy
  - Update Regional Freight Plan
  - TPAC/MTAC review drafts — October (OCT 2017)
  - Discussion drafts — June (JUN 2018)
  - Updated drafts — October (OCT 2018)
  - Adoption drafts — November (NOV 2018)
- **Update plan chapters** (MAY 2017 – AUG 2018)
  - TPAC/MTAC review drafts — October (OCT 2017)
  - Discussion draft — June (JUN 2018)
  - Updated draft — October (OCT 2018)
  - Adoption draft — November (NOV 2018)

RTP investment strategy

- **Update outcomes-based evaluation framework** (DEC 2016 – MAR 2017)
  - System performance measures
  - Transportation equity measures
  - Project performance measures
  - *To be tested during modeling and analysis*
- **Call for projects** (FEB 2017)
  - Draft constrained list
  - Draft regional priorities list
- **Test evaluation framework** (FEB 2017 – MAY 2017)
- **Perform modeling and analysis of projects and programs** (MAY 2017 – NOV 2017)
- **Compile capital, operations and maintenance costs and potential funding tools** (MAY 2017 – NOV 2017)
- Draft findings and recommendations — November (NOV 2017)
- Findings and recommendations report — January (JAN 2018)
- **Review modeling, analysis and costs; refine projects, programs and funding tools** (JAN 2018 – JUN 2018)
- **Refine evaluation framework** (FEB 2018 – JUN 2018)
- Refined evaluation framework measures (JUN 2018)
- **Refine modeling and analysis** (JUN 2018 – AUG 2018)
- Discussion draft analysis and costs (JUN 2018)
- **Refine capital, operations and maintenance costs** (JUN 2018 – AUG 2018)
- Discussion draft constrained list (JUN 2018)
- Discussion draft regional priorities list (JUN 2018)
- Updated draft lists (OCT 2018)
- Recommended constrained list (NOV 2018)
- Recommended regional priorities list (NOV 2018)
- **Adopted 2018 RTP** Submitted for state and federal review (DEC 2018)

Decision milestones

Metro Policy Advisory Committee action
Joint Policy Advisory Committee on Transportation action
Metro Council action

- Recommendation for building RTP investment strategy — May (MAY 2017)
- Direction for building RTP investment strategy — May (MAY 2017)
- Recommendation for discussion draft RTP and modal/topical plans — May/June (MAY 2018)
- Direction for discussion draft RTP and modal/topical plans — June (JUN 2018)
- Recommendation for adoption of 2018 RTP and modal/topical plans — October (OCT 2018)
- Adopt 2018 RTP and modal/topical plans — December (DEC 2018)

Regional funding discussion

- **Identify 2017 legislative priorities** (APR 2016 – DEC 2016)
- **Identify 2018 legislative priorities** (JAN 2018 – DEC 2018)
- **Identify 2019 legislative priorities** (JAN 2019 – FEB 2019)

March 20, 2017

Proposed Evaluation Criteria

#	Recommended Criteria	Former Criteria #	Rationale for Inclusion	Proposed Change	Data Inputs: Metro Model Output	Data Inputs: Metro Layer	Alignment: 6 Desired Outcomes	Alignment: Climate Smart Policy #2	Alignment: Federal CIG
Mobility and Ridership									
1	Current and/or future ridership	D4. Ridership	▪ Ridership is a core measure of transit project benefit.	▪ Consider allowing existing ridership to be used for the mobility and cost-effectiveness ratings in corridors with strong existing ridership (e.g., similar to warrants in the FTA process).	X		X		X
		C1. Supportiveness of existing land uses (current and/or future population)	▪ Population density is an indicator of ridership potential.	▪ Not a separate criterion. Provided as supporting data, but is captured in the modeled ridership.			X		X
		EC3. Economic competiveness (existing and future jobs)	▪ Quality transit access to jobs supports economic development.	▪ Not a separate criterion. Provided as supporting data, but is captured in the modeled ridership.			X	X	X
2	Transit rider travel time benefit	C13/C14. Transportation efficiency or travel time benefit to individual user/all corridor users	▪ Travel time benefit to the user demonstrates the effectiveness of the project and is an important part of attracting ridership.	▪ Only use C13 which measured travel time benefit per rider and not C14, which measured distribution of benefits across all corridor users.	X		X		X
Land Use Supportiveness and Market Potential									
3	Land use policy supportiveness	N/A	▪ Align land use policy assessment with FTA Land Use evaluation.	▪ New criterion			X		X
4	Supportiveness of urban form	C3. Place-making and urban form	▪ Street and block density impacts transit access.	▪ Propose incorporating C10, which measured the comprehensiveness of pedestrian and bicycle networks. ▪ Re-named criterion to be more intuitive.			X	X	X
5	Enhances connections to and between 2040 Growth Areas	C5. Support of regional 2040 Growth Concept	▪ Transit is a key component of supporting the 2040 Growth Concept.	▪ Re-named criterion to be more explicit in what it measures. ▪ Consider adapting measure to evaluate network connections using HCT + frequent network. This approach could illustrate how the corridor investment benefits the major O-D pairs between the growth centers connected, (e.g., weight by actual travel demand between growth centers rather than counting the number of centers served by the project).	X		X		X
6	Rebuilding/ redevelopment opportunity	EC4. Rebuilding/redevelopment opportunity	▪ Catalyzing redevelopment is a benefit of investment in high quality transit.	▪ Consider aligning with existing Metro data sources (e.g., TOD Strategic Plan).		X	X		X
Cost Effectiveness									
7	Operating Cost (Operating Cost per Rider)	EC1. Transportation efficiency (operator)	▪ Aligns with FTA Cost-Effectiveness criterion.	▪ Maintain EC1 (operating cost per rider). Total operating cost (D3) is no longer a separate measure. This eliminates a duplicative measure.	X				X
8	Capital Cost (Capital Cost per Rider)	EC2. Transportation efficiency (user)	▪ Aligns with FTA Cost-Effectiveness criterion.	▪ Maintain EC2 (capital cost per rider). Total capital cost (D1) and total capital cost per mile (D2) are no longer separate measures. This eliminates duplicative measures.	X				X
Equity Benefit									
9	Low income access to jobs and services	C9. Equity Benefit	▪ The equity benefit of transit investments is an important value in the Portland and peer regions and CIG evaluation.	▪ Revise to consider not only equity populations near project, but also whether a project connects people to jobs and services (similar to Ladders of Opportunity used by Salt Lake City).	X		X	X	X
10	Affordable housing	NA	▪ Prioritize transit access to existing and planned affordable housing.	▪ New criterion.					X

#	Recommended Criteria	Former Criteria #	Rationale for Inclusion	Proposed Change	Data Inputs: Metro Model Output	Data Inputs: Metro Layer	Alignment: 6 Desired Outcomes	Alignment: Climate Smart Policy #2	Alignment: Federal CIG
Environmental Benefit									
11	Reduction in emissions and disturbance	EN1. Reduction in emissions and disturbance	▪ Aligning transit service with demand and land use is cost-effective way to reduce emissions.	▪ No change; directly related to ridership.	X		X		X
Funding Commitment/Partnerships/Local Support									
12	Local Commitment and Partnerships	C2. Local Aspirations	▪ Local commitment and partnerships between jurisdictions and agencies are essential for the implementation of large regional transit projects.	▪ Redefine and clarify an existing measure to include partnerships.			X		X
13	Funding Potential	D5. Funding Potential	▪ For projects that would seek federal funding, assess project strength based on the CIG program criteria. ▪ As identified in the rightmost column, the CIG program includes criteria similar to many of the proposed criteria.	▪ Only evaluate this measure for a limited set of the highest scoring projects that are seeking federal funds.					

Existing criteria eliminated, consolidated, or moved out of the core prioritization process

Criteria	Recommendation	Rationale
C4: Ridership Generators	Move to project justification	▪ Ridership is generated by the Metro model and is included as a measure. A list of generators the project will serve as useful background information recommended for inclusion in project justification section of the Regional Transportation Plan call for projects.
EN2: Risk of natural resources disturbance	Move to project justification	▪ Impacts to identified sensitive habitats and/or natural resources is an important local value and should be noted, but is not relevant for evaluating the effectiveness of the transit investment. Impacts are also considered in more detail as part of the environmental process.
EN3: Risk of 4(f) resource disturbance	Move to project justification	▪ No peers have a similar measure related to impacts to school or park lands. Local value that should be noted, but is not relevant for evaluating the effectiveness of the transit investment. Impacts are also considered in more detail as part of the environmental process.
C6: Integration with regional transit system	Move to project justification	▪ Qualitative measure. It is also considered in C5. 'Enhances Connections to and between 2040 Growth Areas.'
C7: Integration with other land uses (freight)	Eliminate	▪ Assessment of freight impacts may be more appropriate during corridor refinement and environmental processes
C8: Congestion avoidance benefit	Eliminate	▪ Measure is related to and somewhat duplicative of C13 (Transportation efficiency or travel time benefit to individual user), both of which are outputs of the ridership modeling.
C11: Safety and security	Eliminate	▪ Measure was adopted to assess personal safety for users of the transit system. The HCT System Plan determined it was more appropriate to address safety in the project design phase.
C12: Housing and transportation benefit	Eliminate	▪ The spirit of this measure is captured in Equity measure C9.
C10. Health (promotion of physical activity)	Consolidate with C3 (Place-making and urban form)	▪ This measure of the comprehensiveness of pedestrian and bicycle networks is combined with the urban form measure (C3).
D1: Total project capital cost (exclusive and nonexclusive right of way options) D2: Capital cost per mile (exclusive and nonexclusive right of way options)	Consolidate with EC2, which will evaluate capital cost	▪ Use capital cost effectiveness as a measure (aligned with FTA scoring). ▪ Total capital cost and capital cost per mile become data points, but cost effectiveness is the measure (measured in EC2), consistent with FTA CIG evaluation criteria.
D3: Operating and maintenance cost[2]	Consolidate with EC1, which will evaluate operating cost (Transportation Efficiency)	▪ Use operating cost effectiveness as a measure. ▪ Total operating and maintenance costs become a data point, but cost effectiveness is the measure (measured in EC1), consistent with FTA CIG evaluation criteria.

