



*Pacific NorthWest  
Economic Region*

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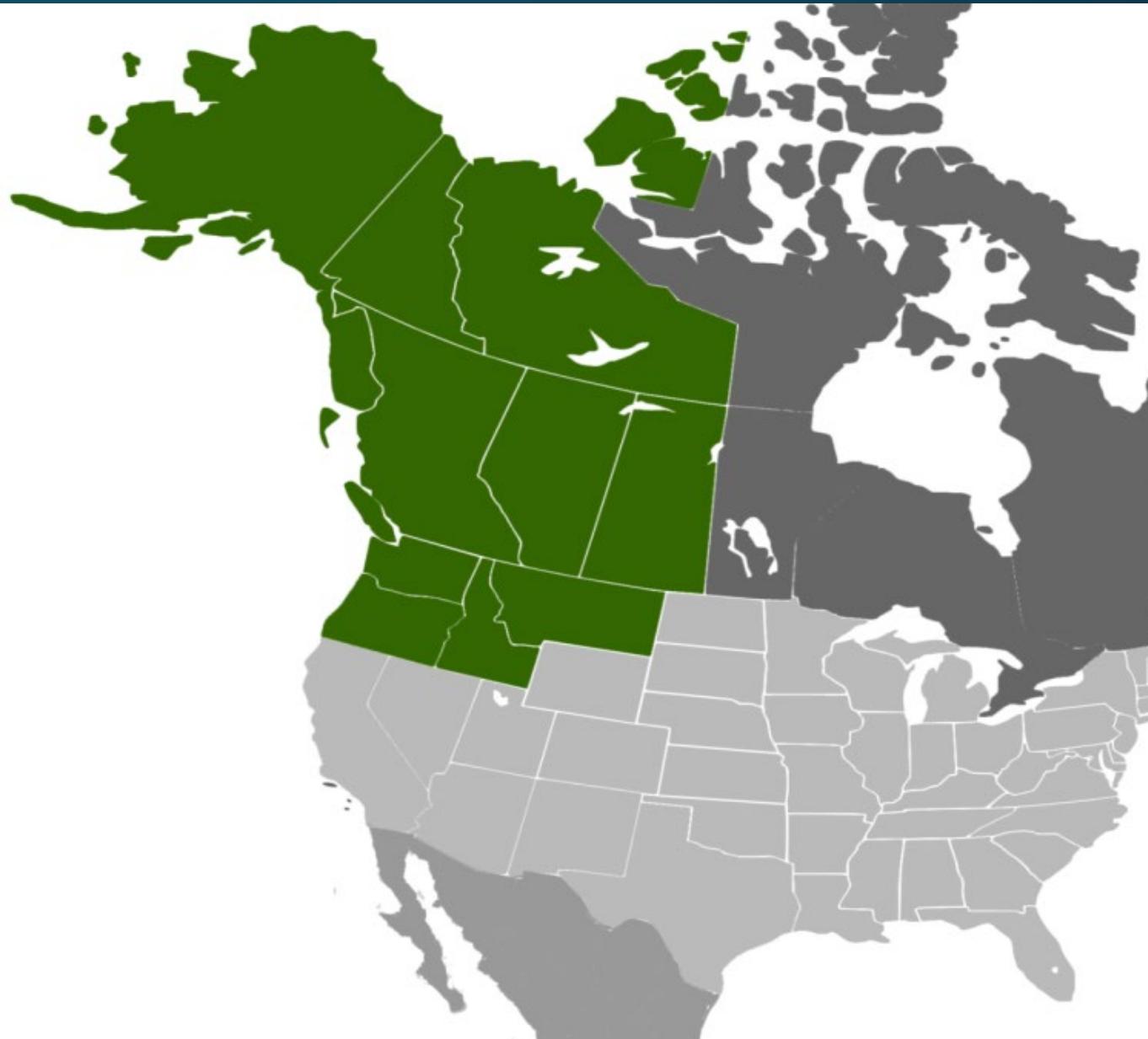
# *Transportation & Infrastructure Briefing*



## *Pacific NorthWest Economic Region*

PNWER is a statutory, public-private partnership chartered in 1991 by the U.S. States of Alaska, Washington, Idaho, Montana, Oregon and the Canadian Provinces of British Columbia , Alberta, Saskatchewan and the Yukon and Northwest Territories.

