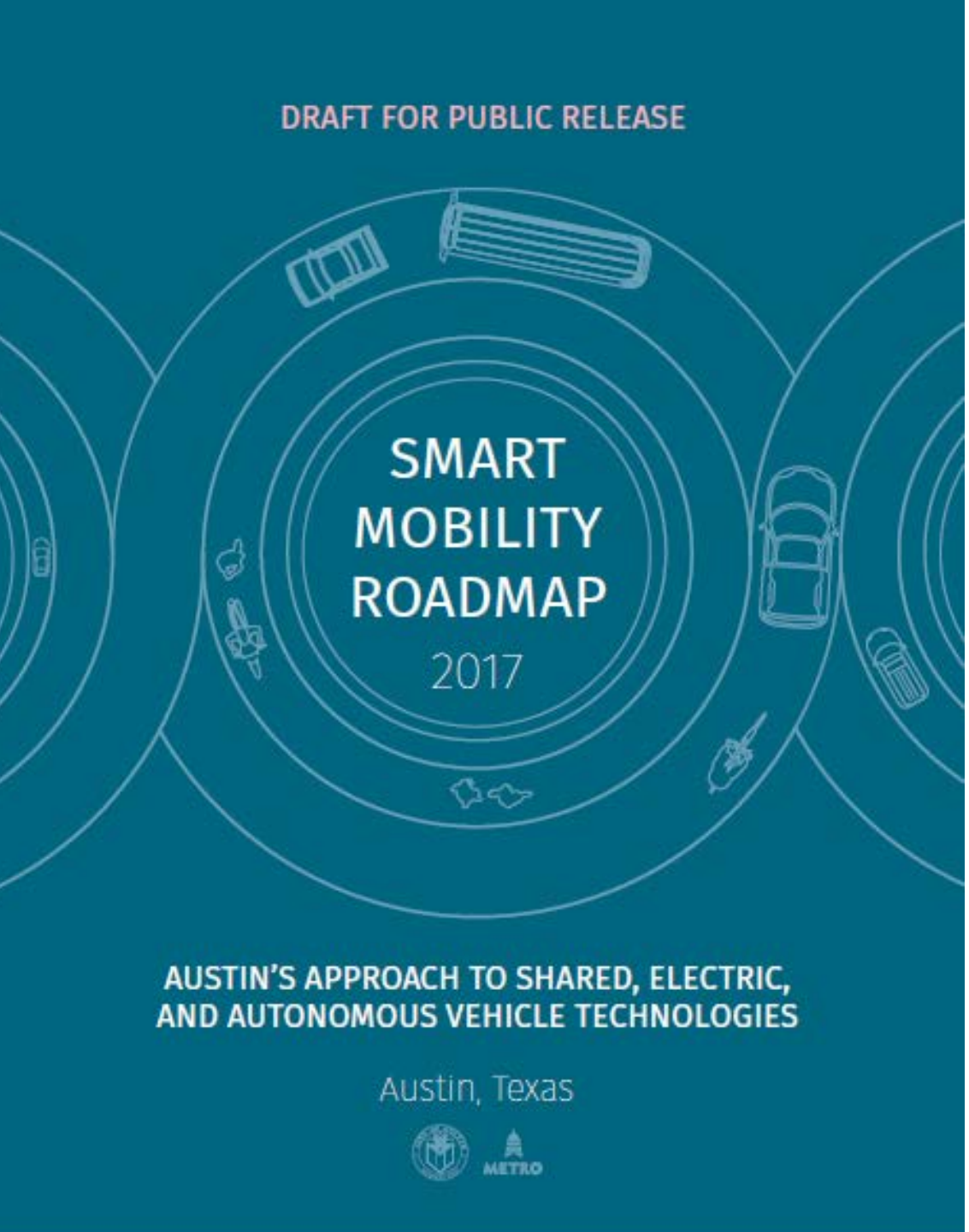


City of Austin

and

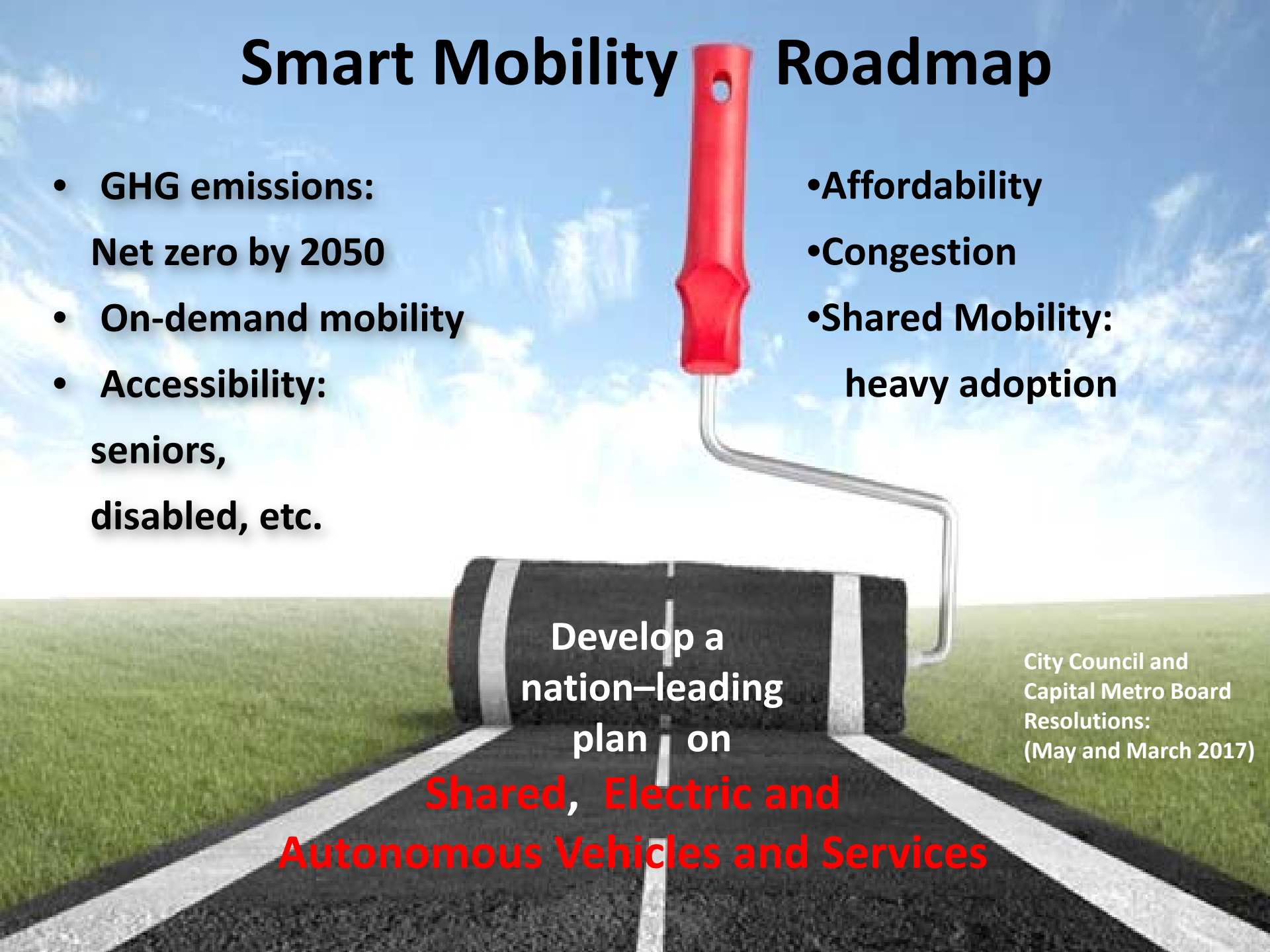
Capital Metropolitan Transportation Authority

Karla Taylor, Chief of Staff

Austin Transportation Department

February 2018

Smart Mobility Roadmap



- GHG emissions:
  Net zero by 2050
- On-demand mobility
- Accessibility:
  seniors,
  disabled, etc.

- Affordability
- Congestion
- Shared Mobility:
  heavy adoption

Develop a nation–leading plan on

Shared, Electric and Autonomous Vehicles and Services

City Council and Capital Metro Board Resolutions:
(May and March 2017)

