

# Industry Impacts of Urban Area Freight Access

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FHWA Talking Freight Webinar

# I-NUF Session: Freight Impacts on Economic Development, the Environment and Society

Five presentations on:

- Assessing public investment in freight mobility
- Environmental justice analysis for state freight plans and freight corridor studies
- Logistics led economic development: Logistics Activity Center (LAC) investments
- Development opportunities and challenges from a new intermodal rail hub facility
- Industry impacts of urban freight access

# Reduced Urban Freight Access Impacts

- Increased Delay and Reduced Reliability for all Traffic
- Operations Overtime Cost
  - Additional drivers / rescue equipment
  - Inventory costs
- Extended Operating Hours
  - Shifts and cut-off times
- Dispersion of DC / Warehousing and Operation Locations
- Diversion of Shipments to Facilities Outside the Urban Area
- Increased Outsourcing of Transportation Services

Trucks



Cars



Transit



Facility Access



# Reduced Freight Market Access Impacts

## *Trends Due to Urban Congestion & Operating Constraints*

- More freight-dependent businesses operating at night
  - Higher density of operations in “off-off-peak”
  - Issues of driver safety and regulatory limits on hours of service
- Delivery receiving hours still limit distribution “off-peak” options, sometimes by regulation
- Businesses pay for loss of productivity as fewer “turns” for regional runs possible
- Staggered shifts nearing implementation limits

# Coping with Access Limitations

## *Emerging Issues with Cost Implications*

- **Increasingly complex logistics practices**
  - Medium sized businesses, especially trade-oriented, heavily reliant
  - Omni-channel demands for eCommerce distribution/delivery
  - Specialization in DC/warehousing technology, functions and sizes
- **Shift to 3<sup>rd</sup> party logistics and for-hire services**
  - Limiting private operations to core services, unless you are Amazon
  - Reduce operating risks of capital tie-up and labor costs
  - Smaller firms are greater users for both domestic and international
- **Focus on exports and out-of-region markets**
  - Increases role of urban transportation freight infrastructure
  - More extensive use of larger trade gateway ports / airports
- **Hours of Service / ELDs limit driver deployment**

# Congestion-Limited Access Reduces Business and a City's Competitiveness

Reduced access reduces the advantages of a location by raising costs or equivalently, **reducing the size of the customer and supplier (including workforce) markets for the same cost / time.**

