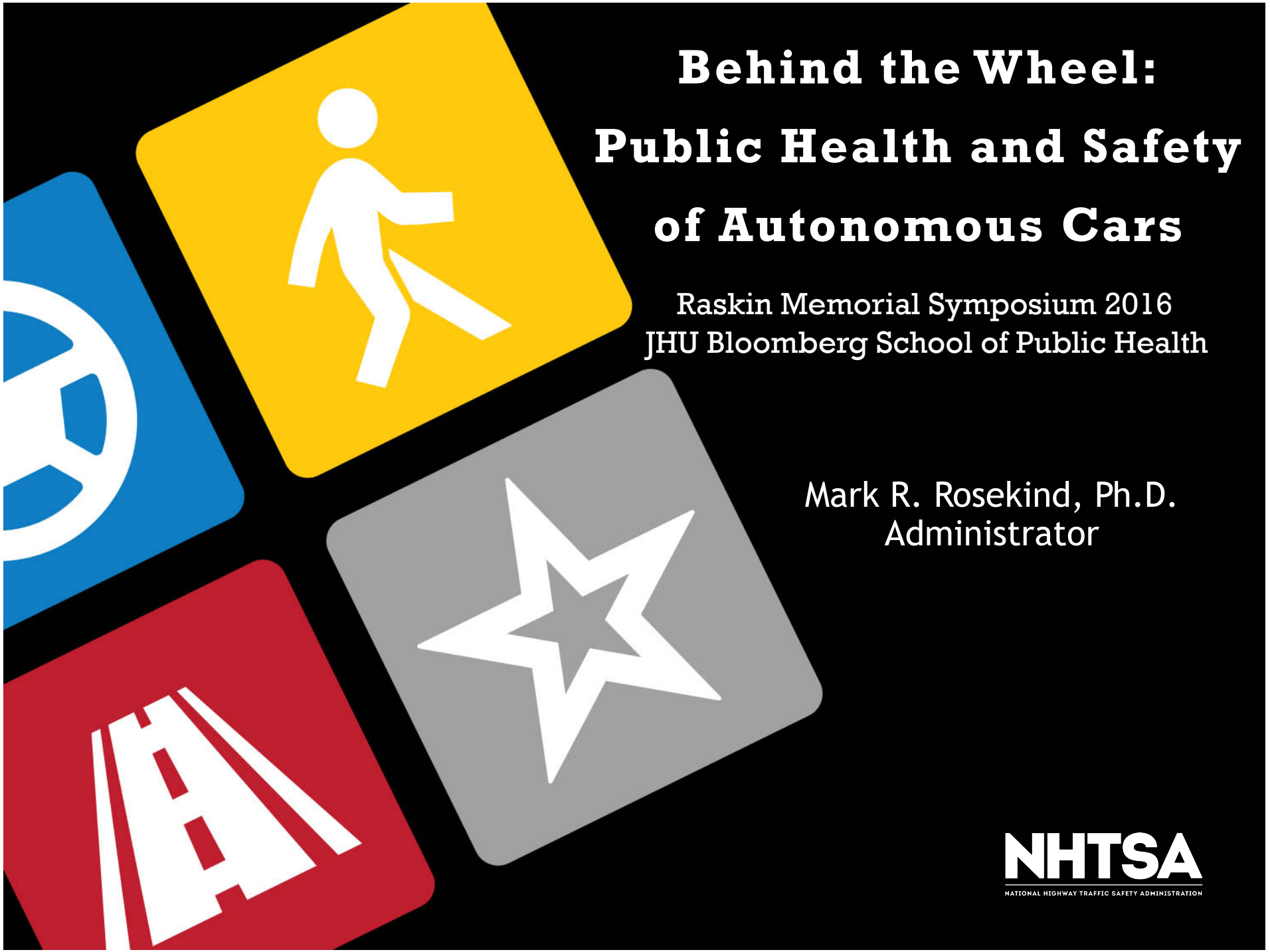


Behind the Wheel: Public Health and Safety of Autonomous Cars

Raskin Memorial Symposium 2016
JHU Bloomberg School of Public Health

Mark R. Rosekind, Ph.D.
Administrator

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Transportation: Everywhere, Everyone

School

Work

Commerce

Family

Food

Social

Health

Athletics

Housing

Religion

Fun

Community

NHTSA

NHTSA's Lifesaving Mission

Reduce deaths, injuries and economic losses resulting from motor vehicle crashes

On US Roadways in 2014 . . .

