

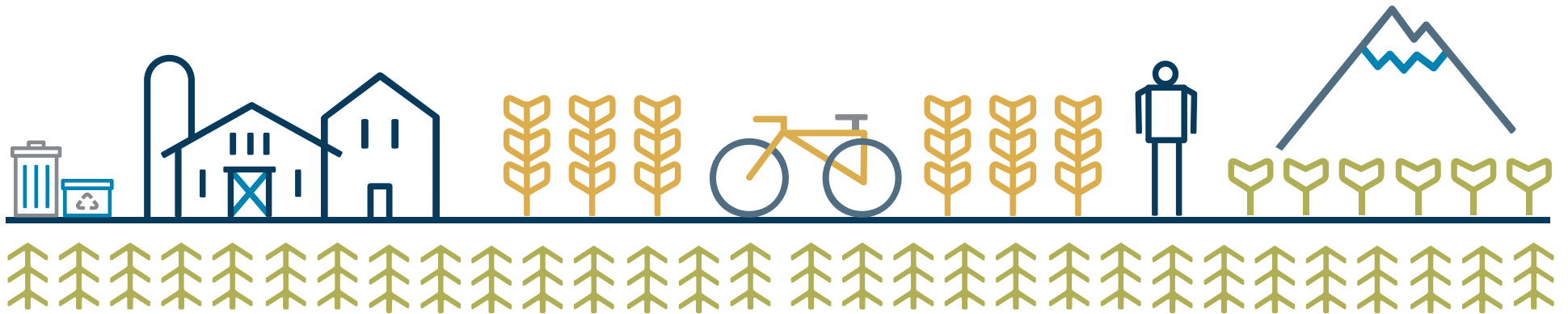
Toolbox - TDM and TSMO Strategies



Introduction

The RTP Regional Mobility Policy, updated as part of the 2023 RTP update, establishes new measures for transportation system performance, including System Completeness, to apply to individual modal systems (such as transit, motor vehicle, bicycle or pedestrian networks) as well as Transportation Demand Management (TDM) and Transportation System Management and Operations (TSMO), which by nature encompass a broad set of policy, programmatic and infrastructure investments.

Metro has developed the **Interim TDM and TSMO System Completeness Guidance** and a **TDM/TSMO Strategy Toolbox** to serve as companion documents to the Regional Transportation Plan (RTP), providing more guidance to cities and counties about how to integrate TDM and TSMO into their planning processes per the updated policy.



Purpose of this Document

The **TDM and TSMO Strategy Toolbox** provides a menu of specific TDM and TSMO strategies that cities and counties can consider in their local planning processes, in support of developing complete TDM and TSMO systems per the updated policy direction. This Toolbox is not an exhaustive list of all TDM/TSMO strategies; it is also not expected that every strategy is appropriate for every community. It is intended as a menu of options to consider and prioritize from based on local context, needs and resources.

The Toolbox is intended to support jurisdictions as they undertake TSP updates and amendments by helping them to move through the stages of the TDM/TSMO Competency Framework. This process is described in more detail in the **Interim TDM and TSMO System Completeness Guidance**.

Partner with Metro to Identify Opportunities

Metro leads coordination of regional TDM and TSMO activities, offering partners policy guidance, regional coordination, and technical assistance, as well as funding opportunities through coordination and grantmaking.

In addition to exploring the strategies outlined in this toolbox, jurisdictions should coordinate with Metro staff and explore opportunities to partner with Metro to identify existing opportunities within the jurisdictions that align with ongoing regional efforts to provide **resources, collaborative groups, and funding** in support of:

- Commuter Programs: provide services to employers and employees to encourage non-drive alone modes to travel to work.
- Safe Routes to School: part of a national program to provide students and caregivers with safe walking, biking and rolling options to get to school.
- Community Programs: provide services and resources to broader community to encourage use of non-drive alone modes, recognizing diverse needs of users.
- Transportation Systems Management and Operations: regional coordination of technologies and operations for safe and reliable trips across all modes.

Questions or Comments?

If you have questions or comments about this document, contact the Regional Travel Options program at: RTO@oregonmetro.gov

Table 1: TDM/TSMO Toolbox System Completeness Support

Competency Framework Aspect	TDM/TSMO Toolbox Support
<p>Baseline</p>	<p>Undertake a Gap Analysis: When completing their initial gap analyses, jurisdictions can utilize the toolbox to compare the strategies they are currently employing to those that may align or work well in their TSP. Jurisdictions should review the Toolbox comprehensively to understand whether there are key areas (Policy, Programming, etc.) where local TDM and TSMO efforts could be improved.</p> <p>Prioritize appropriate projects and programs: Based on the Gap Analysis, jurisdictions should use the toolbox to identify TDM and TSMO strategies for prioritization.</p>
<p>Defined</p>	<p>Implement prioritized projects and programs: The toolbox provides specific guidance to support strategy implementation, including:</p> <ul style="list-style-type: none"> • Information about relative strategy cost. An overview of funding options for TDM and TSMO projects is included in Appendix B of the TDM and TSMO System Completeness Guidance • Examples of measurable outcomes related to the strategy that local jurisdictions may set targets around to measure success. • Guidance around how equity should be considered and incorporated in strategy delivery
<p>Optimized</p>	<p>Iterate and maximize impact of TDM/TSMO: The toolbox provides guidance specific to ‘aligning goals’ and helps jurisdictions set outcome-based objectives which should be tracked over time. As successes and challenges become apparent through ongoing project or program implementation, jurisdictions can utilize the toolbox to identify additional strategies that support the same goals, or newly identified priorities.</p>

Navigating the Document

Example

Create local Universal Basic Mobility (UBM) Policy



Program Cost

\$\$\$	\$\$\$	\$\$\$
Low	Medium	High

Capital Investment

☰	☰☰	☰☰☰
Low	Medium	High

Collaboration

●●●	●●●	●●●●
Low	Medium	High

Mode

Automobile	Walk	Rideshare
Freight	Bike	Multimodal
Transit		

Description

Description of the strategy

Potential Outcomes

Examples of measurable outcomes related to the strategy that local jurisdictions may set targets around to measure success. For example, a desired outcome may include "Reduction in vehicle miles travelled (VMT)." Jurisdictions may then set a specific target for VMT reduction of 5% in a specific location or geographic boundary within a specific timeframe.

Equity Considerations

Specific requirements or suggestions to address disparities and barriers for historically underserved communities.

Aligning Goals

Examples: Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

Examples of strategy in action in the Oregon/ Metro area and nationally, and links to additional resources.



