



# Auto Industry Outlook Summary

AutoPacific, Inc.

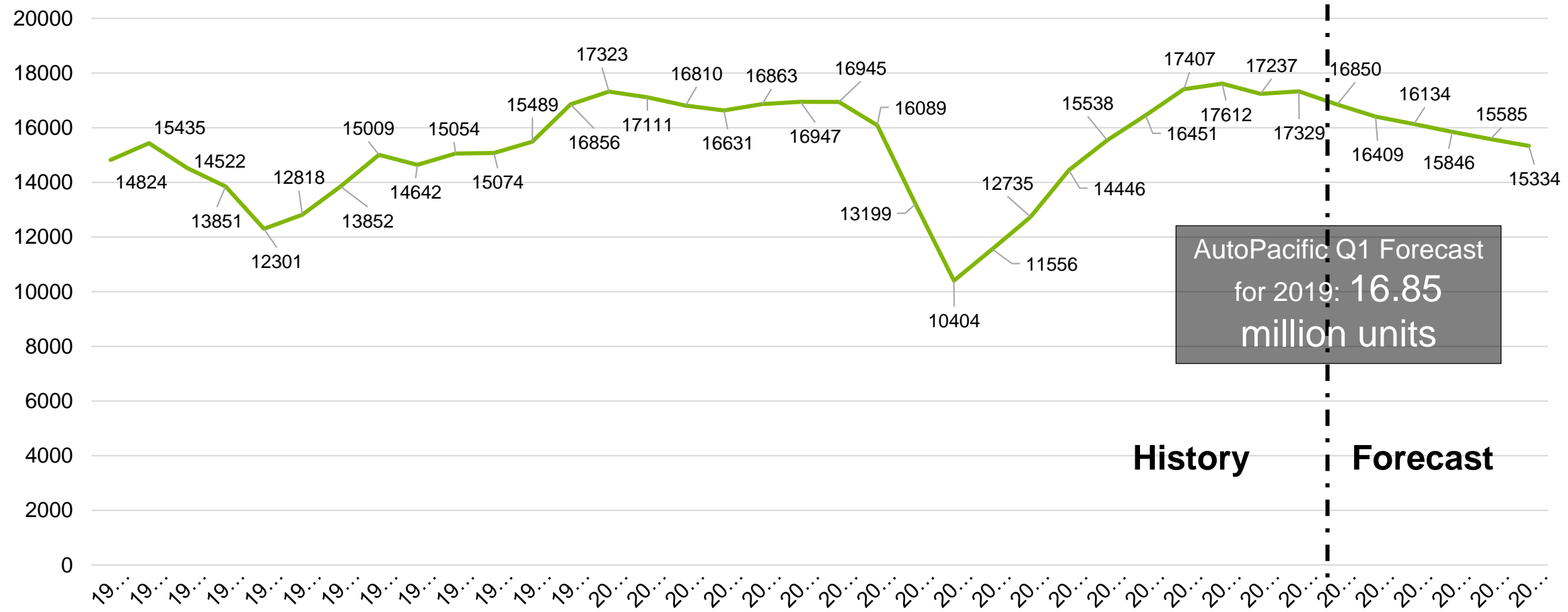
Tuesday, March 5, 2019

# AutoPacific Sales Forecast Through 2024

Q1 2019 AutoPacific Sales Forecast



U.S. Light Vehicles Sales History and Forecast



AutoPacific Q1 Forecast  
for 2019: 16.85  
million units

History

Forecast



# Pent-Up Demand Has Been Fulfilled, Leading to Industry Volumes Trending Downward Since 2017



- Volume decline already in progress, following strong growth up to 2016.
  - Growth was due to pent-up demand and economic recovery following the recession.
  - Volume decline is not in and of itself a sign of a troubled economy; the market is returning to “normal”.



# Demographic Shifts Also Contribute to the Overall Decline of Industry Volume

- While young adults have finally become a major force within the new vehicle market, they have been entering at a later age.
  - A tough job market in the years following the recession made new vehicles unaffordable to many young adults until recently.
  - Alternatives to vehicle ownership are more compelling and feasible than ever, further delaying their entry into the new vehicle marketplace.
- The oldest Baby Boomers are retiring, getting onto fixed incomes, and will be acquiring new vehicles less frequently.



