

DRAFT FOR PUBLIC RELEASE

SMART  
MOBILITY  
ROADMAP  
2017

AUSTIN'S APPROACH TO SHARED, ELECTRIC,  
AND AUTONOMOUS VEHICLE TECHNOLOGIES

Austin, Texas



**City of Austin**



and

**Capital  
Metropolitan  
Transportation  
Authority**

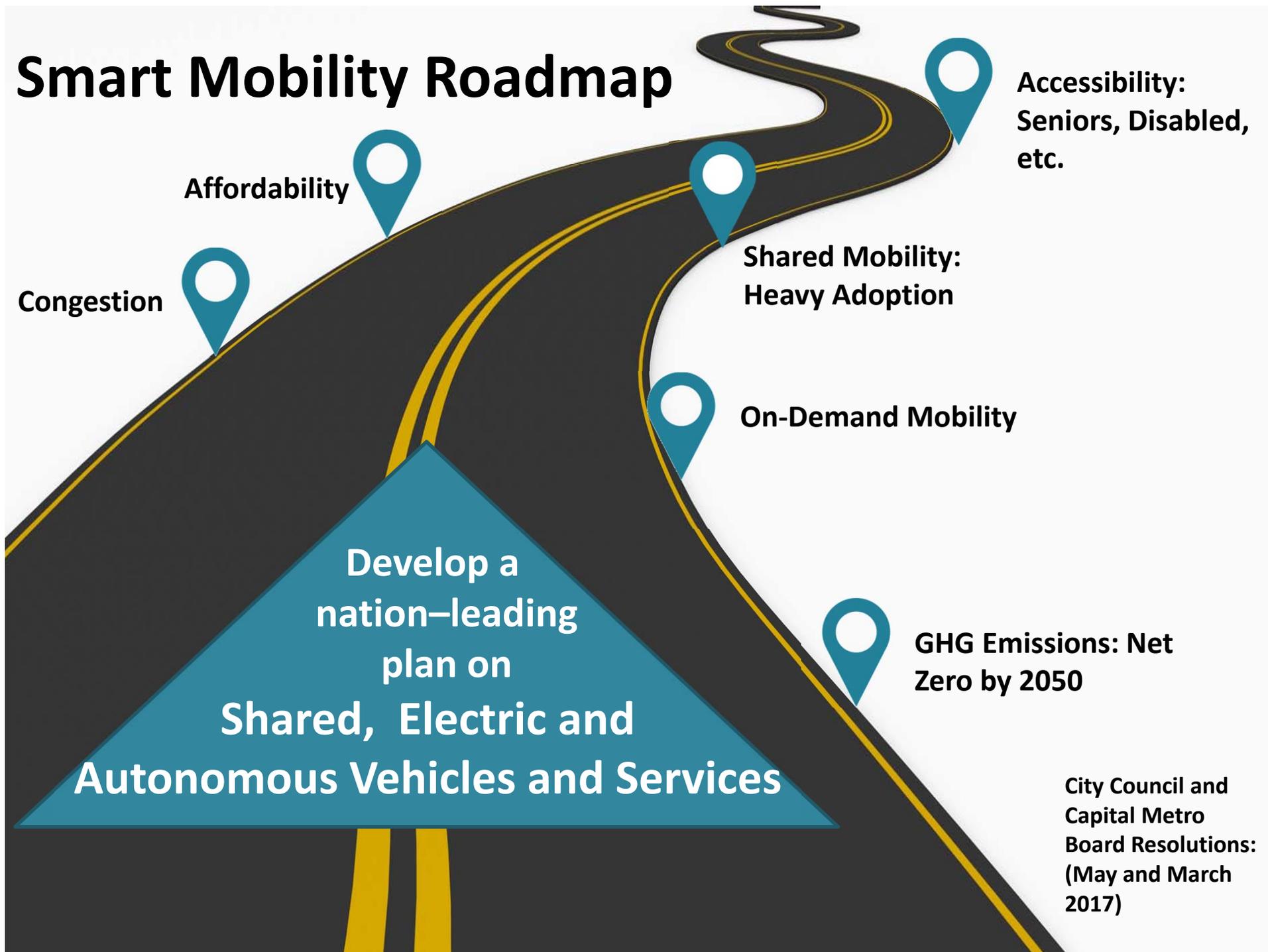


**Rob Spillar, P.E.**

Director, Austin Transportation  
Department