Use this icon to navigate to the table of contents

Strategies by Category

Note: Click on any strategy listed for more information

Policy Plan

Establish a TDM Ordinance

Create a local Universal Basic Mobility policy

Develop a parking management strategy

Develop mobility hub & shared micromobility strategy

Implement Integrated corridor management (ICM)

Marketing/Information

Design and disseminate marketing campaigns

Personalized trip planning

Recognition programs/events

Design and disseminate Individualized Marketing campaigns

Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers

Infrastructure

Activate existing infrastructure with placemaking/demonstration projects

Design and implement wayfinding

Provide real-time information for transit stops and stations

Install end-of-trip facilities

Implement Single-Occupancy Vehicle Access Priority/Restriction

Support vanpool programs

Technology/IS

Explore options for integrated payment systems

Create a framework/platform for UBM/MOD/MaaS

Participate in regional and state connected vehicle ecosystem

Upgrade traffic signal technology to support advanced operations and automate performance metrics to improve reliability for all travelers

Programs / Education

Incorporate TDM programs into new capital projects and transportation services

Design and/or promote incentive programs

Promote Get There Oregon carpool/commuter benefit program resources

Support Learn-to-Ride/bike safety education programs

Support active transportation-focused community events

Support local Transportation Management Agency or other Travel Options program providers

Partner with school district to design comprehensive SRTS program

Implement residential-based transportation options programs

Special events management & travel options to key destinations

Strategies by Focus Area

Commute

Policy Plan

Establish a TDM Ordinance

Create a local Universal Basic Mobility policy

Develop a parking management strategy

Develop mobility hub & shared micromobility strategy

Implement Integrated corridor management (ICM)

Marketing/Information

Design and disseminate marketing campaigns

Personalized trip planning

Recognition programs/events

Design and disseminate Individualized Marketing campaigns

Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers

Infrastructure

Activate existing infrastructure with placemaking/demonstration projects

Design and implement wayfinding

Provide real-time information for transit stops and stations

Install end-of-trip facilities

Implement Single-Occupancy Vehicle Access Priority/Restriction

Support vanpool programs

Technology/IS

Explore options for integrated payment systems

Create a framework/platform for UBM/MOD/MaaS

Note: Click on any strategy listed for more information

Programs / Education

Incorporate TDM programs into new capital projects and transportation services

Design and/or promote incentive programs

Promote Get There Oregon carpool/commuter benefit program resources

Support Learn-to-Ride/bike safety education programs

Support active transportation-focused community events

Support local Transportation Management Agency or other Travel Options program providers

Strategies by Focus Area

Community

Note: Click on any strategy listed for more information

Policy Plan

Establish a TDM Ordinance

Create a local Universal Basic Mobility policy

Develop a parking management strategy

Develop mobility hub & shared micromobility strategy

Marketing/Information

Design and disseminate marketing campaigns

Personalized trip planning

Recognition programs/events

Design and disseminate Individualized Marketing campaigns

Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers

Infrastructure

Activate existing infrastructure with placemaking/demonstration projects

Design and implement wayfinding

Provide real-time information for transit stops and stations

Install end-of-trip facilities

Implement Single-Occupancy Vehicle Access Priority/Restriction

Technology/IS

Explore options for integrated payment systems

Create a framework/platform for UBM/MOD/MaaS

Programs / Education

Incorporate TDM programs into new capital projects and transportation services

Design and/or promote incentive programs

Support Learn-to-Ride/bike safety education programs

Support active transportation-focused community events

Support local Transportation Management Agency or other Travel Options program providers

Implement residential-based transportation options programs

Special events management & travel options to key destinations

Strategies by Focus Area

SRTS

Infrastructure

Activate existing infrastructure with placemaking/demonstration projects

Design and implement wayfinding

Install end-of-trip facilities

Implement Single-Occupancy Vehicle Access Priority/Restriction

Technology/IS

Create a framework/platform for UBM/MOD/MaaS

Programs / Education

Incorporate TDM programs into new capital projects and transportation services

Design and/or promote incentive programs

Support Learn-to-Ride/bike safety education programs

Support active transportation-focused community events

Partner with school district to design comprehensive SRTS program

Marketing/Information

Recognition programs/events

Design and disseminate Individualized Marketing campaigns

Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers

Note: Click on any strategy listed for more information

Strategies by Focus Area

TSMO

Policy Plan

Establish a TDM Ordinance

Create a local Universal Basic Mobility policy

Develop a parking management strategy

Develop mobility hub & shared micromobility strategy

Implement Integrated corridor management (ICM)

Marketing/Information

Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers

Infrastructure

Activate existing infrastructure with placemaking/demonstration projects

Provide real-time information for transit stops and stations

Implement Single-Occupancy Vehicle Access Priority/Restriction

Technology/IS

Explore options for integrated payment systems

Create a framework/platform for UBM/MOD/MaaS

Participate in regional and state connected vehicle ecosystem

Upgrade traffic signal technology to support advanced operations and automate performance metrics to improve reliability for all travelers

Note: Click on any strategy listed for more information

Programs / Education

Incorporate TDM programs into new capital projects and transportation services

Support local Transportation Management Agency or other Travel Options program providers

Implement residential-based transportation options programs

Special events management & travel options to key destinations

Establish a TDM Ordinance



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

A Transportation Demand Management (TDM) Ordinance is a requirement adopted by a local or county government to manage congestion and reduce vehicle miles traveled (VMT) by promoting alternatives to driving alone.

TDM ordinances typically comprise of programs that mandate:

- 1) developers to reduce the drive-alone rate for new development, and
- 2) employers to establish programs to reduce the drive-alone rate for their employees.

A common form of trip reduction ordinance is an employer-based trip reduction program. These programs are implemented by employers to reduce single occupancy employee commuting trips. The employer program can include any of a variety of TDM measures including employer subsidized transit passes, company-run vanpool services, or employer-run shuttle service to transit stations.

Development-based TDM requirements may include implementation of site-based TDM measures and post-occupancy monitoring to track impact.

Potential Outcomes

- Increase the number of municipalities with active policies in place
- Increase the number of developments or employers subject to policies
- Increase non-SOV mode share
- Reduce VMT/capita or VMT/employee

Equity Considerations

Right-size requirements by:

- Considering existing mobility options in diverse communities, and ensuring equitable access and benefit to all employees regardless of business size, industry type and employer location.
- Identifying types of developments that would have waived/reduced requirements (e.g., 100% affordable housing).

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

The State of Oregon's Employee Commute Options (ECO) Rule is the state Commute Trip Reduction program: <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1554>

City of Portland: <https://www.portland.gov/code/17/107>

Santa Monica, CA: <https://www.smgov.net/Departments/PCD/Transportation/Employers/>

"The Effects of Commute Trip Reduction Program on Employee Mode Choice", Wu, Xiatian & Shen, Qing, Transportation Research Board, 7 December 2018 <https://trid.trb.org/View/1572907>

Identified as a transportation measure to reduce GHG emissions (CAPCOA): https://www.caleemod.com/handbook/chapter_3_1transportation.html



Create a local Universal Basic Mobility Policy



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Work with partners to create a Universal Basic Mobility (UBM) Policy, which is the concept of providing a foundational level of mobility to all residents through partnerships and policies, so that they have access to a range of affordable, reliable transportation options that meet their needs. The policy would initiate bundling services and resources (e.g., a Mobility Wallet) to ensure ease of access and scale fees and fares by income, ability, etc.

Potential Outcomes

- Increase the number of Mobility Wallets provided
- Increase total annual UBM program investments across public and private services
- Reduce VMT/capita

Equity Considerations

A subsidized program will need to define eligibility criteria (e.g., annual income). Key considerations may include factors that address equity considerations and mobility barriers such as: income, disability, age, student status, and other food and housing assistance programs.

