



# 2040 FREIGHT STAKEHOLDER INTERVIEW SUMMARY

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**PBOT**  
PORTLAND BUREAU OF TRANSPORTATION

Prepared by:



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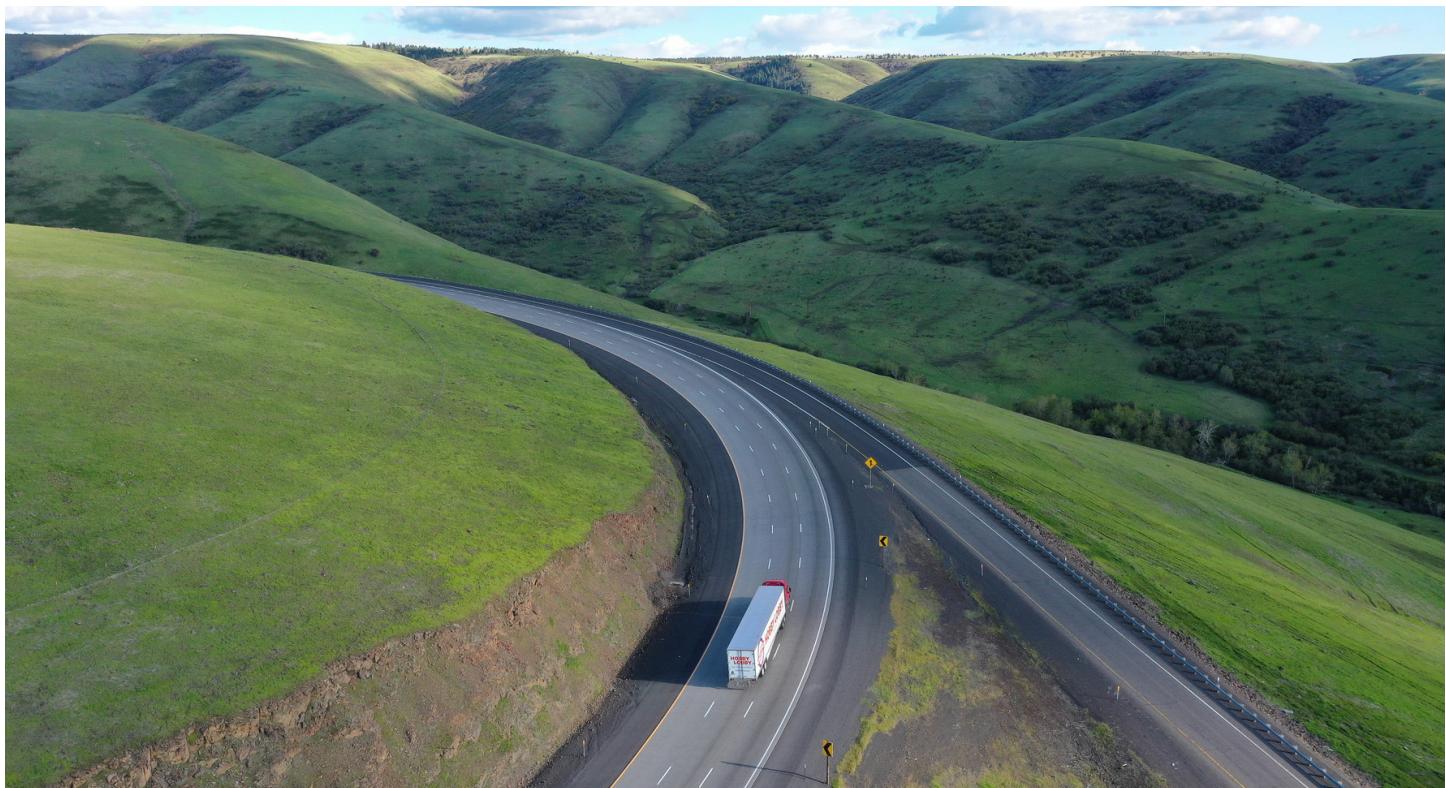
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**Picture 1.1:** A white and red heavy-duty freight truck driving through an empty freeway. Green hills surround the freeway. [Source: unknown]

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# BACKGROUND:

Between April 5, 2021 and mid-May 2021, the Portland Bureau of Transportation (PBOT) conducted thirty-one stakeholder interviews, including forty-five total participants, to inform the 2040 Portland Freight Plan (2040Freight). The interviews, conducted via Zoom and written questionnaires, included two audiences of stakeholders: 1) industry leaders including shippers and carriers, and 2) policy makers and community leaders.

Staff prepared separate interview questions for each stakeholder group. Both groups answered questions about perspectives on freight, innovations and trends in the freight industry, future needs and changes, and next steps. Industry shippers and carriers were additionally asked questions about company freight practices. In addition, both groups were asked for suggestions about what the City of Portland can do to improve freight delivery operations, and what they hope the 2040Freight Plan can achieve.

This report summarizes the key themes and findings from the interviews and looks ahead to how their insights will inform the next steps of the 2040Freight Plan.

