



# **PORTLAND REGION WESTSIDE FREIGHT ACCESS & LOGISTICS ANALYSIS**

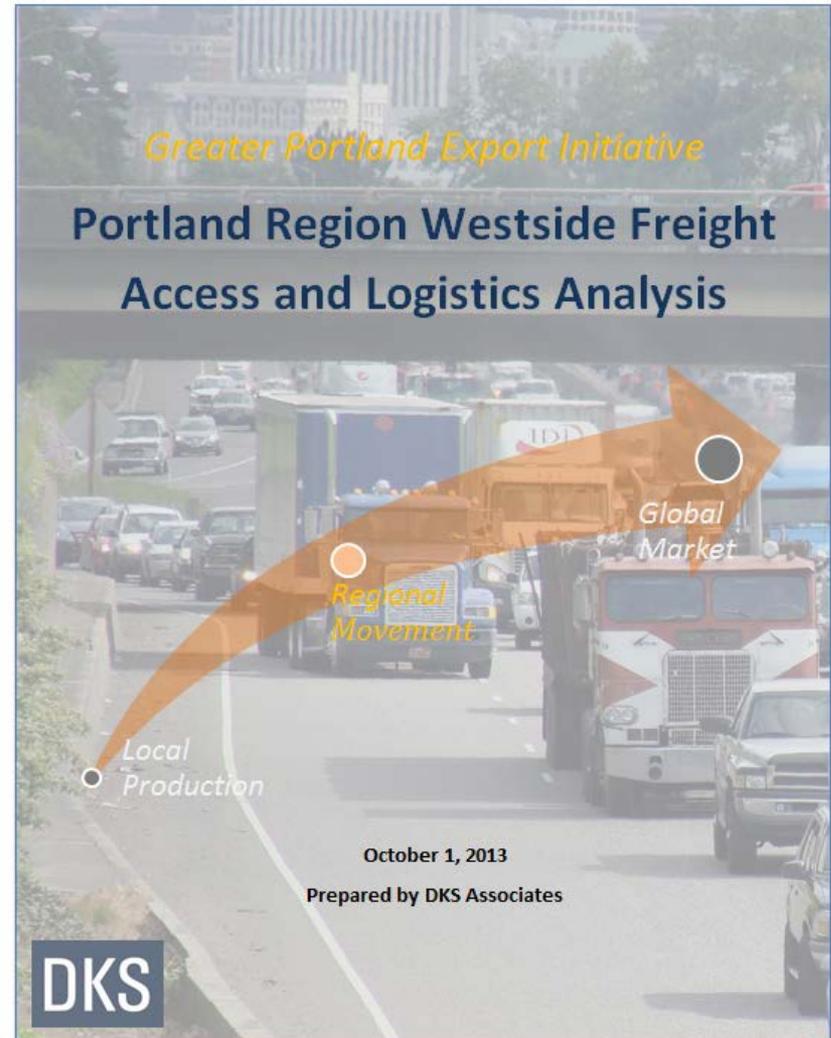
**Chris Maciejewski**

Transportation Research Board

January 2015

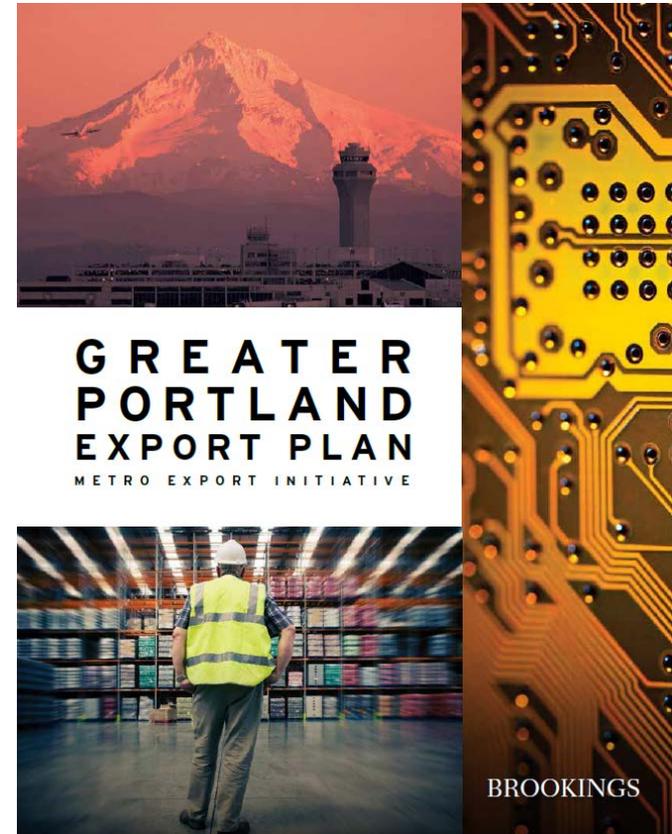
# Overview

- Greater Portland Export Initiative
- Role of Computer & Electronics (C&E) Sector
- Westside Freight Challenges
- Near-Term Transportation Strategies

