

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



Joint Sustainability
Committee

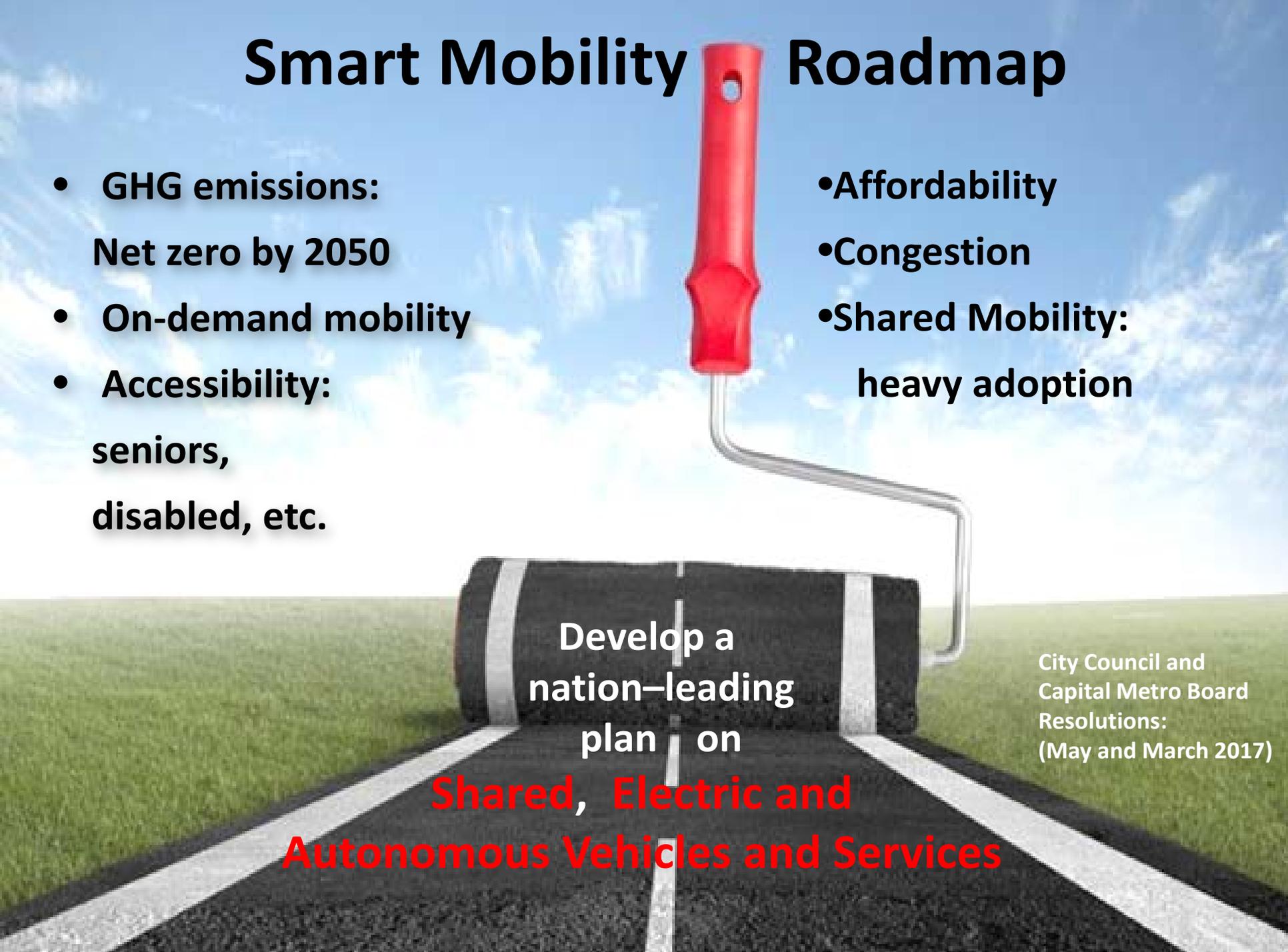
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November 2017

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

IMAGINEAUSTON
Vibrant. Livable. Connected.