# Longer Loans Are Also Hurting Light Vehicle Volumes

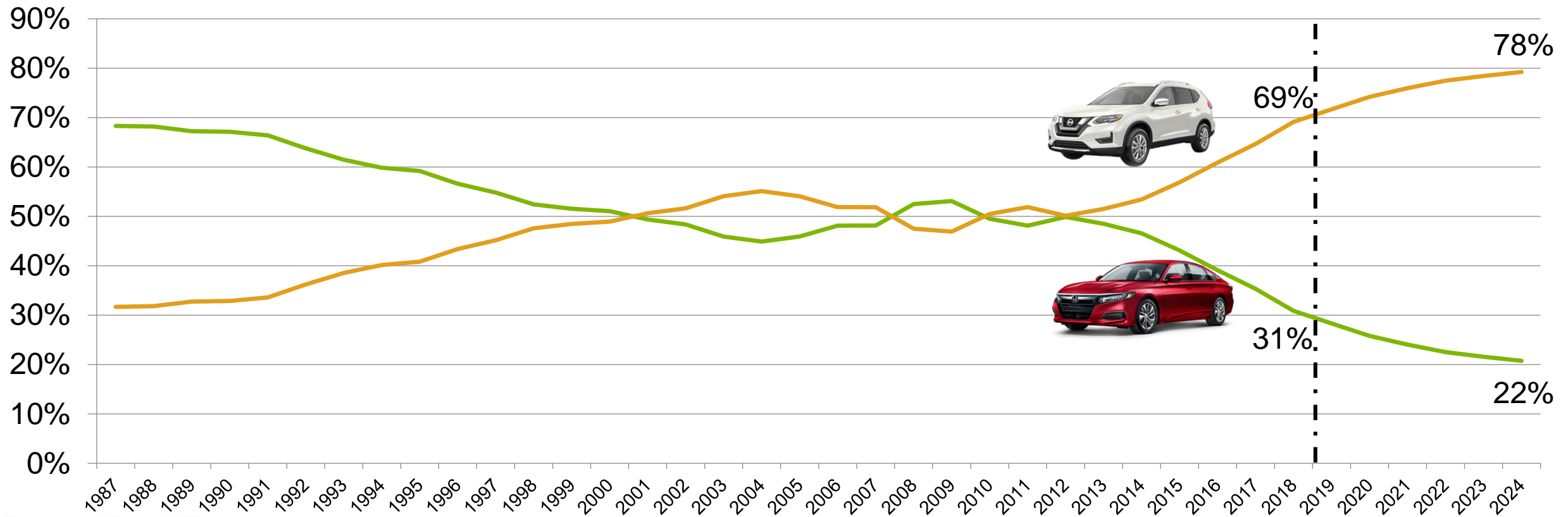


- Interest rates are rising, ultimately reducing consumers' purchasing power.
- Higher transaction prices mean longer loans for those who finance – meaning consumers are upside down on their loans longer and cannot replace their vehicles as frequently.
  - Today, three-quarters of all new vehicle loans are more than five years.
    - 72 months is the most common loan term (24% of market vs. 10% in 2008).
    - 84 and 96 month loans are continuing to become more and more common.
  - AutoPacific's latest NVSS data show that the median price of a new vehicle today is \$35,000!
  - Dropping used car values (glut of lease returns) also contribute to negative equity too.

# Trucks Will Continue to Gain at Cars' Expense





















- Migration to trucks shows no sign of ending; today's most popular "cars" are classified as trucks.
- For the majority of new vehicle consumers today, trucks are better cars than cars, and technology has brought crossover SUV fuel economy within spitting distance of comparable passenger cars.

