Transports Canada Transport Canada

# Public Opinion Research Study on Drone Users' Familiarity with the New Rules & the General Public's Social Acceptance of Drones

# Final report

## Prepared for Transport Canada

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**Ce rapport est aussi disponible en français**

Canada

This public opinion research report presents the results of an online survey conducted by Léger Marketing Inc. on behalf of Transport Canada. The quantitative portion of the research study was conducted with 2,703 Canadians between January 11 and January 31, 2021. The qualitative portion of the research study was conducted with 55 Canadians between February 23 and March 2, 2021.

Cette publication est aussi disponible en français sous le titre *Étude d'opinion publique sur la familiarité des utilisateurs de drones avec les nouvelles règles et l'acceptation sociale des drones par le grand public*.



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# Executive Summary

Leger is pleased to present Transport Canada with this report on findings from a quantitative survey and qualitative Bulletin Boards designed to learn about Canadians drone users and the general public. This report was prepared by Léger Marketing Inc. who was contracted by Transport Canada (contract number T8053-200054/001/CY awarded November 16, 2020).

## 1.1 Background and Objectives

Regulations surrounding the use of drones in Canada have evolved rapidly in recent years. As a matter of fact, the drone industry is contributing to the Canadian economy in many high-value domains, such as precision agriculture and package delivery. Regulations enable the growth of emerging industries by creating a predictable framework in which to operate. At the same time, they aim to address the safety concerns associated with the integration of an emerging technology into Canadian airspace. To keep up with these changes more information is needed on drone users, the general population and their respective level of knowledge about drones and associated regulations. There is also a need to assess the level of social acceptance of the use of drones in the society.

Transport Canada (TC) has observed an increasing trend in the number of reported drone incidents since 2014. Without concluding that Canadians are no longer operating their drones safely, which could be circumstantial, Transport Canada needs a better understanding of the level of awareness and knowledge of the regulations among users and the general population. The results of this study will allow Transport Canada to inform its communication strategies with Canadians about drones.

This study was done through a mixed qualitative and quantitative study.

For each of the study's target groups, the general objectives of the study are as follows:

Drone Users

- Creating a user profile with demographics (age, gender, geolocation, income, education)
- Identifying behaviours (flying frequency, safety features used, commercial or personal usage, awareness of rules)
- Identify purchasing habits (number of drones owned, brand or home build, and year of purchase)
- Identifying sources of information on drones and the new rules
- Measuring registration rate
- Measuring pilot certification rate

General population:

- Profile the sample with demographics (age, gender, geolocation, income, education)
- Measuring the opinion about drones and their perception
- Measuring the level of comfort with drones flying in their vicinity
- Measuring the level of comfort with drones in various situations (e.g. delivering a package, home security)
- Assessing the government role as a regulator
- Measuring the awareness of drone regulations
- Identifying opinion about drone in general, drone regulation and future use of drones
- Other related factors such as safety

## 1.2 Methodology

### Quantitative Research – Online Survey

This public opinion research was conducted via online surveys, using Computer Aided Web Interviewing (CAWI) technology. Fieldwork for the survey was carried out from January 11, 2021 to January 31, 2021. A total of 2,703 Canadians were interviewed, 701 drone users and 2,002 non-users from the general population.

A pre-test of 20 interviews was completed before launching data collection to validate the programming of the questionnaire in both English and French.

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, 14% of respondents have a background in aviation (consistent with 2019 results, 15%). There are significant differences among the drone users based on the purpose of drone usage. Recreational respondents are less likely to have a background in aviation (11%). 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 According to Type of Drone Users (Base: Drone users)

| **Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)?** | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 14% | 16% | 11% |
| No | 81% | 81% | 80% |
| DNK / Refusal | 5% | **4%-** | **9%+** |

Table 2. Background in Aviation According to Purpose of Drone Usage (Base: Drone users)

| **Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)?** | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |

| | | | | |
|---|---|---|---|---|
| Yes | 14% | 11%- | 25%+ | 30%+ |
| No | 81% | 84%+ | 68%- | 69%- |
| DNK / Refusal | 5% | 5% | 7% | 1% |

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

### Qualitative Research – Bulletin Boards

Leger conducted a series of four online discussion sessions with French-speaking and English-speaking Canadians. Conducting the discussion sessions online offered the opportunity to regroup people from all the regions in Canada. Two sessions were held with drone non-users (general public) and two sessions were held with drone users. One session in English and one session in French were held with each target. The sessions were held in the format of Bulletin Boards, i.e. chat-type discussion sessions. For each online discussion session, fifteen participants were recruited by our professional recruiters. A total of 55 recruits participated in the online focus groups (see Table 3 for details). All participants in the focus group received an honorarium of $100.

Online discussion sessions were conducted using the itracks Bulletin Boards software to facilitate moderation and to ensure an optimal interface between moderator and participants. Participants could interact with one another and the moderator as the discussion unfolded. Each session was open for 12 hours in order to maximize the participation of as many recruits as possible.

All sessions allowed for remote viewing by Leger and Transport Canada observers.

Table 3. Details of the discussion sessions

| Session Detail | Date | Recruits | Participants | Language |
|---|---|---|---|---|
| Session 1 – General public (non-users) | February 23 | 15 | 12 | English |
| Session 2 – General public (non-users) | February 23 | 15 | 15 | French |
| Session 3 – Drone users | March 2 | 15 | 14 | English |
| Session 4 – Drone users | March 2 | 15 | 14 | French |

## 1.3 Overview of the Findings

### 1.3.1 Quantitative Survey

#### Profile and Habits of Drone Users

Overall, the incidence of drone users on the Canadian population is 13% (this includes both those who own and do not own a drone and for all types of use). This incidence rate includes recreational and/or professional drone users (those who use their drone for work or research), regardless of if they own a drone or not. Two-thirds of users own one drone (65%) and four out of five fly drones for recreational purposes (80%). 14% of users indicate flying drones professionally (for work or research purposes), while 6% note flying drones for both recreational and professionally.

Generally speaking, Ontario residents are more likely than residents of other provinces to be drone users (15% of Ontario residents fly drones) while Quebec residents are more likely to be non-users (89% of Quebec residents do not fly drones). Males are also more likely to be drone users than females: 19% of males fly drones while only 7% females do. The results found that 21% of Canadians between the ages of 18 and 34 fly drones, which was the highest amount among age groups. This decreases to 15% of Canadians between the ages of 35 and 54 and 6% for Canadians that are 55 years old or older.

Generally speaking, the respondents who said they did fly their drones for both recreationally and professionally, fly their drones on average 59% of the time for recreational purposes and 41% of the time professionally.

A clear majority of respondents do not have any background in aviation. When questioned about having a background in aviation, 81% of the drone users said they did not, while only 14% said they did. Results show that professional drone users are more likely to have a background in aviation (25%).

Generally speaking, recreational users mainly fly their drone(s) for the fun of flying (70%) and 26% fly drones to film videos or take pictures. Drone owners are more likely to fly their drone(s) just for the fun of flying (73%). On their part, non-owners are less likely to fly drones just for the fun of flying (62%) when presented with the opportunity to fly a drone.

One out of four drone users who fly their drone for both professional and recreational purposes (24%) identified the main reason for flying a drone or model aircraft professionally as filmmaking, videography or photography, and nearly one out of five for agricultural purposes (surveys or inspections (17%), inspecting buildings, structures or roofs (area surveys, perimeter scans) (16%), and/or research/academic research purposes (16%).

Generally speaking, drone users mostly fly their drone(s) in a rural area (37%). Users who fly drones for both recreational and professional purposes are more likely to fly their drone(s) in a suburban area (43%) while 41% of recreational drone users fly their drone(s) in a rural area.

Generally speaking, drone users mostly fly medium drones (over 250 grams but below 25kg) in urban settings (54%).

Users who fly drones for professional purposes are more likely to fly large drones (above 25kg) in an urban setting (21%) while recreational drone users are more likely to fly micro drones (under 250 grams).

## Profile of Drone Owned

Drone owners seem to mostly own one drone (65%), and seven out of ten recreational users own one drone. On the other hand, 45% of owners who fly drones for both recreational and professional purposes said they own two drones or more (30%).

Just under three-quarters of the drone owners bought their most-used drone through a retail store (72%), either online (33%) or in-store (40%). More than four in ten recreational users purchased their drone in-store (44%), whereas professional drone users are more likely to have purchased their drone directly from the manufacturer (23%) or through a website specializing in drones (13%).

Surprisingly, three in ten drone owners said they didn't know the make or brand of the drone they fly most often (31%). The most popular brand among the respondents is DJI (17%), followed by Parrot (11%). In the same vein, 76% also didn't know the weight of their most-used drone. The overall average reported weight of a drone is 6.7 pounds [3.04 kg] – 3.3 pounds [1.5 kg] on average for recreational-only users, and 27.0 pounds [12.25 kg] on average for professional-only users.

## Clubs, Learning Techniques, Certifications and Safety Trainings

Only 1% of the respondents are part of a drone or model aircraft club, but 15% said they are looking into joining one. More than four in five of the recreational users are not part of any drone or model aircraft clubs nor looking to join one (82%).

Just one in ten respondents have attended a drone flight school to learn how to operate a drone (12%), with 29% of professional users having attended a drone flight school. Most often, those who attended took an online class (65%).

Two respondents out of ten either have a Drone Pilot Certificate issued by the Government of Canada (13%) or are in the process of obtaining one (9%). One-quarter (23%) of the professional users are in the process of obtaining their certificate and 44% 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%).

Two-thirds of drone users who have a drone pilot certificate issued by the Government of Canada found the process demanding to some degree (66%). 43% said they considered it "Somewhat demanding" and 23% stated they found it "Very demanding."

Nearly seven out of ten drone users (68%) have not received any training or seen any instructional videos specifically on Transport Canada's drone safety regulations; only one-quarter of drone users (25%) have seen such a video or received such training. Drone owners are more likely to have received training or seen an instructional video on Transport Canada's drone safety (27%). Professional users and users who fly drones for both recreational and work or research purposes are more likely to be part of those who have received training or seen an instructional video on Transport Canada's drone safety regulations (34% and 66%, respectively). It is also interesting to note that drone users who fly drones for both recreational and professional (work or research purposes) are more likely to not know if they have received such training or seen such instructional videos (12%).

The majority of drone users who received training or saw an instructional video specifically on Transport Canada's drone safety regulations, found it prepared them well for using a drone (86%). 54% indicated "Fairly good preparation" and 32% stated "Very good preparation."

## Information Sources and Regulations

More than half of the respondents have never searched for information on Canadian Government regulations regarding drones or model aircraft (55%). Results show that 42% of drone owners have searched information on Canadian regulations, while only 33% of the non-owners have. While 57% of recreational users have not conducted conduct such a search, nearly two-thirds of those who use drones for both recreational and professional purposes have searched for regulatory information (64%).

Drone users who stated that they have sought information on Canadian government regulations regarding drones or model aircraft, 61% of them did so using a search engine (e.g., Google, Bing, Yahoo, etc.), 57% visited the Government's website and 17% went directly on Transport Canada's website.

Half of the respondents self-evaluate themselves as not knowledgeable with regards to Transport Canada's drones and model aircraft regulations (51%). All in all, only 11% of the respondents considered they were "Very knowledgeable." Seven out of ten respondents who fly drones for both recreational and work or research purposes consider themselves knowledgeable of the Transport Canada regulations on drones and model aircraft (72%). The best-known rule by recreational drone users is that drones must be flown far away from other aircraft (76%). While they see themselves as not knowledgeable concerning regulations, their level of awareness on certain key elements of the current rules is higher.

Six out of ten drone users think that they are knowledgeable about drones in general (59%). 47% said they considered themselves "Somewhat knowledgeable" and 12% stated they were "Very knowledgeable." Users who fly drones for both recreational and professional purposes are more likely to consider themselves knowledgeable (81%).

Nearly two thirds of drone users feel their knowledge of the Transport Canada regulations on drones and model aircrafts has remained the same over the last year (63%). Non-owners (12%) are more likely to indicate that their knowledge has decreased, while those who fly for recreational and professional purposes are more likely to indicate that it has increased (41%).

At least half of drone users indicate being aware of each of the rules regarding drones or model aircraft currently enforced in Canada, with the greatest proportion being aware that they must operate 'far away from other aircraft (don't fly anywhere near airplanes, helicopters and other drones; 70%)'. As might be expected, drone users who are owners, generally are more likely to be aware of the current rules compared to non-owners. Recreational users are generally more

likely than professional users to be aware of each of the rules surrounding drones and model aircrafts currently enforced in Canada.

Generally, each of the current aspects of the Federal government legislation, in relation to who can fly drones and how or where they can be flown, improve drone users' perceptions of drone safety. Recreational users are more likely than professional users to indicate their perceptions of drone safety are improved by each of the aspects.

Drone users are most comfortable with drones being deployed in emergency scenarios to help save people, like in search and rescue operations, followed by being used to deliver parcels, instead of by delivery personnel. Users are least comfortable with the idea of drones being used to transport people like a taxi service. Drone owners are generally more likely than non-owners to indicate that they would be comfortable with all potential uses of drones.

#### Communication

Two out of ten drone users indicate that the best way that for Transport Canada to communicate relevant information to drones users in Canada regarding safely flying their drone would be through social media (22%), followed by online (19%), and/or television ads (17%). Online ads on drone speciality websites is the preferred medium for 35% of the users who fly drones for both recreational and professional purposes.

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 or other search engine (21%). YouTube channels are also a source of information for 10% of the respondents.

### 1.3.2 Qualitative Research

#### Drone Users

The majority of the participants would qualify themselves as recreational drone users. They mainly use their drones for photography or to film while they are on vacation or on a hike. Professional users also use their drone(s) for the same purposes.

Most drone users fly their drone anywhere that they would think would be interesting for an aerial shot, as long as it's a safe place to do so. Users with less experience said they mainly practice on their own property, outside their house.

When using the drone, respondents said they try to keep their drone within visual range, away from people, power lines, cars and other people's houses. Some professional users mentioned that they use of pre-programed flights because the height and speed of the operation must be constant.

The most popular brand among participants was DJI. Other brands were also mentioned to a lesser extent: National Geographic, Propel, Holy Stone, AKASO Tech, Protocol, and Bigly Brothers.

Most participants judged they are somewhat familiar with the laws and regulations surrounding the use of drones in Canada. Most think they know enough to fly the small drone(s) they own.

Most participants do not however know much about how the drone regulations are enforced. They imagine it is enforced by Transport Canada. Some mentioned they would not even know where to report an unsafe use they witnessed. Some others assume it falls on the local police jurisdiction.

For the participants who are aware of the laws and regulations, they try to always follow them in general. The majority mentioned trying to do their best with what they know. On the other end, some participants are aware they have not always followed the rules, more specifically while they were on vacation.

When thinking about precautionary measures, the majority mentioned not flying on windy days or when the weather is not good. Some participants mentioned that if they are not alone while flying their drone, they also ask their friend to keep an eye on the drone and an ear out for other aircraft that might enter the airspace. The majority of participants also mention not flying around other people, not flying near power lines, not flying near cars or houses but rather flying in a large open field.

For participants who have searched for general information about drones, they mainly searched for piloting tips, how to stay in control, how to use the drone they purchased or how to fix some part of their drone(s). Some also researched reviews prior to purchasing a drone, how well they work or issues that the drone they wanted to buy tend to have.

If they had to search for information about drones, the majority of participants would begin with a Google search and see where the search takes them. For laws and licensing, they would generally turn directly to Transport Canada's website. Some also mentioned YouTube as a search tool.

Some participants admitted not having done exhaustive research on drone laws and rules. Some did stumble upon the laws and rules while searching for other types of information. For the participants who did search for information on drone laws and rules, they searched for this information on the Transport Canada website.

If they had to search for information about laws and rules on the use of drones, most participants would start by doing a Google search. Some participants said they would start by skimming through Transport Canada's website and would then resort to a Google search if they did not find the relevant information.

The majority of participants have not taken any course or training to fly drones. Some admitted they would consider taking a class once they get the hang of simply controlling their drone. Only a couple of participants have taken a course or training.

Generally speaking, some participants do have privacy and safety concerns about the use of drones. Some are also concerned because they found drones are not as easy to fly as they expected. To alleviate their concerns, participants feel classes should be mandatory even for small toy drones, that way everyone would be educated and more aware of the laws and rules to follow, and also learn the right technique. Some participants went as far as saying anyone who buys a drone should have to provide a valid Drone Pilot Certificate to do so.

The majority of participants thought Transport Canada's rules and regulations for drones were excellent. When presented with a sample of Transport Canada drone regulations currently in force, most of the participants had no previous knowledge of them. However, they judged them to be common sense. Some participants were surprised to learn that drones above 250g must be registered with Transport Canada in order to be legally flown.

When presented with different possible future uses of drones, participants were rather divided. Most participants are comfortable with the use of drones for emergency situations like search and rescue, monitoring infrastructure like power lines and monitoring and protecting wildlife.

Most participants are not quite comfortable with flying taxicabs. Some feel the sounds would disturb them, others feel flying taxicabs 'sound like an accident waiting to happen'. On the other end, one participant pointed that if they helped reduce pollution, it might make her feel a little better about it. Another participant mentioned flying taxicabs 'sound cool and all, but there has to be a 99.9% chance it can't crash!'

More participants were comfortable with autonomous drones. They believe human errors can happen as much as computer errors. Some even think that it would be safer if drones were all computer controlled.

## General Public

The general population does not have an in-depth knowledge of drones. They have basic knowledge to what they can do: capture photos or videos, military applications, and delivery purposes.

The general population feel drones can be useful for both recreational and professional uses: photography, scientific, geographic, etc.

Participants who had little to no knowledge about drones compared them to remote-controlled toy cars. The only usage they see in them is to play.

Without having a lot of knowledge about drones the majority of participants thought drones can be safe, if used properly, and with the right intentions. The main unsafe attribute of drones mentioned by some participants is that it's human operated, so human errors can occur, and damages can be done to unaware bystanders.

Most participants were only somewhat aware of the drone laws and regulations, but whether they are aware or not of the laws and regulations, they assume that Canada does a good job at catching and penalizing unsafe drone pilots.

Generally speaking, most participants think the drone laws and regulations are enforced by Transport Canada, while only one or two participants feel it must fall on local law enforcement, i.e. local police, or the Royal Canadian Mounted Police (RCMP).

Participants who looked for information about drones, whether general information or information about laws and rules, were mainly looking to have a better understanding of a drone's function, how useful they can be in general, the price range for drones and safety rules and regulations.

If they were to conduct research on drones or the laws and regulations, the majority of participants would start off by a Google search if they were to search for information on drones. They then imagine they would either end up on drone enthusiasts' blogs, YouTube channels, or more serious governmental sources for safety information, such as Transport Canada's website

Participants mainly had a positive opinion towards drones. Some think it is a positive resource that can be of help for many different purposes. Even if overall, the majority had a positive opinion, a lot of them also had some reservations. They felt a person could use a drone to violate other people's privacy or if the battery runs out of power while flying, they could cause an accident.

Participants said the following may alleviate concerns: pilots being educated before being allowed to own a drone, limiting the height range the drone can fly from the controller or software, classifying drones (just like cars or planes), proof of a course completion to purchase a drone and clear and rigorous regulations.

After being presented with the current Federal government regulations, the majority of participants thought the rules and regulations were excellent and felt safer knowing they are in place. Reading the current regulations also brought up more questions from participants, such as who determines what is "properly qualified" and how does one go about getting qualified, or if registered, does a user require insurance to fly legally.

When presented with different possible future uses of drones, participants were rather divided. Some were not comfortable with all the different types of uses of drones presented, while others were comfortable with all of them, and some were partially comfortable with only some of the uses presented.

Almost every participant was comfortable with using drones for emergency situations like search and rescue, monitoring infrastructure like power lines and monitoring and protecting wildlife.

Only a few participants were comfortable with flying taxicabs. Most feel there would be many safety concerns. Some also feel they would always be worried about a person or a drone falling on them while walking on the streets.

Participants were more comfortable with autonomous drones. Most participants believe human errors can happen as much as computer errors. Some even think that if the drone is “all” computer-controlled, it would work better than a mixed system. Some even went on to say it would be even safer than human controlled drones. Others compared it to the most recent NASA Mars Perseverance Rover mission was controlled by a computer, and everything went smoothly.

## 1.4 Notes on Interpretation of the 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:

Christian Bourque, Senior Researcher

Léger

# Detailed Results – Quantitative Research

## 2.1 Drone Users

### 2.1.1 Profiling

As mentioned before, this study is focussed on people who fly drones, which include the following:

- Canadians who personally own a drone or other model aircraft that they fly for recreational purposes;
- Canadians who personally own a drone or other model aircraft that they fly professionally (for work or research purposes);
- Canadians who do not own a drone or other model aircraft but fly them for recreational purposes;
- Canadians who do not own a drone or other model aircraft but fly them professionally (for work or research purposes);
- Canadians who personally own a drone or other model aircraft that they fly BOTH for professional AND recreational purposes; and
- Canadians who do not own a drone or other model aircraft but fly for BOTH professional AND recreational purposes.

While this study is non-probabilistic, our results show that the incidence of drone users in the Canadian population is 13% (down slightly from 2019 results, 17%). Some are not necessarily the owner of the drone(s) they fly, and they can use them for either recreational purposes, work or research purposes, or for both. Weighting was based on administrative statistics of the starting sample, which creates a calibrated final sample that is representative of the Canadian population, allowing us to evaluate the prevalence of drone users in the population.

More than six out of ten (63%) drone users own a drone for recreational reasons and more than one out of ten (13%) own a drone and fly it for professional reasons. Nearly a quarter of drone users (23%) do not own a drone but occasionally fly one for recreational reasons, while less than one out of ten users (7%) do not personally own a drone but fly it professionally.

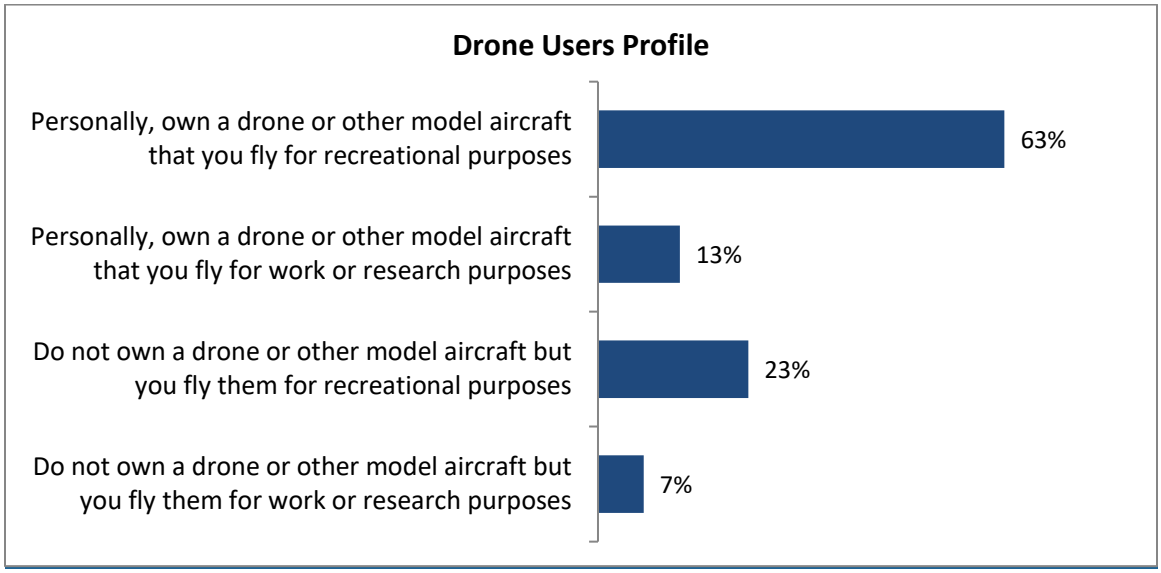


*Figure 1. Answer to question 1: Which of the following best applies to your current situation? MULTIPLE ANSWERS ALLOWED * Base: Drone Users (n=701) *Because respondents were able to give multiple answers, total mentions may exceed 100%.*

The next tables (4-5-6) detail the prevalence of drone users among Canadians.

Proportionally, Ontario has significantly more drone users than other provinces (15%). In contrast, Quebecers are the least likely to be drone users (11%). There are no other significant differences between respondents from other provinces. Males are also more likely to be drone users (19%). Women are less than half as likely to use drones as men (7%). People under 55 are more likely to be more of a user of drones than other Canadians (21%, 18-34 year, and 15%, 35-54 years).People who are 55 years and older are more likely to be non-users (94%).

Table 4. Prevalence of Drone Users Among Regions

| **Q1. Which of the following best applies to your current situation?** | **Total** | **Atlantic** | **Quebec** | **Ontario** | **Prairies (MB, SK)** | **Alberta** | **B.C.+ Territories** |
|---|---|---|---|---|---|---|---|
| n= (weighted) | 2703 | 186 | 634 | 1037 | 176 | 303 | 367 |
| n= (unweighted) | 2703 | 171 | 613 | 1060 | 201 | 302 | 356 |
| Users | 13% | 11% | **11%-** | **15%+** | 13% | 12% | 14% |
| Non-users | 87% | 89% | **89%+** | **85%-** | 88% | 88% | 86% |

Table 5. Prevalence of Drone Users Among Gender

| **Q1. Which of the following best applies to your current situation?** | **Total** | **Male** | **Female** |
|---|---|---|---|
| n= (weighted) | 2703 | 1313 | 1384 |
| n= (unweighted) | 2703 | 1386 | 1309 |
| Users | 13% | **19%+** | **7%-** |
| Non-users | 87% | **81%-** | **93%+** |

Table 6. Prevalence of Drone Users Among Age Groups

| **Q1. Which of the following best applies to your current situation?** | **Total** | **18-34** | **35-54** | **55+** |
|---|---|---|---|---|
| n= (weighted) | 2703 | 737 | 921 | 1044 |
| n= (unweighted) | 2703 | 820 | 1015 | 868 |
| Users | 13% | **21%+** | **15%+** | **6%-** |
| Non-users | 87% | **79%-** | **85%-** | **94%+** |

The next tables (7-8-9) detail drone ownership among drone users.

There are fewer drone users in Atlantic Canada who do not own their own drone than in other provinces. This is the only significant difference observable in the results between provinces depending on whether the user owns his or her drone. Males are more likely to be drone owners (76%), while females are more likely to be non-owners (63%). There are no differences between age groups with respect to ownership.

Table 7. Type of Drone Ownership Among Regions

| **Q1. Which of the following best applies to your current situation?** Base: Drone users | **Total** | **Atlantic** | **Quebec** | **Ontario** | **Prairies (MB, SK)** | **Alberta** | **B.C.+ Territories** |
|---|---|---|---|---|---|---|---|
| n= (weighted) | 354 | 21 | 67 | 154 | 22 | 37 | 52 |
| n= (unweighted) | 701 | 39 | 125 | 304 | 56 | 66 | 111 |
| Owner | 72% | **87%+** | 67% | 70% | 70% | 79% | 76% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Non-owner | 28% | 13%- | 33% | 30% | 31% | 21% | 25% |

Table 8. Type of Drone Ownership Among Gender

| **Q1. Which of the following best applies to your current situation?** Base: Drone users | **Total** | **Male** | **Female** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 486 | 214 |
| Owner | 72% | 76%+ | 63%- |
| Non-owner | 28% | 24%- | 37%+ |

Table 9. Type of Drone Ownership Among Age Groups

| **Q1. Which of the following best applies to your current situation?** Base: Drone users | **Total** | **18-34** | **35-54** | **55+** |
|---|---|---|---|---|
| n= (weighted) | 354 | 153 | 141 | 60 |
| n= (unweighted) | 701 | 285 | 304 | 112 |
| Owner | 72% | 74% | 70% | 73% |
| Non-owner | 28% | 26% | 31% | 27% |

The next tables (10-11-12) detail the purpose of drone usage among drone users.

Other than for some differences between age groups, there are no statistically significant provincial or gender differences as to the reason for using drones. Drone users aged between 35 and 54 years are more likely to be recreational users only (86%). People aged 18 to 34 are more likely to be professional users (17%).

Table 10. Purpose of Drone Usage Among Regions

| **Q1. Which of the following best applies to your current situation?** Base: Drone users | **Total** | **Atlantic** | **Quebec** | **Ontario** | **Prairies (MB, SK)** | **Alberta** | **B.C.+ Territories** |
|---|---|---|---|---|---|---|---|
| n= (weighted) | 354 | 21 | 67 | 154 | 22 | 37 | 52 |
| n= (unweighted) | 701 | 39 | 125 | 304 | 56 | 66 | 111 |
| Recreational | 80% | 79% | 78% | 81% | 76% | 84% | 80% |
| Professional | 14% | 8% | 17% | 13% | 14% | 12% | 14% |
| Both | 6% | 13% | 5% | 6% | 10% | 5% | 6% |

Table 11. Purpose of Drone Usage Among Gender

| **Q1. Which of the following best applies to your current situation?** Base: Drone users | **Total** | **Male** | **Female** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 486 | 214 |
| Recreational | 80% | 80% | 81% |
| Professional | 14% | 13% | 15% |
| Both | 6% | 7% | 4% |

Table 12. Purpose of Drone Usage Among Age Groups

| **Q1. Which of the following best applies to your current situation?** | **Total** | **18-34** | **35-54** | **55+** |
|---|---|---|---|---|
| n= (weighted) | 354 | 153 | 141 | 60 |
| n= (unweighted) | 701 | 285 | 304 | 112 |
| Recreational | 80% | **73%-** | **86%+** | 84% |
| Professional | 14% | **17%+** | 11% | 13% |
| Both | 6% | **10%+** | **3%-** | 3% |

### 2.1.2 Habits of Use of the Drone

Generally speaking, the respondents who said they did fly their drones for both recreational purposes and work or research purposes, fly their drones on average 59% of the time for recreational purposes and 41% of the time professionally. Observable differences between drone owners and non-owners are not significant.

Table 13. Proportion of Usage for Professional or Recreational Purposes According to Type of Drone Users

| **Q2. Thinking about the total number of hours you fly, what is the percentage devoted to professional use versus recreational use? (% mean)** SPONTANEOUS ANSWERS Base: Drone users who fly drones for both recreational and professional purpose | **Total** | **Owner** | **Non-owner*** |
|---|---|---|---|
| n= (weighted) | 22 | 18 | 4 |
| n= (unweighted) | 50 | 42 | 8 |
| % recreational | 58.9% | 54.7% | 78.8% |
| % professional | 41.1% | 45.3% | 21.2% |

*Given the small number of respondents (n<30) data are presented for illustrative purposes only.