- 32,675 lives lost*
- 2.3 million injuries
- 6.1 million crashes

*95% of all transportation fatalities

NHTSA

On US Roadways in 2014 . . .

94% related to human error/choice

On US Roadways in 2015 . . .

Fatalities: 9.3 % estimated increase

Need for Innovation . . .

- 25% decrease in fatalities over 10 years:

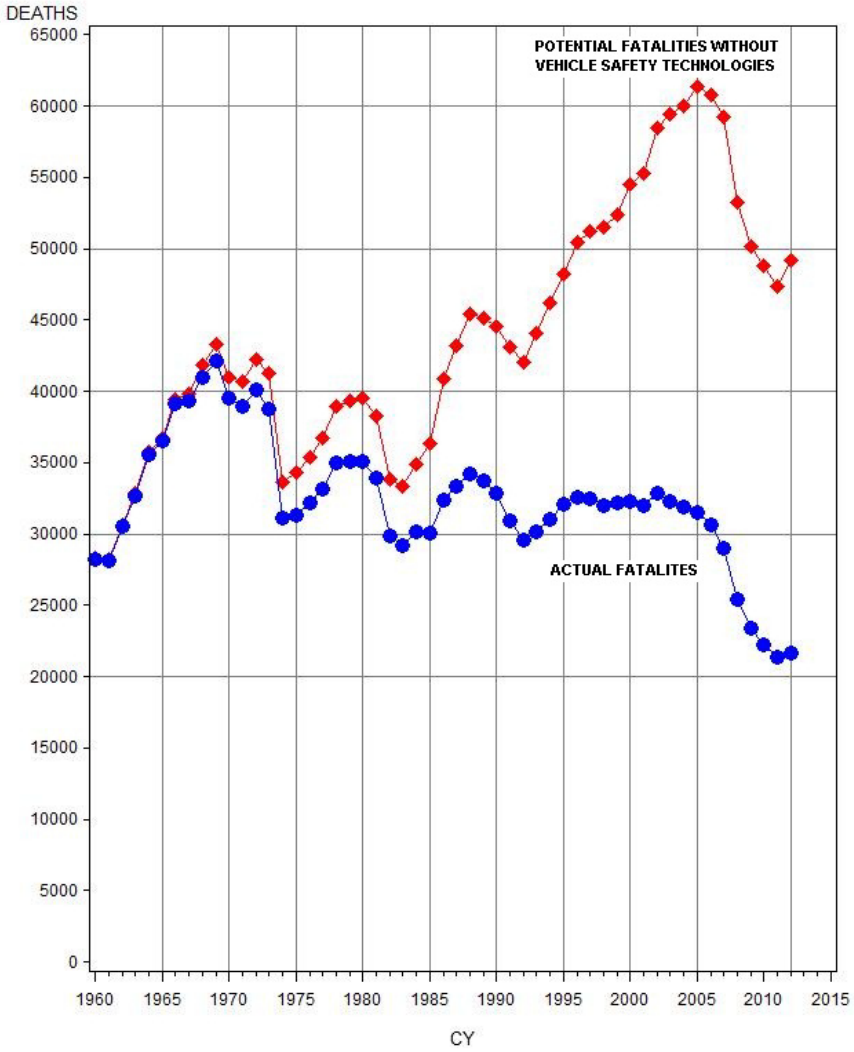
  Continue effective strategies!