**The following fourteen industry leaders, shippers and carriers participated in our stakeholder interviews:**

1. B-Line Sustainable Urban Freight
2. Bridgetown Enterprises
3. Central Eastside Industrial District
4. Columbia Corridor Association
5. Columbia Distributing
6. Daimler

7. Franz Bakery
8. OIA Global
9. Oregon Trucking Association
10. Pacific Coast Fruit Company
11. Portland Gas and Electric
12. Railroad consultant
13. Titan Freight Systems Inc
14. United Parcel Service (UPS)

**The following seventeen community leaders and policy makers participated in our stakeholder interviews:**

1. Black Food Sovereignty Coalition Focus Group
2. Brooklyn Neighborhood Association
3. City of Portland Mayor Wheeler
4. City of Portland Transportation Commissioner
5. Climate Solutions
6. Department of Environmental Quality (DEQ)
7. Forth Mobility
8. Green Energy Institute
9. Neighbors for Clean Air
10. Metro Regional Government
11. Oregon Department of Transportation (ODOT)
12. Oregon Environmental Council
13. Oregon Walks
14. Portland Bureau of Planning and Sustainability
15. Prosper Portland
16. Safe Routes to School
17. St Johns Neighborhood Association

# KEY FINDINGS:

## 3. Perspectives and Concerns about Freight Operations

Both stakeholder groups expressed appreciation for the economic importance of the freight system and its operations in Portland, valuing its necessity as well as the prosperity that the movement of goods represents for the City and region. Policy makers and community leaders expressed strong concerns about air quality impacts and safety associated with freight operations. Industry stakeholders focused much of their comments on the challenges they have moving freight through Portland's dense, urban environment.

More specifically, policy makers and community leaders mentioned that they:

- value the timely delivery of goods and the ability to purchase products in stores;
- especially recognized how valuable freight operations have been during the COVID-19 pandemic; and
- appreciate the fact that freight sustains and brings jobs to Portland and connects Portland to national and global economies.

Given their positions in the community, these stakeholders also hear from a number of their members and constituents about concerns associated with freight delivery. A near unanimous worry is the carbon emissions generated by freight operations, and in particular about the adverse environmental and health impacts of air pollution on low-income communities, communities of color, and youth. Their next most common concern is about potential safety conflicts between trucks and both pedestrians and bicyclists. (In fact, one stakeholder considers all truck travel to be hazardous.) A small number of stakeholders reported concerns about noise pollution. Further, some of the stakeholders in this group believed that trucks are worsening congestion in neighborhoods which in turn negatively impacts businesses vitality.

Industry stakeholders - i.e., shippers and carriers - were universal in describing how congestion and lack of available curb loading zones in the City are major impediments to their operations. The effect of congestion on their travel times and reliability has forced them to purchase additional trucks and hire more staff to guarantee that they meet their commitments to their customers. They worry that congestion will only get worse with population - and corresponding consumption - growth, and they complain that the high weight-mile taxes they pay are not being directed at relieving congestion problems or fixing the poor pavement condition of many City streets. Another common concern is that the capacity of freight routes are being reduced to accommodate bicycle lanes, traffic calming measures, which, in their mind, presents safety conflicts, as well as exacerbating roadway congestion.



**Picture 2.1:** A freight truck driving through a residential street. Many cars are parked on both sides of the street. A person in the foreground is opening their car. [Source: unknown]

### 3.1 Freight Practices

All of the shippers and carriers conduct freight operations in Portland and utilize the most efficient and cost-effective freight modes - including cargo bicycles, light-duty passenger vehicles and trucks, and medium- and heavy-duty trucks. Several are providing time-sensitive intermodal services between trucks and railroads, marine vessels, and cargo aircraft, and they transport raw materials, food and beverages, construction supplies, and other consumer and business merchandise.

Industry stakeholders represent various freight modes and operations, and their equipment is either owned or leased, and provide either full-truckload<sup>1</sup> (FTL) and/or less-than-truckload<sup>2</sup> (LTL) services. Only UPS and to some extent, B-Line, make deliveries between businesses and consumers (i.e., e-commerce) as well as between businesses, while all others provide only business-to-business deliveries.

All stakeholders operate daily routes in Portland. Several service different cities in Oregon, such as Canby, Salem, and Bend. Three stakeholders provide services to Washington, and at least two have routes to California. One also transports goods to and from Arizona and Mexico.

Most shippers and carriers operate their first routes at 2:00 AM, 5:00 AM, and 6:00 AM in order to avoid heavy traffic congestion and delays. Four run their routes throughout the day, and two also perform dark drops. Dark drops are deliveries of goods after hours or overnight when a customer is unavailable to receive them by the carrier who has been supplied with a key to their store to allow the carrier to enter their business to drop off goods. The carriers providing dark drops explained that they're unique and challenging to develop because they need to establish trust with businesses to gain after-hours access to their stores.

Many industry stakeholders transport goods from rail yards, shipping ports, and airports into company warehouses. Inside the warehouses, goods are sorted and loaded onto trucks for delivery.

Two companies interviewed have distinct freight operations. One transports goods from their factories to their warehouses. Once there, goods are sorted and loaded onto company trucks for delivery. Their drivers work as Route Sales Representatives (RSRs) and are responsible for unloading goods into grocery stores and directly stocking their products on shelves. According to the company, RSRs have advantages to the company, however it does impact their unloading times, making them longer than other shippers and carriers who simply pickup and drop off goods that are loaded at docks by their customers. The delivery times by RSRs are further complicated where deliveries can only be accomplished to and from on-street loading zones (which aren't always available) or have limited loading periods. It's not infrequent that drivers are unable to complete deliveries within their allocated parking time and receive parking citations.



