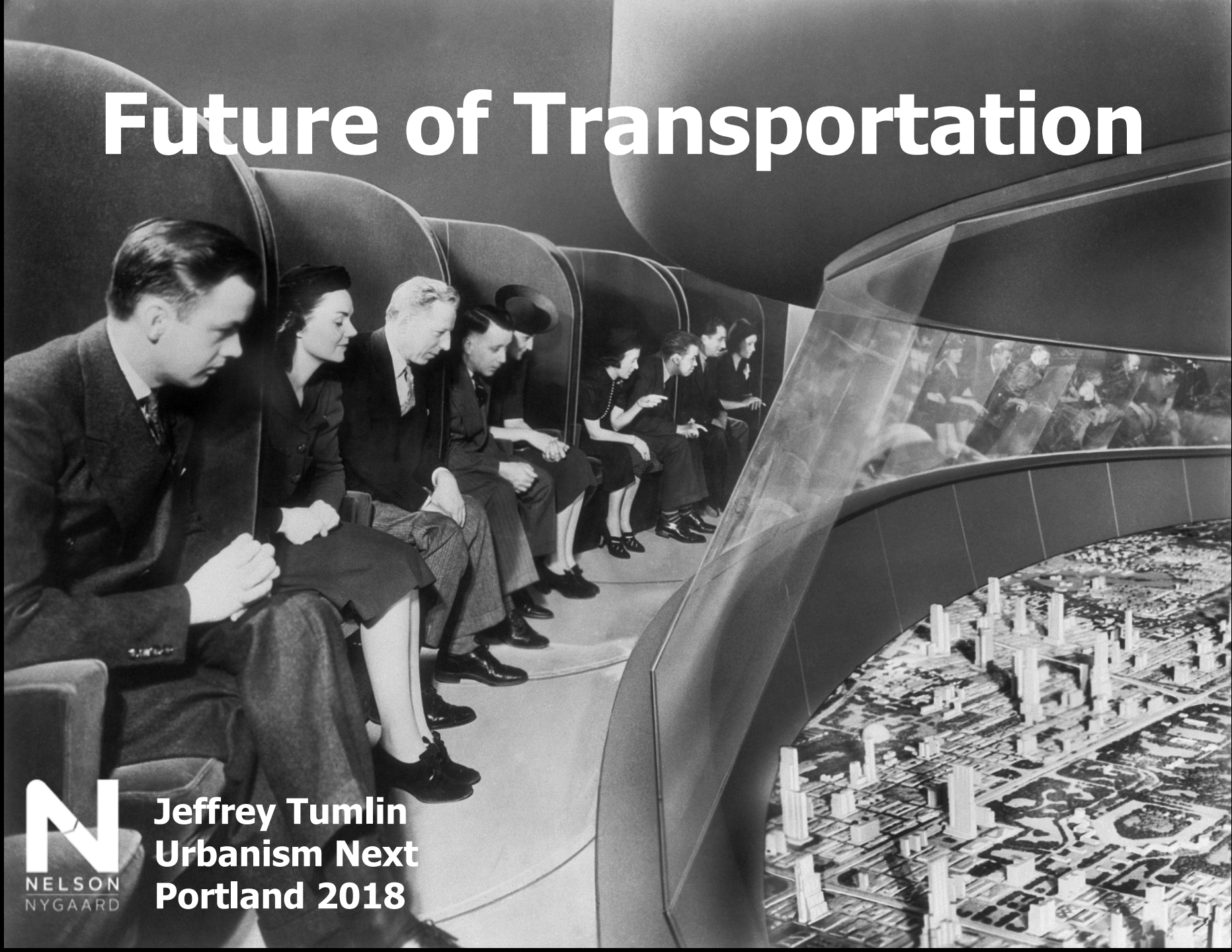


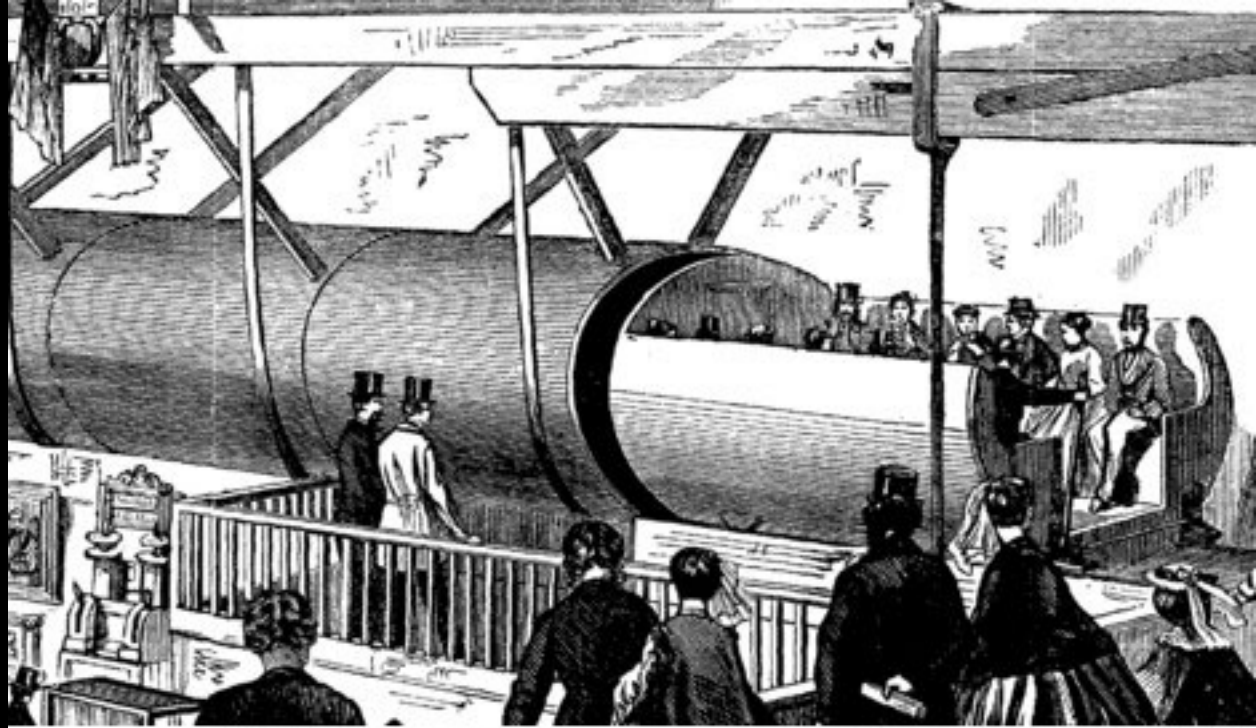
Future of Transportation

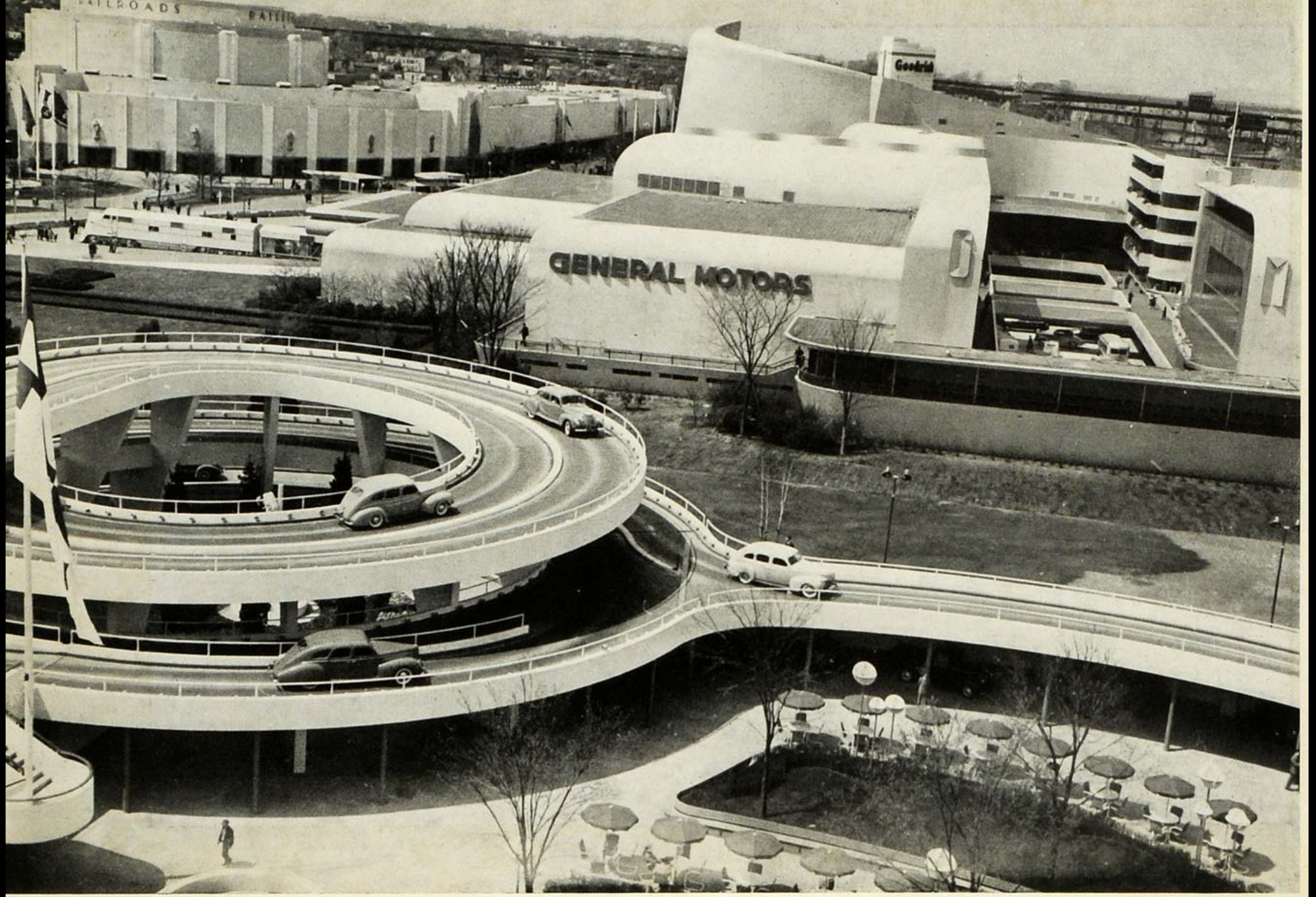