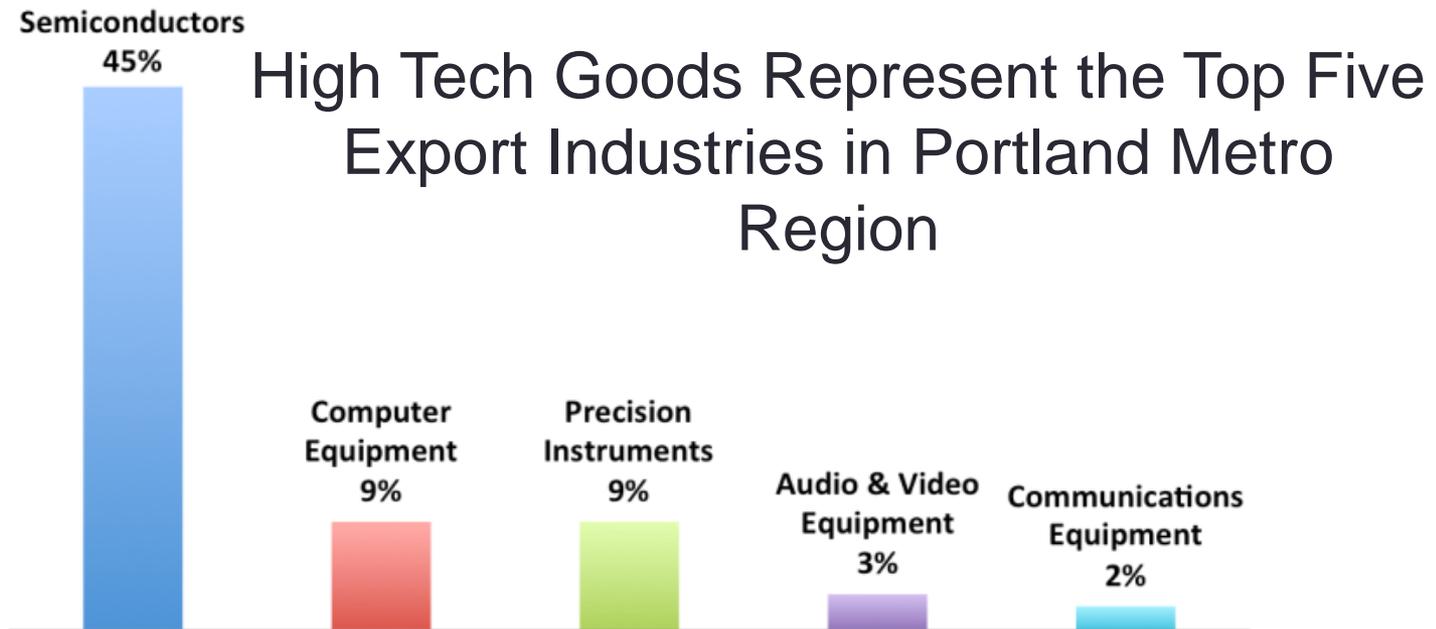


# Exports Drive the Portland Economy

- Greater Portland's Exports Supported 142,270 Jobs
- Nearly 1/5 of the Portland Metro Economy is Exports
- How Can We Double Exports in 5 years?

