

MOBILITY 2030

A DECADE OF OPPORTUNITY



Take a Leap

By 2030, patterns of mobility around the Portland, Oregon region have dramatically changed — for the better. We're on our way to meeting our climate and equity goals. Getting to work, accessing daily needs, and seeing one's family and friends all require significantly fewer emissions.

How did we do it? What changes were made and what strategies were implemented — individually and collectively — to make this future a reality? Twenty-two experts responded to these questions, proposing and prioritizing strategies for the future of regional mobility.

The process was facilitated by students in the Strategy + Foresight class in the Collaborative Design MFA and Design Systems MA programs at Pacific Northwest College of Art. In order to facilitate this process, we partnered with the online Mesydel (www.mesydel.com) collective intelligence platform.

We designed Mobility 2030 to spark conversations and generate insights around transformative futures. We used a two-round "backcasting" process, based on the Delphi method of anonymous, iterative, feedback-informed deliberation. We hosted a public exhibition of our findings in December 2019.

This publication presents the results of this deliberative exercise.

**PACIFIC
NORTHWEST
COLLEGE OF
ART**



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Mobility 2030 Participation

As we facilitated this process to generate insights, we were not concerned with a statistically rigorous sample size. We aimed for 15-20 participants and exceeded this goal.

We sought a diversity of participation, according to six dimensions of expertise: race/ ethnicity, age, gender, Portland regional geographies, frequently used transportation modes, and professional sectors.

Following a Chatham House Rule-style anonymity, all responses are used without attribution. We would like to express our gratitude to these Mobility 2030 participants, all of whom gave generously of their time.

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Marsha	Hanchrow	Oregon Health Authority; Portland Bus Lane Project
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Eliot	Rose	Metro
Jeanette	Shaw	Forth Mobility
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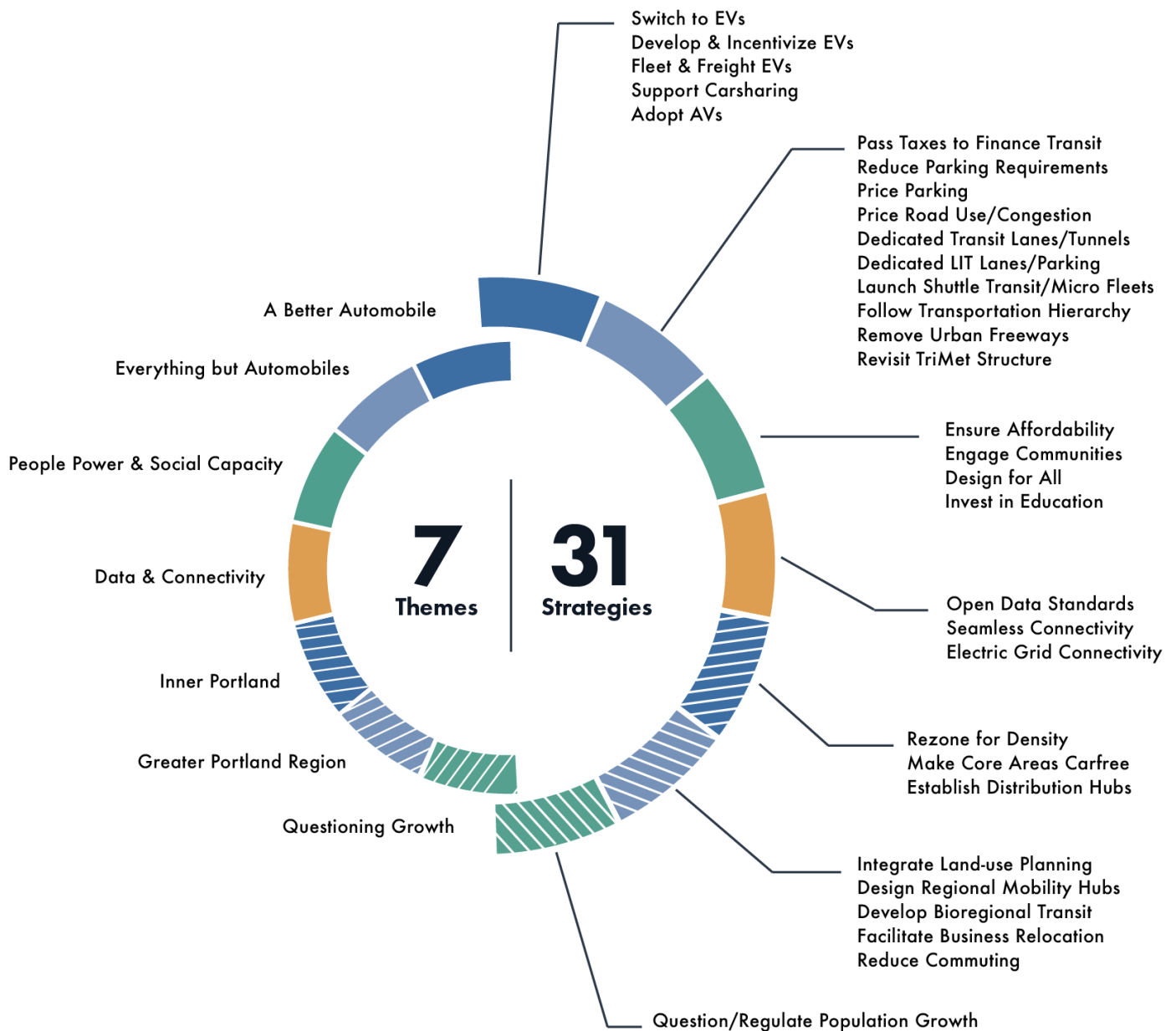