Jeffrey Tumlin
Urbanism Next
Portland 2018



Hyperloop: 1867











THE

Jetsons



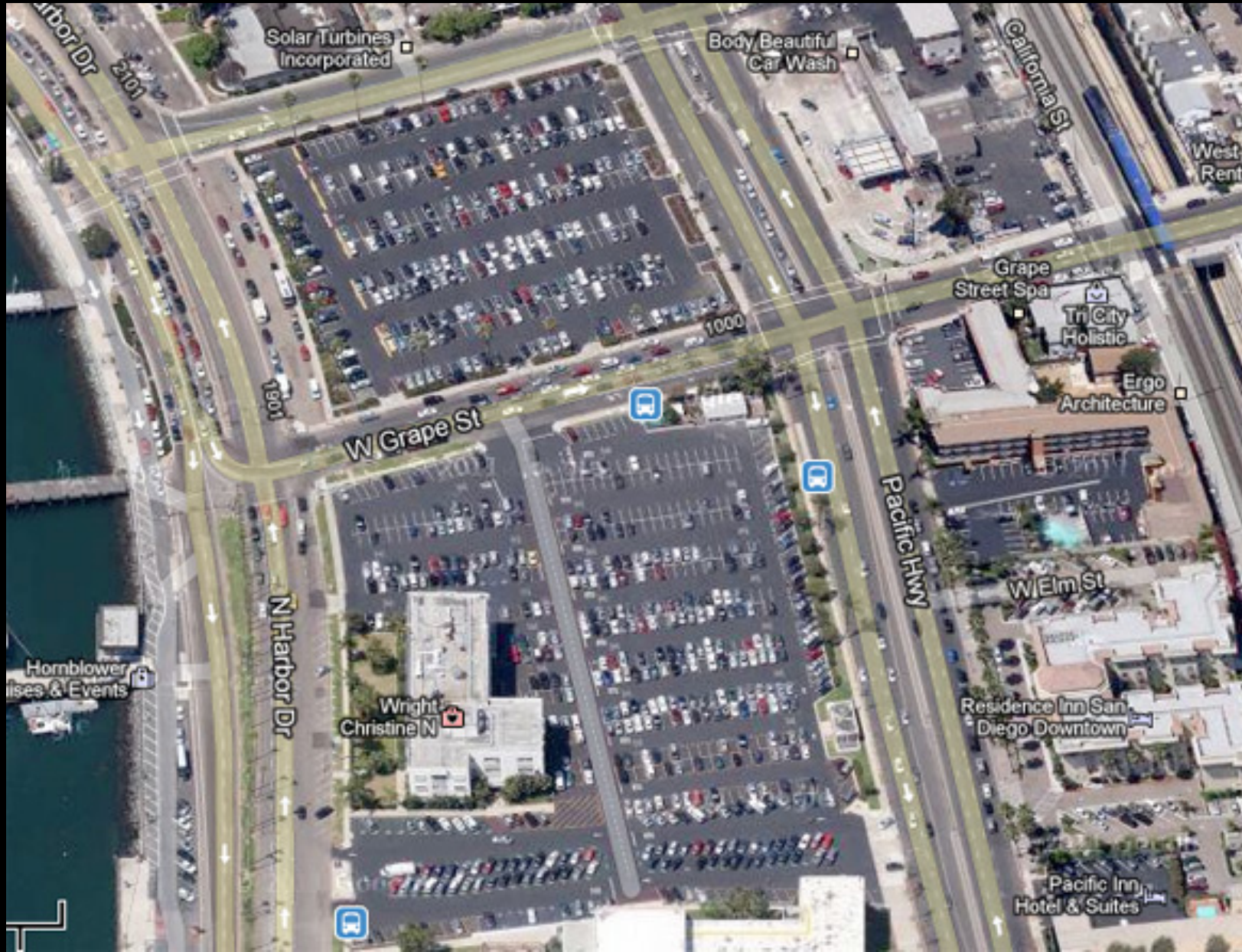
Dallas Morning News <http://www.dallasnews.com/news/transportation/20121125-plan-ahead-then-navigate-lbj-freeway-construction.ece>