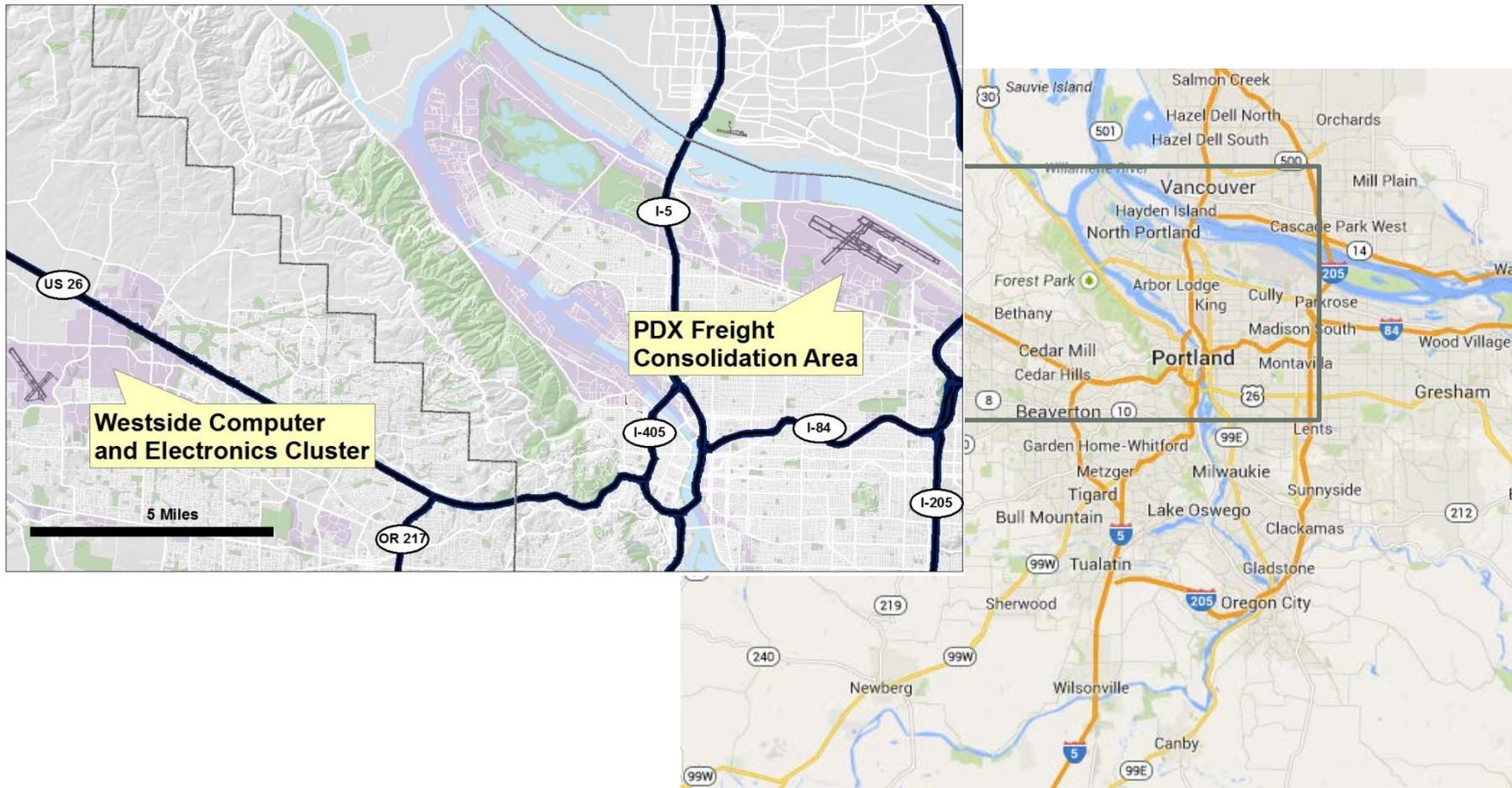


# Regional Export Goals & Industry Needs Drove Analysis



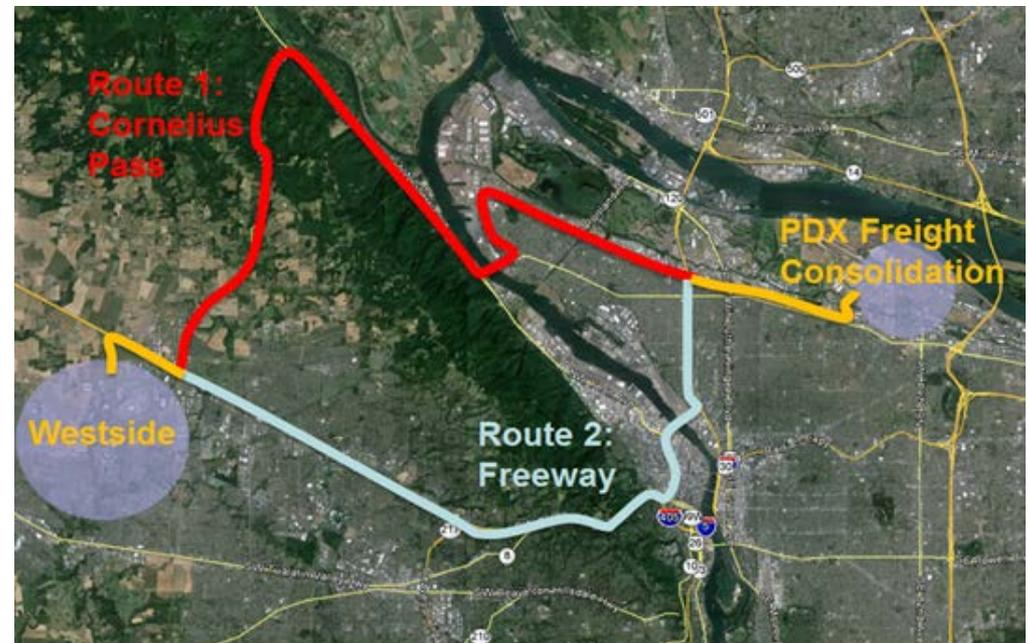
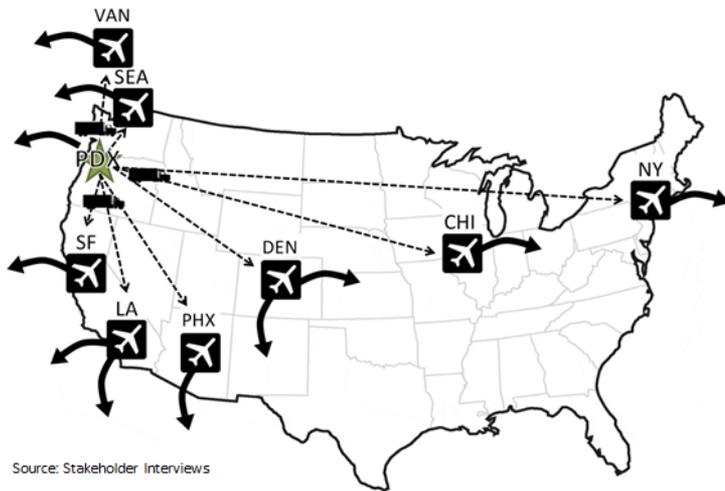
Source: Brookings Institution Export Nation 2013  
(<http://www.brookings.edu/research/interactives/export-nation>)

