



OMSC Freight Subcommittee Report-Out

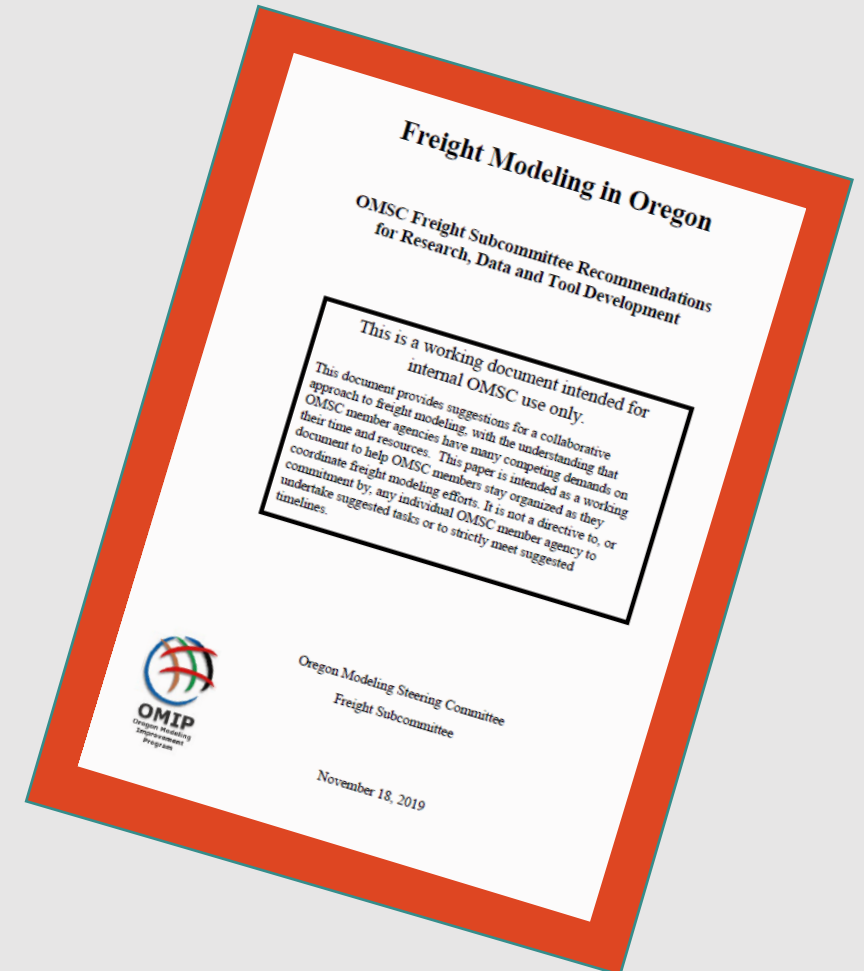
Prepared for the Oregon Modeling Users Group
May 7, 2020