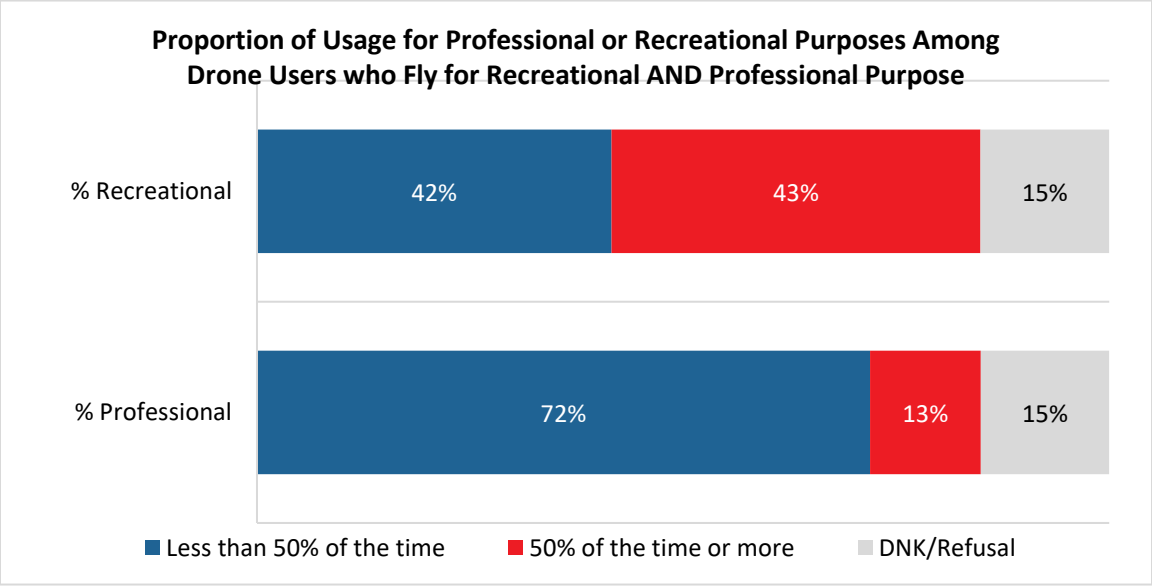


*Figure 2. Answer to question 2: You indicated that you fly drones or model aircraft for both work or research and recreational purposes. Thinking about the total number of hours you fly, what is the percentage devoted to professional use versus recreational use? SPONTANEOUS ANSWERS Base: Respondents who fly drones for both recreational and professional purpose (n=50)*

Of all the drone users, 14% indicate having a background in aviation, while 81% indicate they do not and 5% preferred not to answer.

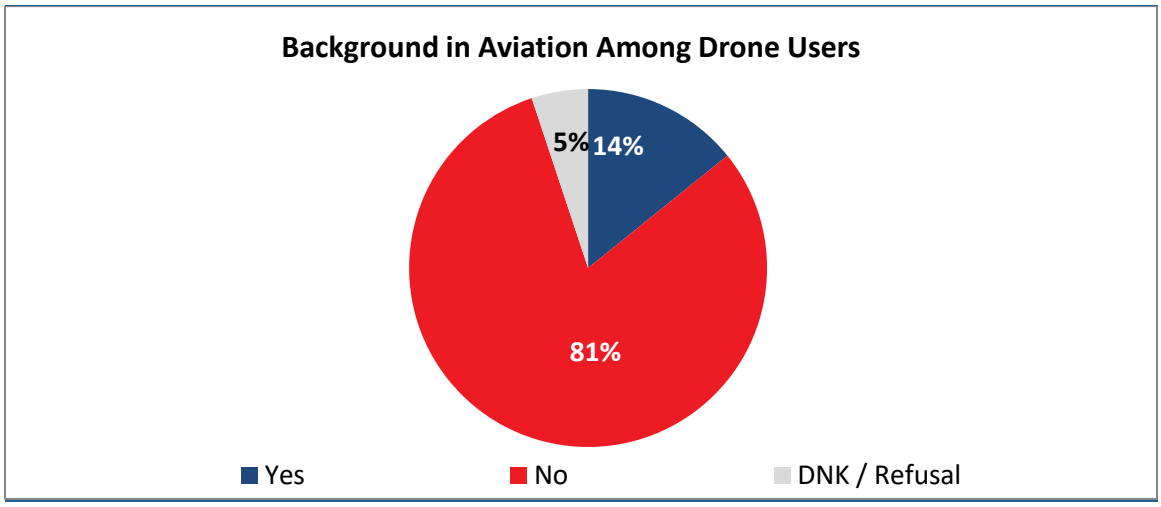


*Figure 3. Answer to question 27: Do you have a background in aviation (flying lessons, pilot license or anything related)? Base: Drone users (n=701)*

The next tables (14-15) detail the background in aviation among drone users.

No statistical difference is observable between drone owners and non-owners on a background in aviation. However, there are significant statistical differences between those who fly their drone solely for professional or both professional and recreational purposes and other users of drones. Those who fly their drone solely for professional (25%) or both professional and recreational (30%) purposes are more likely than the other drone users to have a background in aviation.

Table 14. Background in Aviation According to Type of Drone Users

| **Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 14% | 16% | 11% |
| No | 81% | 81% | 80% |
| DNK / Refusal | 5% | **4%-** | **9%+** |

Table 15. Background in Aviation According to Purpose of Drone Usage

| **Q27. Do you have a background in aviation (flying lessons, pilot license or anything related)?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Yes | 14% | 11% | **25%+** | **30%+** |
| No | 81% | 84% | **68%-** | **69%-** |
| DNK / Refusal | 5% | 5% | 5% | 7% |

Recreational users mainly fly their drone(s) for the fun of flying (70%) and 26% fly drones to film videos or take pictures.

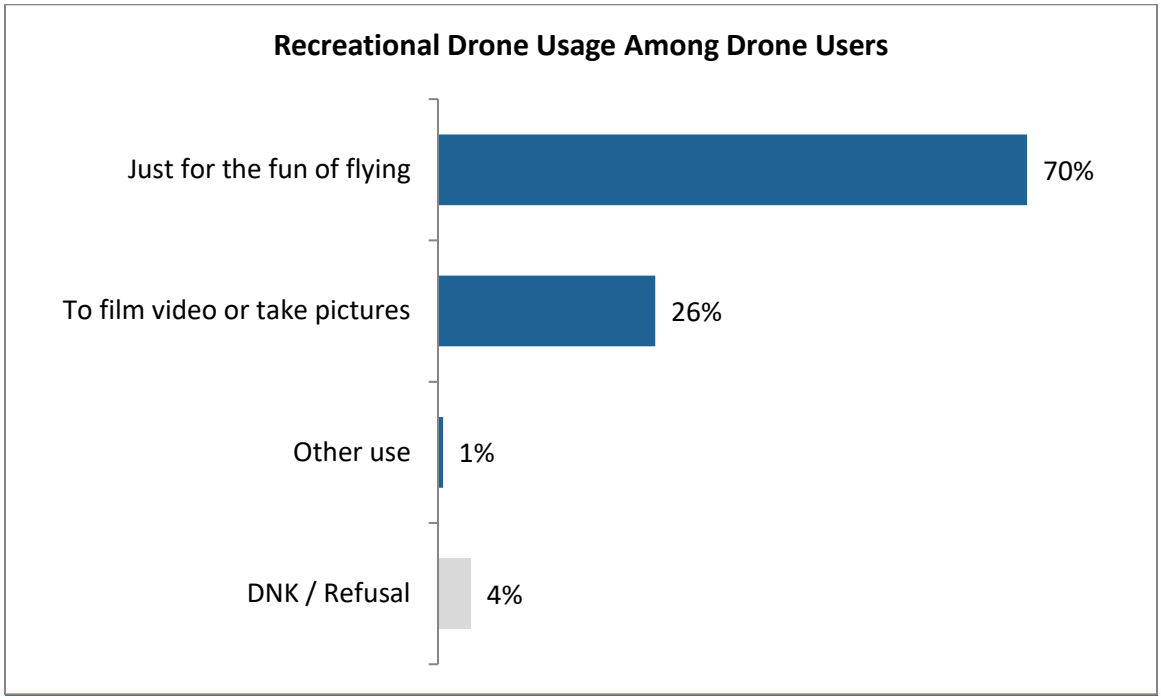


*Figure 4. Answer to question 3: How do you mainly use your drone or model aircraft? Base: Drone users who fly drones for recreational purposes (n=610)*

The next table (16) details the recreational drone usage among drone users.

Drone owners are more likely to fly their drone(s) just for the fun of flying (73%), non-owners are less likely to fly drones just for the fun of flying (62%).

Table 16. Recreational Drone Usage According to Type of Drone Users

| **Q3. How do you mainly use your drone or model aircraft?** Base: Drone users who fly drones for recreational purposes | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 306 | 227 | 78 |
| n= (unweighted) | 610 | 454 | 156 |
| Just for the fun of flying | 70% | **73%+** | **62%-** |
| To film video or take pictures | 26% | 26% | 25% |
| Other use | 1% | 1% | <1% |
| DNK / Refusal | 4% | **1%-** | **13%+** |

One out of four professional users (24%) mainly fly drones for filmmaking, videography or photography, and nearly one out of five mainly fly drones for agricultural purposes (are surveys or inspections) (17%), inspecting buildings, structures or roofs (area surveys, perimeter scans) (16%), and/or research/academic research purposes (16%).

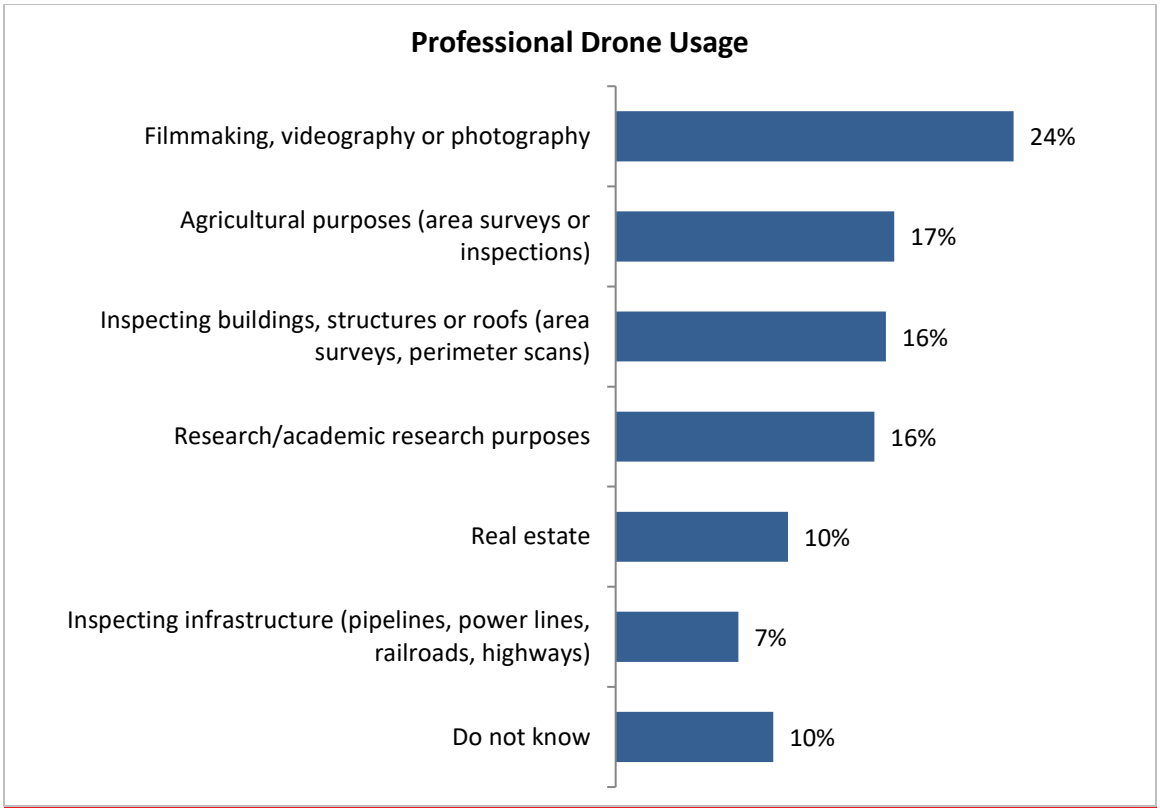


*Figure 5. Answer to question 5: What is your main reason for flying a drone or model aircraft for work or research? Base: Drone users who fly drones for both recreational and professional purposes (n=50)*

The following table (Table 17) shows that there is no statistically significant difference between drone users who own drones and non-owners.

Table 17. Professional Drone Usage According to Type of Drone Users

| **Q5. What is your main reason for flying a drone or model aircraft for work or research?** Base: Drone users who fly drones for recreational and professional purposes | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 22 | 18 | 4 |
| n= (unweighted) | 50 | 42 | 8 |
| Filmmaking, videography or photography | 24% | 18% | 47% |
| Agricultural purposes (area surveys or inspections) | 17% | 19% | 7% |
| Inspecting buildings, structures or roofs (area surveys, perimeter scans) | 16% | 15% | 20% |
| Research/academic research purposes | 16% | 17% | 11% |
| Real estate | 10% | 13% | 0% |
| Inspecting infrastructure (pipelines, power lines, railroads, highways) | 7% | 9% | 0% |
| Do not know | 10% | 8% | 15% |

Generally, drone users mostly fly their drone(s) in a rural area (37%) or in suburban area (29%). About one-third of drone users (34%) fly their drone in an urban environment with a population of 100,000 or more.

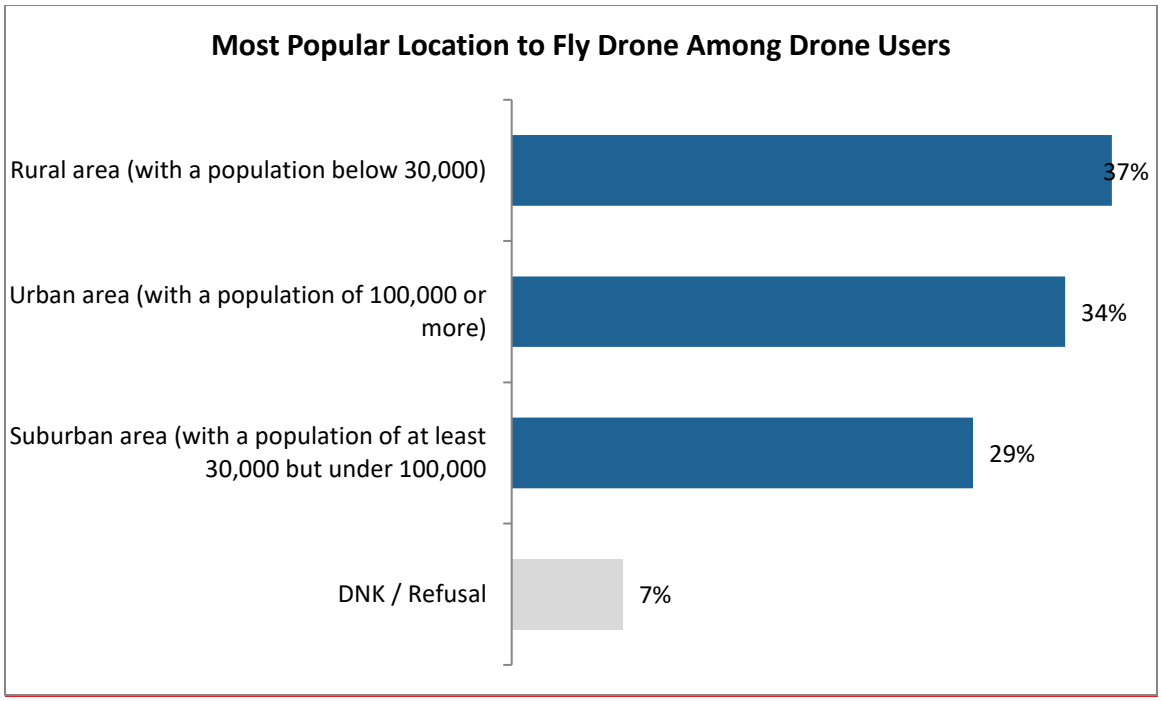


*Figure 6. Answer to question 4: Where do you most often fly your drone or model aircraft? MULTIPLE ANSWERS ALLOWED * Base: Drone users (n=701)*
**Because respondents were able to give multiple answers, total mentions may exceed 100%.*

The next tables (18-19) detail the preferred places to fly drones among drone users.

Users who fly drones for both recreational and professional purposes are more likely to fly their drone(s) in a suburban area (43%) while 41% of recreational drone users fly their drone(s) in a rural area.

Table 18. Most Popular Location to Fly Drone According to Type of Drone Users

| **Q4. Where do you most often fly your drone or model aircraft?** MULTIPLE ANSWERS ALLOWED * Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| In a rural area | 37% | 38% | 35% |
| In a suburban area | 29% | 29% | 27% |
| In an urban area | 34% | 35% | 32% |
| DNK / Refusal | 7% | **4%-** | **14%+** |

**Because respondents were able to give multiple answers, total mentions may exceed 100%.*

Table 19. Most Popular Location to Fly Drone According to Purpose of Drone Usage

| **Q4. Where do you most often fly your drone or model aircraft?** MULTIPLE ANSWERS ALLOWED * Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |

| n= (unweighted) | 701 | 560 | 91 | 50 |
|---|---|---|---|---|
| In a rural area | 37% | **41%+** | **18%-** | 30% |
| In a suburban area | 29% | **27%-** | 34% | **43%+** |
| In an urban area | 34% | 33% | 34% | 47% |
| DNK / Refusal | 7% | 6% | **16%+** | **-3%** |

**Because respondents were able to give multiple answers, total mentions may exceed 100%.*

Drone users mostly fly medium drones (over 250 grams but below 25kg) in urban settings (54%). About one out of ten drone users (11%) flies a large drone in urban areas, while three out of ten (31%) fly micro drones.

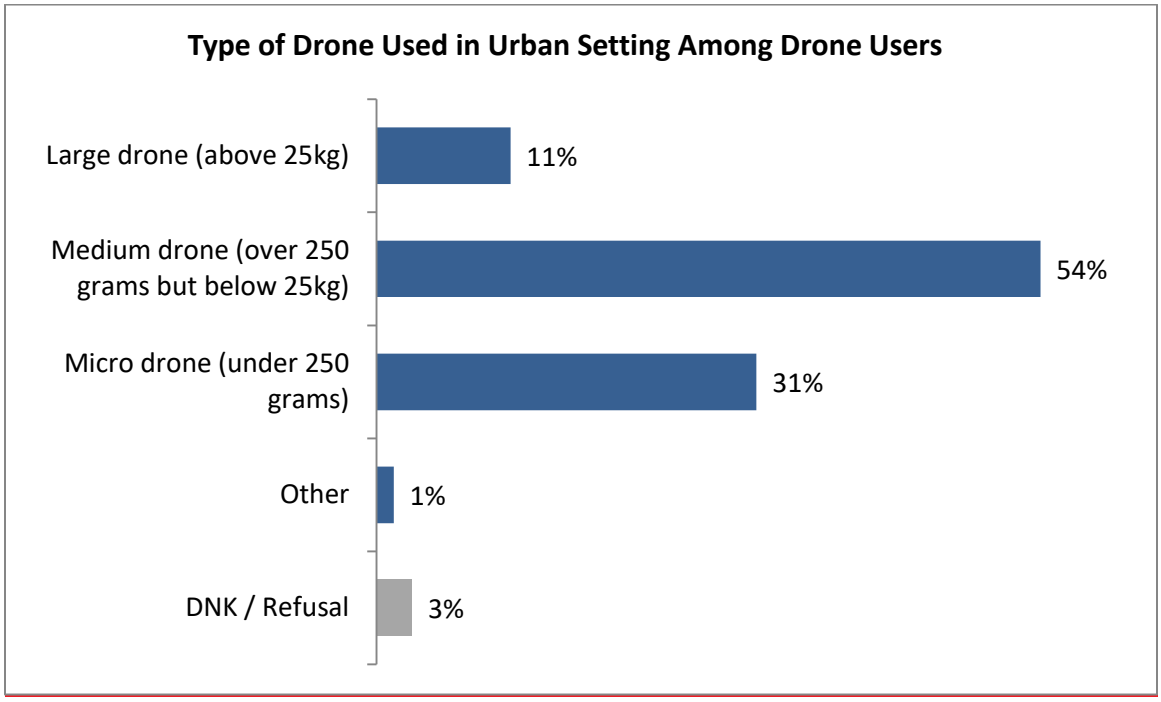


*Figure 7. Answer to question 4A: What kind of drone do you use when flying in an urban setting? * Base: Drone users who fly in an urban area (n=246)*

The next tables (20-21) detail the type of drone used in urban setting.

There is no statistically significant difference between owners and non-owners regarding the type of drone used in urban areas. There are, however, some statistical differences about the type of use of the drone, recreational or professional. Users who fly drones for both professional purposes are more likely to fly medium drones in an urban setting (21%) while recreational drone users are more likely to fly micro drones (under 250 grams).

Table 20. Type of Drone Used in Urban Setting According to Type of Drone Users

| **Q4A. What kind of drone do you use when flying in an urban setting?** Base: Drone users who fly in an urban setting | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 121 | 90 | 31 |
| n= (unweighted) | 246 | 184 | 62 |
| Large drone (above 25kg) | 11% | 10% | 14% |
| Medium drone (over 250 grams but below 25kg) | 54% | 56% | 48% |
| Micro drone (under 250 grams) | 31% | 31% | 32% |

| | | | |
|---|---|---|---|
| Other | 1% | 2% | 0% |
| DNK / Refusal | 3% | 2% | 6% |

Table 21. Type of Drone Used in Urban Setting According to Purpose of Drone Usage

| **Q4A. What kind of drone do you use when flying in an urban setting?** Base: Drone users who fly in an urban setting | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 121 | 95 | 16 | 10 |
| n= (unweighted) | 246 | 188 | 34 | 24 |
| Large drone (above 25kg) | 11% | **8%-** | **21%+** | 23% |
| Medium drone (over 250 grams but below 25kg) | 54% | 53% | 48% | 74% |
| Micro drone (under 250 grams) | 31% | **35%+** | 25% | 3% |
| Other | 1% | 2% | 0% | 0% |
| DNK / Refusal | 3% | 3% | 6% | 0% |

### 2.1.3 Profile of Drone Owned

Generally, just under two-thirds of drone owners (65%) don't own more than one drone; almost two out of ten (20%) own two drones and less than one owner out of ten (6%) owns three drones or more.

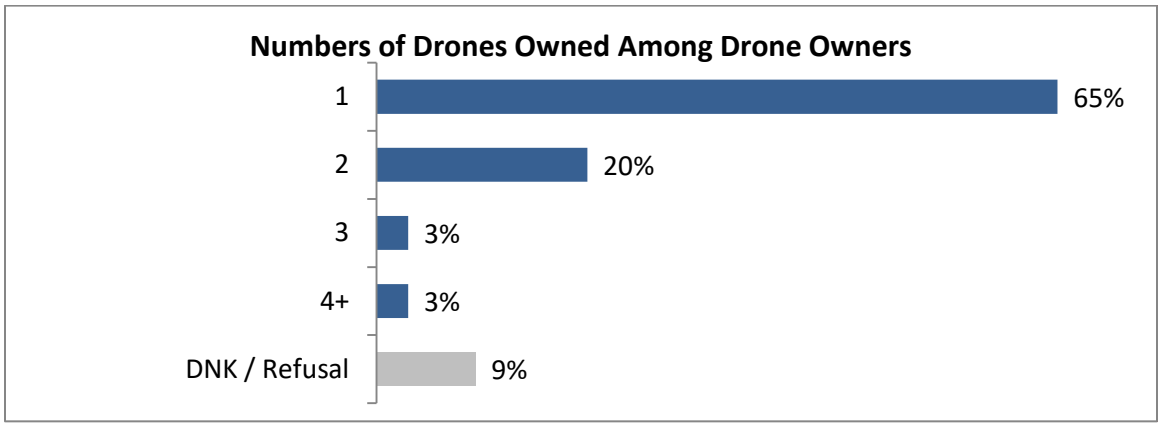


*Figure 8. Answer to question 6: How many drones or model aircraft do you currently own? SPONTANEOUS MENTIONS Base: Drone owners (n=506)*

As shown in table 22, drone owners who fly drones for both professional and recreational purposes are more likely to own more than one drone. 45% of the drone owners who fly drones for both purposes said that they own two drones or more. On the other hand, drone owners who only fly drones for recreational purposes are more likely to only own one drone (70%).

Table 22. Numbers of Drones Owned According to Purpose of Drone Usage

| **Q6 How many drones or model aircraft do you currently own?** SPONTANEOUS MENTIONS Base: Drone owners | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 255 | 210 | 28 | 18 |

| | | | | |
|---|---|---|---|---|
| n= (unweighted) | 506 | 412 | 52 | 42 |
| 1 | 65% | **70%+** | **33%-** | **47%-** |
| 2 | 20% | 19% | 23% | **32%+** |
| 3 | 3% | 3% | 2% | 3% |
| 4 or more | 3% | 3% | 4% | 6% |
| DNK / Refusal | 9% | **5%-** | **39%+** | 11% |

As for the place of purchase, just under three-quarters of drone users bought their most used drone through a retail store (72%), whether it was in-store (40%) or online (33%). Other places of purchase are somewhat more marginal with less than 10% of respondents.

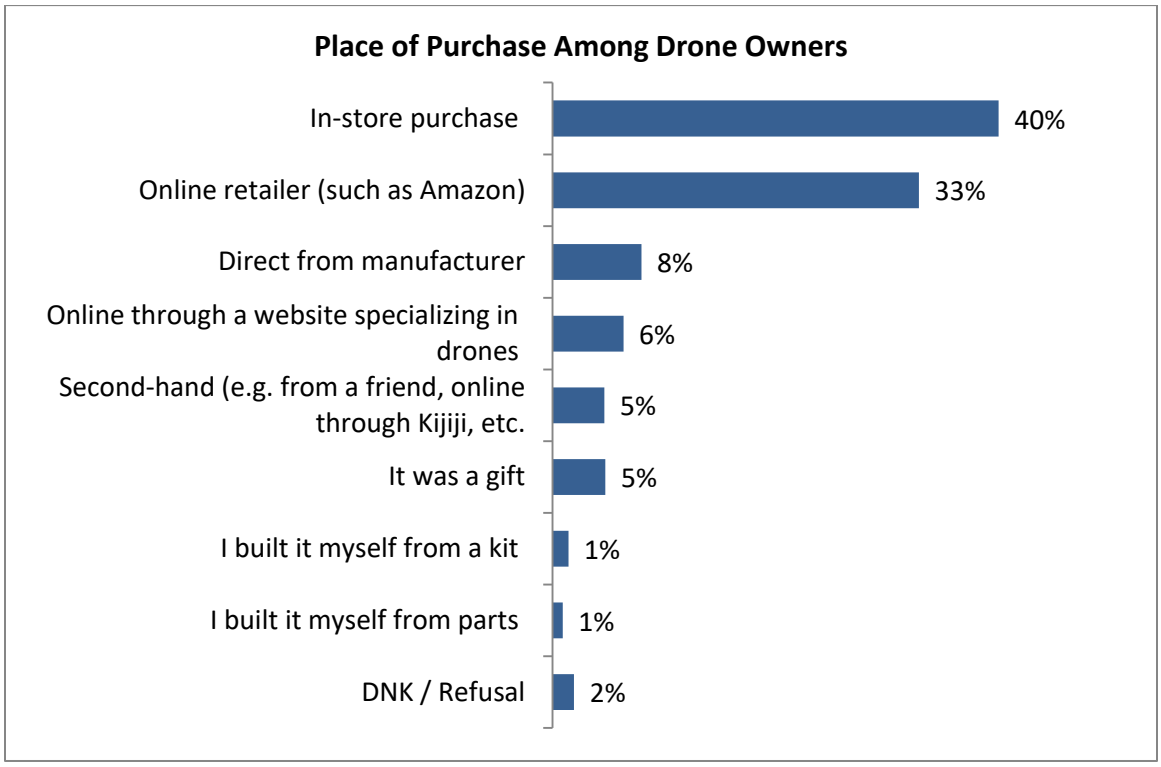


*Figure 9. Answer to question 7: Thinking of the drone or model aircraft you now fly most often, where did you purchase it? Base: Drone owners (n=506)*

Table 23 illustrates that recreational drone owners are more likely to have made an in-store purchase (44%). On their part, drone owners that fly drones for both recreational and professional reasons are more likely to have made their purchase online, through a website specializing in drones (16%).

Table 23. Place of Purchase According to Purpose of Drone Usage

| **Q7 Thinking of the drone or model aircraft you now fly most often, where did you purchase it?** Base: Drone owners | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 255 | 210 | 28 | 18 |
| n= (unweighted) | 506 | 412 | 52 | 42 |
| In-store purchase | 40% | **44%+** | **13%-** | 34% |
| Online retailer (such as Amazon) | 33% | 32% | 39% | 31% |
| Direct from manufacturer | 8% | **5%-** | **23%+** | **17%+** |

| | | | | |
|---|---|---|---|---|
| Online through a website specializing in drones | 6% | 5%- | 13%+ | 16%+ |
| Second-hand (e.g., from a friend, online through Kijiji, etc. | 5% | 5% | 4% | 2% |
| It was a gift | 5% | 5% | 2% | 0% |
| I built it myself from a kit | 1% | 1%- | 6%+ | 0% |
| I built it myself from parts | 1% | 1% | 1% | 0% |
| DNK / Refusal | 2% | 2% | 0% | 0% |

When questioned about the make or brand of the drone they fly most often, 31% of the drone owners who did not build their drone themselves said they did not know what it was. DJI seems to be the most popular brand (17%), followed by Parrot (11%). 3DR (6%) and Syma (5%) are the most popular brands for those who use drones for both recreational and professional reasons.