Smart Mobility Inspiration

Technology Doesn't Change Geometry

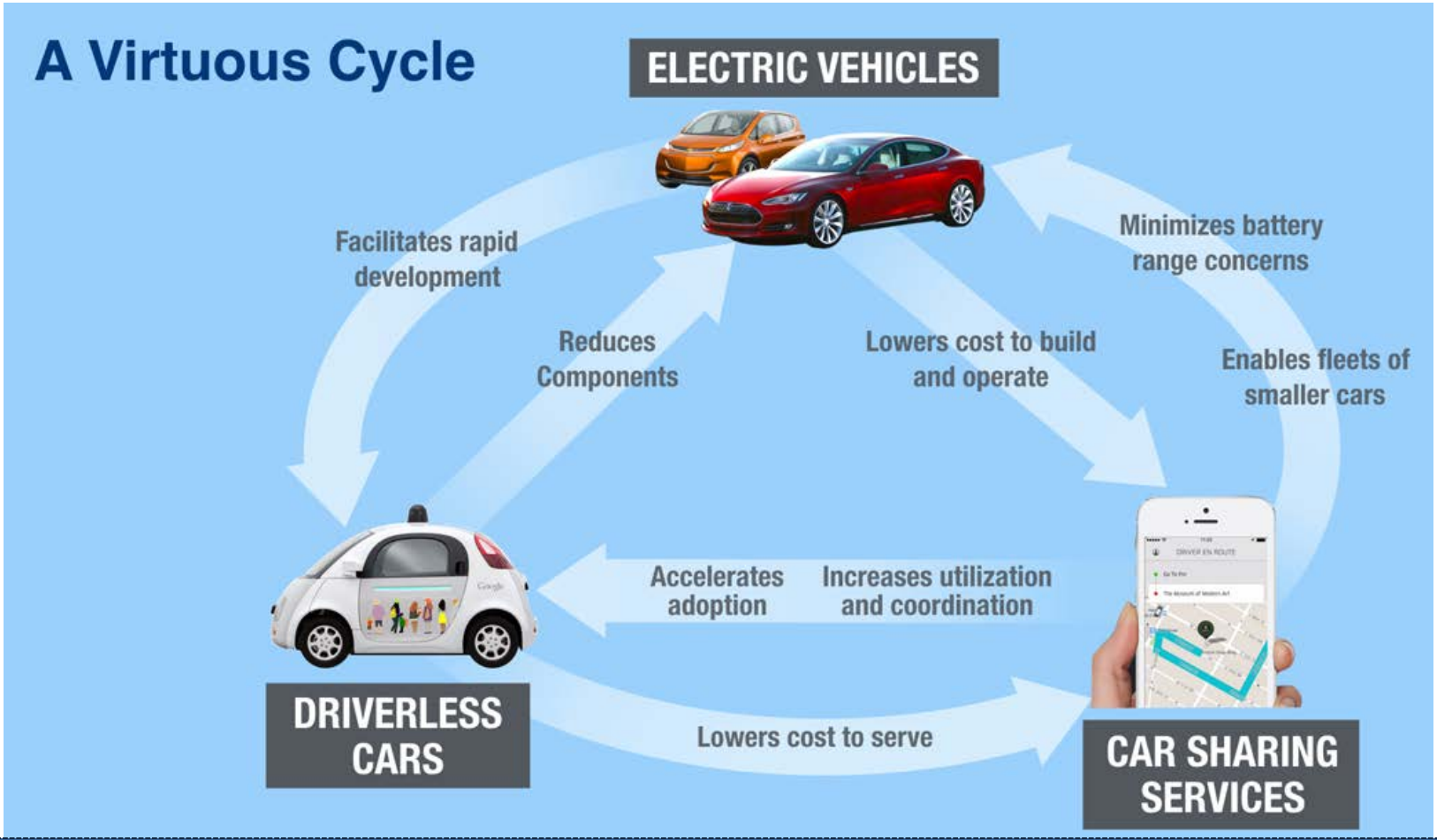
TODAY

40 human-driven cars

TOMORROW

40 self-driving cars

Convergence of Technologies



Next Steps:

- Encourage less SOVs with easy/affordable alternatives;
- More data and collaboration

Shared Mobility

Shared Mobility

Next Steps:

- Create an Austin Shared Use Mobility Plan
- Promote shared vehicle services

"When deployed alongside fixed-route mass transit networks, shared-ride AV taxis could all but eliminate the convenience advantage of personal autos."

— Bloomberg Philanthropies-Aspen Institute

Electric Vehicles

- 618 EV charging ports
- 180 locations
- 4,000+ area EV vehicles
- $4.17/mo or $2.00/hr

<u>Steep Climb:</u>

- .4% of 1M vehicles today
- 25% = 250,000 vehicles

EV's = lower GHG + cost + energy use

Electric Vehicles Next Steps

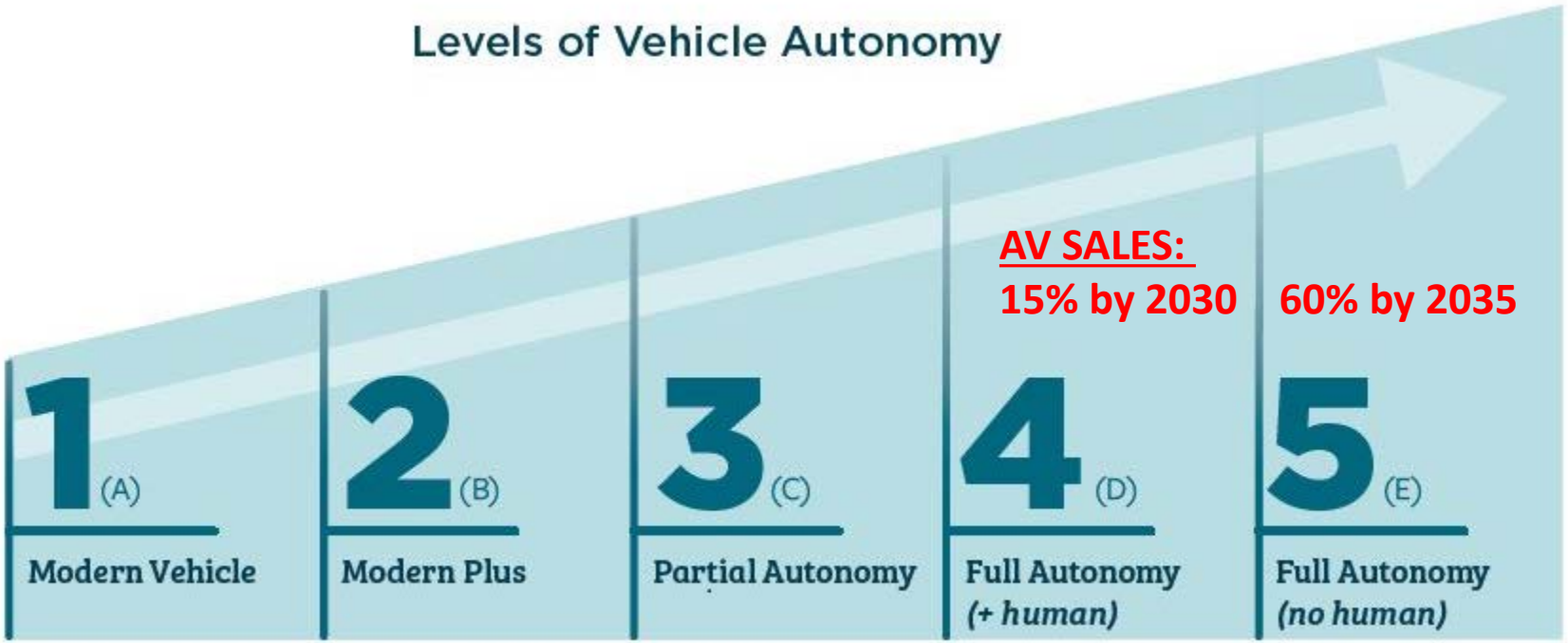
Fleets: early EV adopters, Lower Operating costs by 2020

