

# E-Commerce and Our Streets

Presented by: Joseph Poirier

May 7, 2019



# AGENDA

Freight in the U.S.

Modes of Transport

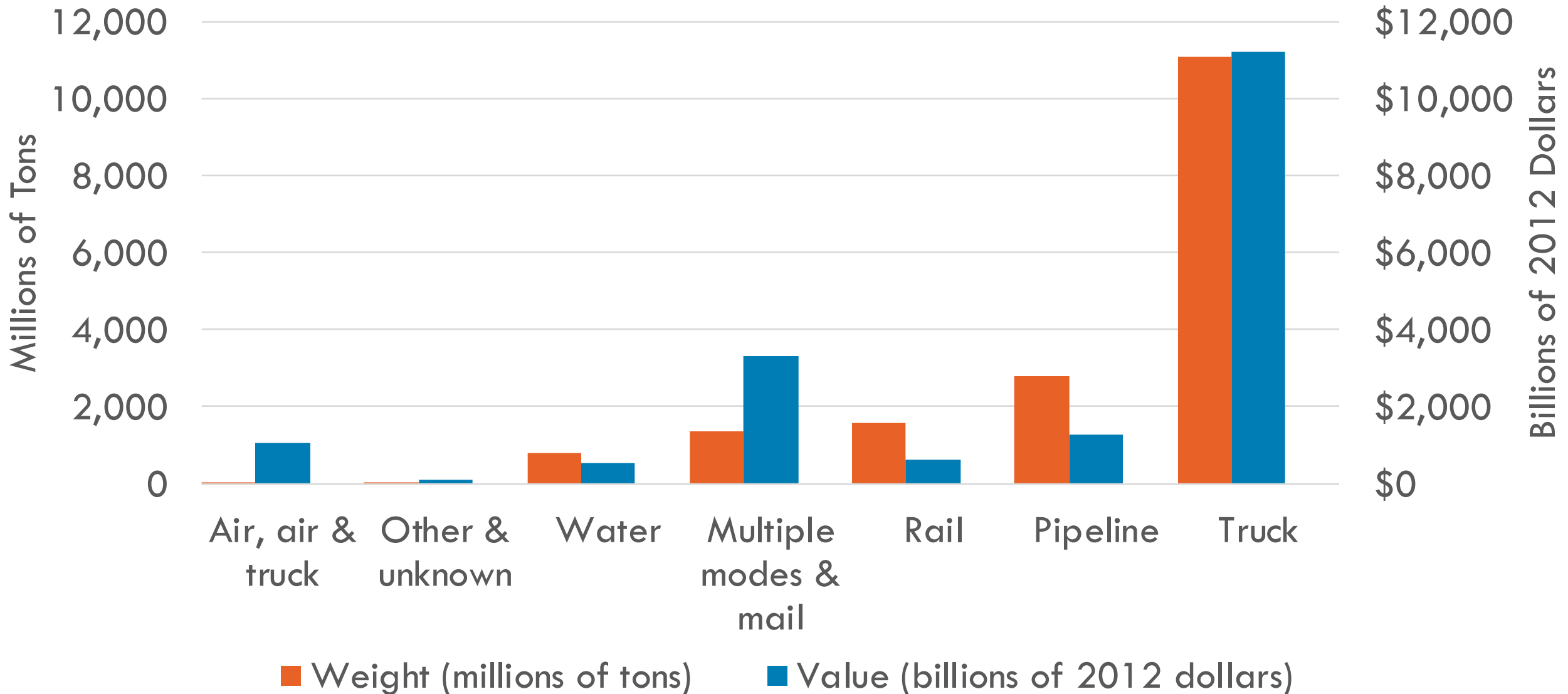
Freight in the City

E-Commerce on our Streets

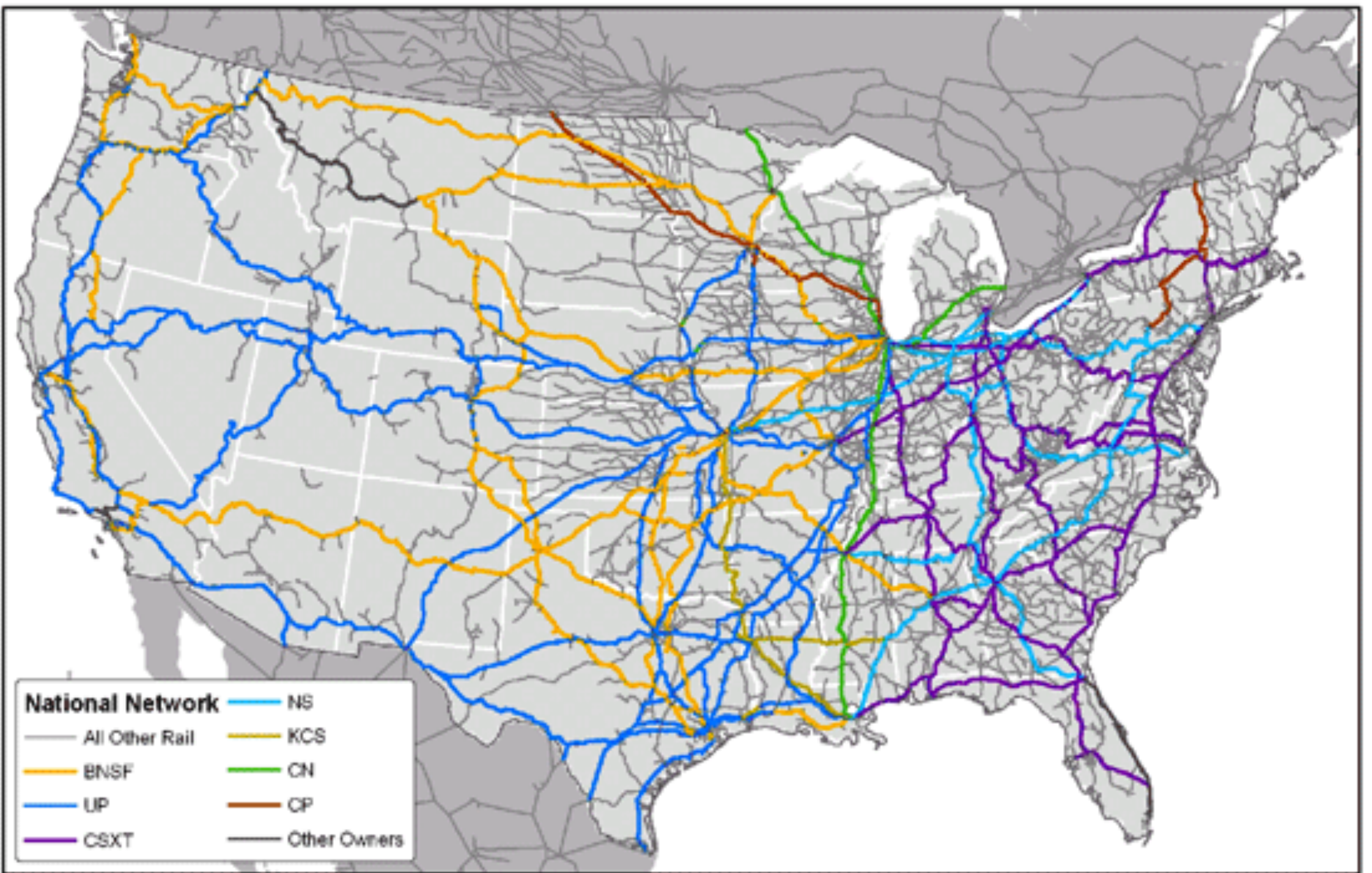