Criteria Common among Peer Agencies

Portland Metro HCT Evaluation Criteria			Peer Agencies								Peer Agencies with Matching Criteria
Category	Number	Evaluation Criteria	Minneapolis-St. Paul	Salt Lake City		San Diego	San Francisco	Seattle			
			Metropolitan Council	City of Salt Lake City	WFRC	SANDAG	BART	City of Seattle	Sound Transit	PSRC	
Community	C1	Supportiveness of existing land uses	X	X	-	-	X	X	X	X	6
	C2	Local aspirations	X	-	X	-	X	-	X	X	5
	C3	Placemaking and urban form	X	-	-	-	X	-	-	-	2
	C4	Ridership generators	X	X	X	X	-	X	X	-	6
	C5	Support of regional 2040 Growth Concept	-	-	-	X	-	X	X	X	4
	C6	Integration with regional transit system	-	-	-	-	X	X	X	-	3
	C7	Integration with other land uses (freight)	-	-	-	-	-	X	-	X	2
	C8	Congestion avoidance benefit	-	-	X	X	-	-	X	X	4
	C9	Equity benefit	X	X	X	X	-	X	X	X	7
	C10	Health (promotion of physical activity)	-	-	X	X	X	X	X	X	6
	C11	Safety and security	-	-	-	-	-	-	-	X	1
	C12	Housing and transportation benefit	-	-	-	-	-	X	-	-	1
	C13	Transportation efficiency or travel time benefit to individual user	-	X	X	X	X	-	X	X	6
	C14	Transportation efficiency or travel time benefit to all corridor users	-	X	X	X	-	-	X	X	5
Environment	EN1	Reduction in emissions and disturbance	X	-	X	X	-	X	-	X	5
	EN2	Risk of natural resources disturbance	X	-	-	-	-	-	-	X	2
	EN3	Risk of resource disturbance	-	-	-	-	-	-	-	-	0
Economy	EC1	Transportation efficiency (operator)	-	-	-	X	X	X	-	-	3
	EC2	Transportation efficiency (user)	X	X	-	X	-	-	-	-	3
	EC3	Economic competiveness	X	X	-	-	-	X	-	X	4
	EC4	Rebuilding/ redevelopment opportunity	X	X	-	X	-	X	X	-	5
Deliverability	D1	Total project capital cost (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	X	-	5
	D2	Capital cost per mile (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	-	-	4
	D3	Operating and maintenance cost	-	X	X	X	X	X	X	-	6
	D4	Ridership	X	X	X	X	X	X	X	-	7
	D5	Funding potential	X	-	-	-	X	-	-	-	2

Existing HCT Plan Criteria

Evaluation Accounts, Criteria, and Methods

Account	Criteria	Method of Evaluation
Community	C1: Supportiveness of existing land uses	Readiness of existing local land use plans and policies to support a HCT investment, quantitative analysis using the Transit Orientation Index , which estimates transit demand based on the land use characteristics of household density, employment density and retail employment density.
	C2: Local aspirations	Political desire for corridor communities (in aggregate) to accommodate land use density and to promote urban form that is supportive of HCT and meets the region's 2040 growth management objectives. Qualitative scoring based on the following four equally weighted points: ▪ Is a form of HCT desired by the local jurisdiction? ▪ Did the jurisdiction attend and participate in the HCT/Local Aspiration Workshops? ▪ Does the jurisdiction have adopted population and employment growth aspirations for that would support HCT? ▪ Does the local jurisdiction have plans to update land use policies to help support HCT?
	C3: Placemaking and urban form	Identification of impacts on urban composition and public space function; factors included: ▪ Street Density (street miles per corridor mile) ▪ Block Density (blocks per corridor mile) ▪ Urban Living Infrastructure (urban amenities per corridor mile)
	C4: Ridership generators	Identification of major activity centers served, e.g. ▪ Hospital & medical centers ▪ Major retail sites I Major social service centers ▪ Colleges / universities ▪ Major Federal / State Government offices ▪ Employers > 500 employees ▪ Sports sites / venues
	C5: Support of regional 2040 Growth Concept	▪ Central City, Regional Centers, Industrial areas, Freight and Passenger Intermodal facilities ▪ Employment areas, Town Centers, Station Communities, Corridors, Main Streets ▪ Inner and Outer Neighborhoods
	C6: Integration with regional transit system	Identification of full trip benefits due to integration with transit transfer centers and interchange opportunities, including: ▪ Does the corridor make a new system connection? ▪ Is the corridor compatible with the existing HCT system? ▪ Does the corridor further the completion of the HCT system? ▪ Does the corridor expand the coverage of the HCT system and does this further the goals of the 2040 Growth Concept? ▪ Does the new corridor contribute to capacity relief of other transit services in the region? ▪ Does the new corridor improve routing choice in the region? ▪ Does the new corridor contribute to regional mobility?
	C7: Integration with other land uses [1,3]	This criterion was intended to assess the impact of HCT on freight corridors.
	C8: Congestion avoidance benefit [2]	Consider HCT ability to bypass congested areas compared to comparable non-HCT transit in mixed traffic
	C9: Equity benefit	▪ Catchment analysis for social groups (low-income and minority census tracts) within walking access (1/4 mile) to a stop

Account	Criteria	Method of Evaluation
		▪ Analysis of % of households with no vehicle available
	C10: Health (promotion of physical activity) [2]	▪ Comprehensiveness of pedestrian and cycling network ▪ Increase in average bicycle and pedestrian mode share
	C11: Safety and security [3]	This criterion was adopted to assess personal safety or users on the system and those using facilities that support system operations (i.e., streets and stations); Qualitative, based on adherence to good design standards
	C12: Housing and transportation benefit	Analysis of housing and transportation costs as percent of total household income.
	C13: Transportation efficiency or travel time benefit to individual user [2]	Average travel time benefit per rider and distribution of benefits across the line and the system. This measure will also determine whether HCT is an effective mode compared to non-HCT transit through congested areas
	C14: Transportation efficiency or travel time benefit to all corridor users [2,4]	
Environment	EN1: Reduction in emissions and disturbance [2]	Change in VMT and resulting emission levels for CO2 and other harmful pollutants such as NOx and SOx. (Potentially for the full project life-cycle)
	EN2: Risk of natural resources disturbance	Length of alignment impacting identified sensitive habitats and/or natural resources
	EN3: Risk of 4(f) resource disturbance [2]	Acres of 4(f) resources impacted; intended to assess the risk of encountering school and park lands in aligning high capacity corridors.
Economy	EC1: Transportation efficiency (operator) [2]	Operating cost per rider, based on Operating and maintenance costs (D3) and Ridership (D4)
	EC2: Transportation efficiency (user) [2]	Annualized capital and operating cost per rider; based on Total project capital cost (D1), Capital cost per mile (D2), Operating and maintenance costs (D3), and Ridership (D4)
	EC3: Economic competiveness	Change in employment catchment; uses GIS to estimate the percentage of 2035 employment in TAZs within a half mile buffer of project corridors
	EC4: Rebuilding/redevelopment opportunity	Measure of the total area of vacant and rebuildable land within a half mile buffer of project corridors
Deliverability	D1: Total project capital cost (exclusive and nonexclusive right of way options)	Capital cost; based on actual construction costs from TriMet for South Corridor (I-205), and adjustments as necessary. Tunnel and elevated costs based on cost per mile estimates from other comparable projects around the country. Two options are: Solely in new right-of-way; Use existing right-of-way (to the extent possible)
	D2: Capital cost per mile (exclusive and nonexclusive right of way options)	Capital cost per mile, calculated to normalize overall capital cost based on length of the corridor. Two options are: Constructed solely in new right-of-way; Use existing right-of-way (to the extent possible)
	D3: Operating and maintenance cost[2]	Operating cost; estimate provides a fully loaded annual cost to operate and maintain the proposed HCT line. It does not consider cost savings on other routes that might be replaced or need for new service to feed the line.
	D4: Ridership[2]	Total daily ridership for the entire project corridor; generated from the Regional Travel Demand Model
	D5: Funding potential[2]	This is an assessment of each corridor's potential to qualify for federal funding under Federal Transit Administration (FTA) program guidelines. FTA funding of guideway capital investments requires demonstration of cost-effectiveness of the project. For FTA purposes, cost effectiveness is determined by comparing the costs, ridership, and travel times of the project to the costs, ridership, and travel times of a comparable non-HCT mode. This comparable non- HCT mode is referred to as the Baseline Alternative. The following five other evaluation criteria are used as inputs: ▪ Transportation efficiency or travel time benefit to individual user (C13) ▪ Total project capital cost (D1) ▪ Capital cost per mile (D2) ▪ Operating and maintenance costs (D3) ▪ Ridership (D4)

Notes: [1] Addressed through the mobility corridors work in coordination with Oregon Department of Transportation. [2] Criteria which are evaluated, at least in part, using regional travel demand outputs. [3] Criteria not evaluated at the corridor-level during 2009 HCT System Plan Corridor Evaluation. [4] C13 and C14 were combined during the 2009 HCT System Plan Evaluation.