Personal EVs: total costs meets gas-powered cars by 2025

Next Steps:

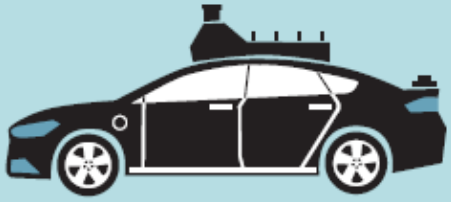
- Accelerate EV use with incentives and policies;
- Expand Public and Private charging infrastructure to include DCFast to support high-mileage vehicles

Autonomous Vehicles



Graphic recreated, with permission, from "Future Autonomous Vehicle Driver Study," September 2016, Cox Automotive.

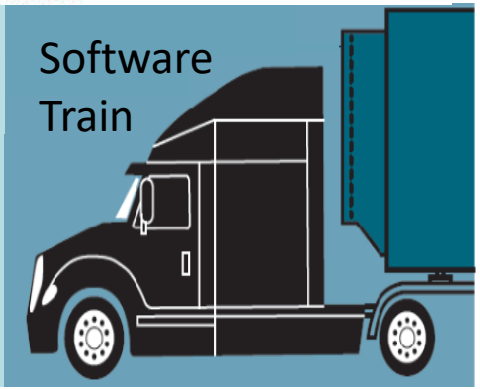
Taxibot



Deliverybot

Driverless Shuttle

Software Train

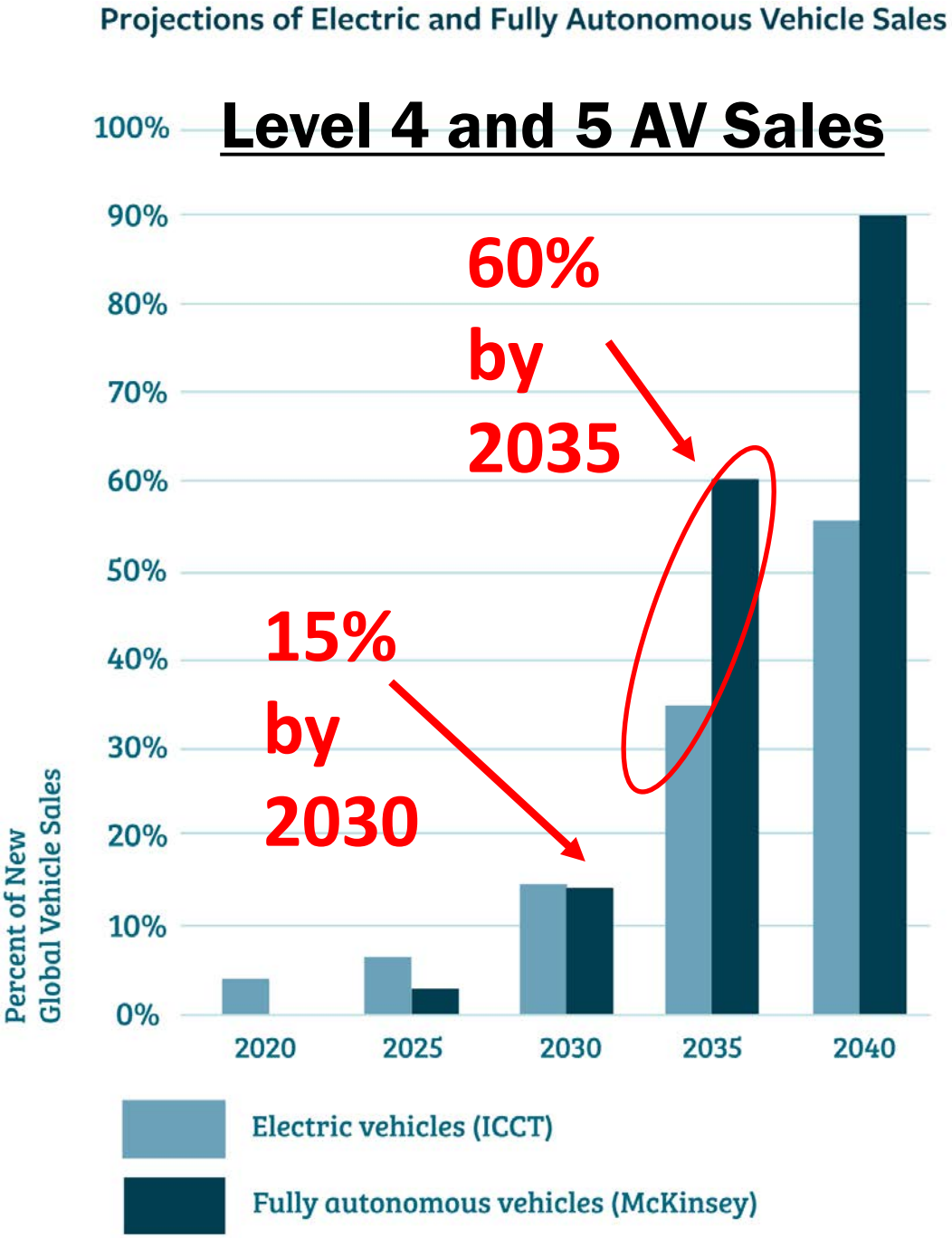


Autonomous Vehicles

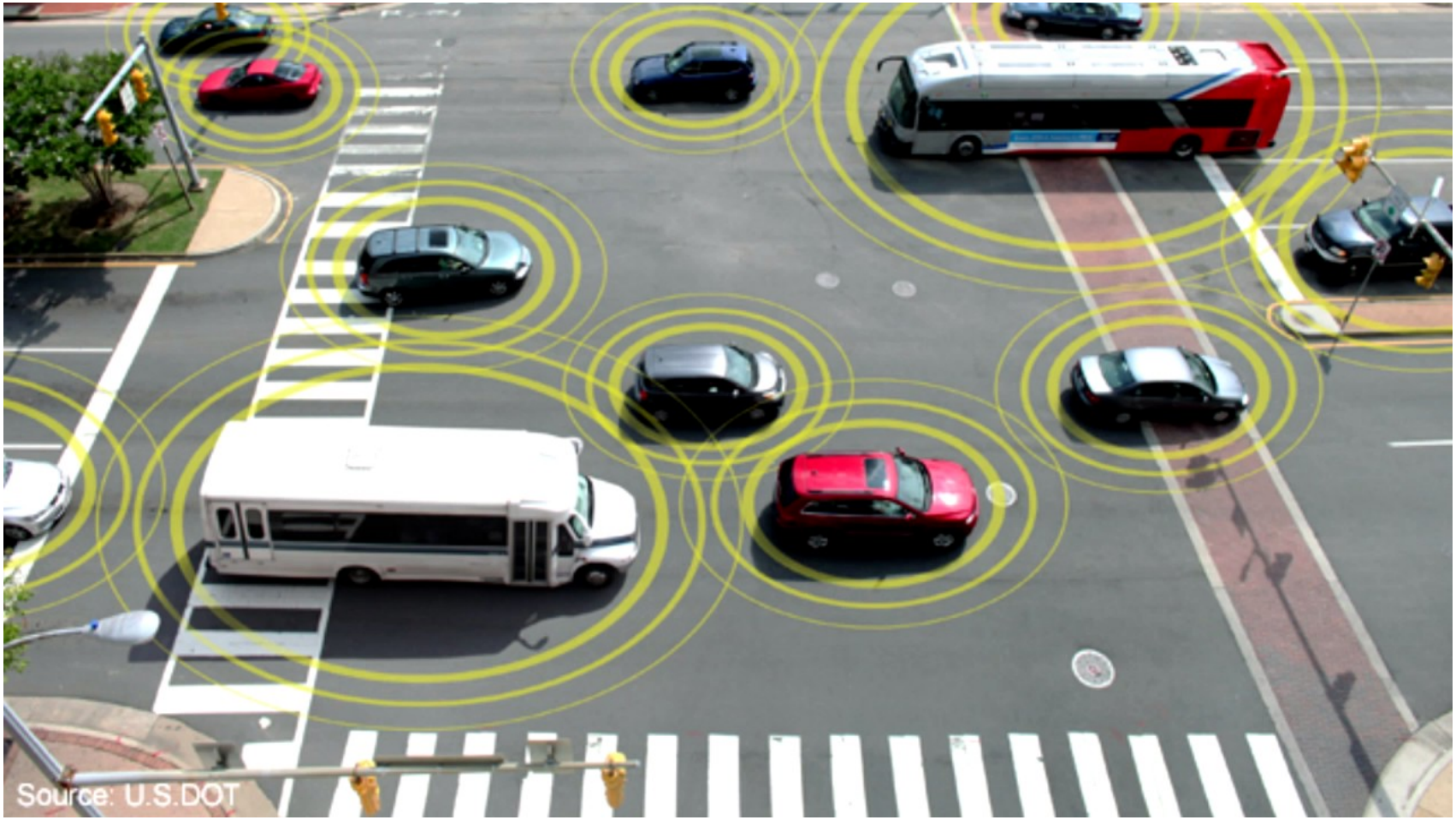
Gap between EV and AV adoption

Next Step:

- Develop a Master Plan for emerging E-AV technologies and services to pursue, keep it human centered



