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In this third installment of a series of research projects on vehicle technology, The Hartford Center for Mature Market Excellence® and the MIT AgeLab explored vehicle technology adoption among mature drivers. New technologies are becoming more widely available in cars today, so it’s important that all drivers learn how they work and how to use them effectively. This is especially true for mature drivers, as many technologies may enhance the driving experience as we age.

The objective of this 2015 study was to understand mature drivers’ willingness to adopt vehicle technologies – by uncovering what moves drivers 50-69 to select, purchase and use these new features.

Vehicle technology adoption was defined in this study as more than just buying a car that has these features. It is also about wanting the technologies in the vehicle, thinking the technologies are “worth it,” being willing to purchase them, and being likely to use them.

Drivers in the study were shown a video depicting how seven vehicle technologies work and showcasing why they might want to consider them for their next car. Using perception analyzer tools, the drivers responded to the question of whether they “want” the technology (see the table).

Overall, mature drivers generally reacted positively to the different technologies presented in the study, but they clearly preferred some vehicle technologies to others.

Mature drivers consistently favored blind-spot warnings systems and reverse back up cameras across the study.

1Vehicle Technology Adoption Among Mature Drivers, launched in 2015, is The Hartford Center for Mature Market Excellence and the MIT AgeLab’s third joint research project focused on vehicle technology. It is a follow up to Top Technologies for Mature Drivers: Consumer Insights in 2013 and the Top Technologies for Mature Drivers: Expert Rankings in 2012. All three studies examined vehicle technology and driving safety for mature drivers.
To delve into the multiple dimensions of adoption, mature drivers in the study answered a series of questions after viewing the video.

- A majority of participants report that they would be quite willing to purchase reverse back up cameras, blind-spot warning systems, smart headlights and collision avoidance systems.

- 96% of mature drivers reported that they would be willing to buy a car with at least one of the seven auto technologies in the study; nearly 10% indicated that they would be willing to buy all seven of the technologies.

- A majority of participants indicated that they would be quite likely to use reverse back up cameras, blind-spot warning systems, smart headlights, lane departure warning systems and collision avoidance systems if they had them.

- 67% of participants indicated that they would be quite likely to use four or more of the seven new technologies if they had them available.

- A majority of mature drivers indicated that they thought each of the seven technologies was “worth having”.

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**Mature Drivers Are Most Willing to Purchase, Likely to Use and Think Are Worth Having**

<table>
<thead>
<tr>
<th></th>
<th>Mature Drivers Are Most Willing to Purchase, Likely to Use and Think Are Worth Having</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blind-spot warning system</td>
</tr>
<tr>
<td>2</td>
<td>Reverse back up camera</td>
</tr>
<tr>
<td>3</td>
<td>Smart headlights</td>
</tr>
<tr>
<td>4</td>
<td>Collision avoidance system</td>
</tr>
<tr>
<td>5</td>
<td>Lane departure warning</td>
</tr>
</tbody>
</table>
Vehicle Technology as a Safety Feature

A series of questionnaire items also assessed how participants thought about each of the technologies – in short, whether they viewed each primarily as a safety feature, convenience or comfort feature, a distraction, or something else.

This figure shows that reverse back up cameras, blind-spot warning systems, lane departure warning systems, collision avoidance systems, and smart headlights were considered by a majority of participants primarily to improve safety. Adaptive cruise control, smart headlights, and parking assistance systems drew a significant portion of people who indicated they thought the most important effect of these systems was on drivers’ comfort. More so than any other technology, people thought of parking assistance systems as a convenience feature for drivers – and many also thought of these systems’ primary effect as making drivers too reliant on technologies.

While each technology drew a share of respondents who said they thought its primary impact was to serve as a distraction for drivers, for most of the technologies this was a relatively small percentage.
Mature drivers’ degree of tech-savviness turned out to be an important factor in understanding their perceptions of vehicle safety technologies. A scale was built based on research participants’ responses to questions about their trust in, experience with, and ease of using technology in general. Overall, the scale seems to have effectively captured their underlying levels of comfort with technology.