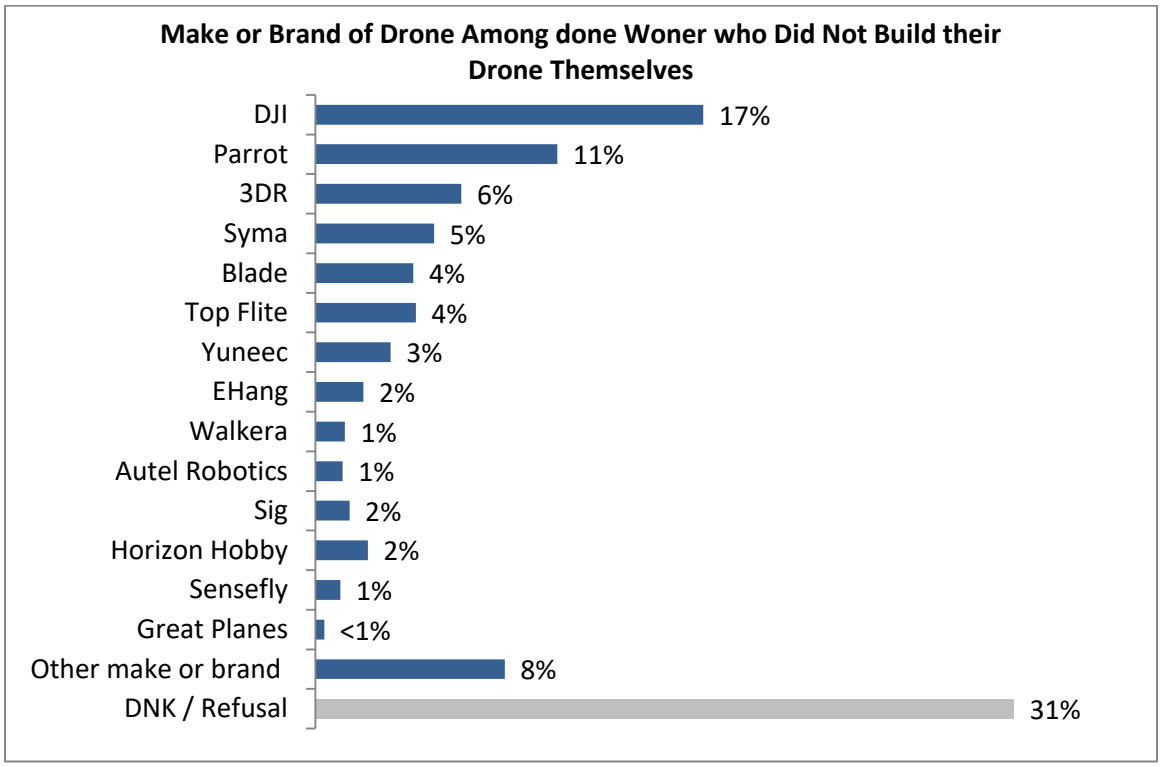


*Figure 10. Answer to question 8: What is the make or brand of your drone or model aircraft you fly most often? Base: Drone owners who did not build their drone themselves (n=499)*

The following table shows that drone users who use their drone(s) professionally are more familiar with the brands of their drone(s) than recreational drone users. In fact, recreational drone users are more likely than other users not to know the brand of their drone(s).

Table 24. Make or Brand of Drone According to Purpose of Drone Usage

| **Q8. What is the make or brand of your drone or model aircraft you fly most often?** Base: Drone owners who did not build their drone themselves | **Total** | **Recreational** | **Professional*** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 251 | 208 | 26 | 18 |

| n= (unweighted) | 499 | 407 | 50 | 42 |
|---|---|---|---|---|
| DJI | 17% | 17% | 12% | 21% |
| Parrot | 11% | 9%- | 21%+ | 17% |
| 3DR | 6% | 4%- | 22%+ | 7% |
| Syma | 5% | 5% | 10% | 0% |
| Blade | 4% | 4% | 5% | 11%+ |
| Top Flite | 4% | 5% | 0% | 7% |
| Yuneec | 3% | 2%- | 10%+ | 7% |
| EHang | 2% | 2%- | 4% | 7%+ |
| Sig | 2% | 2% | 2% | 0% |
| Horizon Hobby | 2% | 3% | 1% | 2% |
| Walkera | 1% | 1% | 3% | 0% |
| Autel Robotics | 1% | <1%- | 3% | 7%+ |
| Sensefly | 1% | 1% | 2% | 1% |
| Great Planes | <1% | <1%- | 1% | 2%+ |
| Other make or brand | 8% | 10%+ | 2% | <1%- |
| DNK / Refusal | 31% | 36%+ | 2%- | 10%- |

*Given the small number of respondents (n<30) data are presented for illustrative purposes only.

Drone owners don't seem to know the weight of the drone they fly most often. When asked, 76% of drone users said they didn't know the weight of the drone they most often fly, even when given the choice to answer in metric or imperial system. For those who knew the weight of their drone, the average weight is 6.7 pounds [3.04 kg]. When looking at the answers given by recreational-only users, the average weight comes down to 3.3 pounds [1.5 kg]. The complete opposite happens when looking at the answers given by professional users: the average weight goes up to 27.0 pounds [12.25 kg]. Recreational drone owners are less likely to own a drone that weighs more than 5 pounds [2.27 kg] (3%).

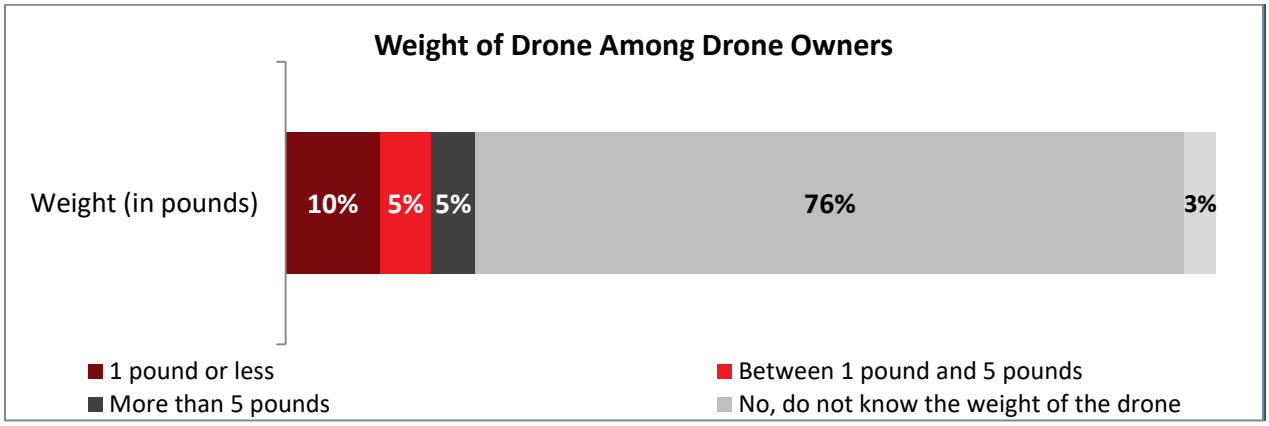


*Figure 11. Answer to question 9: Do you know the weight of your drone or model aircraft you fly most often? SPONTANEOUS ANSWERS Base: Drone owners (n=506)*

In the following table, recreational drone users are more likely than other users not to know the weight of their drone(s), while users who always or occasionally use their drone(s) professionally are more likely to know the weight of the drone they fly most often. That said, a high proportion of drone users, for whatever reason they fly, do not know the weight of their drone.

Table 25. Weight of Drone According to Purpose of Drone Usage

| **Q9. Do you know the weight of your drone or model aircraft you fly most often?** SPONTANEOUS ANSWERS<br>Base: Drone owners | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 255 | 210 | 28 | 18 |
| n= (unweighted) | 506 | 412 | 52 | 42 |
| 1 pound or less | 10% | 11% | 4% | 15% |
| Between 1 pound and 5 pounds | 5% | **3%-** | 10% | **23%+** |
| More than 5 pounds | 5% | **3%-** | **18%+** | 7% |
| No, do not know the weight of the drone | 76% | **80%+** | **64%-** | **55%-** |
| Refusal | 3% | 4% | 4% | 0% |
| *Mean (pounds)* | *6.7* | *3.3* | *27.0* | *2.6* |

### 2.1.4 Drone Clubs and Learning Techniques

Only 1% of drone users are part of a drone or model aircraft club or group. About one out of ten (15%) drone users said they are actively looking into joining one.

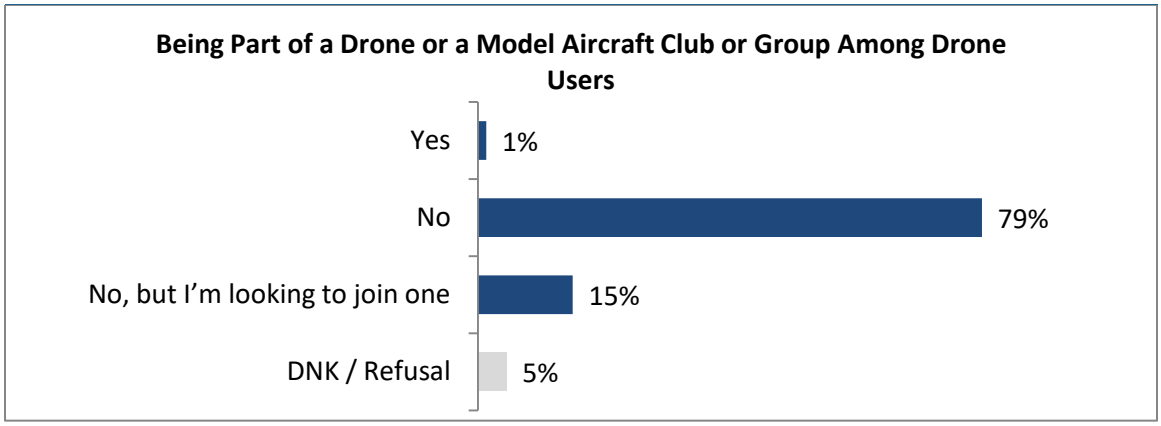


*Figure 12. Answer to question 10: Do you currently belong to a drone or model aircraft club or group? Base: Drone users (n=701)*

The next tables (26-27) detail the profile of drone user who are part of a club or group.

Membership in a club or group or an interest in joining such a group does not appear to be determined by whether or not a drone user owns their drone. The difference between owners and non-owners is not significant. Drone users who are flying drones for professional purposes only are more likely to be looking into joining a club or group (36%), while recreational users are more likely to not belong to a model aircraft club or group (82%).

Table 26. Being Part of a Drone or a Model Aircraft Club or Group According to Type of Drone Users

| **Q10. Do you currently belong to a drone or model aircraft club or group?**<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 1% | 2% | 1% |

| | | | |
|---|---|---|---|
| No | 79% | **83%+** | **70%-** |
| No, but I'm looking to join one | 15% | 14% | 18% |
| DNK / Refusal | 5% | **2%-** | **10%+** |

Table 27. Being Part of a Drone or a Model Aircraft Club or Group According to Purpose of Drone Usage

| **Q10. Do you currently belong to a drone or model aircraft club or group?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Yes | 1% | 2% | 1% | 0% |
| No | 79% | **82%+** | **60%-** | 83% |
| No, but I'm looking to join one | 15% | **11%-** | **36%+** | 13% |
| DNK / Refusal | 5% | 5% | 3% | 4% |

Just over one out of ten drone users have attended a drone flight school to learn how to operate a drone (12%), while eight out of ten (80%) said they have never attended a drone flight school to learn how to operate their drone.

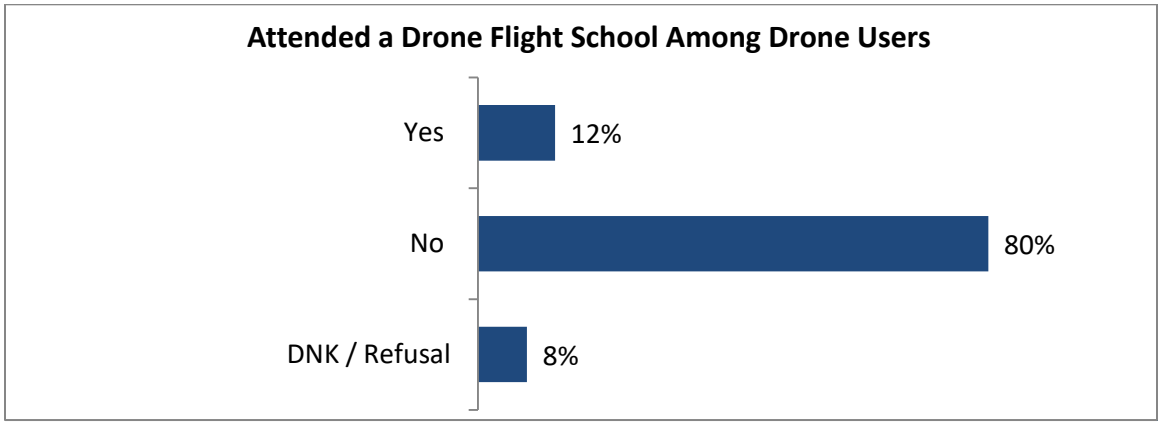


*Figure 13. Answer to question 11: Have you ever attended a drone flight school to learn how to operate a drone? New Questions in 2020 Base: Drone users (n=701)*

The next tables (28-29) detail the profile of drone user who attended a drone flight school.

Drone owners are more likely than non-owner to have attended a flight school (14% vs 6% respectively). Those who fly their drone professionally, either only professionally (29%) or both professionally and recreationally (49%) are more likely to have attended a flight school than those who fly their drone only recreationally (6%).

Table 28. Attended a Drone Flight School According to Type of Drone Users

| **Q11. Have you ever attended a drone flight school to learn how to operate a drone?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 12% | **14%+** | **6%-** |
| No | 80% | 82% | 76% |

| | | | |
|---|---|---|---|
| DNK / Refusal | 8% | 4%- | 18%+ |

Table 29. Attended a Drone Flight School According to Purpose of Drone Usage

| **Q10. Have you ever attended a drone flight school to learn how to operate a drone?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Yes | 12% | 6%- | 29%+ | 49%+ |
| No | 80% | 86%+ | 61%- | 46%- |
| DNK / Refusal | 8% | 8% | 10% | 6% |

Out of drone users who admitted having enrolled in a drone-flying class (12%), 65% of them took an online class, while 33% of them attended a physical class (e.g. school, community centre).

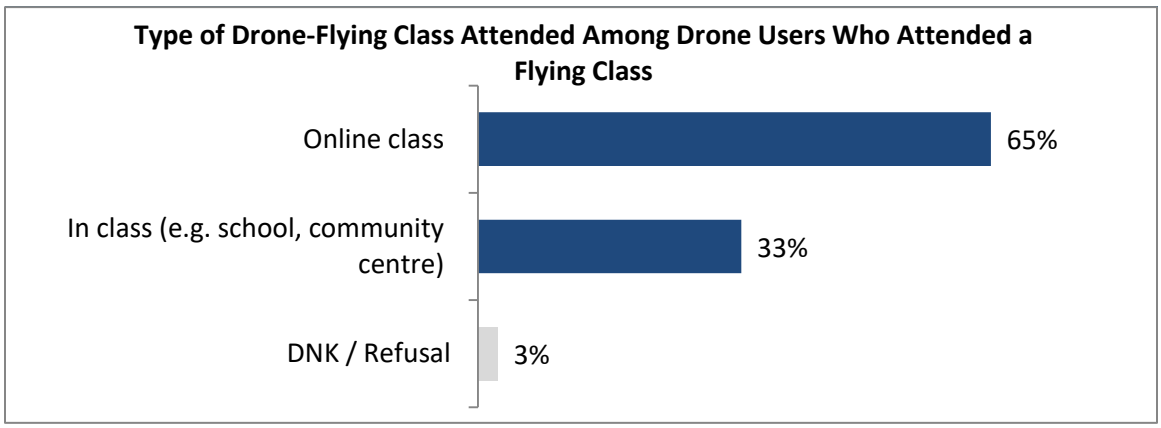


*Figure 14. Answer to question 12: You mentioned attending a drone-flying class. What kind of class was it? Base: Drone users who attended a drone-flying class (n=95)*

### 2.1.5 Drone Pilot Certification and Safety Training

Even though the majority of drone users do not have a drone pilot certificate issued by the Government of Canada (73%), two out of ten drone users either have one (13%) or are in the process of obtaining one (9%).

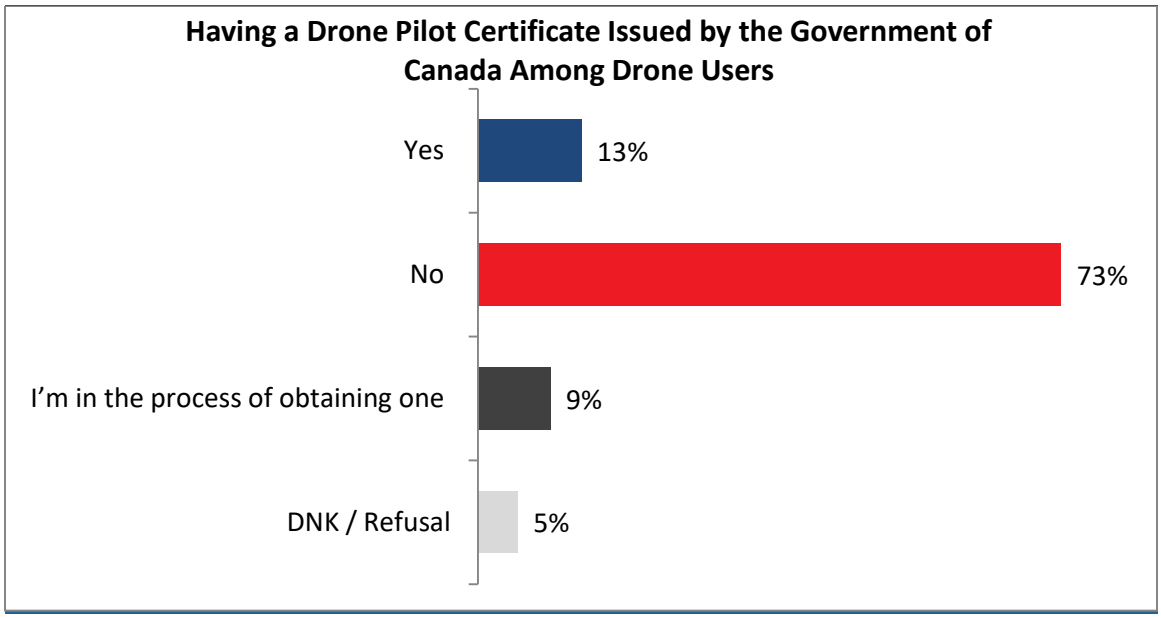


*Figure 15. Answer to question 13: Do you have a drone pilot certificate issued by the Government of Canada? Base: Drone users (n=701)*

The next tables (30-31) detail the profile of drone user who have a drone pilot certificate issued by the Government of Canada.

Drone owners are more likely than non-owners to have a drone pilot certificate issued by the Government of Canada (15%). Recreational users are less likely to have the certificate (9%) than those who fly drones for other reason. Professional drone users are more likely to have a drone pilot certificate (23%) or to be in the process of obtaining their certificate (17%). Users who fly drones for both purposes are also more likely to have a drone pilot certificate (44%).

Table 30. Having a Drone Pilot Certificate Issued by the Government of Canada According to Type of Drone Users

| **Q13. Do you have a drone pilot certificate issued by the Government of Canada?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 13% | **15%+** | **9%-** |
| No | 73% | **75%+** | **68%-** |
| I'm in the process of obtaining one | 9% | **8%-** | **13%+** |
| DNK / Refusal | 5% | **2%-** | **11%+** |

Table 31. Having a Drone Pilot Certificate Issued by the Government of Canada According to Purpose of Drone Usage

| **Q13. Do you have a drone pilot certificate issued by the Government of Canada?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Yes | 13% | **9%-** | **23%+** | **44%+** |
| No | 73% | **79%+** | **54%-** | **48%-** |

| | | | | |
|---|---|---|---|---|
| I'm in the process of obtaining one | 9% | 8%- | 17%+ | 8% |
| DNK / Refusal | 5% | 5% | 6% | 0% |

Two-thirds of drone users who have a drone pilot certificate issued by the Government of Canada, found the process demanding to some degree (66%). 43% said they considered it "Somewhat demanding" and 23% stated they found it "Very demanding."

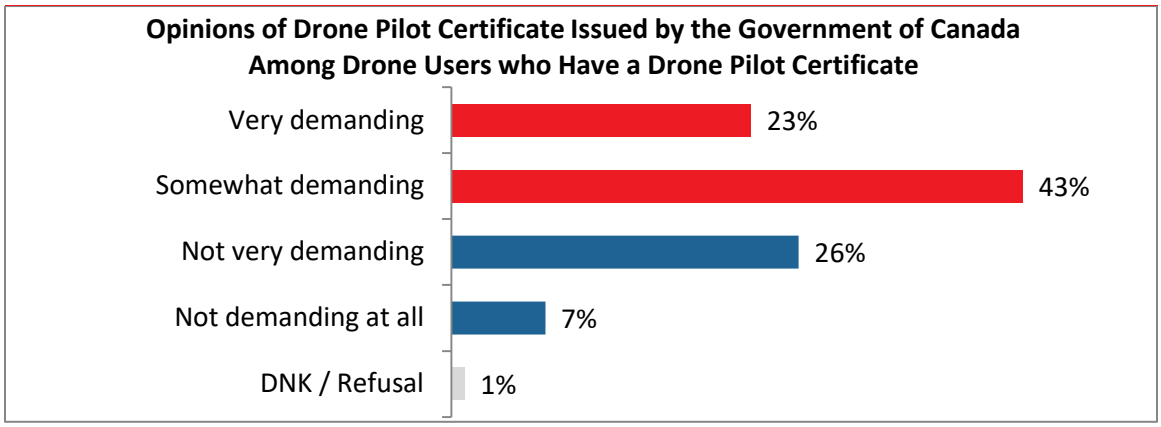


*Figure 16. Answer to question 13B: How did you find the drone pilot certification process? Base: Drone users who have drone pilot certificate issued by the Government of Canada (n=100)*

The next tables (32-33) detail the opinion about the process to obtain a drone pilot certificate by drone user profiles.

The following tables show that there is no significant difference according to drone user profile in respect to their opinion of the process to obtain a drone pilot certificate offered by the Government of Canada.

Table 32. Opinions of the process to obtain a Drone Pilot Certificate Issued by the Government of Canada According to Type of Drone Users

| **Q13B. How did you find the drone pilot certificate process?** Base: Drone users who have a drone pilot certificate issued by the Government of Canada | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 46 | 37 | 9 |
| n= (unweighted) | 100 | 84 | 16 |
| Net Demanding | 66% | 72% | 38% |
| Very demanding | 23% | 26% | 7% |
| Somewhat demanding | 43% | 46% | 31% |
| Net Not Demanding | 33% | 28% | 56% |
| Not very demanding | 26% | 19% | 56% |
| Not at all demanding | 7% | 9% | 0% |
| DNK / Refusal | 1% | 0% | 6% |

Table 33. Opinions of the process to obtain a Drone Pilot Certificate Issued by the Government of Canada According to Purpose of Drone Usage

| **Q13B. How did you find the drone pilot certificate process?** | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|

| Base: Drone users who have drone pilot certificate issued by the Government of Canada | | | | |
|---|---|---|---|---|
| n= (weighted) | 46 | 25 | 11 | 10 |
| n= (unweighted) | 100 | 50 | 25* | 25* |
| Net Demanding | 66% | 57% | 66% | 88% |
| Very demanding | 23% | 22% | 8% | 40% |
| Somewhat demanding | 43% | 35% | 58% | 49% |
| Net Not Demanding | 33% | 43% | 30% | 12% |
| Not very demanding | 26% | 32% | 25% | 12% |
| Not at all demanding | 7% | 11% | 5% | 0% |
| DNK / Refusal | 1% | 0% | 4% | 0% |

*Given the small number of respondents (n<30) data are presented for illustrative purposes only.

Nearly seven out of ten drone users (68%) have not received any training or seen any instructional videos specifically on Transport Canada's drone safety regulations; only one-quarter of drone users (25%) have seen such a video or received such training.

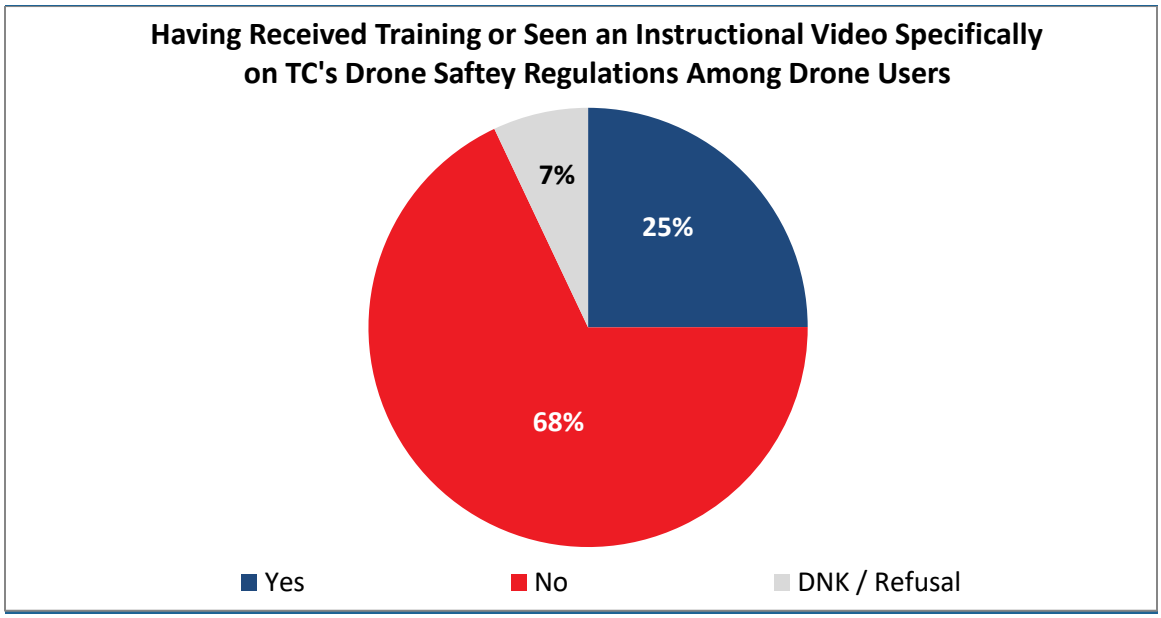


*Figure 17. Answer to question 15: Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations? Base: Drone users (n=701)*

The next tables (34-35) detail the profile of drone users who have ever received training or seen an instructional video on Transport Canada's drone safety regulations.

Drone owners are more likely to have received training or seen an instructional video on Transport Canada's drone safety webpage (27%). Professional users and users who fly drones for both recreational and work or research purposes are more likely to be part of those who have received training or seen an instructional video on Transport Canada's drone safety regulations (34% and 66%, respectively).

It is also interesting to note that drone users who fly drones for both recreational and work or research purposes are more likely to not know if they have received such training or seen such instructional videos (12%).

Table 34. Having Received a Training or Seen an Instructional Video Specifically on Transport Canada's Drone Safety Regulations According to Type of Drone Users

| **Q15. Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 25% | **27%+** | **19%-** |
| No | 68% | 68% | 67% |
| DNK / Refusal | 7% | **4%-** | **15%+** |

Table 35. Having Received Training or Seen an Instructional Video Specifically on Transport Canada's Drone Safety Regulations According to Purpose of Drone Usage

| **Q15. Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Yes | 25% | **20%-** | **34%+** | **66%+** |
| No | 68% | **73%+** | **54%-** | **33%-** |
| DNK / Refusal | 7% | 7% | 12% | 1% |

The majority of drone users who received training or saw an instructional video specifically on Transport Canada's drone safety regulations, found it prepared them well for using a drone (86%), 54% indicated "Fairly good preparation" and 32% stated "Very good preparation."

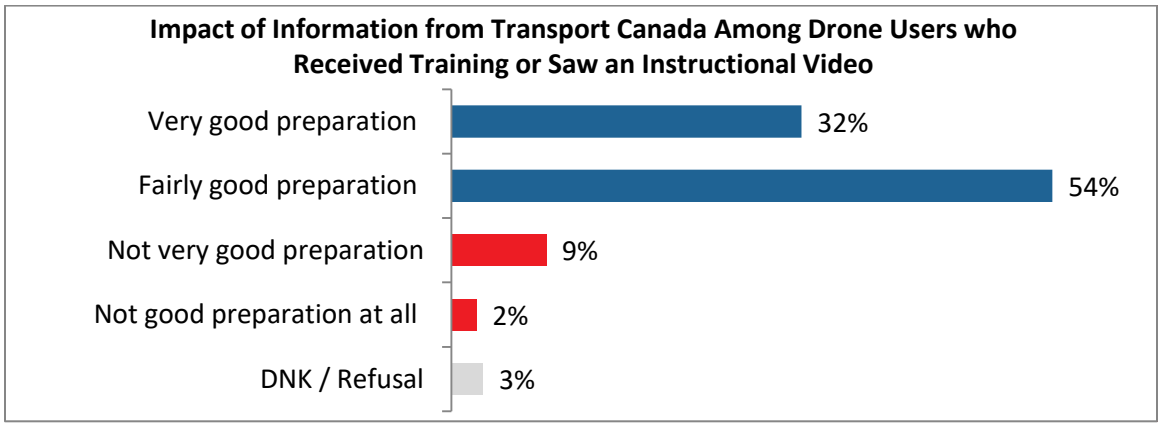


*Figure 18. Answer to question 15B: You mentioned that you used training materials from Transport Canada. How well did the information from Transport Canada help you prepare for using a drone? Base: Drone users who received training or saw an instructional video specifcally on Transport Canada's drone safety regulations (n=189)*

The following tables (36-37) show that there is no significant difference according to drone user profile in respect to their opinion about the information provided by Transport Canada in preparation for using a drone.

Table 36. Impact of Information from Transport Canada According to Type of Drone Users

| **Q15B. You mentioned that you used training materials from Transport Canada. How well did the information from Transport Canada help you prepare for using a drone?** Base: Drone users who received training or seen an instructional video specifcally on Transport Canada's drone safety regulations | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 88 | 70 | 19 |
| n= (unweighted) | 189 | 148 | 41 |
| Net Good Preparation | 86% | 85% | 91% |
| Very good preparation | 32% | 29% | 42% |
| Fairly good preparation | 54% | 56% | 48% |
| Net Not Good Preparation | 11% | 11% | 9% |
| Not very good preparation | 9% | 9% | 6% |
| Not good preparation at all | 2% | 2% | 4% |
| DNK / Refusal | 3% | 4% | 0% |

Table 37. Impact of Information from Transport Canada According to Purpose of Drone Usage

| **Q15B. You mentioned that you used training materials from Transport Canada. How well did the information from Transport Canada help you prepare for using a drone?** Base: Drone users who received training or seen an instructional video specifcally on Transport Canada's drone safety regulations | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 88 | 57 | 16 | 14 |
| n= (unweighted) | 189 | 121 | 33 | 35 |
| Net Good Preparation | 86% | 84% | 86% | 95% |
| Very good preparation | 32% | 32% | 30% | 33% |
| Fairly good preparation | 54% | 52% | 56% | 62% |
| Net Not Good Preparation | 11% | 12% | 14% | 5% |
| Not very good preparation | 9% | 9% | 14% | **0%-** |
| Not good preparation at all | 2% | 2% | 0% | 5% |
| DNK / Refusal | 3% | 5% | 0% | 0% |

### 2.1.6 Information Sources and Transport Canada's Website Drone Pages Visits

More than a third of drone users (39%) said that they have searched for information on Canadian government regulations regarding drones or model aircraft. However, about half (55%) of drone users mention that they did not seek or search for information about government regulations.