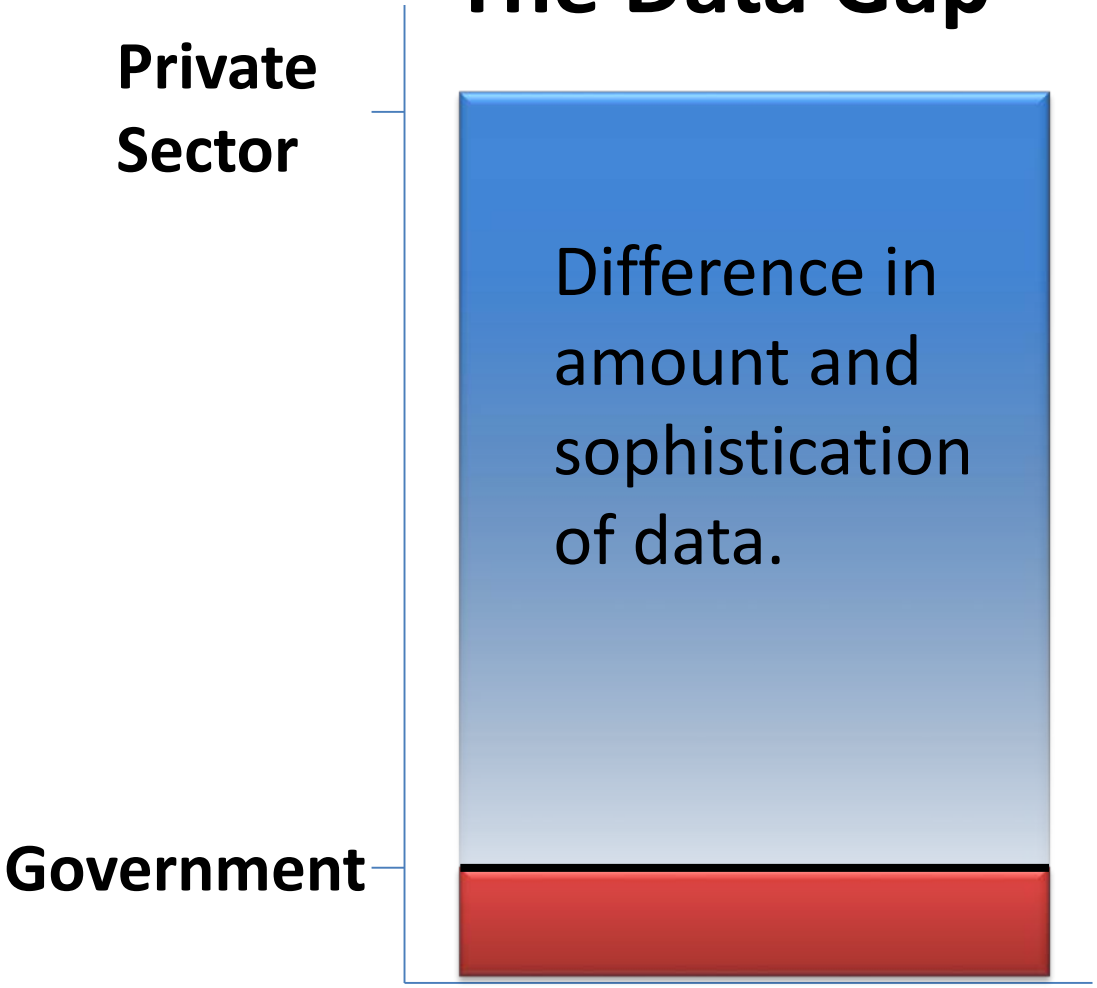
Data and Technologies



V2V + V2I + V2P + V2X = More complex data and analyses that yields better safety and mobility

Data and Technologies

The Data Gap



Next Step:

- Test and invest in data driven technologies that promotes open data, real-time public information
- Collaborate with public /private sectors.

Current and Future Land Use

A compact and connected Austin supports travel options other than just driving alone, like walking, biking, transit, taxis, TNCs, etc.

Impacts on Equity

On-demand AVs can help non-drivers, the elderly and disabled, along with better sidewalks

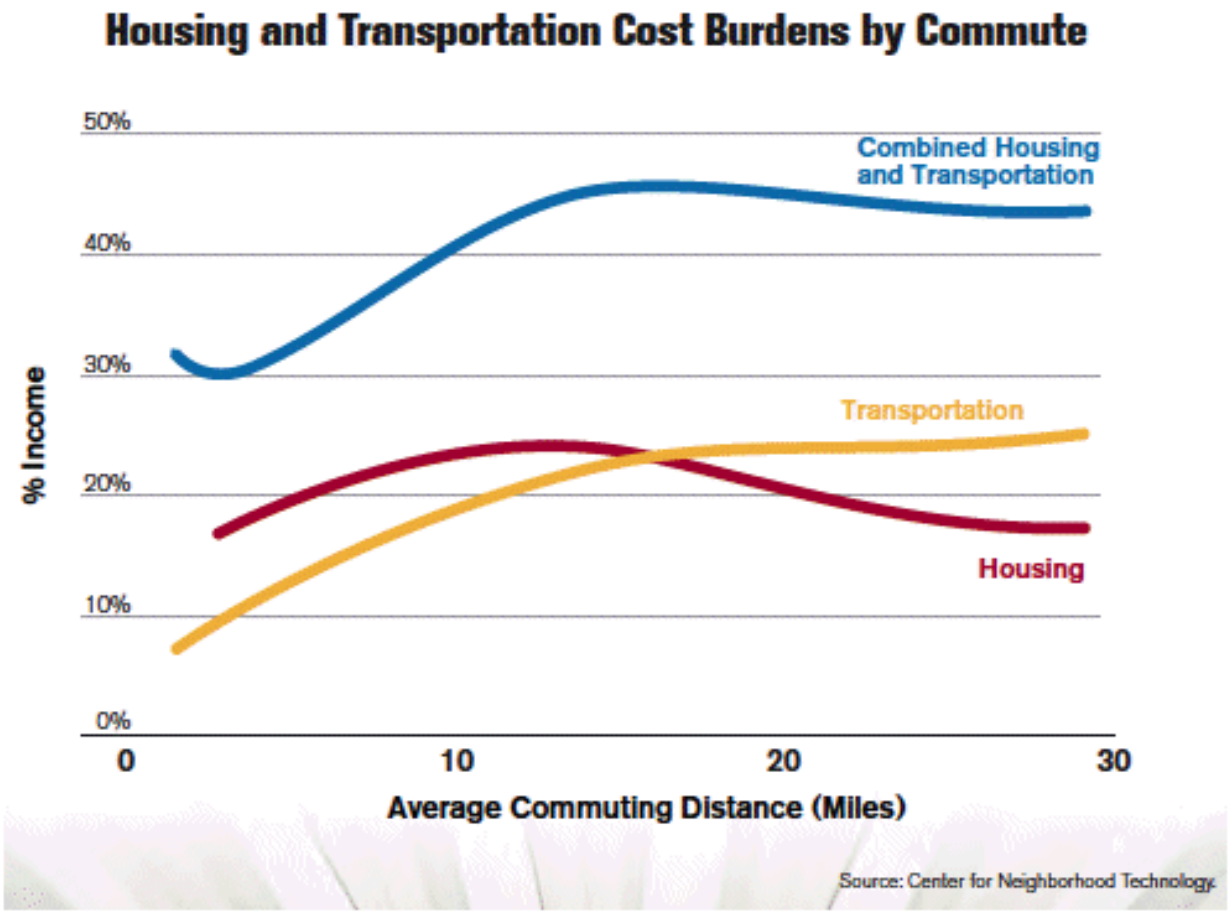
More pilots with pricing incentives are needed