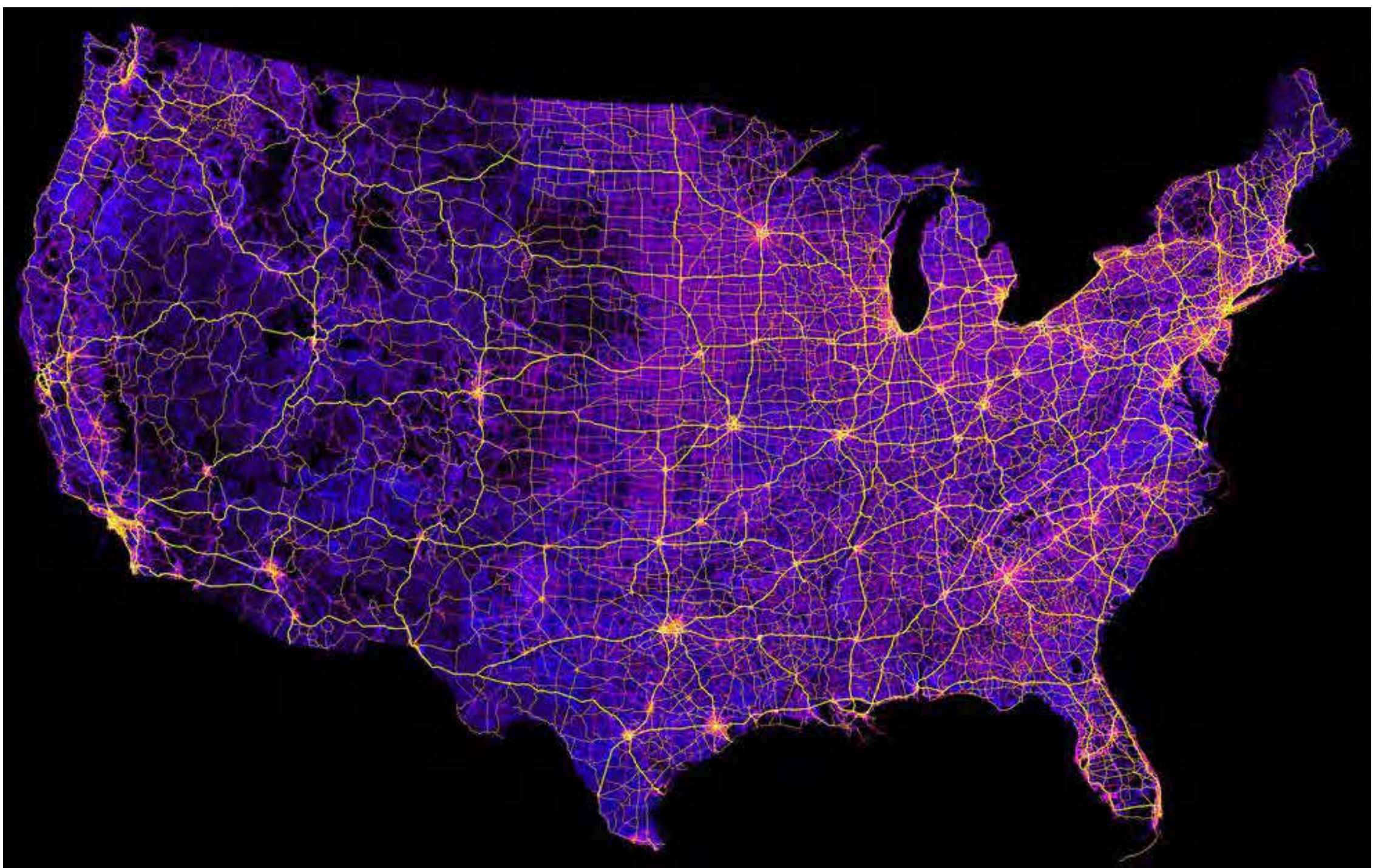
**FREIGHT IN THE U.S.**

# FREIGHT IN THE UNITED STATES











# MODES OF TRANSPORT





# AIR FREIGHT

- High cost
- Fast



# WATER FREIGHT

- Low cost
- Slow
- Limited by geography
- Bulk goods
  - Coal
  - Gravel
  - Agricultural



# RAIL FREIGHT

- Low cost
- Moderate speed
- Limited by geography
- Goods in quantity
  - Containers
  - Bulk goods



# TRUCK FREIGHT

- Moderate cost
- Moderate speed
- Nearly universal access
- Any quantity of goods



