

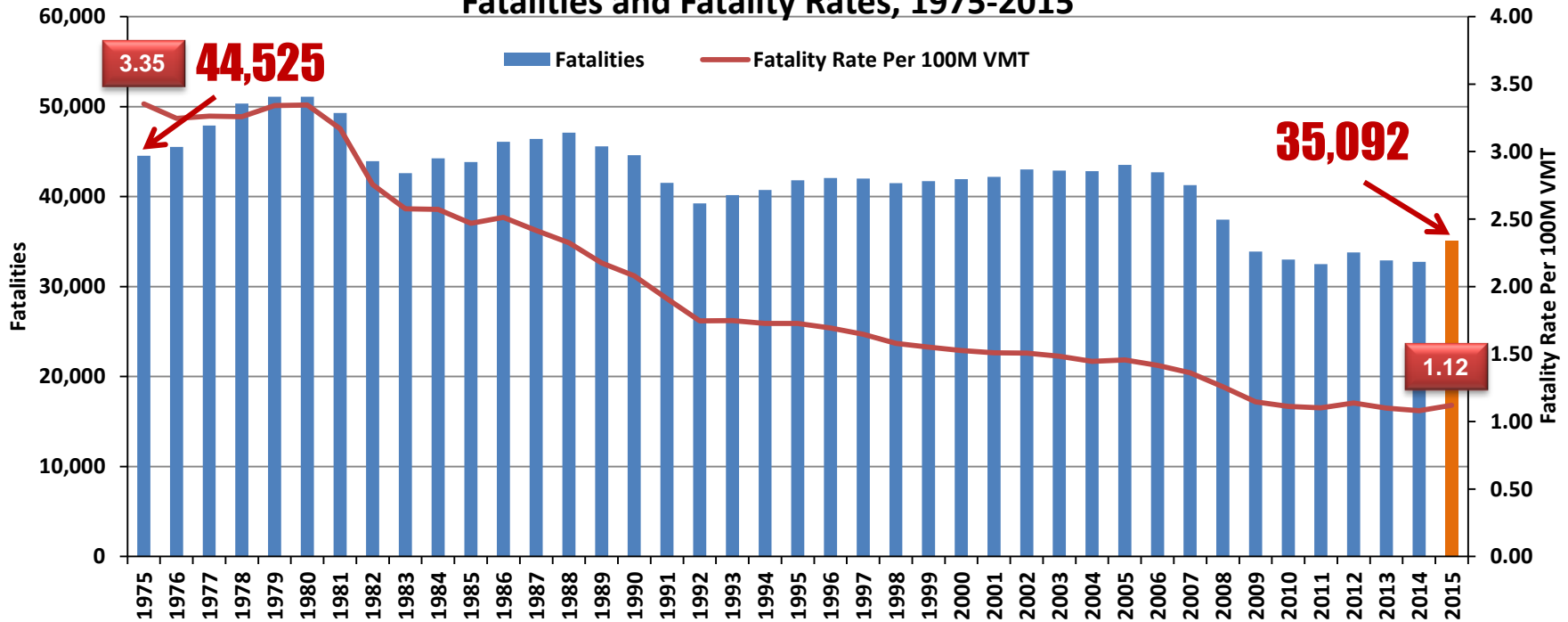
Autonomous Vehicles: Safety Assurance

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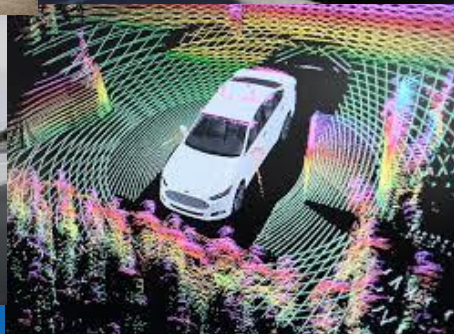
Fatalities and Fatality Rates, 1975-2015