- 2015 estimated increase:

  Need new tools!!

Technology Saves Lives

FIGURE 2-2: ACTUAL VERSUS POTENTIAL CAR/LTV OCCUPANT FATALITIES, 1960-2012



Technology Saves Lives

613,501

(1960-2012)

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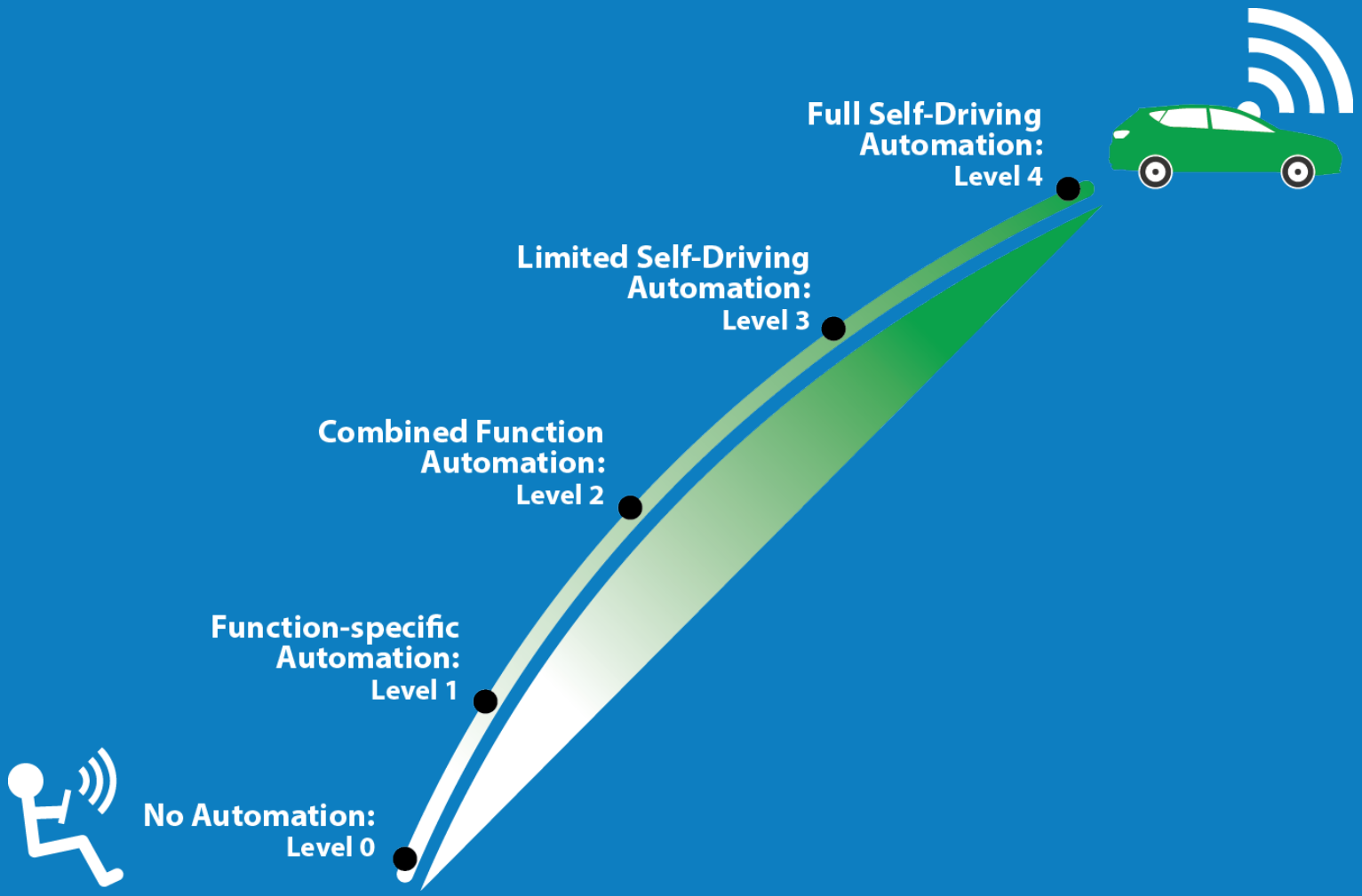
Two Opportunities . . .