**Picture 3.1:** White freight trailers sitting at a loading dock, where goods are unloaded and loaded for transport.  
[Source: Chris Yunker]

<sup>1</sup> Full-truckload is a type of shipping mode whereby a truck carries one dedicated shipment. FreightOS, [freightos.com](http://freightos.com)

<sup>2</sup> Less-than-truckload is a type of shipping mode whereby a truck is available to carry more than one shipment. FreightOS, [freightos.com](http://freightos.com)

## 3.2 Delivery Vehicles

All seven carriers operate trucks built after 2006, and all but one use diesel-powered trucks. One carrier uses renewable diesel and has ordered four new electric-powered truck-tractors. One other carrier has tested propane, and solar powered freight trucks as part of their research in their next fleet purchases.

Most shippers and carriers fueled their freight trucks with diesel. Only one company interviewed regularly uses an alternative fuel supply; renewable diesel, a fuel made from vegetable oils that produces significantly fewer carbon emissions than regular diesel. One other company that experimented with renewable fuels, having tested propane-powered refrigerated trucks and a solar-powered refrigeration trailer, found that they worked very well. The company had a positive experience with propane powered vehicles, however believed that the costs did not outweigh its benefits and decided to hold out for future electric truck technology to evolve, believing it will soon be the standard. All shippers and carriers operated trucks built in 2006 and newer.<sup>3</sup>

Another company interviewed with distinct freight operations is a last mile logistics company that transports goods with cargo bicycles. The company receives goods by truck at a warehouse to sort and package goods which are then loaded onto cargo bicycles for short-distance delivery. To fulfill large volume and long-distance orders, employees load cargo bicycles and goods onto box trucks, drive the trucks closer to the customers' location, then unload the cargo onto the bicycles to their destinations. This strategy uses box trucks as mobile distribution centers. According to the company, strong business partnerships that supply appropriate demand and volume are necessary to increase cargo bicycle deliveries.

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<sup>3</sup> Dynamic routing is a navigation software that offers route options based on live traffic and road conditions. According to stakeholders, this system has improved the efficiency of their operations.

## 3.3 Logistics and Other On-Board Devices

Shippers and carriers rely on technology to improve their operations. Several stakeholders use dynamic routing systems<sup>[2]</sup> to avoid traffic delays. One company developed a virtual logistics system that automates their order-taking process, and others have equipped their vehicles with artificial intelligence (AI) devices that alert drivers about dangerous conditions, and monitor and collect data about both vehicle (MPG, idling, travel time) and driver (e.g., distracted driving, and drowsy driving, and monitors a driver's speed and turning speed) performance. One carrier said that one of their devices measures idle and run time and that they reward drivers who keep idle times under 5%. One company has equipped their trucks with front facing cameras to provide a record of conditions in case a driver is involved in a collision.

Industry stakeholders reported changes in their logistics operations over the past few years to help them best navigate to the increased number of distribution centers throughout the Portland area, and the dramatic growth in e-commerce delivery. According to stakeholders, e-commerce delivery has reduced the ability to consolidate loads and trips because shipments now have to be broken up and dispersed across multiple freight trucks to different destinations. They explained that this has generated more complex operations and an increase in LTL shipments.

## 3.4 Operations during COVID-19

Shippers and carriers also discussed changes they experienced throughout the COVID-19 pandemic. In the first months of the pandemic, some companies experienced rises in demand and increased freight activity. Companies providing business-to-business deliveries, however, did not experience major changes to their business volume.<sup>4</sup> The United Postal Service (UPS) explained that the growth in online shopping throughout the pandemic led to a historic surge in e-commerce shipping.

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<sup>4</sup> Business-to-business (B2B), also called B-to-B, is a transaction or business conducted between one business and another, such as a wholesaler and retailer." Investopedia, Investopedia.com.

## **4. Trends and Innovations in the Freight Industry**

### **4.1 Trends**

Many stakeholders in both groups stated that traffic congestion in Portland is rising, vacancies are declining, available land for business expansion is declining, and that interest in electrification is growing across the freight industry.

As noted earlier, shippers and carriers focused many of their comments about trends on growing congestion levels and its impact on their travel time reliability and overall operations, and more importantly, on their bottom line. Also, on average, loads are smaller and are using smaller trucks and vans as customers downsize shipments, particularly, with regard to e-commerce deliveries. Industry stakeholders identified congestion problems in Downtown Portland, the NW Industrial District, along Marine Drive, and within construction zones, and one stated that traffic was increasing particularly between 11:00 AM – 1:00 PM.

One railroad stakeholder explained that freight trains are getting longer which is leading to longer delays for roadway traffic at at-grade railroad crossings. In addition, railroads are moving away from cargo that requires additional labor (e.g., lumber and natural gas) than what is needed for highly efficient intermodal and unit train operations. This may result in more freight being moved by trucks.

Several stakeholders described the low industrial land use vacancy rates in Portland and how it has put pressures on growing businesses such as having to work to keep their trucks from overfilling their lots and protruding onto streets shared by other users. One company did relocate its headquarters out of Portland and others that want to expand their operations are finding that the low vacancy rates and limited available land is making a strong case for their moving outside the City. One opportunity may be to restore industrial brownfields with transportation improvements<sup>1</sup> as a strategy to increase availability of industrial lands within the City.