# URBAN FREIGHT

- Not containerized or palletized
- Labor intensive

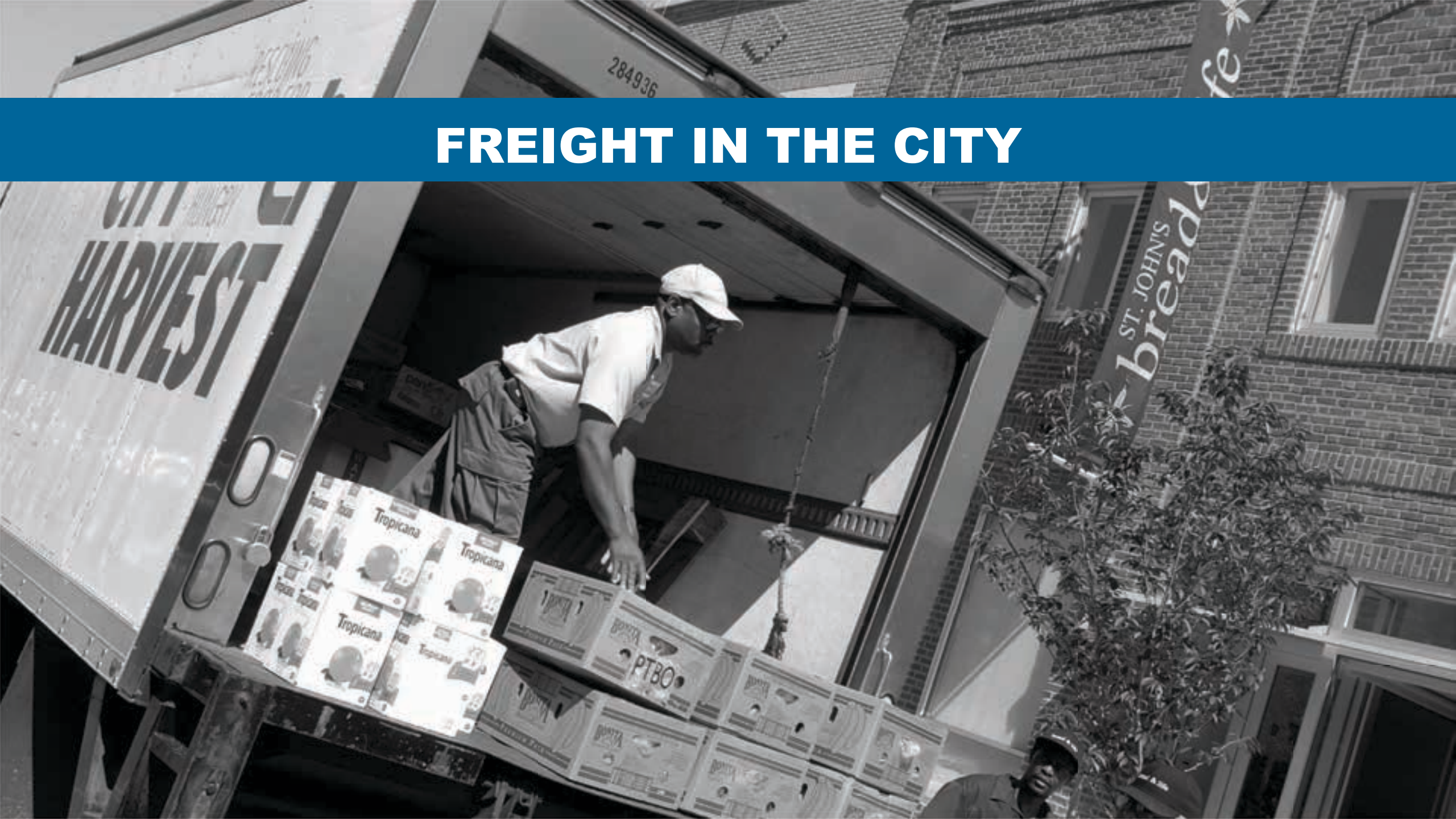


## NEW AND OLD MODES

- Fewer geometric restrictions
- Potentially reduced greenhouse gas emissions



# FREIGHT IN THE CITY



# DENSIFICATION

- Many North American cities are pursuing density as a growth strategy
- More people
- More jobs
- Same amount of space





# CURB SPACE CONFLICT

- Curb space is limited
- Freight vehicles are traditionally larger than personal vehicles