Connections
2025



Technology Doesn't Change Geometry

TODAY



40 human-driven cars

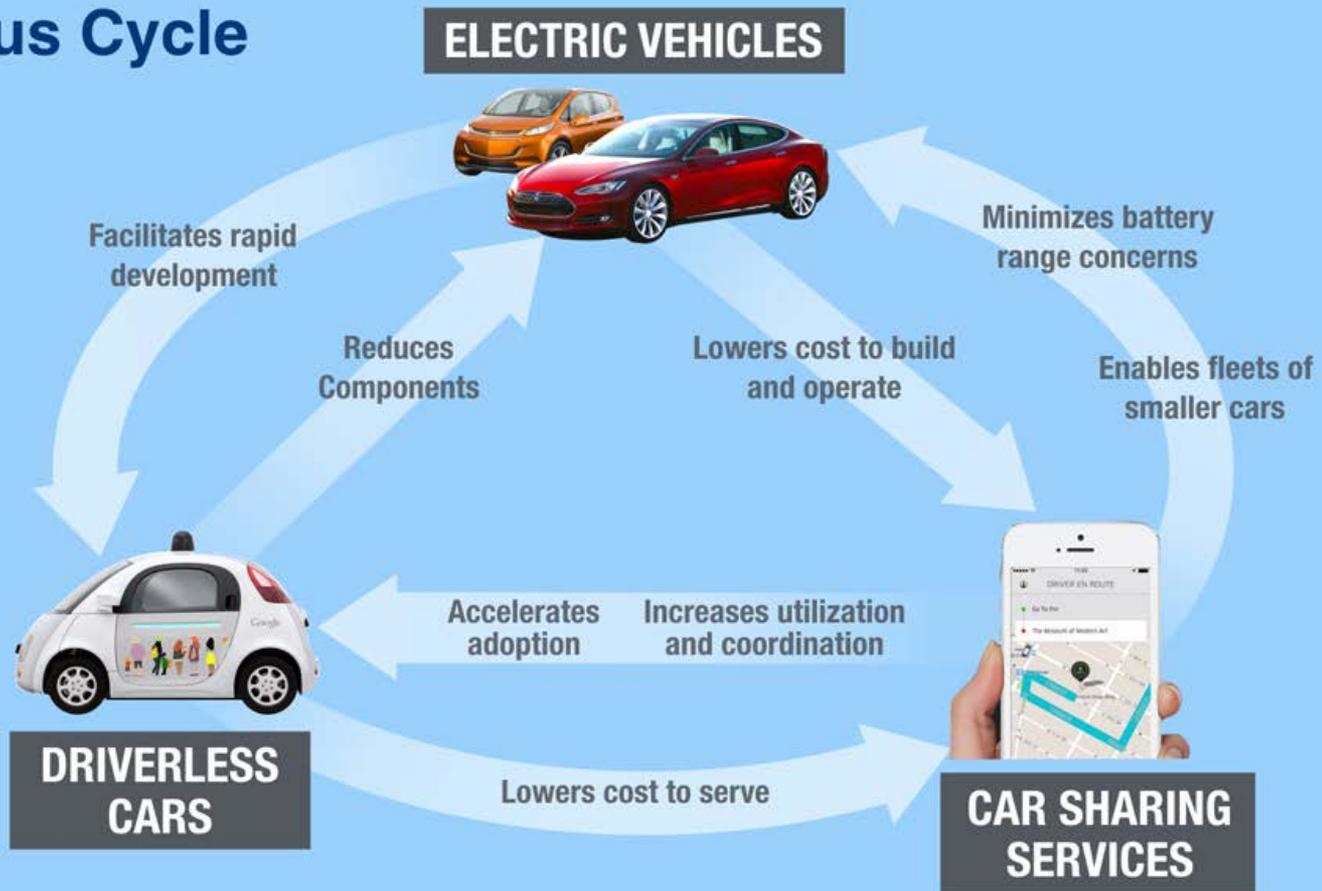
TOMORROW



40 self-driving cars

Convergence of Technologies

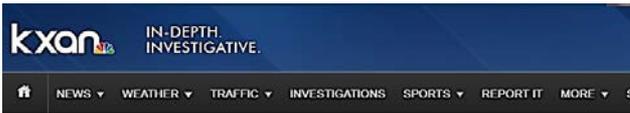
A Virtuous Cycle



Next Steps:

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

Why all 3?