# C&E Manufacturing Location & Context



# Industry Interviews Provided Insight

- PDX Freight Consolidation Area is a Gateway for Air & Truck Transfers
- The Westside Relies Upon Two Primary Freight Routes to PDX

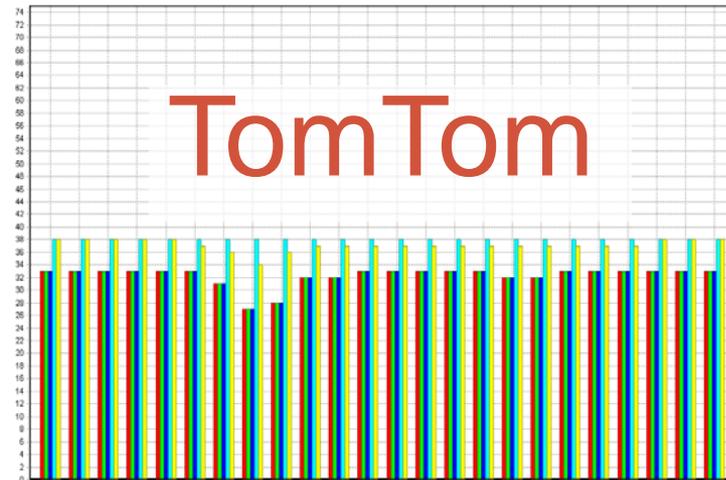


# Data & Measures to Address Freight Needs

- Identified in Interviews

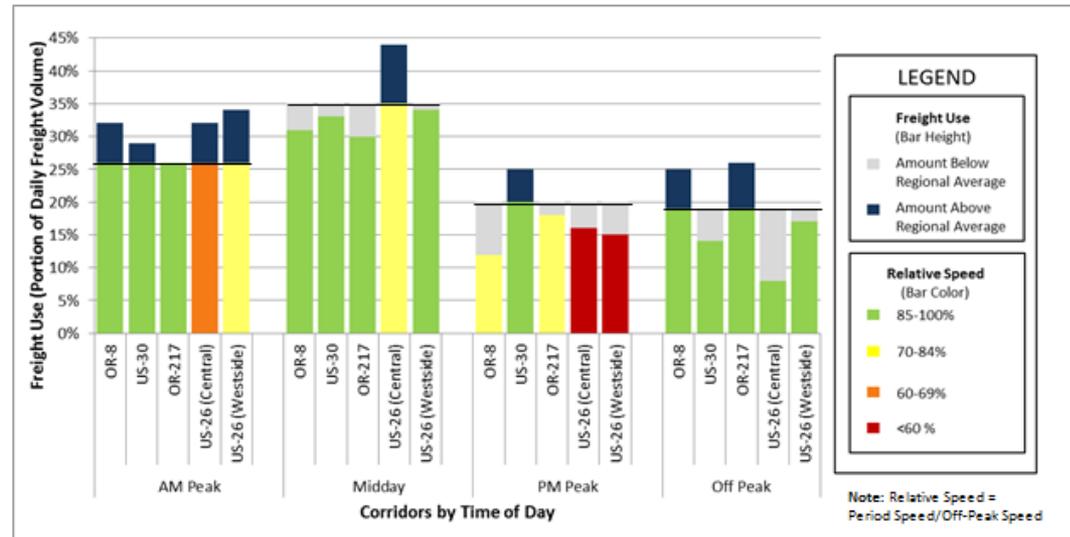
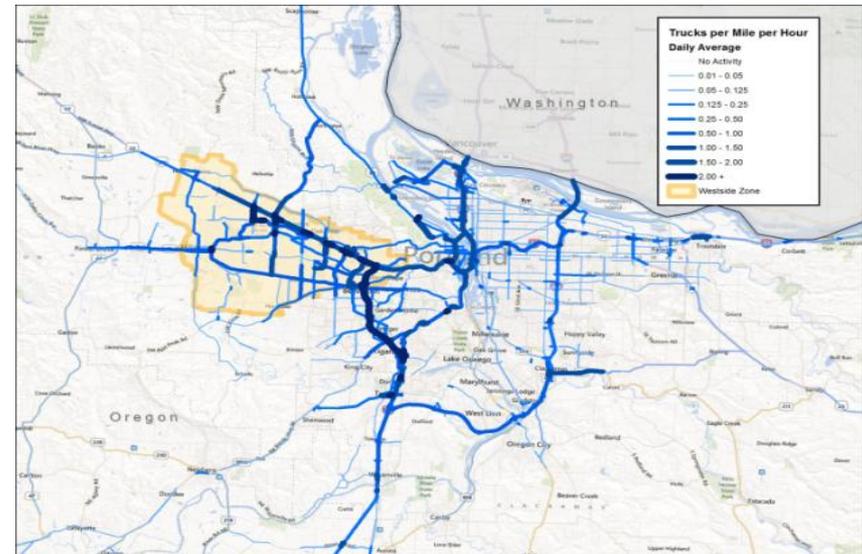
- Fastest Routing → **Average Travel Time**
- Most Direct / Optimal Proximity → **Distance, # Segments**
- Minimize System Variability → **TT Reliability (BI)**
- Improve System Redundancy → **New Connections**