**So What about
Autonomous Vehicles?**

~40,000 Traffic Deaths per Year
3.5 Million Americans since 1929

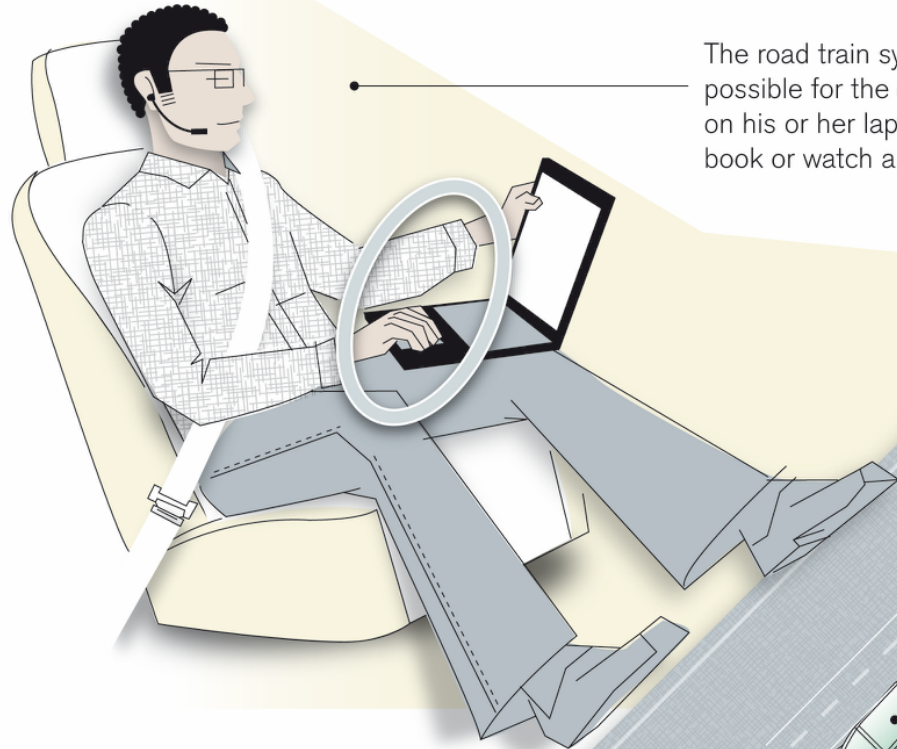


Eliminate 80% Commercial Parking Demand?