Current Pilots

Capital Metro piloting "PickUp" on-demand service in East Austin

Community Care + Ride Austin piloting free transport to health care

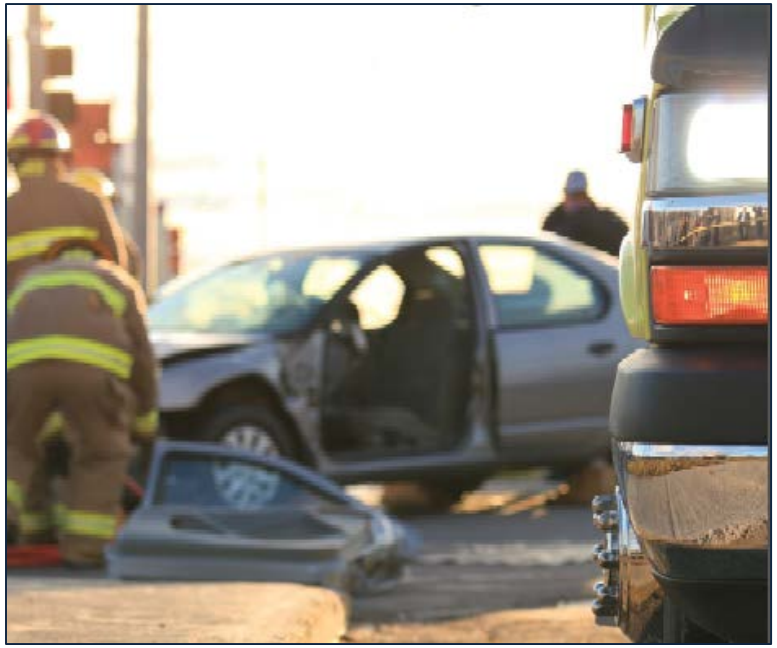
Impacts on Affordability



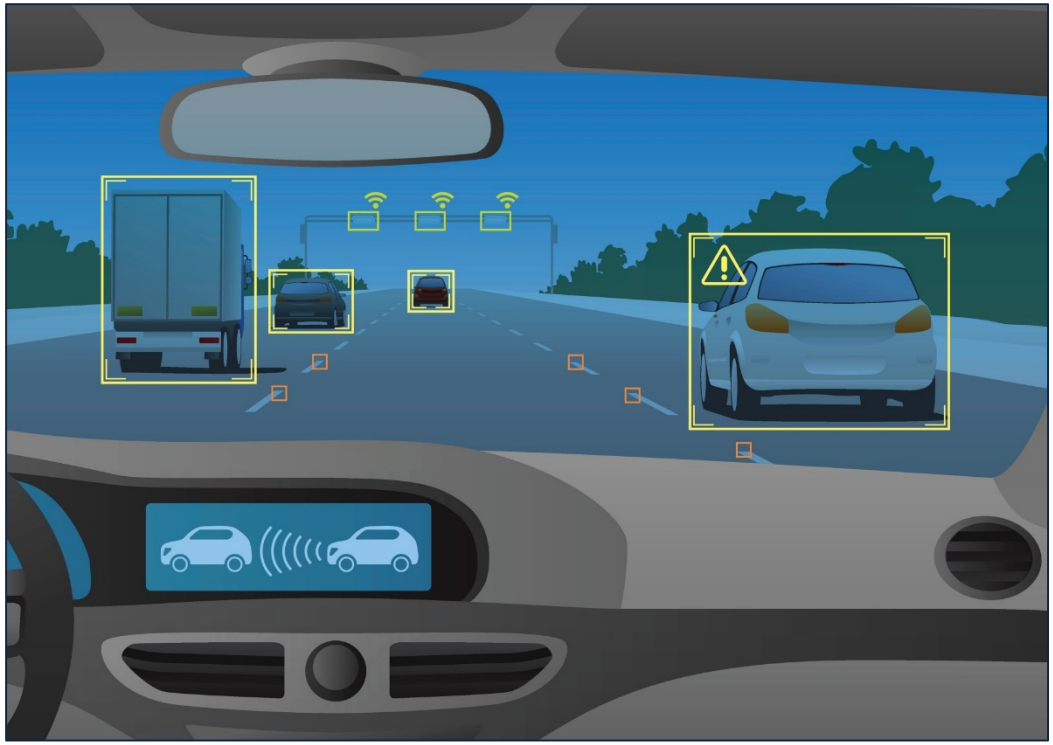
Study: Costs saved on housing 12+ miles from jobs/city center is wiped out by transportation costs Housing and Affordability Index.