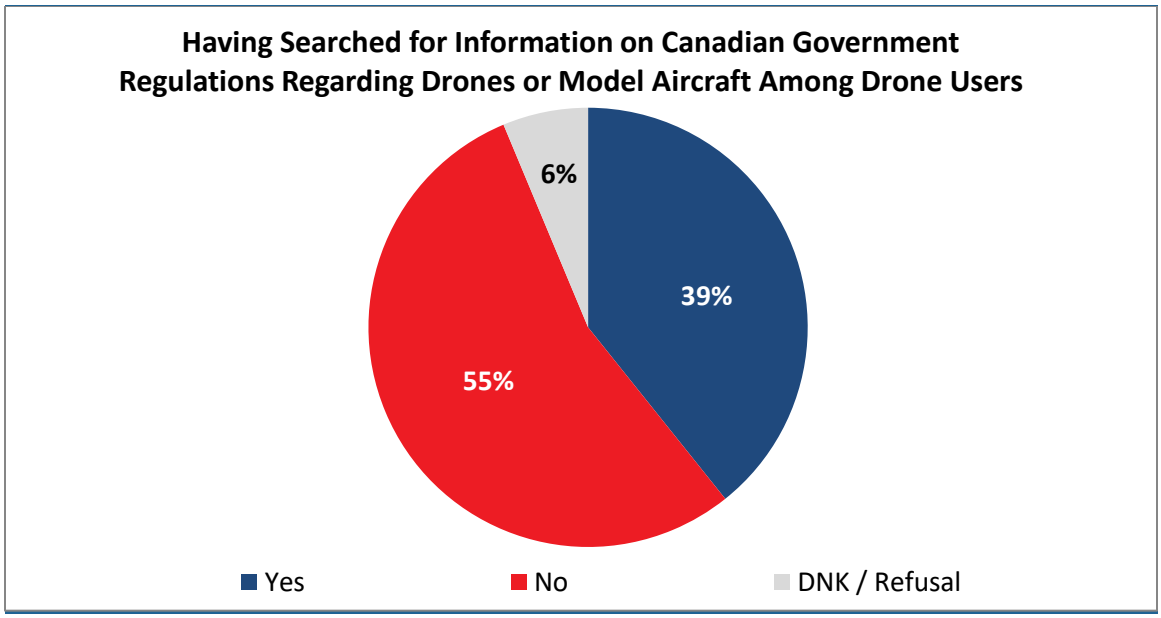


*Figure 19. Answer to question 16: Have you ever sought or searched for information on Canadian government regulations regarding drones or model aircraft? Base: Drone users (n=701)*

The next tables (38-39) detail the profile of drone user who have searched for information on Canadian government regulations regarding drones or model aircraft.

Drone owners are more likely to have sought or searched for information on Canadian government regulations (42%). According to the purpose of drone usage, recreational users are less likely to have sought for information on Canadian government regulations (37%). As for users who fly drones for both recreational and work purposes, they are more likely to have sought for information on Canadian government regulations (64%).

Table 38. Having Searched for Information on Canadian Government Regulations Regarding Drones or Model Aircraft According to Type of Drone Users

| **Q16. Have you ever sought or searched for information on Canadian government regulations regarding drones or model aircraft?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Yes | 39% | **42%+** | **33%-** |
| No | 55% | 54% | 56% |
| DNK / Refusal | 6% | **5%-** | **11%+** |

Table 39. Having Searched for Information on Canadian Government Regulations Regarding Drones or Model Aircraft According to Purpose of Drone Usage

| **Q16. Have you ever sought or searched for information on Canadian government regulations regarding drones or model aircraft?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |

| | | | | |
|---|---|---|---|---|
| Yes | 39% | 37%- | 39% | 64%+ |
| No | 55% | 57%+ | 51% | 31%- |
| DNK / Refusal | 6% | 6%- | 10%+ | 5% |

Drone users who stated that they have sought information on Canadian government regulations regarding drones or model aircraft, 61% of them did so using a search engine (e.g., Google, Bing, Yahoo, etc.), 57% visited the Government's website and 17% went directly on Transport Canada's website. Other sources, such as the Transport Canada website or Drone Safety website, trade publications or retailers were mentioned less by less than 20% of respondents.

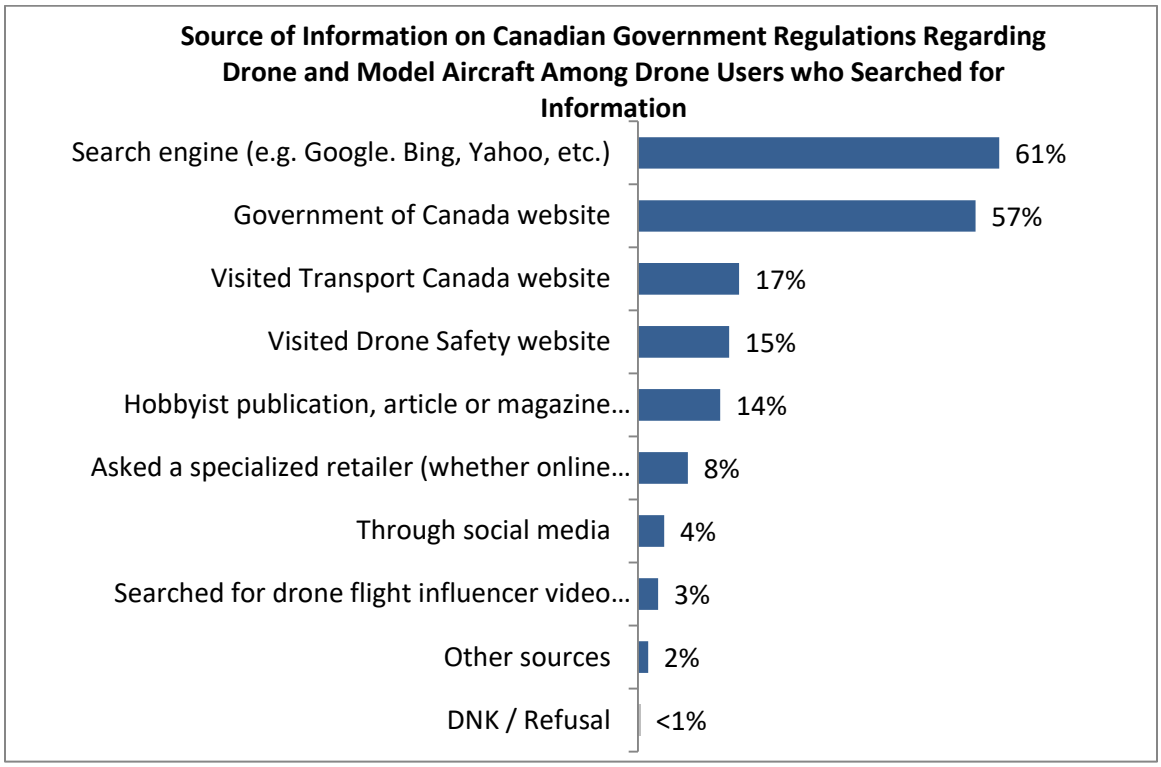


*Figure 20. Answer to question 17: Where did you go to find that information? Base: Drone users who searched for information on Canadian government regulations regarding drones or model aircraft (n=284)*

The next tables (40-41) detail the profile of drone users who searched for information on Canadian government regulations regarding drones or model aircraft.

Based on the purpose of drone usage, drone users flying drones only professionally are less likely to have conducted a search engine query (30%), while recreational users are more likely to have done so (67%). As for users who fly drones for both purposes, they are more likely to have visited the Government of Canada website (74%), consulted a hobbyist publication, article or magazine for drone users (32%) or asked a specialized retailer—whether online or in-store—(22%).

Nearly three quarters of drone users (74%) who conducted a social media search used Instagram as the search platform.

Table 40. Source of Information on Canadian Government Regulations Regarding Drone and Model Aircraft According to Type of Drone Users

| **Q17. Where did you go to find that information?**<br>Base: Drone users who searched for information on Canadian government | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|

| regulations regarding drones or model aircraft | | | |
|---|---|---|---|
| n= (weighted) | 139 | 106 | 33 |
| n= (unweighted) | 284 | 219 | 65 |
| Search engine (e.g. Google, Bing, Yahoo, etc.) | 61% | 60% | 65% |
| Government of Canada website | 57% | 57% | 56% |
| Visited Transport Canada website | 17% | 19% | 9% |
| Visited Drone Safety website | 15% | 16% | 13% |
| Hobbyist publication, article or magazine for drone users | 14% | **16%+** | **6%-** |
| Asked a specialized retailer (whether online or in-store) | 8% | 10% | 4% |
| Through social media | 4% | 5% | 4% |
| Searched for drone flight influencer video on regulations | 3% | 3% | 4% |
| Other sources | 2% | 2% | 0% |
| DNK / Refusal | <1% | 1% | 0% |

Table 41. Source of Information on Canadian Government Regulations Regarding Drone and Model Aircraft According to Purpose of Drone Usage

| **Q17. Where did you go to find that information?** Base: Drone users who searched for information on Canadian government regulations regarding drones or model aircraft | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 139 | 106 | 19 | 14 |
| n= (unweighted) | 284 | 211 | 39 | 34 |
| Search engine (e.g. Google. Bing, Yahoo, etc.) | 61% | **67%+** | **30%-** | 57% |
| Government of Canada website | 57% | 54% | 61% | **74%+** |
| Visited Transport Canada website | 17% | 17% | 16% | 20% |
| Visited Drone Safety website | 15% | **12%-** | **26%+** | **28%+** |
| Hobbyist publication, article or magazine for drone users | 14% | **11%-** | 15% | **32%+** |
| Asked a specialized retailer (whether online or in-store) | 8% | **6%-** | 15% | **22%+** |
| Through social media | 4% | 3% | **11%+** | 4% |
| Searched for drone flight influencer video on regulations | 3% | 2% | 6% | 7% |
| Other sources | 2% | 2% | 1% | 0% |
| DNK / Refusal | <1% | 1% | 0% | 0% |

Among those who consulted social media, Instagram and Facebook were the sources most often mentioned by respondents.

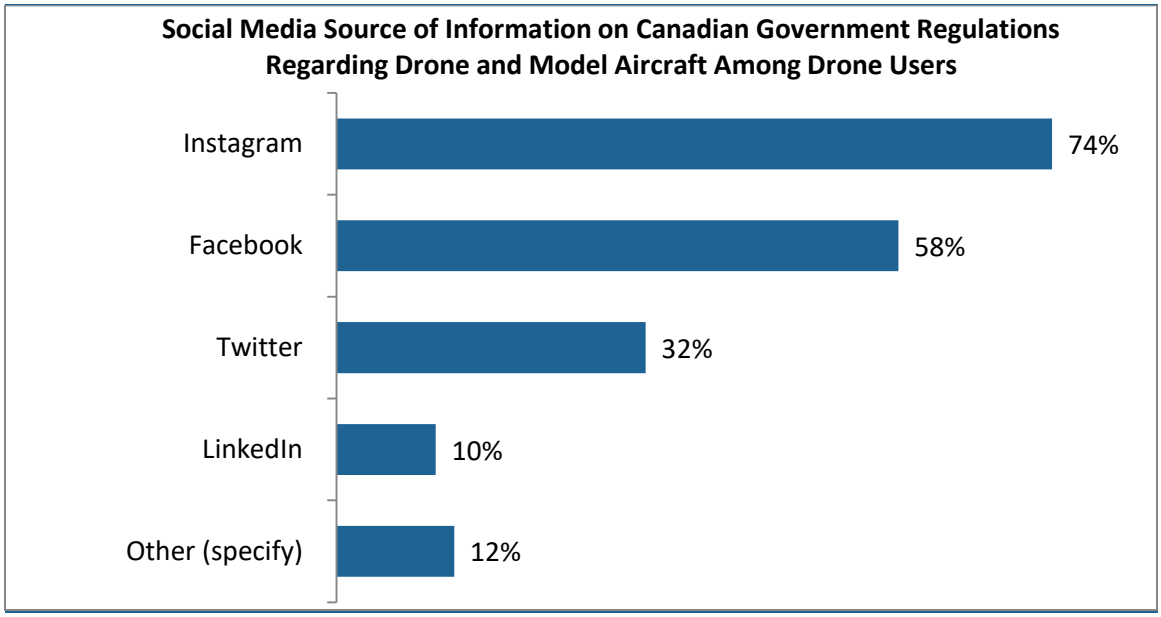


*Figure 21. Answer to question 17B: You mentioned that you found information regarding Canadian government regulations of drones or model aircraft through a social media search. Please specify which platform(s). MULTIPLE ANSWERS ALLOWED* Base: Drone users who searched for information on Canadian government regulations regarding drones or model aircraft though a social media search (n=13**) *Because drone users were able to give multiple answers, total mentions may exceed 100%. **Given the small number of drone users (n<30) data are presented for illustrative purposes only.*

### 2.1.7 Drones and Model Aircraft Regulations

In general, half of drone users think that they are not knowledgeable in regard to the Transport Canada regulations on drones and model aircraft (51%). When asked, 28% said they considered themselves "Not very knowledgeable" and 23% stated they were "Not at all knowledgeable," only 11% considered they were "Very knowledgeable."

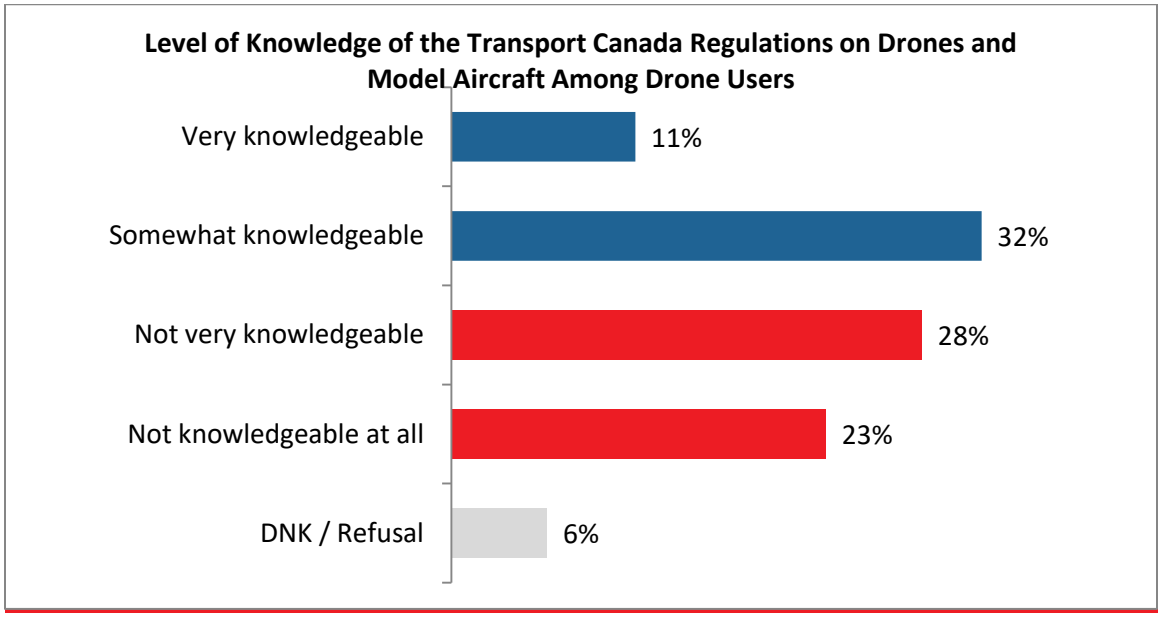


*Figure 22. Answer to question 20: How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft? Base: Drone users (n=701)*

The next tables (42-43) detail the level of knowledge of the Transport Canada regulations on drones and model aircraft according to the profile of drone users.

Drone owners are more likely to have said that they are very knowledgeable (13%) than non-owners (6%). Users who only fly drones for recreational purposes are less likely to be knowledgeable (38%). On their side, drone users who fly drones professionally are more likely to be knowledgeable (58%), as are those who fly drones for both purposes (72%).

Table 42. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft According to Type of Drone Users

| **Q20. How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft?**<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Net Knowledgeable | 43% | 45% | 39% |
| Very knowledgeable | 11% | **13%+** | **6%-** |
| Somewhat knowledgeable | 32% | 32% | 33% |
| Net Not Knowledgeable | 51% | 51% | 52% |
| Not very knowledgeable | 28% | 28% | 30% |
| Not at all knowledgeable | 23% | 23% | 21% |
| DNK / Refusal | 6% | 5% | 9% |

Table 43. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft According to Purpose of Drone Usage

| **Q20. How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft?**<br>Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Net Knowledgeable | 43% | **38%-** | **58%+** | **72%+** |
| Very knowledgeable | 11% | **9%-** | 17% | **24%+** |
| Somewhat knowledgeable | 32% | **29%-** | **41%+** | **48%+** |
| Net Not knowledgeable | 51% | **55%+** | **39%-** | **22%-** |
| Not very knowledgeable | 28% | 30% | 28% | **16%-** |
| Not at all knowledgeable | 23% | **26%+** | **12%-** | **6%-** |
| DNK / Refusal | 6% | 6% | 3% | 6% |

Six out of ten (59%) drone users think that they are knowledgeable in regard to drones in general, 47% said they considered themselves “Somewhat knowledgeable” and 12% stated they were “Very knowledgeable.”

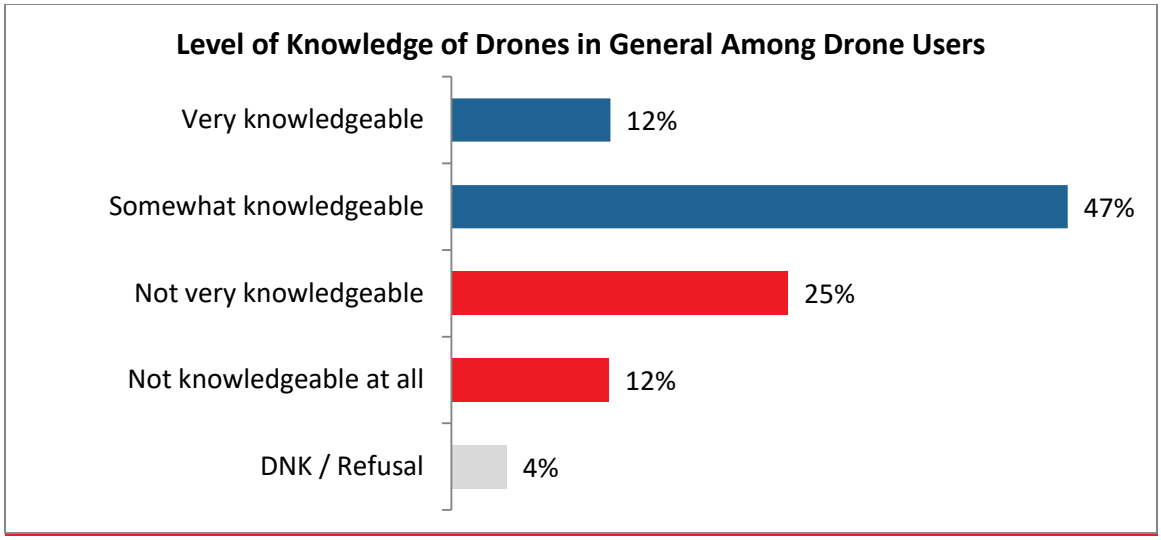


*Figure 23. Answer to question 20A: What would you say is your level of knowledge of drones in general? Base: Drone users (n=701)*

The next tables (44-45) detail the level of knowledge of drone users about drones in general.

Drone owners (62%) are more likely to consider themselves knowledgeable about drone in general than non-owners (50%). Drone users who only fly drones for both recreational and professional purposes are more likely than the other users to consider themselves knowledgeable (81%).

Table 44. Level of Knowledge of Drones in General According to Type of Drone Users

| **Q20A. What would you say is your level of knowledge of drones in general?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Net Knowledgeable | 59% | **62%+** | **50%-** |
| Very knowledgeable | 12% | 14% | 8% |
| Somewhat knowledgeable | 47% | 48% | 42% |
| Net Not Knowledgeable | 37% | 36% | 41% |
| Not very knowledgeable | 25% | 24% | 28% |
| Not at all knowledgeable | 12% | 12% | 13% |
| DNK / Refusal | 4% | 2% | 10% |

Table 45. Level of Knowledge of Drones in General According to Purpose of Drone Usage

| **Q20A. What would you say is your level of knowledge of drones in general?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Net Knowledgeable | 59% | 57% | 56% | **81%+** |
| Very knowledgeable | 12% | **10%-** | 18% | **28%+** |
| Somewhat knowledgeable | 47% | 47% | 38% | 54% |
| Net Not knowledgeable | 37% | 38% | 43% | **19%-** |

| | | | | |
|---|---|---|---|---|
| Not very knowledgeable | 25% | 25% | 32% | **13%-** |
| Not at all knowledgeable | 12% | 13% | 11% | 6% |
| DNK / Refusal | 4% | 5% | 1% | 0% |

Nearly two thirds of drone users feel their knowledge of the Transport Canada regulations on drones and model aircrafts has remained the same over the last year (63%).

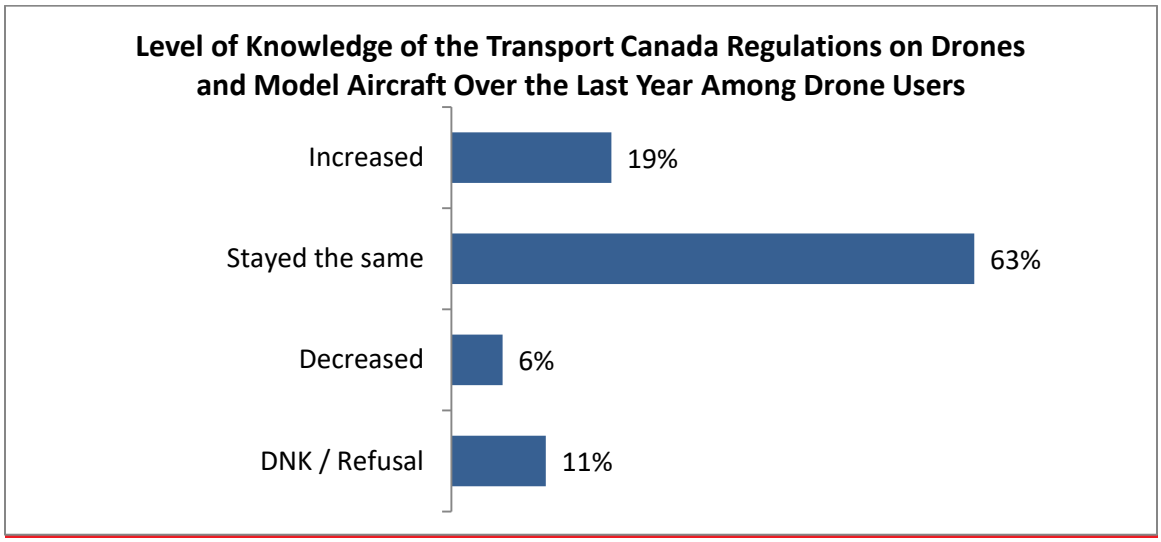


*Figure 24. Answer to question 20B: Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year? Base: Drone users (n=701)*

The next tables (46-47) detail the evolution of knowledge about Transport Canada regulations on drones and model aircraft over the last year.

Non-owners (12%) are more likely to indicate that their knowledge has decreased, while those who fly for both recreational and professional purposes are more likely to indicate that it has increased (41%). Drone users who fly only for recreational purpose are more likely to think their level of knowledge stayed the same over the last year.

Table 46. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft Over the Last Year According to Type of Drone Users

| **Q20B. Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year?**<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Increased | 19% | 19% | 21% |
| Stayed the same | 63% | **68%+** | **52%-** |
| Decreased | 6% | **4%-** | **12%+** |
| DNK / Refusal | 11% | 10% | 15% |

Table 47. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft Over the Last Year According to Purpose of Drone Usage

| **Q20B. Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Increased | 19% | **17%-** | 25% | **41%+** |
| Stayed the same | 63% | **65%+** | 58% | **44%-** |
| Decreased | 6% | **5%-** | 8% | **15%+** |
| DNK / Refusal | 11% | 13% | 8% | 0% |

At least half of drone users indicate being aware of each of the rules regarding drones or model aircraft currently enforced in Canada, with the greatest proportion (70%) being aware that they must operate 'far away from other aircraft (don't fly anywhere near airplanes, helicopters and other drones).

The three regulations with the highest awareness among drone users are the following:

1. Far away from other aircraft (Don't fly anywhere near airplanes, helicopters and other drones) (70%)
2. Away from airports and heliports (5.6 kilometres (3 nautical miles) from airports) (1.9 kilometres (1 nautical mile) from heliports) (67%)
3. Outside controlled airspace (for basic operations only) (64%)

The regulations with the lowest level of awareness among drone users are:

1. Where you can see it at all times (58%)
2. Away from bystanders, at a minimum horizontal distance of 30 metres for basic operations (58%)
3. Below 122 metres (400 feet) in the air (50%)

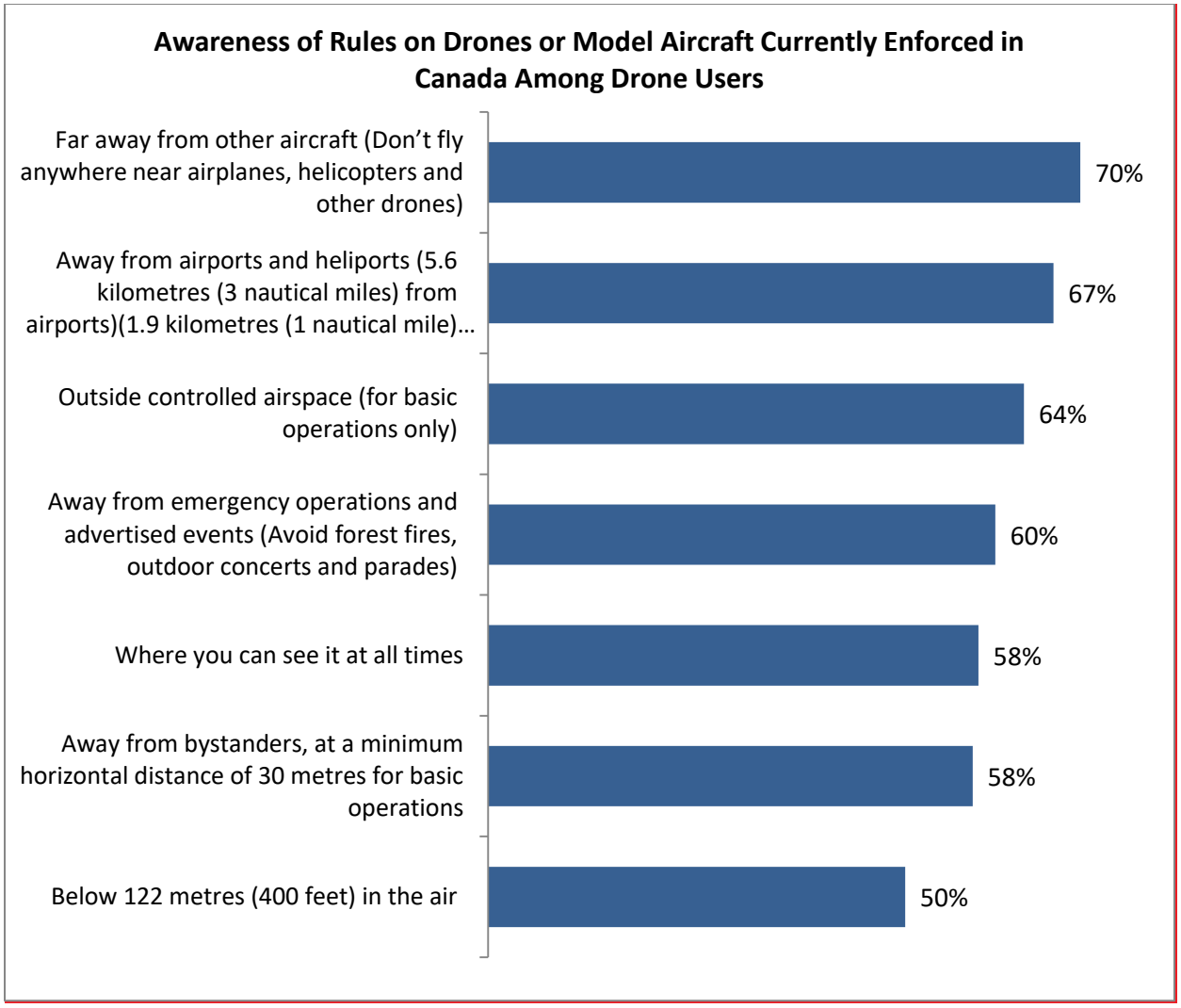


*Figure 25. Answer to question 21: Were you aware of the following rules on drones or model aircraft currently enforced in Canada? ONLY YES MENTIONS SHOWN Base: Drone users (n=701)*

The next tables (48-49) detail the level of awareness of rules on drones or model aircraft by drone user profile.

As might be expected, drone users who are owners, generally are more likely to be aware of the current rules compared to non-owners. Recreational users are generally more likely than professional users to be aware of each of the rules surrounding drones and model aircrafts currently enforced in Canada.

Table 48. Awareness of Rules on Drones or Model Aircraft Currently Enforced in Canada According to Type of Drone Users

| **Q21. Were you aware of the following rules on drones or model aircraft currently enforced in Canada?**<br>YES MENTIONS<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Far away from other aircraft (Don't fly anywhere near airplanes, helicopters and other drones) | 70% | **74%+** | **61%-** |

| | | | |
|---|---|---|---|
| Away from airports and heliports (5.6 kilometres (3 nautical miles) from airports)(1.9 kilometres (1 nautical mile) from heliports) | 67% | **70%+** | **61%-** |
| Outside controlled airspace (for basic operations only) | 64% | **67%+** | **56%-** |
| Away from emergency operations and advertised events (Avoid forest fires, outdoor concerts and parades) | 60% | 62% | 55% |
| Where you can see it at all times | 58% | 60% | 55% |
| Away from bystanders, at a minimum horizontal distance of 30 metres for basic operations | 58% | 59% | 54% |
| Below 122 metres (400 feet) in the air | 50% | **52%+** | **43%-** |

Table 49. Awareness of Rules on Drones or Model Aircraft Currently Enforced in Canada According to Type of Drone Users

| **Q21. Were you aware of the following rules on drones or model aircraft currently enforced in Canada?**<br>YES MENTIONS<br>Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Far away from other aircraft (Don't fly anywhere near airplanes, helicopters and other drones) | 70% | **76%+** | **45%-** | **56%-** |
| Away from airports and heliports (5.6 kilometres (3 nautical miles) from airports)(1.9 kilometres (1 nautical mile) from heliports) | 67% | **71%+** | **47%-** | 66% |
| Outside controlled airspace (for basic operations only) | 64% | **67%+** | **44%-** | 66% |
| Away from emergency operations and advertised events (Avoid forest fires, outdoor concerts and parades) | 60% | **63%+** | **47%-** | 51% |
| Where you can see it at all times | 58% | 59% | **48%-** | 71% |
| Away from bystanders, at a minimum horizontal distance of 30 metres for basic operations | 58% | 59% | 49% | 57% |
| Below 122 metres (400 feet) in the air | 50% | 50% | 43% | 62% |

Generally, each of the current aspects of the Federal government legislation, in relation to who can fly drones and how or where they can be flown, improve drone users' perceptions of drone safety. The two regulations with the strongest positive impact on the perception of drone safety are:

1. Drones can only be flown outside controlled airspace (46%)
2. Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport (45%)

The two regulations that have the least positive impact on the perception of drone safety are:

1. Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk (40%)
2. Only drones that are registered with Transport Canada can be legally flown in Canada (39%)

These are also the two rules that have the most negative effect on the perception of drone safety. Respectively 11% and 12% of drone users consider that these rules reduce their perception of drone safety.