## Passenger Car vs. Truck Mix





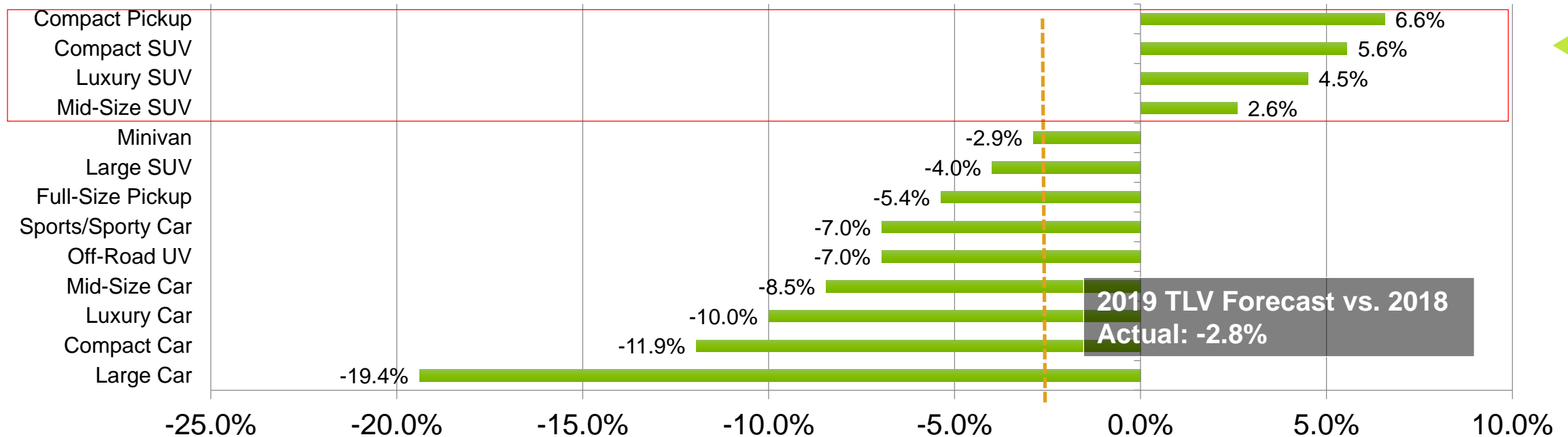
# Technology Has Enabled SUVs to Thrive

<b>2019 Ford Fusion FWD</b> <span>X</span>   1.5 L, 4 cyl, Automatic (S6), Turbo MSRP: \$22,840 - \$34,340 <b>Regular Gasoline</b>  <b>27</b> <b>MPG</b> 23 34 combined city highway city/highway 3.7 gal/100mi  <b>Gasoline</b>  446 miles Total Range	<b>2019 Ford Escape FWD</b> <span>X</span>   1.5 L, 4 cyl, Automatic (S6), Turbo MSRP: \$24,105 - \$32,620 <b>Regular Gasoline</b>  <b>26</b> <b>MPG</b> 23 30 combined city highway city/highway 3.8 gal/100mi  <b>Gasoline</b>  408 miles Total Range	<b>2019 Audi A4 quattro</b> <span>X</span>   2.0 L, 4 cyl, Automatic (AM-S7), Turbo MSRP: \$42,000 - \$50,800 <b>Premium Gasoline</b>  <b>27</b> <b>MPG</b> 23 34 combined city highway city/highway 3.7 gal/100mi  <b>Gasoline</b>  413 miles Total Range	<b>2019 Audi Q5</b> <span>X</span>   2.0 L, 4 cyl, Automatic (S7), Turbo MSRP: \$42,950 - \$53,850 <b>Premium Gasoline</b>  <b>24</b> <b>MPG</b> 22 27 combined city highway city/highway 4.2 gal/100mi  <b>Gasoline</b>  444 miles Total Range
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- Earlier this decade, unstable fuel prices caused SUV sales to crash while passenger car mix soared.
- This is not likely to happen again because:
  - Fuel prices have been trending upward, but slowly this time. AutoPacific's research shows that consumers change buying behavior when fuel prices are unstable.
  - Technology has brought SUV fuel economy closer to parity with passenger cars.

# Consequently, Only Trucks Are Growing Sales This Year

## Segment Performance: 2019 Forecast vs. 2018 Actuals



- As total light vehicle volumes are declining, most vehicle segments will see a volume decline in 2019.
- The exceptions are four truck segments.
  - SUV segment bookends are both expected to grow this year.
  - Mid-Size SUVs continue to draw from former mid-size sedan owners.
  - Much action in the small pickup space with Ford Ranger and Jeep Gladiator joining the segment this year.