**January 2018**

# Smart Mobility Roadmap



# Smart Mobility Inspiration

**IMAGINEAUSTON**  
Vibrant. Livable. Connected.



**Connections**  
2025



# Technology Doesn't Change Geometry

**TODAY**



**40 human-driven cars**

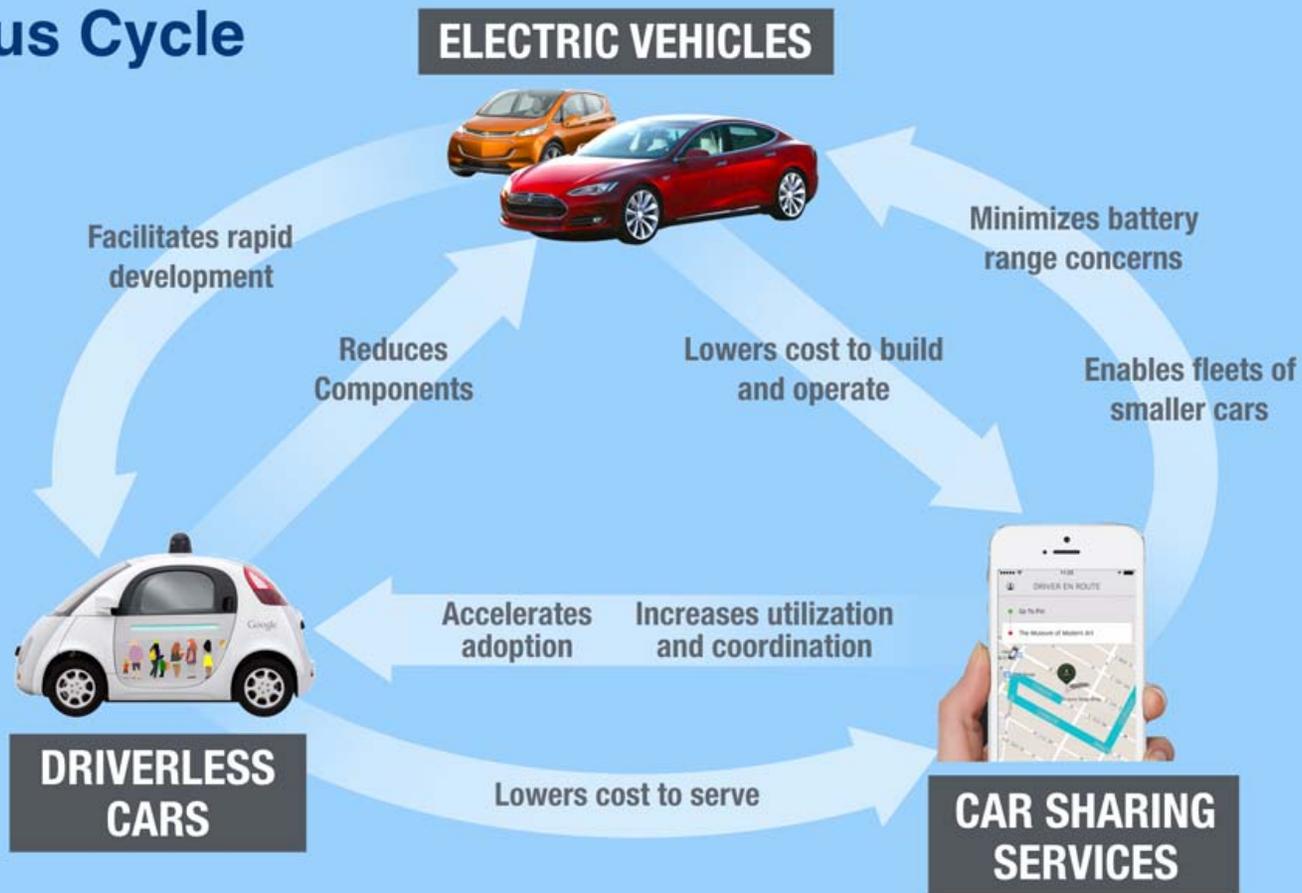
**TOMORROW**



**40 self-driving cars**

# Convergence of Technologies

## A Virtuous Cycle



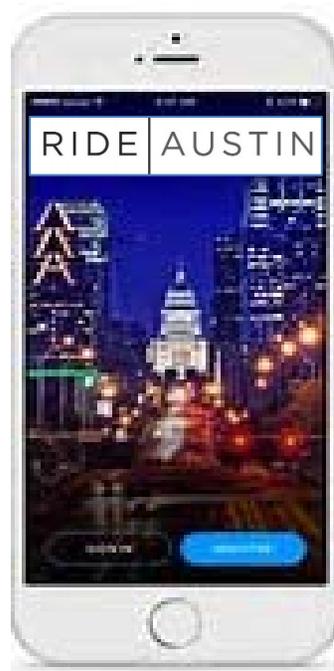