Austin welcomes self-driving cars with new resolution



By Amanda Brandeis

Published: March 2, 2017, 7:10 pm | Updated: March 2, 2017, 8:26 pm



TRANSPORTATION

Friday, March 3, 2017

Council looks forward to robot car future

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1. Shared

2. Electric

3. Autonomous

Congestion
Relief

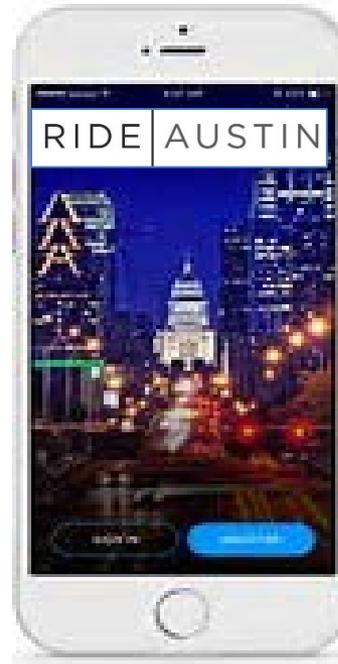
Clean Air &
Climate
Protection

Safety

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.”

Next Steps:

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

— Bloomberg Philanthropies-
Aspen Institute

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



\$4.17/mo
or
\$2.00/hr

100% Texas Wind

10

Austin's "Electric Drive" Showcase



1st Place



Winner



Electric Vehicles Next Steps

Fleets: early EV adopters,
Lower Operating costs by 2020

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

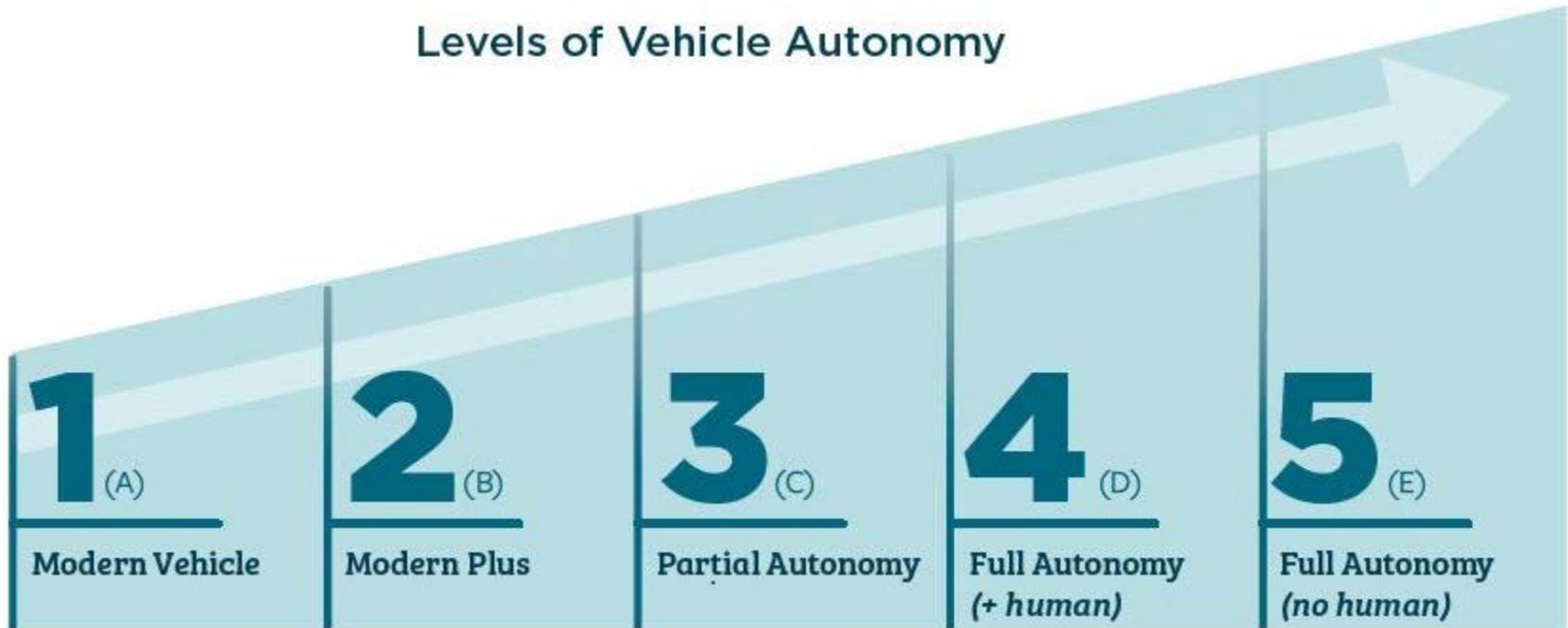


Next Steps:

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

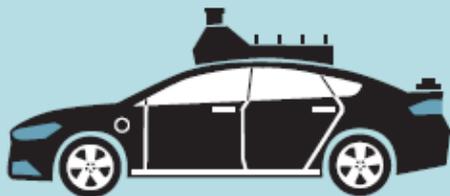
Autonomous Vehicles

Levels of Vehicle Autonomy



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

Taxibot



Deliverybot



Driverless Shuttle



Software Train



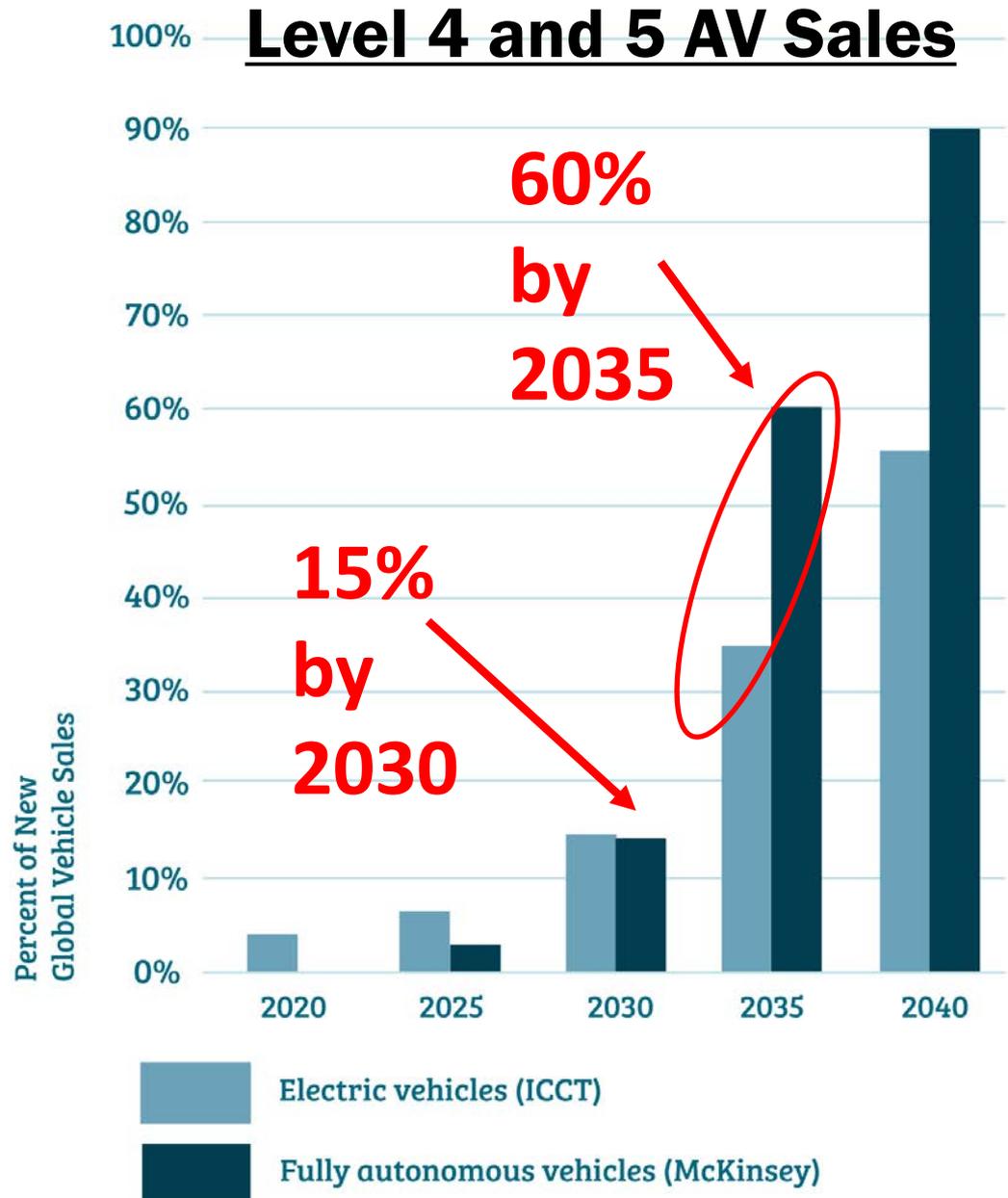
Autonomous Vehicles

 **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

**Private
Sector**

Difference in
amount and
sophistication
of data.

