Autonomous Vehicles & Driver Assistance
Trust, Preferences, and Effects of Age

Back to the Future - Generational Driving Challenges
Northeast Transportation Safety Conference
October 24th, 2017
Advanced Driver Assistance Systems (ADAS): The Circle of Safety

ADAS have the potential to prevent or mitigate thousands of crashes each year.
ADAS & Self-Driving Cars Can Particularly Benefit Older Adults
Maximum level of automation drivers would be comfortable with

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More comfortable with full automation

Comfortable with active assist, but not with giving up control

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Compared to 2016, all age groups are less interested in full automation. Effects are particularly pronounced among younger respondents.
Consumer Interest is Influenced by Events

“In most cases, as technology concepts get closer to becoming reality, consumer curiosity and acceptance increase,” said Kristin Kolodge, executive director of driver interaction and HMI research at J.D. Power. “With autonomous vehicles, we see a pattern where trust drives interest in the technology and right now, the level of trust is declining. (JD Power - April 2017)
Older and Younger Drivers Share the Same Concerns

- Hesitations related to purchasing a self-driving car (N=1434)
  - Trust (N=1188, 83%)
  - I Like Driving (16%)
  - Not Interested (4%)
  - Cost (3%)

  - Reliability (N=393, 27% (33%)
    - Malfunction (15% (56%))
  - Safety (15% (19%))
  - Too New (15% (18%))
  - Mix of Human & Automation (4% (5%))
    - Hacking (3% (10%))

Percentages outside of parenthesis are the percent of respondents compared to the total number of respondents who indicated they would never purchase a self-driving car.

Percentages in parenthesis are the percent of respondents listing the sub-category compared to the number of respondents who indicated the parent category.
Improved training → Increased Use & Understanding

When drivers are taught using methods they prefer, they understand systems better and use more features.
Drivers Cite Multiple Learning Preferences

“How would you prefer to learn about the technology in the car you drive today or the next vehicle you purchase?”
Learning Preferences are Misaligned with Experiences

Far fewer individuals want to use trial and error or the vehicle manual – dealerships and in-vehicle education are more highly desired.

Methods that aren’t utilized, but desired

Methods that are utilized, but not desired
Older & Younger Adults Prefer to Learn Differently

Older adults prefer dealership education

Younger adults prefer to have the car instruct them
Successful Deployment of ADAS will Address Generational and Non-Generational Concerns

Based on Unified Theory of Acceptance and Use of Technology (UTAUT)

Expectations for Performance

Effort to Use

Societal Acceptance

Support

Reliability & Safety

Cost & Accessibility

Adoption from Peers

Learning Materials & Intuitive Interfaces

Age

Adoption
Thank you

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