Factors in

- ✓ Business Retention
- ✓ Expansion
- ✓ Attraction

Freight Delivery Routes & Markets

Warehousing and Distribution Logistics

Labor Markets: Cost & Skill Availability

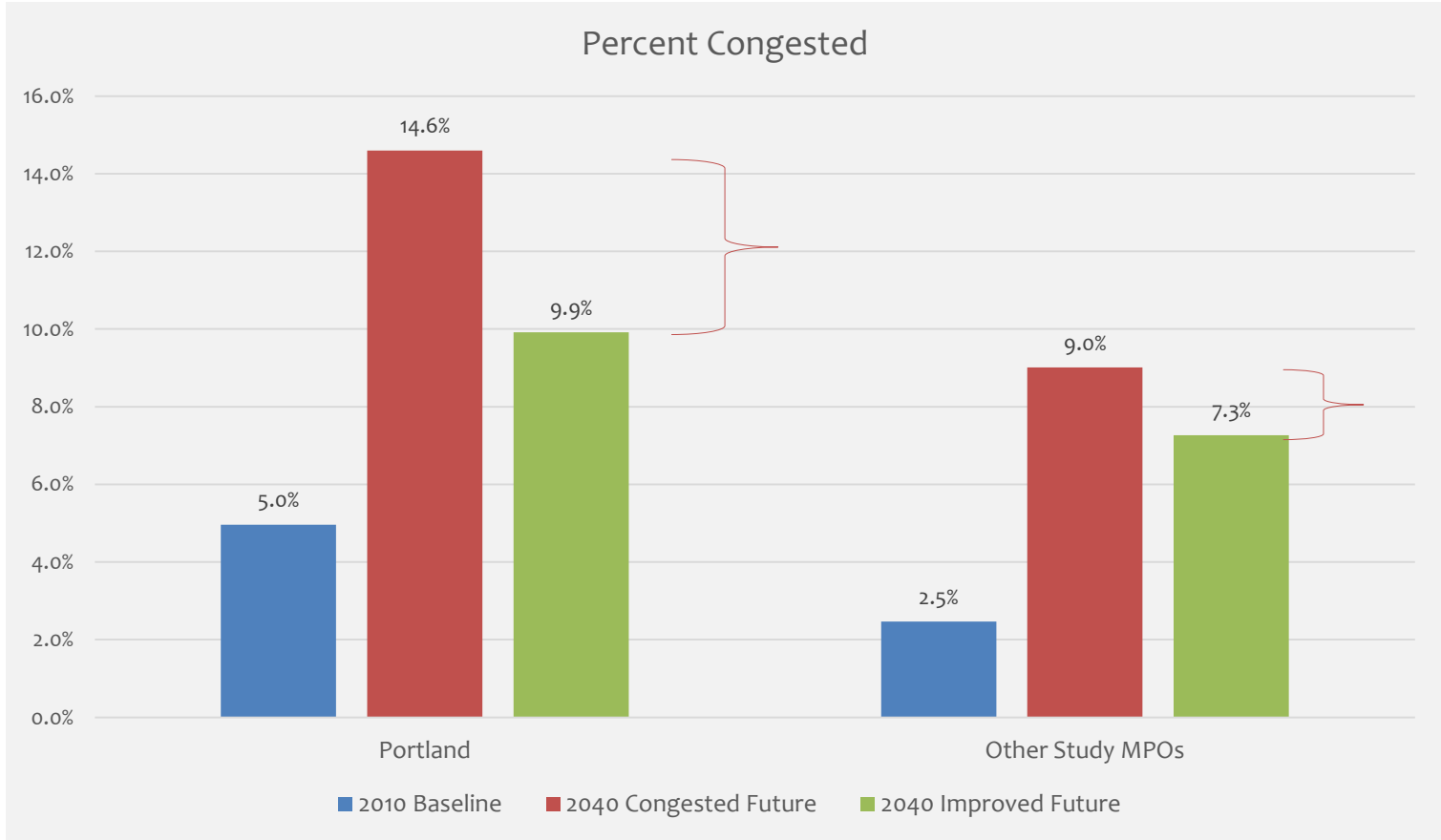
Land and Operations Costs

Quality of Life

# Example Economic Impact of Potential Transportation Access Improvement Investments

# Network Improvements Reduce Impacts

## Example Improvement vs. Baseline by 2040



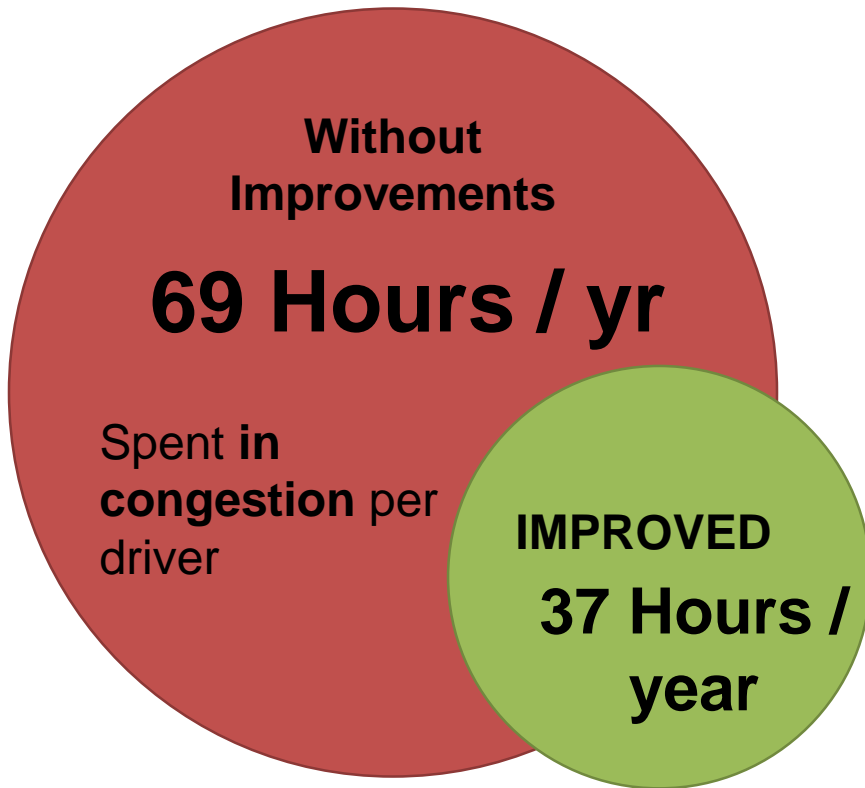
Source: Portland Metro; Oregon DOT

Indicates improvements from investment in Improved Future Scenario in 2040



# Comparing the Impacts of Improvements

## EXAMPLE PORTLAND IMPROVEMENT IMPACTS



**TRAVEL DEMAND  
MODELED REDUCTION IN  
ANNUAL DRIVER TIME IN  
THE URBAN AREA SPENT  
ON ROADS WITH A  
VOLUME / CAPACITY  
RATIO OF 0.9 OR  
GREATER**