The Region has a GDP of over \$1 Trillion, with a population of 24.4 Million people, making it the 13<sup>th</sup> Largest Economy in the world



# Transportation and Infrastructure Working Group

Dedicated to improving the infrastructure of our major corridors and gateways, with a special interest on border infrastructure.

*Co-chairs: Senator Chuck Winder, Idaho and Bruce Agnew, Director, Cascadia Center*





16 million people  
\$655 billion GDP  
21<sup>st</sup> largest economy

## CASCADIA INNOVATION CORRIDOR

Cascadia Rail Corridor • Vancouver, BC to Eugene, Oregon

photo by Greg Vaughn

photo by NASA

# Key Issues

**Market Access & Rail Infrastructure**

**Cascadia Innovation Corridor – High Speed Rail & Harbor to Harbour Air Service**

**Oil Train Safety & Safety in the Salish Sea**

**Autonomous, Connected, Electric, Shared Vehicles**

**Infrastructure Finance**

**Permit Reform**

**Truck Size & Weight Harmonization**



PNWER has long worked with our partners to establish Harbour to Harbor floatplane service between Seattle and Vancouver, BC to advance the Cascadia Innovation Corridor. *(Consul General Brandon Lee and Microsoft COO Brad Smith pictured above took part in the announcement of the new service)*



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*Automated, Electric, Connected,  
Shared Vehicles*

# Automated, Electric, Connected, Shared Vehicles

- ACES: Rapid technological advances with implications on driver workforce, electric grid, productivity, and safety
- PNWER facilitates information – sharing between innovators, traditional private sector, and legislators
- We are working to prepare the NW to be an ACES leader and leverage the economic benefits of new tech

# Autonomous, Connected Electric Shared Vehicle Session

2018 Annual Summit | Spokane | TVW Video

## Is the public ready for an ACES world?

- Moderated by **Steve Marshall**, City of Bellevue
- **Kyle Quinn**, PACCAR Chief Technology Officer - Truck Platooning and Automation
- **Rep. Jake Fey**, Washington Legislature
- **Reema Griffith**, Executive Director, Washington State Transportation Commission - Washington's new Autonomous Vehicle advisory committee
- **Jeff Marker**, Freight Program Manager, Idaho, Transportation Department
- **Joel Fisher**, Business Development Manager, Verizon Smart Communities

## The “E” in ACES – Transportation Electrification can boost our economies while enhancing our environment

- **Matthew Hepner**, Certified Electrical Workers of WA (IBEW)
- **Jeff Allen**, Executive Director, Forth
- **Jeffrey Phillips**, Managing Director, Dawson Strategic
- **Rendall Farley**, Avista