Round 1 Insights

Mobility 2030: We're on our way to meeting our climate and equity goals. *How did we do it?*

What changes were made and what strategies were implemented — individually and collectively — to make this future a reality?

We organized participant responses to these questions by tagging them, clustering them into 31 strategy groups, and then further clustering them into 7 themes. The breadth of these responses is fully represented here, edited only for clarity and brevity.



A Better Automobile

Switch to Electric Vehicles (EVs)

"Those who do take personal vehicles have zero emission vehicles."

"On highly congested streets, intersections and neighborhood areas, allow only EVs."

"EV adoption has increased to 50%. ICE [Internal Combustion Engine] vehicles are slowly dying. We have reduced emissions at it's primary source - passenger vehicles."

"We will not be able to totally eliminate VMT [Vehicle Miles Traveled], and there will be a transition period where people are reorganizing their lives and businesses around the new approach, and will still be driving more than they will eventually. It is necessary to electrify those remaining VMT to achieve our emissions goals."

"The ongoing effects of climate change propelled policy changes at both the state and federal levels which have resulted in policies to dramatically lower carbon emissions from all sectors of society. The majority of the changes were relatively easy and required simply changing out existing vehicles for EVs as well as full electrification of new and existing buildings."

Develop EV infrastructure and incentives

"Implement more EV charging stations in Portland."

"The City can invest in the transportation future by offering an incentive to EV owners. Free meter access to private and corporately owned EVs would help drive demand."

"The City could also require installation of electric charging infrastructure in new buildings, and construction of charging hubs in key locations."

"Work with PBOT to provide free meter parking to EV owners."

Focus on Fleets and Freight as early EV adopters

"Focus on electrification of the remaining VMT. Initial efforts could focus on the TriMet fleet and on freight electrification."

"The City could work with the utilities to support electrification of the largest diesel users."

"100% renewable public fleets."

Support carsharing

"Establish a new one-way carshare service in Portland. Car2go's departure from Portland on October 31st has left a huge gap in the transportation options available to residents. The flexibility of one-way carshare is essential for many residents to consider giving up their private vehicle."



"By keeping personal vehicles out of the primary city and in suburban located parking facilities, congestion will be dramatically alleviated."

"Mobility-as-a-Service is the norm."

Adopt Autonomous Vehicles (AVs)

"Autonomous Vehicle functionality is increasing efficiency and safety."

"Autonomous cars and micro-vans, both personally owned and shared, are often stored off-site at high-capacity automated parking areas. When someone wants to use such a vehicle, they summon it and it comes to their building within 10-15 minutes. This reduces most need for on-site and street parking, lowering the cost of buildings and freeing up large amounts of street space from parking."

"Much hyped as well as much hated-on, autonomous vehicles I think will over time have big impacts in certain parts of the mobility system."

Everything but Automobiles

Pass taxes to finance transit

"The transit system has been much expanded, funded by state carbon tax proceeds, by shifting spending from automobile/highway spending, and from general funding to create equitable/subsidized system highly usable to all, and from land-development / value capture around transit nodes and lines."

