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Quantitative Research on Drone Users Lifestyle and Demographics

Executive Summary

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This public opinion research report presents the results of an online survey conducted by Leger Marketing Inc. on behalf of Transport Canada. The research was conducted with 700 Canadian drone users between February the 25th and March 6, 2019.

Cette publication est aussi disponible en français sous le titre : Étude quantitative sur le profil démographique et les habitudes des utilisateurs de drones au Canada

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1. Executive Summary

Leger is pleased to present Transport Canada with this report on findings from a quantitative survey designed to learn about Canadians drone users.

This report was prepared by Leger who was contracted by Transport Canada (contract number T8053-180127/001/CY awarded February 7, 2019).

1.1 Background and objectives

Despite exponential growth, the civilian drone sector continues to be in its early stages, and the number of studies and available data on drone users is somewhat limited, particularly in smaller markets like Canada. To properly target the Transport Canada's (TC) communications and awareness efforts, information is needed on drone users, including demographics, as well as related activities they may be involved in, how they purchase and use their drones, and what their understanding of aviation safety is. This research will also support the partnership between Transport Canada and Code for Canada, which will be working over the course of 2018-19 to develop a digital solution for drone safety in Canada.

The results will inform the Civil Aviation Group within Transport Canada of their target audience. The research will also aid the Drone Safety ("Know Before You Go") communications campaign to determine how information, educational tools and resources should be delivered to the drone community. The products this research will inform include educational material, advertising, web content and social media messaging.

Research on drone users will allow TC to:

- Understand the consumer profile of commercial and recreational drone users.
- Examine and gain insight on how aviation safety is understood by users.
- Identify opportunities to deliver and improve messaging, educational tools, and educational material to drone users.
- Support the partnership between Transport Canada and Code for Canada to develop a digital solution for drones in Canada. The partnership will place a heavy emphasis on user-driven work to seek a better understanding of drone pilots and their motivations.
- Results of this research study will help develop and deliver effective drone safety communication products.

1.2 Methodology – Quantitative research

Online survey

This consumer research was conducted via online surveys, using Computer Aided Web Interviewing (CAWI) technology. Fieldwork for the survey was carried out from February 25 to March 6, 2019. A total of 700 Canadian drone users were interviewed.

With the objective of having enough respondents in each category of drone users (recreational/professional; owns a drone/does not own a drone but occasionally flies drone) minimum quotas were set on each of these profiles. We ensured a minimum of 100 respondents corresponding to each of the aforementioned profiles of drone users, which allow us to draw up demographic profiles and compare them.

A pre-test of 20 interviews was completed before launching data collection to validate the programming of the questionnaire.

Since we didn't use an actual probability sampling method, the calculation of the margin of error cannot be done for this project.

Leger adheres to the most stringent guidelines for quantitative research. The survey instrument was compliant with the Standards of Conduct of Government of Canada Public Opinion Research.

A complete methodological description is provided in the Appendix section of this document (please see Appendix A).

Notes to the reader

The cross-tabulations in this report present the detailed responses obtained for the questions in the drone users' survey.

Presented in the "Total" column are the results for all respondents, and then the results per subgroup (for example, by gender, age, drone owners and non-owners, etc.). **Red** (with a - symbol) and **green** (with a + symbol) numbers respectively indicate lower or higher results that are considered statistically significant compared to results obtained for other respondents. Two proportions or two averages are significantly different only when statistical tests confirm this difference.

In the example below, we observe that overall 15% of respondents have a background in aviation. There are significant differences among the type of drone users. Respondents who own their drone(s) (21%) are more likely to have a background in aviation. There are also significant differences among the drone users based on the purpose of drone usage. Recreational respondents are less likely to have a background in aviation (13%). As shown in Table 1, the "non-owner" category refers to people who said that they do fly drones but do not own them. As such, they are drone users, without being owners.

Table 1. Background in aviation by type of drones users

Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)? Base: All respondents	Total	Owner	Non-owner
n= (weighted)	700	429	271
n= (unweighted)	700	447	253
Yes	15%	21%+	6%-
No	80%	76%-	86%+
DNK / Refusal	5%	3%-	8%+

Table 2. Background in aviation by drone usage purpose

Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)? Base: All respondents	Total	Recreational	Professional	Both
n= (weighted)	700	552	81	67
n= (unweighted)	700	547	82	71
Yes	15%	13%-	21%	28%+
No	80%	84%+	67%-	62%-
DNK / Refusal	5%	3%-	12%+	10%+

Note: Unweighted n = actual number of respondents surveyed in each sub-group.

