

TransPort / draft summary

TransPort, Subcommittee of Transportation Policy Alternatives Committee (TPAC)
Thursday June 14, 2023, 1:30 to 2:45 pm online

Attendees:

AJ O'Connor, Vice Chair	TriMet
Alison Tanaka	City of Portland
Basem Elazzabi	PSU/TREC
Bikram Raghubansh	City of Portland
Bruce Irvine, Ph.D.	PSU
Caleb Winter	Metro
Carl Olson	Clackamas County
Dennis Mitchell	DKS
Dustin Ross	ODOT
Jabra Kasho	City of Beaverton
Jana LaFrenier	City of Portland
Jim Gelhar	City of Gresham
John Fasana	Washington County
Kate Freitag, Chair	ODOT
Katherine Bell	ODOT
Mina Vu	PSU
Mike Burkhart	ODOT
Nick Fortey	FHWA
Pamela O'Brien	DKS
Patrick Marnell	Q-Free
Scott Turnoy	ODOT
Summer Blackhorse	Metro
Tammy Lee	PSU/TREC
Ted Leybold	Metro
Tina Nguyen	City of Beaverton
Will Farley	City of Lake Oswego
Yi-min Ha	Kittelson

Introductions and Announcements

Chair Kate Freitag called the meeting to order at 1:32 p.m. She asked the committee for announcements and project updates.

'round the Table Updates

- Caleb Winter gave an update on the Metro Carbon Reduction Program, a bipartisan infrastructure law for regional and state agencies. He noted that Metro had built scenarios for investments for the TriMet FX transit line for TV highway 82ND and updates for line 33 for next gen signal priority. He also discussed what \$3 million for TSMO and carbon reduction investments might look like.
- Caleb announced that the annual Traffic Incident (TIM) coalition meeting would be held on September 2023 and would include electric vehicle crash training.
- Bikram Raghubansh with the City of Portland noted that the Airport Way Intelligent Transportation Systems (ITS) was wrapping up. They will run a before and after study with DKS. Additionally, the Barbur Blvd ITS project installation will begin June 19. Bikram also stated that there was a chip issue that would impact 2E Plus boards for the ATC controller that will need to be replaced.
- Alison Tanaka with the City of Portland and Central Signal Systems announced that Q-Free had installed the latest version of Kinetic Signals. She hopes to have testing and configuration completed later this summer.
- Caleb announced that the ITS network had made changes to the ring for the Max Redline and noted that the port does not have to be on the network for the next three months. Further, The City of Gresham and across to I-205 have completed the ring. Further, they are still working to connect the City of Beaverton and the City of Hillsboro and Washington County are working to make changes. Caleb also noted that the next ITS quarterly Network meeting would be held the third week in July.
- Chair Kate Freitag with Oregon Department of Transportation (ODOT) announced that the I-5 Marquam to Terwilliger Project is moving into final adapt. The TV highway fiber project is moving forward, and they are working on the IGA to work with City of Beaverton. Finally, she noted that the ATCMTD evaluations are beginning to come in. Additionally, Scott Turnoy with ODOT gave an update on the Carbon reduction grants. He noted that Region 1 ODOT staff had submitted two grant applications, one focused on I-205 shoulder improvements for bus on shoulder, the other for a signal systems project for 62 signals in five corridors.
- AJ O'Connor with TriMet stated that they had received an extension to December 2024 for the transit signal priority (TSP) project. Additionally, they are working on the inter-governmental agreement (IGA) with PBOT, ODOT and the City of Gresham. AJ also noted that they are waiting to hear about the on/off study results from Kittelson. AJ noted that the approximate amount of fuel TriMet used on one route with TSP off was approximately 681 gallons more (a 14% fuel increase) than when TSP was on.
- Carl Olson with Clackamas County noted that the Freight ITS project will be completed this month and they are set to approve an IGA to include additional intersections. Additionally, Carl noted that they are waiting for the OC fiber and TSMO AT&T projects to kick off.
- Tina Nguyen with the City of Beaverton discussed the Washington Square Adaptive project, noting that they were short funds for construction by \$800 thousand. They are working with FHWA to appeal the project funding, which could push the project back to 2024.
- John Fasana With Washington County noted that their ITS projects are ongoing. The Durham project is mostly wrapped up and they will kick off their ATC controller project soon. Additionally, they implemented a county-wide Enterprise Access Management system that went live this week.