# Industry Inflection Point



## Autonomous



## Connected



## Electric

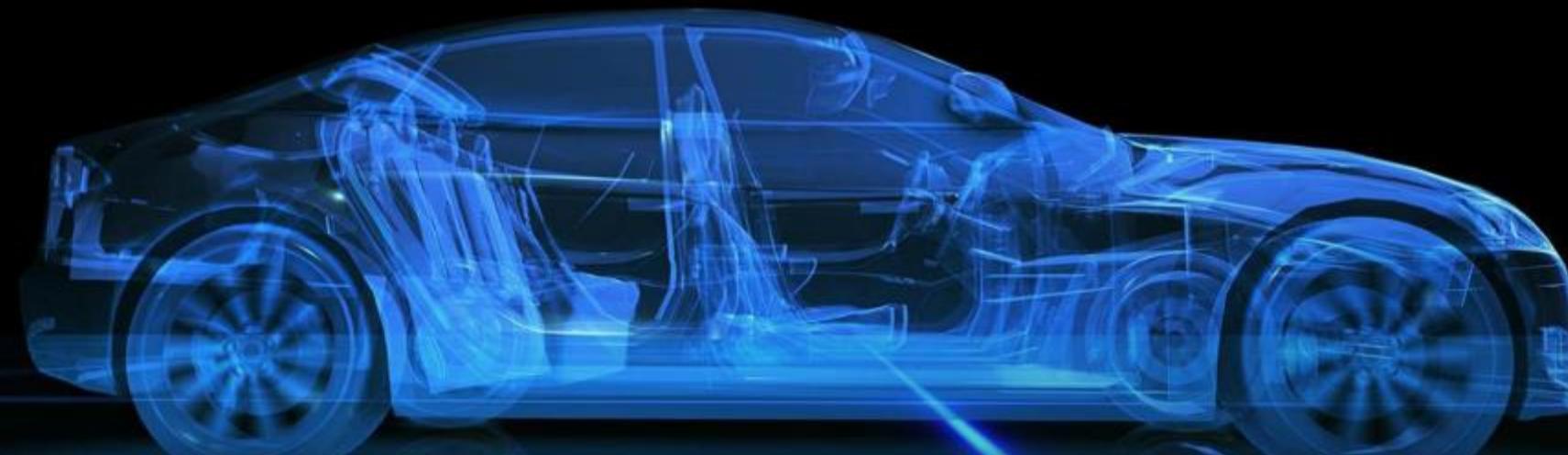


## Shared



# The Coming Flood of Data - Autonomous Vehicles

Cameras	Radar	LiDAR	GPS	Sonar
~20-40M BYTES PER SECOND	~10-100K BYTES PER SECOND	~10-70M BYTES PER SECOND	~50K BYTES PER SECOND	~10-100K BYTES PER SECOND



Total: 4,000G bytes per day

# PACCAR Level 4 Demonstrator



- ACES technology has significant implications for the trucking industry.
- Improve safety through lane departure technology, platooning, and automatic braking.