Aligning Goals

Mobility, Accessibility, Affordability, Equity

Examples and Resources

City of Portland's [Pricing Options for Equitable Mobility](#) identified fares and fees that could change to support more people's mobility. The [Transportation Wallet](#) is the City of Portland's Universal Basic Mobility (UBM) program that provides multimodal transportation incentives for use on transit, streetcar, bike-share, scooter-share, taxis and TNCs (like Uber and Lyft).

The Los Angeles Department of Transportation (LADOT) in partnership with LA Metro launched a widescale UBM pilot in 2023: <https://ladot.lacity.gov/ubm>



Develop a parking management strategy



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Define a parking management strategy which outlines policies and programs that would result in more efficient use of parking resources, including reduced demand and congestion or revise existing local parking policies to support changes in travel behavior. Examples of parking management policies/ programs include parking maximums, parking pricing, and shared parking arrangements.

- Parking cash out requirements offer subsidies to employees that commute using non-SOV modes. They are aimed at providing fair treatment to employees who chose not to drive if employers subsidize parking.
- Preferred parking for carpool/ vanpool involves offering an adequate supply of these rideshare spaces in preferred locations helping to incentivize people who use these non-SOV modes.
- Parking in-lieu fees can be offered as an option for developers to pay fees "in lieu" of building underground or surface parking for a residential and commercial development.
- Dynamic parking is an approach to pricing parking that raises the cost of parking based on demand, helping to optimize the number

of parking spaces available based on time of day, location and other demand-related factors.

- Short-term parking areas can help encourage turnover and manage demand in high trafficked areas, such as downtown commercial districts.

Potential Outcomes

- Optimize parking utilization/ availability
- Reduce number of parking spaces
- Increase non-SOV mode share (overall or by site)
- Increase use of designated spaces by non-SOV modes
- Reduce VMT/capita Equity

Considerations

- Develop policies/programs that support a reduction in the need for parking subsidies, whilst ensuring that high-priority populations (e.g., seniors, people with disabilities, pregnant people, etc.) have access to facilities at key destinations.
- Revisions to parking regulations should consider geographic and multi-modal context. For example, transit-oriented developments provide a key opportunity for reduced parking supply given the proximity to alternative modes of transportation.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

The City of [Oregon City adopted a formal TDM Plan](#) in 2018 to improve access to the riverwalk and to downtown Oregon City through improved management of parking and promotion of transportation options in the area.

The Department of Land Conservation and Development [Climate Friendly and Equitable Communities](#) program includes requirements for Parking Reform Requirements as well as guidance and assistance for cities to comply with rules.



Develop a mobility hub & shared micromobility strategy



Program Cost



Capital Investment



Collaboration



Mode



Description

Establish principles and guidelines for mobility hub planning that support regional mobility and integration. "Mobility hubs" are multimodal interfaces where transit, shared mobility, and micromobility services converge. A mobility hub strategy should address planning location, design considerations, funding, multi-jurisdictional responsibilities, and operational matters to promote consistency in implementation and improve customer experience.

In addition, a shared mobility strategy (scooter-share, bike-share) allows for the establishment of new multi-modal options for residents to choose – especially as a component of larger trips (first/last mile) and access to these options is critical for the development of a mobility hub.

Potential Outcomes

- Increase number of inter-modal connections
- Reduce average access distance of hub user to reach hubs
- Reduce average household vehicle ownership in locations surrounding mobility hubs
- Increase in the number of options for first/last mile connections
- Increase in non-SOV mode share
- Reduce in VMT/capita

Equity Considerations

In developing the mobility hubs strategy, consider the diversity of regional needs and opportunities when defining suitable locations and amenities:

- Accessibility of transit hubs and services
- Adequate safety and security features
- Siting of mobility hubs to serve historically marginalized groups

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

The [SANDAG Mobility Hub Guidelines](#) are included in their 2021 RTP which includes a connected network of mobility hubs strategically located near development and activity centers.

Mobility hub examples and lessons learned are shared by [Minneapolis and Boston](#) as well as [Pittsburgh and Columbus](#).

Metro's 2018 Metro Emerging Technology Strategy: <https://www.oregonmetro.gov/emerging-technology-strategy>



Implement integrated corridor Management (ICM)



Program Cost



Capital Investment



Collaboration



Mode



Description

Implement integrated corridor management (ICM) strategies in alignment with a regional approach that seeks to improve mobility, reliability, safety and efficiency along key regional mobility corridors. Approaches should include prioritization to fill gaps in regional ITS infrastructure, data sharing and inter-agency agreements, multimodal detour and emergency policies, and community listening.

Potential Outcomes

Key objectives and performance metrics should be focused on gauging corridor performance, collaboration and data sharing, and community listening/feedback. Sample metrics include:

- Increase share of investments targeting key regional mobility corridors
- Increase share of signals with communications
- Encourage Data Sharing with Connected & Automated Vehicles (CAV), Smart Phones, and Mobility Devices
- Reduce non-recurring delay associated with incidents

Equity Considerations

Metro encourages applying equity considerations to all facets of TSMO-related planning explained in more detail in the 2021 TSMO Strategy [Equity Decision Tree](#).

- Context: what are the transportation disparities or inequities that exist in the context of TSMO that affect quality of life?
- Choices: How can TSMO affect transportation choices broadly and meet individual needs in historically marginalized communities, expanding access to economic, health and recreational opportunities?
- Voices: who is voicing a problem and related impacts? What steps follow regional efforts to build capacity in communities to include people without formal organization or influence?

Aligning Goals

Mobility, Accessibility, Equity, Safety, Reliability, Connectivity

Examples and Resources

No current corridors are fully integrated. The process can take many years to complete operational strategies. Early projects include a concept of operations for active management where I-84 and I-205. Arterials were improved based on event scenarios and roles were drafted for City, County, State and regional partners. Planning work is complete for ICM in the northeast and southeast parts of the region (I-84 Multimodal ICM and Clackamas Connections ICM I-5/I-205). The 2012 East Metro Connections Plan focuses primarily on capital improvements but also links to operations and making better use of the existing system with smarter and efficient changes including at signalized intersections and variable message signs at gateway locations.

Updated Regional TSMO Strategy : <https://www.oregonmetro.gov/sites/default/files/2022/08/22/2021-Regional-Transportation-System-Management-Operations-Strategy-20220106.pdf>

ODOT and Metros Multimodal Integrated Corridor Management Architecture: https://www.oregonmetro.gov/sites/default/files/metro-events/ODOT-Metro%20Multimodal%20ICM%20Architecture_Packet%20of%20Materials_October%202021.pdf





Activate existing infrastructure with placemaking/demonstration projects



Program Cost



Capital Investment



Collaboration



Mode



Description

Implement temporary or permanent space activations to make travel options more approachable and attractive to more people. This might include temporary demonstration projects to invite people into a space that was traditionally only open to vehicles or unsafe for certain modes. This could also include adding amenities like culturally specific art or improved lighting that makes a space more welcoming.