"A subsequent regional ballot measure paid for similar improvements around the region, along with a direct boost to bus service. This led to a jump in suburban ridership and more fare revenue, which TriMet is now planning to reinvest in more new service."

"With a new state/local business or income tax structure, Metro / TriMet dramatically increases investment in high-frequency (under 5-minute headways during peak times / under 10 during regular hours / under 20 during low-peak), high-capacity (60+ PP vehicle comfortable), 24-hour service along major corridors throughout the Portland region."

Reduce or Eliminate Parking Requirements

"Reduce parking requirements for affordable housing (particularly in suburban areas). When parking is plentiful (in Washington County, for instance, we have 8 on and off-street parking spaces for every car in the county), our investment is in cars, not people, or other transportation options (bike, ped, transit)."

"The legal requirement to provide free off-street parking with all new homes is a major driver of the expense of new housing, essentially hidden inside everyone's rent. This makes no sense; people should be able to save this money by not owning a car or by parking in the street. Giving them the legal option to do so would enable a gradual infill of transit-oriented housing in many more areas at lower price points."



"In 2021, citing the need to legalize greener lifestyles throughout the Portland metro area, Metro Council voted 5-2 to lower the maximum allowed parking quota from 1 to 0. This legalization of car-free homes throughout the suburbs, the world's first such action, didn't immediately change development patterns, but early in the economic rebound of 2024 a few entrepreneurs began putting up small, relatively low-priced apartment buildings without on-site parking in Beaverton, Hillsboro and Wilsonville. After some growing pains---the cities ultimately created systems of transferrable neighborhood parking permits to prevent too much freeloading on nearby curbsides---the subsequent housing boom included many such buildings near the rapidly improving transit corridors and regional bike path network, further fueling ridership growth."

Price Parking

"Make parking downtown more expensive and difficult."

"Acting on the recommendation of Portland's equitable mobility task force, the City embraced a simple, powerful version of decongestion pricing, the first of its kind in the world: a surcharge on parking purchases in the central city that begin between 7am and 9:30am. (Owners and operators of private garages were allowed to use a share of the revenue for transponders in the cars of their customers and employees.) Because the fee was parking-based rather than driving-based, it wasn't subject to Oregon's constitutional requirement that the money be spent on roads, and because it didn't require sign-off from any other jurisdiction, the city was able to spend it on its own priorities."

"When it comes to behavior change, paid parking dwarfs all other transportation demand management tactics."

Price Road Use and Congestion

"Congestion pricing is implemented in a way that reduces single occupancy vehicle trips and encourages transit use, bicycling, and walking."

"Congestion pricing on our freeways, with the revenue going towards exemptions for low-income drivers and transit investments."

"Figure out how to charge a weight * miles fee for every road user. This sounds like it would either be impossible or an unacceptable invasion of privacy, but it is close to possible, and we've already allowed our (phone) carriers to track us at all times."

"People are used to paying for everything - except access to limited road space and parking. Once the region's elected officials actually begin to implement TDM tools like variable pricing of roadways (HOT lanes), variable pricing of parking (i.e. lower prices at low-demand times; higher prices at high-demand times), people will begin to make different transportation choices."

"Large, commercial, and high-impact (e.g. automobile) vehicles are charged dynamic and transparent impact fees for road use, which steadily pushes these uses to more efficient and lower-impact use, e.g. off-peak and night-time use, smaller & safer & lower-pollution vehicles."



"We're pricing driving to account for its full costs to our region, including congestion, emissions, and maintenance of our roadways. We're doing it in a smart way, where we are able to charge different prices based on factors like location within the region, type of vehicle (e.g., Uber/Lyft, freight, regular passenger vehicle), time of day, and income."

"Treat public right-of-way and parking spaces as a utility, and charge for their use according to the city's goals and priorities. Charging can take a variety of forms, depending on the desired outcome. For example, if the goal is to reduce emissions, use of the right-of-way can be tiered, with the heaviest emissions charging the most, and zero-emissions modes of transportation traveling for free. If the goal is to reduce congestion, the most space-inefficient modes would pay the most."

"Pricing allows us to turn the use of the system into revenue, which can be used to invest in the pro-social modes and make it easier and more convenient to use those modes."

Dedicate Transit Lanes / Build Tunnels

"There can be immediate positive outcomes from low-cost investments to dedicate right-of-way, particularly in key areas, to transit, bicycling and walking."