### **4.2 Electrification of Freight Transportation System**

Every industry stakeholder expressed interest in electrification. Most were interested in purchasing or leasing electric freight trucks due to their lower maintenance costs and others were driven by the reduced carbon footprint in switching from diesel to electric. All shippers and carriers identified purchase costs as their biggest obstacle in transferring to electric trucks. Daimler, a freight truck manufacturing company, explained that electric freight trucks and diesel-power trucks would have the same life cycle costs by the middle of the 2020's. Daimler also highlighted grant opportunities to assist with purchases. Other stakeholders advocated for City funded grant opportunities to assist with electric truck purchases. Others pointed out that the State, with federal assistance, may be better positioned to advance these kinds of funding programs.

Industry stakeholders were also concerned about their ability (i.e., space and cost) to install electric charging facilities. And policymakers and community leaders discussed the need to install public charging stations throughout the City as an incentive to carriers to buy electric trucks. Here too, public funding to encourage carriers to build these charging facilities as well as for local jurisdictions to construct public ones, was mentioned by a number of stakeholders.

<sup>1</sup> "A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." The U.S. Environmental Protection Agency (EPA), EPA.gov

## 5. Innovations

### 5.1 Safety

Policymakers and community leaders recommended that shippers and carriers shift their freight operations into nighttime, as possible. They also expressed interest in carriers “right-sizing” the type of trucks they use in urban environments to help reduce congestion and to enhance curbside management. Industry stakeholders explained that artificial intelligence in their trucks enhanced the safety of their freight operations.

Policy makers and community leaders outlined strategies to promote pedestrian, bicyclist and driver safety. One of the practices proposed was to mandate time of day restrictions for truck travel to periods when there are fewer pedestrians and bicyclists - especially schoolchildren - to reduce truck collisions. Shippers and carriers cited challenges with overnight deliveries due to businesses not having staff to load and receive goods when they’re closed. While dark drops are a solution, they’re not common across the freight industry in Portland. Industry stakeholders explained that this initiative also requires strong partnerships between businesses and freight carriers, and it can present personal safety risks to drivers. One unique safety example provided was when alcoholic beverages are delivered at night to businesses that are open who may have intoxicated patrons or activity on the street leading to theft and robberies.

Several community leaders and policymakers expressed interest for smaller freight vehicles in the urban environment. Some proposed that companies solely operate light-duty vehicles on City streets. Others recommended companies redesign and downsize their heavy and medium duty truck fleets to enhance safety, visibility, and fuel efficiency. They cited the new United States Postal Service (USPS) vehicle released in February 2021 as an example of a smaller fleet delivery vehicle with these added technologies. Stakeholders highlighted the added benefits these proposals would have for active transportation travelers.

In contrast to this, one community leader stated that we need to acknowledge that bigger trucks and bigger industrial facilities result in more efficiency and fewer emissions.

Community leaders and policymakers also looked to curbside management strategies, such as enhancing existing loading zones, as another strategy to prevent double parking and other unauthorized behavior that obstructs visibility on City streets. One industry stakeholder recommended installing mountable curbs on streets to prevent truck-collisions, explaining that mountable curbs allow truck drivers to maintain control of the vehicle if they drive onto the curb when making turns. Shippers and carriers envisioned curbside management as an opportunity to enhance their employees’ safety and the safety of Portland residents.

Shippers and carriers did highlight their company’s dedication to safety, pointing to equipping their fleets with artificial intelligence (AI) to monitor and alert drivers about hazards. The AI systems monitor speeding, distracted driving, and drowsy driving. They also notify management about any safety concerns. Stakeholders strongly supported the continued use of AI to promote safety.



**Picture 4.1:** Various youth crossing the street on their way to school. [Source: PBOT]

## 5.2 Carbon Emissions

Policy makers and community leaders offered various innovations to lower carbon emissions in the freight industry. They proposed developing incentives to promote electrification and advocated for enhancements to multimodal freight, public transportation, and active transportation networks as supplemental strategies to reduce emissions. Industry stakeholders shared this interest, especially, if financial and other incentives were provided to help them feasibly shift to no-petroleum-based fueled vehicles.

Policy makers and community leaders demonstrated a sense of urgency in mitigating climate change and advocated for various innovations to reduce emissions. Electrifying freight vehicles was the top innovation proposed by this group. According to these stakeholders, electrification reduced carbon emissions and offered an opportunity to eliminate diesel-powered trucks in Portland, benefitting public health, especially for those disproportionately impacted by diesel pollution.

A small number of stakeholders from both groups raised concerns about how environmentally friendly and non-polluting electric freight might actually be. They expressed concerns about the ecological impacts of mining raw materials to create electric truck batteries, and the environmental impacts of running trucks on electric grids powered by fossil fuels. Stakeholders representing Portland Gas and Electric (PGE) explained that PGE had specific goals about cleaning and decarbonizing the grid. PGE was working to reduce greenhouse gas emissions associated with the power supplied to customers by at least 80% by 2030 (from 2010 levels).<sup>1</sup> They also set a goal to achieve net zero greenhouse gas emissions by 2040.<sup>2</sup> PGE highlighted that electric vehicles were the only vehicles that become more ecofriendly over time as the grid becomes cleaner.

1 <https://portlandgeneral.com/news/2020-11-18-portland-general-electric-aims-for-companywide-net-zero>

2 <https://portlandgeneral.com/news/2020-11-18-portland-general-electric-aims-for-companywide-net-zero>

In addition to electrification, community leaders and policy makers proposed that carriers begin to use trucks powered by renewable diesel, natural gas, biodiesel, and hydrogen, as a means of reducing emissions. One industry stakeholder expressed concern that renewable diesel is not widely available for purchase, and that supplies are limited and mostly destined for carriers in California. A Department of Environmental Quality (DEQ) representative reported that natural gas was also in limited supply.