# Emerging Autonomous Applications

Social Acceptance and Economic Feasibility

**Platooning**



**Closed Course  
Autonomy**



**On-Highway  
Autonomy**

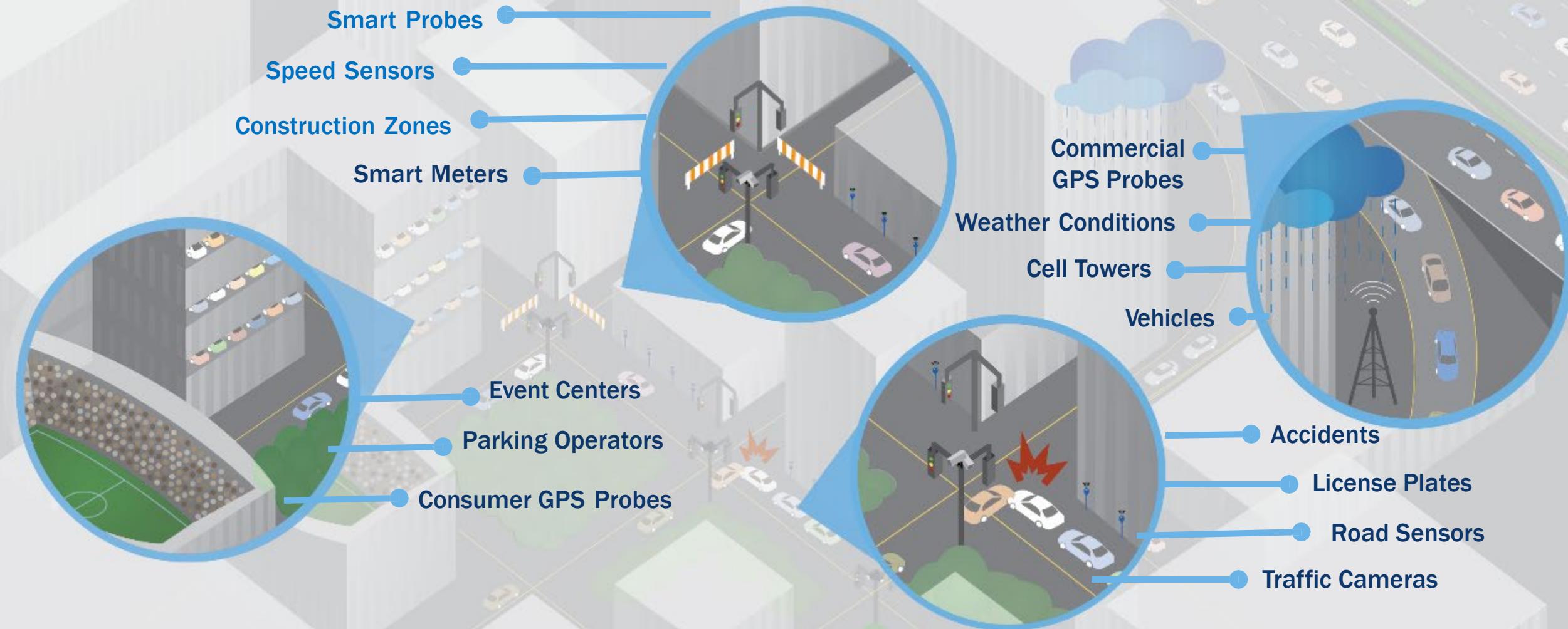


**Urban  
Autonomy**



# Data Mining the Smart City

We leverage a connected network of IoT sensors, devices, cars and drivers



# Benefits of ACES

- ✓ Reduced Congestion
- ✓ Increased Safety
- ✓ Lower Cost of Transportation
- ✓ More Convenient
- ✓ More Environmentally Friendly
- ✓ More Accessible



**INRIX**

# How do we get there?

- Platooning trucks (PACCAR) on interstates in WA
- Extend sales tax exemption for electric vehicle purchase
- State support for super charging stations on state corridors and authorization of public utility districts to invest in electrification infrastructure
- Tale of Two Regions: a research project with PNWER and Urbanova comparing the progress of Greater Spokane and central Puget Sound towards electrification, shared mobility (transit/TNC's), smart cities/5G, and autonomous vehicle testing.

# PNWER's Role

- 2018 Spokane Summit: Forum with Idaho Transportation Department, PACCAR, Forth Mobility Network, Avista
- 2019 Saskatoon Summit in July:
  - AL/CAN/Hwy 97 Corridor: Collaboration on smart cities, electrification, highway maintenance, fiber optics and buried energy transmission lines.
- 2019 Seattle Economic Leadership Forum in November:
  - Smart cities
  - Autonomous, Electric Vehicles
  - Infrastructure