"The Rose Lane Project initiated by Commissioner Eudaly dedicated bus-only lanes and signals on many major roads and intersections, replacing parking lanes on some streets and passing lanes on others."

"Bus lanes approach urban space from a justice perspective: a bus with 50 passengers has the right to 50 times more road space than a car with one. They also allow buses to travel faster and more frequently per dollar of budget, creating operational savings that can be invested in more service and/or lower fares."

"This new high-frequency, high-capacity (HF/HC) network is enabled by some major infrastructure projects to overcome bottlenecks (e.g., MAX tunnel from Goose Hollow to Lloyd Center), and the implementation of a widespread right-of-way reallocation plan (transit-only lanes, protected micromobility / bike lanes, etc.) implemented at the city and county level."

Dedicate LIT Lanes / Parking

"Create LIT highways - long-distance Low Impact Transit (bikes, e-bikes, scooters, etc.) corridors."

"Create true bike-only boulevards that allow rapid commuting across large sections of town."

"The City's right-of-way reallocation plan includes a 10-12 ft long geofenced designated micromobility parking area every 1-2 blocks in commercial and residential areas throughout the city. The success of the City's second-generation biketown program combined with the improvements to the regional transit network and the right-of-way reallocation plan have rendered private point-to-point transportation generally expensive and time consuming by comparison."



Launch Shuttle Transit / Microtransit Fleets

“TriMet replaces all low-frequency bus routes with flexible, on-demand, local-circulator shuttles, designed to quickly and easily connect people in low density areas to the HF/HC network.”

“In 2028 TriMet begins piloting autonomous local-circulator shuttles in Damascus, Forest Grove, and St. Johns.”

“When combined with abundant pedestrian and bike infrastructure and an ample supply of local shuttles (microtransit) and micromobility services, efficient and cost-effective multi-modal journeys are possible.”

Follow Transportation Hierarchy

“The City of Portland follows its own Transportation Hierarchy in projects and at every level of decision: pedestrians first; bicyclists second; transit third; freight fourth; and private cars, cabs, ride-hailing cars, and other low occupancy vehicles last.”

Remove Urban Freeways

“We tore down many of our urban freeways and replaced them with dense, affordable housing and transit routes.”

Revisit TriMet Planning and Structure

“All investments must be prioritized based on their ability to decrease carbon emissions and VMT, increase safety, and increase access to opportunity. In Portland, the Transportation System Plan will need to be revised to reflect this, creating a new list of significant projects. Transit planning and investment will necessarily need to be folded more closely into the city’s planning work, which might require a major restructuring of TriMet.”

People Power & Social Capacity

Ensure Affordability

“Free public transportation in the region. If not free for all, free for kids under 18 and for all low-income households.”

“Develop a robust ‘transportation wallet’ to facilitate transfer payments to subsidize low-carbon modes for low-income populations. This will be essential to ensure that low-income residents enjoy access to the expanding range of low-cost, low-carbon transportation technologies, and can access jobs and resources to live full, happy lives.”

“The main priority turned out to be a universal mobility allowance that all Portland-based residents and workers now receive to spend on parking purchases, transit fares or the purchase and maintenance of zero-emission vehicles, including pedal bicycles.”



"Most people have flat-rate monthly or yearly transit access passes, which are subsidized by government and employers so they are readily affordable at all income levels, and for most people are usually a preferred alternative to personal vehicle ownership."

"Provide innovative ways to make newer mobility devices available to lower-income families and seniors who may not have credit cards or disposable income for annual subscriptions or even one-time fees."

"Those with the least income may be the longest-term highest-volume users of these clean transportation forms if they can achieve access."

"Eudaly's major political insight was that the massive political obstacle of repurposing auto lanes could be overcome by reducing fares for sympathetic constituencies."

Engage with Individuals and Communities

"Engage all individuals in the community, all demographics, race, gender, age. Design for a more equitable system to include everyone's needs."

Design for All

"The successful customer service model and well-regarded user experience of the on-demand shuttles is soon replicated by TriMet's ADA paratransit service, ensuring that all people in the Portland region have access to high-quality shared transit services."

"Autonomous vehicles greatly increase the mobility options for mobility-impaired persons, e.g. elderly and disabled."

"Special vehicles and building interface points are used which facilitate e.g. wheelchair users easily rolling right on and off transport vehicles."