Potential Outcomes

- Increase non-SOV mode share
- Decrease VMT/capita

Equity Considerations

Implementation of safety enhancements should be targeted to areas where the enhancements would have the highest potential impact – by addressing existing gaps/needs and/or benefiting underserved populations.¹

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

Metro’s Community Placemaking Grants:

<https://www.oregonmetro.gov/tools-partners/grants-and-resources/community-placemaking-grants>

Portland Bureau of Transportation and Division Midway Alliance Beyond Traffic Safety Toolkit:

<https://www.portland.gov/transportation/vision-zero/documents/beyond-traffic-safety-report-appendix-personal-safety-0/download>

Quick Build Demonstration Projects:

<https://smartgrowthamerica.org/program/national-complete-streets-coalition/quick-build-demonstration-projects/>

Better Block:

<https://trec.pdx.edu/better-block-psu>



¹ Underserved populations are defined in the Transportation Planning Rule of Oregon Administrative Rules (OAR 660-012-0125).



Design and implement wayfinding



Program Cost



Capital Investment



Collaboration



Mode



Description

Establish a standardized informational system of signs, maps, electronic devices and other information resources that help people navigate the urban environment to help travelers get where they need to go. Wayfinding can also increase the visibility of transit, pedestrian and biking amenities.

Potential Outcomes

- Increase share of multimodal wayfinding at key locations including transfer hubs
- Increase accessibility of facilities to various users and language speakers
- Increase use of advertised first/last mile options
- Increase positive user feedback

Equity Considerations

Wayfinding should be designed to be accessible to a range of different users and language speakers. Select letterforms and colors that comply with Americans with Disabilities Act (ADA) Accessibility Guidelines.

Aligning Goals

Accessibility, Customer Experience

Examples and Resources

Portland's Bureau of Transportation (PBOT) partnered with Travel Portland to design pedestrian wayfinding and signage that incorporates unique characters of different neighborhoods. <https://www.portland.gov/transportation/planning/pedpdx-status/pedpdx-strategy-10-actions>

Metro's Designing Livable Streets and Trails Guide provides design guidance for our regional streets and trails to support multi-modal safety, including wayfinding. Agencies developing transportation projects funded by Metro use the guidelines to plan, design and construct their projects. <https://www.oregonmetro.gov/tools-partners/guides-and-tools/guidelines-designing-livable-streets-and-trails>

The National Association of City Transportation Officials also has a guide for passenger information and wayfinding included in their Transit Street Design Guide. <https://nacto.org/publication/transit-street-design-guide/station-stop-elements/stop-elements/passenger-information-wayfinding/>





Provide real-time information for transit stops and stations



Program Cost



Capital Investment



Collaboration



Mode



Description

Real time passenger information systems allow passengers to conveniently plan their journeys based on the current status of public transportation services. This usually includes a screen programmed with nearby transit lines, and often includes shared micromobility available nearby as well. These screens can be placed at transit stops themselves, or at community-based locations and multi-family housing. This strategy can complement a larger wayfinding strategy.

Potential Outcomes

- Increase positive user feedback
- Increase non-SOV mode share

Equity Considerations

Consider how real time information systems can be made accessible to people with disabilities, particularly for people with vision, hearing and speech disabilities.

Aligning Goals

Accessibility

Examples and Resources

TriMet and Google partnered to develop the General Transit Feed Specification (GTFS) that standardized data for open sharing among app developers. Today, this information is maintained by 100s of transit agencies worldwide, available on smartphones, at bus stops and in lobbies that are all connected to live information. While TriMet furnishes many displays at stops and stations, screens can be placed at mobility hubs and other gathering places.

TriMet linked what improvements riders want to see and what TriMet is doing including real-time arrival information <https://blog.trimet.org/2021/06/22/where-riders-say-we-need-to-improve-and-what-were-doing-about-it/>





Install end-of-trip facilities



Program Cost



Capital Investment



Collaboration



Mode



Description

End-of-trip facilities such as secure bike parking, showers, and lockers support the use of active modes to key destinations. These amenities can be strategically located at key transfer hubs and destinations. Employers and developers can also be encouraged or required to include these amenities in residential and commercial developments through zoning codes. End of trip facilities can also include amenities that make a facility more inviting, such as benches and bike repair stations. Bike parking amenities at schools for both employees and students can support SRTS programming, and can even be installed on a temporary basis to support major event days.

Potential Outcomes

- Increase share of transit stations with secured bike parking
- Optimize utilization rates of secured bike parking at transit stations
- Increase share of new commercial/residential developments including end-of-trip facilities

Equity Considerations

Consider the location and design of end-of-trip facilities to ensure that infrastructure appropriately accommodates riders of all ages and abilities. For example, “double-stacker racks” are challenging for people with decreased manual strength, dexterity or standing balance and are too small and incompatible for non-standard bicycles.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

The City of Portland requires bike parking for most uses to encourage use of active modes of transportation. <https://www.portland.gov/ppd/zoning-land-use/zoning-code-overview/bicycle-parking>

TriMet Bike & Rides: <https://trimet.org/bikes/bikeandride.htm>

The League of American Bicyclists webinar with bike parking experts to help guide those interested in providing long-term bike parking solutions for their business, university, or community: <https://bikeleague.org/webinar-recap-two-hours-or-more-long-term-bike-parking-for-sure/>





Implement single-occupancy vehicle access priority/restriction



Program Cost

\$\$\$\$-\$\$\$\$

Capital Investment



Collaboration



Mode



Description

Apply single-occupancy vehicle access prioritization/restrictions at the urban area, parking, and roadway, levels. Examples of such interventions include transit/HOV lanes, limited vehicle access/car-free zones, and circulation planning around school zones that limits vehicle movement at pick up drop off.

Potential Outcomes

- Decrease parking demand
- Decrease congestion
- Decrease VMT/capita

Equity Considerations

Consider impacts of restriction implications to people with limited mobility.

Aligning Goals

Congestion reduction, Accessibility

Examples and Resources

School Zone Traffic Calming Study at Sabin Elementary in Portland (1997): https://www.pedbikeinfo.org/examples/example_details.cfm?id=4860

School Streets Initiative (UK): <http://schoolstreets.org.uk/>

Car-free zones developed during COVID-19 pandemic continued: <https://www.bluezones.com/2024/03/in-these-cities-car-free-streets-are-here-to-stay/>

Denver 16th Street Mall – Car-free Street: <https://www.denver.org/things-to-do/attractions/16th-street-mall/>

“Car free cities: Pathway to healthy urban living”, Mark J. Nieuwenhuijsen and Haneen Khreis, Environment International, September 2016. <https://doi.org/10.1016/j.envint.2016.05.032>





Support vanpool programs

Program Cost



Capital Investment



Collaboration



Mode



Description

Vanpools are a type of transportation service where a group of 5 to 15 people share a vehicle to travel together from a common community location, such as a park-and-ride lot or a transit station, to a place of work.

Vanpool programs work best in areas that are not served well by transit and for long distance commutes. Primary strategies to attract vanpool participants include subsidies, ride matching service, guaranteed ride home services, preferential parking programs and tax-free benefits.