## Next Steps:

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

# Shared Mobility



# Shared Mobility



*“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

## Next Steps:

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

# Electric Vehicles



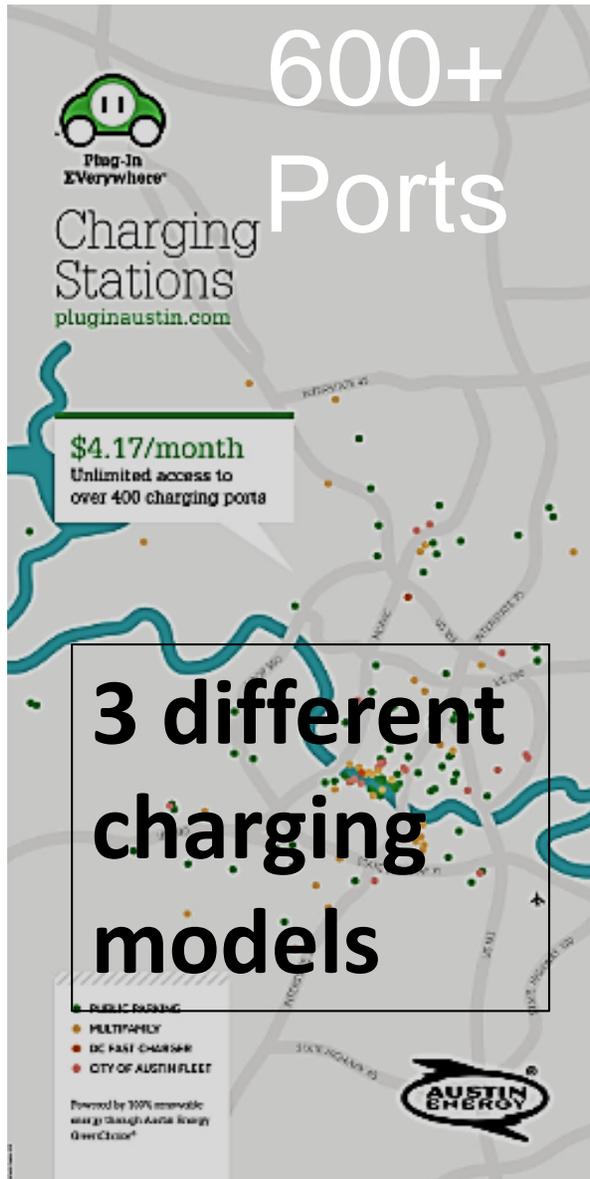
- 618 EV charging ports
- 180 locations
- 4,000+ area EV vehicles