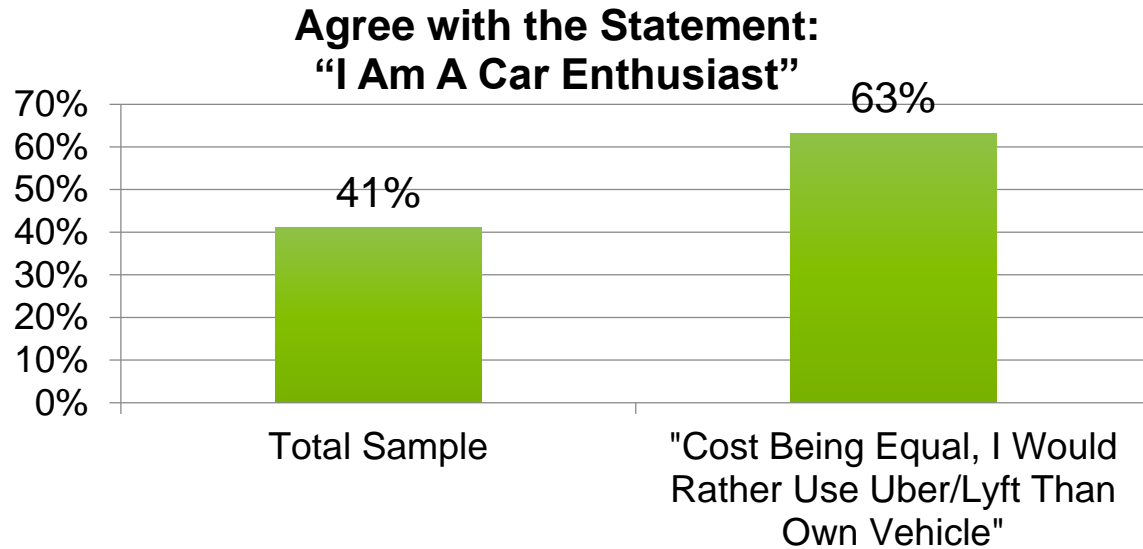


# Impact of Ride Hailing Autonomous Vehicles?



- Autonomous vehicles proliferation will go hand in hand with growing deployment of ride hailing services, but ride hailing (with human drivers) will have a stronger and more immediate impact on the industry.
- In dense urban centers, ride hailing services aim to be cheaper and more convenient than car ownership.
- However, the proliferation of autonomous ride hailing cars will take quite some time.
- Privately owned, self-driven vehicles are not going away anytime soon, and industry sales volumes will not feel a negative impact from autonomous ride hailing vehicles in the near term.

# Still, We're Witnessing Changing Attitudes Towards Driving



- In dense areas, even car enthusiasts don't find traffic jams fun; that's NOT driving.
- Also, young adults do not have the same connection or enthusiasm for cars and driving as prior generations when they were young.
  - They got into vehicle ownership later than prior generations due to recession, student debt, and increasingly viable alternatives to vehicle ownership.