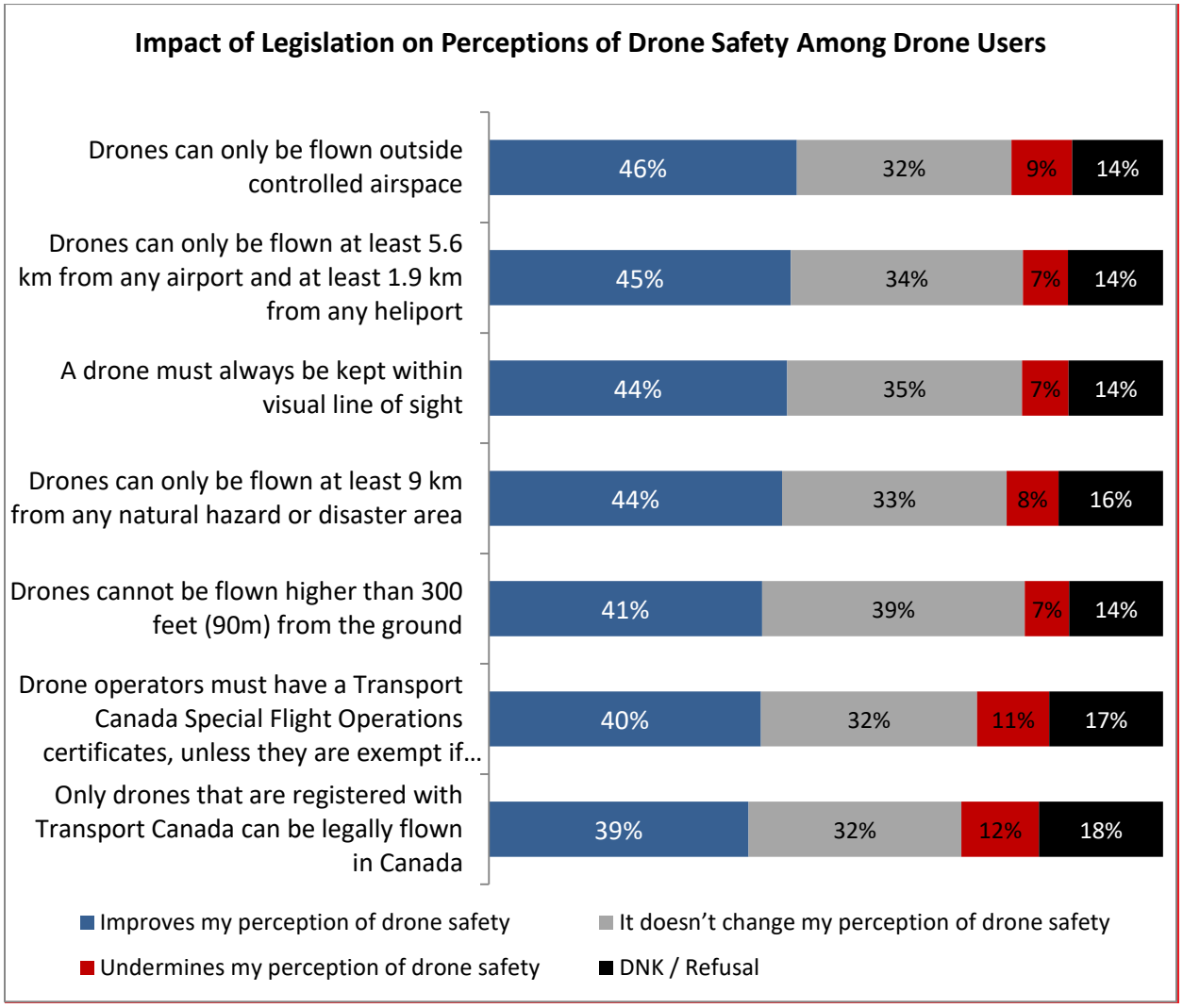


*Figure 26. Answer to question 21A: Right now, Federal government legislation regulates who can fly drones and how or where they can be flown. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area? Base: Drone users (n=701)*

The next tables (50-51) detail the impact of regulations on the perception of drone safety by drone user profile.

No statistical difference is observable depending on whether the drone user is the owner of his drone. Recreational users are more likely than professional users to indicate their perceptions of drone safety are improved by each of the aspects.

Table 50. Impact of Legislation on Perceptions of Drone Safety According to Type of Drone Users

| **Q21A. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area?**<br>IMPROVES PERCEPTIONS<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Drones can only be flown outside controlled airspace | 46% | 46% | 46% |
| Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport | 45% | 45% | 44% |
| A drone must always be kept within visual line of sight | 44% | 44% | 45% |
| Drones can only be flown at least 9 km from any natural hazard or disaster area | 44% | 44% | 43% |
| Drones cannot be flown higher than 300 feet (90m) from the ground | 41% | 40% | 43% |
| Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk | 40% | 39% | 43% |
| Only drones that are registered with Transport Canada can be legally flown in Canada | 39% | 37% | 43% |

Table 51. Impact of Legislation on Perceptions of Drone Safety According to Type of Drone Users

| **Q21A. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area?**<br>IMPROVES PERCEPTIONS<br>Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Drones can only be flown outside controlled airspace | 46% | **48%+** | 42% | **29%-** |
| Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport | 45% | **48%+** | **30%-** | 42% |
| A drone must always be kept within visual line of sight | 44% | **48%+** | **28%-** | 33% |
| Drones can only be flown at least 9 km from any natural hazard or disaster area | 44% | **46%+** | **32%-** | 38% |
| Drones cannot be flown higher than 300 feet (90m) from the ground | 41% | **42%+** | **31%-** | 36% |

| | | | | |
|---|---|---|---|---|
| Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk | 40% | **43%+** | **24%-** | 48% |
| Only drones that are registered with Transport Canada can be legally flown in Canada | 39% | **40%+** | **27%-** | 40% |

Drone users are most comfortable with drones being deployed in emergency scenarios to help save people, like in search and rescue operations (72%), followed by being used to deliver parcels (53%), instead of by delivery personnel. Users are least comfortable with the idea of drones being used to transport people like a taxi service (37%) and autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads (39%).

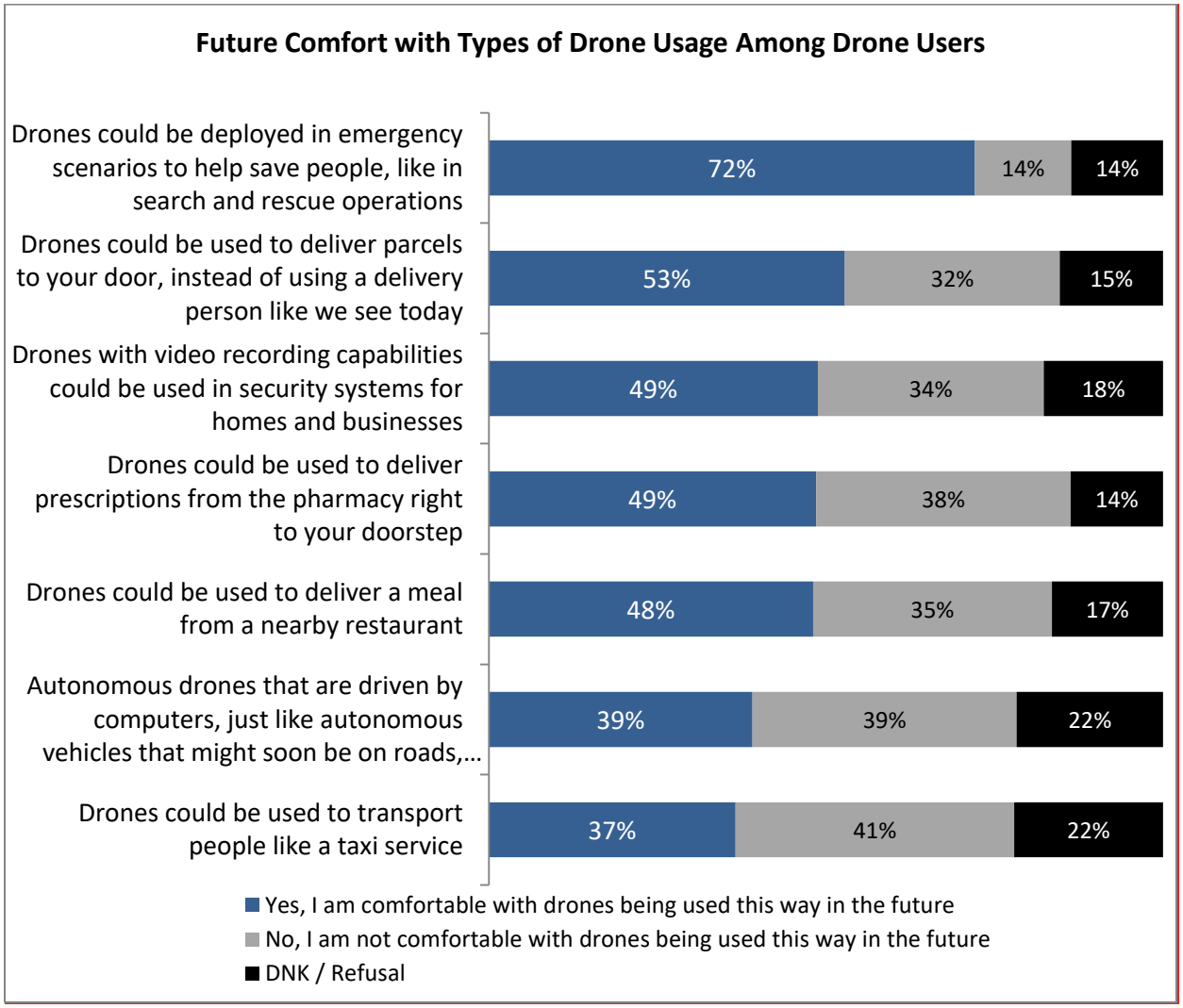


*Figure 27. Answer to question 21B: Some people feel that, in the future, drones will become more commonplace and put to different uses. Please tell me if you would be comfortable with these types of uses of drones in the near future. Base: Drone users (n=701)*

The next tables (52-53) detail the level of comfort with future use of drone by drone user profile.

Drone owners are generally more likely than non-owners to indicate that they would be comfortable with all potential uses of drones except for "drones could be used to deliver a meal from a nearby restaurant". There is no difference for this particular future use of drones depending on whether the user owns its drone or not. Drone users who operate their drone professionally are less likely to feel comfortable (49%) with "drones could be deployed in emergency scenarios to help save people, like in search and rescue operations" than those who operate it for recreational purposes (77%).

Table 52. Future Comfort with Types of Drone Usage According to Type of Drone Users

| **Q21B. Please tell me if you would be comfortable with these types of uses of drones in the near future.** COMFORTABLE MENTIONS Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations | 72% | **77%+** | **61%-** |
| Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today | 53% | **57%+** | **43%-** |
| Drones with video recording capabilities could be used in security systems for homes and businesses | 49% | **52%+** | **41%-** |
| Drones could be used to deliver prescriptions from the pharmacy right to your doorstep | 49% | **52%+** | **40%-** |
| Drones could be used to deliver a meal from a nearby restaurant | 48% | 50% | 44% |
| Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future | 39% | **42%+** | **32%-** |
| Drones could be used to transport people like a taxi service | 37% | **39%+** | **29%-** |

Table 53. Future Comfort with Types of Drone Usage According to Type of Drone Users

| **Q21B. Please tell me if you would be comfortable with these types of uses of drones in the near future.** COMFORTABLE MENTIONS Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations | 72% | **77%+** | **49%-** | 66% |
| Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today | 53% | 53% | 48% | 61% |

| | | | | |
|---|---|---|---|---|
| Drones with video recording capabilities could be used in security systems for homes and businesses | 49% | 50% | 44% | 48% |
| Drones could be used to deliver prescriptions from the pharmacy right to your doorstep | 49% | 49% | 43% | 56% |
| Drones could be used to deliver a meal from a nearby restaurant | 48% | 49% | 42% | 52% |
| Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future | 39% | 38% | 40% | **54%+** |
| Drones could be used to transport people like a taxi service | 37% | 37% | 28% | **52%+** |

### 2.1.8 Communications Channels

Two out of ten drone users indicate that the best way for Transport Canada to communicate relevant information to drone users in Canada regarding safely flying their drone would be through social media (22%), followed by online (19%), and/or television ads (17%). The least effective channels identified by respondents for reaching them are information at point of purchase / included with purchase (1%), direct mail / flyers / pamphlets (0%) and print/news media (0%).

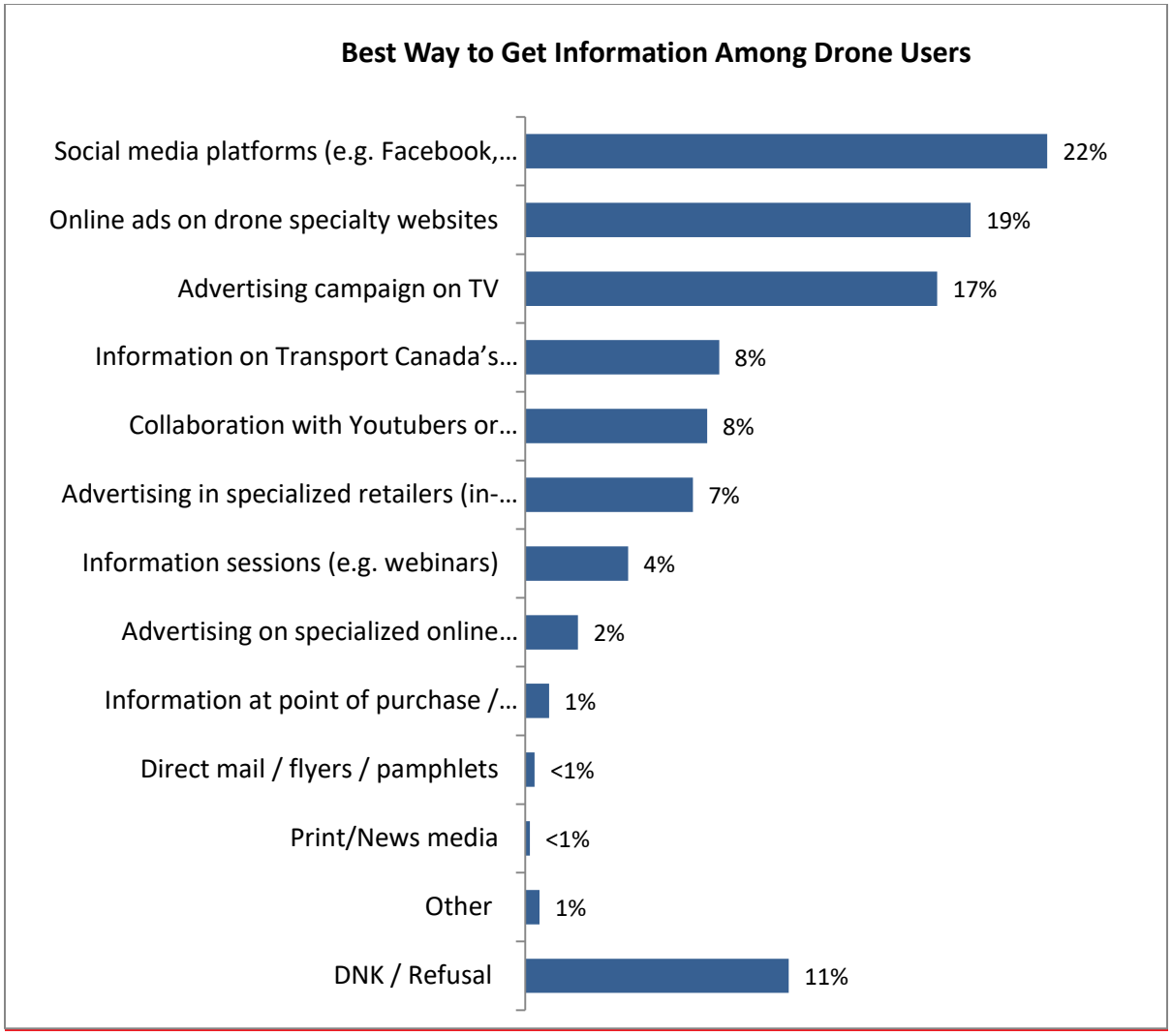


*Figure 28. Answer to question 25: If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you? Base: Drone users (n=701)*

The next tables (54-55) detail the best way to get information about drone by drone user profile.

Recreational drone users are more likely to indicate a preference for social media, television advertising campaigns and the Transport Canada website. Those who fly their drone professionally prefer advertising on specialized websites and collaboration with influencers. Those who only fly their drone professionally are also more likely to have mentioned advertising in specialized retailers (in-store) to reach them.

Table 54. Best Way to Get Information to Drone Users According to Type of Drone Users

| **Q25. If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you?** Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |

| | | | |
|---|---|---|---|
| Social media platforms (e.g. Facebook, Instagram, YouTube, etc) | 22% | 21% | 23% |
| Online ads on drone specialty websites | 19% | 19% | 18% |
| Advertising campaign on TV | 17% | 19% | 14% |
| Information on Transport Canada's Drone Safety Website | 8% | 9% | 6% |
| Collaboration with Youtubers or influencers | 8% | 7% | 9% |
| Advertising in specialized retailers (in-store) | 7% | 8% | 4% |
| Information sessions (e.g. webinars) | 4% | 3% | 7% |
| Advertising on specialized online retailers' websites | 2% | 2% | 2% |
| Information at point of purchase / included with purchase | 1% | 1% | 0% |
| Direct mail / flyers / pamphlets | <1% | 1% | 0% |
| Print/News media | <1% | 0% | 1% |
| Other | 1% | 1% | 0% |
| DNK / Refusal | 11% | 9% | 16% |

Table 55. Best Way to Get Information to Drone Users According to Purpose of Drone Usage

| **Q25. If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you?** Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| Social media platforms (e.g. Facebook, Instagram, YouTube, etc) | 22% | **24%+** | **10%-** | 14% |
| Online ads on drone specialty websites | 19% | **15%-** | **33%+** | **35%+** |
| Advertising campaign on TV | 17% | **19%+** | **8%-** | 11% |
| Information on Transport Canada's Drone Safety Website | 8% | **9%+** | **2%-** | 4% |
| Collaboration with Youtubers or influencers | 8% | **5%-** | **17%+** | **24%+** |
| Advertising in specialized retailers (in-store) | 7% | **6%-** | **16%+** | 2% |
| Information sessions (e.g. webinars) | 4% | 4% | 3% | 7% |
| Advertising on specialized online retailers' websites | 2% | 3% | 2% | 0% |
| Information at point of purchase / included with purchase | 1% | 1% | 0% | 0% |

| | | | | |
|---|---|---|---|---|
| Direct mail / flyers / pamphlets | <1% | 1% | 0% | 0% |
| Print/News media | <1% | 0% | 0% | 0% |
| Other | 1% | 1% | 0% | 0% |
| DNK / Refusal | 11% | 12% | 9% | 4% |

Two out of ten drone users who look for the latest trends about drones and model aircraft will do so on the Internet through a search engine (21%). YouTube channels (10%) are also a source of information for drone users, as well as social media platforms, whether it is Facebook or any other (6%).

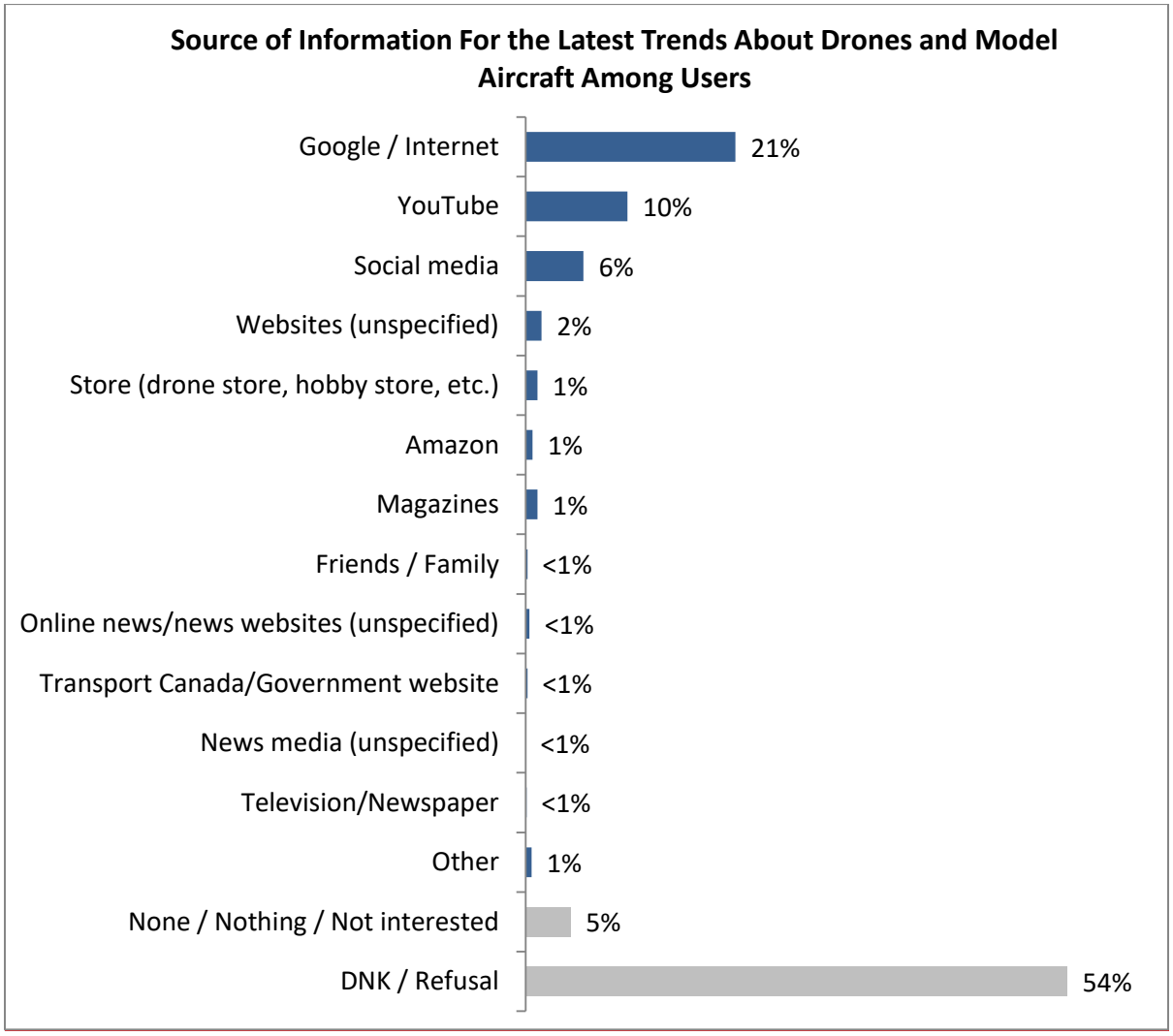


*Figure 29. Answer to question 28: Where do you go to find the latest trends about drones and model aircraft? Base: Drone users (n=701)*

The next tables (56-57) detail the best way to get information about drone by drone user profile.

There are no significant differences between drone owners or non-owners on this issue. Drone users who use their drones recreationally are more likely than others to prefer Google and the Internet in general to follow the latest trends on drones.

Table 56. Source of Information for the Latest Trends About Drones and Model Aircraft According to Type of Drone Users

| **Q28. Where do you go to find the latest trends about drones and model aircraft?** SPONTANEOUS MENTIONS<br>Base: Drone users | **Total** | **Owner** | **Non-owner** |
|---|---|---|---|
| n= (weighted) | 354 | 255 | 99 |
| n= (unweighted) | 701 | 506 | 195 |
| **Google / Internet** | 21% | 23% | 17% |
| **YouTube** | 10% | 11% | 7% |
| **Social media** | 6% | 6% | 5% |
| **Websites (unspecified)** | 2% | 2% | 1% |
| **Store (drone store, hobby store, etc.)** | 1% | 2% | 0% |
| **Amazon** | 1% | 1% | 1% |
| **Magazines** | 1% | 1% | 1% |
| **Friends / Family** | <1% | <1% | 0% |
| **Online news/news websites (unspecified)** | <1% | 1% | 0% |
| **Transport Canada/Government website** | <1% | <1% | 1% |
| **News media (unspecified)** | 0% | 0% | 0% |
| **Television/Newspaper** | <1% | <1% | 0% |
| **Other** | 1% | 1% | 1% |
| **None / Nothing / Not interested** | 5% | **5%+** | **2%-** |
| **DNK / Refusal** | 54% | **50%-** | **66%+** |

Table 57. Source of Information for the Latest Trends About Drones and Model Aircraft According to Purpose of Drone Usage

| **Q28. Where do you go to find the latest trends about drones and model aircraft?** SPONTANEOUS MENTIONS<br>Base: Drone users | **Total** | **Recreational** | **Professional** | **Both** |
|---|---|---|---|---|
| n= (weighted) | 354 | 284 | 48 | 22 |
| n= (unweighted) | 701 | 560 | 91 | 50 |
| **Google / Internet** | 21% | **24%+** | **12%-** | **7%-** |
| **YouTube** | 10% | 10% | 6% | **21%+** |
| **Social media** | 6% | **7%+** | 2% | 2% |
| **Websites (unspecified)** | 2% | 2% | 1% | 0% |
| **Store (drone store, hobby store, etc.)** | 1% | 1% | **4%+** | 0% |
| **Amazon** | 1% | 1% | 1% | 0% |
| **Magazines** | 1% | **1%-** | **4%+** | 0% |
| **Friends / Family** | <1% | <1% | 0% | 0% |
| **Online news/news websites (unspecified)** | <1% | 1% | 0% | 0% |

| | | | | |
|---|---|---|---|---|
| **Transport Canada/Government website** | <1% | <1% | 1% | 0% |
| **News media (unspecified)** | 0% | <1% | 0% | 0% |
| **Television/Newspaper** | <1% | 0% | **1%+** | 0% |
| **Other** | 1% | 1% | 1% | 0% |
| **None / Nothing / Not interested** | 5% | **3%-** | **9%+** | **18%+** |
| **DNK / Refusal** | 54% | **53%+** | **61%-** | 52% |

## 2.2 General Public (Non-Users)

### 2.2.1 Profiling

Over three-quarters of Canadians (78%) do not, nor does another person in their household, currently own a drone or model aircraft. However, one quarter (24%) of non-users indicate knowing someone close to them, friend or family, who flies a drone, either professionally or casually. Three in ten non-users indicate being in a place within the past 12-months where a drone or drones were flying overhead or nearby (30%). 35% indicate that prior to this occurrence(s) they were in a place where a drone or drones were flying overhead or nearby.

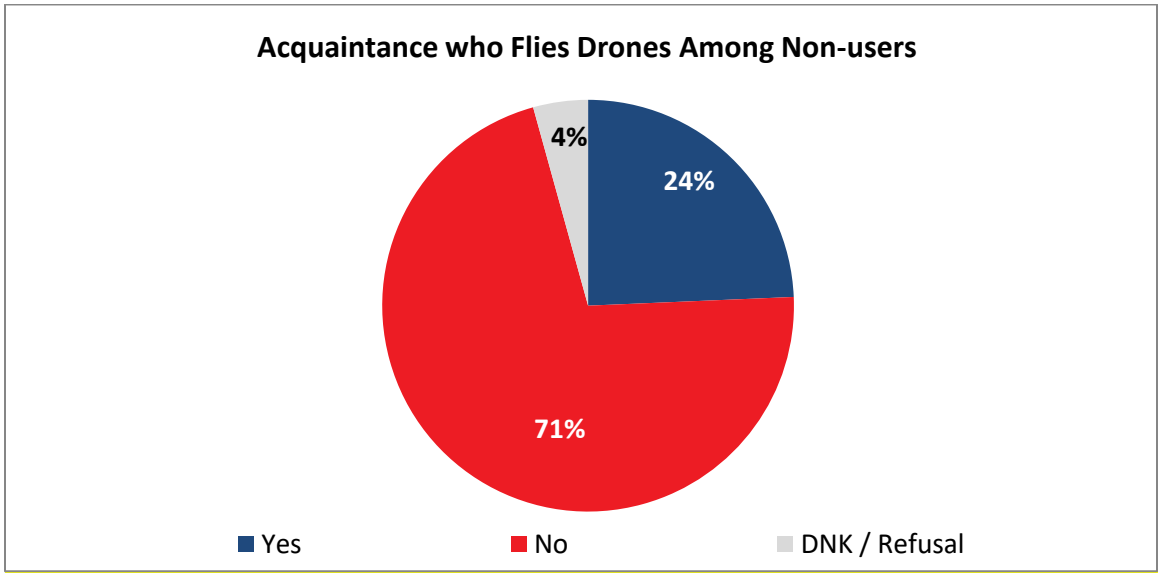


*Figure 30. Answer to question 1A: Do you know a person close to you, friend or family, who flies a drone, either professionally or casually?? Base: Non-users (n=1,799)*

Half (50%) of non-users are concerned with drones being flown safely, 12% being very concerned.