Presented by Becky Knudson, ODOT



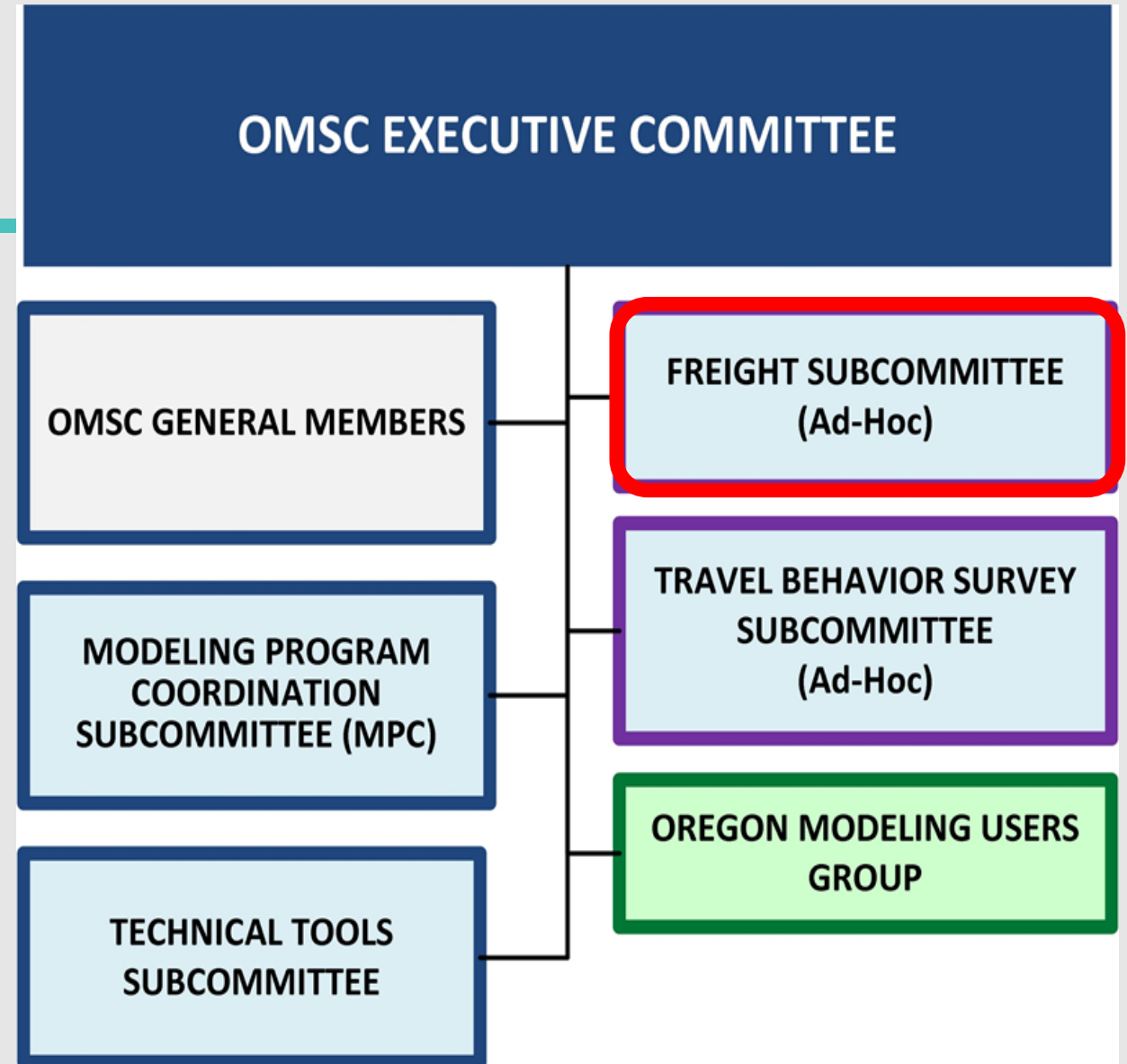
Overview

- Purpose
- Process
- Outcome



Freight Subcommittee

- ✓ Established Fall 2017
- ✓ Two-year Charter
- ✓ Completed late 2019



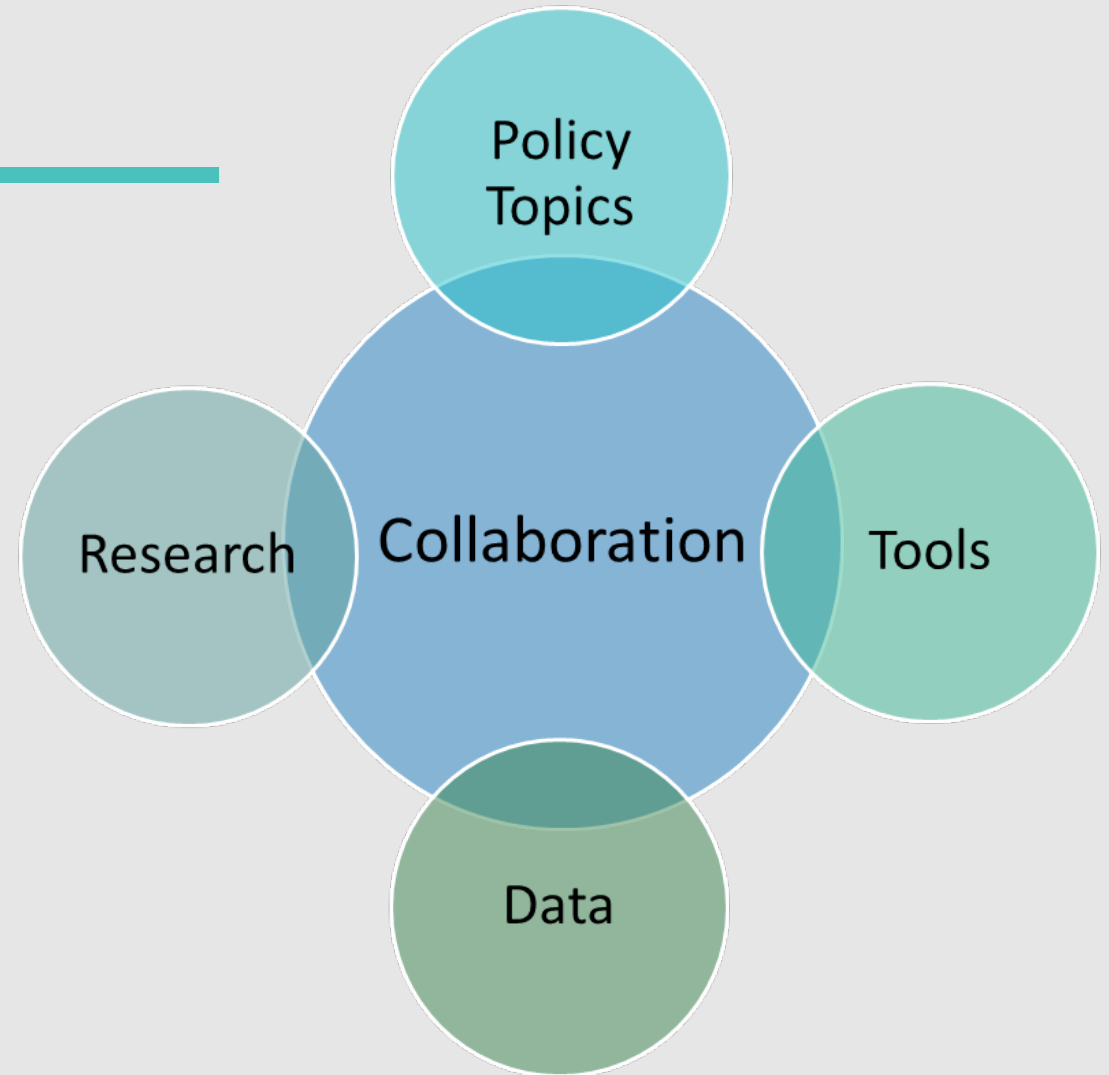


Broad and Diverse Membership



Committee Purpose

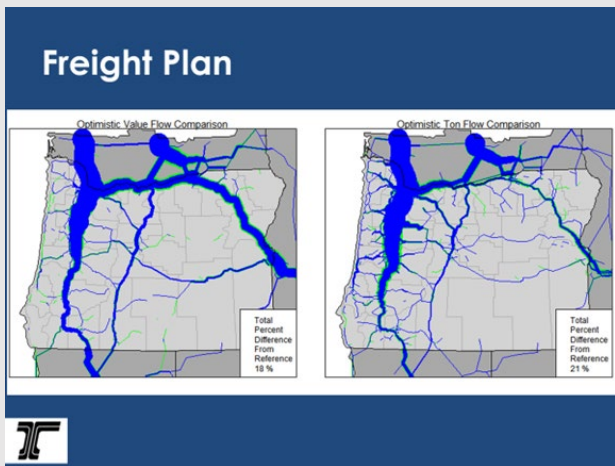