Summary of Proposed Evaluation Approach

Existing Criteria Moved to Project Justification	Transit Evaluation Criteria	Project Readiness Criteria
▪ Ridership Generators ▪ Integration with regional transit system ▪ Risk of natural resources disturbance ▪ Risk of 4(f) resource disturbance	Mobility and Ridership ▪ Current and/or future ridership ▪ Transit rider travel time benefit Land Use Supportiveness and Market Potential ▪ Land use policy supportiveness ▪ Supportiveness of urban form ▪ Enhances connections to and between 2040 Growth Areas ▪ Rebuilding/ redevelopment opportunity Cost Effectiveness ▪ Operating Cost (Operating Cost per Rider) ▪ Capital Cost (Capital Cost per Rider) Equity Benefit ▪ Low income access to jobs and services ▪ Affordable housing Environmental Benefit ▪ Reduction in emissions and disturbance	▪ Funding Potential ▪ Local Commitment and Partnerships

Metro Transit System Expansion Policy

Presented by:
Matt Berkow
Jamie Snook

April 2017

Metro

NELSON NYGAARD

Overview

1. Transit Investment Prioritization Research

2. Initial proposal of revised criteria based on best practices

Transit Investment Prioritization Research

Peer Review - Objectives

- Issues and opportunities to address with this update
  - Difficult to apply
  - Locals can't calculate themselves
  - Simplify and reduce the number of criteria
  - Expand the types of projects to which they apply

- Best practice questions
  - Which criteria are most common?
  - Similar criteria calculated in a better way?
  - Criteria not currently used, but which the region values
  - Implementation challenges and/or lessons learned to inform TSEP prioritization process

Peer Review – Peer Process

Figure 5 Peer Summary

Region	Regional Planning Agency	Primary Transit Agency	Population[1]	Plan or Document Name	Measures Last Adopted/Updated
Portland	**Metro**	**TriMet**	**2,320,000**	**Regional High Capacity Transit System Plan**	**2009**
Minneapolis	Metropolitan Council	Metro Transit	3,459,000	2040 Transportation Policy Plan	2015
Salt Lake City	WFRC	UTA	1,140,000	2040 Regional Transportation Plan	2015
				Salt Lake City Transit Master Plan	2017 (Planned)
San Diego	SANDAG	MTS	3,223,000	San Diego Forward: The Regional Plan	2015
San Francisco	MTC	Muni / BART	4,529,000	System Expansion Policy	2012
Seattle	PSRC	KCM / Sound Transit	3,614,000	Sound Transit 3: Regional Transit System Plan	2015
				Seattle Transit Master Plan	2016

Peer Review – Peer Process

- Minneapolis-St. Paul
  - County-led process which then transitions to Metropolitan Council (MPO)
- Salt Lake City
  - Wasatch Front Regional Council (WFRC) is the MPO
  - SLC developed Transit Master Plan
  - Regional transit provider appreciates the TMP's single vision for transit in the city
- San Francisco
  - BART shifting from expansion to capacity issues, aging infrastructure, etc.
- San Diego
  - SANDAG assumed transit planning, project development and construction from two local transit agencies in 2003
  - SANDAG runs all projects through its Activity Based Model
- Seattle
  - Puget Sound Regional Council (PSRC), Sound Transit, and City of Seattle
  - $54B "ST3" and $930M Levy to Move Seattle
  - Seattle Transit Master Plan (TMP)

Peer Review – Key Findings / Observations

- Important project types not included in prioritization process
  - Operations and programs (e.g., system management, TDM) could greatly increase the efficiency of the system
  - Focus on dedicated guideway can limit investments in other beneficial projects (e.g., BRT lite or enhanced bus)
  - As systems mature and age, priorities can shift from expansion to investment in existing system

Peer Review – Key Findings / Observations

- Locally-focused transit plans and funding sources
  - A city-focused transit plan can help a regional transit agency understand local needs and desires (e.g., SLC TMP)
  - Local transit funding sources can help a City implement local priorities (e.g., Seattle TMP and Move Seattle)

Peer Review – Key Findings / Observations

- Prioritization processes are seen as providing objective assessment of project value
  - Data driven project evaluation, though time consuming, ensures the process remains independent of politics
- Opportunities to streamline evaluation process
  - Several peers use a multi-stage prioritization process, including considering funding after project scoring

Peer Review – Key Findings

- Opportunities to refine Equity criterion
  - WFRC (SLC region) uses “Ladders of Opportunity”
    - Term often used by US DOT to refer to opportunities for the economically disadvantaged to achieve success
  - Two components of this measure:
    - (1) disadvantaged communities
    - (2) regionally significant job, education and health centers to which they should be connected to find opportunities

Peer Review – Criteria Overview

Region	Agency	Plan or Document	Adopted /Updated	Number of Criteria	Criteria Similar to Portland Metro
Portland	Metro	Regional High Capacity Transit System Plan	2009	26	NA
Minneapolis-St. Paul (MSP)	Metropolitan Council	2040 Transportation Policy Plan	2015	28	25
Salt Lake City (City)	Wasatch Front Regional Council (WFRC)	2040 Regional Transportation Plan	2015	14	12
	Salt Lake City	Transit Master Plan	2016	10	10
San Diego	San Diego Assoc. of Governments (SANDAG)	San Diego Forward: The Regional Plan	2015	14	11
San Francisco Bay Area	Bay Area Rapid Transit District (BART)	System Expansion Policy	2002	13	13
		BART Vision Plan	Ongoing	17	13
Seattle	Puget Sound Regional Council (PSRC)	Transportation 2040	2014	22	22
	Sound Transit	Sound Transit 3: Regional Transit System Plan	2015	16	15
	City of Seattle	Transit Master Plan	2016	28	26

Peer Review – Key Findings

Figure 3 Criteria Common among Peer Agencies

Portland Metro HCT Evaluation Criteria			Peer Agencies								Peer Agencies with Matching Criteria
Category	Number	Evaluation Criteria	Minneapolis-St. Paul	Salt Lake City		San Diego	San Francisco	Seattle			
			Metropolitan Council	City of Salt Lake City	WFRC	SANDAG	BART	City of Seattle	Sound Transit	PSRC	
Community	C1	Supportiveness of existing land uses	X	X	-	-	X	X	X	X	6
	C2	Local aspirations	X	-	X	-	X	-	X	X	5
	C3	Placemaking and urban form	X	-	-	-	X	-	-	-	2
	C4	Ridership generators	X	X	X	X	-	X	X	-	6
	C5	Support of regional 2040 Growth Concept	-	-	-	X	-	X	X	X	4
	C6	Integration with regional transit system	-	-	-	-	X	X	X	-	3
	C7	Integration with other land uses (freight)	-	-	-	-	-	X	-	X	2
	C8	Congestion avoidance benefit	-	-	X	X	-	-	X	X	4
	C9	Equity benefit	X	X	X	X	-	X	X	X	7
	C10	Health (promotion of physical activity)	-	-	X	X	X	X	X	X	6
	C11	Safety and security	-	-	-	-	-	-	-	X	1
	C12	Housing and transportation benefit	-	-	-	-	-	X	-	-	1
	C13	Transportation efficiency or travel time benefit to individual user	-	X	X	X	X	-	X	X	6
	C14	Transportation efficiency or travel time benefit to all corridor users	-	X	X	X	-	-	X	X	5
Environment	EN1	Reduction in emissions and disturbance	X	-	X	X	-	X	-	X	5
	EN2	Risk of natural resources disturbance	X	-	-	-	-	-	-	X	2
	EN3	Risk of resource disturbance	-	-	-	-	-	-	-	-	0
Economy	EC1	Transportation efficiency (operator)	-	-	-	X	X	X	-	-	3
	EC2	Transportation efficiency (user)	X	X	-	X	-	-	-	-	3
	EC3	Economic competiveness	X	X	-	-	-	X	-	X	4
	EC4	Rebuilding/ redevelopment opportunity	X	X	-	X	-	X	X	-	5
Deliverability	D1	Total project capital cost (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	X	-	5
	D2	Capital cost per mile (exclusive and nonexclusive right of way options)	-	X	X	X	X	-	-	-	4
	D3	Operating and maintenance cost	-	X	X	X	X	X	X	-	6
	D4	Ridership	X	X	X	X	X	X	X	-	7
	D5	Funding potential	X	-	-	-	X	-	-	-	2

Peer Review – Most Common Criteria

- C1. Supportiveness of existing land uses
- C4. Ridership generators
- C9. Equity benefit
- C10. Health (promotion of physical activity)
- C13. Travel time benefits
- D1. Capital costs
- D3. Operating and maintenance costs
- D4. Ridership

Peer Review – Least Common Criteria

- C3. Placemaking and urban form
- C7. Integration with other land uses (freight)
- C11. Safety and security
- C12. Housing and transportation benefit
- EN2. Risk of impacts to sensitive habitats and natural resources
- EN3. Risk of school and parkland disturbance
- D5. Funding Potential

Preliminary Proposed Criteria

What informed the proposed criteria?

- Existing HCT Criteria
- FTA process and it's current criteria
- Regional priorities: Climate Smart, Six Desired Outcomes
- Best practice review of peer processes

FTA Section 5309 Program under FAST Act

Grant	Project Types	Funding Thresholds
New Starts	▪ New fixed guideway system ▪ Extension to existing fixed guideway system ▪ BRT operating in a fixed guideway	▪ Total project cost ≥ $300 M ▪ New Starts funding ≥ $100 M and no more than 60% of total project budget
Small Starts	▪ New fixed guideway system ▪ Extension to existing fixed guideway system ▪ BRT operating in a fixed guideway; or ▪ Corridor-based BRT system (doesn't require separated right-of-way for full corridor)	▪ Total project cost < $300 M ▪ Small Starts funding < $100 M and no more than 80% of total project budget
Core Capacity	▪ Substantial corridor-based investments within existing fixed guideway system ▪ Corridor must currently be at or over capacity, or projected to meet or exceed capacity within five years ▪ Must increase capacity by at least 10% ▪ Cannot include project elements designated for maintaining a state of good repair	▪ Core Capacity funding no more than 80% of total project budget

FTA Section 5309 Program under FAST Act

- New and Small Starts have a rigorous evaluation process

Criteria	Definition
Project Justification (50% of Overall Project Rating)	
Mobility Improvements (16.66%)	Total linked trips on the proposed project
Environmental Benefits (16.66%)	Dollar value of the anticipated direct and indirect benefits to human health, safety, energy, and the air quality environment
Congestion Relief (16.66%)	New transit trips
Cost-Effectiveness (16.66%)	Annual capital and operating and maintenance cost per trip
Economic Development (16.66%)	▪ Transit supportive plans and policies ▪ Affordable housing policies
Land Use (16.66%)	▪ Existing corridor and station area development and character ▪ Existing corridor and station area parking supply ▪ Affordable housing
Local Financial Commitment (50% of Overall Project Rating)	
Current Condition (25%)	Sound financial condition of project sponsor
Commitment of Funds (25%)	▪ Amount of committed, budgeted, or planned funds ▪ Whether there are significant private contributions to the project
Reliability/Capacity (50%)	▪ Historical revenues and expenses ▪ Reasonableness of project capital cost estimate ▪ State of good repair ▪ Financial capacity

TM #1: Criteria Alignment w FTA and Local Values

- Each HCT criteria corresponds to at least one criteria from other initiatives
- Six Desired Outcomes - less aligned with “Deliverability” criteria
- Climate Smart - Service hours, Transit access (HH within ¼ mile),Transit fares
- CIG - 3 considered in FTA’s environmental process

