

Ford and Autonomous Vehicles

NCOIL 2018 Summer Meeting
Tony Reinhart

Details Matter: SAE Levels of Automation

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) AUTOMATION LEVELS

Full Automation



0

No Automation

Zero autonomy; the driver performs all driving tasks.

1

Driver Assistance

Vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design.

2

Partial Automation

Vehicle has combined automated functions, like acceleration and steering, but the driver must remain engaged with the driving task and monitor the environment at all times.

3

Conditional Automation

Driver is a necessity, but is not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice.

4

High Automation

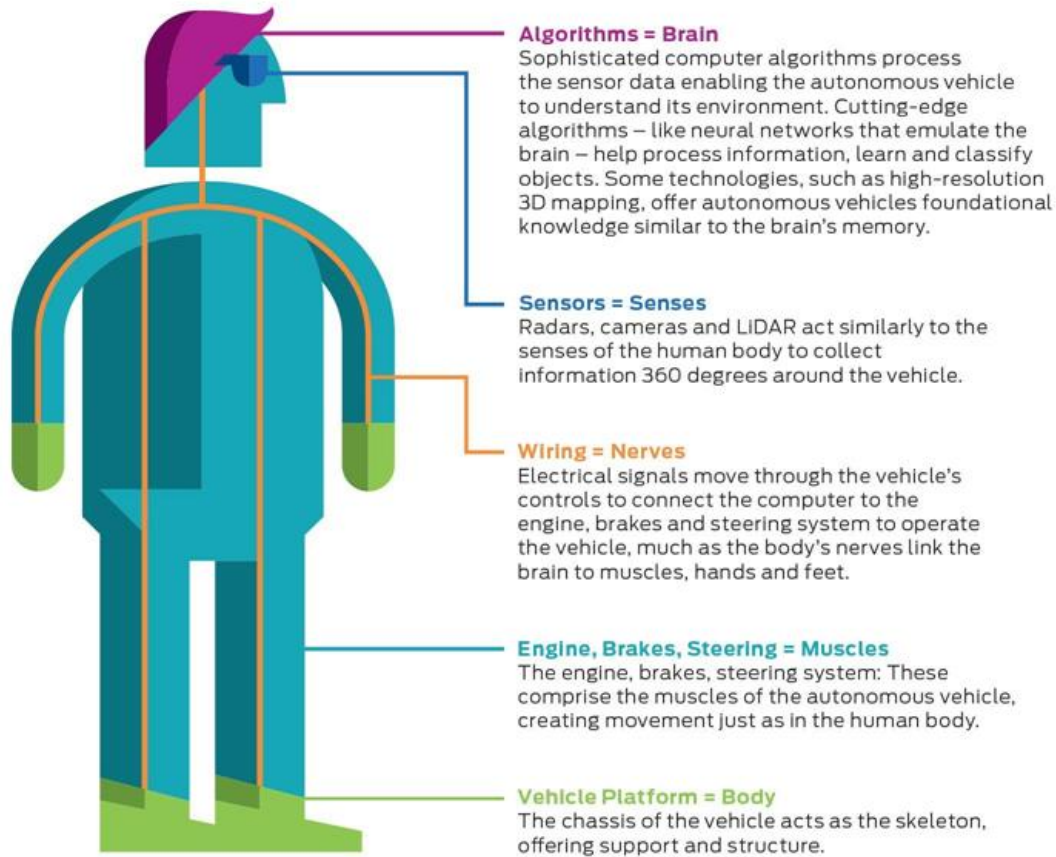
The vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle.

5

Full Automation

The vehicle is capable of performing all driving functions under all conditions. The driver may have the option to control the vehicle.

How a Ford Level 4-Capable Vehicle Works



How Ford is Testing Level 4-Capable Vehicles

Ford in Miami



Ford and Postmates



Ford and VTTI



Ford and Domino's



What's Next for Ford?

- Ford anticipates deploying a Level 4-capable vehicle for ride-hail and/or commercial use (such as package delivery) in **2021**.
- In order for this to happen, policy changes – particularly federal law and regulation – are necessary.



Federal and State Policy

- Ford and other stakeholders believe the AV legislation being considered by Congress is necessary to facilitate AV deployment.
- In brief, that legislation is necessary because existing safety standards do not contemplate driverless vehicles and need to be updated, a time-intensive process.
- The federal legislation would provide a pathway to near and medium-term deployment through expanded use of exemptions, clarify that only NHTSA may set vehicle safety standards, and prompt a rulemaking by NHTSA to update existing standards.
- Importantly, existing state authorities, such as those related to vehicle registration, inspection, and traffic safety or “rules of the road,” would be preserved.

Conclusion

- Ford looks forward to continuing to work with stakeholders to get policy right.
- Vehicle data is an issue your members care about, and we welcome ongoing dialogue to explore whether and how that data can be appropriately shared in the future.
- At this point, sharing mandates are premature because AVs are still being developed, as well as concerns about privacy and confidential business information.