# RIGHT-OF-WAY CONFLICTS

- Freight vehicles:
  - Stop often
  - Limited visibility
  - Geometric limitations
- Public transit:
  - Many North American cities are pursuing transit-only right-of-way as a congestion reduction and climate change mitigation strategy



# SAFETY

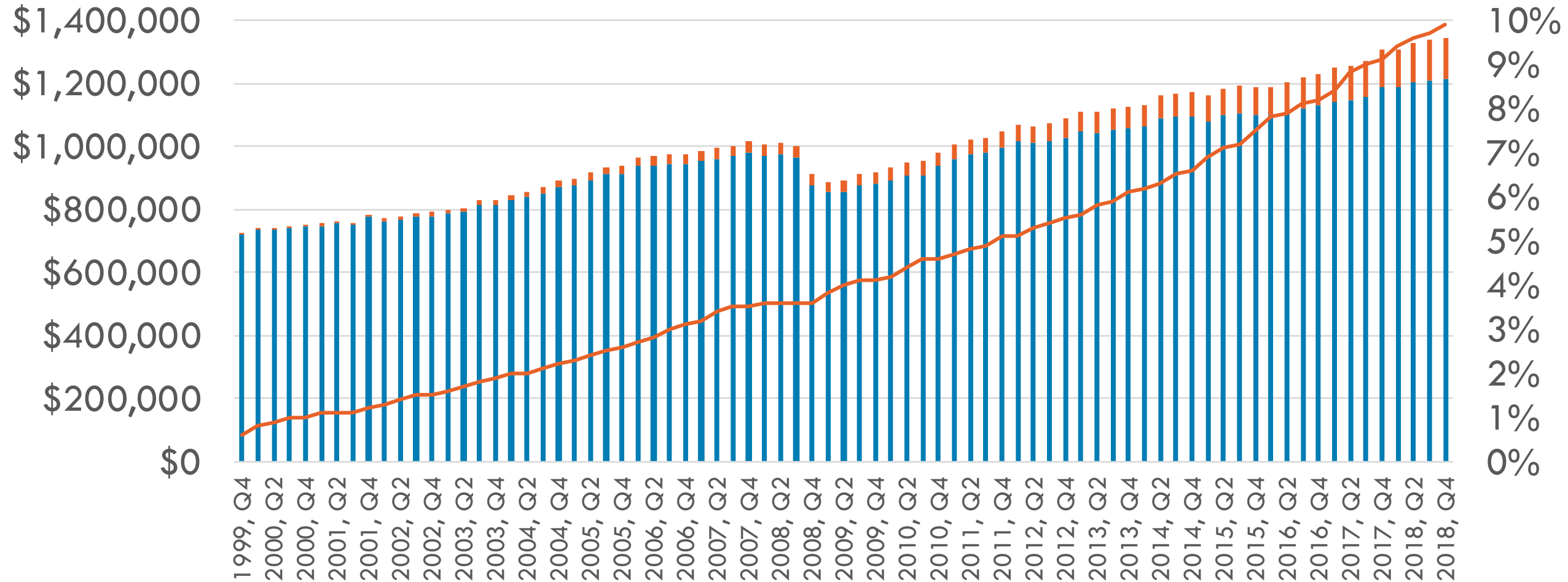
- Most U.S. right-of-way is designed to mix vulnerable road users with heavy trucks
- Large vehicles:
  - Have large blind spots
  - Can kill people more easily





**E-COMMERCE ON OUR STREETS**

# E-COMMERCE GROWTH



- E-Commerce Sales (millions of dollars)
- Non-E-Commerce Sales (millions of dollars)
- E-Commerce Sales as a Percent of Total Sales

# E-COMMERCE GOODS JOURNEY



# E-COMMERCE LAST-MILE

- Vans or personal vehicles
- Likely increase in VMT
- Frequent stops
- High-pressure 'gig economy' jobs



## OTHER CONSIDERATIONS

- Climate impacts
- Labor impacts

## RECOMMENDED READING

- Alana Samuels, “I Delivered Packages for Amazon...”, *The Atlantic*
- Marc Levinson, *The Box*





# THANK YOU



**Joseph Poirier**

[jpoirier@nelsonnygaard.com](mailto:jpoirier@nelsonnygaard.com)