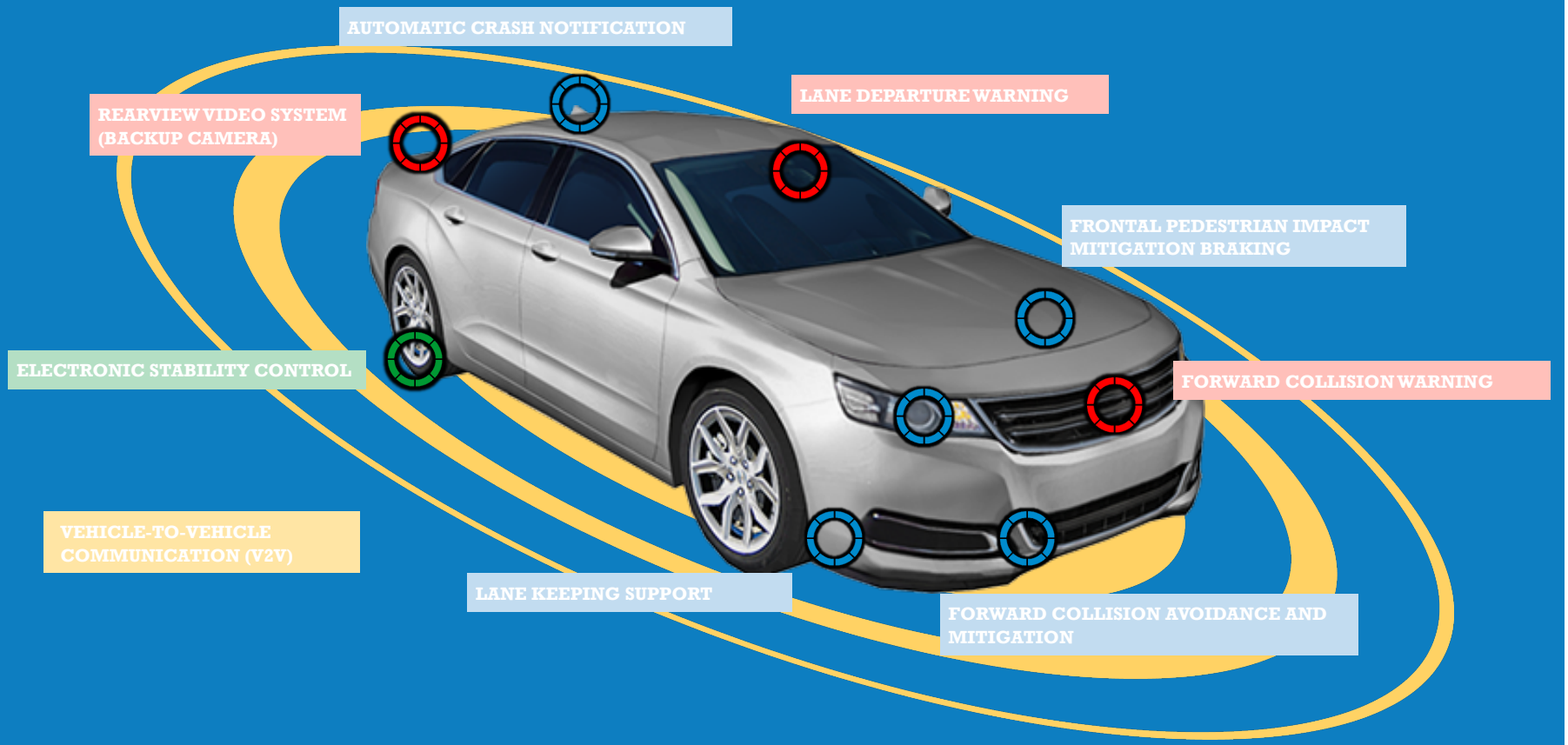
- Automated Safety Technology
- Human Choices