# Sample of Data Reviewed for Corridors



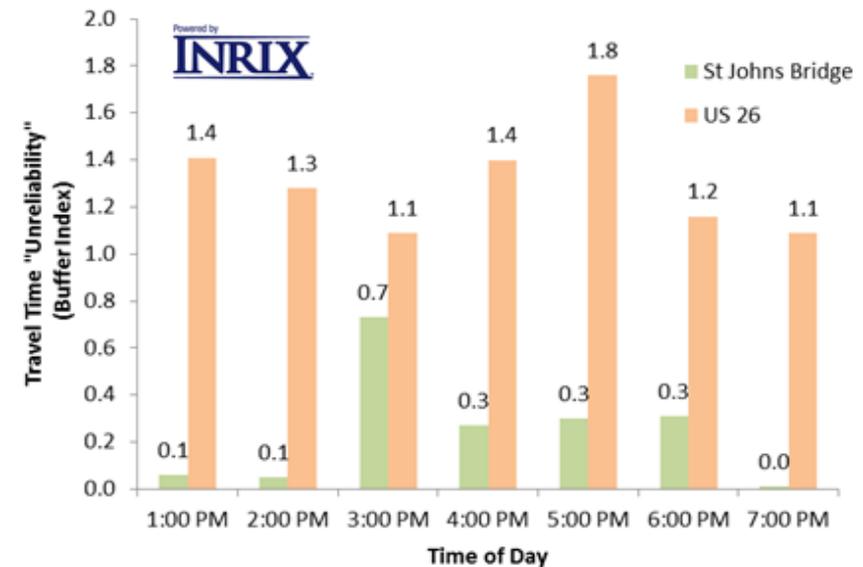
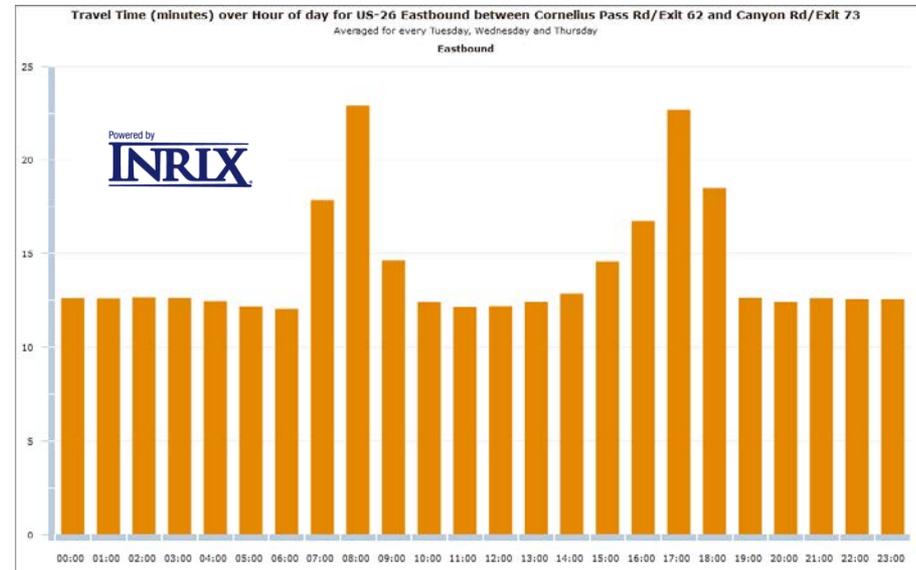
# ATRI Report Data

- Freight GPS Dataset
- Does Not Include Smaller Trucks
- Raw Data Not Available
- Report Summary Used



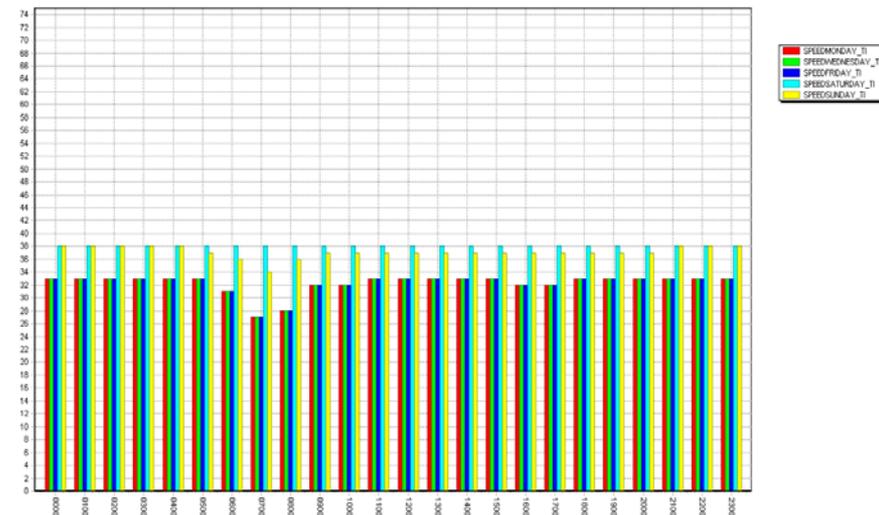
# INRIX Data

- Travel Time Data
  - Travel time profiles
  - Reliability metrics
- Web-based Tool
- Coverage for Major Segments
  - Did not include ramps