## Steep Climb:

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

**EV's = lower GHG + cost + energy use**

# Convenient, Clean & Affordable



600+ Ports

Plug-In EVerywhere<sup>®</sup>  
Charging Stations  
pluginaustin.com

\$4.17/month  
Unlimited access to over 400 charging ports

**3 different charging models**

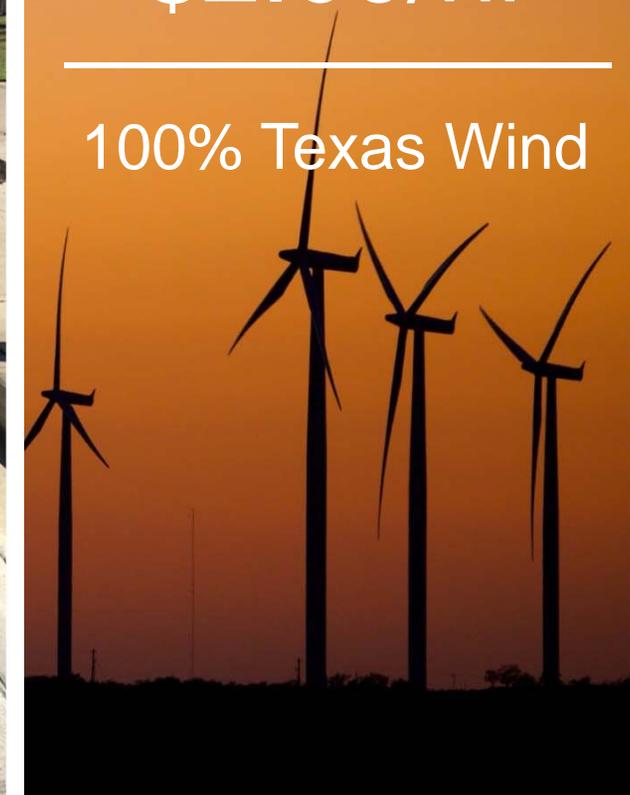
- PUBLIC PARKING
- MULTIFAMILY
- DC FAST CHARGER
- CITY OF AUSTIN FLEET