1.3 Overview of quantitative findings

Profile and habits of drone users

- Overall, the incidence of drone users on the Canadian population is 17%. This incidence rate includes recreational and/or professional drone users, regardless if they own a drone or not. Three users out of five consider themselves drone owners (61%) and almost four users out of five fly drones for recreational purposes (79%). Only one user out of ten fly drones for work or research purposes (12%), and the same goes for users who fly drones for both recreational and work or research purposes (10%).
- Generally speaking, Ontario residents are more likely to be drone users (18%). Same goes for people who are aged between 18 and 34 (28%) and males (23%). Prior to launching the survey, it was established that drones can be used for two main reasons: recreational purposes and work or research purposes. Results show that people between the age of 55 and 64 are more likely to be recreational users (88%).
- On average, respondents who fly drones for both recreational and work or research purposes stated that they fly their drone 48% of the time for recreational purposes and 37% of the time for work or research purposes.
- A clear majority of respondents do not have any background in aviation. Indeed, when questioned about having a background in aviation, 80% of the respondents said they did not, while only one out of ten respondents said they did (15%). Results show that drone owners are more likely to have a background in aviation (21%) and non-owners¹ are more likely not to have one (86%).

¹ Non-owners refer to respondents who said they fly a drone but do not own one. This can apply to both recreational and professional drone users.

- Generally speaking, drone users use their drone(s) for less than an hour on a weekly basis (40%). A clear majority of drone owners fly their drone up to 4 hours per week (82%). Respondents who stated they fly drones for both recreational and work or research purposes are more likely to use their drone(s) between 10 and 14 hours per week (12%).
- Recreational users seem to mainly fly their drone(s) just for the fun of flying (64%). Results show that non-owners are less likely to fly their drone just for the fun of flying (52%). At the other end, one out of four professional users said the main reason they fly drones is for filmmaking, videography or photography (25%) and a little over one out of five said it was for research/academic purposes (22%).
- Generally speaking, almost four out of ten respondents say they usually fly their drone(s) in a rural area (37%).

Profile of drone owners

- Drone owners seem to mostly own one drone (68%). Indeed, almost three out of four recreational drone owners own only one drone (74%). On the other hand, three out of ten owners who fly drones for both recreational purposes said they own three drones or more (30%).
- Three quarters of the drone owners bought their drone(s) through a retail store (76%), whether online (27%) or in-store (49%). Half of the recreational owners purchased their drone in-store (53%) and are less likely to have made an online purchase (26%). On the other hand, almost three owners out of ten who fly drones for recreational and work or research purposes bought the drone they fly most often online through a website specializing in drones (29%).
- Surprisingly, almost three drone owners out of ten said they didn't know the make or brand of the drone they fly most often (28%). The most popular brand among the respondents is DJI (16%), followed by Blade (11%) and Parrot (9%). In the same vein, drone owners didn't seem to know the weight of the drone they fly most often. Results show that almost three quarters of the respondents weren't able to give an answer when questioned about the weight of their most used drone (74%). The overall average weight of a drone is 5.8 pounds and the general median is 1 pound. When looking at the answers given by recreational users, the average weight comes down to 3.7 pounds. The complete opposite happens when looking at the answers given by professional users: the average weight goes up to 24.6 pounds.