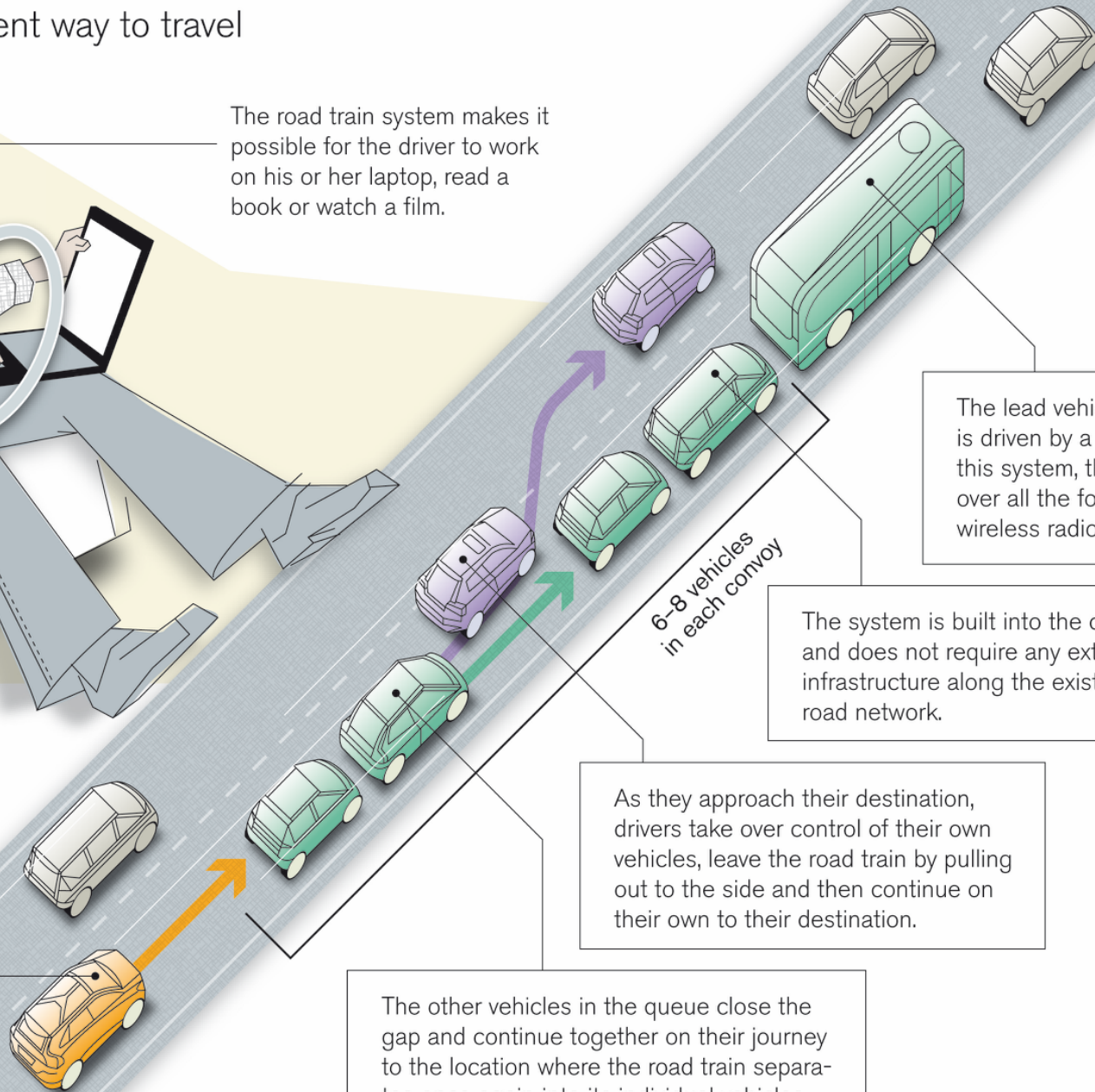
Join a road train

A safe and energy-efficient way to travel



The road train system makes it possible for the driver to work on his or her laptop, read a book or watch a film.

Drivers who want to join a road train state their destination and are guided by their on-board navigation system to the nearest road train. The car joins the rear of the queue and the system takes over control of the car.



The lead vehicle, for instance a bus, is driven by a professional driver. In this system, the lead vehicle takes over all the following vehicles via wireless radio communication.

The system is built into the cars and does not require any extended infrastructure along the existing road network.

As they approach their destination, drivers take over control of their own vehicles, leave the road train by pulling out to the side and then continue on their own to their destination.