Powered by 100% renewable energy through Austin Energy GreenChoice<sup>®</sup>



\$4.17/mo  
or  
\$2.00/hr

100% Texas Wind



# Electric Vehicles Next Steps

Fleets: early EV adopters,  
Lower Operating costs by 2020

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

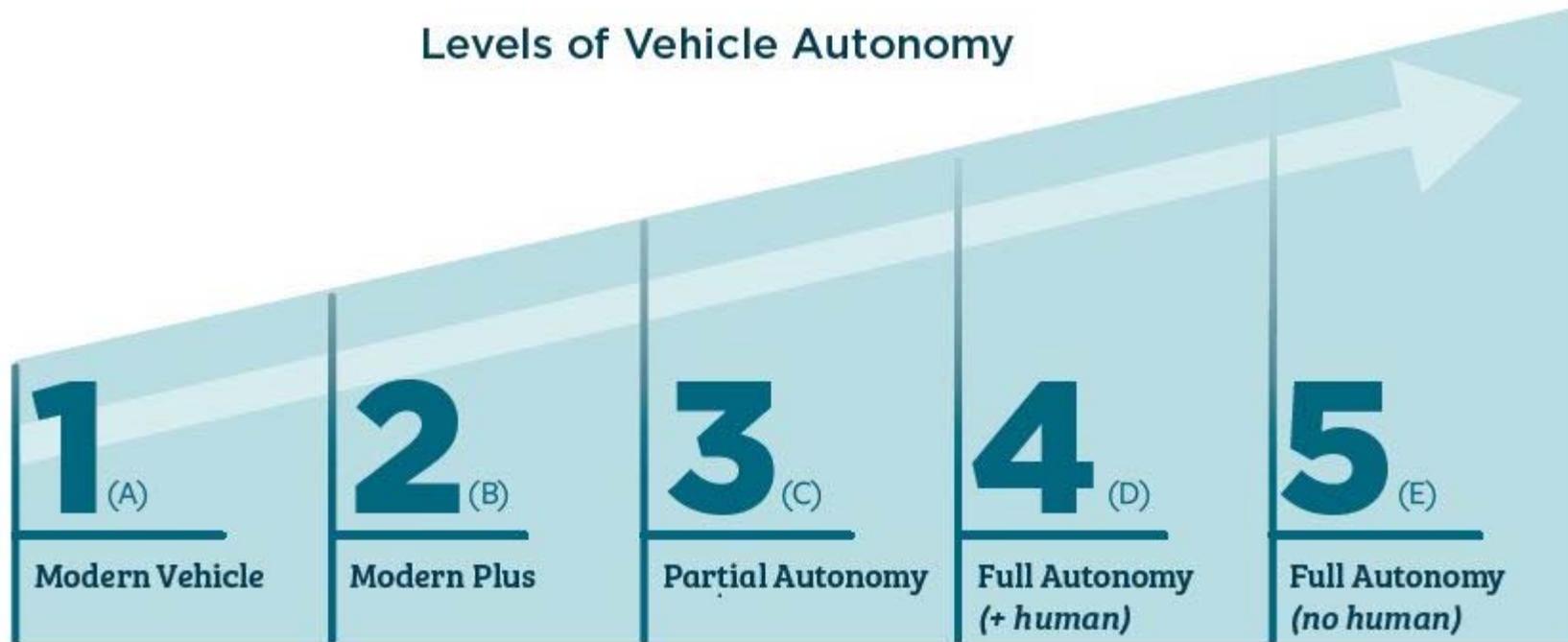


## Next Steps:

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

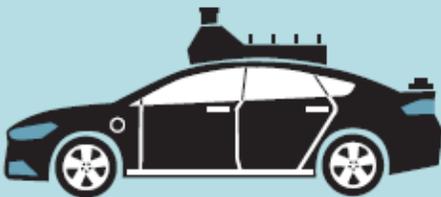