“Identify issues and provide strategic direction for actions supporting robust analytical capabilities in the field of freight planning.”



Charter available here:

<https://www.oregon.gov/odot/Planning/Documents/Freight%20Subcommittee%20Charter%202018-03-18.pdf>

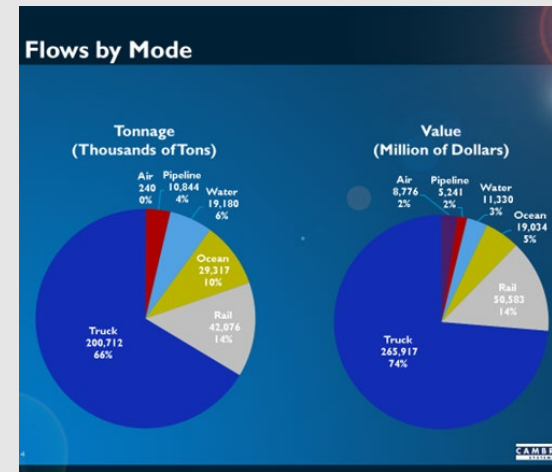
Approach



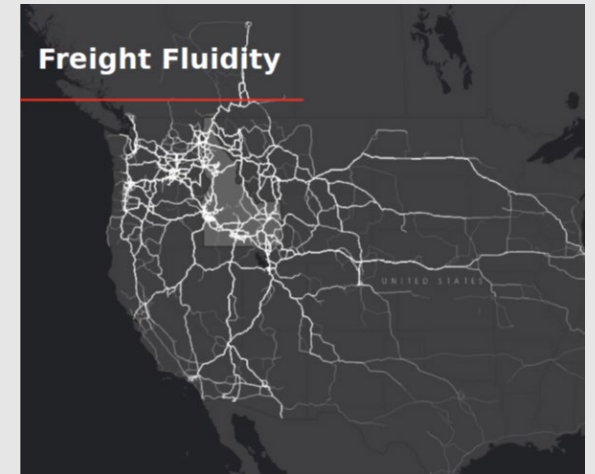
Policy Topics



Tools



Data



Research Needs

We can already do some things...