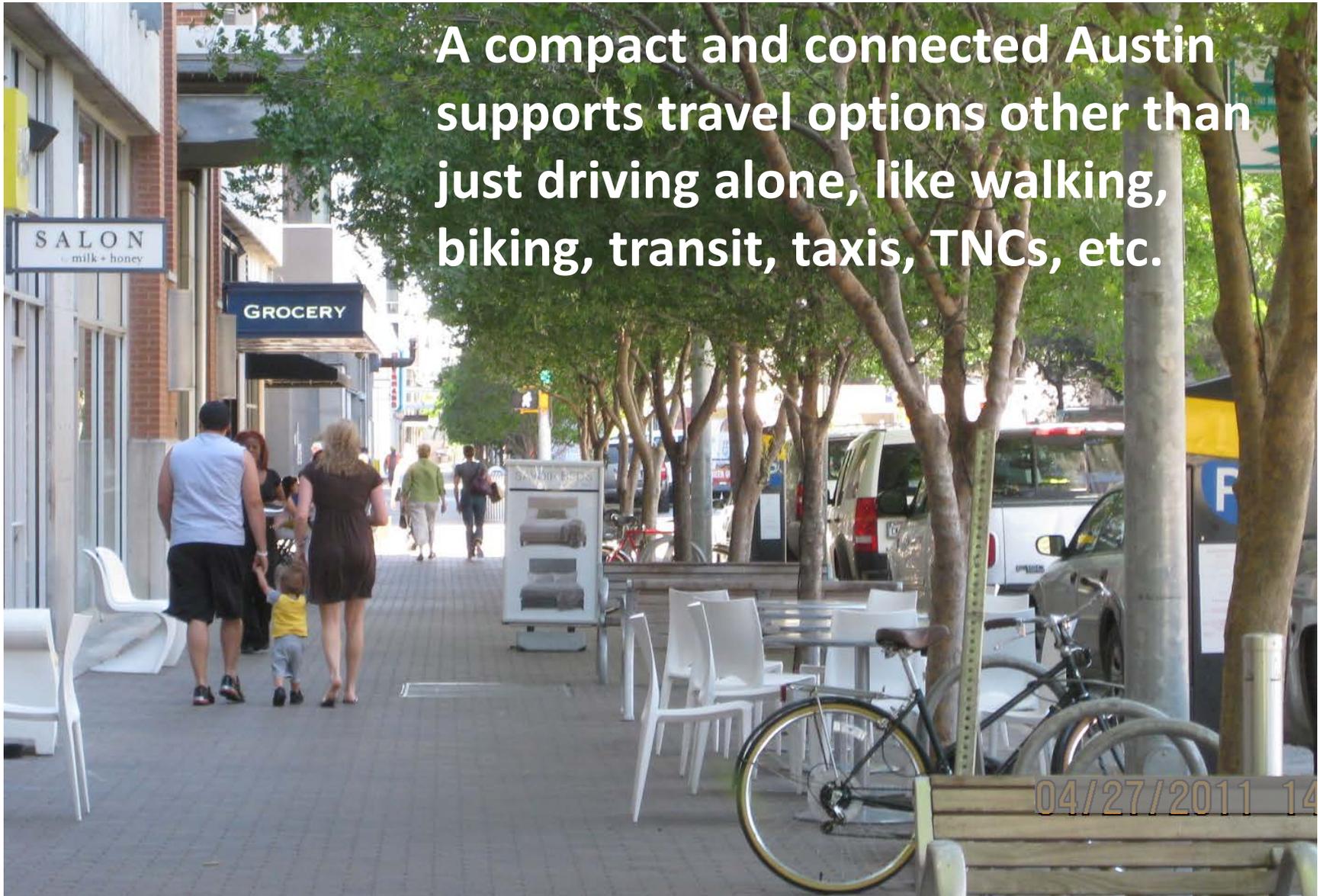
Government

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 Austin - Equity

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

More pilots with pricing incentives are needed

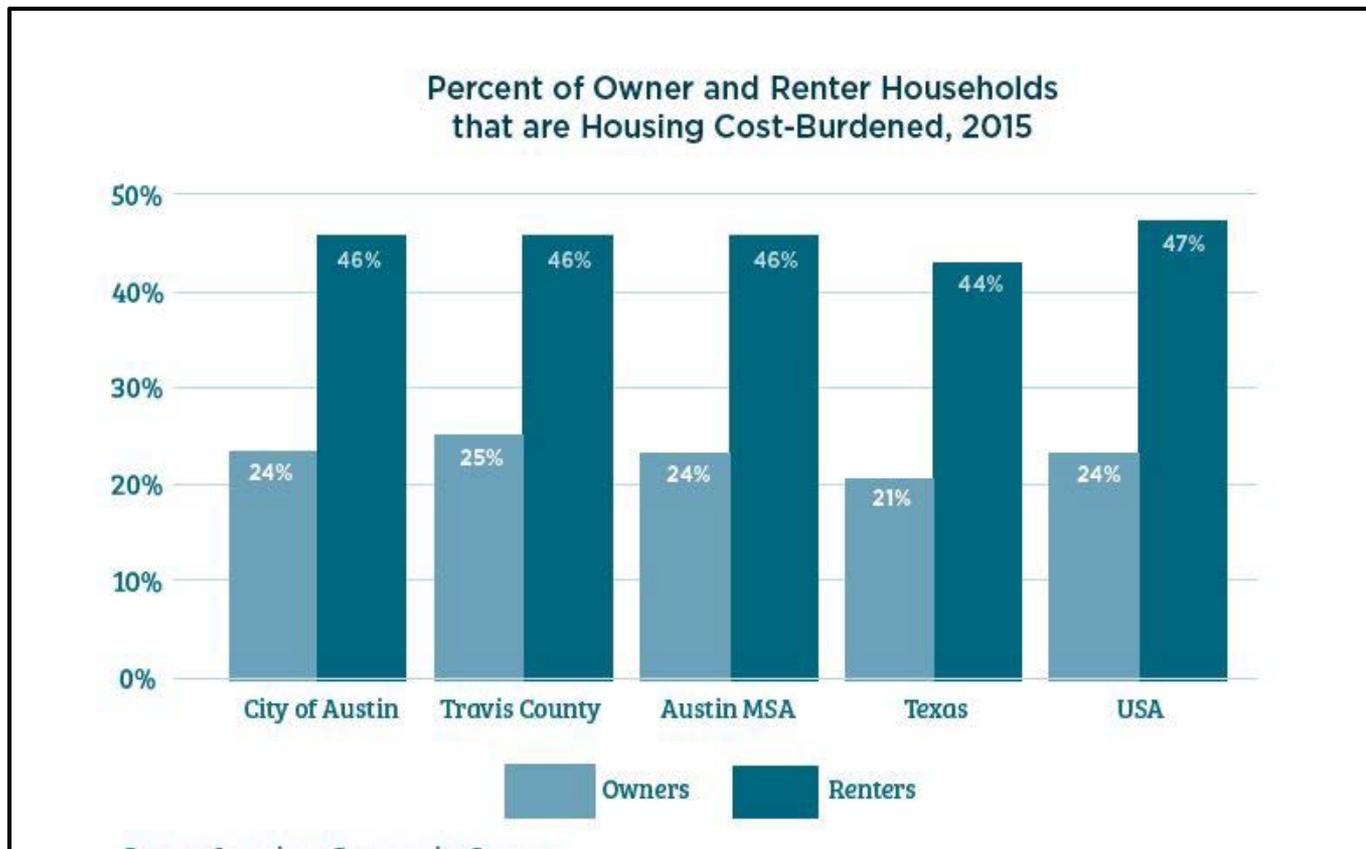


Current Pilots

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

Community Care + Ride Austin piloting free transport to health care

Impacts on Austin - Affordability



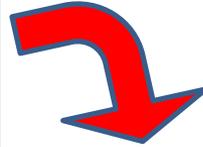
Study: Costs saved on housing 12+ miles from jobs/city center is wiped out by transportation costs Housing and Affordability Index.