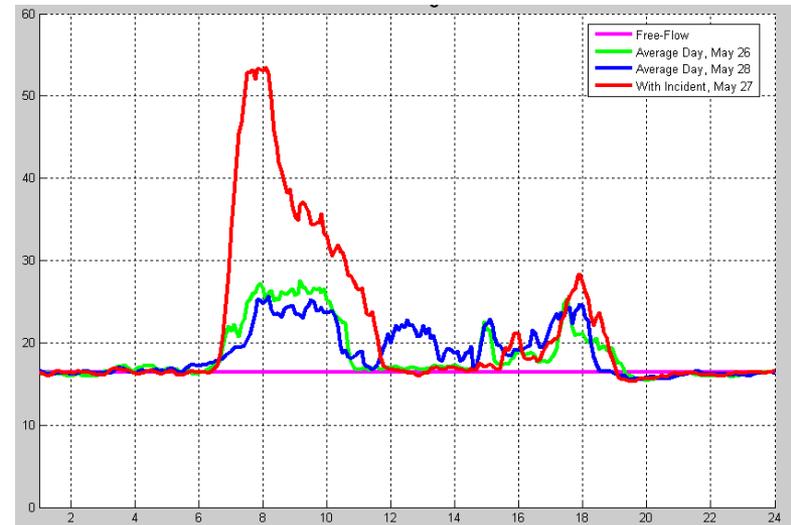
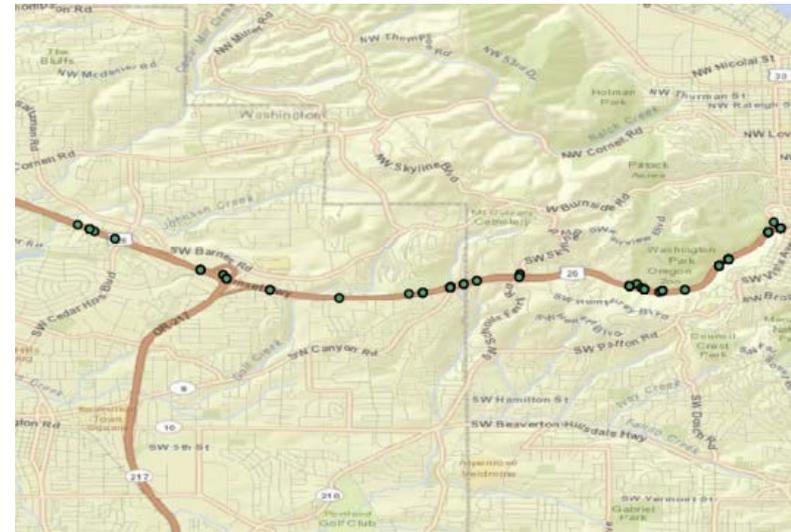
# TomTom Data

- ODOT Statewide Dataset
  - Historic profiles
- Significant Coverage, Good Segment Fidelity
  - Included ramps
- Data as Link Summary (profiles)
- Detail for our Application not Present (*meets other needs*)