2009 HCT System Plan		Comparison to Criteria from Other Plans/Programs		
#	Criteria	6 Desired Outcomes	Climate Smart Policy #2	Federal CIG
C1	Supportiveness of existing land uses	✓		✓
C2	Local aspirations	✓		✓
C3	Placemaking and urban form	✓	✓	✓
C4	Ridership generators	✓		✓
C5	Support of regional 2040 Growth Concept	✓		✓
C6	Integration with regional transit system	✓		✓
C7	Integration with other land uses [freight corridor impacts][1]	✓		
C8	Congestion avoidance benefit[2]	✓		✓
C9	Equity benefit	✓	✓	✓
C10	Health (promotion of physical activity)[2]	✓		✓
C11	Safety and security	✓		✓
C12	Housing and transportation benefit	✓		✓
C13	Transportation efficiency or travel time benefit to individual user[2]	✓		✓
C14	Transportation efficiency or travel time benefit to all corridor users[2]	✓		✓
EN1	Reduction in emissions and disturbance[2]	✓		✓
EN2	Risk of natural resources disturbance	✓		
EN3	Risk of 4(f) resource of disturbance[2]	✓		
EC1	Transportation efficiency (operator)[2]			✓
EC2	Transportation efficiency (user)[2]			✓
EC3	Economic competiveness	✓	✓	✓
EC4	Rebuilding/redevelopment opportunity	✓		✓
D1	Total project capital cost (exclusive and nonexclusive right of way options)			✓
D2	Capital cost per mile (exclusive and nonexclusive right of way options)			✓
D3	Operating and maintenance cost[2]			✓
D4	Ridership[2]	✓		✓
D5	Funding potential[2]			

Apply Criteria to Wider Range of Projects

- Corridor Transit Capital Improvement Projects
  - Light rail
  - BRT operating in fixed guideway
  - Streetcar
  - Core Capacity
  - BRT not operating in a fixed guideway (e.g., Arterial BRT)

Consistent with peer findings and eligibility for FTA funding as of 2015 Fixing America's Surface Transportation (FAST) Act

Proposed process and criteria

Figure 1 Summary of Proposed Evaluation Approach

Existing Criteria Moved to Project Justification	Transit Evaluation Criteria	Project Readiness Criteria
▪ Ridership Generators ▪ Integration with regional transit system ▪ Risk of natural resources disturbance ▪ Risk of 4(f) resource disturbance	Mobility and Ridership ▪ Current and/or future ridership ▪ Transit rider travel time benefit Land Use Supportiveness and Market Potential ▪ Land use policy supportiveness ▪ Supportiveness of urban form ▪ Enhances connections to and between 2040 Growth Areas ▪ Rebuilding/ redevelopment opportunity Cost Effectiveness ▪ Operating Cost (Operating Cost per Rider) ▪ Capital Cost (Capital Cost per Rider) Equity Benefit ▪ Low income access to jobs and services ▪ Affordable housing Environmental Benefit ▪ Reduction in emissions and disturbance	▪ Funding Potential ▪ Local Commitment and Partnerships

Proposed Evaluation Criteria

- 6 Categories
  - Mobility and Ridership
  - Land Use Supportiveness and Market Potential
  - Cost Effectiveness
  - Equity Benefit
  - Environmental Benefit
  - Funding Commitment/Partnerships/Local Support (Readiness)

- 11 Core Measures + 2 Readiness Measures

Proposed Evaluation Criteria

Figure 2 Proposed Evaluation Criteria

					Data Inputs		Alignment		
#	Recommended Criteria	Former Criteria #	Rationale for Inclusion	Proposed Change	Metro Model Output	Metro Layer	6 Desired Outcomes	Climate Smart Policy #2	Federal CIG
Mobility and Ridership									
1	Current and/or future ridership	D4. Ridership	▪ Ridership is a core measure of transit project benefit.	▪ Consider allowing existing ridership to be used for the mobility and cost-effectiveness ratings in corridors with strong existing ridership (e.g., similar to warrants in the FTA process).	X		X		X
		C1. Supportiveness of existing land uses (current and/or future population)	▪ Population density is an indicator of ridership potential.	▪ Not a separate criterion. Provided as supporting data, but is captured in the modeled ridership.			X		X
		EC3. Economic competiveness (existing and future jobs)	▪ Quality transit access to jobs supports economic development.	▪ Not a separate criterion. Provided as supporting data, but is captured in the modeled ridership.			X	X	X
2	Transit rider travel time benefit	C13/C14. Transportation efficiency or travel time benefit to individual user/all corridor users	▪ Travel time benefit to the user demonstrates the effectiveness of the project and is an important part of attracting ridership.	▪ Only use C13 which measured travel time benefit per rider and not C14, which measured distribution of benefits across all corridor users.	X		X		X
Land Use Supportiveness and Market Potential									
3	Land use policy supportiveness	N/A	▪ Align land use policy assessment with FTA Land Use evaluation.	▪ New criterion			X		X
4	Supportiveness of urban form	C3. Place-making and urban form	▪ Street and block density impacts transit access.	▪ Propose incorporating C10, which measured the comprehensiveness of pedestrian and bicycle networks. ▪ Re-named criterion to be more intuitive.			X	X	X
5	Enhances connections to and between 2040 Growth Areas	C5. Support of regional 2040 Growth Concept	▪ Transit is a key component of supporting the 2040 Growth Concept.	▪ Re-named criterion to be more explicit in what it measures. ▪ Consider adapting measure to evaluate network connections using HCT + frequent network. This approach could illustrate how the corridor investment benefits the major O-D pairs between the growth centers connected, (e.g., weight by actual travel demand between growth centers rather than counting the number of centers served by the project).	X		X		X
6	Rebuilding/ redevelopment opportunity	EC4. Rebuilding/redevelopment opportunity	▪ Catalyzing redevelopment is a benefit of investment in high quality transit.	▪ Consider aligning with existing Metro data sources (e.g., TOD Strategic Plan).		X	X		X
Cost Effectiveness									
7	Operating Cost (Operating Cost per Rider)	EC1. Transportation efficiency (operator)	▪ Aligns with FTA Cost-Effectiveness criterion.	▪ Maintain EC1 (operating cost per rider). Total operating cost (D3) is no longer a separate measure. This eliminates a duplicative measure.	X				X
8	Capital Cost (Capital Cost per Rider)	EC2. Transportation efficiency (user)	▪ Aligns with FTA Cost-Effectiveness criterion.	▪ Maintain EC2 (capital cost per rider). Total capital cost (D1) and total capital cost per mile (D2) are no longer separate measures. This eliminates duplicative measures.	X				X
Equity Benefit									
9	Low income access to jobs and services	C9. Equity Benefit	▪ The equity benefit of transit investments is an important value in the Portland and peer regions and CIG evaluation.	▪ Revise to consider not only equity populations near project, but also whether a project connects people to jobs and services (similar to Ladders of Opportunity used by Salt Lake City).	X		X	X	X
10	Affordable housing	NA	▪ Prioritize transit access to existing and planned affordable housing.	▪ New criterion.					X

How did we simplify?

Figure 3 **Existing criteria eliminated, consolidated, or moved out of the core prioritization process**

Criteria	Recommendation	Rationale
C4: Ridership Generators	Move to project justification	▪ Ridership is generated by the Metro model and is included as a measure. A list of generators the project will serve as useful background information recommended for inclusion in project justification section of the Regional Transportation Plan call for projects.
EN2: Risk of natural resources disturbance	Move to project justification	▪ Impacts to identified sensitive habitats and/or natural resources is an important local value and should be noted, but is not relevant for evaluating the effectiveness of the transit investment. Impacts are also considered in more detail as part of the environmental process.
EN3: Risk of 4(f) resource disturbance	Move to project justification	▪ No peers have a similar measure related to impacts to school or park lands. Local value that should be noted, but is not relevant for evaluating the effectiveness of the transit investment. Impacts are also considered in more detail as part of the environmental process.
C6: Integration with regional transit system	Move to project justification	▪ Qualitative measure. It is also considered in C5. 'Enhances Connections to and between 2040 Growth Areas.'
C7: Integration with other land uses (freight)	Eliminate	▪ Assessment of freight impacts may be more appropriate during corridor refinement and environmental processes
C8: Congestion avoidance benefit	Eliminate	▪ Measure is related to and somewhat duplicative of C13 (Transportation efficiency or travel time benefit to individual user), both of which are outputs of the ridership modeling.
C11: Safety and security	Eliminate	▪ Measure was adopted to assess personal safety for users of the transit system. The HCT System Plan determined it was more appropriate to address safety in the project design phase.
C12: Housing and transportation benefit	Eliminate	▪ The spirit of this measure is captured in Equity measure C9.
C10. Health (promotion of physical activity)	Consolidate with C3 (Place-making and urban form)	▪ This measure of the comprehensiveness of pedestrian and bicycle networks is combined with the urban form measure (C3).
D1: Total project capital cost (exclusive and nonexclusive right of way options) D2: Capital cost per mile (exclusive and nonexclusive right of way options)	Consolidate with EC2, which will evaluate capital cost	▪ Use capital cost effectiveness as a measure (aligned with FTA scoring). ▪ Total capital cost and capital cost per mile become data points, but cost effectiveness is the measure (measured in EC2), consistent with FTA CIG evaluation criteria.
D3: Operating and maintenance cost[2]	Consolidate with EC1, which will evaluate operating cost (Transportation Efficiency)	▪ Use operating cost effectiveness as a measure. ▪ Total operating and maintenance costs become a data point, but cost effectiveness is the measure (measured in EC1), consistent with FTA CIG evaluation criteria.

Discussion and Questions

Next Steps

Next Steps

- Inform June 1 Call for Projects
- Recommended Best Practices for Transit Investment Prioritization (Tech Memo #4)
- Recommended Criteria (Tech Memo #5)
- Transit supportive elements (Tech Memo #6)

Thank You!