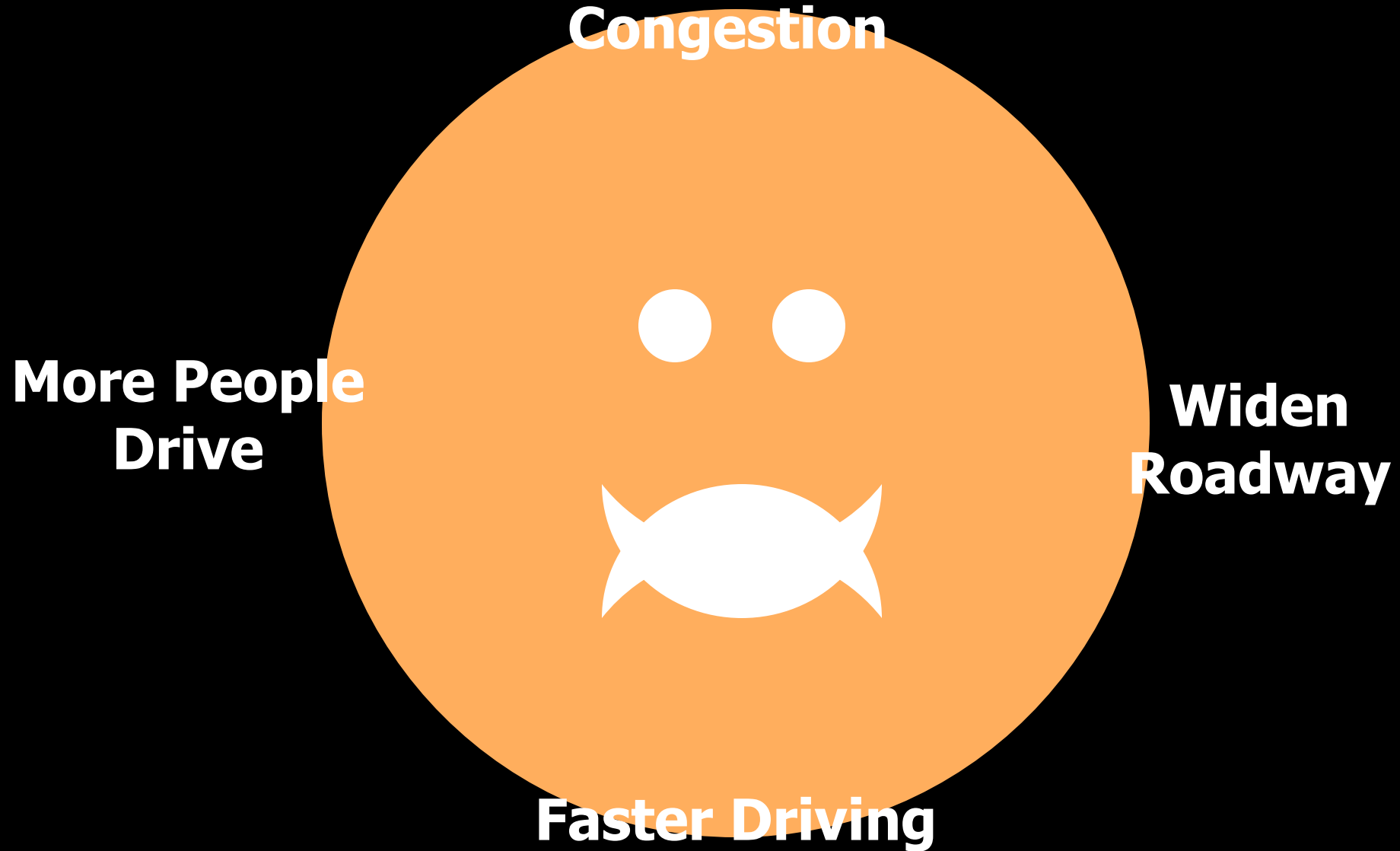
The other vehicles in the queue close the gap and continue together on their journey to the location where the road train separates once again into its individual vehicles.

6-8 vehicles in each convoy

First/Last Mile



Induced and Latent Demand



space required to transport 60 people



Car?



Bus?