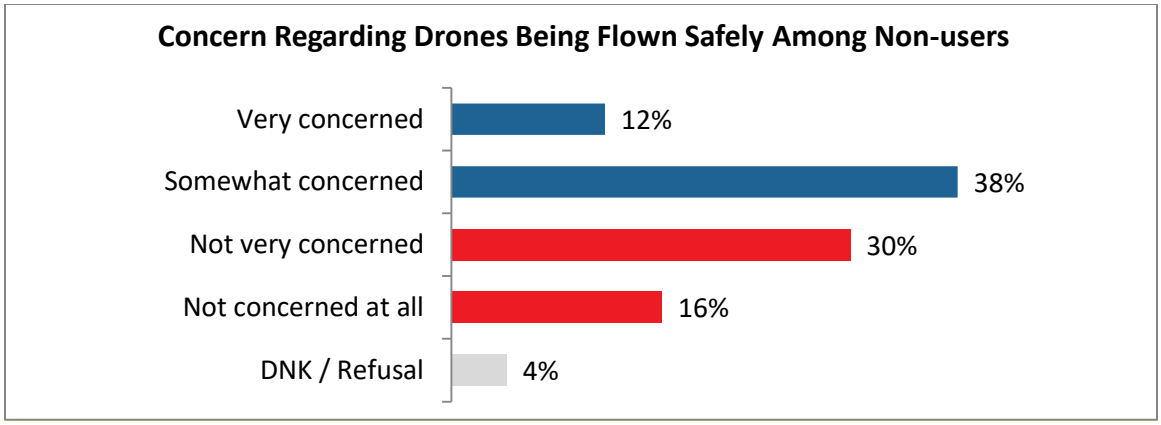


*Figure 31. Answer to question 1B: How concerned are you about drones being flown safely? Base: Non-users (n=2,002)*

The next table (60) details the level of concern about drone being flown safely among drone users and non-users

Drone users (59%) are more likely that non-users (50%) to express concern around drones being flown safely. Drone users are also more likely to be very concerned (59%) about that than non-users (12%).

Table 58. Concern Regarding Drones Being Flown Safely According to Type of Drone Users

| **Q1B. How concerned are you about drones being flown safely?** Base: Respondents | **Total** | **Drone User** | **Non-user** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Net Concerned | 51% | **59%+** | **50%-** |
| Very concerned | 13% | **21%+** | **12%-** |
| Somewhat concerned | 38% | 38% | 38% |
| Net Not Concerned | 45% | **39%-** | **46%+** |
| Not very concerned | 30% | **26%-** | **30%+** |
| Not at all concerned | 16% | 13% | 16% |
| DNK / Refusal | 4% | 2% | 4% |

Among non-users of drones, the main concern is privacy issues (13%). This main issue is followed by aviation risks (7%) or the loss of control due to inexperienced pilots (6%) or possible injuries (6%) caused by a crashing drone.

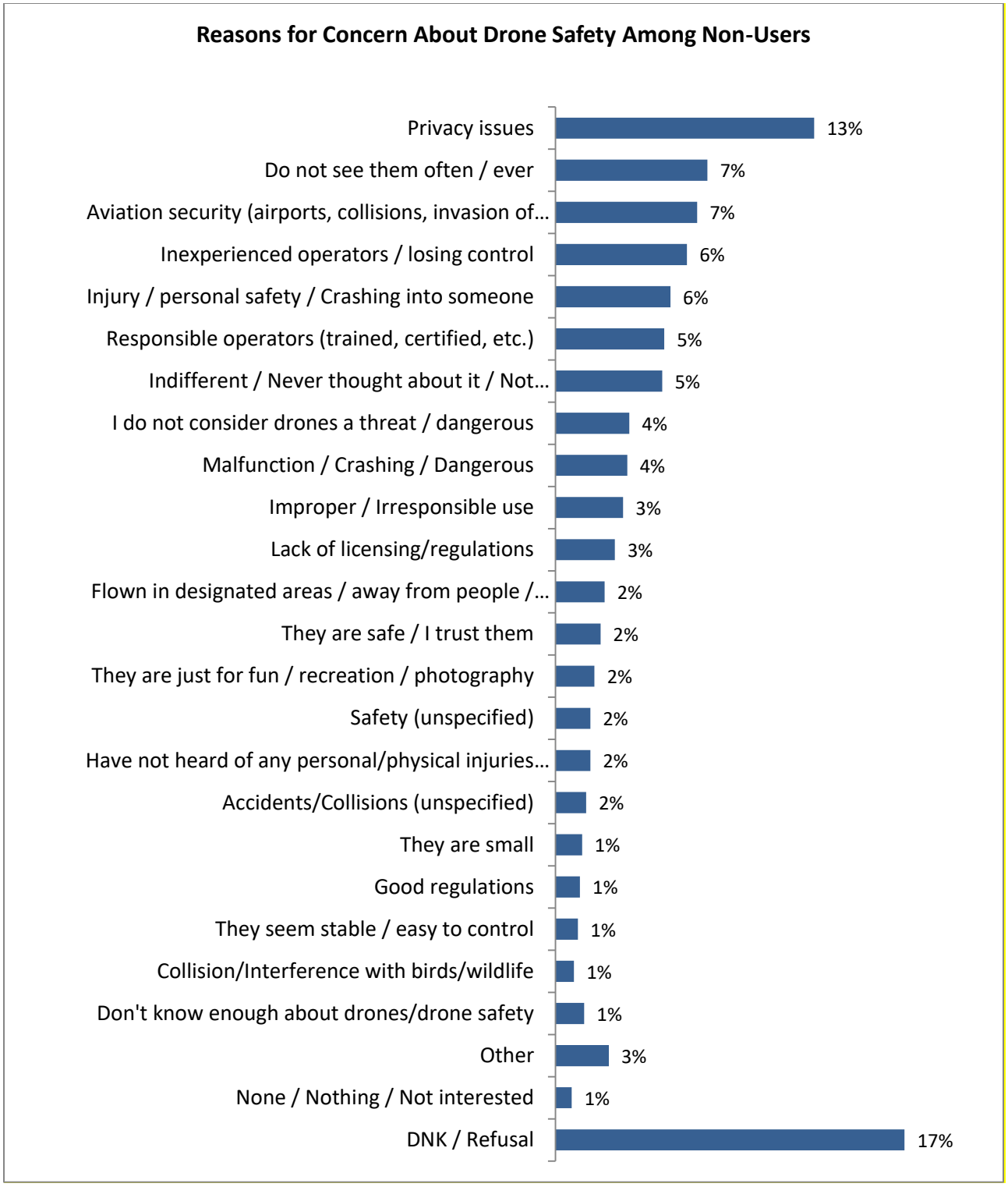


*Figure 32. Answer to question 1C: What is the main reason why you are [insert level of concern from Q1B] about drone safety? Base: Non-users who are concerned with drone safety (n=1,922)*

The next table (61) details the main reason of concern about drone safety among drone users and non-users.

Non-users' reasons for concern regarding drone safety varies, with the greatest proportion citing 'privacy issues' (13%). This concern is statistically different from drone users (9%). Most of the other concerns are similar between users and non-users.

Table 59. Reasons for Concern About Drone Safety According to Type of Drone Users

| **Q1C. What is the main reason why you are [*insert level of concern from Q1B]* ] about drone safety?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2598 | 347 | 2250 |
| n= (unweighted) | 2612 | 690 | 1922 |
| **Privacy issues** | 12% | **9%-** | **13%+** |
| **Do not see them often / ever** | 7% | **3%-** | **7%+** |
| **Aviation security (airports, collisions, invasion of space** | 7% | 7% | 7% |
| **Inexperienced operators / losing control** | 6% | 5% | 6% |
| **Injury / personal safety / Crashing into someone** | 6% | 7% | 6% |
| **Responsible operators (trained, certified, etc.)** | 5% | **3%-** | **5%+** |
| **Indifferent / Never thought about it / Not concerned** | 5% | 6% | 5% |
| **I do not consider drones a threat / dangerous** | 4% | 3% | 4% |
| **Malfunction / Crashing / Dangerous** | 3% | 3% | 4% |
| **Improper / Irresponsible use** | 3% | 4% | 3% |
| **Lack of licensing/regulations** | 3% | 3% | 3% |
| **Flown in designated areas / away from people / open space** | 2% | 2% | 2% |
| **They are safe / I trust them** | 2% | 3% | 2% |
| **They are just for fun / recreation / photography** | 2% | 3% | 2% |
| **Safety (unspecified)** | 2% | 2% | 2% |
| **Have not heard of any personal/physical injuries** | 2% | **1%-** | **2%+** |
| **Accidents/Collisions (unspecified)** | 2% | **3%+** | **2%-** |
| **They are small** | 1% | 2% | 1% |
| **Good regulations** | 1% | 1% | 1% |
| **They seem stable / easy to control** | 1% | 2% | 1% |
| **Collision/Interference with birds/wildlife** | 1% | 1% | 1% |
| **Don't know enough about drones/drone safety** | 1% | **0%-** | **1%+** |
| **Other** | 3% | **5%+** | **3%-** |
| **None / Nothing / Not interested** | 1% | **3%+** | **1%-** |
| **DNK / Refusal** | 17% | 23% | 17% |

Two-thirds (65%) of non-users are concerned about potential privacy issues related to drones with cameras. Drone users (11%) are more likely than non-users (7%) to express not being concerned at all regarding privacy issues.

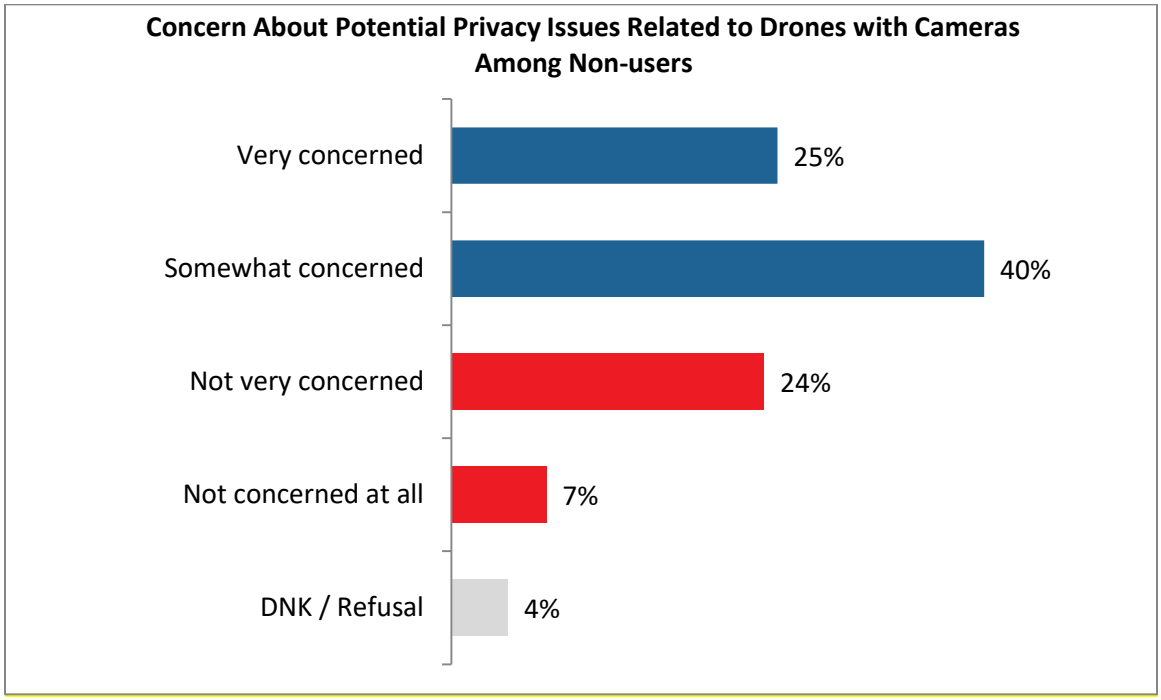


*Figure 33. Answer to question 1DD: How concerned are you about potential privacy issues related to drones equipped with cameras? Base: Non-users (n=2,002)*

The next table (62) detail the level of concern about privacy issues among drone users and non-users

The level of concern about this issue is similar between the two profiles. However, drone users (11%) are more likely than non-users (7%) to express not being concerned at all regarding privacy issues.

Table 60. Concern About Potential Privacy Issues Related to Drones with Cameras Among Drone Users and Non-Users

| **Q1DD. How concerned are you about potential privacy issues related to drones equipped with cameras?** Base: Respondents | **Total** | **Drone User** | **Non-user** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Net Concerned | 65% | 63% | 65% |
| Very concerned | 24% | 23% | 25% |
| Somewhat concerned | 40% | 41% | 40% |
| Net Not Concerned | 31% | 34% | 31% |
| Not very concerned | 24% | 24% | 24% |
| Not at all concerned | 8% | **11%+** | **7%-** |
| DNK / Refusal | 4% | 3% | 4% |

Nearly one out of five (17%) non-users are comfortable with a professionally operated drone being close enough to identify them. However, more than three-quarters of non-users would be uncomfortable with this. In fact, more than half (52%) of them would not be comfortable with it at all.

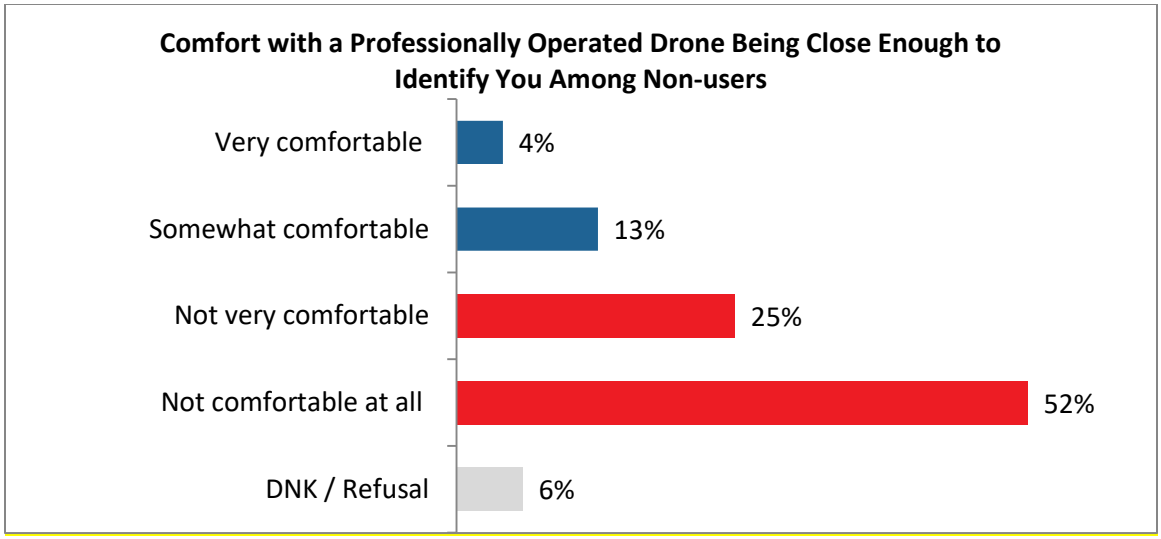


*Figure 34. Answer to question 1EE: How comfortable would you be if a drone piloted by a professional user was close enough to identify you in the pictures or videos they take? Base: Non-users (n=2,002)*

The next table (63) detail the level of comfort about being identified in pictures or videos taken by a drone piloted by a professional user among drone users and non-users

Drone users (38%) are more likely than non-users (17%) to be comfortable with a professionally operated drone being close enough to identify them. They are more likely to be very or somewhat comfortable that the non-users.

Table 61. Comfort with a Professionally Operated Drone Being Close Enough to Identify You Among Drone Users and Non-Users

| **Q1EE. How comfortable would you be if a drone piloted by a professional user was close enough to identify you in the pictures or videos they take?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Net Comfortable | 20% | **38%+** | **17%-** |
| Very comfortbale | 6% | **14%+** | **4%-** |
| Somewhat comfortable | 14% | **25%+** | **13%-** |
| Net Not Comfortable | 75% | **60%-** | **77%+** |
| Not very comfortable | 25% | 25% | 25% |
| Not at all comfortable | 50% | **35%-** | **52%+** |
| DNK / Refusal | 6% | 2% | 6% |

The results on this subject are quite similar if the drone would be piloted by a recreational user and not a professional user. The few variations observed are not significant and the general trends are the same, respondents being, for the most part, not comfortable at all. 14% of non-users are comfortable with a recreationally operated drone being close enough to identify them while more than three-quarters would be uncomfortable. Again, this is more than half of the non-users (56%) who would be uncomfortable with a drone being operated close enough to be identified in the photos or videos.

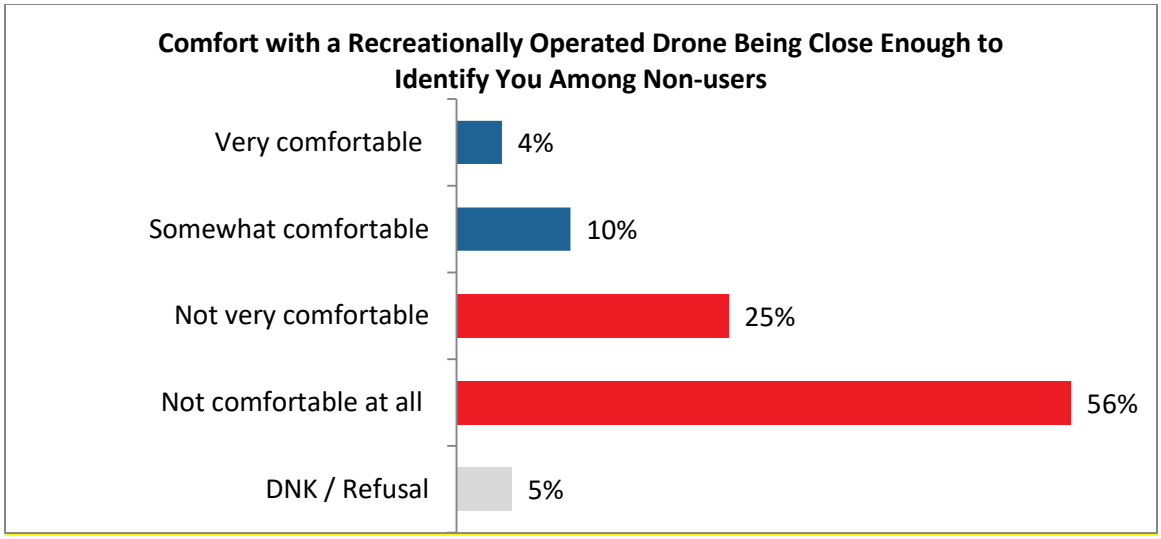


*Figure 35. Answer to question 1F: How comfortable would you be if a drone piloted by a recreational user was close enough to identify you in the pictures or videos they take? Base: Non-users (n=2,002)*

The next table (64) details the level of comfort with being identified in pictures or videos taken by a drone piloted by a recreational user among drone users and non-users

Drone users (36%) are more likely than non-users (14%) to be comfortable with a professionally operated drone being close enough to identify them.

Table 62. Comfort with a Recreationally Operated Drone Being Close Enough to Identify You According to Type of Drone Users

| **Q1F. How comfortable would you be if a drone piloted by a recreational user was close enough to identify you in the pictures or videos they take?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Net Comfortable | 17% | **36%+** | **14%-** |
| Very comfortable | 5% | **10%+** | **4%-** |
| Somewhat comfortable | 12% | **26%+** | **10%-** |
| Net Not Comfortable | 78% | **61%-** | **80%+** |
| Not very comfortable | 25% | 28% | 25% |
| Not at all comfortable | 53% | **33%-** | **56%+** |
| DNK / Refusal | 5% | 3% | 5% |

## 2.2.2 Drone Clubs and Learning Techniques

Less than 1% of non-users are part of a drone or model aircraft club or group.

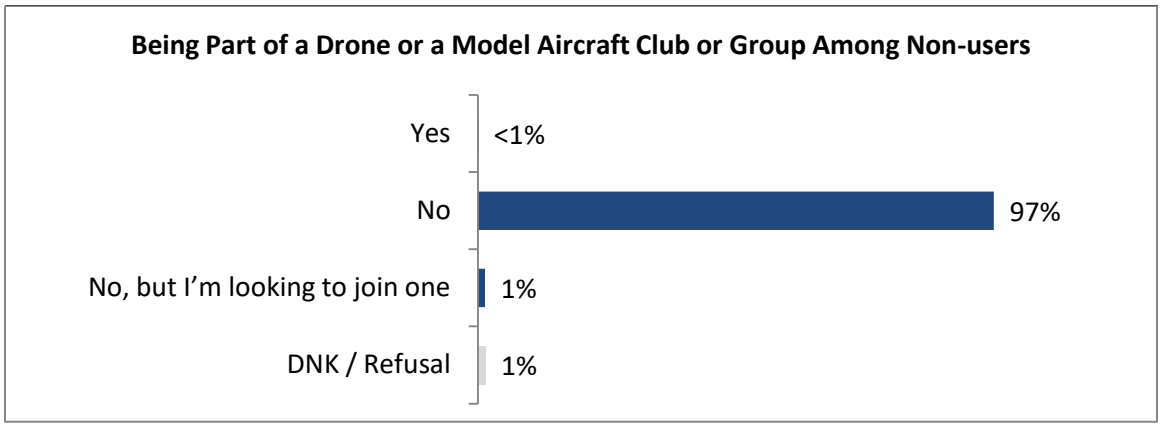


*Figure 36. Answer to question 10: Do you currently belong to a drone or model aircraft club or group? Base: Non-users (n=2,002)*

The next table (65) details belonging to a club or a group of drone users among drone users and non-users.

Drone users (1%) are more likely than non-users (0%) to belong to a club or group of drone users. Users are also more likely (15%) to be looking to join a club or group than non-users (1%).

Table 63. Being Part of a Drone or a Model Aircraft Club or Group According to Type of Drone Users

| **Q10. Do you currently belong to a drone or model aircraft club or group?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Yes | 0% | **1%+** | **0%-** |
| No | 95% | **79%-** | **97%+** |
| No, but I'm looking to join one | 3% | **15%+** | **1%-** |
| DNK / Refusal | 2% | 2% | **5%+** |

### 2.2.3 Drone Pilot Certification and Safety Training

Even though nearly all non-users do not have a drone pilot certificate issued by the Government of Canada (98%), 1% are in the process of obtaining one.

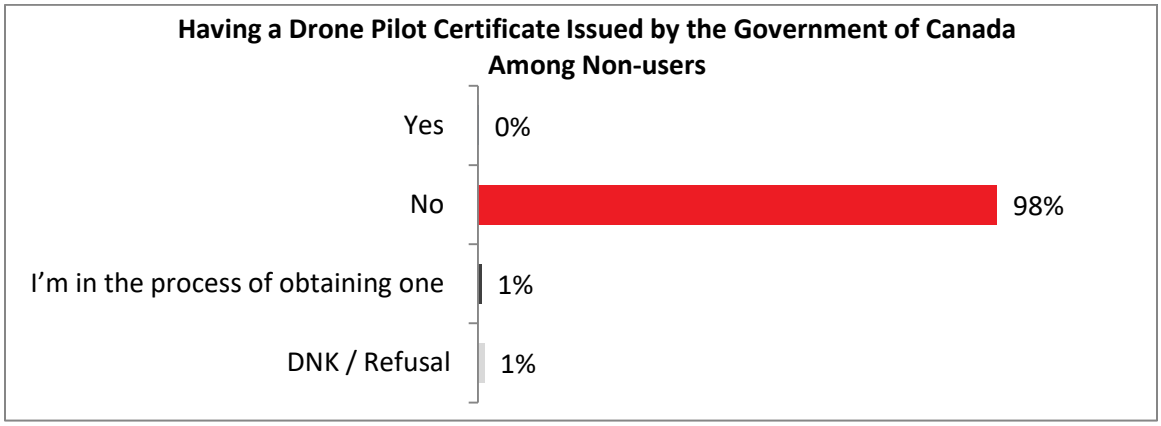


*Figure 37. Answer to question 13: Do you have a drone pilot certificate issued by the Government of Canada? Base: Non-users (n=2,002)*

The next table (66) detail the holding of a drone pilot certificate issued by the Government of Canada among drone users and non-users.

Drone users (13%) are more likely than non-users (0%) to have a drone pilot certificate. Users are also more likely (9%) to be in the process of obtaining a drone pilot certificate than non-users (1%).

Table 64. Having a Drone Pilot Certificate Issued by the Government of Canada According to Type of Drone Users

| **Q13. Do you have a drone pilot certificate issued by the Government of Canada?** Base: Drone users | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Yes | 2% | **13%+** | **0%-** |
| No | 95% | **73%-** | **98%+** |
| I'm in the process of obtaining one | 2% | **9%+** | **1%-** |
| DNK / Refusal | 2% | **5%+** | **1%-** |

One out of ten (10%) of non-users who have someone in their household who is a drone user, cite that they have received training or seen an instructional video specifically on Transport Canada's Drone Safety Regulations.

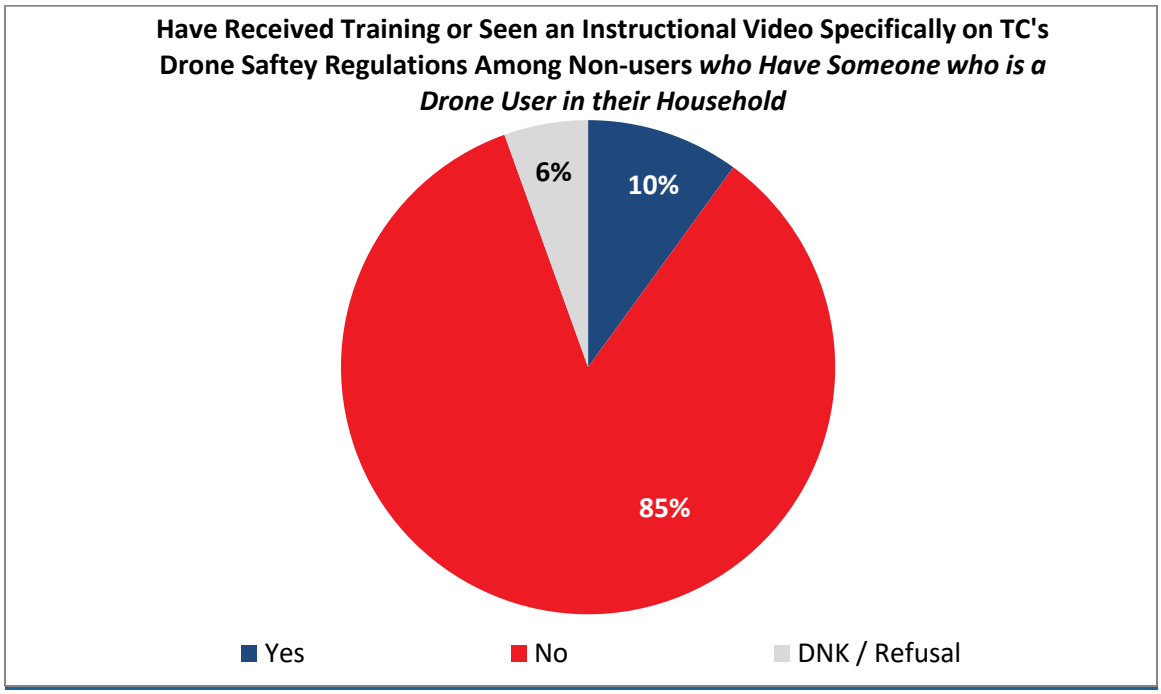


*Figure 38. Answer to question 15: Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations? Base: Non-users, who have someone who is a drone user in their household (n=145)*

The next table (67) details the proportion of Canadians who have received training or seen an instructional video on Transport Canada's drone safety regulations.

Drone users (25%) are more likely than non-users (10%) to have received training or seen an instructional video on Transport Canada's drone safety regulations.

Table 65. Having Received a Training or Seen an Instructional Video Specifically on Transport Canada's Drone Safety Regulations According to Type of Drone Users

| **Q15. Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 516 | 354 | 161 |
| n= (unweighted) | 846 | 701 | 145 |
| Yes | 20% | **25%+** | **10%-** |
| No | 73% | **68%-** | **85%+** |
| DNK / Refusal | 7% | 7% | 6% |

### 2.2.4 Information Sources and Transport Canada's Website Drone Pages Visits

Generally speaking, 74% of non-users mention that they did not seek or search for information on Canadian government regulations regarding drones or model aircraft.

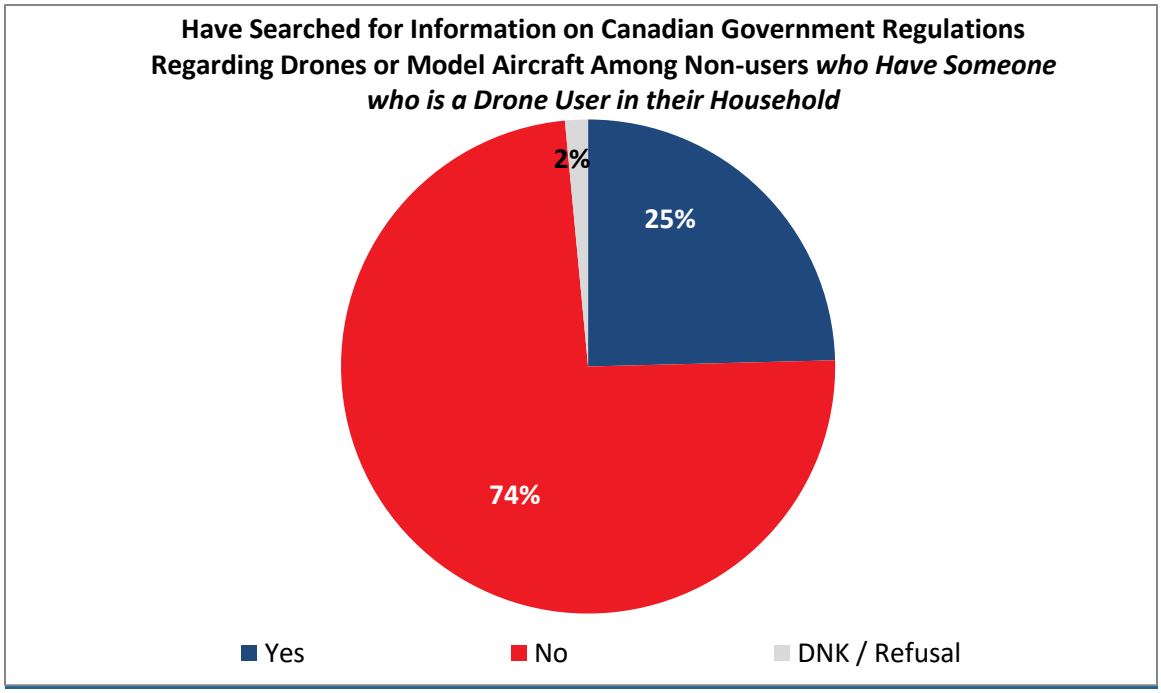


*Figure 39. Answer to question 16: Have you ever sought or searched for information on Canadian government regulations regarding drones or model aircraft? Non-users, who have someone who is a drone user in their household (n=145)*

The next table (68) details the proportion of Canadians who searched for information on Canadian government regulations regarding drones or model aircraft.

