J.D. POWER

Press Release

Automakers Locked in Battle with Phone Manufacturers for Consumers' Attention, J.D. Power Finds

Wide Differences Exist Between Automakers Regarding Usefulness of Technology by Consumers

Apple CarPlay Outperforms Android Auto; Google Maps is Most Preferred Navigation

COSTA MESA, Calif.: 29 Aug. 2018 — Some technologies, such as smartphone mirroring, are quickly adopted by new-vehicle owners, while other technologies can take decades to be fully embraced according to the J.D. Power 2018 U.S. Tech Experience Index (TXI) Study,SM released today.

Two clear examples of technologies with rapid adoption are Apple CarPlay and Android Auto, each of which are quickly becoming "must haves" for many consumers just a few years after their introduction. Both are showing rapid year-over-year penetration increases. In contrast, many technologies that have been around much longer are not nearly as sought-after by new-vehicle owners.

"This rapid adoption of smartphone mirroring is the unavoidable outcome of consumers thinking that automakers are being outperformed by smartphone software providers in certain areas," said **Kristin Kolodge, Executive Director of Driver Interaction & HMI Research at J.D. Power**. "Most consumers consider phone systems better for navigation and voice recognition—and they're free. 'Better and free' are hard to compete with, so automakers will inevitably have to cede this territory and will be much better served by focusing on areas where they are the exclusive provider—like driver assistance and collision avoidance—and continue to hone those systems."

Factory-installed navigation systems are easily replaced by another device. In fact, 19% of new-vehicle owners who have factory-installed navigation don't use it and, of these, 70% use another device instead, almost always a smartphone.

In the smartphone mirroring battle, drivers using Apple CarPlay report significantly higher satisfaction with the system than those using Android Auto (777 vs. 748, respectively, on a 1,000-point scale). However, Google fights back when it comes to navigation. Among owners who use their own navigation system, 56% use Google Maps most often and 16% use Google-owned Waze most often, while only 23% use Apple Maps most often. Even iPhone owners are more likely to use Google Maps than Apple Maps, whereas very few Android owners use Apple Maps.

The study also finds that wide differences exist between automakers in terms of how frequently owners use some of their systems. For instance, the number of owners who say they use their lane-keeping/centering system "every time they drive" ranges from a low of 46% to a high of 67% across the different automakers. For adaptive cruise control, the range is 16% to 42% and for voice recognition it is 10% to 29%. Obviously, there is something to be learned about what is driving those differences. Automakers that create systems that aren't being used are making investments in technology that are unlikely to be successful.

"Today's experience with a technology drives tomorrow's desire," Kolodge added. "Consumers are challenging the level of usefulness that some automotive technology provides, including whether it's needed at all. For example, although automakers' built-in navigation systems are appreciated for image quality, owners often prefer using smartphone-based navigation because they consider it more accurate."

Overall satisfaction with new-vehicle technology among owners of luxury vehicles averages 766, while satisfaction among owners of mass market vehicles is 765. This is a 16-point and 15-point improvement, respectively, from 2017.

The study, now in its third year, measures owners' experiences, usage and interaction with 38 driver-centric vehicle technologies at 90 days of ownership. The study provides clarity to auto manufacturers, insurance carriers, telecommunications companies and consumer electronics companies for ways to minimize the gap between driver experience and execution. The major technology categories analyzed in the study are entertainment and connectivity; comfort and convenience; driving assistance; collision protection; navigation; and smartphone mirroring.

Following are additional key findings of the 2018 study:

- **Satisfaction improves across all categories:** The increase in the overall satisfaction is due to gains across all categories in the study. Scores in comfort and convenience improve the most (+22 points), followed by collision protection (+18); smartphone mirroring (+15); driving assistance (+13); navigation (+12); and entertainment and connectivity (+7).

- **Owners supplementing their technology learning outside the dealership:** Despite frequently learning about smartphone mirroring technologies from their dealer, many owners also learn outside the dealership. In fact, 62% of Apple CarPlay owners and 67% of Android Auto owners learn how to use this technology outside the dealership even if they initially learned from interaction with a dealer.

- **Balance needed among collision avoidance systems:** The Society of Automotive Engineers lists advanced driving assistance system features like adaptive cruise control; forward collision warning; lane-keeping assistance systems; and automatic parking as examples of Level 1[1] technology, which are fundamental building blocks to technically achieve higher levels of automation. Ultimately, the technology path will lead to a fully automated vehicle at Level 5. However, owners may lose trust or find the systems to be more of a bother than a benefit. Lane-keeping/centering system has the highest frequency (23%) of owners saying their system is annoying or bothersome. For automakers, this figure ranges from a high of 29% to a low of 7%.

- **High satisfaction leads to high advocacy:** Owner satisfaction with their vehicle technology experience is a strong indicator of advocacy, as demonstrated by the positive relationship between overall satisfaction scores and likelihood to recommend. Among the 23% of owners who are highly satisfied with the technology in their vehicles (satisfaction scores of 900 and above), 94% say they "definitely will" recommend their vehicle to family and friends.

"Automakers need to be very clear where they can win—areas in which there's no alternative—and where they may have to accept defeat, such as navigation and voice recognition," Kolodge said. "The smart option in some areas may be to offer the best integration, not the least bad alternative."

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[1] SAE J3016: Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems

In the 2018 study, the **Hyundai Kona** ranks highest in the small segment; **Volkswagen Tiguan** in the compact segment; **Kia Stinger** in the compact premium segment; **Kia Optima** in the midsize segment; **Lincoln MKX** in the midsize premium segment; and **Ford Expedition** in the large segment.

The 2018 Tech Experience Index (TXI) Study is based on a survey of nearly 20,000 vehicle owners and lessees. Awards are based solely on responses from the 14,800 owners who purchased or leased a new 2018 model-year vehicle in the previous 90 days that is an all-new or redesigned model within the past three years.[2] The study was fielded from February through July 2018.

For more information about the Tech Experience Index Study, visit http://www.jdpower.com/resource/us-tech-experience-index-study.

See the online press release at http://www.jdpower.com/pr-id/2018148.

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Media Relations Contacts
Geno Effler; West Coast; 714-621-6224; media.relations@jdpa.com
Shane Smith; East Coast; 424-903-3665; ssmith@pacificcommunicationsgroup.com

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Note: One chart follows.

[2] There must be at least three models with 80% of market sales in any given award segment for an award to be presented. The small premium and large premium car segments did not meet the criteria to be award eligible in 2018, thus no awards were issued.

J.D. Power
2018 U.S. Tech Experience Index (TXI) Study℠

Top Three Models per Award Segment
All Segments

Small
Highest Ranked: Hyundai Kona
Kia Sportage
Ford EcoSport

Compact
Highest Ranked: Volkswagen Tiguan
Chevrolet Cruze
Hyundai Elantra

Midsize
Highest Ranked: Kia Optima
Honda Accord
Chevrolet Camaro

Large*
Highest Ranked: Ford Expedition
Ford Super Duty

Compact Premium
Highest Ranked: Kia Stinger
Audi A4
Land Rover Range Rover Velar

Midsize Premium
Highest Ranked: Lincoln MKX
BMW 5 Series
Volvo XC90

** No other model in this segment performs at or above segment average.*
Note: There must be at least three models with 80% of market sales in any given award segment for an award to be presented. The Small Premium and Large Premium segments did not meet criteria to be award eligible, thus no awards will be issued..

Source: J.D. Power 2018 U.S. Tech Experience Index (TXI) Study℠