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

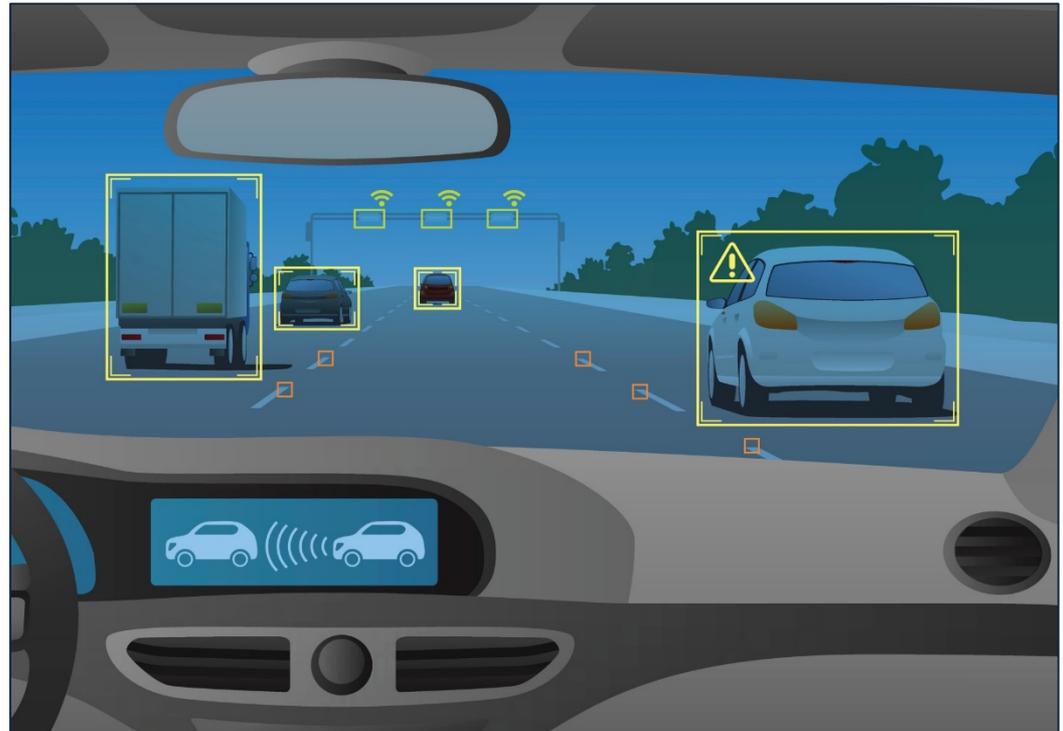
Impacts on Austin - Safety



Today: 94% of crashes caused by human error



Future: 80% of crashes can be reduced through automation