There are several ways a local jurisdiction can support vanpools:

- Subsidies or other support for a third party-operated program supporting local residents or businesses
- Promotion/marketing of existing program
- Priority vanpool parking in city-owned lots or on city streets
- Funding for vanpool start-up incentives (first month free, free gas, etc) or ongoing trip-logging incentives
- Emergency rides home programs for, or including, vanpool participants in the jurisdiction (whether or not the local jurisdiction subsidizes the vanpool)

Potential Outcomes

- Increase non-SOV mode share
- Decrease VMT/capita

Equity Considerations

Call-centers, warehouses and other large work sites located in remote areas are ideal candidates for vanpools and often have over representation of low-income and BIPOC commuters.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

The Lane Transit District (LTD) Employer Program provides a subsidy of up to \$675 per month to each van to offset the lease price.

Supported by the Oregon Department of Transportation, Wilsonville SMART offers a \$500 per van/per month subsidy to help start more vanpools coming into and out of Wilsonville.

<https://www.ridesmart.com/transit/page/vanpool-smart>

Commute with Enterprise (Example Private Partner):

<https://www.enterprise.com/en/commute.html>

Get There Oregon vanpool information and resources:

<https://getthereoregon.org/for-commuters/vanpool/>

FHWA Commuter Choice Decision System:

<https://ops.fhwa.dot.gov/PrimerDSS/cc-options/vanpool/vanpool.htm>

Funding opportunities that could pay for a contractor, to run their own program, or use funds for subsidies:

- STIF discretionary or formula under mobility management for vanpool
- STBG
- FTA 5307 funds through transit agency recipient

Incorporate TDM programs into new capital projects and transportation services



Program Cost



Capital Investment



Collaboration



Mode



Description

Embed transportation demand management measures into the planning process for new capital projects, to maximize access and use following construction completion or establishment of the service. This can include Individualized Marketing (IM) campaigns coupled with a new street improvement, or education and incentives paired with the launch of a new transportation service such as a fixed-route or on-demand shuttle, vanpool or micromobility system.

Potential Outcomes

- Increase share of project revenue spent on TDM-related projects
- Increase non-SOV mode share
- Decrease VMT/capita

Equity Considerations

Ensure that IM campaigns and wayfinding investments are provided in multiple languages and are culturally relevant for local communities.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

City of Portland Lotería Go was an interactive community game to celebrate the completion of road safety projects: <https://www.portland.gov/transportation/walking-biking-transit-safety/play-loteria-go>

Ride Clackamas is a campaign aimed at encouraging bus ridership in Clackamas County: <https://rideclackamas.org/>

King County Metro in Seattle, WA hosts community-based TDM campaigns in tandem with a number of transit service launches.



Design and/or promote incentive programs



Program Cost

\$\$\$-\$\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Identify opportunities that encourage the use of non-driving modes of transportation and promote existing programs through rewards and financial incentives. Incentive programs may include carpool/vanpool subsidies, subsidized transit passes, e-bike rebates/subsidies, raffle prizes, employer, community, or school-based 'challenges', etc.

Potential Outcomes

- Increase annual dollars allocated to incentive programs
- Increase number of program beneficiaries
- Increase non-SOV mode share/behavior change
- Reduce VMT/capita

Equity Considerations

Consideration should be given to establishing equity-based eligibility criteria for key incentive programs. For example, special priority may be given to individuals with household incomes at a specified percentage of the federal poverty level (FPL) and live in disadvantaged and low-income communities.

Aligning Goals

Congestion reduction, Mobility, Accessibility, Equity

Examples and Resources

The Westside Transportation Alliance offers incentive programs for commuters to earn points and rewards for walking, rolling or riding transit to work:
<https://www.wta-tma.org/incentive-programs.html>

Explore Washington Park also offers free transit passes to use for travel to and from Washington Park:
<https://rto.explorewashingtonpark.org/>

"Expanding Traveler Choices Through the Use of Incentives: A Compendium of Examples", Jocelyn Bauer, Lisa Kinner Bedsole, Kayce Snyder, Michelle Neuner, Michael C. Smith, Federal Highway Administration U.S. Department of Transportation, December 2018.
<https://ops.fhwa.dot.gov/publications/fhwahop18071/fhwahop18071.pdf>





Promote Get There Oregon carpool/commuter benefit program resources

Program Cost

\$\$\$

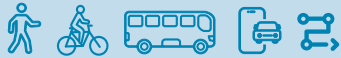
Capital Investment

N/A

Collaboration



Mode



Description

Get There Oregon is a statewide initiative spearheaded by the Oregon Department of Transportation (ODOT) and supported regionally by Metro that helps commuters and employers shift commute habits to alternative modes. Get There aims to increase awareness of the value and benefits of commute options including biking, walking, transit, carpool, vanpool, and remote work. Some of the resources provided by Get There Oregon include:

- Web-based commuter trip planning and tracking tool
- Monthly employer newsletter
- Employer resources to support worksite commute benefit programs
- Free online employee modal survey tool
- Online incentive/reward program tools

- Communications toolkits for promoting travel options in your community or workplace
- Annual statewide challenge aimed at shifting travel habits
- Identify avenues to promote Get There resources, such as:
 - Provide information on Get There to businesses as part of the business license registration and renewal process
 - Include distribution of Get There resources as a transportation demand management (TDM) strategy for new developments with TDM requirements
 - Use Get There resources to implement education and outreach and incentive/reward programming.

Potential Outcomes

- Increase Get There networks in jurisdiction
- Increase Get There users in jurisdiction
- Increase number of trips logged
- Decrease VMT

Equity Considerations

Consider promotion through a wide range of outlets and in various languages in order to reach a broad audience. The Get There web site and online commuter survey are available in Spanish.

Aligning Goals

Congestion reduction, Mobility, Accessibility Examples and Resources

Examples and Resources

South Metro Area Regional Transit (SMART) incorporates Get There tools and messaging into their outreach to commuters and employers that they reach in their SMART Options program. <https://www.ridesmart.com/transit/page/commuter-programs>

<https://getthereoregon.org/>





Support learn-to-ride/bike safety education programs



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Support school and community-based efforts to ensure residents have the skills and tools to ride a bicycle. This can include offering learn-to-ride activities at community events, supporting community rides, or teaching rules of the road. Learn-to-ride instruction aims to equip participants with the necessary skills to independently ride a bicycle. Instruction focuses on improving rider confidence and skills related to balancing, pedaling, braking, and turning, and often takes place in a fixed location (as opposed to a bike ride).

Bike safety education spans a range of participant skill levels, but participants are generally able to start, stop, and ride a bicycle in a straight line independently. Instruction focuses on improving rider confidence and skills related to shifting, bike handling, navigating bicycle infrastructure, wayfinding, rules of the road/right-of-way, and bicycle repair.

Both learn-to-ride and bike safety education benefit from multiple instructional sessions to support participants in gaining confidence and competence over time. Bike safety education should be implemented by instructors who are comfortable leading group bicycle rides through the public right of way. Both learn-to-ride and bike safety education are appropriate for youth and adults and can take place at a school or community level.

Potential Outcomes

- Increase number of event attendees who are able to ride independently
- Increase number of participants receiving bike safety and/or learn-to-ride education programming
- Increase number of schools receiving bike safety education and learn-to-ride instruction
- Improve learn-to-ride attendees' skills related to balancing, pedalling, braking, and/or turning
- Improve bike safety education attendees' skills related to rules of the road and right of way
- Increase bicycling mode share

Equity Considerations

Provide class options during a wide range of days/times to cater to diverse work schedules. Identify opportunities to offer classes for non-English speakers. Include adaptive bicycles in instructional fleets.