Drone users (39%) are more likely than non-users (25%) to have searched for information on Canadian government regulations regarding drones or model aircraft

Table 66. Having Searched for Information on Canadian Government Regulations Regarding Drones or Model Aircraft According to Type of Drone Users

| **Q16. Have you ever sought or searched for information on Canadian** | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|

| **government regulations regarding drones or model aircraft?** Base: Respondents | | | |
|---|---|---|---|
| n= (weighted) | 516 | 354 | 161 |
| n= (unweighted) | 846 | 701 | 145 |
| Yes | 35% | **39%+** | **25%-** |
| No | 61% | **55%-** | **74%+** |
| DNK / Refusal | 5% | 6% | 2% |

Three-quarters of non-users who stated that they have sought information on Canadian government regulations regarding drones or model aircraft did so using a search engine (e.g., Google, Bing, Yahoo, etc.) (74%), followed by 53% who visited the Government's website. Other sources of information were mentioned to a lesser extent by respondents.

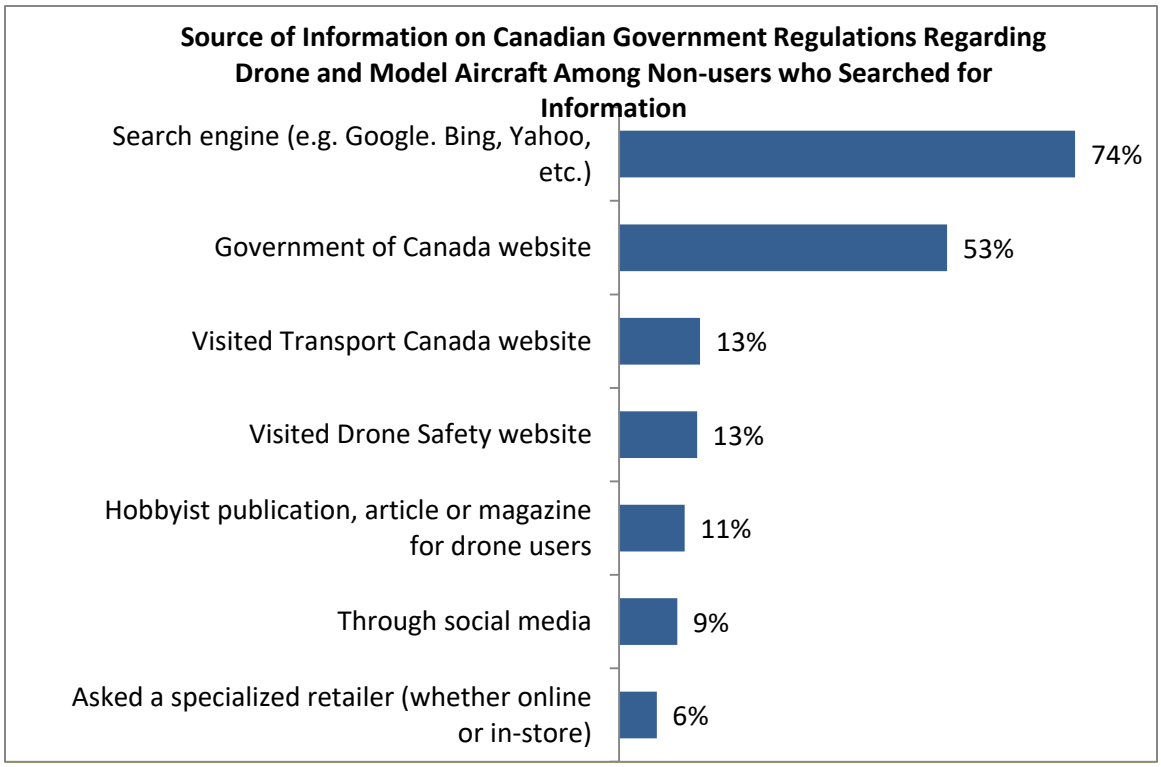


*Figure 40. Answer to question 17: Where did you go to find that information? Base: Non-users who searched for information on Canadian government regulations regarding drones or model aircraft (n=38)*

The next table (69) details the place where the information on regulations was searched for among users and non-users.

The table indicates that there are no statistically significant differences between the two subgroups in the sample. The preferred sources are the same.

Table *67. Source of Information on Canadian Government Regulations Regarding Drone and Model Aircraft According to Type of Drone Users*

| **Q17. Where did you go to find that information?** Base: Respondents who searched for information on Canadian government regulations regarding drones or model aircraft | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|

| | | | |
|---|---|---|---|
| n= (weighted) | 179 | 139 | 40 |
| n= (unweighted) | 322 | 284 | 38 |
| **Search engine (e.g. Google. Bing, Yahoo, etc.)** | 64% | 61% | 74% |
| **Government of Canada website** | 56% | 57% | 53% |
| **Visited Transport Canada website** | 16% | 17% | 13% |
| **Visited Drone Safety website** | 15% | 15% | 13% |
| **Hobbyist publication, article or magazine for drone users** | 13% | 14% | 11% |
| **Asked a specialized retailer (whether online or in-store)** | 8% | 8% | 6% |
| **Through social media** | 6% | 4% | 9% |
| **Searched for drone flight influencer video on regulations** | 3% | 3% | 0% |
| **Other sources (please specify)** | 1% | 2% | 0% |
| DNK / Refusal | <1% | <1% | 0% |

### 2.2.5 Drones and Model Aircraft Regulations

Nearly one out of five (18%) non-users feel knowledgeable about drones in general. About half (45%) of non-drone users consider themselves not to be at all knowledgeable about drones.

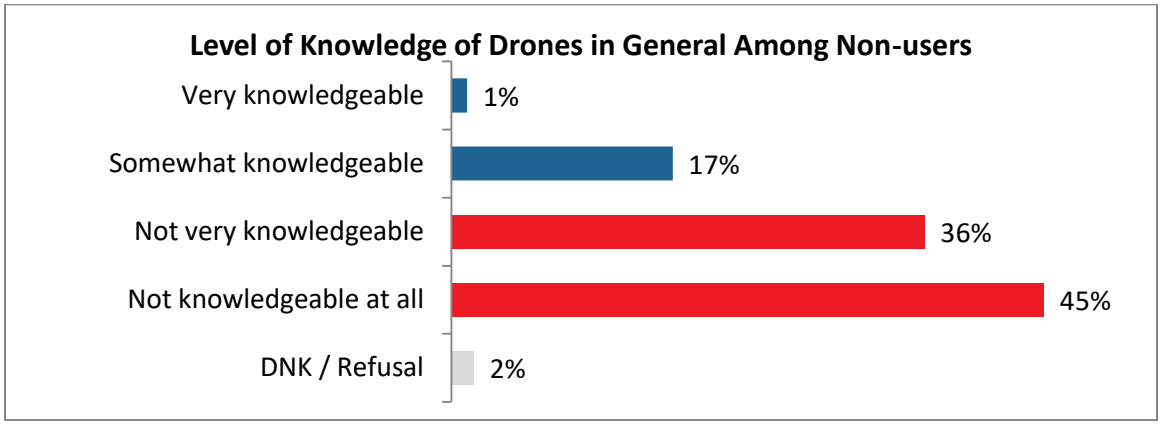


*Figure 41. Answer to question 20A: What would you say is your level of knowledge of drones in general? Base: Non-users (n=2,002)*

The next table (70) details the level of knowledge of drones in general among users and non-users.

As might be expected, drone users (59%) are more likely than non-users (18%), to feel knowledgeable about drones in general.

Table 68. Level of Knowledge of Drones in General According to Type of Drone Users

| **Q20A. What would you say is your level of knowledge of drones in general?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |

| | | | |
|---|---|---|---|
| Net Knowledgeable | 23% | **59%+** | **18%-** |
| Very knowledgeable | 3% | **12%+** | **1%-** |
| Somewhat knowledgeable | 21% | **47%+** | **17%-** |
| Net Not Knowledgeable | 75% | **37%-** | **80%+** |
| Not very knowledgeable | 34% | **25%-** | **36%+** |
| Not at all knowledgeable | 40% | **12%-** | **45%+** |
| DNK / Refusal | 2% | 4% | 2% |

Few (7%) non-users feel knowledgeable of the Transport Canada regulations on drones and model aircraft. Six out of ten (60%) non-users say they are not knowledgeable at all about this.

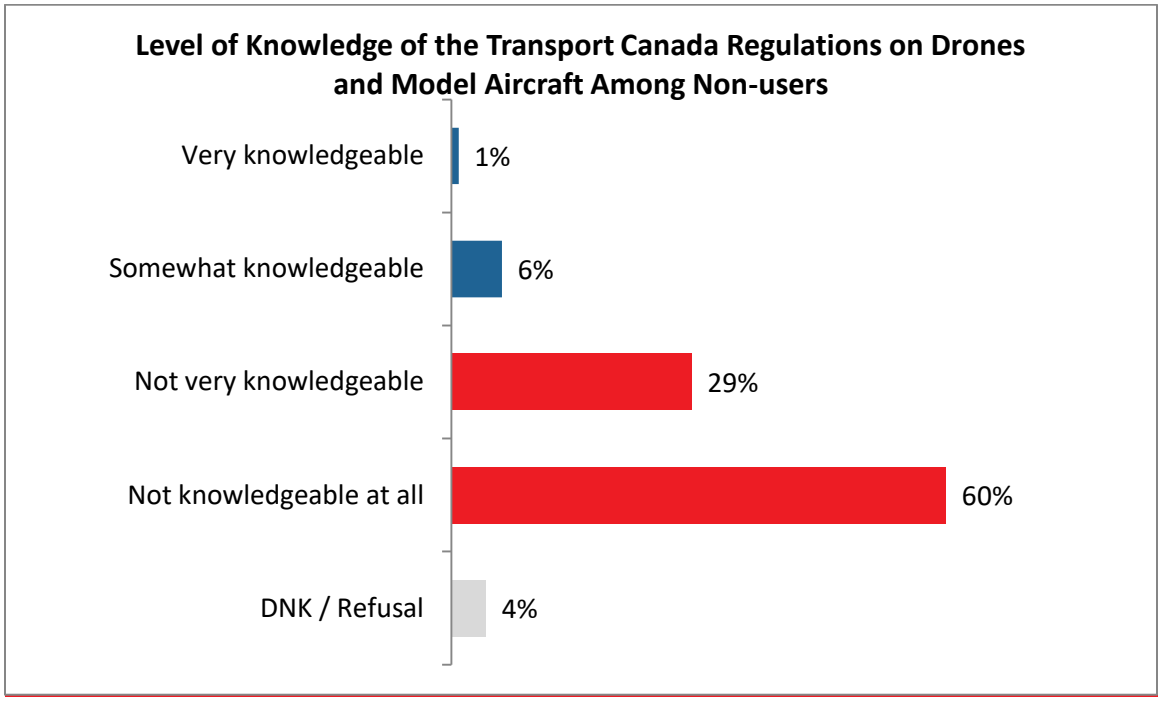


*Figure 42. Answer to question 20: How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft? Base: Non-users (n=2,002)*

The next table (71) details the level of knowledge of the Transport Canada regulations on drones and model aircraft among users and non-users.

Drone users (43%) are more likely than non-users (7%), to feel knowledgeable about the Transport Canada regulations on drones and model aircraft.

Table 69. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft According to Type of Drone Users

| **Q20. How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Net Knowledgeable | 12% | **43%+** | **7%-** |

| | | | |
|---|---|---|---|
| Very knowledgeable | 2% | 11%+ | 1%- |
| Somewhat knowledgeable | 10% | 32%+ | 6%- |
| Net Not Knowledgeable | 84% | 51%- | 89%+ |
| Not very knowledgeable | 29% | 28% | 29% |
| Not at all knowledgeable | 55% | 23%- | 60%+ |
| DNK / Refusal | 4% | 6% | 4% |

Nearly three quarters (73%) of non-users feel their knowledge of the Transport Canada regulations on drones and model aircrafts has remained the same over the last year.

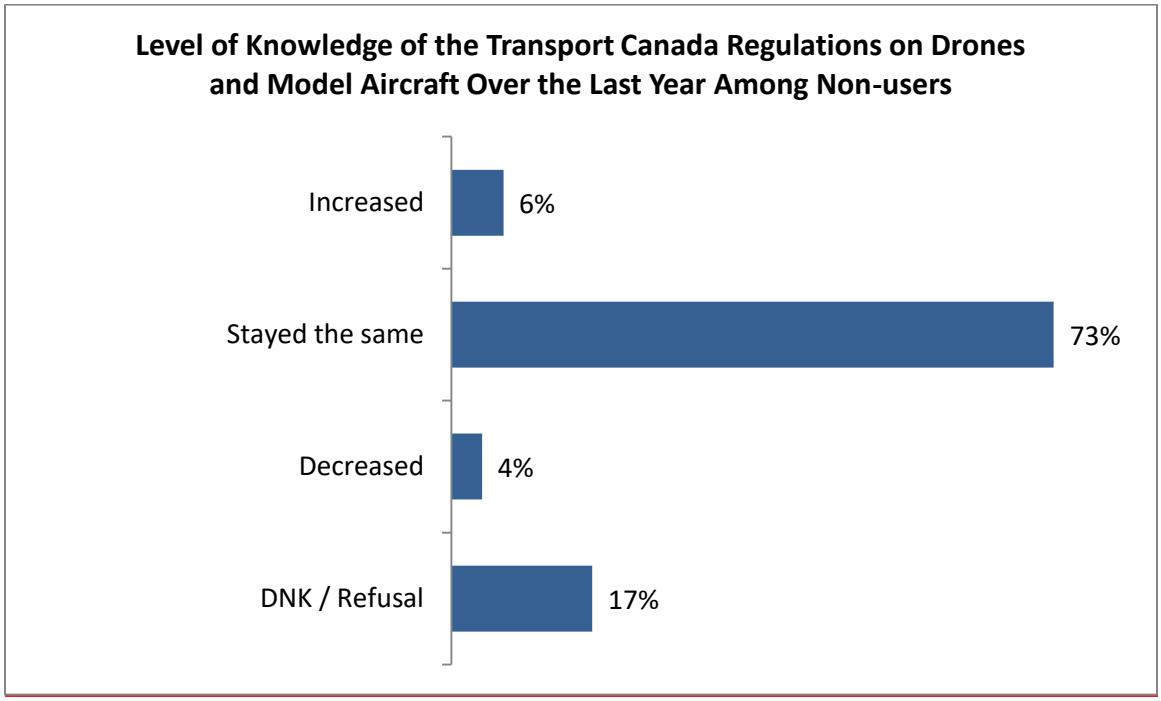


*Figure 43. Answer to question 20B: Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year? Base: Non-users (n=2,002)*

The next table (72) details the evolution over last year of level of knowledge of the Transport Canada regulations on drones and model aircraft among users and non-users.

Drone users are more likely than non-users to feel their level of knowledge increased (19%) or decreased (6%) over the last year. Non-users are more likely to have said that their level of knowledgeable stayed the same.

Table 70. Level of Knowledge of the Transport Canada Regulations on Drones and Model Aircraft Over the Last Year According to Type of Drone Users

| **Q20B. Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Increased | 8% | 19%+ | 6%- |

| | | | |
|---|---|---|---|
| Stayed the same | 72% | 63%- | 73%+ |
| Decreased | 4% | 6%+ | 4%- |
| DNK / Refusal | 17% | 11% | 17% |

The greatest proportion (45%) of non-users indicate being aware that drones must operate 'far away from other aircraft (don't fly anywhere near airplanes, helicopters and other drones)', and/or 'away from airports and heliports (5.6 kilometres (3 nautical miles) from airports) (1.9 kilometres (1 nautical mile) from heliports) (44%). These are the two regulations that have the highest awareness among non-users.

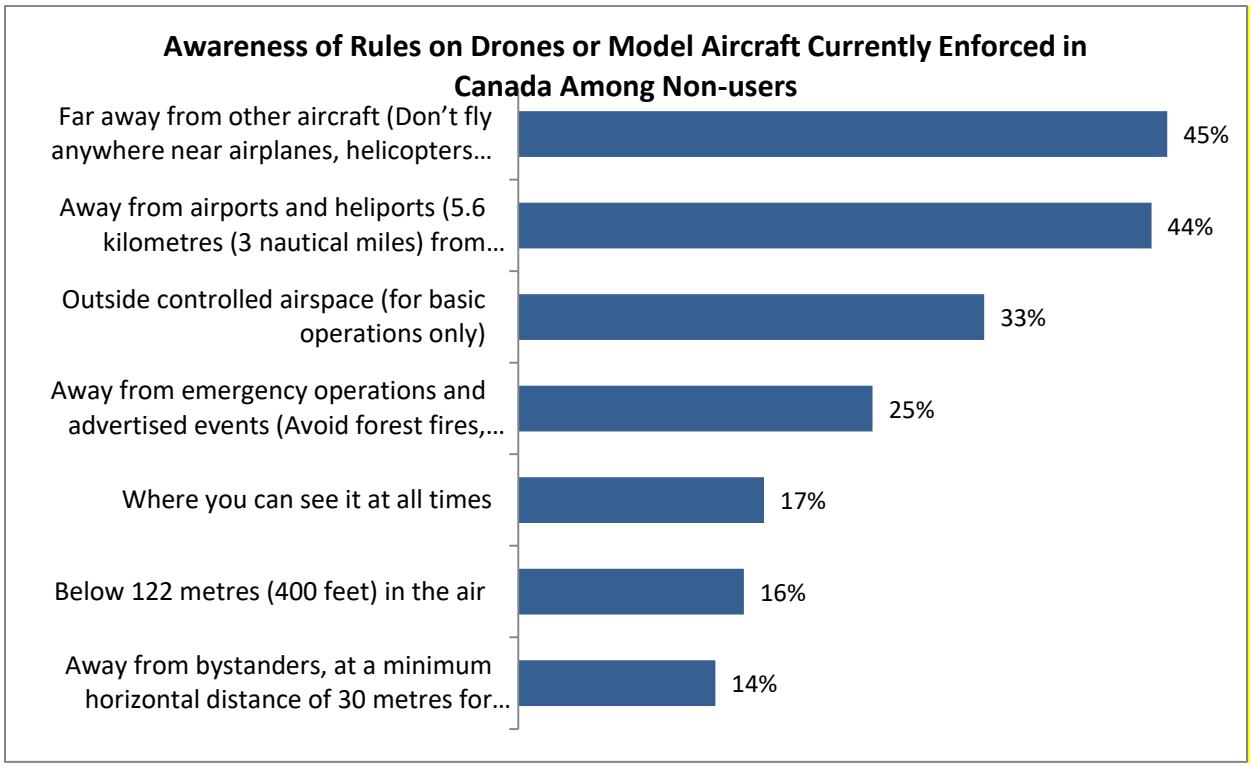


*Figure 44. Answer to question 21: Were you aware of the following rules on drones or model aircraft currently enforced in Canada? ONLY YES MENTIONS SHOWN Base: Non-users (n=2,002)*

The next table (73) details the awareness of rules on drones and model aircraft among users and non-users.

Users are more likely than non-users to be aware of all regulations around drones and model aircrafts. The observed differences in awareness between the two subgroups in the sample are quite large, ranging from 44 to 23 percentage points, depending on the regulation being assessed.

Table 71. Awareness of Rules on Drones or Model Aircraft Currently Enforced in Canada According to Type of Drone Users

| **Q21. Were you aware of the following rules on drones or model aircraft currently enforced in Canada?**<br>YES MENTIONS<br>Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |

| | | | |
|---|---|---|---|
| Far away from other aircraft (Don't fly anywhere near airplanes, helicopters and other drones) | 49% | **70%+** | **45%-** |
| Away from airports and heliports (5.6 kilometres (3 nautical miles) from airports)(1.9 kilometres (1 nautical mile) from heliports) | 47% | **67%+** | **44%-** |
| Outside controlled airspace (for basic operations only) | 37% | **64%+** | **33%-** |
| Away from bystanders, at a minimum horizontal distance of 30 metres for basic operations | 20% | **58%+** | **14%-** |
| Away from emergency operations and advertised events (Avoid forest fires, outdoor concerts and parades) | 30% | **60%+** | **25%-** |
| Where you can see it at all times | 23% | **58%+** | **17%-** |
| Below 122 metres (400 feet) in the air | 20% | **50%+** | **16%-** |

The three regulations evaluated in the survey that have the most positive impact on the perception of non-users are:

1. A drone must always be kept within visual line of sight (49%)
2. Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low risk (49%)
3. Only drones that are registered with Transport Canada can be legally flown in Canada (48%).

The three regulations evaluated in the survey that have the least positive influence on the perception of non-users about drone safety are:

1. Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport (41%)
2. Drones can only be flown at least 9 km from any natural hazard or disaster area (34%)
3. Drones cannot be flown higher than 300 feet (90m) from the ground (30%)

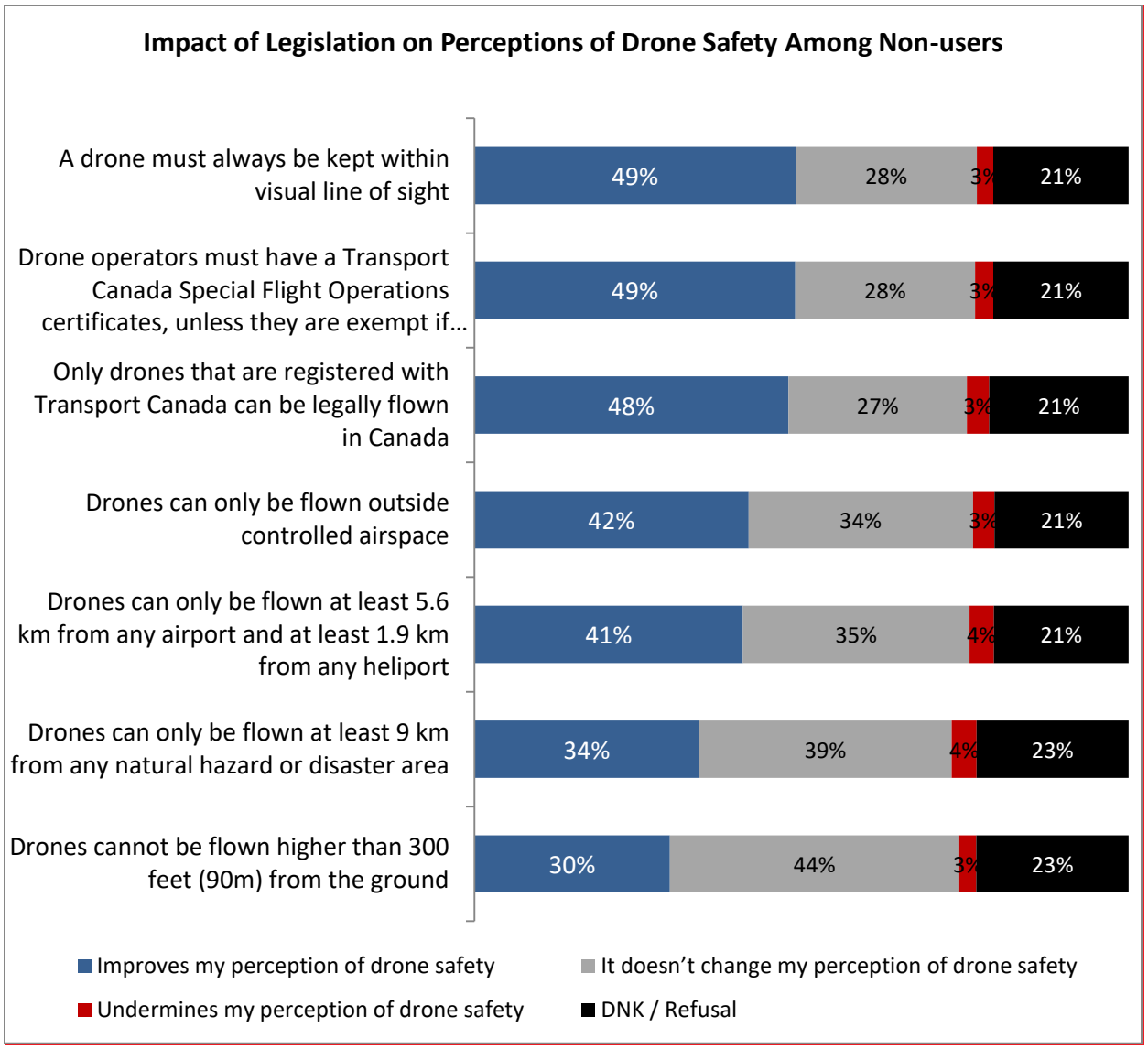


*Figure 45. Answer to question 21A: Right now, Federal government legislation regulates who can fly drones and how or where they can be flown. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area? Base: Non-users (n=2,002)*

The next table (74) details the influence of rules on drones and model aircraft on perception about drone safety among users and non-users.

Non-users are more likely to indicate that 'a drone must always be kept within visual line of sight' (49%), 'drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk' (49%), and 'only drones that are registered with Transport Canada can be legally flown in Canada' (48%) improves their perception of drone safety when compared to drone users (44%, 40%, 39% respectively).

Table 72. Impact of Legislation on Perceptions of Drone Safety According to Type of Drone Users

| **Q21A. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area?**<br>IMPROVES PERCEPTIONS<br>Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |

| n= (unweighted) | 2703 | 701 | 2002 |
|---|---|---|---|
| A drone must always be kept within visual line of sight | 48% | **44%-** | **49%+** |
| Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk | 48% | **40%-** | **49%+** |
| Only drones that are registered with Transport Canada can be legally flown in Canada | 47% | **39%-** | **48%+** |
| Drones can only be flown outside controlled airspace | 42% | 46% | 42% |
| Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport | 42% | 45% | 41% |
| Drones can only be flown at least 9 km from any natural hazard or disaster area | 36% | **44%+** | **34%-** |
| Drones cannot be flown higher than 300 feet (90m) from the ground | 31% | **41%+** | **30%-** |

Non-users are most comfortable with drones being deployed in emergency scenarios to help save people. (79%) but they are least comfortable with the idea of drones being used to transport people like a taxi service (18%), and autonomous drones that are driven by computers, like autonomous vehicles that might soon be on the roads (17%).

The three future uses of drones for which non-users are the most comfortable are:

1. Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations (79%)
2. Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today (36%)
3. Drones with video recording capabilities could be used in security systems for homes and businesses (34%)

The three future uses of drones for which non-users are the least comfortable are:

1. Drones could be used to transport people like a taxi service (58%)
2. Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future (57%)
3. Drones could be used to deliver prescriptions from the pharmacy right to your doorstep (50%)

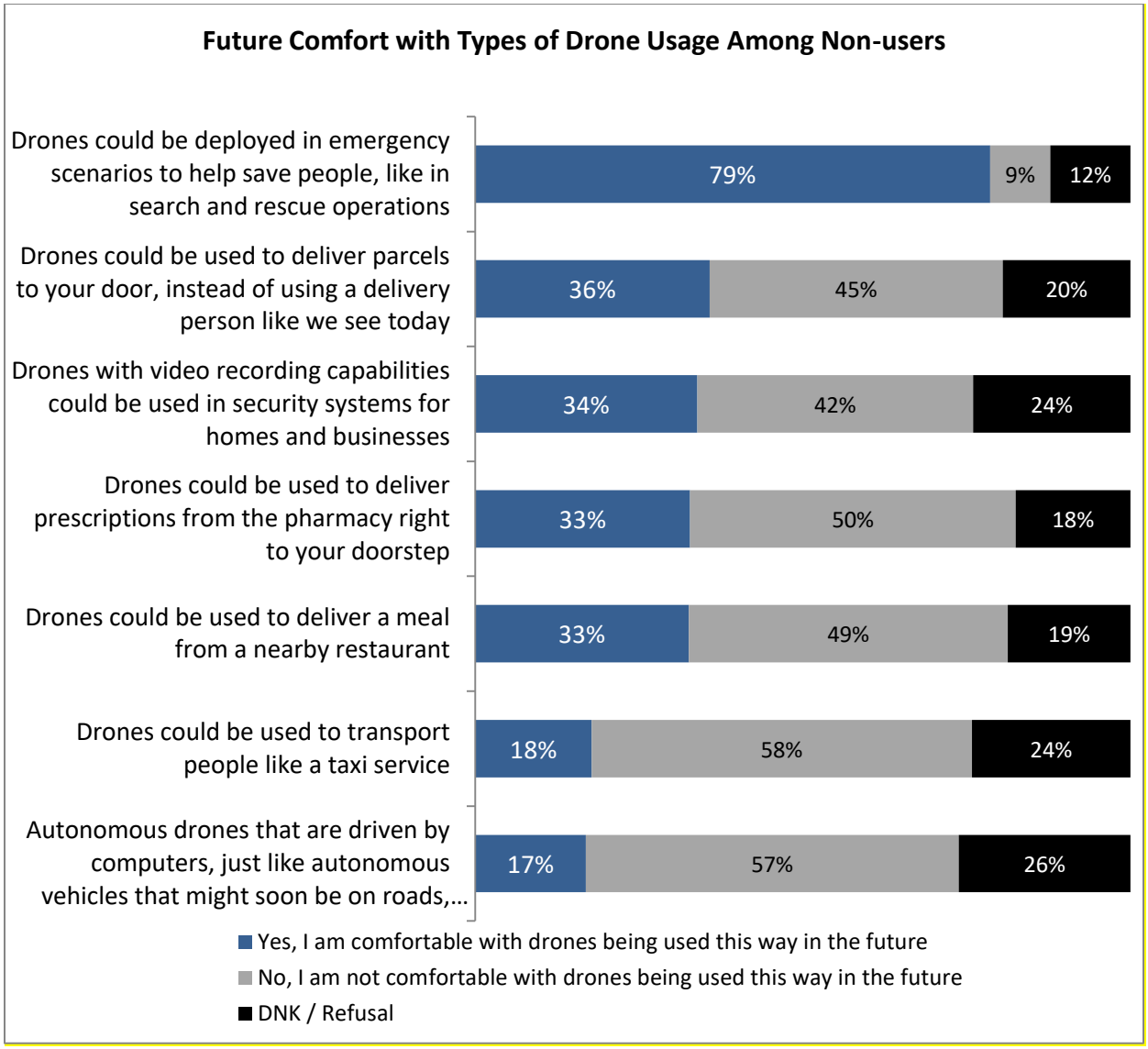


*Figure 46. Answer to question 21B: Some people feel that, in the future, drones will become more commonplace and put to different uses. Please tell me if you would be comfortable with these types of uses of drones in the near future. Base: Non-users (n=2,002)*

The next table (75) details the level of comfort with future use of drones and model aircrafts among users and non-users.

Non-users are less likely to indicate they are comfortable with future use of drones than drone users for almost all of the future uses evaluated in the survey. There is only one exception, non-users are more likely to feel comfortable with drones that could be deployed in emergency scenarios to help save people, like in search and rescue operations, than drone users are.