Scoring high on the scale, which indicated a greater comfort and confidence with using technology, was positively related to recommending that others should buy new vehicle technologies and to more positive overall feelings about new vehicle technologies.

Mature drivers who have greater comfort and confidence with technology in general:

- feel more positively about vehicle technologies overall
- are more likely to recommend that a family member or friend purchase a car with new technologies
- have a greater willingness to purchase vehicle technologies themselves
- are more likely to believe that self-driving vehicles will be on the road in the next 10 years

### Influence of Technology in General

<table>
<thead>
<tr>
<th>Overall</th>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would test-drive a self-driving car</td>
<td>69.8%</td>
<td>13.8%</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

If self-driving car and regular car were same price, which purchase

<table>
<thead>
<tr>
<th>Overall</th>
<th>Self-driving</th>
<th>Regular</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.5%</td>
<td>38.9%</td>
<td>30.5%</td>
<td></td>
</tr>
</tbody>
</table>

### Self-Driving Cars

After watching a video demonstrating a self-driving car, participants answered questions about their perception of autonomous vehicles. They were asked if they would test drive such a vehicle, and if they would buy one if the price were the same as a regular car.

- Mature drivers express more interest in test-driving a self-driving car than in purchasing one.
  - 70% of mature drivers said they would test-drive a self-driving car
  - 31% said they would purchase one, even if it was the same price as a “regular” car.
  - If a self-driving car and a “regular” car were the same price, more participants would buy the “regular” car (39%) than the self-driving car (31%).

- Gender matters
  - Men (77%) indicated that they would be more likely to try a test drive than women (62%).
  - Men (38%) were more likely to agree than women (23%) that they would purchase a self-driving car if it were the same price as a regular car.
Conclusion

New technologies meant to enhance driver safety, comfort and convenience may require that drivers change a lifetime of habits first to adopt them and then to use them appropriately. Mature drivers are in many ways poised to benefit greatly from this technological revolution in the vehicle, as such features may enable people to continue to drive safely for a longer period of time, enhancing mobility and independence.

To learn more about the specific technologies in this research project in a consumer guide on and to take a vehicle technology video quiz, check out our website at www.thehartford.com/cartech.
Methodology

In 2015 The Hartford Center for Mature Market Excellence and the MIT AgeLab conducted a multi-method research project with 302 drivers ages 50-69 to assess their likelihood to adopt current vehicle technologies. In the study, participants viewed a video about seven vehicle technologies (blind-spot warning systems, reverse back-up cameras, smart headlights, collision avoidance systems, lane departure warnings, parking assistance and adaptive cruise control), as well as a video about a self-driving car, and responded to the videos via a perception analyzer tool. Participants also completed a conjoint analysis, a small group discussion and pre/post-test questionnaires.

The Hartford Center for Mature Market Excellence

For more than 30 years, The Hartford has recognized the unique and changing needs of people over the age of 50. Our Center for Mature Market Excellence partners with leading universities, including the Massachusetts Institute of Technology, to conduct original research and produce public education programs on safety, mobility and independence.

The Hartford/MIT AgeLab Partnership

The Hartford became a founding sponsor of the MIT AgeLab in 1999. The Hartford Center for Mature Market Excellence and the MIT AgeLab are committed to producing original research to improve the quality of life for older adults and their families. Through publications, professional meetings and public education, The Hartford/MIT AgeLab partnership has successfully reached millions of people in the United States and around the globe with high-quality, meaningful information to guide important decisions about safety, mobility and independence.

The MIT AgeLab

The MIT AgeLab is a multidisciplinary research program that works with business, government, and NGOs to improve the quality of life of older people and those who care for them. The AgeLab applies consumer-centered systems thinking to understand the challenges and opportunities of longevity and emerging generational lifestyles to catalyze innovation. For more information go to agelab.mit.edu.