# Autonomous Vehicles

## Levels of Vehicle Autonomy



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

Taxibot



Deliverybot



Driverless Shuttle



Software Train



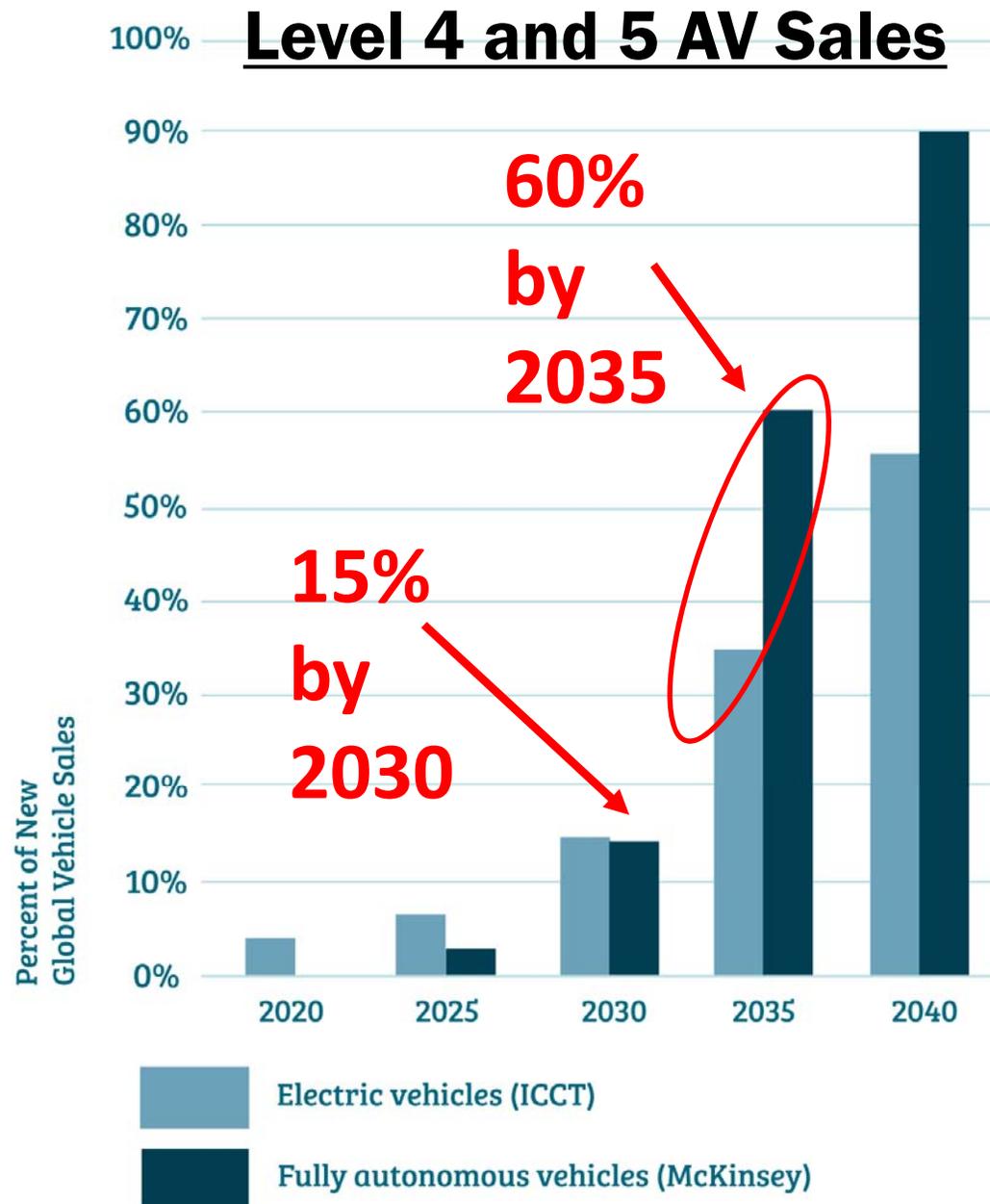
# Autonomous Vehicles

 **Gap between EV and AV adoption**

## Next Step:

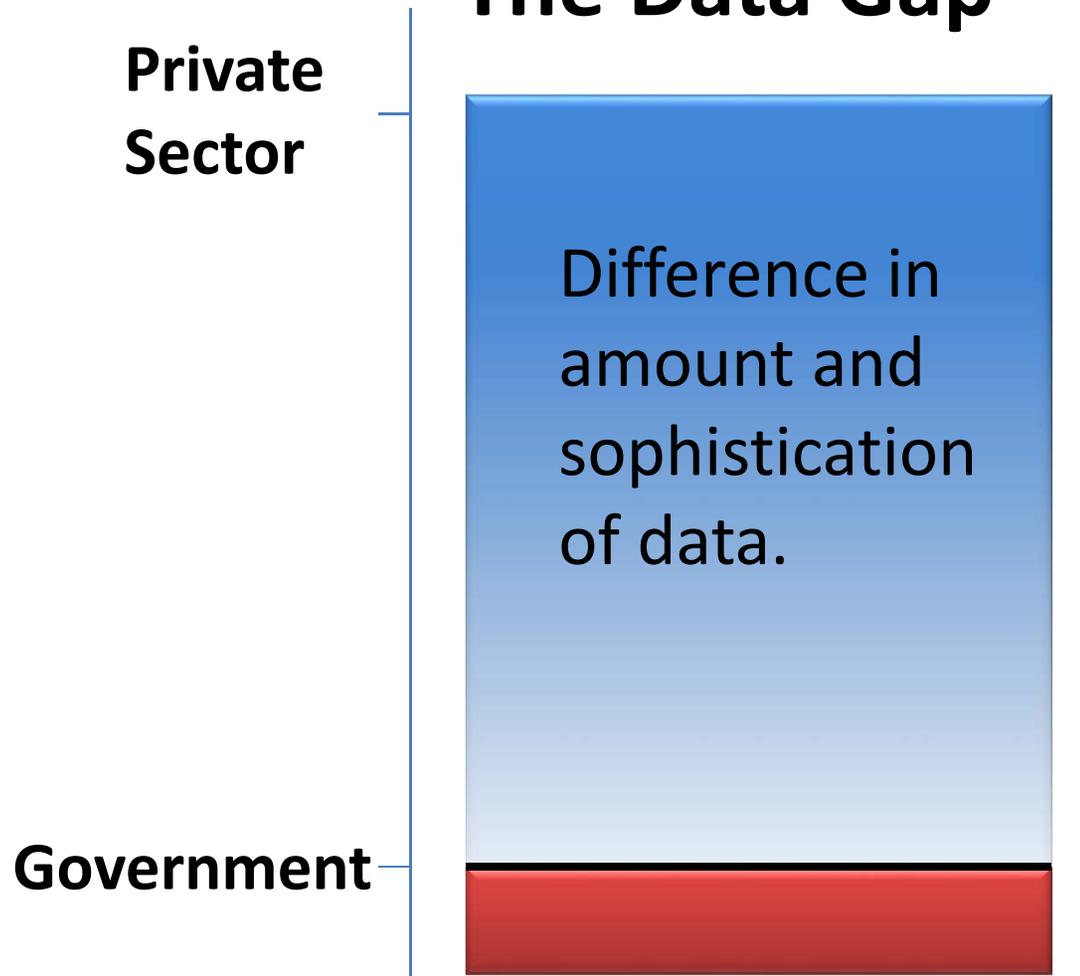
- Develop a Master Plan for emerging E-AV technologies and services to pursue, keep it human centered