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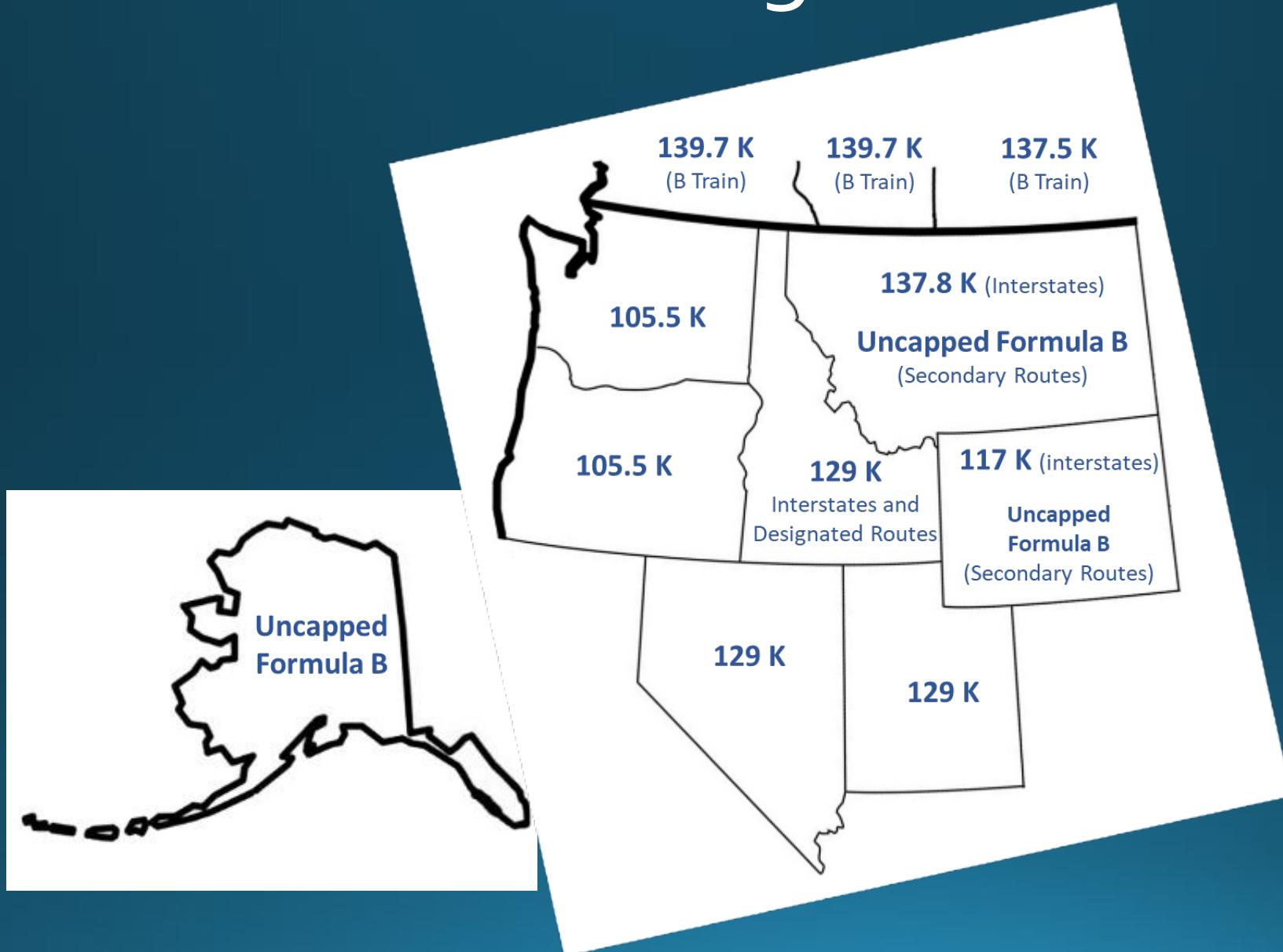
# *Truck Size and Weights*

# Producer Economics

- Many commodities from the PNWER region are both fungible and priced on a national or world market.
- Producer pays the freight cost either directly or it is deducted from the proceeds.

