REACHING ZERO CRASHES
A DIALOGUE ON THE ROLE OF ADVANCED DRIVER ASSISTANCE SYSTEMS

OCTOBER 27, 2016
Advanced Driver-Assist Safety Technologies: Educating Consumers Through Online Media

Prepared for NTSB
October 27, 2016
Washington, DC
We leverage our audience to understand consumer attitudes and behaviors
The Power of Cox Automotive Insights

- Shopper Behaviors
- Owner Behaviors
- Attitudinal Tracking
- CPO Research
- Industry Studies
- ... and much more
Kelley Blue Book and Autotrader provide consumers with continuously updated information regarding in-vehicle technology.
We dedicate resources to educate media and consumers
IN-VEHICLE TECHNOLOGY
Topline Report
The majority of vehicles on the road today are equipped with ADAS equivalent to Level 1 (Modern Vehicle)

Current Ownership

6% LEVEL 0 only shown for ownership

72% LEVEL 0 only shown for ownership

16% LEVEL 0 only shown for ownership

0% LEVEL 0 only shown for ownership

0% LEVEL 0 only shown for ownership

0% LEVEL 0 only shown for ownership

0% LEVEL 0 only shown for ownership

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The driver (human) controls everything: steering, brakes, throttle, power

Most functions are still controlled by a driver, but some (like braking) can be done automatically by the car

At least 2 functions are automated (like cruise control & lane-centering), but the driver must be ready to take control of the vehicle

Drivers are still necessary, but are not required to monitor the situation as with previous levels

Vehicles perform all safety-critical driving functions and monitor roadway conditions for an entire trip, with option for human driving

No option for human driving - no steering wheel or controls

Base: Total Currently Own/Lease (n=1550)

AV4. Please select what level of vehicle autonomy applies to a car you currently own or lease, or have owned or leased in the past.
Consumers Are Split Between Safety And Infotainment When Defining In-Vehicle Technology

Q: Which of the following best represents in-vehicle technology to you?

52% Safety Features
48% Infotainment Features

11% Car Care Features
11% Navigation
16% Connectivity Features
10% Infotainment Features

N = 2076

Q: Which of the following best represents in-vehicle technology to you? In-Vehicle Tech Survey
Young Shoppers Associate In-Vehicle Technology With Infotainment Features

Which of The Following Best Represents In-Vehicle Technology to You?

<table>
<thead>
<tr>
<th>Generation</th>
<th>Safety Features</th>
<th>Infotainment Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Generation</td>
<td>21%</td>
<td>11%</td>
</tr>
<tr>
<td>Baby Boomer</td>
<td>51%</td>
<td>56%</td>
</tr>
<tr>
<td>Gen X</td>
<td>17%</td>
<td>25%</td>
</tr>
<tr>
<td>Millennials</td>
<td>6%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Q: Which of the following best represents in-vehicle technology to you?
In-Vehicle Tech Survey  N = 2076
Safety Features Are Most Important When Considering A New Vehicle

When Are Certain Features Considered?

- **Safety**
  - When I’m First Researching: 27%
  - When I’m Narrowing Down The List I’m Considering: 21%
  - After I Visit The Dealers: 14%
  - Never: 13%

Q: In your shopping process, when would you consider each of the following?
In-Vehicle Technology Survey
N = 2076
64% of people have never experienced these safety features.

Q: Have you ever driven a car with any of the following safety features?

In-vehicle Tech Survey
N = 737

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blind Spot Detection</td>
<td>26%</td>
</tr>
<tr>
<td>Adaptive Cruise Control</td>
<td>21%</td>
</tr>
<tr>
<td>Heads-up Display</td>
<td>20%</td>
</tr>
<tr>
<td>Lane Departure</td>
<td>15%</td>
</tr>
<tr>
<td>Accident Avoidance System</td>
<td>14%</td>
</tr>
<tr>
<td>Self-Parking</td>
<td>4%</td>
</tr>
</tbody>
</table>

Q: Have you ever driven a car with any of the following safety features?
In-vehicle Tech Survey
N = 737
Q: Have you ever driven a car with any of the following safety features?
Q: Which of the following best represents in-vehicle technology to you?