Bicycle?

space required to transport 60 people



car



uber



autonomous car

Manage the street

- Manage public right-of-way for public good
- Dedicate space for most efficient modes
- Price congestion
- Price wasted space



Price by Weight for Maintenance



Price by Size for Fairness



Price Congestion for Throughput



Price Wasted Space for Efficient and Equity



Manage the curb

- Design standards for curbside dropoff
- Fees for curbside access
- Promote shared use
- Eliminate dropoff/bike conflicts



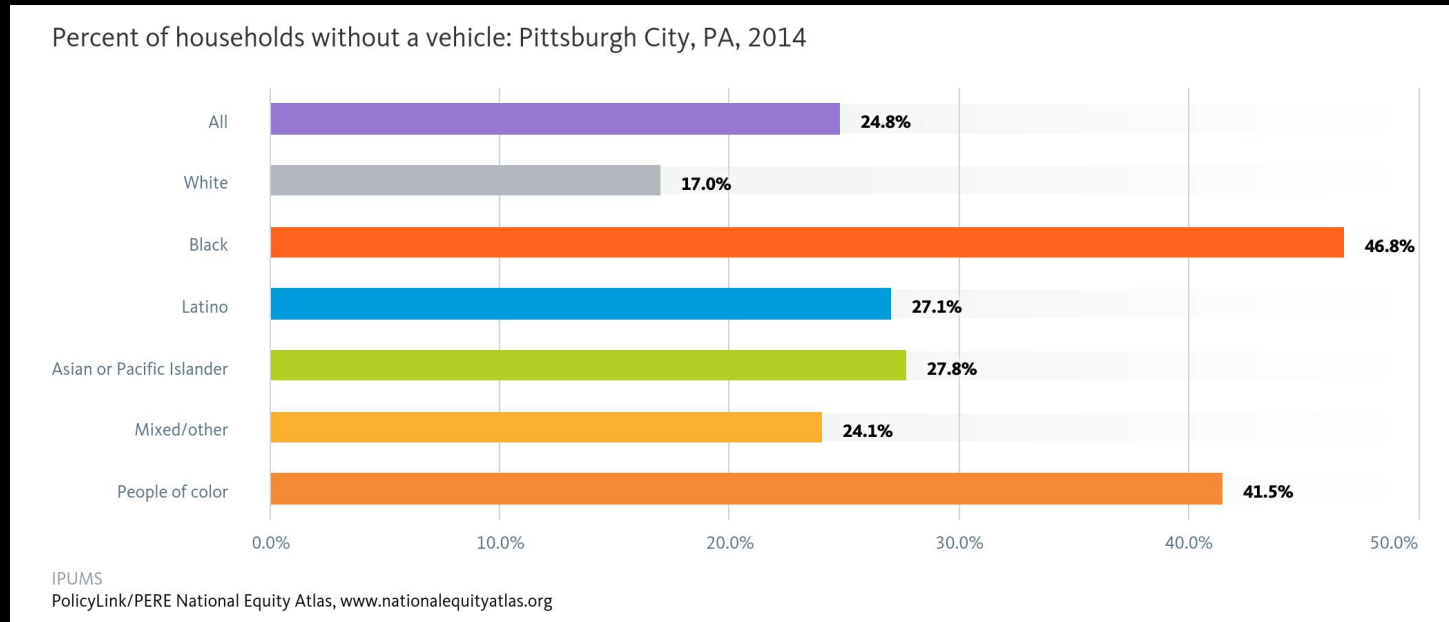
Modernize parking regulations

- Price for availability
- Eliminate minimums
- Establish maximums
- Unbundle
- Share
- Promote adaptability



Establish data protocols for public good

- Data should inform transportation system
- Barriers to flow of data between public and private sector
- Disaggregate data by race, income, and other demographic categories.
- Explain the problem that data will solve.



Quantify and Promote Equity

- Focus on outcomes:
 - Health
 - Access to employment and services
 - Share of income and time spent on mobility
- Consider ethnicity, income, age, ability, gender
- Price least efficient modes to subsidize mobility for those with the fewest choices
- Private profit motive will ignore those with greatest need



Reorganize government around mobility

- Be decisive about public transit agency survival
- Realign taxation: replace gas and parking taxes with VMT and congestion fees
- Align public right of way ownership (state, county, local) with operations
- New regional mobility authorities?



Transit Must Lead

- Best contexts for AVs:
 - Long haul trucking
 - Bus Rapid Transit
- Cities must partner with transit operators: Dedicated right of way in exchange for AV BRT, 24/7 every 2 minutes
- Begin process now to minimize any job loss



Provide a quality future of work

- 4.4 million American workers are drivers
- Partner with labor leadership now
- Future jobs require tech or customer service skills
- Current trajectory jeopardizes public sector pensions



Tell Better Stories



Tell Better Stories





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