Several policy makers and community leaders raised concerns about adopting “bridge fuels”, which in this context are fuels that pollute less than traditional diesel, however, are not low or zero emission fuels.<sup>3</sup> These stakeholders are concerned that freight companies would become complacent with the lower carbon emissions from bridge fuels and avoid transitioning to electric trucks. These stakeholders emphasized that bridge fuels were improvements to diesel use, but they were not a substitute for electrification which they see as the end-goal for freight companies. One stakeholder recommended that the City establish an endpoint for bridge fuels as a strategy to guarantee electric vehicle adoption.

Policy makers and community leaders recommended using incentives as another strategy to promote electrification of the commercial fleet. Some proposed zero emission loading zones as an incentive for freight companies to electrify their fleets who value companies convenient and accessible loading zones. Some industry stakeholders supported zero emission loading zones and considered them part of a potentially effective strategy to support transition to zero emission freight. Policy makers and community leaders also proposed charging stations near zero emission loading zones as an added incentive for companies to electrify, an incentive supported by the industry stakeholders.

Several policy makers and community leaders proposed leveraging City construction contracts as an incentive for companies to electrify their fleets. These stakeholders recommended developing policies that

3 “A bridge fuel is a transitional fuel between carbon-intensive fuels like oil and gas and renewable energy.” Sightline Institute, sightline.org

mandated City agencies to work with companies using bridge fuels or electric vehicles. They suggested that the City make bridge fuels accessible to BIPOC owned companies to ensure this policy did not bar BIPOC from acquiring City contracts. One such way to do so, proposed by an interviewee, was to have the City acquire a contract to receive a supply of bridge fuel and allow contractors working for the City to use these fueling stations.

Various policy makers and community leaders suggested using tax relief and subsidies as incentives to promote electrification. Stakeholders recommended providing tax relief to companies that purchased or leased zero-emission vehicles (ZEVs). Alternatively, they advised that the city set ZEV deployment targets and provide tax relief to companies that adopted the measures. They also recommended granting property tax relief to companies that installed electric vehicle (EV) charging infrastructure on their property. One industry stakeholder advocated for the City to provide rent reductions or subsidies to companies that adopted ZEVs, as they believed it would be a powerful incentive. One stakeholder proposed that the City develop 'scrapping incentives' to prevent internal combustion engine (ICE) vehicles from being sold to other jurisdictions.

Policy makers and community leaders also proposed developing deterrents for use of carbon emitting vehicles. Several of these stakeholders recommended implementing congestion pricing and bridge tolls for companies operating ICEs, where freight companies that adopted ZEVs could be exempt from these fees. Stakeholders in favor of these measures explained that pricing the roads would be a powerful motivator for freight companies. Many argued that strong measures were needed to prompt companies to lower their carbon emissions. Several industry stakeholders voiced concerns about raising the heavy vehicle taxes in Portland. They explained that freight-related taxes in Oregon are already high, and companies might choose to leave Oregon if taxes continue rising. Both stakeholder groups were concerned about the impacts these measures would have on small freight businesses. They advocated for strategies that keep small businesses from going out of business because of policies that might increase the cost of doing business to prohibitively high levels.

While all of the carriers interviewed have trucks that were manufactured after 2006 and therefore far more efficient and producing far fewer toxic emissions than older diesel engines, carriers and shippers alike recommended funding programs to help retrofit diesel engines and to replace older diesel equipment.

Some stakeholder groups recommended using parcel lockers as a strategy to improve efficiency and lower carbon emissions because they might reduce last-mile delivery trips and carbon emissions. UPS proposed that the City require all new construction to provide package delivery room service for residents as a supplemental strategy. Industry stakeholders also recommended that freight carriers adopt dynamic routing systems to prevent truck idling, reduce carbon emissions, and improve route efficiency.

Both stakeholder groups proposed increasing multimodal freight options and enhancing public transit as a strategy to reduce carbon emissions. Stakeholders were particularly interested in increasing rail shipping to reduce freight truck activity, however, industry stakeholders explained that rail freight companies do not have additional cargo space to transport a greater volume of goods, since the industry is also near their maximum capacity on the tracks.

Some stakeholders expressed interest in expanding trike deliveries. They explained that trike deliveries could reduce trucks on the road and enhance pedestrian safety. An industry representative explained that the City of Portland would need to improve its cycling infrastructure, widen bicycle lanes to accommodate cargo bicycles, and promote widespread distribution centers to expand trike deliveries. They also shared that strong and consistent business partnerships are necessary to expand trike deliveries. Policy makers and community leaders emphasized the need to enhance cycling infrastructure in East Portland and other low-income and predominantly BIPOC neighborhoods to ensure trike deliveries are available to all Portlanders.

Some stakeholders proposed using drones as a strategy to expand multimodal freight. They explained that drones could provide zero emission delivery services, generate 24-hour delivery networks, free

up curb space, and transport supplies during natural disasters. Two stakeholders recommended that the city begin installing drone ports on top of buildings to prepare for the imminent growth in drone delivery services. They noted that the City would need to develop building codes for drone ports.