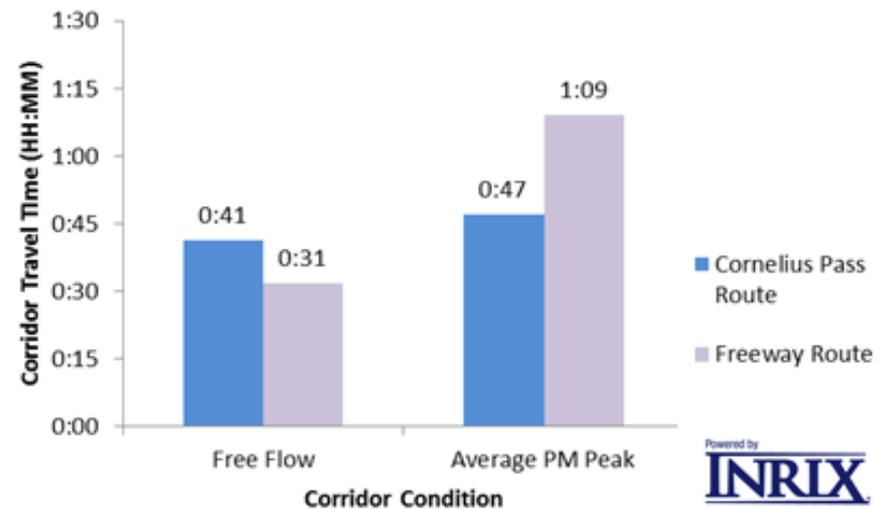
# Incident Data

- Event Summaries
  - Lanes closed
  - Duration
  
- Lane closure impacts almost every weekday



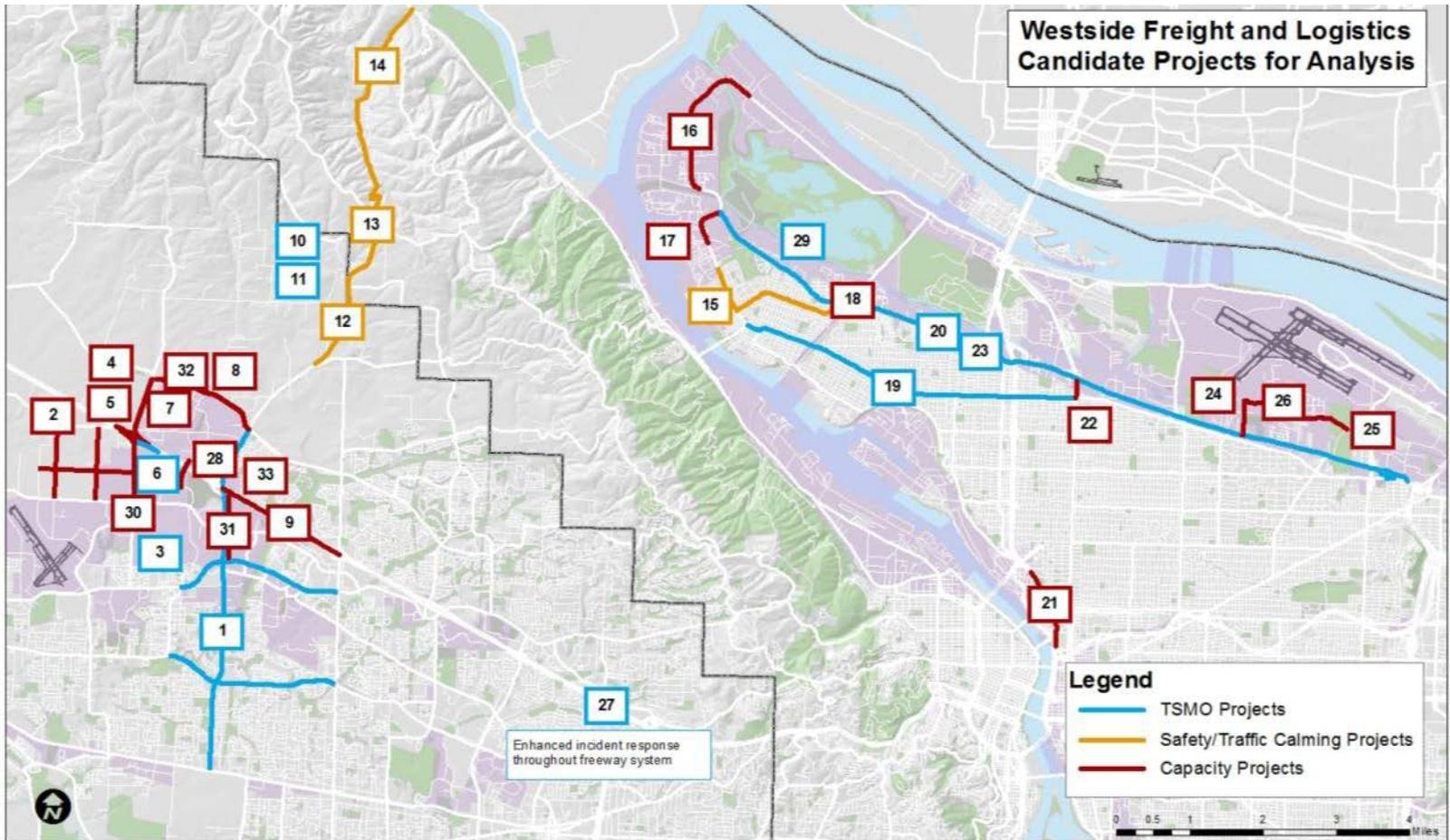
# Existing Routes Face Reliability Challenges Exacerbated By:

1. Limited Route Choice
2. US 26 Travel Time Reliability
3. I-5 Travel Time Reliability
4. US30/Columbia Connection
5. Freeway Access & Ramp Meters
6. Conditions on Cornelius Pass Road



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# Existing Project Proposals & New Ideas Screened For Near-Term Benefits to Freight Logistics



# 3 Strategies Best Meet the Specific Needs of Westside C&E Freight Movements to Consolidation Areas (PDX)

1. Enhanced Traveler Information
2. US 26 Truck Ramp Meter Bypass
3. Enhanced Freeway Incident Response

# Strategy 1: Enhanced Traveler Information

Provides More Reliable Travel Time by:

- Alerting Drivers of Incidents and Predicted Travel Times
- Reducing Non-Recurring Delay