Projections of Electric and Fully Autonomous Vehicle Sales



# 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

Imagine Austin – “compact and connected” 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

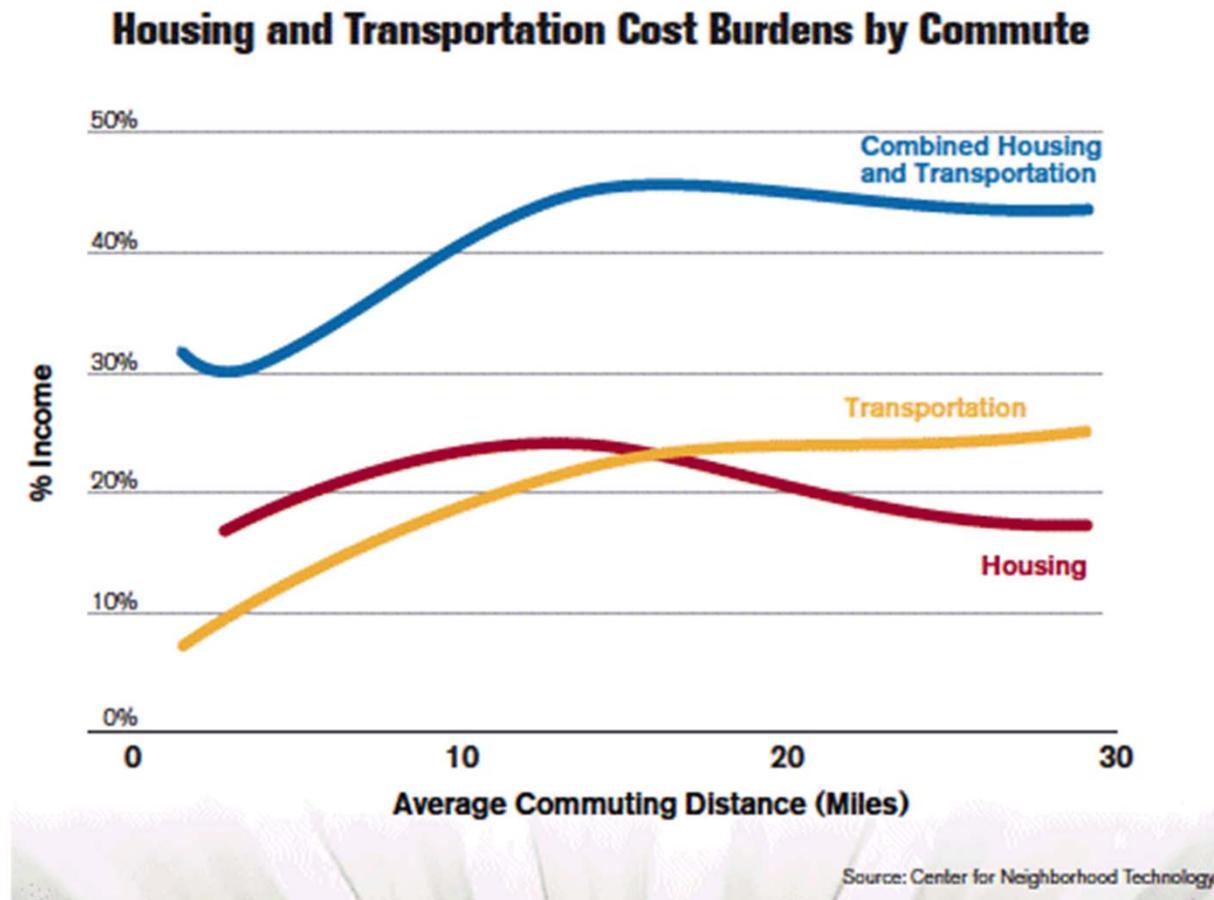


## Current Pilots

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

Community Care + Ride Austin piloting free transport to health care

# Impacts on Affordability



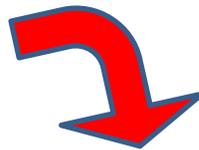
Study: Costs saved on housing 12+ miles from jobs/city center is wiped out by transportation costs Housing and Affordability Index.