Aligning Goals

Mobility, Accessibility

Examples and Resources

Portland Bureau of Transportation's (PBOT) bike safety webpage is one of the most comprehensive in regard to bike safety resources: <https://www.portland.gov/transportation/walking-biking-transit-safety/safe-routes/bike-safety-education>

Cycle Oregon's Jump Start Program emphasizes bike fleet coordination and rural communities: <https://cycleoregon.com/jump-start/>

Multnomah County has also partnered with [bikeworks by p:ear](#) for a Safe Routes to School program: <https://www.multco.us/saferoutes>



Support active transportation-focused community events



Program Cost

\$\$\$-\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Support or deliver community events that raise awareness and skills of using travel options including:

- Walk/roll to work/school day/week/month
- Open streets events
- Bike fix-it events
- Bike fairs/rodeos

These events will be most successful if delivered in partnership with schools or community-based groups. These events may also need a component of 'learn to ride' education (see additional strategy), as well as the potential of providing equipment for use by participants who may not have access to a bike and/or helmets.

Potential Outcomes

- Increase number of attendees
- Increase number of impressions or engagements

Equity Considerations

Work with community partners to plan events that are community and cultural appropriate, catering to different language groups and other specific user needs.

Aligning Goals

Mobility, Accessibility

Examples and Resources

City of Portland offers bike fairs across different neighborhoods throughout the summer, usually hosted at schools or community locations (like affordable housing):

<https://www.portland.gov/transportation/walking-biking-transit-safety/events/2024/4/26/east-portland-neighborhood-bike-fair>

Beaverton School District offers a Bike Rodeo toolkit:

<https://www.beaverton.k12.or.us/departments/transportation/safe-routes-to-school/event-planning/bike-rodeo>

Sunday Parkways is Portland's annual Open Streets event series:

<https://www.portland.gov/sunday-parkways>

City of Gresham partners with Bikes for Humanity to provide monthly bike repair services at a local park:

<https://www.b4hpd.org/blog/2024/8/2/summer-2024-at-gresham-repair-hub>



Support local Transportation Management Agency or other travel options program providers



Program Cost

\$\$\$

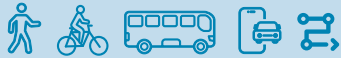
Capital Investment

N/A

Collaboration



Mode



Description

Provide support to local Transportation Management Associations (TMAs) or other travel option providers in order to extend the reach of transportation demand management (TDM) services and efforts. Transportation Management Associations/Organizations (TMAs/TMOs) are non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center or industrial park. They are generally public-private partnerships, consisting primarily of area businesses with local government support. TMAs provide an institutional framework for TDM programs and services.

Establish regular liaison with TMA staff and promote TMA services to residents and employers. Consider integrating TMA membership into local TDM requirements for new developments and employers or use local funding to provide matching funds to an organization as required by some State and Federal grants. In the absence of an established TMA, community nonprofits or organizations can deliver programming and receive support.

Potential Outcomes

- Increase number of TMA members
- Increase non-SOV mode share
- Decrease VMT/capita or VMT/employee

Equity Considerations

Consider prioritizing outreach to smaller and BIPOC businesses to ensure they are aware of free TMA resources. These businesses may be located in underserved communities or resource-constrained, thus having limited ability to implement TDM programming without support.

Aligning Goals

Mobility, Accessibility

Examples and Resources

The City of Portland's Enhanced Services District scheme provides [Go Lloyd](#) nearly half of its annual funding and is paid into by Lloyd District building owners and property managers.

Current metro region TMAs include: [Westside Transportation Alliance](#), [Go Lloyd](#) and [Explore Washington Park](#).





Partner with School District to design comprehensive SRTS program

Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Local school districts and individual schools should be coordinated with to offer SRTS programming. Some programs will make sense for the school to lead, and some for a local jurisdiction. The types of programs offered may vary but below is a breakdown of common programming led by individual schools or districts and how jurisdictions can support:

- Encouragement events – these often include walk/roll to school days throughout the year. Jurisdictions can support these efforts by providing staff on-site to talk about upcoming projects and support walking/rolling groups
- Education – this is often provided in the classroom or through after-school programs. Jurisdictions can support local community-based organizations that often provide the education with assistance at target schools, particularly for community rides or walks.
- Walking School Bus/Bike Buses – these are often parent/teacher led efforts to lead a group of students to school on the same route on a scheduled day. Jurisdictions can help provide maps on the best routes and also help communicate to neighbors through wayfinding or temporary infrastructure that helps elevate the routes in the community.

- Circulation planning – schools all have a circulation plan to coordinate pick up/drop-off at schools to include the school bus, employee parking, car drop-off and walk/roll entry. Jurisdictions can help schools with circulation planning and even implement temporary or permanent changes to the immediate school streets to ensure safe and effective pick up/drop off with an emphasis on supporting non-SOV travel.

Potential Outcomes

- Increase active mode split at schools within jurisdiction
- Increase number of students who receive bike/ped education

Equity Considerations

Ensure that all students are able to participate by focusing on access to bicycles and bike accessories, including school bus riders in encouragement events, and providing culturally relevant prizes. In addition, consider compensating parents and teachers who support efforts like walking school bus/bike buses to encourage broader participation. Use [Metro's School Walkshed tool](#) to understand specific demographics and safety needs at individual schools. Prioritize Title IA schools and populations when planning programs and services.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

Find opportunities to promote to local schools or districts in your community, and access Metro's School Walkshed Tool that identifies each school's local SRTS Coordinator through Metro's Regional SRTS Program: <https://www.oregonmetro.gov/tools-partners/grants-and-resources/regional-travel-options-program/safe-routes-school-program>

Find statewide resources - including materials that schools can order, webinars, and funding opportunities - through Oregon Safe Routes to School: <https://www.oregonsaferoutes.org/>

Implement residential-based travel options programs



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Support residents with travel options programs based on where they live, given the shift of trips with the increase in work from home. This includes:

- Geographic specific 'wallet' programs for residents who opt out of parking passes
- Bulk transit pass programs at market-rate transit-oriented developments to encourage transit use
- Subsidized wallet programs for residents at affordable housing
- Shared mobility offerings unique to multifamily developments – i.e. shared e-bikes available for resident use
- Community education through resident services to support travel options including group transit trips, walking groups, etc.

Potential Outcomes

- Increase annual dollars allocated to residential programs
- Increase number of participating residential sites/developments
- Increase number of program beneficiaries
- Increase non-SOV mode share/behavior change
- Reduce VMT/capita

Equity Considerations

Promotions and communications should be done in multiple languages to reach a diverse audience.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

Metro Transit Multi-tenant Properties Program:
<https://www.metrotransit.org/commuter-programs-multi-tenant-properties>

PBOT Transportation Wallet for Parking Districts:
<https://www.portland.gov/transportation/wallet/signup-1>

City of Tigard Power to the Pedal Shared E-bike Program:
<https://www.tigard-or.gov/your-government/departments/community-development/transportation-safe-streets-for-tigard/power-to-the-pedal>



Special events management & travel options to key destinations



Program Cost

\$\$\$-\$\$\$\$

Capital Investment

Capital investment could be required depending on the strategies deployed to manage event flows, Low to High.