Stakeholders from both groups supported enhancing public transportation and active (non-motorized) transportation networks as strategies to ease traffic congestion and reduce carbon emissions from freight. According to stakeholders, improvements to these networks would help lower single occupancy vehicle use, ease congestion on roads, shorten travel times, and reduce truck idling.

Several stakeholders also voiced interest in a high-speed rail network servicing the Portland metro area. The high-speed rail service (also known as Cascadia Rail<sup>4</sup>) would have major stations in Eugene, Portland, Olympia, Tacoma, Seattle, and Vancouver, British Columbia, and could lower single occupancy vehicle use, and ease congestion on freeways. One stakeholder proposed that the Cascadia Rail add freight cars to the end of its trains for fast shipping. One industry stakeholder raised concerns about the feasibility of the existing rail network to support the load capacity and speed of a high-speed rail line.

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<sup>4</sup> The Cascadia Rail is a proposed project to connect the Cascadia region through high speed rail. <https://www.cascadiarail.org/>

## 6. Future Needs and Changes

### 6.1 Needs

Industry stakeholders supported street designs to enhance efficient mobility for all users, safety improvements to greenways and bike lanes, and enhanced curbside management.

Industry stakeholders identified needs and strategies to improve the efficiency of goods movement in Portland. They listed various congestion issues that impacted their freight operations including on NE Marine Drive in North East Portland; SE 8th, SE 11th, and SE 12th in the Brooklyn Neighborhood; and the Alberta district. Several explained that congestion is a problem on narrow streets throughout Portland. Stakeholders also voiced concerns about freeway congestion. Many highlighted severe congestion issues on I-5. According to stakeholders, traffic congestion peaks between 6:00 AM – 9:00 AM and 1:00 PM – 6:00 PM. Some noted that traffic is beginning to surge between 11:00 AM - 1:00 PM as well. Industry stakeholders expressed concern about traffic congestion expanding to all hours of the day in the future.

As one strategy to combat the congestion experienced by freight companies, the project team proposed granting freight companies limited access to the City of Portland's rapid bus lanes (Rose Lanes). Most industry stakeholders supported this initiative, however, they also asked for reassurance that the Rose Lanes would improve their travel times and requested further analysis on the feasibility of curbside parking on or near the Rose Lanes. Community leaders and stakeholders raised concerns about the negative impacts the strategy could have on bus travel time reliability and rider safety. Shippers and carriers described various street design issues that impacted the safety of their operations. Stakeholders reported challenges turning onto narrow City streets, particularly in Downtown Portland. Industry stakeholders also raised curbside management issues. They explained that curbside parking shortages often led to double parking, idling, visibility challenges, and congestion. One carrier explained that curbside

loading shortages left their employees vulnerable to theft and extended their delivery times. Both stakeholder groups were interested in addressing freight-related parking issues in residential areas.

Several industry stakeholders highlighted safety concerns associated with bike lanes. According to these stakeholders, some bike lanes cross industrial business driveways where trucks frequently back in and out, which they stated is a common issue in parts of the Central Eastside Industrial District. Other industry stakeholders shared that several streets are narrower after bike lane installations which has resulted in certain streets become too narrow to safely support trucks and bicycles at the same time. One community leader noted that the bike lanes on Milwaukee Ave are hazardous because they are narrow and there is no physical separation between the bike and driving lanes, and trucks drive at a fast speed. Some industry stakeholders recommended that PBOT reach out to freight industries for input on bike lane installations near industrial areas.

Some industry stakeholders raised concerns about greenways on City streets, explaining that the trees on greenways often interfere with the line of sight of heavy-duty vehicles. They stated that greenways were not designed with the height and line of sight of freight trucks in mind and hoped that PBOT would consult freight companies for input on future greenway designs and installations.

One company recommended street improvements to support their cargo bike operations, specifically widening bike lanes to support trike deliveries (i.e., cargo bikes are wider than conventional passenger bicycles). They recommended developing corridors without right turn lanes to prevent collisions on right turn lanes across bike lanes. They also suggested improving curbside management and adding curbside bicycle delivery zones. They noted that strategically installing smart traffic signals would also enhance flow and movement on City streets and explained that these improvements would enhance their access to City streets and increase their competitive advantage over shippers and carriers who rely on trucks.

## 6.2 Changes

Both stakeholder groups shared strategies to address disproportionate air quality impacts on Portlanders of color. Policy makers and community leaders offered innovative strategies to improve the quality of life of communities of color. Industry stakeholders offered an array of implementable actions.

Both stakeholder groups were asked how the freight industry and the City of Portland could address the disproportionate adverse air quality impacts on Portlanders of color. Most industry stakeholders offered electrification as a strategy. Others proposed removing old ICE vehicles from the roads. One industry stakeholder recommended powering warehouses with solar energy. Another promoted equipping trucks with dynamic routing systems to reduce travel times and idling. One recommended that the City only allow zero-emission delivery vehicles in areas where communities of color and low-income communities are disproportionately impacted by air pollution. Community leaders and policy makers offered a wide range of strategies to address disproportionate air quality impacts on communities of color. The Black Food Sovereignty Coalition (BFSC) advocated for policies that reduced carbon emissions in BIPOC neighborhoods and protected Portlanders of color from displacement and relocating into neighborhoods with poor air quality. They also promoted electrifying the grid. BFSC and other stakeholders offered 15-minute cities<sup>5</sup>as another strategy. This land use strategy, when implemented in BIPOC neighborhoods, would allow residents to get most of their needs met within a short walk or bike ride, thereby lowering carbon emissions and enhancing residents' quality of life. (The "20-minute Neighborhood" is already a concept behind the citywide neighborhood centers and corridors approach of Portland's Comprehensive Plan.) BFSC also recommended installing green plots and clean air hubs in BIPOC neighborhoods to contribute to cleaner air quality.