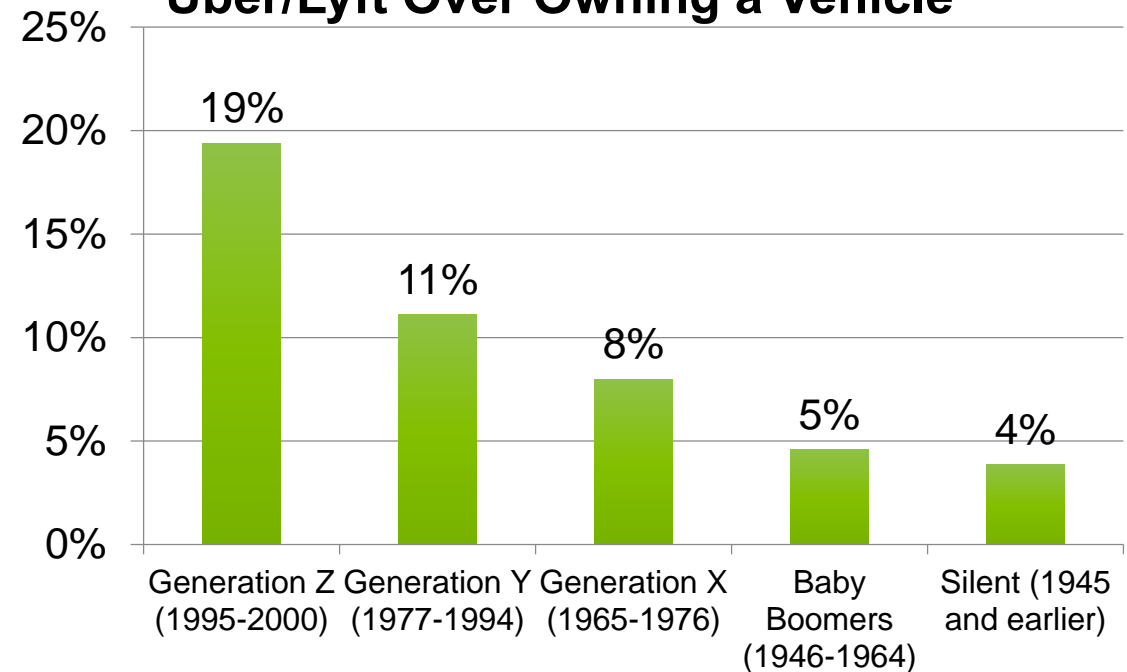
Source: AutoPacific 2018 New Vehicle Satisfaction Study

# Changing Attitudes Towards Ownership

- People are getting accustomed to paying for access rather than owning outright.
  - Leasing continues to grow.
  - Netflix
  - Spotify
  - Turo
  - AirBnB
  - Renting instead of buying real estate
- There is an inverse relationship between comfort with paying for access instead of owning and age.