Clubs, learning techniques, certifications, and safety trainings

- Only 2% of the respondents are part of a drone or model aircraft club, but almost one out of five respondents said they are looking into joining one (18%). A little over three quarters of the recreational users are not part of any drone or model aircraft clubs nor looking to join one (77%).
- More than half of the respondents learned to fly drones on their own/without assistance (54%), almost one out of five was taught by a friend or colleague (18%) and one out of ten learned through instructional videos (YouTube or through a drone company) (11%). Only 4% of the respondents stated they enrolled in a drone-flying class, either online (47%) or in class (e.g. school, community centre) (48%).
- Two respondents out of ten either have a Drone Pilot Certificate issued by the Government of Canada or are in the process of obtaining one (21%). One quarter (25%) of the professional users are in the process of obtaining their certificate and 21% of the users who fly for both recreational and professional purposes already have their certificate. Results show that recreational users are more likely to not have a drone pilot certificate (79%) and professional users are less likely to not have one (48%).
- More than half of the respondents have not received any training or seen any instructional video specifically on safety relative to flying drones or model aircraft in Canada (58%). However, three respondents out of ten have received such training or seen such instructional video (37%). Four out of ten drone owners stated they did receive a training or saw an instructional video specifically on safety relative to flying drones or model aircraft in Canada (44%). Professional users are less likely to be part of those who did not receive any training nor seen any instructional video on drone safety (47%). In the same vein, only one quarter of the respondents have received training or saw an instructional video on Transport Canada's drone safety regulations (25%).

Information sources and regulations

- Generally speaking, more than half of the respondents mentioned they did not search for information on Canadian Government regulations regarding drones or model aircraft (57%). Results show that 43% of drone owners did search to get information on Canadian regulations, while only 28% of the non-owners did. While 63% of recreational users did not conduct such a search, more than half of the respondents who fly drones for work or research purposes did search for information on Canadian government regulations regarding drones or model aircraft at one point or another (52%). Out of all the respondents who stated they searched for information on Canadian government regulations regarding drone and model aircraft, almost seven out of ten conducted a search engine query (68%), almost half visited the Government of Canada website (48%) and one quarter visited TC's website (25%).
- Overall, 57% of the respondents who did not search for information on Canadian government regulations regarding drones or model aircraft directly on TC's website did, however, visit TC's website pages about drones at one point or another. A clear majority of these respondents searched for information about the current rules and regulations (80%), one respondent out of ten was looking for information on how to register their drone (11%) and only 8% were looking for information on how to get a drone pilot certificate.
- Half of the respondents self-evaluate themselves as not knowledgeable with regards to TC's drones and model aircraft regulations (50%). All in all, only 11% of the respondents considered they were "Very knowledgeable." Six respondents who fly drones for both recreational and work or research purposes out of ten consider themselves knowledgeable of the Transport Canada regulations on drones and model aircraft (62%). The best-known rule by recreational users is the one stating that one must fly their drone outside of controlled airspace (74%). As for professional users, half of them are aware that you must apply to TC to obtain a Special Flight Operations Certificate OR be eligible for an exemption if your operation is low-risk (50%).
- Six respondents out of ten weren't aware that there were new drone regulations coming into effect June 1, 2019 (64%). Only 27% were aware and 9% preferred not to say. Of the 27% of respondents who were aware that there were new regulations coming into effect, a good majority does not have a clear understanding of what those regulations will bring. Indeed, when asked to explain in their own words what changes the new regulations will bring, six respondents out of ten said they either didn't know or preferred not to answer (61%). While proportions of "do not know" answers tend to be higher for web surveys (compared to the telephone), an expected level of "do not know" should remain in the 30% range, not 61%. The new rule most of the respondents are aware of is that "You must keep your drone within your visual line of sight" (62%). In general, drone owners and respondents who fly their drones for both recreational and work or research purposes are more likely to be aware of the new rules.

Communication channels

- When it comes to staying informed on the newest trends about drones and model aircraft, two out of ten respondents do so on the internet through a Google search (20%). YouTube channels are also a source of information for 14% of the respondents.
- When asked, respondents believe an advertising campaign on TV is the best medium for TC to reach drone and model aircraft users (26%), followed by social media platforms (20%). Online ads on drone speciality websites is the preferred medium for 23% of the users who fly drones for both recreational and professional purposes.
- Results show that the preferred format to get information regarding safely flying drones in Canada is online videos (46%). Web content is the second preferred format with 23%.


1.4 Notes on interpretation of research findings

The views and observations expressed in this document do not reflect those of Transport Canada. This report was compiled by Leger based on the research conducted specifically for this project. This research is not probabilistic; the results cannot be inferred to the general population of Canada.

1.5 Political neutrality statement and contact information

Leger certifies that the final deliverables fully comply with the Government of Canada's political neutrality requirements outlined in the *Policy on Communications and Federal Identity* and the *Directive on the Management of Communications*.

Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

Signed: 

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