Transport Canada Transports Canada

Canadians' Awareness of and Confidence in Automated Vehicles

Executive Summary

Prepared for Transport Canada

Supplier Name: Environics Research
Contract Number: T8053-180120/001/CY
Contract Value: $114,959.59 (including HST)
Award Date: 2019-11-23
Delivery Date: 2019-03-08

Registration Number: POR 073-18

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Canada

Executive summary

Background and objectives

Transport Canada (TC) wants to better understand what Canadian drivers know about automated vehicle (AV) technology and how they learn about it. The findings will be used to develop tools and resources to help educate the public, thereby promoting road safety as well as public confidence in these new technologies. The study was designed to look at how much Canadians know about AV technology and how they choose to educate themselves on it, particularly in terms of the lower level automation technologies currently available to Canadian consumers. The data will create a baseline from which comparative data can be drawn in future studies. The findings will help inform Transport Canada and relevant stakeholders on the types of tools/resources/forums they should produce to educate the public on this issue and promote motor vehicle safety on Canadian roads.

The specific objectives of this research were to:

- Measure Canadians' awareness and confidence in AVs;
- Collect data to assist Transport Canada in creating non-regulatory tools/forums to enhance Canadians' knowledge of AVs;
- Provide feedback that will enable Transport Canada to inform relevant stakeholders (e.g. provinces, territories, municipalities, industry) about Canadians' perceptions of AVs, which will help guide the resources/tools they produce to educate the public;
- Provide reliable statistical support to Transport Canada in the development of Memoranda of Understanding (MoUs) with industry/states to advance public awareness on AVs.

Methodology

Environics Research conducted an online survey of 3,113 Canadians who are members of an online panel, from January 31 to February 16, 2019. The sampling method was designed to complete interviews with Canadians between the ages of 16 to 80, 2,700 with a valid drivers' license and 300 without a driver's license. Quotas were set by age, gender, and region, as well as by Environics Analytics PRIZM5 segments to make the sample as close to representative as possible.[1] The data were statistically weighted to ensure the sample is representative of this population according to the most recently available Census information (region, gender, age).

As an online survey is a non-probability sample, no margin of sampling error is reported. Although opt-in panels are not random probability samples, online surveys can be used for general population surveys provided they are well designed and employ a large, well-maintained panel. This survey's large and carefully designed sample provides robust data for understanding the attitudes of the Canadian population and subgroups of interest, and supports a custom segmentation of the driver population, based on interest in, and affinity for, advanced automobile technology.

[1] PRIZM divides Canadians into 68 lifestyle segments, based on their postal codes. Proportionally including PRIZM segments into the sample design, in addition to standard region, age and gender demographics, allows Environics to balance online panel samples in a way that makes them more representative and comparable to telephone survey samples.

Target group	Target (quota)	Actual Unweighted	Actual Weighted
Total	3,000	3,113	3,113
Licensed drivers	2,700	2,700	2,789
Non-licensed	300	300	325

More information about the methodology for this survey is included in Appendix A.

Cost of research

The cost of this research was $114,959.59 (HST included).

Key findings

Awareness and impressions of automated vehicles (AVs)

- The dominant view of Canadians currently is that automated vehicles are ones that drive themselves. One-third of Canadians indicate the term “automated vehicles” refers to a car that drives itself, and still others specify a driverless car or one driven by a computer. Small proportions would include automatic transmissions, electric vehicles or artificial intelligence systems as constituting an AV.
- One-third of Canadians say they are at least somewhat familiar with automated vehicles, and two-thirds admit to being not very or at all familiar.
- When presented with a list of vehicle technologies, over eight in ten indicate having heard of at least one of the six ADAS features explored in the survey. Of these the best known, and most used, is blind spot monitoring (BSM).
- When presented with a list of potential advantages of AVs, the top advantages identified by Canadians are a reduction in driver error, and easier vehicle operation for elderly or disabled persons. The main disadvantages identified are the potential for equipment failure, failure to react to unexpected situations, or that drivers will become lazy or pay less attention.
- There is currently a relatively high level of concern about automated vehicles and how they will function on the nation’s roads. A majority of Canadians agree to some extent with negative statements about automated vehicles, most notably that system security and data privacy will become more of a concern when vehicles are more automated (almost three-quarters agreeing to some extent), or that the idea of fully automated delivery vehicles concerns them (two-thirds agree at least somewhat). In contrast, just over four in ten agree to some extent that automated vehicles perform better than human drivers in routine driving conditions or that automated vehicles will keep the road safer for everyone.
- While close to half of Canadians are currently neutral, the remainder are twice as likely to feel experiencing an automated vehicle would be stressful than to think it would be relaxing.

Impressions of specific advanced driver assistance systems (ADAS)

- Four in ten Canadians have used at least one of the three ADAS features about which they were asked; six in ten have not. Around one in ten report owning a vehicle with an ADAS technology and similar proportions report driving one equipped with an ADAS, that they do not currently own (e.g. a previous vehicle, rental or car share) or having ridden in one they did not drive. Between six and eight in ten indicate they either have no experience with ADAS as a driver or passenger, or are not able to say. When

all of the ADAS technologies are taken together, four in ten report being a user of at least one, while six in ten are non-users.

- When driver owners were asked how often they use the ADAS feature on their vehicle, the technology most likely to be used frequently is blind spot monitoring, followed by lane keeping assist. Not using an ADAS frequently mostly comes down to people feeling their driving is good, so the feature's assistance is not needed. However, three in ten who do not frequently use lane departure warning say it is because it is annoying, and around one-quarter say they do not frequently use lane keeping assist or blind spot monitoring because it is distracting.
- Three-quarters of driver owners say it was at least somewhat important to them that their vehicle had blind spot monitoring; this is also the technology others think will be most important for future purchase decisions. Three in ten driver owners say lane departure warning was very important, and around two in ten each say other ADAS features were very important when they selected their current vehicle.
- Canadians are most likely to say they are familiar with what blind spot monitoring does, and are least familiar with automatic emergency braking. When asked to identity the correct function of an ADAS from a list of three options, seven in ten or more identify the correct functions of blind spot monitoring, lane keeping assist or lane departure warning; only one-quarter identify the function of adaptive cruise control.

Information sources regarding advanced driver assistance systems (ADAS)

- When shown a list of possible information sources, users of ADAS are most likely to have consulted an owner's manual, friends or family, the manufacturer's web site or the dealership to learn about the ADAS features with which they are familiar.
- If they needed information on AV features in the future, close to half of Canadians would seek this on a manufacturer's web site, and around three in ten each would look at the owner's manual, ask the dealership, or seek out a video online. Just under two in ten would ask friends or family, or use a book, brochure or pamphlet. Fewer than one in ten would use any other listed information sources.
- From a list of four different ways of learning about ADAS technologies, Canadians are most likely to think in-person training at the dealership would be very useful, followed by having ADAS-specific training as part of new driver training programs. Around one-quarter each think onboard videos or printed information offered by rental car companies or car share programs would be very useful ways for Canadians to learn about ADAS functions.

Political neutrality statement and contact information

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Supplier name: Environics Research Group
PWGSC contract number: T8053-180120/001/CY
Original contract date: 2018-11-23

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