Navigating an Autonomous Future

Prepared for the Federal Advisory Committee on Insurance (FACI)

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Mike Nelson
Partner
Meet the presenter

Mike Nelson
Partner, Eversheds Sutherland

Mike Nelson has more than 35 years of legal, insurance and automotive regulatory experience at the state and federal levels. As automated driving technology has begun to disrupt the insurance and automotive industries, Mike has become involved in helping clients adapt their business strategies to embrace artificial intelligence and Highly Automated Vehicles (HAVs) and their impact on risk transfer and emerging legal concepts. His work in this area includes automotive products, insurance practices, auto repair processes, data accumulation, storage and transfer, and the impact of the internet’s interaction with the future of mobility. Mike owns two Level 2 automated vehicles; regularly attends hearings before the US Senate, the Department of Transportation, the NHTSA and the FTC; and attends industry events such as the Consumer Electronics Show. Mike also received training at the University of Michigan’s M-City course on Connected and Automated Vehicles.
Navigating an autonomous future

Level 2

Level 3

Level 4

Level 5
Who’s Responsible in a Fully Driverless Vehicle Crash?
(Based on U.S. survey responses)
Advances in safety and technology

- V2X Communication
  - DSRC
  - 5G mobile communications

- Solid-state LIDAR

- Electric vehicles
  - 2018 Nissan Leaf expected to have a range of 150 miles and will start at $30,000
    - 2019 Nissan Leaf expected to have a range of 230 miles
  - GM – all electric by 2030

- Hydrogen fuel cell
Consumer adoption and fleet adoption

End of 2017

Rumored to deploy thousands of self-driving cars in 2018

Self-driving on the highway by 2020

Highway by 2020; urban driving by 2030

Self-driving on the highway by 2020

2020 for autonomous cars in urban conditions; 2025 for truly driverless cars

Nearly fully autonomous by early 2020s – cars as well as freight trucks

Will reach Level 4 by 2021 – skipping Level 3

CEO expects there to be some self-driving vehicles on the road by 2021

Fully self-driving vehicles possible by 2021 – Level 4 or Level 5 is possible

Self-driving on the highway by 2021
Geo fencing and ring fencing

- Limit AVs to certain roadways
- Limit AVs to certain geographic areas
- Navya/Keolis bus – Las Vegas
Consumer adoption and fleet adoption

Millennials and centennials are driving driverless demand, study finds

Around a quarter of centennials (20.9 percent) and millennials (18.9 percent) trust complete autonomy.

AUTOLIST.COM – MAY 26, 2017
OEM – technology partnerships
GM – cruise automation

– Creation of fleet of battery-powered, self-driving Chevrolet Bolts
– Ready for consumer application in “quarters, not years”
  – GM President, Daniel Ammann
International adoption

- Laws and regulations drafted by foreign countries

Where?

Asia (predominantly China)  Europe  Australia

Successful use overseas

Change in politics and public perception at home
OEM – technology partnerships
GM – cruise automation

Graph courtesy of Navigant
OEM – technology partnerships

- Ford – Lyft
- Fiat/Chrysler – Google/Waymo
- GM – Cruise Automation – Lyft
- Uber – Daimler
- Mobileye – Intel
- Baidu – BlackBerry
- Uber – Volvo
- Lyft – Magna
OEM – technology partnerships
Lyft – Magna

Lyft, Magna in Deal to Develop Hardware, Software for Self-Driving Cars

Magna is also putting about $200 million into Lyft, joining other investors in a funding round.

A semi-autonomous vehicle in Holly, Mich. PHOTO: GRAHAM WALZER/BLOOMBERG NEWS

By Greg Bensinger
March 14, 2018 5:15 p.m. ET
Exclusive: Volkswagen in talks to manage Didi fleet, co-develop self-driving cars

Aditi Shah, Norihiko Shirouzu

BEIJING (Reuters) - Volkswagen AG (VOWGp.DE), the world's biggest automaker, is in talks to form a joint venture with China's Didi Chuxing to manage part of the ride-hailing company's fleet of cars and help develop "purpose-built" vehicles for Didi's services.
Consumer adoption and fleet adoption
Legal and regulatory framework

— Federal
  • Federal legislation, House and Senate
  • DOT/NHTSA
    • Release of revised, voluntary AV guidelines this coming summer
    • Seeks to eliminate “unnecessary obstacles to the development and integration of new technology”
    • Targeting revision of the FMVSS

— State-based laws and regulations
  • 33 states had passed something
    • Patchwork
  • Product liability and negligence law

— Body of law from other countries is evolving quickly
Navigating an autonomous future

New laws and regulations
International competition
Increased technology
Consumer adoption
Insurance

2018
2020
2025
2030
2035
2040

Level 2
Level 3
Level 4
Level 5

Eversheds Sutherland
Insurance

- Enhanced analytics
- Consolidation of insurers
- New entrants
- New alliances
- New insurance models (e.g., TNC – ridesharing insurance)
- InsureMyTesla (LMI)
- Care by Volvo (LMI)
Insurance

- "Care by Volvo"
  - Vehicle subscription model for the Volvo XC40
  - Starts at $600/month
  - Access to a 24/7 Volvo concierge
  - 24-month subscription
  - Opportunity to upgrade to a new car at 12 months
  - **Insurance comes “baked in”**
    - Premium Liberty Mutual insurance package
    - 15,000-mile allowance
    - Factory scheduled maintenance
    - Tire and wheel road hazard protection
Transportation as a Service (TaaS)

- Lyft/Uber
- Zoox
- Leasing model (Care by Volvo)
- Fractional ownership
- HAV shuttles

- RethinkX
  - TaaS will disrupt, OEM, Energy and Insurance sectors by 2030
Intelligent Machines

Prepare to be Underwhelmed by 2021’s Autonomous Cars

Ford, Uber, and BMW promise fully self-driving cars in five years — but they will probably only work in very limited areas.

by Tom Simonite     August 23, 2016
The chaotic middle

The autonomous vehicle and disruption in automobile insurance

White Paper | June 2017

kpmg.com/insurance
KPMG now believes that the core business models for traditional automobile insurance carriers may be under threat of obsolescence, with automotive manufacturers potentially becoming a viable alternative to cover driving risk. We are entering a period of radical change – the ‘chaotic’ middle’ of a transformation – that promises to reshape the insurance landscape.

— The Chaotic Middle, KMPG White Paper, June 2017
Accident Frequency Could Fall Dramatically

The KPMG Actuarial Team estimates by 2050 a potential reduction in accident frequency of almost 90% through additive benefits from technology improvements and car stock conversion.

Source: KPMG LLP – “The Chaotic Middle: Autonomous Vehicles and Disruption in Automobile Insurance” – June 2017
Pilot project for insurers for Level 3 and Level 4 vehicles

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<th>Manual driving</th>
<th>Automated driving</th>
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<td>Risk: personal auto</td>
<td>Risk: OEM</td>
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<td>Model would operate as it does today, likely at reduced cost</td>
<td>Creation of captive insurance company</td>
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<td>Opportunity for reinsurance</td>
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Insurer would handle all claims administration. To the customer, it would appear as if they were purchasing a single policy through an insurer.

Government
- Federal
- State
  - DMV
  - DOI

Pilot State

Insurer

OEM

Photo courtesy of myonlinemaps.com
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