Skills Learned Building a Big Data Pipeline

Bruce Irvin and Mina Vu with Portland State University (PSU) gave a presentation on PSU Data Engineering course for graduate students. The quarterly course provides hands-on experience with the practical challenges of gathering, transporting, validating, transforming, loading, and ethically maintaining data for use in analysis by data scientists. Students use Google Cloud Platform, Python, Postgresql, Kafka, Pandas, Beautiful Soup, MapBox, JSON and other related technologies to build data pipelines to handle up to 15GB of GPS breadcrumb data and CAD/AVL stop data TriMet bus data.

The course provides short lectures and four-hour in class intensive coding and encourages independent and group collaboration through team projects to develop two data pipelines using TriMet bus data. Bruce gave an example of project architecture and visualizations developed by students and covered the tools used. He stated that transportation data is used by students because it is public, incremental, and familiar to them. Further, he discussed student challenges in writing SQL queries for visualization and navigating large data crashes. Additional skills include managing virtual machines, processing data in chunks, and automation of software system components. He noted that the course encourages students to be curious, yet skeptical and have fun with data. Bruce noted that they are beginning to plan for next year and are requesting new data and ideas for data analysis.

Caleb asked if they used API. Bruce stated that they had a data copy and transferred it to a server they built and controlled to hold data unique to breadcrumb and CAD. Caleb also asked who hired for big data needs. Bruce noted that government agencies and non-profit normally had a large amount of unorganized data that they need help with. Tammy Lee encouraged the committee to work with the capstone group, noting that students tend to be interested and engaged. She stated that students from PSE had helped develop a user interface to help visualize data gaps for PORTAL. Finally, Bruce asked the committee to please contact him for more information.

Considerations for TSMO Key Corridors

Caleb Provided a presentation about the Regional Mobility Policy update (RMPU) in consideration of TSMO Key corridors that will help build a complete transportation system. The system will allow operators to actively manage facilities and services and travelers will be able to utilize real-time data and tools offered through the system.

Caleb covered system completeness, which includes travel options and connectivity and discussed the potential application of the measure tested, including system planning for the future and amendments needed for plan regulation. He briefly covered the 2023 Regional Transportation Plan (RTP) System Management Map for actively managed throughways and select arterials, as well as the Mobility Corridor Concept with connected downtowns for good, services and jobs.

Caleb discussed RMPU workshops, which included input from ODOT, Washington, Clackamas, Multnomah Counties, and TriMet to help define what key TSMO corridors are and how to determine when they have a complete system. Workshops covered important region-wide data and technology such as fiber networks, evacuation, travel delay, crash data and weather impacts. He also discussed Throughways with managed lanes, metered ramping, bus on shoulder and (high occupancy vehicle) HOV or (high occupancy toll) HOT lanes. Further, he covered arterial functions such as freight, emergency and river crossing for specific areas round the region, as well as transit, fiber gaps and system development.

Caleb covered the TSMO system completeness draft that included operator automation, interoperable local systems, incident management, end-of-life assets assessment and the equitable benefits of a shared transportation system. He noted TSMO key corridors as areas with bi-directional movement across one or more jurisdictional boundaries that serves each primary modal function outlined in the RTP, and right of way and reduction of barriers to accessible active transportation movement. Further, Caleb covered additional questions around how TSMO system completeness factors into the local transportation system and key corridor questions around the RMPU. These include thresholds of parallel facilities, emergency routes for key TSMO corridors, which corridors are complete, criteria and circumstances for TSMO funding, bike/ped safety and what is considered a TSMO project.

Next steps for the TSMO RMPU are the Transportation Policy Alternatives committee workshop on July 12, and refining definitions, the map and matrix this summer. Finally, they will work with RMPU planners and consultants to finalize the 2023 RTP by fall of 2023. Caleb asked that committee members and attendees reach out to him with additional comments or suggestions.

Adjourn

There being no further business, Chair Freitag adjourned the meeting at 2:47 p.m. The next online meeting will be July 12, 2023.