Motor vehicle crashes cost nearly \$836 billion



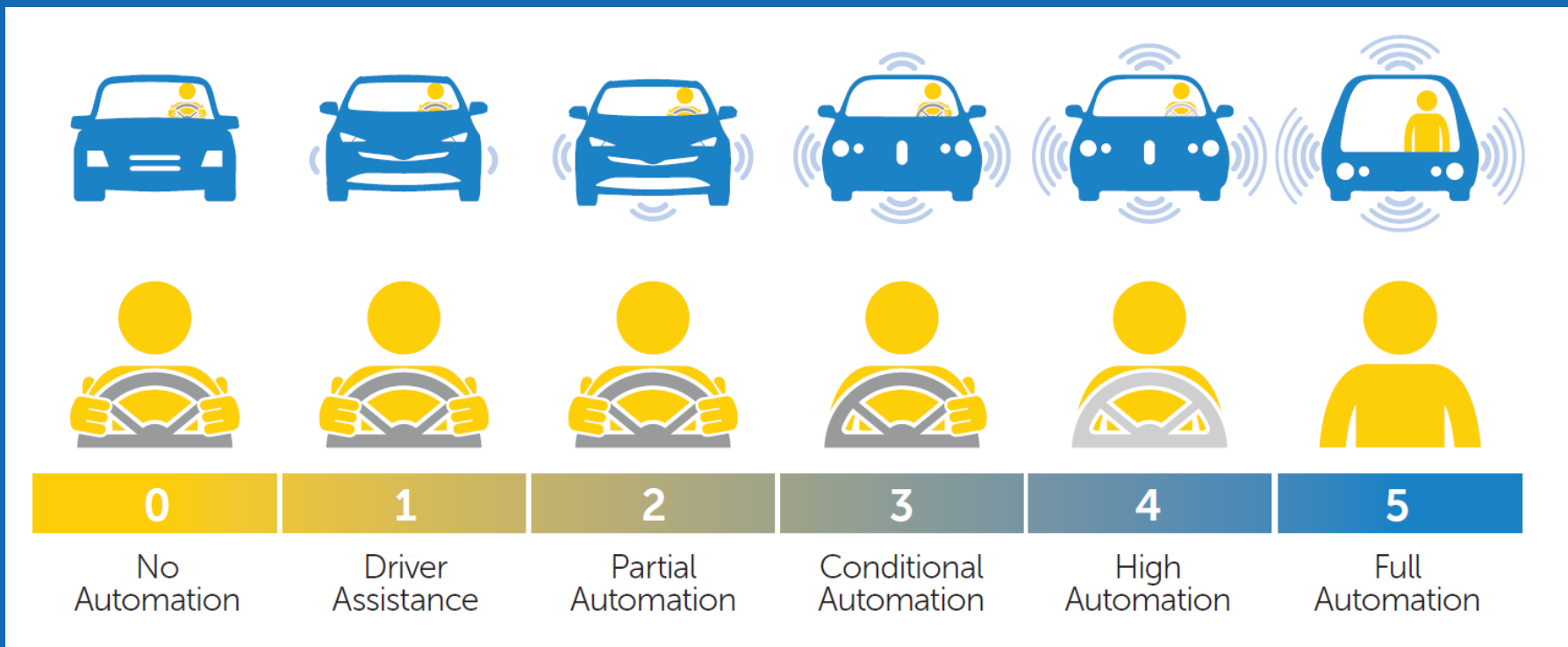
Automated Driving Systems: Technology can enhance safety



Today's fleet includes a wide range of systems and more are on the horizon



Levels of automation: Focus on proactive approach to improving safety





Safety Approach Today

NHTSA utilizes its safety standards to establish a minimum national level for vehicle safety while also utilizing consumer information programs to encourage higher levels of safety

Safety is a shared responsibility that involves a wide range of stakeholders:

Federal

- Set FMVSS and self-certification enforcement program
- Investigating and managing recalls & remedies

State

- Licensing drivers, vehicle registration, field enforcement, regulating insurance and liability

Private Sector

- Vehicle certification to all applicable standards and regulations
- Initiating and finalizing recalls & remedies

Safety Advocacy Groups

- Coordinating with stakeholders on public campaigns, such as heatstroke

- Consumer education is a shared responsibility and a vital component to safety



Federal Focus

NHTSA regulates various aspects of vehicle performance, including equipment and systems associated with automated vehicle technologies

NHTSA's safety standards apply to vehicles at time of first sale and some replacement equipment

NHTSA does not conduct in-use compliance programs or inspections, states have this authority

Example: NHTSA sets performance requirements for headlamps, including a design requirement for a driver to be able to switch between upper and lower beams. States may enforce upkeep of headlamps and establish dimming requirements to minimum glare to other drivers

NHTSA also coordinates with states on safety campaigns (seat belts, drunk driving)



State Focus

States set requirements for individual drivers to obtain and maintain a license to operate motor vehicles and to maintain vehicle registration

- To obtain: demonstrate knowledge of state laws, certify insurance coverage, document eligibility (vision/health, residency)
- To maintain: demonstrate ability to abide by state rules governing operating of motor vehicles

States have authority to establish annual inspection programs to ensure in-use performance of vehicle systems and equipment (ex: braking, lighting)

States are pre-empted from adopting vehicle performance requirements that contradict those put in place by NHTSA

- However, states may (and many do) adopt requirements for equipment, such as fog lamps not directly regulated by NHTSA



Path Forward on Automated Driving Systems

Today there are approximately 250 million vehicles on roadways in the United States. As manufacturers deploy vehicles utilizing higher levels of automation into this fleet, NHTSA will remain focused on safety including the ability to leverage the ability of automated driving systems, building blocks of autonomous vehicles, to mitigate and prevent crashes.

NHTSA is coordinating with the states (best practices) to address questions regarding new technology. For example, interpreting automated driving systems to assume the traditional role and responsibilities of the driver.

To achieve the vision of a consistent national framework to enable the safe deployment of promising new vehicle technologies, NHTSA remains focused on its safety standards while coordinating with stakeholders (including SAE)

NHTSA

QUESTIONS?

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