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<sup>5</sup> A 15-minute city is an urban planning model where most human needs and many desires are located within a travel distance of 15 minutes. Congress for the New Urbanism, <https://www.cnu.org/publicsquare/2021/02/08/defining-15-minute-city>

Other policy makers and community leaders said that any strategies to reduce carbon emissions would benefit BIPOC communities because they are the most impacted by emissions. Several stakeholders recommend implementing true cost pricing, fees, and fines to discourage pollution in and near BIPOC neighborhoods. A small group explained they believe that stronger strategies and enforcement efforts are necessary because the freight industry has been reluctant to engage in environmentally sustainable practices. Stakeholders in this group also expressed interest for widespread electric vehicle adoption.

Industry stakeholders were asked how the freight industry could support Portlanders of color in other ways. One company proposed developing micro-delivery hubs to improve access to goods and produce in BIPOC neighborhoods. They emphasized the necessity to ensure communities of color had easy access to culturally appropriate goods and produce. They explained that this initiative would also provide BIPOC people with nearby job opportunities. Another company suggested that freight companies train their employees to enter higher paying jobs in the freight industry, explaining that companies with diverse fleets have the resources to train warehouse workers and drivers to operate different classes of vehicles, which would allow them to transition into better paying jobs within the company over time. Another company proposed that freight companies invest in communities of color through employee volunteerism or grant opportunities. They recommended implementing incentives to promote this strategy. Other stakeholders generally offered workforce development as a strategy to support Portlanders of color.

## 7. Vision and Next Steps

### 7.1 Vision

Policy makers and community leaders wished to see 2040Freight implement progressive strategies that promote equity, human health, and environmental health. Industry leaders hoped 2040Freight would promote economic prosperity and develop a safe transportation system.

Both stakeholder groups outlined what they hoped the 2040Freight Plan would accomplish. Several industry stakeholders hoped 2040Freight would provide educational opportunities that informed Portland residents about freight operations. Others wished to see heightened appreciation for freight industry employees. Many stakeholders wished to see a cut-off date for diesel use in Portland. A number of stakeholders from both groups want the 2040Freight Plan to propose a comprehensive infrastructure for electric freight vehicles. Most industry stakeholders as well as some community leaders requested that the freight plan not impose additional fees onto shippers and carriers. They feared that additional costs would push freight companies out of Portland.

Policymakers and community leaders described a broader set of visions for the 2040Freight Plan. Most envisioned equity as a central component of 2040Freight. They wish to see BIPOC needs, experiences, and voices centered throughout the development and implementation of the Plan. Several proposed that the City work with community-based organizations and communities of color to realize this objective. They also recommended having the City ask communities of color how they would like to be involved. Many stakeholders wish to see the Plan mitigate the health impacts of air pollution and noise pollution on communities of color. Portland City Commissioner Jo Ann Hardesty expressed that 2040Freight should not perpetuate or promote additional harm to these communities. She explained that the Plan would be a failure if it caused harm to BIPOC Portlanders.

Policy makers and community leaders expected 2040Freight to significantly reduce carbon emissions in Portland. These stakeholders overall wished to see mutually-beneficial, yet aggressive goals and strategies

to reduce emissions, that are incrementally phased in. They advocated for regulations and incentives that improve air quality, promote electrification, and reverse the adverse impacts of climate change. Several stakeholders aspired for Portland to become a national leader in freight and climate mitigation.

Several policy makers and community leaders wished to see the Plan create vibrant spaces and streets that serve all communities. They hoped 2040Freight would enhance bicycle lanes, sidewalks, railroad crossings, and curbside management. These stakeholders also hope the Plan will provide education on freight and cultivate an appreciation for the freight industry.

Policy makers and community leaders wished to see 2040Freight promote economic prosperity. Several stakeholders noted interest for the Plan to point towards workforce training opportunities in the industry. Others said it would be helpful for the Plan to attract businesses to Portland and promote industry growth.

Many policy makers and community leaders expected 2040Freight to demonstrate a strong commitment to achieving its outcomes. They anticipate the Plan to have reasonable and achievable goals. For example, one industry stakeholder asked that the Plan identify several different performance attributes in our freight system (e.g., BTUs, tonnage moved, industry employees, emissions generated) between 2010, 2020, and 2040. Stakeholders also want the Plan to have specific policy directions and time frames for its recommendations. Several stakeholders wished to see 2040Freight policies carried out in phases. They explained that phasing the Plan's actions would allow companies time to adopt changes in the equipment they use, and for the City to implement new regulations and infrastructure, and help guarantee 2040Freight successfully achieves its desired outcomes.

Both groups were given the opportunity to share additional insights or recommendations they wished to contribute to the 2040Freight planning process. Some emphasized that freight companies need to achieve a 100% reduction in carbon emissions by 2030, not 2040, and advocated for developing zero emission zones in Portland. One recommendation was that PBOT carry out pilot projects as often as possible to test the efficacy of potential policies and strategies.