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

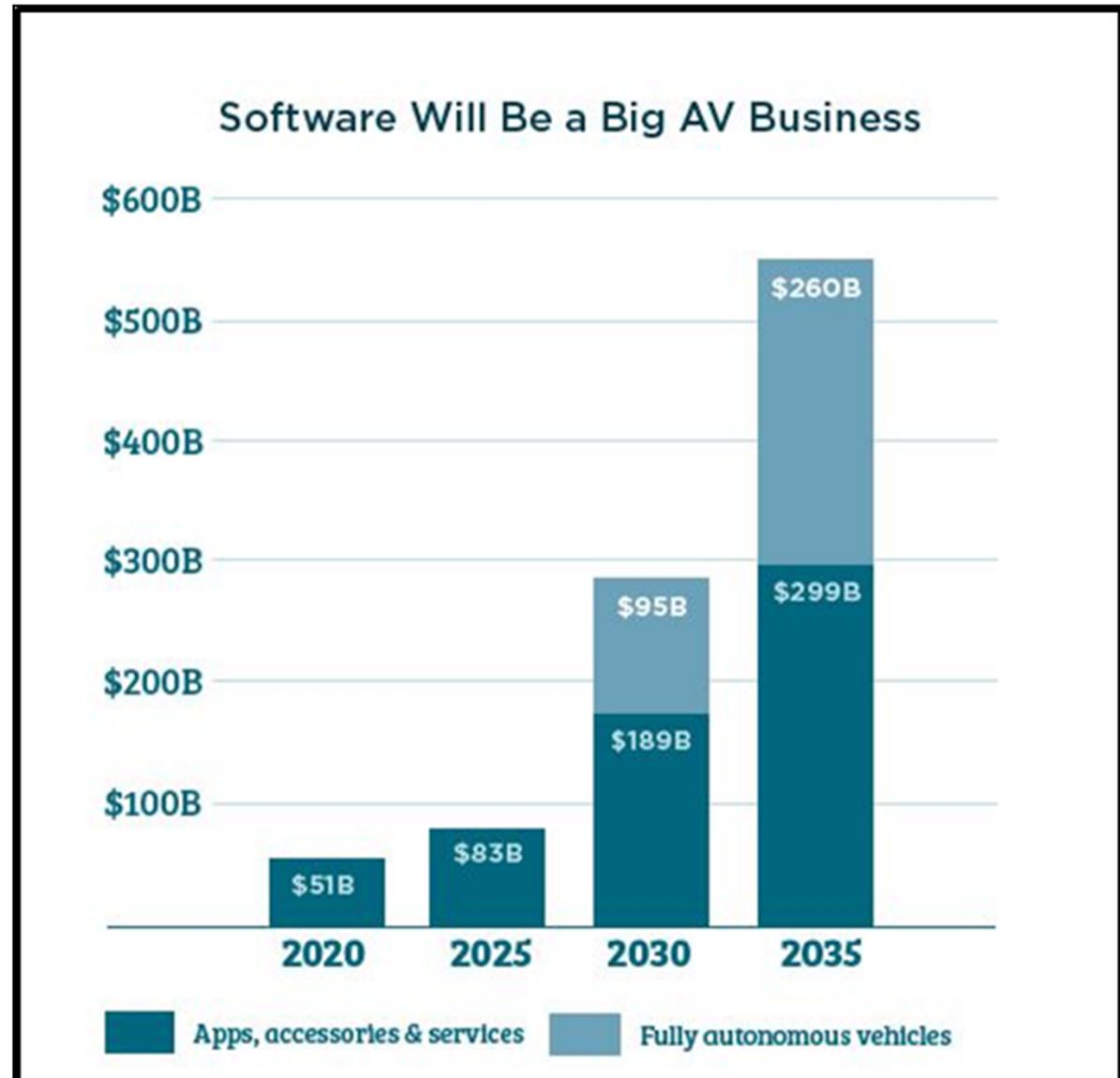


# Future of Austin - Workforce

Austin is a software and technology leader

## Next Steps:

- Create Public-Private Workgroup
- Initiate Educational Task Force



# 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](http://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