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Getting there

by transit

Regional Transit Strategy

a component of the 2018 RTP

Metro

Transit Work Group Meeting #11

April 26,2017

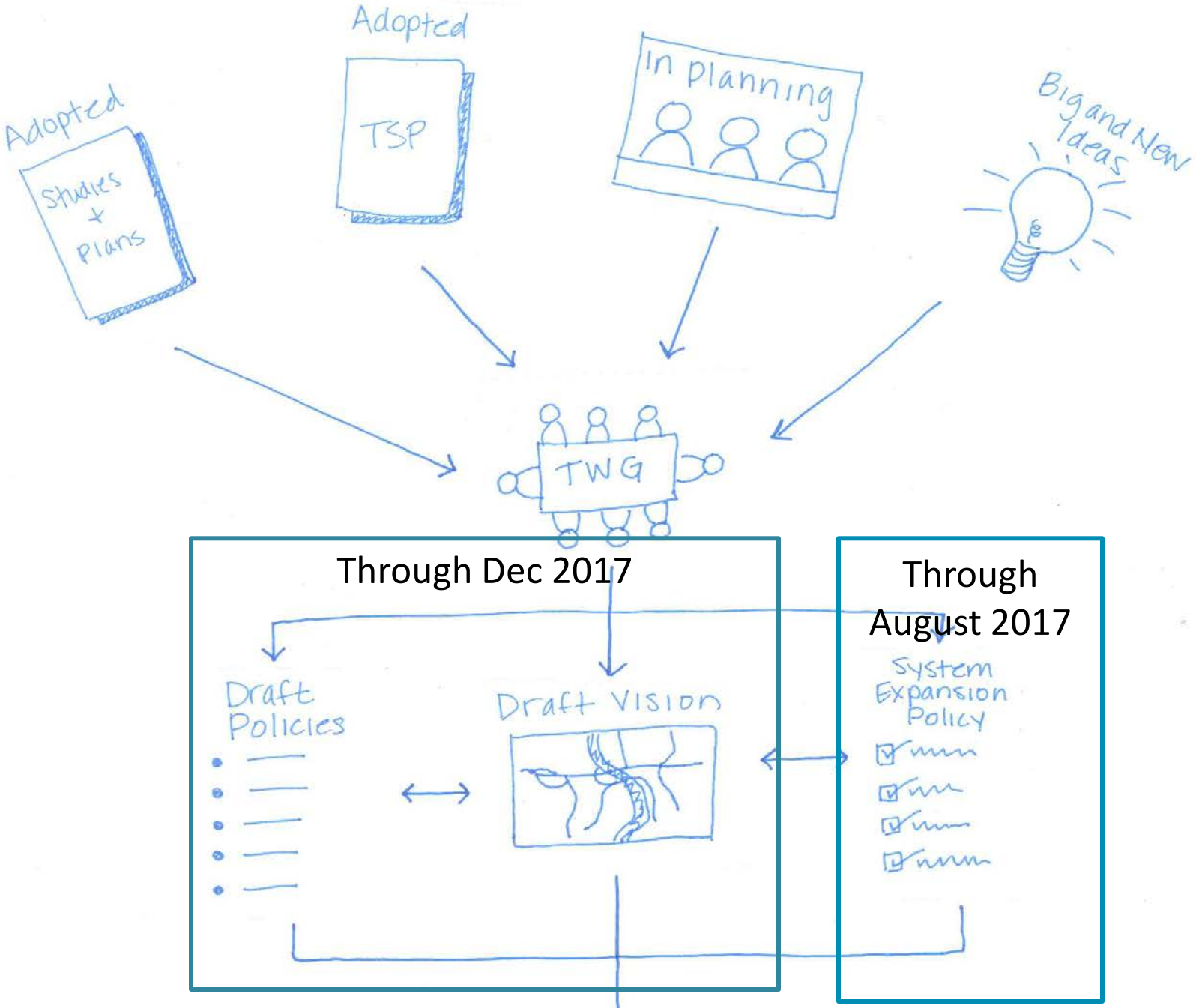
Today's agenda

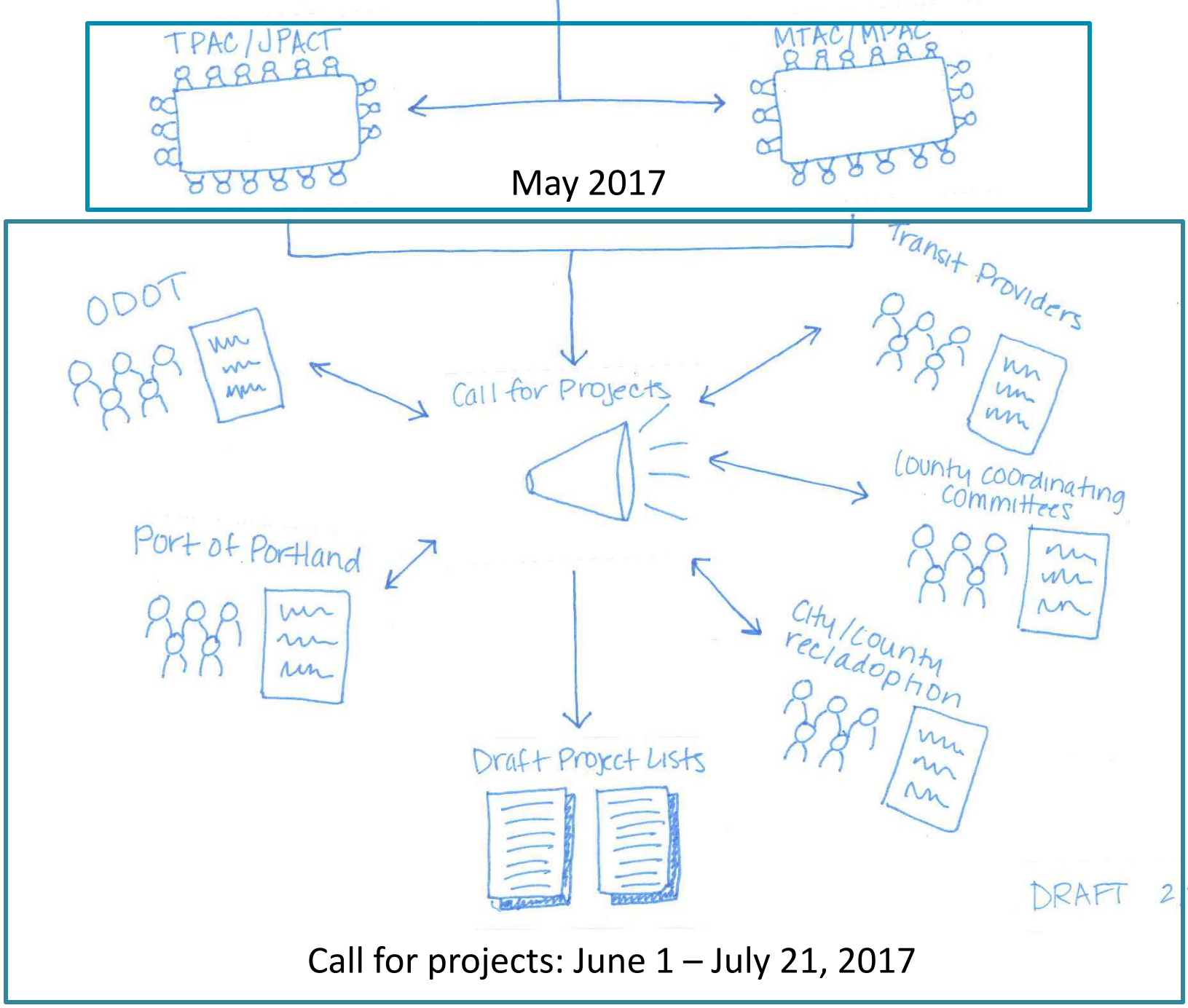
Peer review of other region's prioritization process