## “Costs Being Equal, I Would Prefer Uber/Lyft Over Owning a Vehicle”

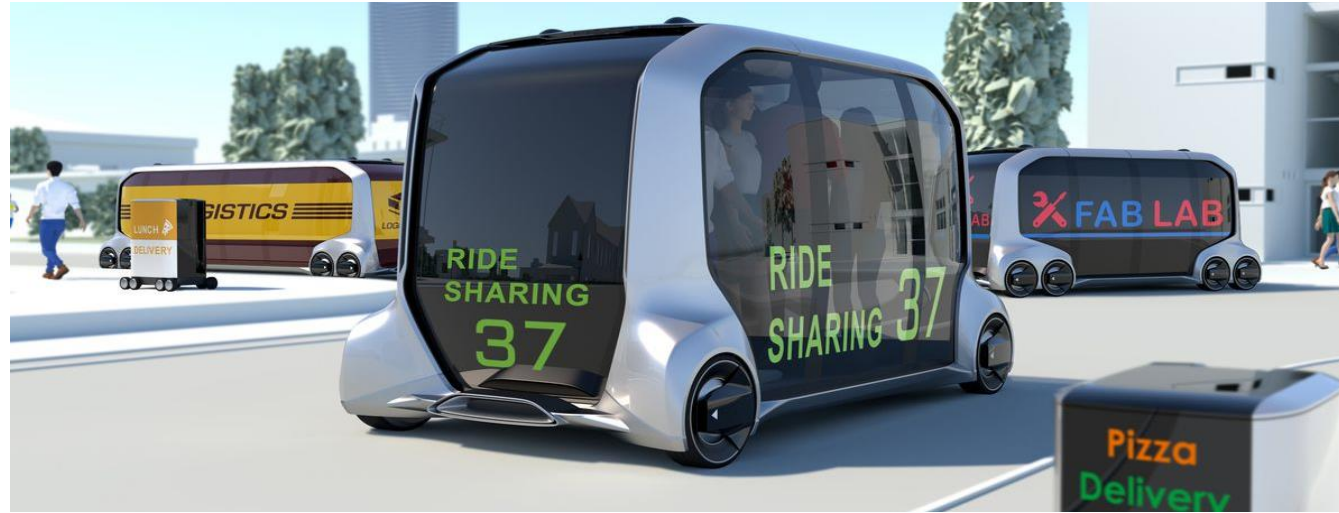


Source: AutoPacific 2018 New Vehicle Satisfaction Study

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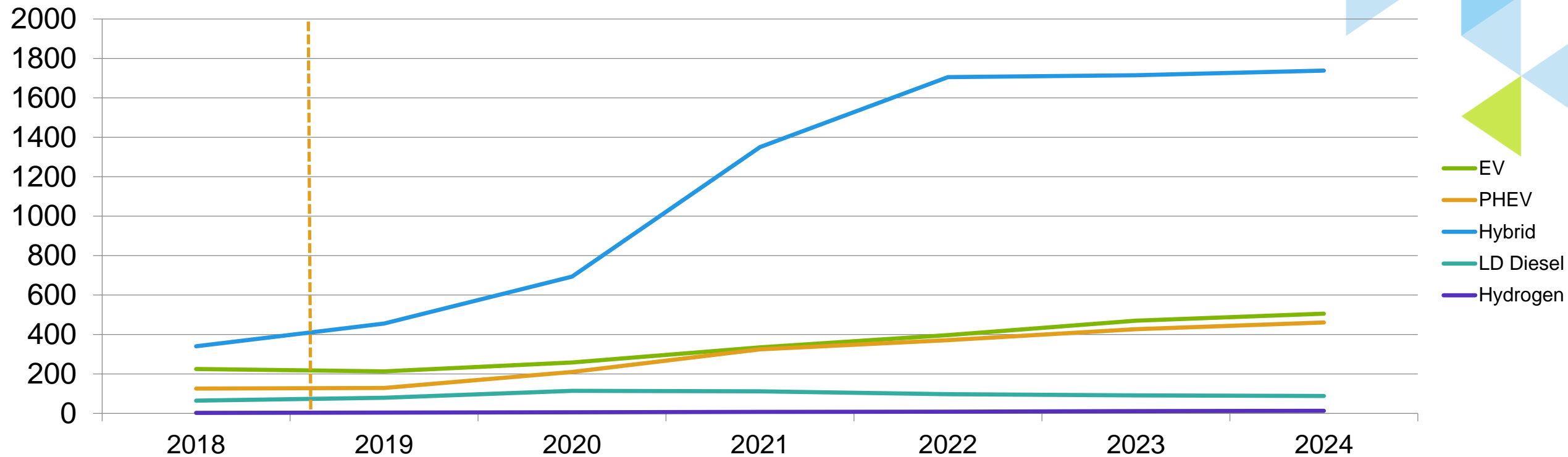
# So, Paying for Access to On-Demand Autonomous Transportation Isn't Far Fetched, But It's Still Years Away



- With attitudes towards ownership changing, it's not a stretch to apply the idea to automotive.
- Uber, Lyft, and other ride hailing services are already blazing the trail in automotive.
  - Currently an alternative to taxis.
  - In the future, autonomous technology will bring costs down, making them increasingly viable alternatives to vehicle ownership – and ultimately cheaper than owning a vehicle.
- However, transitioning from human-driven privately owned cars to shared autonomous transportation will take many, many years to realize.

