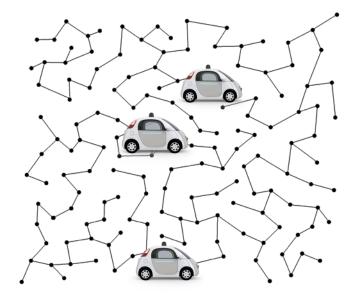
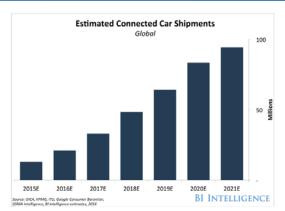
#### **SAE INTERNATIONAL**



From Advanced Driver Assistance Systems to Connected Vehicle to Automated Vehicle Standards

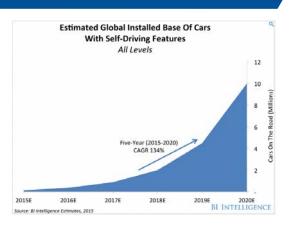


## Connected and Automated technology predictions



#### Just say no to connected cars

Around 5% of new vehicles already include some form of embedded technology inside. But have you thought about the consequences?



# Will Everyone Soon Drive a Connected Car? Google Thinks So

At a recent auto show, Google Product Manager Andrew Brenner predicted that all cars will be connected to each other sooner rather than later.

## Autonomous-Car Proliferation Decades Away, U.S. Regulator Says

NHTSA head Mark Rosekind says it will take 20 to 30 years to cycle out older vehicles

All Cars Will Be Driverless in 5 Years. Autonomous Cars Will Replace Humans, Says Lyft Founder

observer s,

In a bold predcition, Zimmer of Lyft predicts robots will replace drivers by 2022.

#### The answer is in...



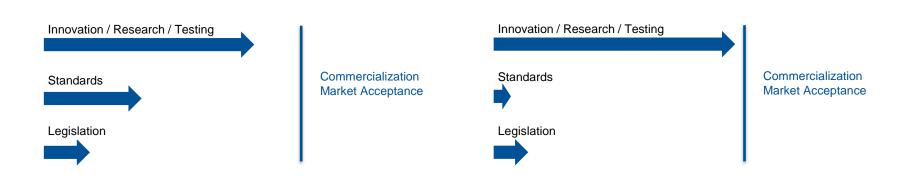
## ...engineering science

"If you control an industry's standards, you control that industry lock, stock, and ledger"

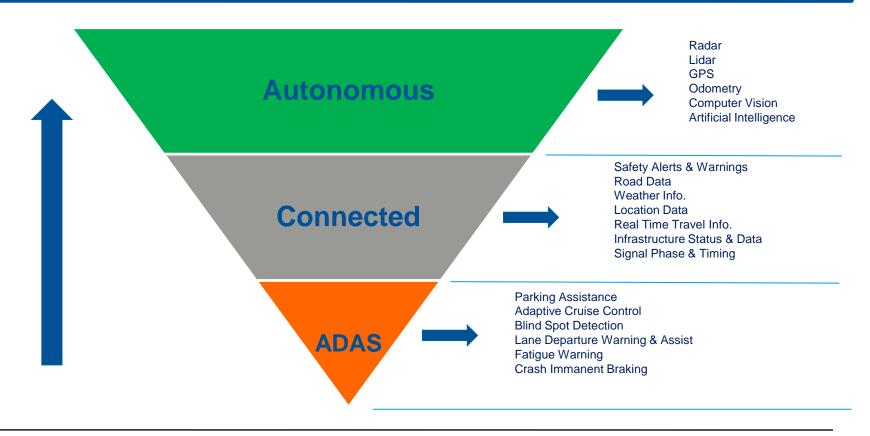
W. Edwards Deming

#### **Standards Paths**

#### Typical Automated Vehicles



## **Technology Evolution**



## **Key Focus Areas to Support and Advance New Vehicle Technologies**



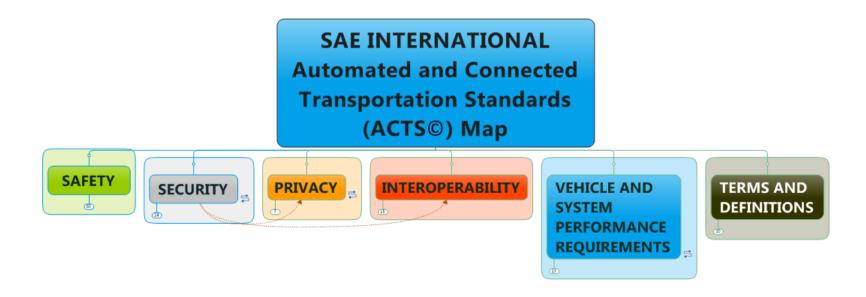
















#### Safety and Reliability:

SAE J1211: Robustness Validation of Automotive Electronic Modules

SAE J2940: Use of Model Verification & Validation in Product Reliability & Confidence Assessments

#### **Active Safety - Advanced Driver Assistance Systems & Levels of Automation:**

SAE J3088 WIP: Active Safety Systems Sensors

SAE J3087: Automatic Emergency Braking Test Methods & Performance Assessment

SAE J3116: Specifications of Pedestrian Mannequins for Vehicle Pedestrian Detection Systems

SAE J3045: Truck & Bus Lane Departure Warning Systems Test Procedure

SAE J3029: Truck & Bus Forward Collision Warning & Mitigation Test Procedure

SAE J1626/2: Recommended Practice for Braking, Stability, & Control Performance Test Procedure of Air-Brake-Equipped Trucks

SAE J3122 WIP: Active Safety Test Target Correlation

Jack Pokrzywa
SAE International
Global Ground Vehicle Standards
jackp@sae.org
248-273-2460

SAE INTERNATIONAL©

10