Discuss potential criteria for prioritization

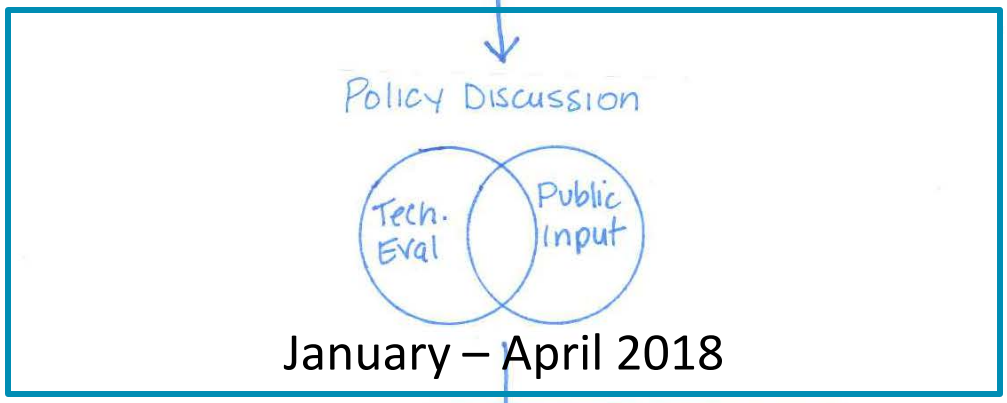
Updated transit vision map

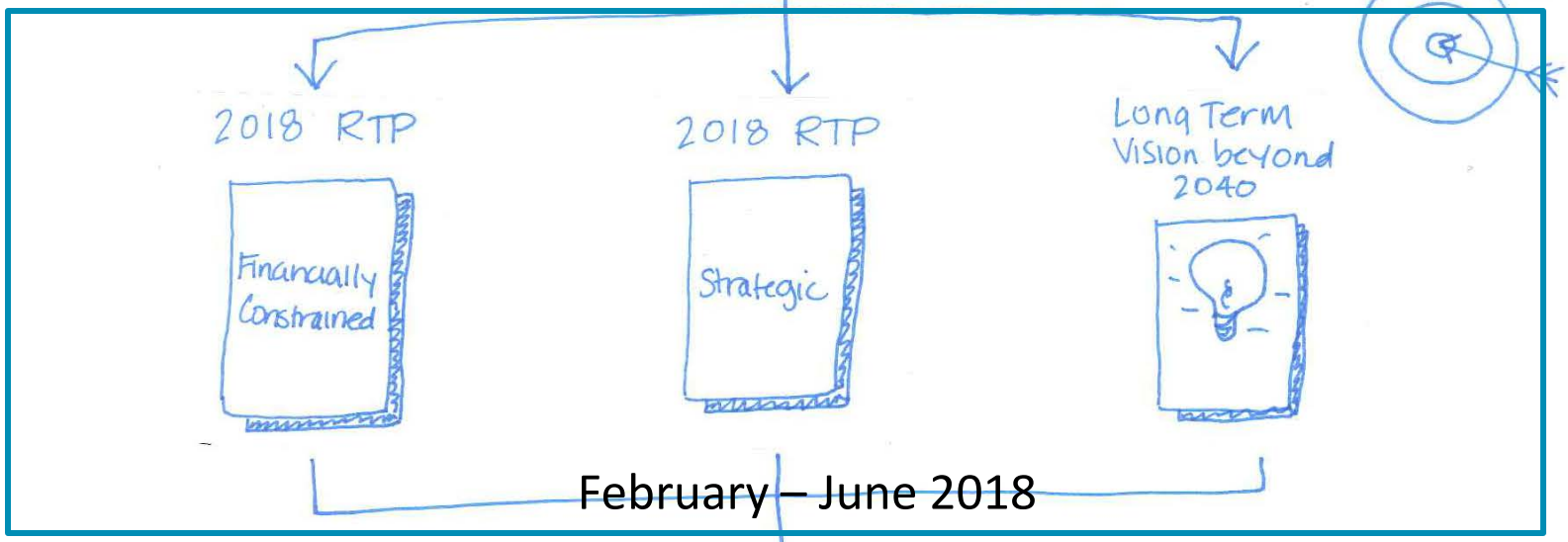
Transit supportive elements

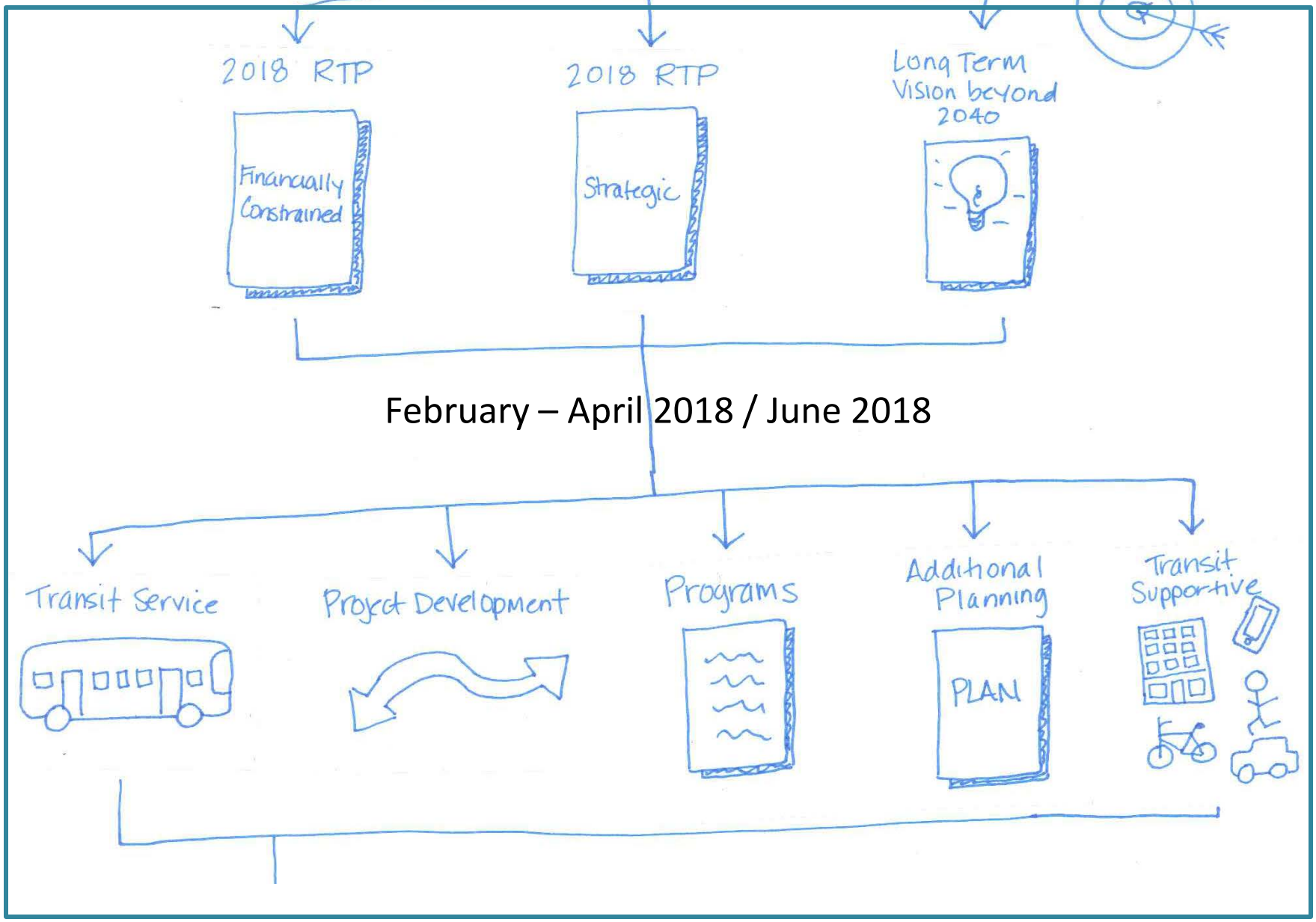

Adopted
Studies + Plans
Adopted
TSP
In planning
Big and New Ideas
TWG
Through Dec 2017
Draft Policies
Draft Vision
Through August 2017
System Expansion Policy

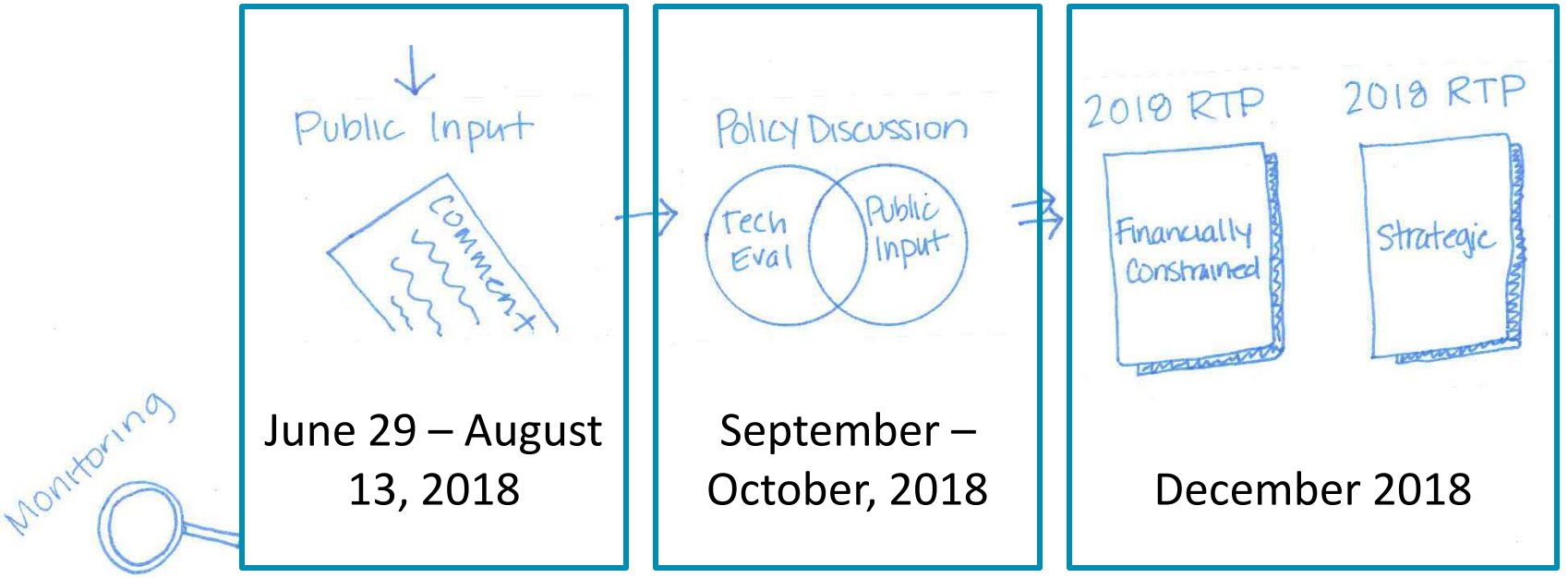

TPAC / JPACT
MTAC / MPAC
May 2017
ODOT
Transit Providers
Call for Projects
County coordinating committees
Port of Portland
City / County rec adoption
Draft Project Lists
DRAFT 2/2017
Call for projects: June 1 – July 21, 2017


System Evaluation
Equity Analysis Evaluation
System Expansion Policy
Project Evaluation
July – December 2017