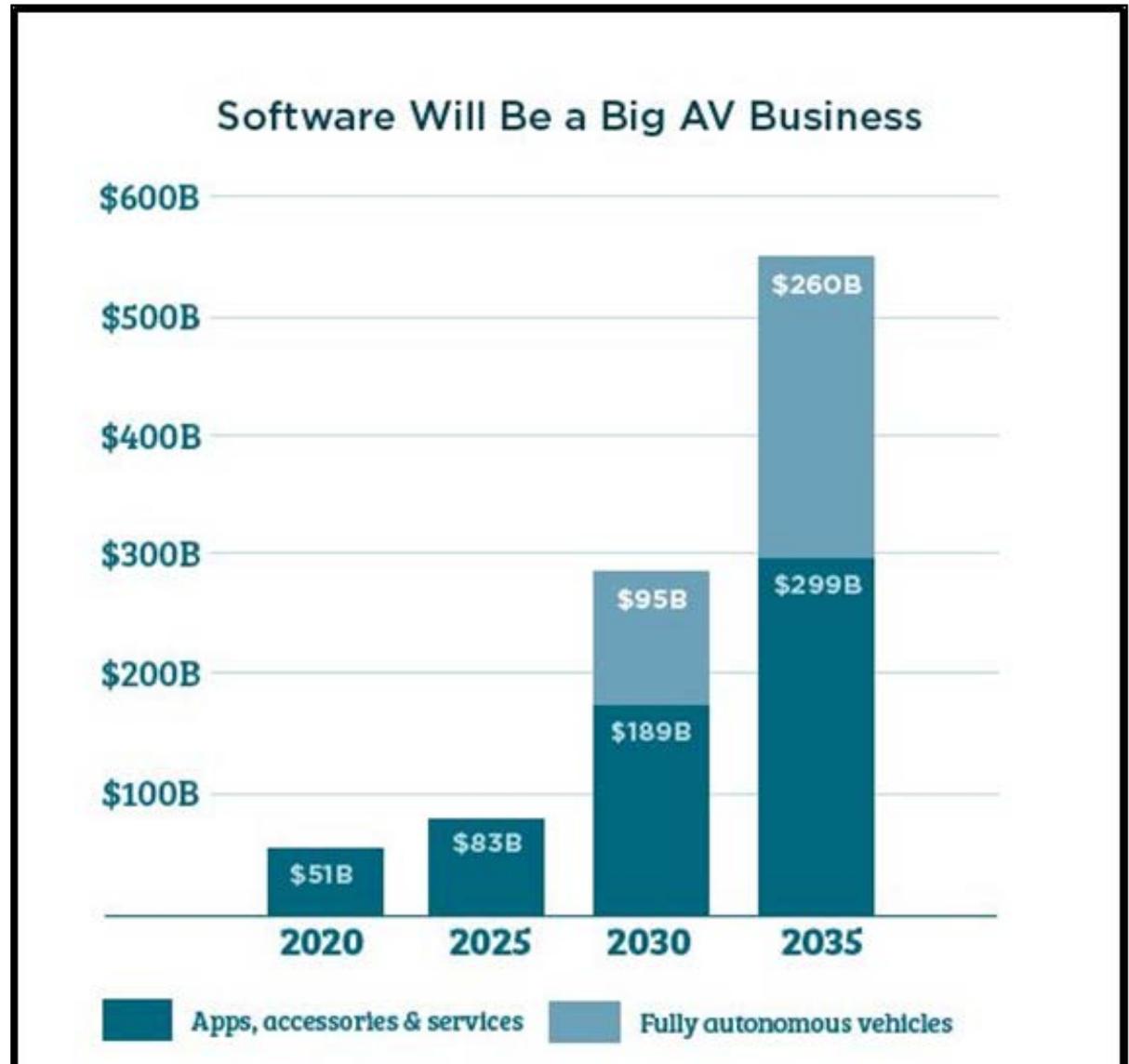


Future of Austin - Workforce

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
- 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?