# Alternative Powertrain Sales Are Growing, But a Fully Electric Future is Still a Ways Off

## Q4 2019 Alternative Powertrain Forecast



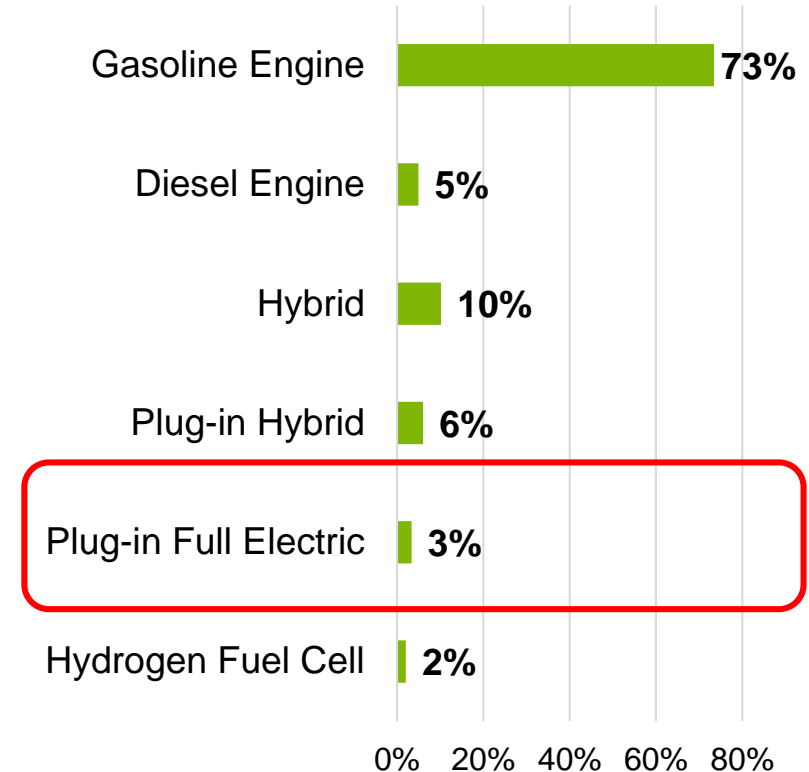
- Despite an overall decline in industry volume, hybrid sales are forecast to grow dramatically, especially as mild hybrids make a big comeback.
  - That growth rate is temporary as 48v mild hybrids are more of a stopgap and won't be a growth segment for long.
- ***EV sales growth is strong in percentage terms but not in terms of absolute volumes, with 2024 sales around half a million (still well over double 2018's volumes).***

# Range Improvements are Making BEVs More Ready for the Mainstream, But They Are Still Years From Replacing ICE Vehicles

- Range improvements reduce range anxiety – one of the primary reasons people reject BEVs
- Makes driving an BEV a more “normal” experience.
  - This was critical in the early success of hybrids; hybrids were seamless in operation and did not require drivers to make big changes in routine
- Still, overall consumer consideration for EVs remains modest as cost and required behavioral changes deter mainstream consumers, making widespread adoption still many years away.