Policy makers and community leaders also offered additional insights and recommendations. Many stakeholders emphasized the need to prioritize safety throughout the plan. They voiced that developing a safe transportation system should be the primary objective of 2040Freight. Several proposed that the bicycle community and freight community work together to find mutually beneficial solutions for getting cars off of City streets. Stakeholders also recommended that 2040Freight reduce conflicts between freight networks and other transportation networks to enhance safety. One stakeholder emphasized the necessity for freight networks to support land use. Another stakeholder highlighted the importance of considering long term planning and resiliency throughout the Plan.

## 7.2 Future Contributions

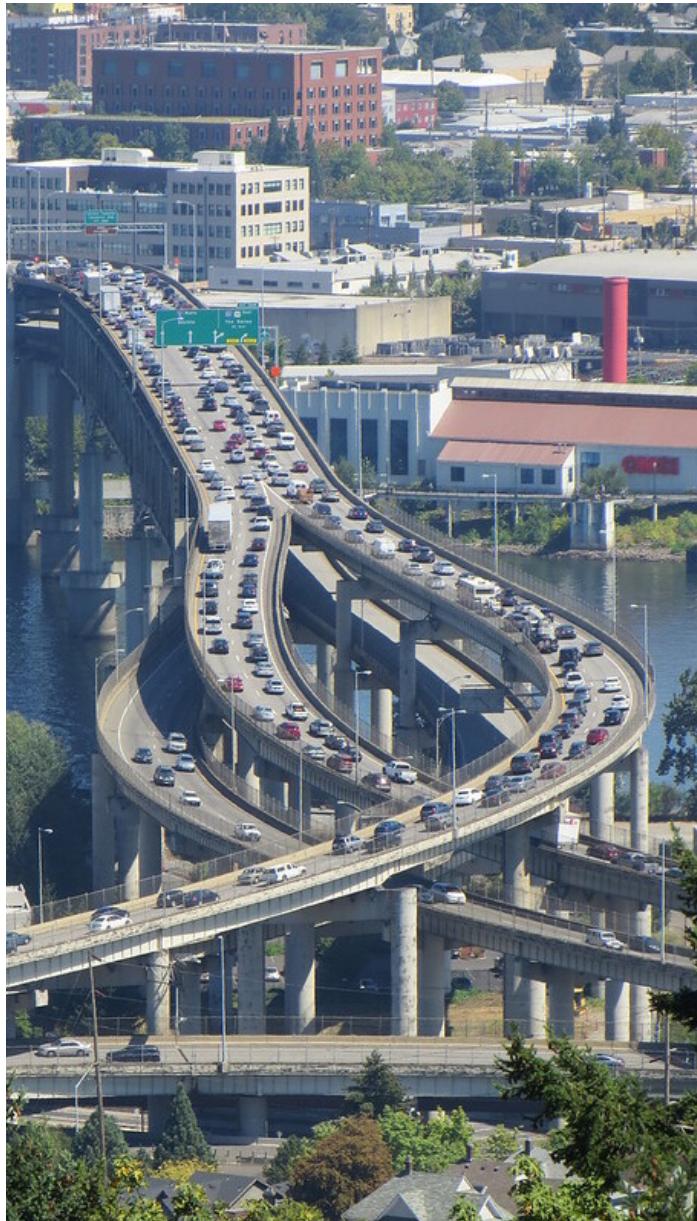
Most stakeholders wished to remain involved throughout the 2040Freight planning and implementation process. Many offered to support Plan development with outreach efforts. Others were interested in helping to guide the Plan.

The vast majority of policy makers and community leaders wished to have Portlanders of color and community-based organizations strongly involved in 2040Freight. Stakeholders recommended reaching out to OPAL Environmental Justice Oregon, the Black community of Portland, Coalition of Communities of Color, Guerreras Latinas, Leaders Become Legends, and the Getting There Together Coalition. Stakeholders wished for these communities and organizations to be engaged in focus groups, workshops, and symposiums for the freight plan.

# CONCLUSION:

Stakeholders offered various insights and recommendations for consideration in the 2040 Freight Plan. While policy makers and community leaders offered recommendations rooted in equity, human health, and environmental health, and i stakeholders largely spoke about operational impediments in the system and economic prosperity and operations, they also shared a number of insights.

- Both groups are interested in preventing truck-involved collisions and fixing safety hot spots. They supported using curbside management to enhance visibility and reduce traffic conflicts. They also favored enhancing street designs to improve safety for all Portlanders.
- They aspire to a freight system that's largely operated by zero-emission vehicles as a means to reduce carbon emissions in Portland and to reduce carrier operating costs. Stakeholders wished to see public charging infrastructure to support ZEV adoption. Both groups also supported developing incentives to promote ZEV adoption. They considered zero emission loading zones a viable incentive for encouraging companies to electrify their fleets.
- Stakeholders also advocated for improving public transportation to increase ridership and reduce single occupancy vehicle use.
- Both groups support enhancing Portland's bicycle infrastructure. They also wish to see PBOT reduce overlaps between freight networks and pedestrian and bicycle networks.



**Picture 5.1:** Ariel image of a freeway experiencing high traffic. Various freight trucks and passenger vehicles are visible. [Source: Unknown]

Lastly, stakeholders shared their visions for 2040 Freight. All stakeholders wished to see the plan succeed in achieving its goals. They recommended setting target dates for policies and phasing components of the plan to guarantee its success.