Collaboration



Mode



Description

Prepare for special events at key locations (stadiums, concert venues, convention centers) by planning to increase the use of non-SOV modes by working with event organizers and/or venue staff to identify opportunities to encourage ridesharing, transit or active transportation to and from events and activities at key destinations. Identify ways to reduce localized congestion at the event by supporting development of efficient circulation plans (including pick-up/drop-off).

Potential Outcomes

- Decrease parking demand
- Increase non-SOV mode share
- Decrease VMT

Equity Considerations

Identify a balanced, multi-modal event transportation plan to support attendees' unique travel needs (i.e., some attendees will have access to transit from their point of origin while other may be coming from areas with lower transit accessibility).

Aligning Goals

Mobility, Accessibility

Examples and Resources

The Office of Emergency Management provided lessons learned from the 2017 solar eclipse that can be applied to other special events.

https://www.oregon.gov/oem/Documents/2017_Eclipse_AAR.pdf

The City of Portland hosts multi-agency meetings to coordinate construction on streets, updated via the Keep Portland Moving map.

<https://www.portland.gov/transportation/permitting/movepdx>

Pickathon events provide support for and guidance on how to bike to events:

<https://pickathon.com/info/>

Denver Airport TDM Plan:

https://www.flydenver.com/app/uploads/2024/06/DENTDMPlan_FinalADA.pdf

A Metro TSMO partnership with ODOT TripCheck created tools available to all cities and counties to enter local events. TripCheck produces an API that populates many travel apps as well as partnering with Waze for Cities.

<https://tripcheck.com>





Design and disseminate marketing campaigns



Program Cost

\$\$\$\$-\$\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Design and implement marketing and promotional campaigns to raise the awareness of existing or new TDM programs and the availability of non-SOV travel options in the region. Successful campaigns typically involve a combination of printed, email, and social media campaigns and can also be paired with other marketing strategies such as personalized trip planning or recognition programs/events.

We encourage utilization and partnership with ODOT's Get There Oregon campaign and resources. Campaigns should encourage people to register at GetThereOregon.org and log trips taken by carpool, vanpool, transit, biking, or walking, or by teleworking. On-going campaigns should incorporate messaging about the yearly Get There Challenge. Cities and counties can partner with Metro to promote this campaign as well as other campaigns, recognition programs, individualized marketing, and other efforts.

Potential Outcomes

Objectives for campaigns can focus on reaching a wider audience or target a specific group as well as the level of engagement. Campaigns typically involve some "call to action" – whether to click on a link, register for a challenge, or log trips for a reward.

- Increase number of views/ impressions
- Increase number of registrants
- Increase number of clicks/ engagement
- Increase reported mode shift

Equity Considerations

Cities and counties seeking to partner with Metro to promote Get There Portland should consider specific user needs to help disadvantaged groups become aware of and access key services.

- Communication channels that reach diverse audiences;
- Messaging that is culturally appropriate and delivered in multiple languages;
- Incentives and rewards that are meaningful and impactful to that group.

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

The City of Eugene has rebranded their commuter outreach and longstanding individualized marketing campaign to Get There Eugene to leverage and align with ODOT efforts.

<https://www.facebook.com/GetThereEUG/?rdr>

<https://getthereoregon.org/>





Personalized trip planning



Focus Area



Program Cost



Capital Investment

N/A

Collaboration



Mode



Description

Personalized trip planning (PTP) is a specific engagement strategy which aims to help an individual understand their unique mobility needs and identify travel options that might be most suitable for them as well as ways to overcome any barriers. PTP is typically offered via a “coach” trained to walk an individual through a series of questions about their travel behavior, with the goal of highlighting the benefits of non-SOV modes and encouraging mode shift.

Potential Outcomes

Personalized trip planning efforts should include objectives that expand the reach of these campaigns as well as the success rate of people opting for non-driving modes:

- Increase number of impressions
- Increase number of successful engagements/interviews
- Increase number of commitments from participants
- Increase reported mode shift

Equity Considerations

PTP campaigns can be designed with specific user needs in mind and can be used to help disadvantaged groups become aware of and access key services. PTP Partnerships with local organizations can help leverage existing communication channels.

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

Lloyd Links is a custom-designed commute plan for employees and residents of the Lloyd neighborhood run by the TMA Go Lloyd.

<https://www.golloyd.org/lloyd-links>

RideWise is a personalized trip planning program promoting safe and independent use of public transportation for older adults, people with disabilities, and English language learners run by the organization Ride Connection.

<https://rideconnection.org/services/travel-training/>





Recognition programs/events



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Plan recognition programs and events that encourage people to set goals to use non-SOV modes and celebrate their achievements in meeting those personal goals. Importantly, recognition programs can be focused on individuals or communities of individuals. Some examples include:

- Pledge programs that ask residents to commit to reducing SOV trips.
- Rewards programs that recognize efforts of employers to encourage non-driving modes to their employees and recognize leadership.
- School-based events that encourage local districts/schools to compete for most active travel miles completed within a period of time.

Potential Outcomes

Recognition programs should focus objectives on the number of participants and people who complete their personal goals:

- Increase number of events and participants
- Increase number of pledges
- Increase reported mode shift

Equity Considerations

Recognition programs can be designed with specific user needs in mind and can be used to help disadvantaged groups become aware of and access key services. Recognition programs should consider:

- Communication channels that reach diverse audiences;
- Messaging that is culturally appropriate and delivered in multiple languages;
- Rewards, if used, that are meaningful and impactful to that group.

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

Best Work Places for commuters recognizes individuals and businesses that champion travel options for commuting, such as transit, carpools, vanpools, and teleworking.

<https://www.bestworkplaces.org/about>

The Oregon SRTS Recognition Program celebrates schools who participate at different levels.

<https://www.oregonsaferoutes.org/get-recognized/>





Design and disseminate Individualized Marketing campaigns



Program Cost

\$\$\$\$-\$\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Individualized Marketing campaigns involve specifically identifying and targeting travellers who are most likely to change their behavior and encouraging them to participate in a program or use a mode to travel by (1) providing personalized trip assistance to help them plan their trip, (2) incentivising or rewarding their participation, and (3) issuing a survey before and after to measure their success.

These travellers may be identified based on demographic characteristics or geographic proximity to specific services, for example:

- Residents living in proximity to a new transit service or active transportation infrastructure;
- Commuters at specific worksites who may be eligible for vanpool services;
- Students arriving on campus for a new school year who may wish to try biking for the first time.

Potential Outcomes

Individualized marketing campaign objectives should focus on reaching the intended audience and level of engagement.

- Increase views/impressions
- Increase number of registrants/ individuals who complete the "call to action"
- Increase number of clicks/ engagement
- Increase reported mode shift

Equity Considerations

Messaging and communications should be designed to be culturally relevant and accessible to intended audiences. Include specific requirements or suggestions to address disparities and barriers for historically underserved communities.