What We Can Do Now

- Simulate average annual commodity flows by county. Higher volume facilities (more populated counties) have greater detail
- Estimate transportation freight demand derived from economic activity
- Evaluate potential policy scenarios, changes to the transport system, future economic conditions, as well as other areas of future uncertainty using current tools
- FAF provides commodity flows for all modes: truck, rail, air, marine, and pipeline.

There is a lot we cannot do...



What We Cannot Do Now

- Accurately forecast impacts of change to individual industries and commodity movement.
- Model or forecast quickly changing logistic tactics used by firms today, especially related to e-commerce, warehouse logistics, transload facilities, and agricultural commodity sheds.
- Simulate impacts of truck logistics, such as truck parking and hours of service regulations.
- Simulate detailed freight behavioral sensitivity to the changing environment (e.g. operating costs, labor costs, regulations, congestion, and reliability).

Opportunities for collaboration...



Opportunities for OMSC Collaboration

Data

- Obtain real-time and other observed data related to freight by mode and commodities
- Develop methods to evaluate new and potential data sources that ensure quality and affordability

Opportunities for collaboration...



Opportunities for OMSC Collaboration

Tools

- Develop and implement incremental improvements to freight analysis tools and data
- Look for ways to make progress at an affordable price

Opportunities for collaboration...



Opportunities for OMSC Collaboration

Policy Analysis

- Partner with Oregon shippers and transportation providers to develop and prioritize solutions
- Support integration of freight into all aspects of transportation planning



Oregon Freight Advisory Committee



Motor Carrier Technical Advisory Committee

Stakeholder Outreach

Recommended Action Plan – Data Example

Item No.	Action	Lead Person or Organization	Partners/ Contributors	Approx. Timeline
DATA				
D.1	Inventory light commercial truck data sources and costs. Potential sources of data for medium trucks (26,000 lbs or less), including as many of these data points as possible: Commodity, weight, value, trip distance, O/D, seasonal patterns, logistic attributes, fuel type, fuel efficiency, miles of travel, fleet age.		DMV OTA	1-2 years
D.2	Inventory heavy commercial truck data sources and costs. Potential sources of data for heavy trucks (over 26,000 lbs), including as many of these data points as possible: Commodity, weight, value, truck configuration, trip distance, O/D, seasonal patterns, logistic attributes, fuel type, fuel efficiency, miles of travel, fleet age.		MCTD (Wilson) FHWA (Fortey)	1-2 years
D.3	Maintain commodity flow data. Look for ways to increase the level of commodity data detail.	ODOT (TPAU)	ODOT (Region 1) Port of Portland (POP)	Ongoing
D.4	Obtain access to beneficial data sets identified in action items D.1 and D.2. Develop agreements with data owners and cost-sharing agreements with OMSC member agencies as appropriate.	ODOT (TPAU)	EROAD ATRI HERE ITERIS	2-5 years

Recommended Action Plan – Research Example

RESEARCH				
R.1	Develop methods for the OMSC to use when evaluating the quality of new data sources.	ODOT (Research)		2-5 years
R.2	Monitor research efforts by the Texas A&M Transportation Institute (TTI) related to e-commerce. Scope out a list of research desires for Oregon to help create direction for TTI. (A key need is a model framework for simulating ecommerce logistics and delivery. Note that PSU is currently also leading a project looking at e-commerce growth and potential freight impacts.)	ODOT (Dunn)	POP (Drumm) FHWA (Fortey) PSU (Figliozi)	2-5 years
R.4	Research elasticities between truck and non-highway freight modes Identify factors impacting commodity flow via different modes, investigate and identify forces impacting mode choice by commodity and find the tipping point between modes.		FHWA (Fortey)	2-5 years
R.5	Develop a model framework for predicting shifts between freight modes under different scenarios.			5-8 years
R.6	Research (or identify an existing source of observed data) to better understand how trucks adjust their movements in response to highway travel impediments.			5-8 years
R.7	Research industry operational responses to new weight, length, height and load restrictions.		OTA	5-8 years

Questions?

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Freight Modeling in Oregon

OMSC Freight Subcommittee Recommendations
for Research, Data and Tool Development

This is a working document intended for
internal OMSC use only.

This document provides suggestions for a collaborative approach to freight modeling, with the understanding that OMSC member agencies have many competing demands on their time and resources. This paper is intended as a working document to help OMSC members stay organized as they coordinate freight modeling efforts. It is not a directive to, or commitment by, any individual OMSC member agency to undertake suggested tasks or to strictly meet suggested timelines.

Oregon Modeling Steering Committee
Freight Subcommittee

November 18, 2019