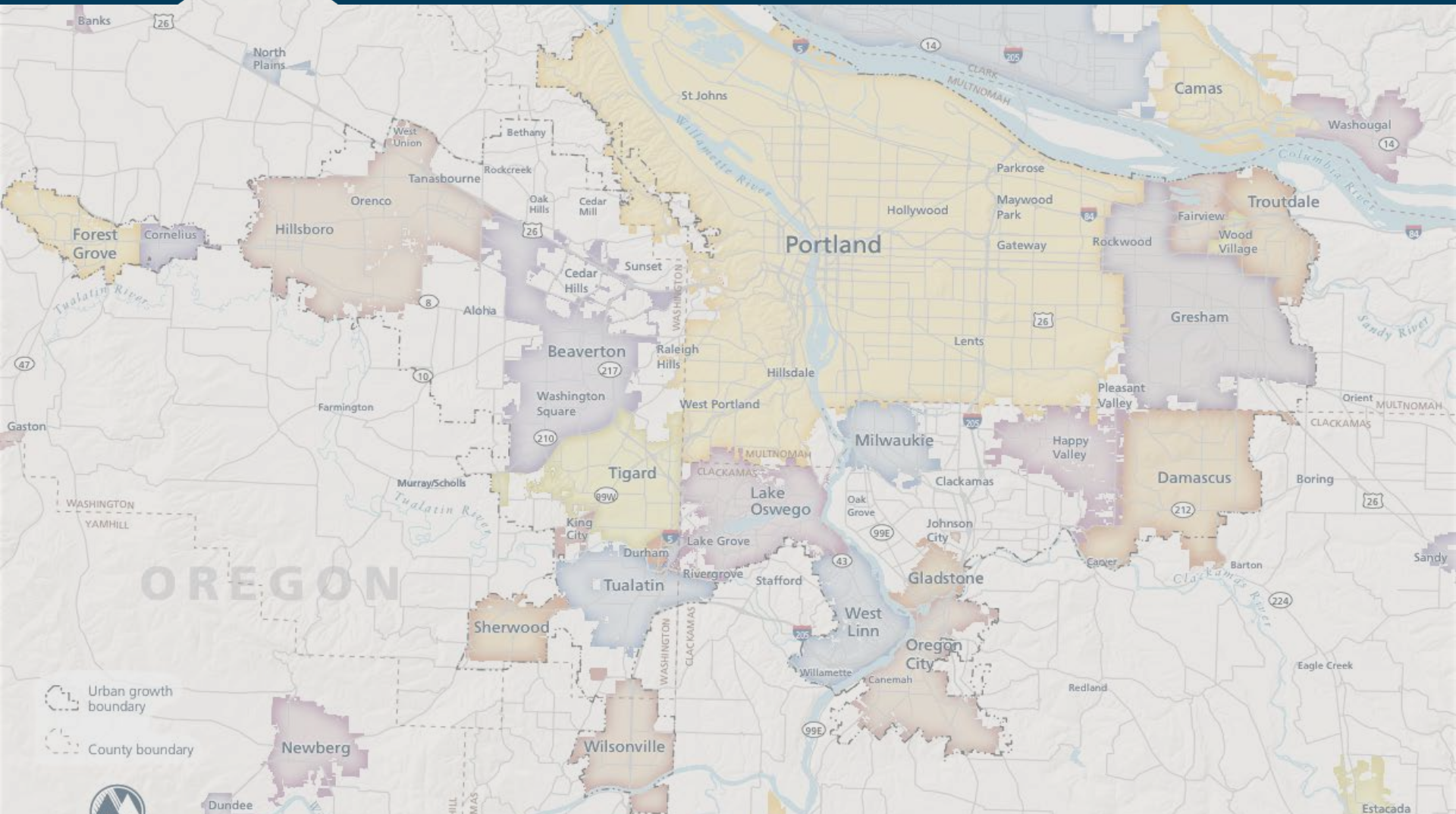

Policy Discussion
Tech. Eval
Public Input
January – April 2018


Targets
2018 RTP
Financially Constrained
2018 RTP
Strategic
Long Term Vision beyond 2040
February – June 2018

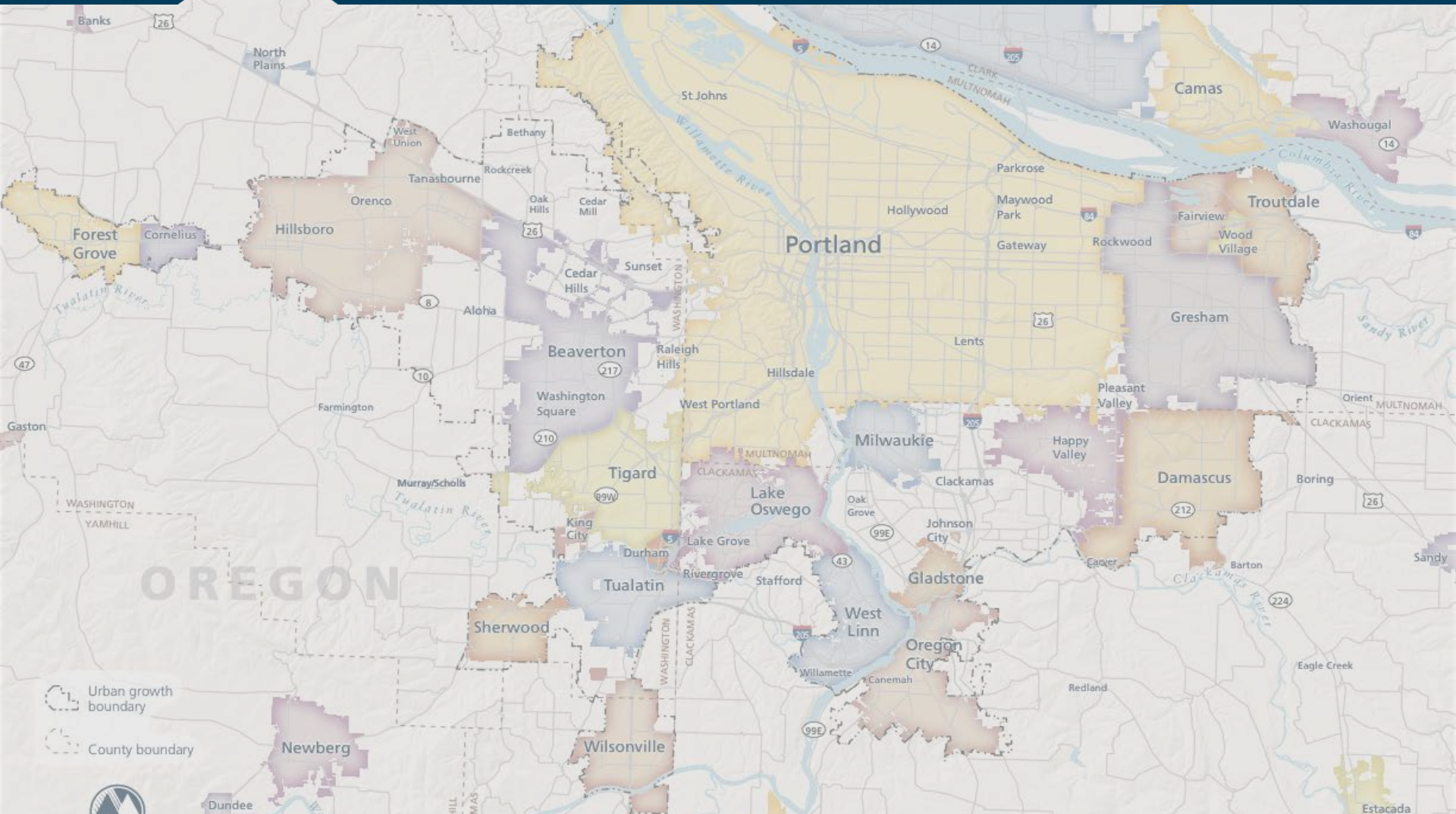

2018 RTP
Financially Constrained
2018 RTP
Strategic
Long Term Vision beyond 2040
February – April 2018 / June 2018
Transit Service
Project Development
Programs
Additional Planning
PLAN
Transit Supportive


Public Input
COMMENT
June 29 – August 13, 2018
Policy Discussion
Tech Eval
Public Input
September – October, 2018
2018 RTP
Financially Constrained
2018 RTP
Strategic
December 2018
Monitoring

Peer Review and Discussion

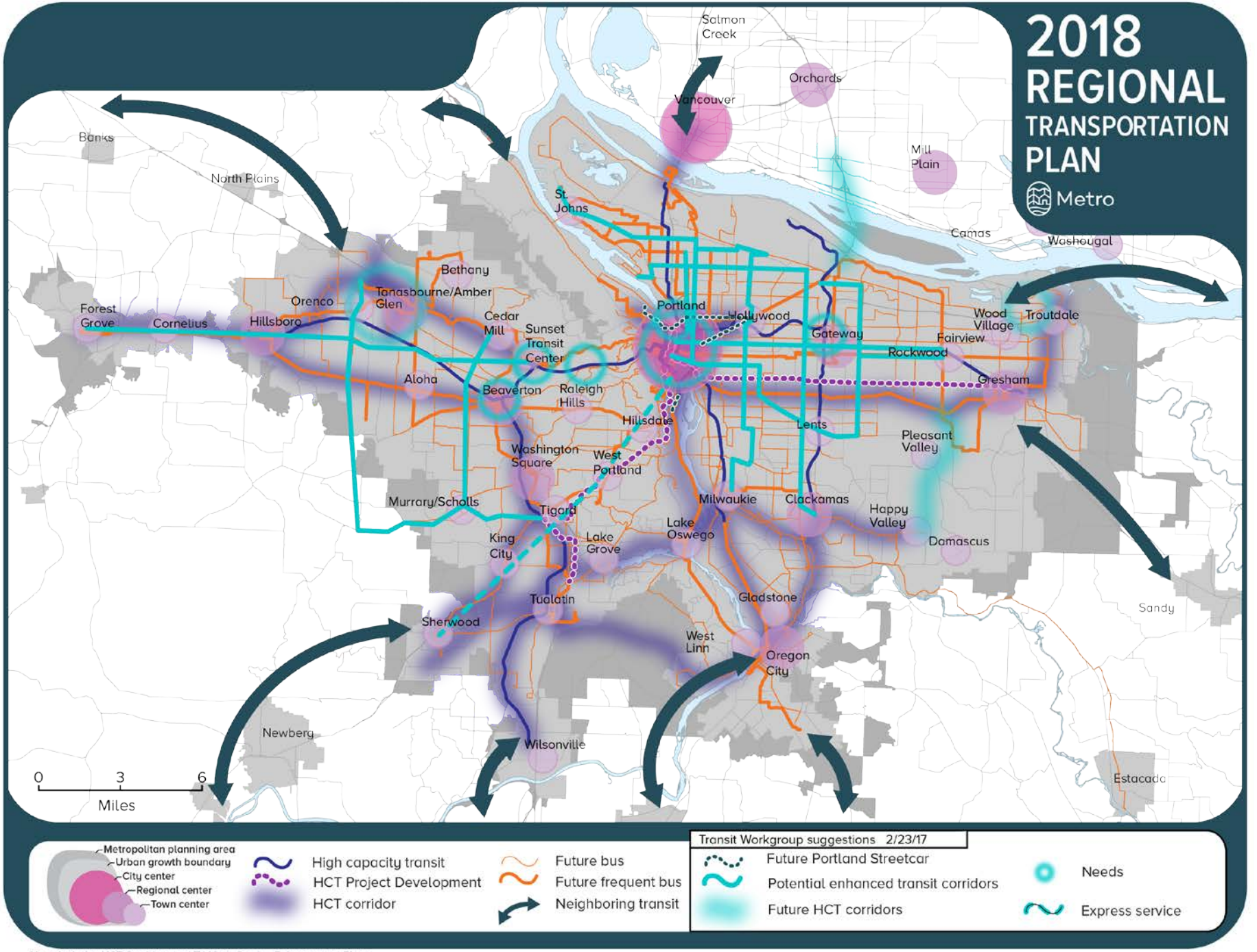


Transit Vision Map – what we heard



2018 REGIONAL TRANSPORTATION PLAN

Metro



Metropolitan planning area
Urban growth boundary
City center
Regional center
Town center