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

City of Portland runs a Smart Trips program that provides information and resources for people using non-drive alone modes to travel:

<https://www.portland.gov/transportation/walking-biking-transit-safety/smarttrips>

In addition, Portland Bureau of Transportation (PBOT) runs a Smart Trips to Kindergarten program focused on parents and care takers transitioning into a new educational experience:

<https://www.portland.gov/transportation/walking-biking-transit-safety/safe-routes/smarttrips-kindergarten>

Tools of Change is an extensive and free collection of full-length behavior change case studies.

<https://www.toolsofchange.com/en/case-studies/>





Coordinate public information out of Emergency Operations Centers and Traffic Operations Centers



Program Cost

\$\$\$

Capital Investment

N/A

Collaboration



Mode



Description

Coordinate and disseminate important travel information about traffic disruptions, road and weather conditions, closures and detours through emergency and traffic operations centers. This information can also be entered into the state shared data, making it available at TripCheck.org, where local alerts are disseminated by ODOT and app partners.

Potential Outcomes

- Increase number/share of alerts shared
- Increase engagement or user feedback
- Increase site visits/engagement with local alters on TripCheck.org

Equity Considerations

Information should be multimodal and include alerts pertaining to specific user groups, for example travelers with disabilities if relevant.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

<https://tripcheck.com/>

Research on Traveler Information and Travel Time Reliability: <https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2343>



Explore options for integrated payment systems



Program Cost

\$\$\$

Capital Investment



Collaboration



Mode



Description

Provide support for integrated payment systems that allow travelers to enjoy more seamless travel between transit and shared mobility services in the region. Integrated payment or ticketing systems typically feature a single fare media used for multiple different transit services, for example transit passes that enable access to bus, rail service across different operators as well as micromobility, on-demand and other shuttles. Integrated payment systems simplify the journey planning process for travelers, reducing challenges of using multiple different payment systems or processes to undertake a single trip.

Potential Outcomes

Integrated payment system objectives should focus on use of integrated fare media vs. traditional payment processes, as well as trips that incorporate more than one service.

- Increase number of trips purchased, total and per service
- Increase number of transfers within a single service
- Increase trips utilizing more than one service
- Increase non-SOV mode share
- Decrease VMT
- Increase mode shift

Equity Considerations

Integrated payment systems typically provide ease of payment online and through credit cards but can create challenges for unbanked populations. Service providers should consider:

- In-person capacity for loading fare media (allowing for cash payments in addition to credit card)
- Ensuring that discounted fare programs (seniors, students, disabled populations, etc.) can be incorporated onto payment systems

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

TriMet is rolling out integrated payment systems that allow for multimodal trip payment experience and maintain access for the unbanked and underbanked. multimodal trip payment experience more seamless for travelers and improving access for the unbanked and underbanked.

<https://trimet.org/imi/>



Create a framework/platform for UBM/ MOD/MaaS



Program Cost

\$\$\$

Capital Investment



Collaboration



Mode



Description

Universal Basic Mobility (UBM), Mobility on Demand (MOD) and Mobility as a Service (MaaS) all describe integration of scheduling, payment and provision of multimodal travel services in order to create a seamless trip planning, payment, and travel experience for users. Frameworks for UBM, MOD and MaaS may involve:

- Trip planning through a single platform that recommends use of multiple providers, and allows users to select between options based on time, cost, or mode
- Establishing funding agreements with public and private sector partners that allow for a single fare and/or free transfers across services
- Supplementing fixed route service with flexible microtransit or micromobility, accessible by users through a single platform and fare

Potential Outcomes

UBM/MOD/MaaS objectives should focus on quantifying trips that incorporate more than one mode or service

- Increase number of users with access to platform (app users, website registrants, etc.)
- Increase trips taken through platform
- Increase non-SOV mode share
- Decrease VMT
- Increase reported mode shift

Equity Considerations

All of the strategies, and particularly the concept of Universal Basic Mobility, center around the concept of increasing accessibility and mobility. Providers should consider how these programs can:

- Stretch service coverage beyond areas currently served by fixed-route transit
- Increase opportunities for travelers with disabilities or specific travel requirements to choose the services that work best for them
- Generally reduce cost burden compared to potential cost of using multiple services individually
- Facilitate the provision of discounted programs for targeted groups

Aligning Goals

Congestion reduction, Mobility, Accessibility, Cost Burden Relief

Examples and Resources

TriMet IMI Grant
<https://trimet.org/imi>

FTA Integrated Mobility Innovation and related projects
<https://www.transit.dot.gov/IMI>



Participate in regional and state connected vehicle ecosystem



Program Cost

\$\$\$

Capital Investment



Collaboration



Mode



Description

Participate in the regional and state efforts to build a connected vehicle ecosystem (CVE) wherein vehicles send and receive messages to other vehicles, wireless devices and infrastructure such as traffic signals and roadside units. CVE can serve multiple missions across agencies such as traffic management and emergency response.

Potential Outcomes

- CVE improves traveler experiences with information from multiple sources, and road safety by providing timely warning messages to prevent collisions.

Equity Considerations

Local deployments of technology that joins the CVE should flow from communities voicing needs such as safer conditions for vulnerable road users.

Aligning Goals

Safety, Congestion reduction, Mobility

Examples and Resources

ODOT is currently piloting a connected vehicle project in Salem, OR.

<https://www.oregon.gov/odot/programs/pages/connected-vehicles.aspx>





Upgrade traffic signal technology to support advanced operations and automate performance metrics to improve reliability for all travelers

Program Cost

\$\$\$

Capital Investment



Collaboration



Mode



Description

Traffic signal technology can support efficient and optimized transportation systems, ensuring that travelers using all modes benefit from smoother experiences. With a particular focus on multimodal travel, traffic signal technology can support:

- Using signals to prioritize transit, supporting a more reliable system
- Optimizing signal timing to support bicycle and pedestrian travelers, increasing safety by connecting to devices, particularly for pedestrians with disabilities
- Adapting signal timing to reflect changing needs at a given intersection, including peak travel times, events, etc.
- Collection of data and performance metrics to continue to improve flow for all travelers

Potential Outcomes

Traffic signal technology objectives should focus on signal wait times for transit, cyclists and pedestrians. As improved signal technology can also provide a safer travel environment for all users, objectives can also include focus on safety metrics, considering change from before technology was implemented.

- Increase fixed route transit on-time performance
- Increase number of priority requests and allowances provided
- Reduce number of crashes at high-injury intersections

Equity Considerations

Solutions such as Transit Signal Priority, which support improved schedule reliability support general accessibility and mobility for transit-dependent travelers. It is important for providers to consider where these strategies are implemented and prioritize intersections and areas where they might be most beneficial to transit riders.

Aligning Goals

Congestion reduction, Mobility, Accessibility

Examples and Resources

TriMet use of cloud-based transit signal priority
<https://news.trimet.org/2024/04/new-bus-only-signal-saves-time-for-trimet-riders/>

Portland use of Pedestrian Head Starts
<https://www.portland.gov/transportation/traffic-operations/pedestrian-head-starts>

Metro TSMO Resources tab
<https://www.oregonmetro.gov/tsmo>

USDOT Intersection Safety Challenge
<https://its.dot.gov/isc/>