"Provide charging options for wheelchairs throughout centers and corridors so those with mobility impairments have equal access to festivals, etc."

Invest in Education

"As our region continues to grow, the demand for skilled labor increases, but the state has historically under-invested in its universities. Increasing funding for higher education with the purpose of increasing enrollment and lowering expenses. This will help Portland-born residents to better take advantage of existing growth."



Data & Connectivity

Enforce Open Data Standards

"All mobility service providers are required to meet benchmarks for transparency, including adherence to specific open-data standards and open APIs that enable their services to be found, booked, and paid for from any public or third-party mobility-as-a-service platform of a given user's choosing."

"Achieving success here is highly dependent on the continued work of groups like MobilityData.io and other non-profit organizations that are developing open data standards and validation tools for how mobility services are presented to users, as well as support for the use of these open data standards by state and local government, including Metro, TriMet, and the City of Portland."

Build Partnerships for Seamless Mobile Connectivity

"TriMet transit agency offers a unified system of access to trains, buses, bikeshare, electric car share, ebikes, scooters, and utility vehicles (e.g. disabled transport, cargo transport)."

"Micromobility hubs at every light rail station and price of usage included in every transit ticket."

"Developing technology infrastructure to collect data from and transmit data to the growing number of services and vehicles that navigate our streets using digital maps allows us to manage these modes effectively and reduce conflicts with transit, bicycling, and walking. Collecting real-time data also allows us to manage streets dynamically, for example, changing lanes from bus-only to all-vehicle depending upon traffic conditions."

"Finally, by enabling access to all mobility services through any/all platforms, you remove many of the barriers between transportation services and potential riders (i.e., knowing that an alternative exists, where it goes, when it leaves and arrives, how much it costs, and how to book and pay for it)."

"For most people and most trips, relying on the extensive multi-modal service network is the quickest and most cost-effective way to travel."

Optimize for Electric Grid Connectivity

"All of these new electrical devices are optimized in terms of efficiency and for use as either distributed or aggregated energy resources."

Inner Portland

Rezone for Density

"Close-in Portland should be rezoned for much higher allowed density (R1 zoning at least)."



"Allowing density in close-in Portland will allow people to live closer to their jobs and services, allowing them to increase access to opportunity and reduce VMT in their personal lives."

"The density of the central city neighborhoods has increased dramatically, thanks in large part to Portland's 'missing middle' zoning reforms."

"Increase housing density throughout the city but focus on inner neighborhoods first."

"High frequency transit requires suitable population density aka demand. Without increasing inner neighborhoods' density we cannot meet our goals."

"Infill zoning reforms, that promote ADUs and multi-family developments (or redevelopments) similar to those scattered throughout the inner SE are absolutely critical to the long term future of transportation in this region."

Make Core Areas Carfree

"More carfree blocks, plazas, and a carfree downtown Portland."

"Once folks realize how much quieter, cleaner, safer, and more fulfilling our urban neighborhoods can be when we restrict the private storage of automobiles and reclaim streets for people, it'll snowball into a larger push for cleaner, greener, more equitable cities."

Establish Distribution Hubs

"Commercial traffic such as deliveries uses neighborhood delivery hubs, smart building infrastructure that allows round-the-clock to-the-unit delivery, and night-time service including night-time use of autonomous vehicles for many needs. This greatly reduces daytime congestion and road dangers."

"The City or the Metro region could build transload facilities where trucks could deliver at night and fleets of electric bikes/trikes/small trucks could disperse the freight in urban centers during the day."

Greater Portland Region

Integrate Land-Use Planning for Transit Corridors and Housing

"Land use planning should also be folded in with transportation planning, and strong action should be taken immediately to increase allowed density close to transit and services."

"Electric-Bus Rapid Transit serves all major arterials."

"Light rail now goes to the Westside -- Tigard, Sherwood, Wilsonville, Newburg, Dundee, McMinnville and then to LO, West Linn, Oregon City. Additional light rail spurs (from mainline) to reach Troutdale/Springdale via Southeast Gresham."



"Higher density with affordable homes on transit provides for greater mobility and ease of movement and promotes better health through active lifestyles, it frees up household income for other expenses, increases transit ridership and fare revenue, reduces traffic congestion, air pollution and greenhouse gas emissions, and improves access to jobs, schools and other opportunities. Developing with greater density near transit also results in infrastructure cost savings."