# Strategy 2: US Truck Ramp Meter Bypass

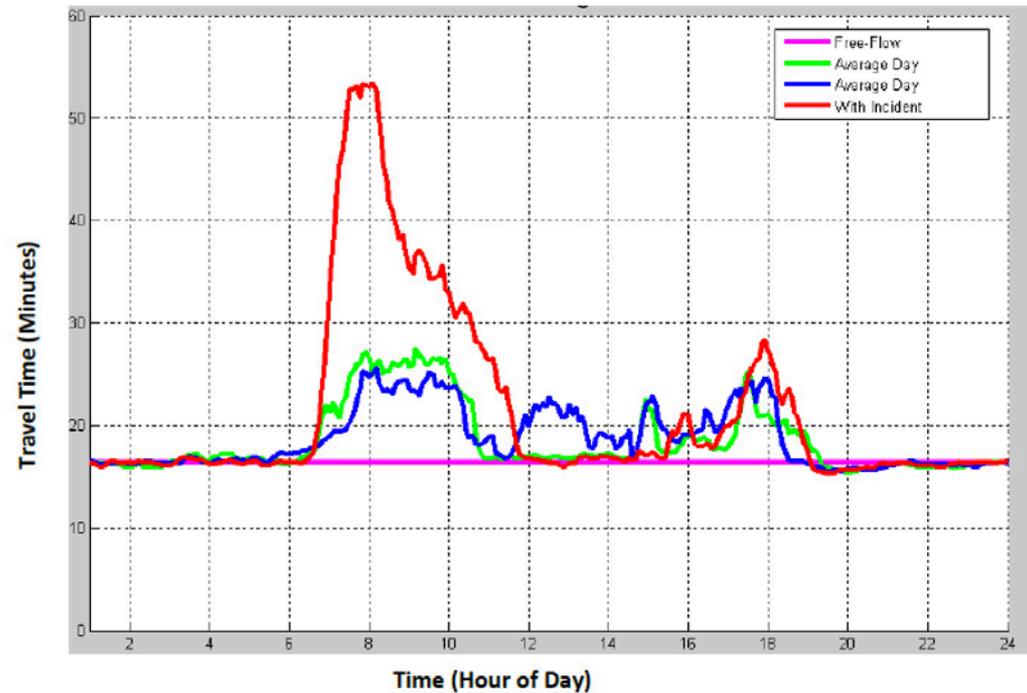
Potential to Reduce Queue-related Delay by 10-20 Minutes by Allowing Freight to Jump Queues



Source: Metropolitan Transportation Commission, <http://www.mtc.ca.gov>, viewed 1/11/15.

# Strategy 3: Enhanced Freeway Incident Response

Reduce Delays Due to Incidents



# Early Project Success!

## \$10.1M Tiger Grant Awarded to Washington County & ODOT for ITS projects

- VMS Signs
- Advisory Speed Signs
- Truck Signal Priority
- Active Traffic Signal Mgmt.
- System Performance Monitoring

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Home»ITS: TIGER grant bringing \$10.1 million in ITS upgrades to Washington County, Ore.

### ITS: TIGER grant bringing \$10.1 million in ITS upgrades to Washington County, Ore.

If successful, county could build up to \$30 million worth of ITS infrastructure

TRAFFIC MANAGEMENT | NEWS | HILLSBORO TRIBUNE | SEPTEMBER 23, 2014

A \$10.1 million TIGER grant announced in mid-September will help launch eight intelligent transportation system (ITS) projects in Washington County, Ore., over the next two years, according to state and local officials. If these measures prove successful, the county could pursue as many as 60 additional ITS projects in the future.

The main goal of the first eight projects—part of the TIGER grant awarded to the Washington County Department of Land Use and Transportation and the Oregon Department of Transportation (ODOT)—is to improve traffic flow in the region, which serves the Portland airport and a number of major computer and electronics employers.

Measures that will be constructed include:

- Active traffic signal management;
- Transit and truck signal priority improvements;
- Bicycle detection systems; and
- New signal timing and ITS system performance monitoring.

Real-time traffic data will be displayed on a series of new variable message boards, along with suggested speed limits depending on the level of congestion.

Washington County officials are investing in ITS improvements due to major growth in the area both now and in the future. The total cost of improvements could reach \$30 million if the county continues to pursue the technology.

Source: Roads&Bridges Magazine, [www.roadbridges.com](http://www.roadbridges.com), viewed 1/9/15.

# Acknowledgements

 <p>BROOKINGS</p>	 <p>Hillsboro OREGON</p>	 <p>CITY OF PORTLAND, OREGON 1851</p>	 <p>U.S. Department of Transportation Federal Highway Administration</p>
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 <p>MULTNOMAH COUNTY</p>	 <p>Oregon Department of Transportation</p>	 <p>One Northwest Consulting, LLC <small>Economics - Land use - Transportation - Business - Finance</small></p>	 <p>business oregon <small>where business grows</small></p>
 <p>PORT OF PORTLAND</p>	 <p>Port of Vancouver USA</p>	 <p>CITY OF PORTLAND BUREAU OF TRANSPORTATION</p>	 <p>PORTLAND BUSINESS ALLIANCE <small>Commerce - Community - Prosperity</small></p>
 <p>QUINN THOMAS</p>	 <p>TRIMET</p>	 <p>WASHINGTON COUNTY OREGON</p>	



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# Questions & Discussion

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