In-vehicle Tech Survey
N Safety = 1435, N Infotainment = 1216

- Heads Up Display: 10%
- Lane Departure: 8%
- Accident Avoidance Systems: 8%
- Blind Spot Detection: 16%
- Adaptive Cruise Control: 11%
- Self Parking: 2%

- Heads Up Display: 11%
- Lane Departure: 7%
- Accident Avoidance Systems: 2%
- Blind Spot Detection: 11%
- Adaptive Cruise Control: 11%
- Self Parking: 13%
For 1 in 3 people, technology is “make or break” when choosing a car.

When choosing the car I will purchase...

- 66% Any technology that comes in the car is an added bonus.
- 1 in 3 people

Technology features in the car will make or break my decision.

Q: When choosing the car I will purchase...
In-Vehicle Technology Survey
N = 2076
Common Tech Items Are Most Important When Shopping For A New Vehicle

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Neutral</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-up Camera</td>
<td>Blind Spot Detector</td>
<td>Satellite Radio</td>
</tr>
<tr>
<td>USB/Auxiliary Port</td>
<td>Navigation</td>
<td>Voice Commands</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>Push to Start</td>
<td></td>
</tr>
<tr>
<td>Remote keyless entry</td>
<td>4G LTE hotspot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote engine start</td>
<td></td>
</tr>
</tbody>
</table>
Safety Technology is More Important As Drivers Age

How Important Are The Following Technology Features to You?

- **Back-Up Camera**
- **Blind Spot Detector**

<table>
<thead>
<tr>
<th>Generation</th>
<th>Age Range</th>
<th>Importance of Back-Up Camera</th>
<th>Importance of Blind Spot Detector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Millennials</strong></td>
<td>15–35 years old</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Gen X</strong></td>
<td>35–55 years old</td>
<td>45%</td>
<td>37%</td>
</tr>
<tr>
<td><strong>Baby Boomer</strong></td>
<td>51–69 years old</td>
<td>47%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Silent Generation</strong></td>
<td>70–90 years old</td>
<td>63%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Q: How important are the following technology features to you?
Q: What is your age?

In-Vehicle Technology Survey
N = 2076
Younger Drivers Value Connectivity Features More

How Important Are The Following Technology Features to You?

- USB/Auxiliary Port
- Bluetooth

<table>
<thead>
<tr>
<th>Generation</th>
<th>USB/Auxiliary Port</th>
<th>Bluetooth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Gen</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Baby Boomer</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>Gen X</td>
<td>62%</td>
<td>49%</td>
</tr>
<tr>
<td>Millennials</td>
<td>59%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Q: How important are the following technology features to you?
Q: What is your age?
In-Vehicle Technology Survey
N = 2076
Worryingly, Phone Features Are Not Important To Millennials When Shopping For a New Vehicle

Q: How important are the following technology features to you?

- 4G LTE Hotspot: 58%
- Satellite Radio: 55%
- Navigation: 32%
- Voice Command: 53%

Q: What is your age?

- Millennials: 15–35 years old

In-Vehicle Technology Survey
N = 2076
Key Takeaways

• As advanced driver assist systems penetrate the market, KBB and Autotrader will continue to educate consumers on the technologies.

• As familiarity and experience grows, consumers will become more comfortable with ADAS such as blind spot monitor, lane departure warning, and adaptive cruise control.

• Efforts towards educating drivers about distracted driving need to continue and even intensify.

• ADAS can help mitigate dangers but consumers need to value the technology and be willing to pay for it and learn how to use it.
Thank You
Rebecca Lindland
Senior Director, Commercial Insights
Rebecca.Lindland@kbb.com