Shared Mobility – car-pool/vanpool, coupled with driverless vehicles to reach transit can extend transportation access, reduce cost

Impacts on Safety



Today: 94% of crashes caused by human error



Future: 80% of crashes can be reduced through automation

Impacts on Workforce

Potential jobs lost:
~3% of Austin jobs are drivers

- 77% delivery/ heavy truck drivers
- 14% bus drivers
- 8% taxi/chauffeur drivers

Next Step:

- Create New Mobility Workforce training taskforce - partner with educational institutions and businesses

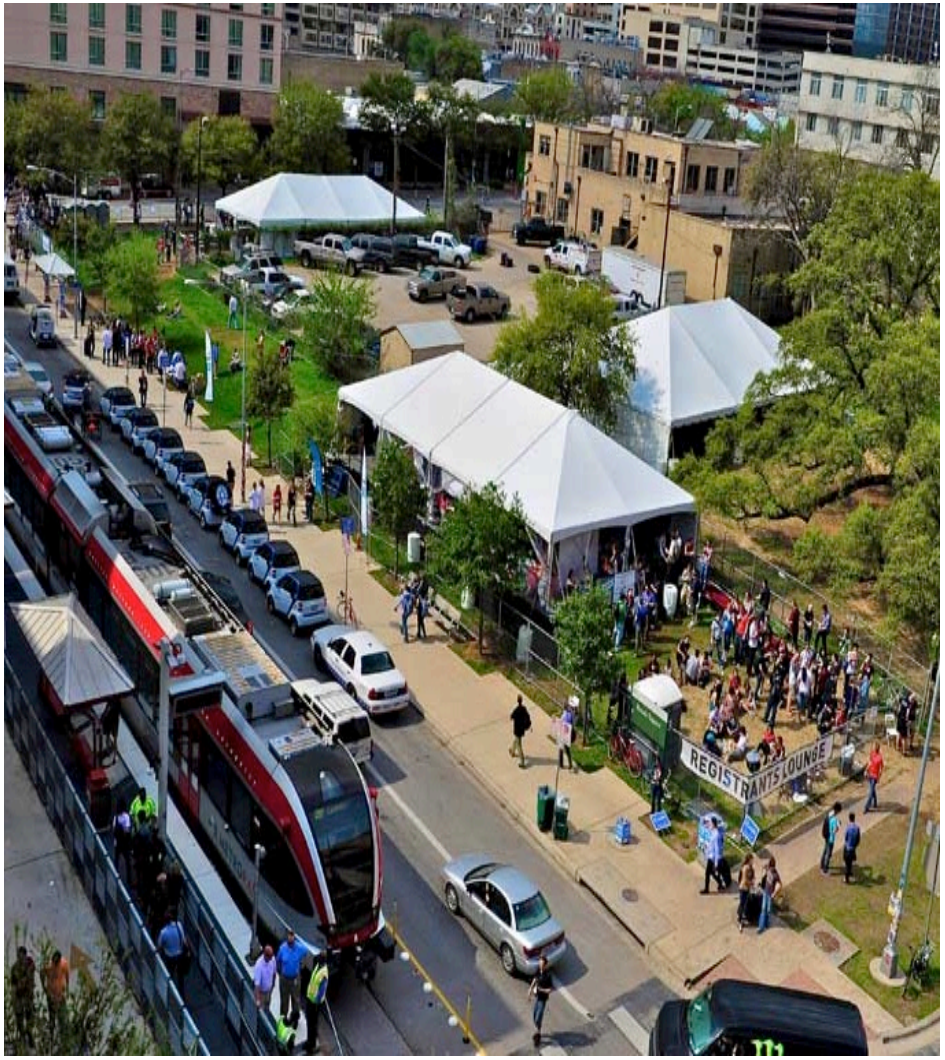
Community Engagement

60% of Austin residents would shift away from driving alone if given better options
(2016 Mobility Talks)

New mobility options, tailored to a community and individual's needs, begins with community engagement

Next Steps

- Public review of roadmap www.austintexas.gov/smartmobilityroadmap
- Begin dialogue with stakeholders, community
- Demonstration and partnership agreements
- Start technology pilots
- Seek funding sources, partners
- Initiate policy discussions in concert with Austin Strategic Mobility Plan



Thank You!

Questions?