High capacity transit
HCT Project Development
HCT corridor

Future bus
Future frequent bus
Neighboring transit

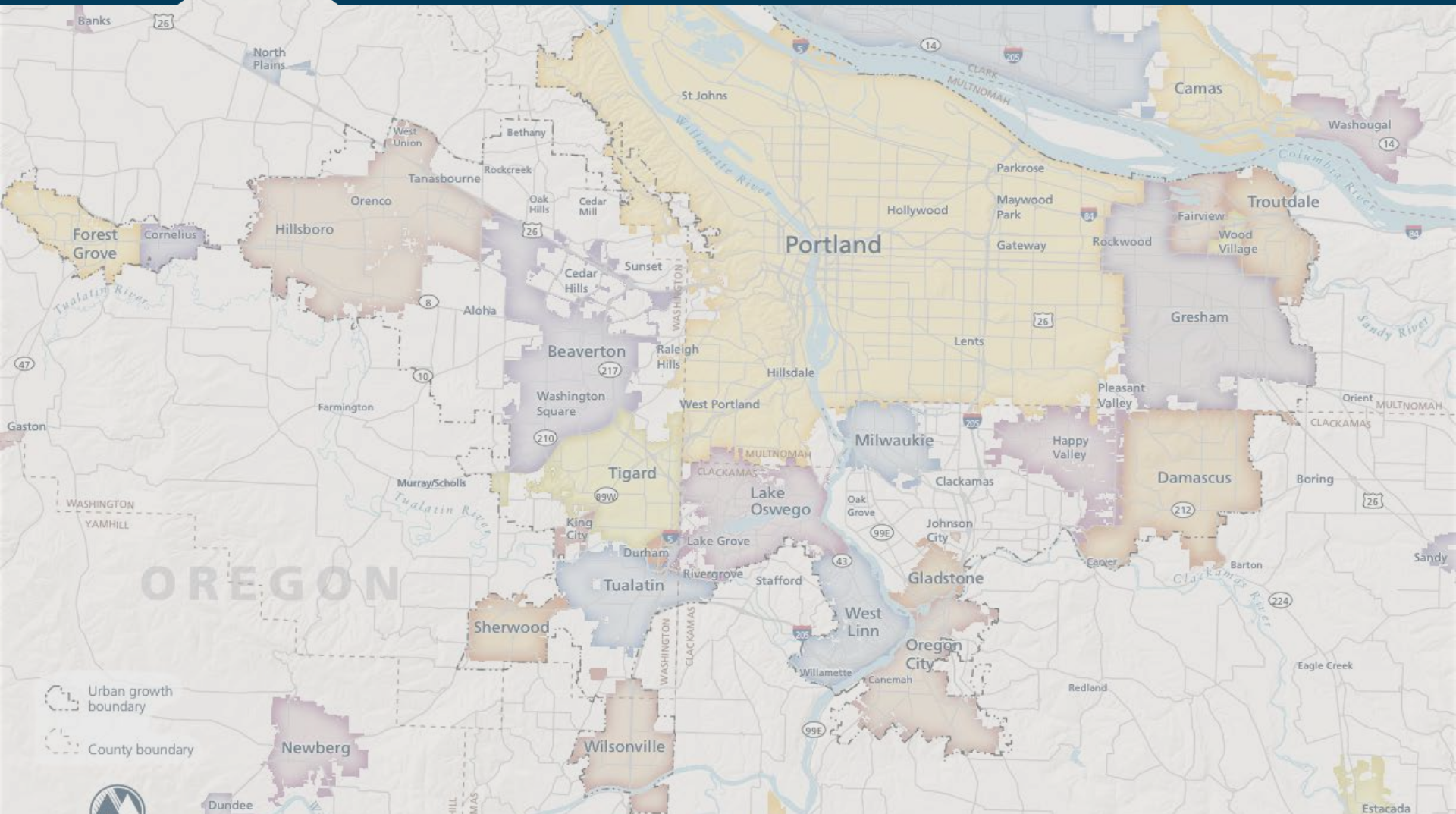
Transit Workgroup suggestions 2/23/17

Future Portland Streetcar
Potential enhanced transit corridors
Future HCT corridors

Needs
Express service

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

Transit supportive elements



Shared mobility/ridesourcing

lyft

CAR2GO

UBER

RelayRides

BRIDJ

Getaround

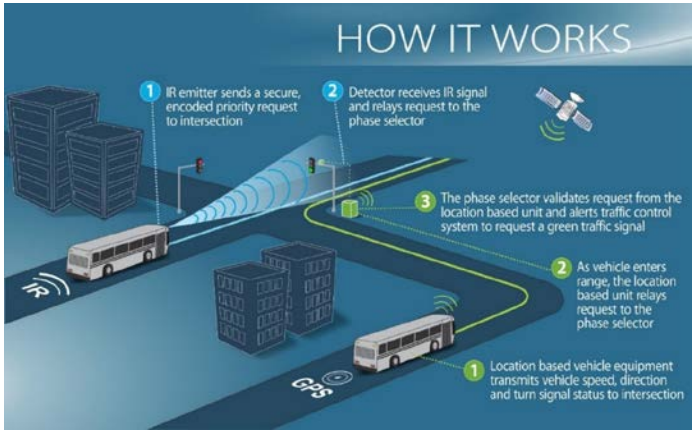
TURO

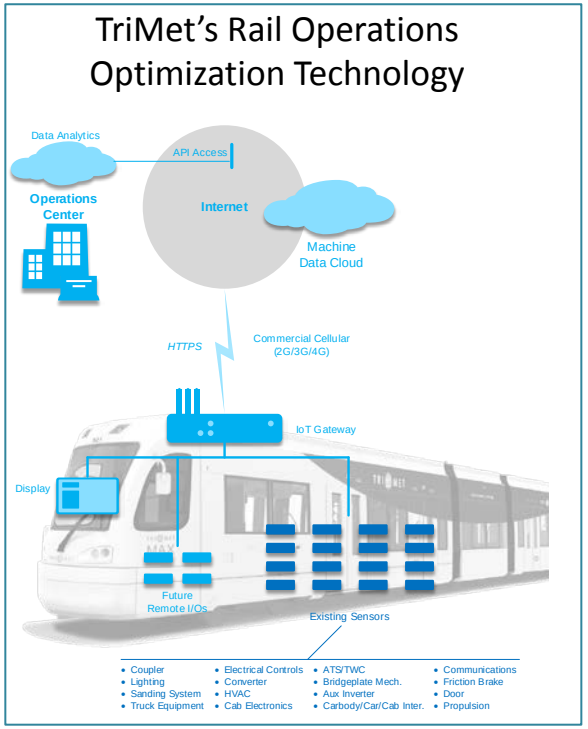
zipcar
wheels when you want them

Technology

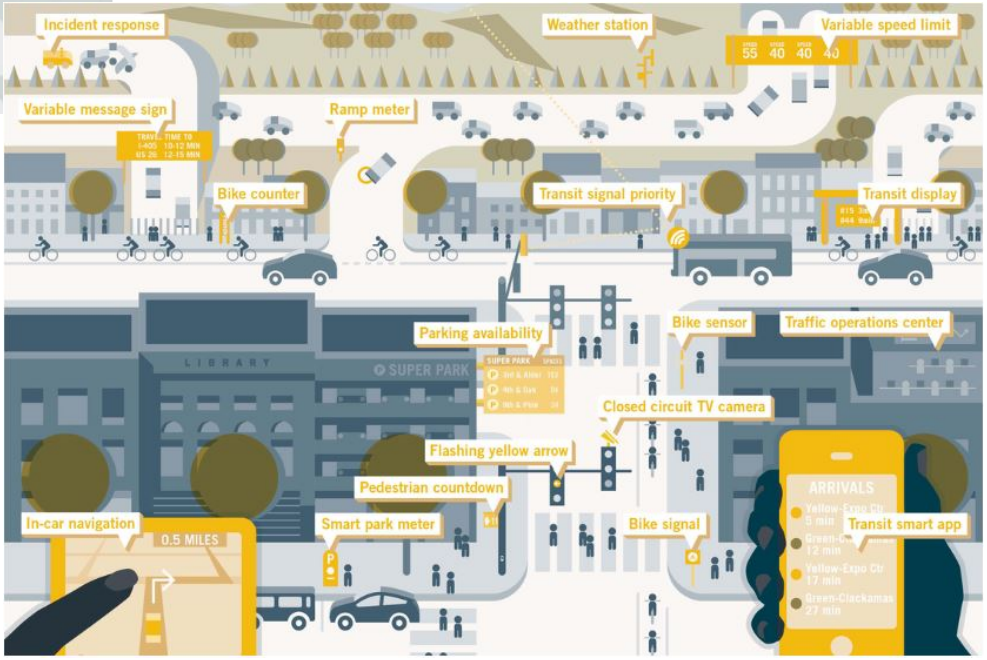
MOD

MOBILITY ON DEMAND



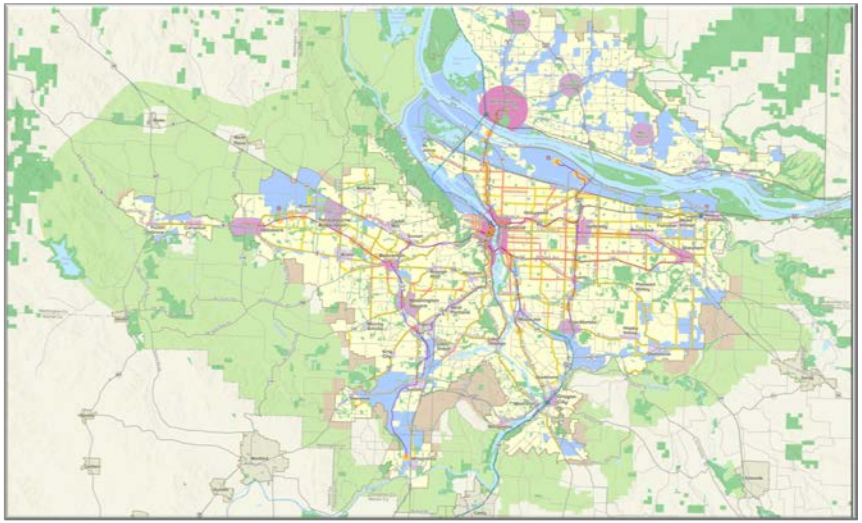


Programs and plans



Access to transit

Land use



Thank you

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