"Our region commits to creating mixed-income communities on high capacity transit lines with at least 50% of housing at transit stations being regulated affordable (primarily rental, but can include homeownership, i.e., condos)."

"A significant increase in affordable housing (both deed-restricted and affordable), especially near MAX stations and in other areas that are well-served by transportation options. This would involve a combination of public funding for affordable housing, creative land use planning in target locations, and broader policies to increase the supply of housing across the region."

Design Regional Transit Stations as Mobility Hubs

"Bus Rapid Transit and rail stations all offer ample free, secure storage for personal LIT vehicles, also, easy supply of on-demand shared vehicles."

"Bike share is public transit and can help with first and last mile connections."

"Autonomous technology from Tortoise is implemented in all biketown micro-vehicles, enabling them to redistribute themselves during low-peak times."

"Provide more suburban transit area parking where people can park fossil-fuel vehicles and have quick easy access to mass transit (buses, light rail) and EV-based taxi / ride sharing services."

Develop Bioregional Transit

"High-speed rail or bus links to connect regional hubs, Hood to coast, and north and south."

"Higher-capacity light and heavy rail create high-speed longer-distance connections between key nodes across the whole region, and inter-regionally e.g. south to San Francisco and north to Puget Sound."

Facilitate Business Relocation to Regional Town Centers

"Create great work places outside of the city. Locate them closer to where people can afford to live."

"Create remote suburban commerce centers and campus. Provide fast easy zoning, building permits. Subsidized commercial real estate loans to promote development."



"Would incentivize (regulate) large downtown companies to relocate along transit (light rail corridors) to free up traffic in the downtown core area. Property taxes, etc. will be divided to each entity either where the company has left and where the company is going."

"Availability of transit will dictate company location strategies and not City business development."

"In Washington County and elsewhere in the metro region, allowances have been made throughout all residential zones to encourage small neighborhood scale commercial and community activity, so that every home in the urbanized area is within walking distance to basic services and amenities (a park, market, community gathering space, etc.)."

Reduce Commuting

"Implement an effective commute trip reduction program. Commuting is a major source of VMT/energy/GHG."

"Allow individuals to swap jobs (employer consent required) who do very similar jobs, but commute long distances with someone doing similar work and closer to their residence. A colleague and I did very similar jobs at one point in our careers -- I commuted from Tigard to airport and she commuted from Vancouver, WA to Tigard. If we could have 'swapped' jobs then both of us would have worked in our 'backyard' and removed two vehicles from the roadways."

"People have got to be able to live near their workplaces, and/or transit service has to be extraordinarily good."

"Work places closer to home will result in economic development for associated service businesses."

Questioning Growth

Question / Regulate Population Growth

"With the population growing by 300,000 and issues such as urban blight, and safety, will incentivize people to move 'out' to areas with less transit as the City of Portland is ill-equipped to manage an additional 300,000 downtown. Plus, we need to ensure we have a well-rounded eco-system between urban and rural communities."

"Only allow growth of new permanent residence equal to the amount of resident exits. This will stop the decline in livability which has occurred in the Portland metro area of the last 10 years."



From Round 1 to Round 2

We sent the above synthesis of Round 1 responses to participants. Then, we asked them to prioritize from among the 31 strategies by selecting 5 of them to create a 2030 vision.

One value of this type of process can be seen in the evolution of strategies from Round 1 to 2.

Here is one example:

How did strategies evolve?

Participant 6

Round 1

Revisit TriMet Structure
Integrate Land-use Planning
Ensure Affordability
Dedicated LIT Lanes/Parking
Fleet & Freight EVs
Establish Distribution Hubs
Switch to EVs
Rezone for Density
Price Road Use/Congestion
Dedicated Transit Lanes/Tunnels

Round 2

Rezone for Density
Price Road Use/Congestion
Dedicated Transit Lanes/Tunnels
Price Parking
Follow Transportation Hierarchy