**Next Vehicle Engine Type Desired**



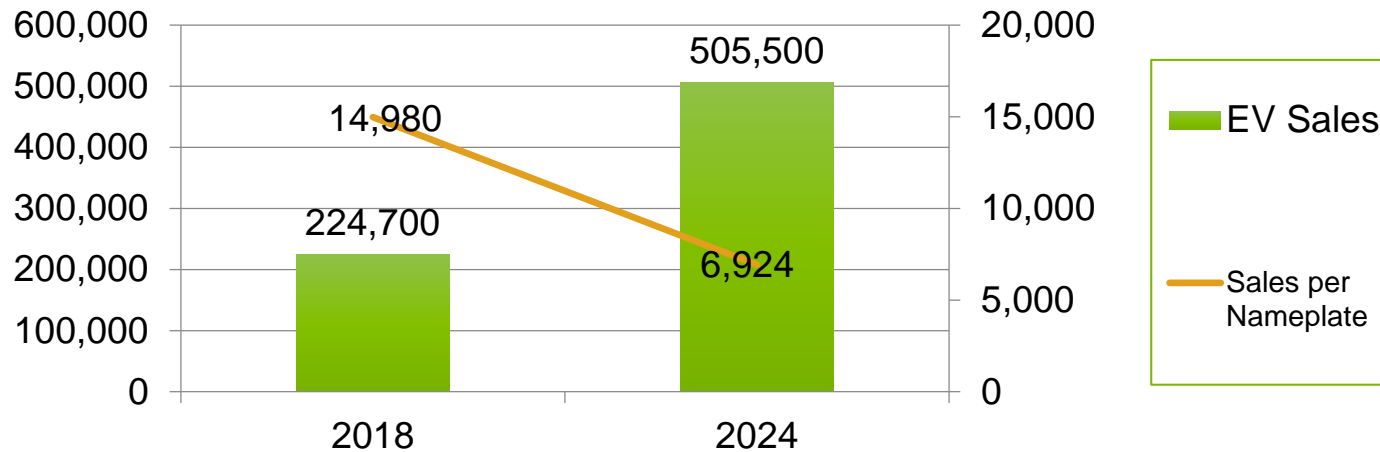
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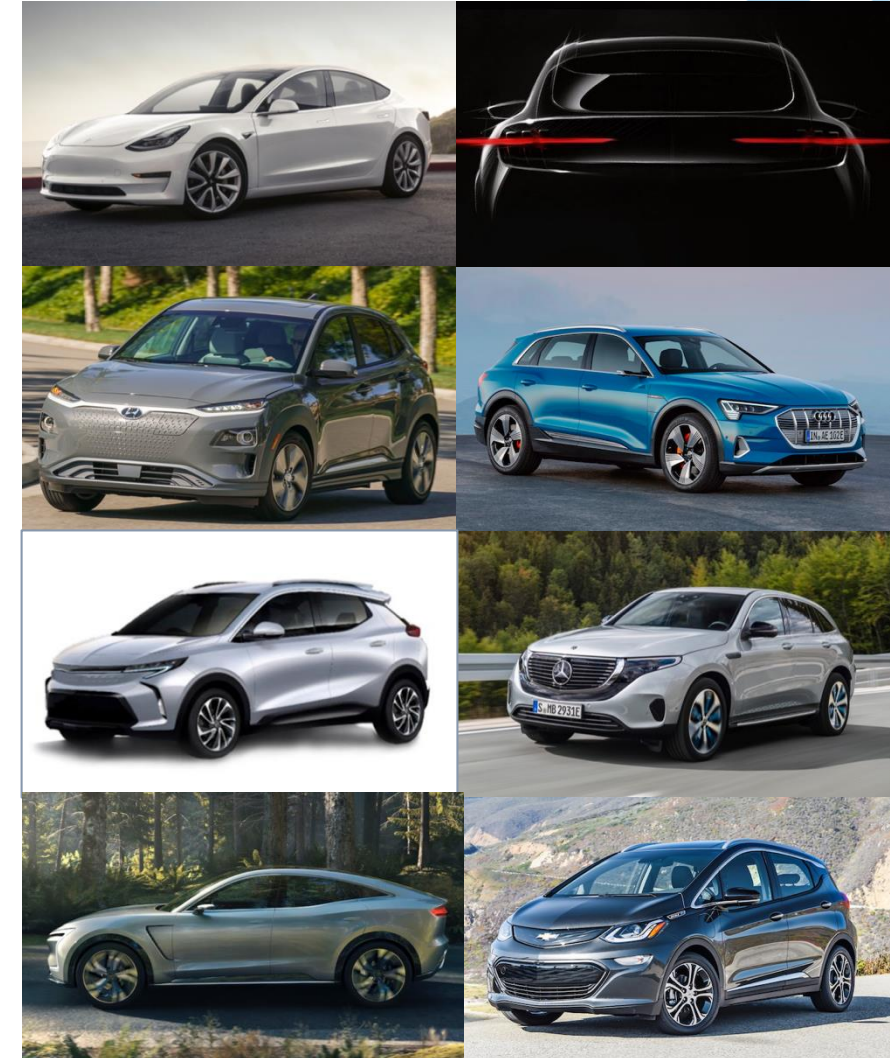


# Consumers Will Soon Have an Abundance of EV Offerings in the Market; Will Choice Exceed Demand?

EV Volume and Sales/Nameplate Forecast



- The next few years will be a very exciting time for EV fans as there will be a massive amount of choice in the next few years.
  - Tesla will finally have lots of competition from most luxury brands.
  - Mainstream brands will also be launching numerous EVs at popular price points.
- HOWEVER:
  - In 2018, there were 15 EV nameplates on sale.
  - In 2024, there will be at least 73 EV nameplates on sale!
- This means a smaller average piece of the pie for each entry.



Source: AutoPacific 2018 New Vehicle Satisfaction Study

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## In Summary...

- Massive changes are coming to the auto industry, and Silicon Valley is a big part of that change.
- However, not only is the auto industry slower to change than the tech industry, but AutoPacific's data also consistently show that mainstream consumers are also resistant to rapid change.
  - The sheer cost of a new vehicle, compared to personal technologies, contributes to consumers' generally greater conservatism when it comes to automobiles.
- This is why the move to electrification and autonomy are not overnight developments.
- Technology applied in ways that result in tangible and cost effective consumer benefits speed up adoption of new ideas. Maintaining a razor sharp focus on consumer needs is key when developing new ideas and technologies.

# AutoPacific

*Authoritative Automotive Research and Insight*