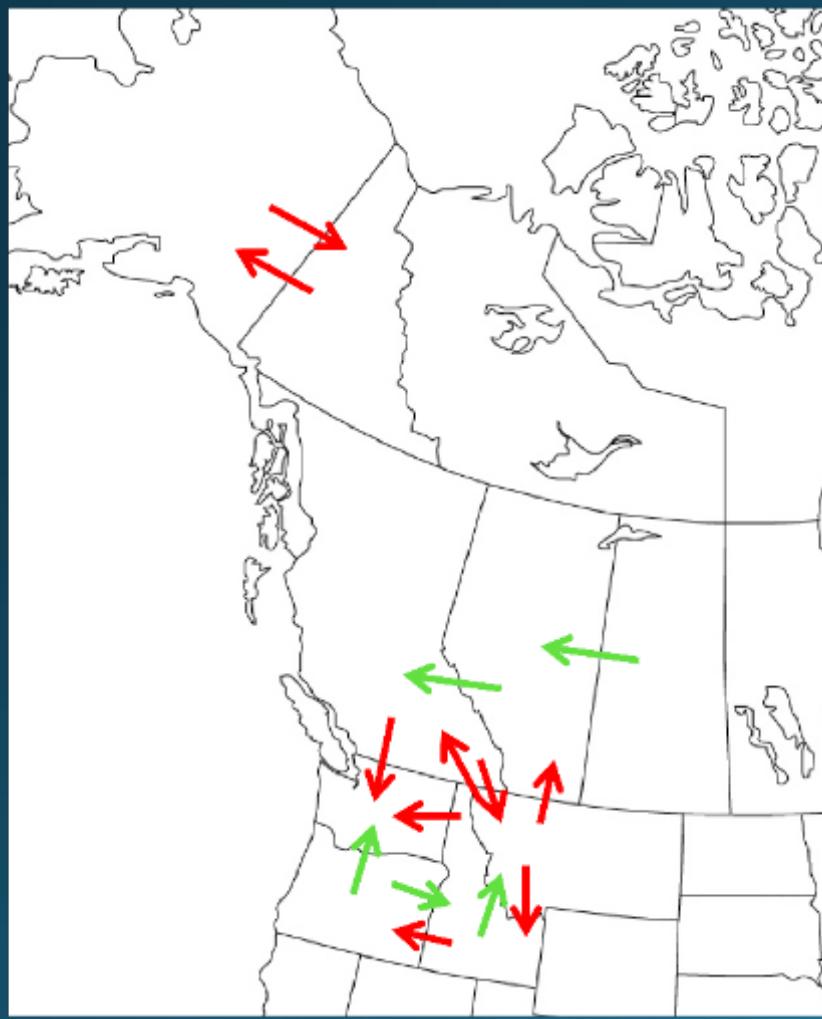


# Truck Size and Weight Differences



# PNWER Barriers

- Not OK to transit
- OK to transit



Differing truck size and weight measures is a significant drag on the potential profits of commodity producers.

This slide addresses the jurisdiction's most efficient vehicles only.

# Recommendations

- Identify high volume destinations and appropriate routes for harmonization opportunities.
- Address “other” harmonization issues...flags, escorts, lights, signs.



## Next Steps

- Convene discussions and information sharing with NW Transportation Committee Chairs
- Engage private sector
- Seek federal support
- Present at 2019 Western Association of State Highway and Transportation Officials (WASHTO) Annual Conference.



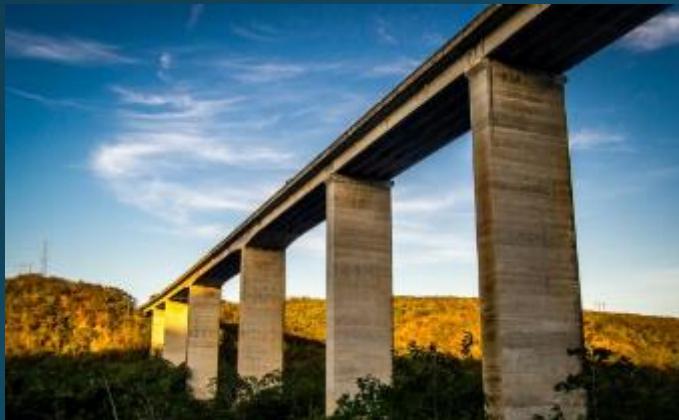
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# *Market Access and Rail Infrastructure*

# PNWER Supports

Sandpoint Junction Connector as part of the Great Northern Corridor  
Enhanced investments in Asia Pacific Gateway and Trade Corridor  
Five-state PNWER Rail Caucus to focus on Passenger and Freight Issues