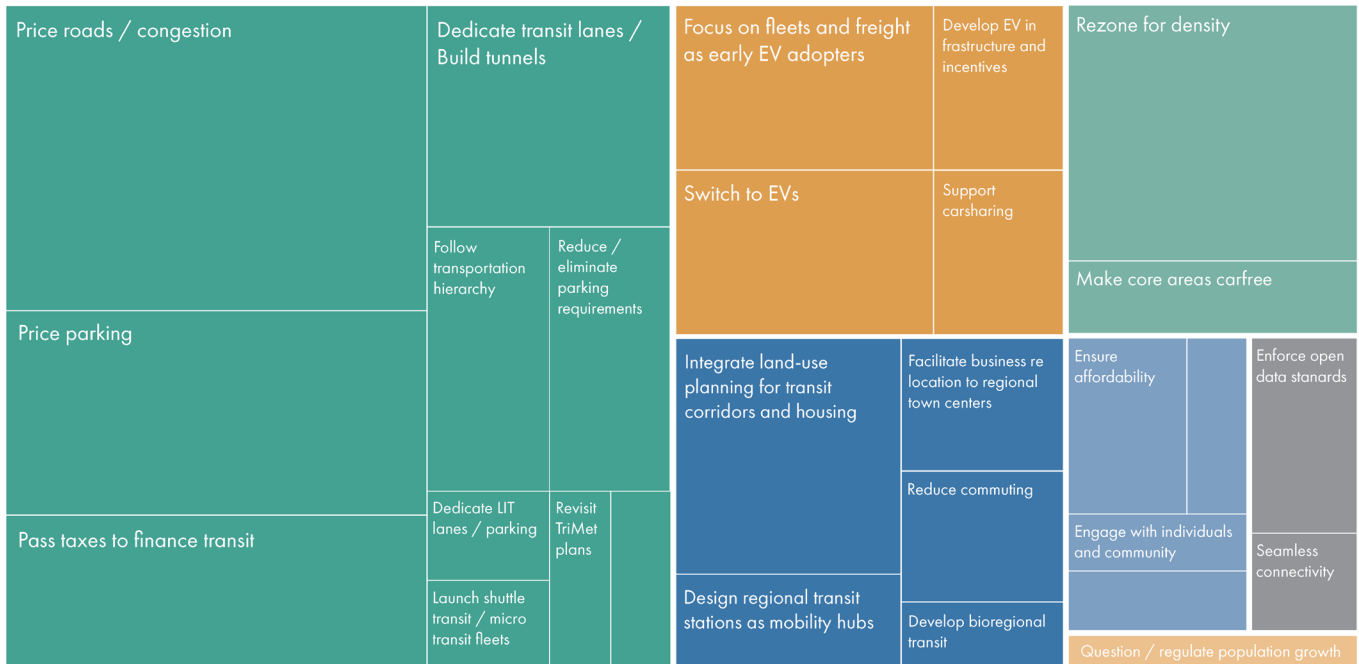
This color indicates a strategy that was unique to Round 1 or 2.
This color indicates a strategy that was consistent from Round 1 to 2.



Round 2 Strategic Visions

Round 2 responses are synthesized here. First is the prioritization by participants of Round 1 themes and strategies. Next is a set of representative responses to questions we asked about obstacles and plausibility.

Strategic Priorities



Themes

- 49.4%** Everything but Automobiles
- 14.5%** A Better Automobile
- 14.5%** Greater Portland Region
- 10.8%** Inner Portland
- 6.0%** People Power & Social Capacity
- 3.6%** Data & Connectivity
- 1.2%** Questioning Growth



Obstacles & Plausibility

What are the obstacles to implementing these strategies?

“Obstacles are everyone’s aversion to paying for anything that has previously been ‘free,’ like parking and use of the public right of way.”

“The obstacles are political in nature.”

“In every planning, policy, spending, and implementation decision, there are very real and sometimes difficult to untangle trade-offs between providing immediate relief for individuals and communities and making long-term investments that can result in difficult and painful adjustment periods.”

“Investing in transit only gets us part of the way towards meeting climate and equity goals. We also need to dramatically adjust the currently low-density and auto-centric nature of our urban form, such that everyone has access to walkable neighborhoods and viable alternatives to driving.”

How plausible are these changes?

“Plausible but difficult. The main obstacle is that people will correctly perceive that their lives must change somewhat. However, they’re usually failing to recognize/accept that their lives will be changing without this action - both because of climate and because of other things like home prices that will rise faster without more housing, or streets that will clog more intractably without better transit.”

“All these strategies can have significant impact in the next 10 years.”

“All would be technically plausible. All are in some form of process. It would help if these were linked into a larger, public vision.”

“The more that we can tie resilient, carfree transportation investments (and divestment from automobile infrastructure) to climate justice, the better.”