Foundation: education/laws/enforcement


Full Self-Driving Automation: Level 4
Limited Self-Driving Automation: Level 3
Combined Function Automation: Level 2
Function-specific Automation: Level 1
No Automation: Level 0

NHTSA

Safety Technologies



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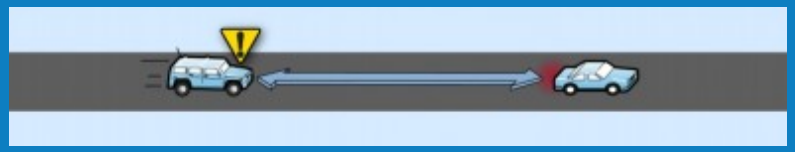
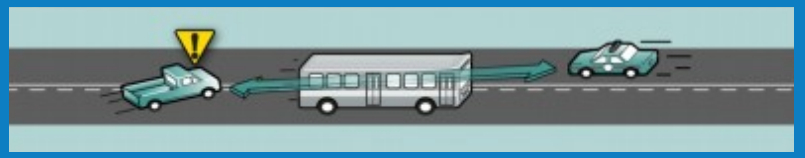
Vehicle to Vehicle (V2V): Connected Automation

Forward Collision



Do Not Pass



Lane Change/Blind Spot

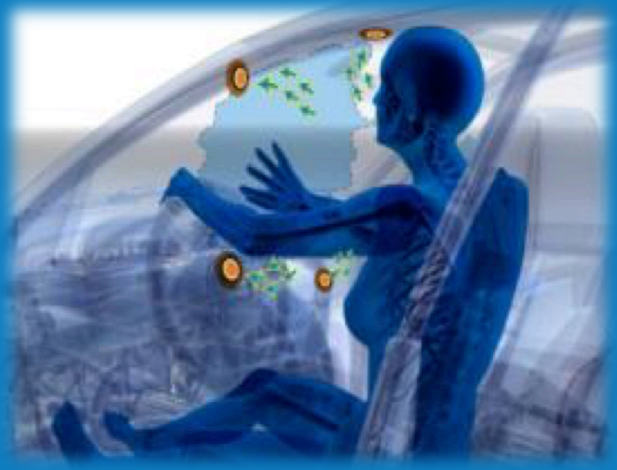
Intersection

NHTSA

Driver Alcohol Detection System for Safety

Objective

A non-invasive, seamless technology to measure driver BAC and reduce the incidence of drunk driving



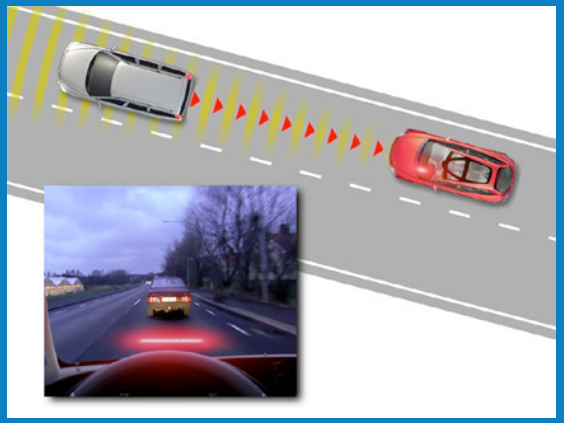
DOT/NHTSA Efforts: In Six Months . . .

- Develop deployment guidance
- Create model state policy
- Identify new tools
- Structure current tools

Evolution: Transformative Technology

- Historically: reduce severity/mitigate injury/medical attention

- Proactive safety: avoid the crash



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