# Economic Benefits of Improved Access: Value of Time and Reliability Basis

Economic Benefits, Annually, by year 2040

*Benefits = Value Added + Travel Time & Safety + Health (emissions)*

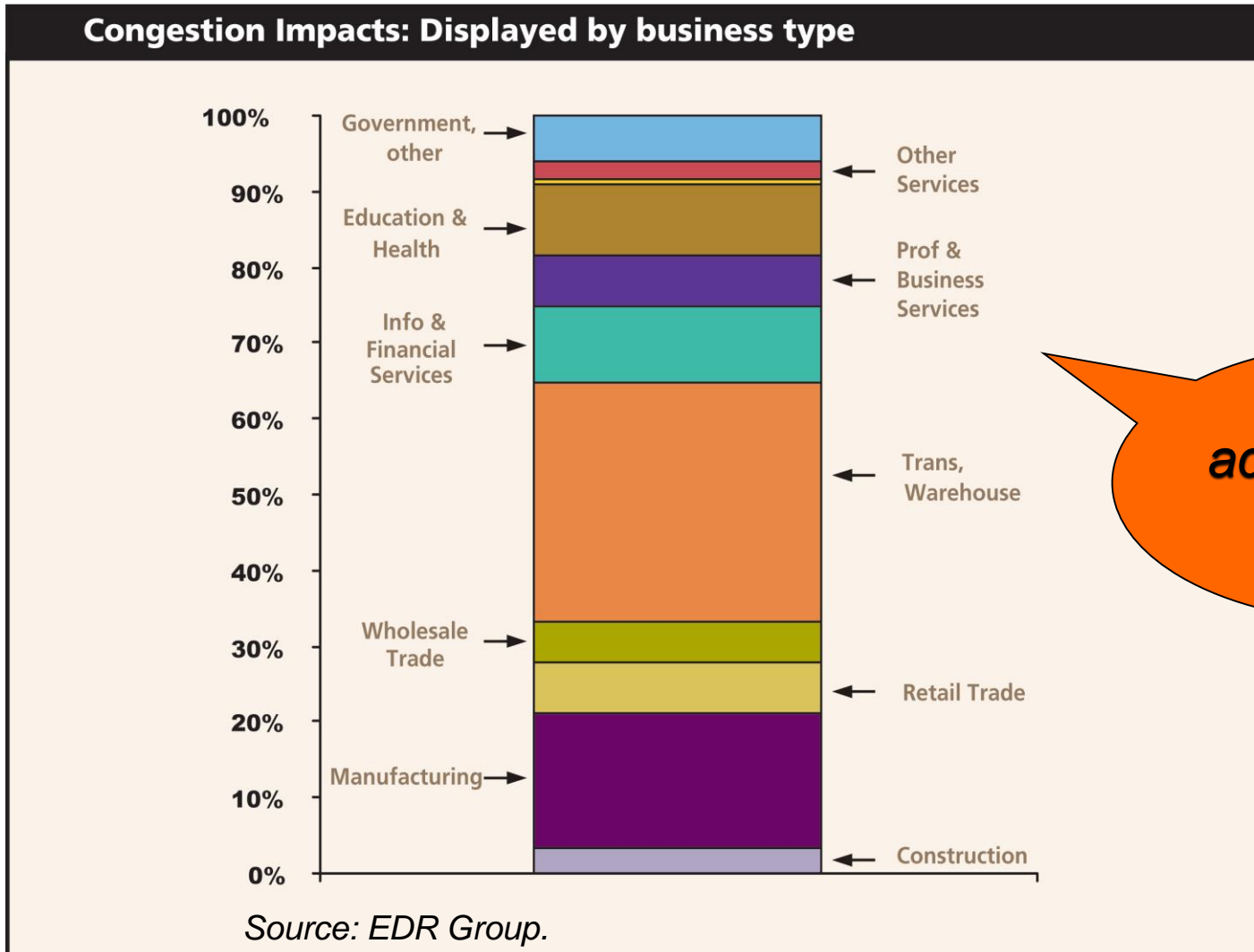
	Portland Area
Benefits*	\$822 Million
Jobs**	5,897

\* Includes **GRP, traveler non-monetary benefits, and societal benefits**

\*\* Change to average annual employment level

Source: EDR Group modeled using TREDIS

# Access Impacts by Industry



**Congestion access impacts affect all industries**

# Thank You

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