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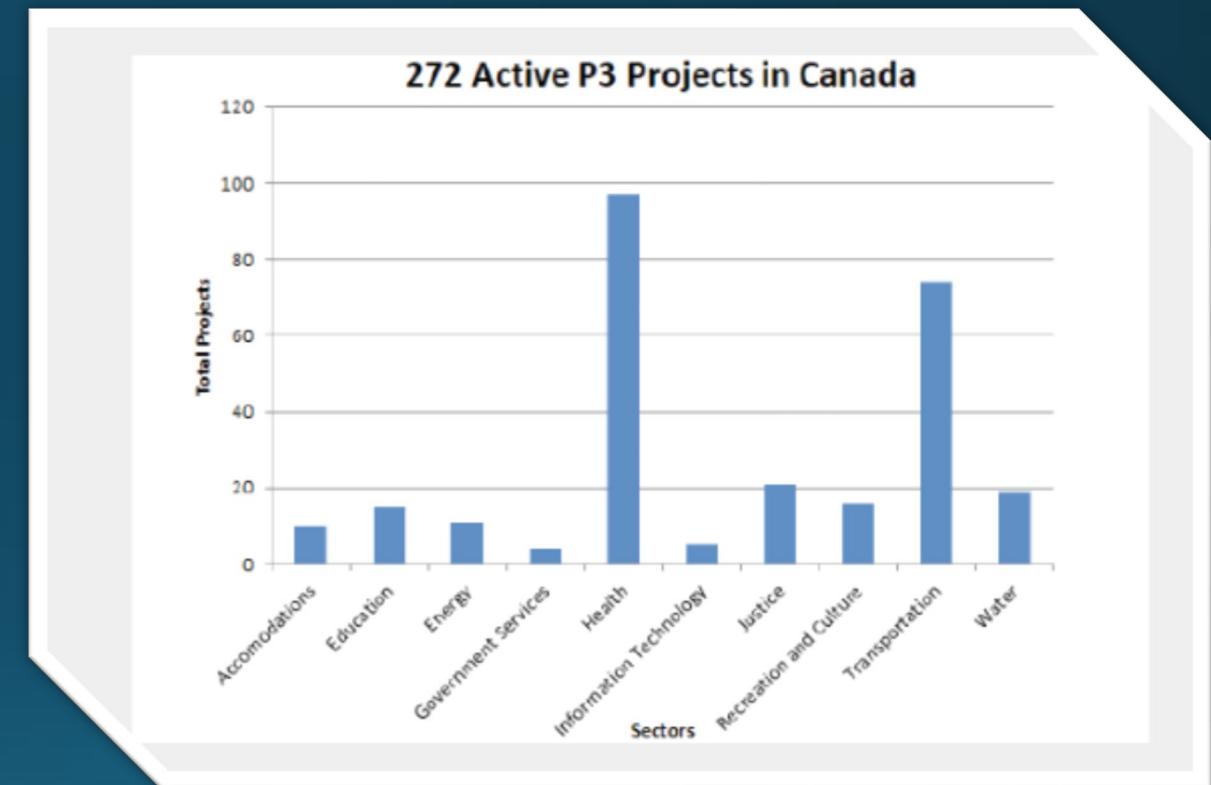
*Innovative Infrastructure Finance*

# Innovative Infrastructure Finance

Traditional funding mechanisms for large-scale infrastructure and transportation projects are challenged by the absence of resources to explore innovative procurement methods.

The ***Innovative Infrastructure Finance Taskforce*** promotes best practices for public-private infrastructure financing

- Public private partnerships in Canada are applied through common contract law and have been expanded to 280 infrastructure projects (\$90 Billion) nationwide.
- Canadian experts in public-private partnerships share lessons learned with U.S. legislators and other stakeholders at PNWER conferences, webinars and tours of infrastructure networks.
  - Example: Canada Line connecting downtown Vancouver to Vancouver BC Airport



# Federal Engagement

FAST Act of 2015 – Sec. 1441 authorized \$12 Million competitive grant program for **Regional Infrastructure Accelerator Demonstration Program**

PNWER is currently working with Congressional leadership to secure funding appropriation for Demonstration Program and any future infrastructure programs address rural areas and small states infrastructure needs.

## Demonstration Center Objectives:

- Assist states and municipalities in accessing existing funding sources
- Provide a 'Center of Excellence' to enable states to assess potential of innovative financing for proposed projects
- Support the alignment of multi-state regulations for cross border infrastructure projects
- Support the streamlining of regulatory environment
- Promote bi-lateral, multi-state and multi-use corridors

# Regional Infrastructure Accelerator Demonstration Program

Sample projects –

- Rail (freight and passenger)
- Highway
- Utilities
- Telecommunications
- Water
- Unmanned Aerial Vehicles (drones)



# Become Involved in PNWER



Pacific NorthWest Economic Region Annual Summit  
July 21-25, 2019 - Saskatoon, SK

**Pacific NorthWest Economic Region**  
29th Annual Summit | Saskatoon, Saskatchewan | July 21-25, 2019

*The premier bi-national conference promoting regional collaboration*

Delta Hotels Bessborough  
[www.pnwer.org/2019summit](http://www.pnwer.org/2019summit)



**Pacific NorthWest Economic Region**  
Economic Leadership Forum  
Seattle, WA | November 20-23, 2019

PNWER is the premier, bi-national, non-partisan, public/private partnership in North America.

Questions:

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