Table 73. Future Comfort with Types of Drone Usage According to Type of Drone Users

| **Q21B. Please tell me if you would be comfortable with these types of uses of drones in the near future.** COMFORTABLE MENTIONS Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |

| | | | |
|---|---|---|---|
| Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations | 78% | 72%- | 79%+ |
| Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today | 38% | 53%+ | 36%- |
| Drones with video recording capabilities could be used in security systems for homes and businesses | 36% | 49%+ | 34%- |
| Drones could be used to deliver prescriptions from the pharmacy right to your doorstep | 35% | 49%+ | 33%- |
| Drones could be used to deliver a meal from a nearby restaurant | 35% | 48%+ | 33%- |
| Drones could be used to transport people like a taxi service | 20% | 37%+ | 18%- |
| Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future | 20% | 39%+ | 17%- |

### 2.2.6 Communication Channels

Nearly three out of ten non-users indicate that the best way that Transport Canada can make sure they are getting all relevant information regarding safely flying their drone in Canada, would be through television ads (28%), followed by social media platforms (21%) and information on Transport Canada's Drone Safety Website (18%).

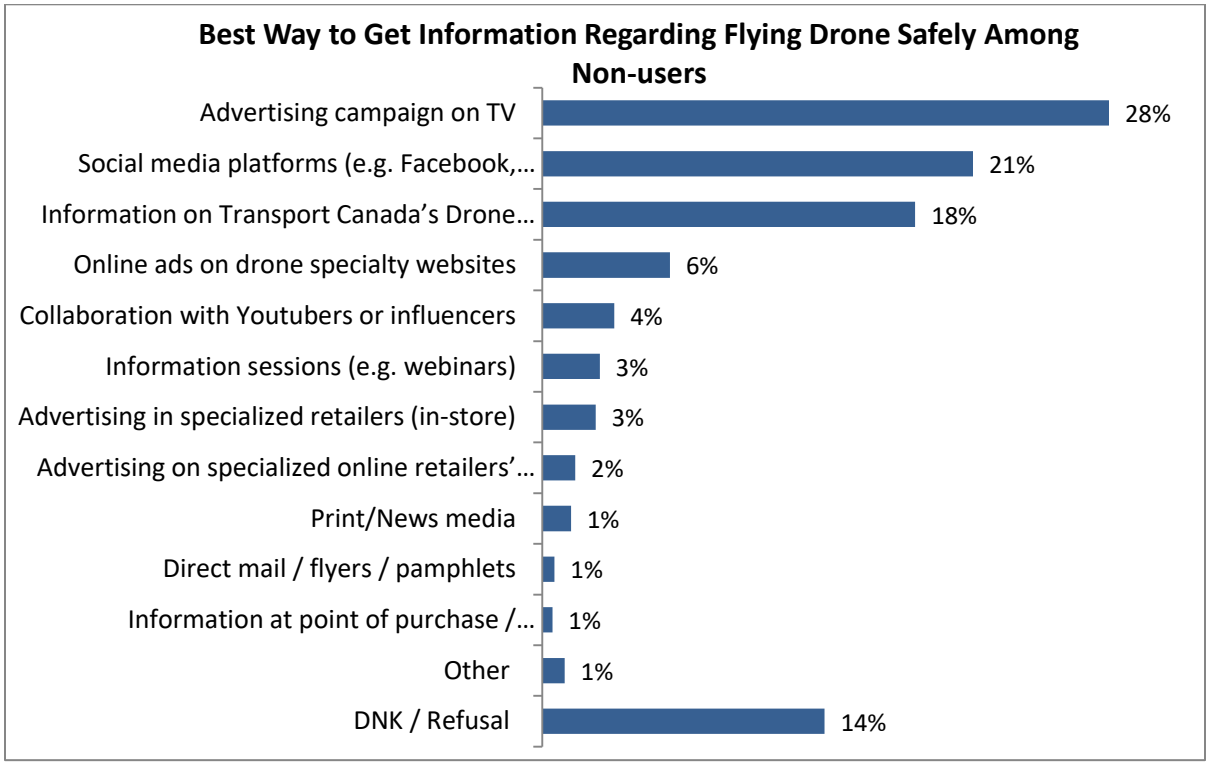


*Figure 47. Answer to question 25: If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you? Base: Non-users (n=2,002)*

The next table (76) detail the level of comfort with future use of drones and model aircrafts among users and non-users.

Non-users are more likely to indicate that advertising campaign on TV (28%) and information on Transport Canada's Drone Safety Website (18%) would be the preferred way to get information about flying drones safely in Canada. In comparison, drone users are more likely to indicate that online ads on drone specialty websites(19%), collaboration with Youtubers or influencers (8%), advertising in specialized retailers (in-store) (7%) and information sessions (e.g. webinars) (4%) would be their preferred ways to get information about flying drones safely in Canada.

Table 74. Best Way to Get Information to Drone Users According to Type of Drone Users

| **Q25. If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you?** Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Advertising campaign on TV | 26% | **17%-** | **28%+** |
| Social media platforms (e.g. Facebook, Instagram, YouTube, etc) | 21% | 22% | 21% |
| Information on Transport Canada's Drone Safety Website | 17% | **8%-** | **18%+** |
| Online ads on drone specialty websites | 8% | **19%+** | **6%-** |
| Collaboration with Youtubers or influencers | 4% | **8%+** | **4%-** |
| Information sessions (e.g. webinars) | 3% | **4%+** | **3%-** |
| Advertising in specialized retailers (in-store) | 3% | **7%+** | **3%-** |
| Advertising on specialized online retailers' websites | 2% | 2% | 2% |
| Print/News media | 1% | **<1%-** | **1%+** |
| Direct mail / flyers / pamphlets | 1% | <1% | 1% |
| Information at point of purchase / included with purchase | 1% | 1% | 1% |
| Other | 1% | 1% | 1% |
| DNK / Refusal | 13% | 11% | 14% |

12% of non-users who look for the latest trends about drones and model aircraft will do so on the Internet through a search engine. The other potential sources information were mentioned to a lesser extent by respondents.

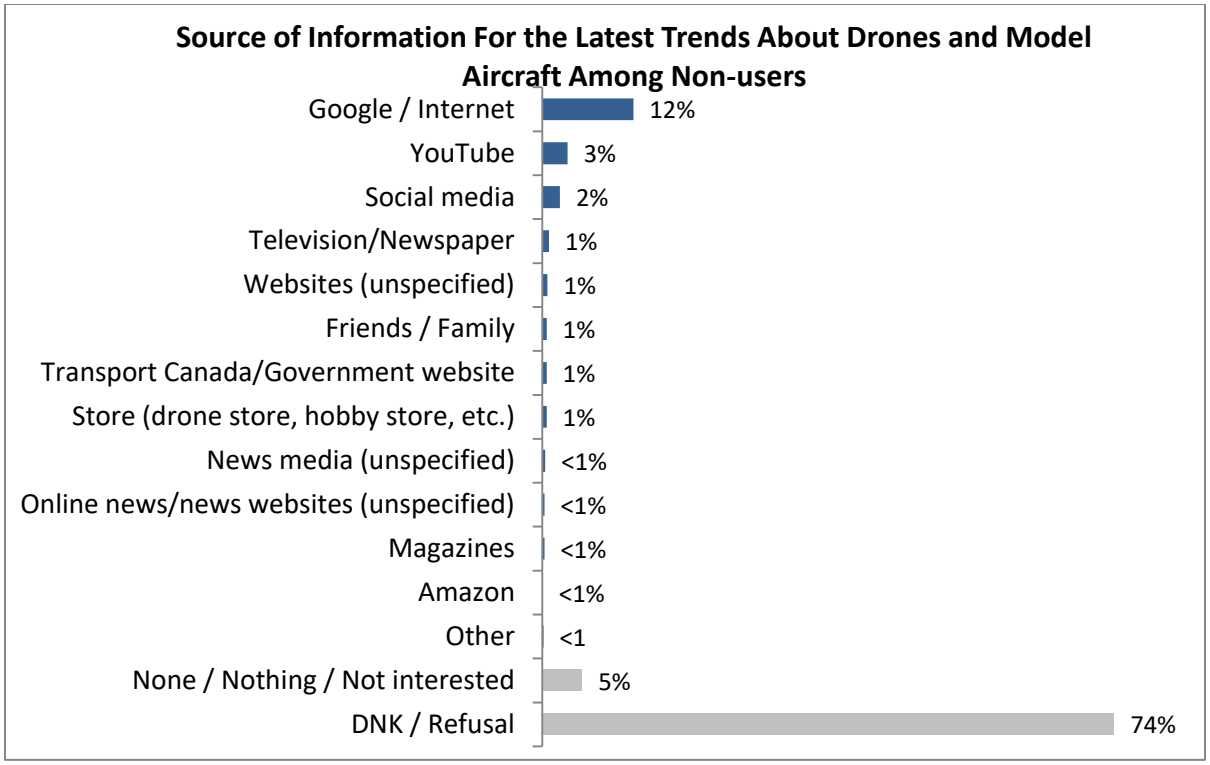


*Figure 48. Answer to question 28: Where do you go to find the latest trends about drones and model aircraft? Base: Non-users (n=2,002)*

The next table (77) detail the privileged sources to find the latest trends about drones and model aircraft among users and non-users.

Non-users are more likely to indicate that they don't know where they would go to find the latest trends about drones and model aircrafts. Drone users would be more likely to go on Internet (21%), YouTube (10%) and on social media (6%).

Table 75. Source of Information for the Latest Trends About Drones and Model Aircraft According to Type of Drone Users

| **Q28. Where do you go to find the latest trends about drones and model aircraft?** SPONTANEOUS MENTIONS Base: Respondents | **Total** | **Drone Users** | **Non-users** |
|---|---|---|---|
| n= (weighted) | 2703 | 354 | 2349 |
| n= (unweighted) | 2703 | 701 | 2002 |
| Google / Internet | 13% | **21%+** | **12%-** |
| YouTube | 4% | **10%+** | **3%-** |
| Social media | 3% | **6%+** | **2%-** |
| Television/Newspaper | 1% | **<1%-** | **1%+** |
| Websites (unspecified) | 1% | 2% | 1% |
| Friends / Family | 1% | <1% | 1% |
| Transport Canada/Government website | 1% | <1% | 1% |
| Store (drone store, hobby store, etc.) | 1% | 1% | 1% |
| News media (unspecified) | <1% | 0% | <1% |
| Online news/news websites (unspecified) | <1% | <1% | <1% |
| Magazines | <1% | **1%+** | **<1%-** |

| | | | |
|---|---|---|---|
| Amazon | <1% | **1%+** | **<1%-** |
| Other | <1% | 1% | <1% |
| None / Nothing / Not interested | 5% | 5% | 5% |
| DNK / Refusal | 71% | **54%-** | **74%+** |

# Detailed Results – Qualitative Research

## 3.1 Drone Users

### 3.1.1 Personal Use

The majority of the participants would qualify themselves as recreational drone users. A couple of participants mentioned they are new users, and therefore they are still only learning how to master controlling the drone. Participants mainly use their drones for photography or to film while they are on vacation or on a hike. Professional users also use their drone(s) for the same purposes.

Some participants mention they use their drone(s) at least once a week, while others use their drone(s) once a month or less. For the least experienced users, most have not been using their drones during wintertime, mainly because of the strong wind makes controlling the drones even harder than it already is.

Most drone users fly their drone anywhere that they would think would be interesting for an aerial shot, as long as it's a safe place to do so. Users with less experience said they mainly practice on their own property, outside their home. If there are not too many people, participants fly their drones nearly anywhere: the park, the beach, at their cottage, near the water, etc.

When they are using it, they try to keep their drone within visual range, away from people, power lines, cars and other people's houses. Some professional users mentioned the use of programed flights because the height and speed must be constant.

The majority of the participants knew the brand(s) of their drone(s):

- National Geographic
- DJI
- Propel
- Holy Stone
- AKASO Tech
- Protocol
- Propel
- Bigly Brothers

### 3.1.2 Drone Safety

Most participants judged they are somewhat familiar with the laws and regulations surrounding the use of drones in Canada. Most think they know enough to fly the small drone(s) their own. A couple of participants completed courses, obtained a drone pilot certificate and feel they retained the information that is most critical and relevant to where they fly. The majority of participants that are aware of the laws and regulations surrounding the use of drones in Canada found the information on Transport Canada's website.

Most participants do not know much about how drone regulations are enforced. A few assumed it is enforced by Transport Canada. Some mentioned they would not know where to report unsafe use of a drone if they witnessed it. Some others believe it falls under local police jurisdiction. Others said whoever the enforcement falls on, they are doing a great job at it since they have not heard of many cases where a drone interfered with planes or caused damage to anything.

Participants who are aware of the laws and regulations became aware of either one of four ways:

- Word of mouth: From a family member, close friend, or a co-worker;
- The media;
- They researched for drone information before purchasing one (Transport Canada website, drone forums, etc.);
- They took a course.

For the participants who are aware of the laws and regulations, they try to always follow them in general. The majority mentioned trying to do their best with what they know. Some participants have built in map system that restricts flying in restricted areas as well as setting height and distance restrictions in their flying interface app to make sure they do not over push the defined boundaries.

However, some participants are aware they have not always followed the rules, more specifically while they were on vacation. One participant also mentioned that, since the listed laws and regulations stipulates a drone needs to be registered with Transport Canada to be legally flown in Canada, she feels like she is breaking the law since she does not have the required accreditation for her drone.

As for taking precautionary measures when flying a drone to ensure its safe operation, the majority mentioned not flying on windy days or in adverse weather conditions. Some participants mentioned that if they are not alone while flying their drone, they also ask their friend to keep an eye on the drone and an ear out for other aircraft that might enter the airspace. The majority of participants also mention not flying around other people, not flying near power lines, not flying near cars or houses but rather flying in a large open field. A couple of participants said they also made sure the drone and remote were fully charged before flying their drone.

### 3.1.3 Information and New Rules

#### General information

Apart for searching for information about laws and regulations, some participants did not research for more. The individuals who did look for more mainly searched for piloting tips, how to stay in control, how to use the drone they purchased or how to fix some part of their drone(s). Some also researched for reviews prior to purchasing a drone, how well they work or issues that the drone they wanted to buy tend to have. The research usually began with a Google search, pointing them to either the manufacturer's website, YouTube Channels or forums.

If they had to search for information about drones, the majority of participants would begin with a Google search and see where the search takes them. If looking for laws and licensing, they would generally look directly to Transport Canada's website. Some also mentioned YouTube as a search tool. A couple of participants also said they would probably turn to a licensed drone pilot friend.

#### Laws and Rules Information

Some participants admitted not having done an exhaustive research on drone laws and rules. Some did stumble upon the laws and rules while searching for other types of information. For the participants who did search for information on drone laws and rules, they searched for this information on Transport Canada's website. They also consulted forums to get a sense of what other users thought of the new rules and regulations.

Just like it was the case for general information research, if they had to search for information about laws and rules on the use of drones, most participants would start by doing a Google search. Some participants said they would start by skimming through Transport Canada's website and would then resort to a Google search if they did not find the relevant information. One or two participants also mentioned turning to a friend with a great deal of experience with drones.

The participants sources to learn about the laws and rules surrounding the use of drones are mainly the internet (Transport Canada's website, forums, YouTube channels, Facebook groups, etc.), friends (avid drone pilots) or from family members.

Without getting into too much details, the participants who wish to keep up to date with the new drone laws and rules, they would do so by reading Transport Canada's reports or doing general Google searches and signing up for Google alerts on the subject.

**Courses or Training**

Most participants have not taken any course or training to fly drones. Some admitted they would consider taking a class once they get the hang of simply controlling their drone. Only a couple of participants have taken a course or training. One participant completed the first level license for flying drones online. Another participant took a course and did his certification following recent law changes.

### 3.1.4 Opinion on Drones

Some participants do have privacy and safety concerns about the use of drones. Some are also concerned because drones are not as easy to fly as it seems. One participant elaborated a great deal about a group of people he came across who claim they can remove all technical restrictions on drone software, i.e. remove restrictions set in the drone itself, whether height or not allowing you to fly the drone in a restricted area. The participant found that concerning because it would allow people to fly around airports or other restricted areas without approval. Some participants also worry about inexperienced and uneducated users who fly near people. A participant also mentioned being worried about weaponized drones and how governments around the world can protect people against them.

To alleviate their concerns, participants feel classes should be mandatory even for all drones, including under 250g [0,5lbs]. To ensure everyone would be educated and aware of the laws and rules to follow and learn the right technique. Some participants went as far as saying anyone who buys a drone should have to provide a valid Drone Pilot Certificate to do so. Other participants mentioned being more aware on how to report inappropriate drone usage would help alleviate their concerns. Making people more aware of the penalties of inappropriate usage would also be a good way to alleviate concerns. Having insurance for your drone, as you would a car, would also help reduce some users concerns. A couple of participants said the only way to alleviate their concerns would be to prohibit drone use anywhere else other than on private lands.

### 3.1.5 Regulations

After being presented with the current federal government regulations, the majority of participants thought the regulations were excellent. Most of the participants were not necessarily aware of all these regulations but they judged them to be common sense. Some participants were surprised to learn that drones must be registered with Transport Canada in order to be legally flown and admitted they now felt uncomfortable flying their unregistered drone on their own property. Others were also surprised by this rule because they were under the impression that any drone weighing less than 454g [1 lbs] did not have to be registered with Transport Canada. Overall, most participants still felt the current regulations improved their perception of drone safety.

Some participants were also a little worried with the distance regulations. They feel 400 feet is pretty far from the ground and may not be in alignment with the fact that a drone must always be kept within the visual line of sight. Other concerns rose from the presented regulations:

- On what basis the distances are set?
- How does the government have control over all the drones flown in Canada since they are available for over-the-counter sales?
- How are these regulations enforced?
- How can we be sure people are respecting the safe distances set?

A participant mentioned that as drones become more popular expanding upon the current regulations may be beneficial. Allowing for special circumstances which may arise for professional commercial users such as the film industry or couriers could be clarified more in the current regulations. Similarly, another participant mentioned they believe there needs to be more awareness/education about the existing regulations.

### 3.1.6 Future Drone Use

When presented with different possible future use of drones, participants were rather divided. Some were not comfortable with all the different types of possible future uses of drones presented, while others were comfortable with all of them, and some were comfortable with only some of the uses presented.

Most participants think using drones for emergency situations like search and rescue, monitoring infrastructure like power lines and monitoring and protecting wildlife are uses of drones that they are perfectly comfortable with.

Many participants were comfortable with drones being used for parcel deliveries. The participants who said they were not comfortable with parcel delivery by drones stated they were actually uncomfortable with the idea that a person might lose their employment due to a drone replacing a job a human could do and not the idea of a drone performing the delivery. One participant pointed out that all these uses would create a large amount of air traffic, bringing a lot of traffic/safety issues as well as a privacy issue.

Most participants think using drones for emergency situations like search and rescue, monitoring infrastructure like power lines and monitoring and protecting wildlife are uses of drones that they are perfectly comfortable with.

#### Flying taxicabs in urban areas

Most participants are not quite comfortable with flying taxicabs. Some feel the sounds would disturb them, others feel flying taxicabs sound like an accident waiting to happen. Some participants also feel like technology is not quite there yet. Others based their feeling about flying taxicabs on automated cars and felt like if cars are not there yet, how could flying taxicabs be safe.

One participant pointed that if they helped reduce pollution, it might make her feel a little better about it. Another participant mentioned flying taxicabs sounded interesting but there has to be a near certain chance it can't crash. One participant said that with the regulations previously presented he'd be comfortable with the concept.

#### Autonomous Drones

Some participants were more comfortable with autonomous drones. They believe human errors can happen as much as computer errors. Some even think that it would be safer if drones were all computer controlled. Some participants brought up automated cars, saying the margin of error and accidents is inferior to the one for cars driven by a human, they would therefore have more trust in a system than in a person.

Some participants said they would be comfortable to a certain extent, depending on the purpose. They would be comfortable with autonomous drones for delivery of goods, search of an area, and checking for damages to infrastructure. But for transporting people, they would not be comfortable that the drone is being controlled by a computer.

On the other end, some participants were not comfortable with the idea of a computer-controlled drone. A participant pointed that planes crash when they have pilots, so it would be even less safe if they were fully controlled by computers. Another participant said that since computers are programed, they would not be able to "think" in front of an unusual situation.

## 3.2 General Public (Non-Users)

### 3.2.1 Personal Use

#### Drone knowledge, personal usage and use of drones by acquaintances

Many of the participants have never flown drones. A lot of the participants admitted firsthand that they knew very little about drones. They have basic knowledge with regards to what they can do: from capturing photos and videos to military applications and some mentioned more recent drone usages such as delivery services. Some mentioned that drones have come a long way in the past years. A lot of participants mentioned having seen someone (a friend, family member, a neighbor, or a stranger in the park) control a drone at one point or another in their life, but only one or two had actually controlled one themselves.

Most of the participants considered drones useful in some way. Some mentioned photography, others were more specific in mentioning real estate photography. One mentioned a drone allows vantage points otherwise impossible to access. Some also saw scientific and geographic purposes to a drone.

Participants who had little to no knowledge about drones compared them to remote-controlled toy cars. The only usage they saw in them was to play. Some participants mentioned that even though they have never seen a drone in real life, they have researched information about them because they find drones fascinating. The sources consulted were generally governmental sources.

### 3.2.2 Drone Safety

Based on participants' current understanding, most think drones can be safe if used properly and with the right intentions. It was mentioned that there is a learning curve: they will most likely crash the drone when controlling it for the first time, therefore making it unsafe. Past that learning curve, and as long as they respect the airspace and the environment you are in, participants feel drones seem as safe as another technology.

It was often mentioned that "like anything else, drones are as safe as the operator using it." Some participants mentioned that drones can be used to violate people's privacy, or interfere with air traffic, therefore making it unsafe. Participants feel that to ensure drones are used safely the regulations and guidelines that are already in place must be followed. It was also stated that it will be important to continue updating the regulations and guidelines as the technology continues to evolve and gain in popularity.

Participants who feel drones are not safe stated it is because human error is possible. Participants also said drones are often flown in public spaces, such as parks or even in residential neighborhoods, and damages or injuries could happen to unaware bystanders.

#### Laws and regulations

Most participants are somewhat aware that there are regulations in Canada on drones, but they know very little about it. Some spontaneously mention laws or regulations, such as not being allowed to fly drones near an airport or requiring a special license, but always mention they are not completely sure of what they are saying. The main laws and regulations mentioned by participants are:

- Existence of no-fly zones (airports, prisons, protected natural areas, parks, hospitals, military bases, etc.);
- Minimum age to fly drones;
- License required;
- Height limits.

For participants who are unaware of the existence of laws and regulations, they still feel as though drones have been around long enough for the government to have put in place appropriate restrictions. A participant mentioned remembering reading something that mentioned drones are regulated by the Canadian Aviation Regulations and standard guidelines.

For the participants who were the most aware of Canada's drone laws and regulations, some felt like the government is doing a fairly good job, while others believed Canada is very behind on drone regulations, saying the technology appears to have made a significant leap as of late and the Canadian and Provincial governments are not keep pace with the proper and acceptable use of drones, both commercially and recreationally.

#### Enforcement

Since many participants were only somewhat aware of the regulations in place in Canada, they assumed that Canada does a good job at catching and penalizing unsafe drone pilots. Most of them based their opinion on the fact that they have not read or heard on the news about anyone being penalized. However, some participants think Canada might not be doing a good job enforcing the regulations for the same reason. It is mentioned by some participants that they assume catching and penalizing must be very difficult since a drone can be fast and undetectable, and therefore difficult to spot and corner.

Most of the participants assume the enforcement is done by Transport Canada while others think it must be local law enforcement. One participant recalled a case that made the news during the wildfire season, and it was the RCMP that enforced and charged the drone pilots. Some participants proposed regulations about drones might be enforced on a complaint basis.

Overall, regardless of how much they know about drone regulation enforcement, some participants agreed that everybody should be made more aware of the regulations.

#### Witnessing any events questioning the safety of drones

The great majority of participants have not personally witnessed any events that made them question the safety of drones. Some heard stories about people spying on neighbors or flying drones into restricted airspace, which did change their perception of drones in a negative way. The only incidents that were witnessed by participants' first-hand were drone getting stuck in a tree, which did not have any impact on their view of drone safety.

#### What should be done on rules surrounding the use of drones

Main suggestions for improving awareness and compliance for drone regulations are:

- Giving access to free online courses on how to properly fly a drone
- Mandatory course for obtaining a license
- Minimum age for operators
- Regulated ownership (register drones like you do so for cars or even firearms), especially if the drone is equipped with a photo or video camera.
- Have class identification for the different types of drones
- Include a booklet with every drone to educate on proper use and safety considerations
- Identify drones with a type of "license" number
- Flight plans mandatory
- Insurance on the drones

### 3.2.3 Information Search

In general, participants who looked for information about drones were mainly looking to have a better understanding of a drone's function, how useful they can be, the price range for drones and safety rules and regulations. A participant researched a little information when Amazon announced they were considering using drones for delivery purposes.

A few participants searched information because they were looking to purchase a drone as a gift, and they wanted to ensure they purchased one that was good quality.

Most participants would start off by a Google search if they were to search for information on drones. They then imagine they would either end up on drone enthusiasts' blogs, YouTube channels, or more serious governmental sources for safety information, such as Transport Canada's website. If looking to purchase a drone, some participants also mentioned manufacturers' websites to look at reviews and user feedback. Participants who have family members or close friends that own drones will also turn to them for information.

### 3.2.4 Opinion on Drones

Participants mainly felt positively towards drones and think they are an interesting technology. Some think it's a positive resource that can be of help for many different purposes, such as, delivering medical supplies, locating missing people, or aiding endangered species. They are also great for videos and photos whether recreational or professional.

Although the overall feeling towards drones is mainly positive, some participants still think there can be negative aspects as well. Main concerns about the use of drones remain privacy issues and disturbance of peace in public places. More specifically, participants mentioned their negative opinions are more toward if a person uses a drone to violate other people's privacy or if they cause an accident because the drone runs out of batteries or loses signal. It was also mentioned by a participant that the fact that young people may use drones for entertainment purposes without following safety procedures is rather concerning. The lack of training is also a concern for some of the participants.

The main actions that could be done to alleviate participants concerns about drones are as follows:

- Some kind of signal (flashing light or special sound) on drones to alert people that there is a drone around;
- Being educated before being allowed to purchase a drone;
- Limit the height range from controllers;
- Classify drones (just like we do with cars or planes);
- Proof of completed courses to purchase a drone;
- Ownership licensing;
- Number of training and/or flying hours needed before owning and operating a drone;
- A clear and rigorous regulation.

### 3.2.5 Regulations

After being presented with the current Federal government regulations, the majority of participants thought they were excellent regulations and felt safer knowing they are in place. Most participants were not aware of these regulations and mentioned they alleviate their concerns of drones accidentally hitting a crowd. A lot of participants were also very pleased to learn that drones above 250g must be registered with Transport Canada in order to be legally flown.

Some participants felt although regulations are important, but how they are enforced is even more important. Participants have a hard time understanding how the regulations can be enforced. Participants also brought up other questions about enforcing the regulations in place, such as:

- Who determines “properly qualified” and how does one go about getting qualified, i.e. what are the criteria for qualification?
- How is a user supposed to determine the height they are flown at if they don’t report altitude?
- How do you register something that does not have a unique identifier and who will issue that identifier?
- If registered, does a user then also require insurance to fly legally?
- Is there an age restriction on the use of drone?

Based on what they read during the exercise, some participants were also concerned that there were no clear regulations about flying drones in built up, urban areas, and no regulations regarding the respect of people’s privacy. Participants felt as though city centers should be banned as well as public parks. They also felt that respecting people's privacy also would be a very good rule to add. Since officially almost all urban areas have controlled airspace where drones should not be flown, these comments show the Federal government regulations might not be clear enough in the eyes of the general public.

### 3.2.6 Future of Drone Use

Participants were rather divided when presented with different possible future use of drones. Some were not comfortable with all the different types of uses of drones presented, while others were comfortable with all of them, and some were partially comfortable with only some of the uses presented.

Most participants were comfortable with drones being use for parcel deliveries, but less so for prescriptions deliveries, for privacy concerns. An interesting observation is that participants were actually uncomfortable with the idea that a person might lose their employment due to a drone replacing a job a human could do and not the idea of a drone performing the work.

All participants are completely comfortable with the use of drones for emergency situations such as: search and rescue; monitoring infrastructure (like power lines); monitoring and protecting wildlife.

The overall opinion on the future of Drone Use among the general public is very much in line with the overall opinion of drone users who participated in the same exercise.

#### Flying taxicabs in urban areas

Most participants are not quite comfortable with flying taxicabs. Some feel taxis on the ground are already concerning, that they don’t feel safe sometimes in a regular taxi. Most also feel there would be many safety concerns. Some also feel they would always be worried a drone falling on them while walking on the streets. They also have concerns about the air traffic that it would create and noise pollution.

Some participants’ say they would be comfortable with drones transporting people since they enjoy traditional commercial flying and feel it would be a pleasant and faster form of travel.

#### Autonomous drones

Participants were comfortable with autonomous drones. Most participants believe human errors can happen as much as computer errors. Some even think that if it’s “all” computer controlled, it would work better than a mixed system. Some even went on to say it would be even safer than human controlled drones. Others compared it to the most recent NASA Mars Perseverance Rover was controlled by artificial intelligence, and everything went smoothly. So, if the technology is well tested and the drones have a low risk of causing a safety hazard, most participants would be comfortable.

A couple of participants were not comfortable with the idea of certain types of autonomous drones. Participants said they would not trust a taxicab controlled by artificial intelligence. Some mentioned that an out of control flying object would not be safe at all.

# Conclusion

Results from the quantitative portion of this study show that the incidence of drone users in the Canadian population is 13%. A large majority of these users do not have any background in aviation. The majority of recreational users fly their drone(s) for the fun of flying, and one in four professional users mainly fly their drones for filmmaking, videography or photography. Two respondents out of then either have a Drone Pilot Certificate issued by the Government of Canada or are in the process of obtaining one. Results show that at least half of drone users are aware of the basic rules regarding drones or model aircraft currently enforced in Canada. To make sure Transport Canada reaches as many drone users as possible, participants suggest communicating relevant information to drone users through social media.

Results from the qualitative portion of this study were obtained to complement the information gathered through the quantitative portion. Indeed, drone users felt they are only somewhat familiar with the laws and regulations enforced in Canada, at least enough to fly the small drone(s) they own. The general public discussion groups showed that even though they do not feel they have an in-depth knowledge of drones, they know more than they think. The number one source of information about drone, or about the laws and regulations around them, is Transport Canada for both users and non-users. Just like the quantitative results showed, only a limited number of drone users in the focus groups has a Drone Pilot Certificate issued by the Government of Canada. For those who do not have the certificate, most of them would be open to completing the process of obtaining one in a near future. Generally speaking, the main issue for both users and non-users see in drones are privacy and safety issues that could be alleviated with more detailed and precise regulation. Lastly, the discussions with users and non-users showed they are comfortable with future uses of drones, but not quite ready for flying taxicabs and autonomous drones.

# Appendix

## A.1 Quantitative Methodology

Quantitative research was conducted through online surveys, using Computer Aided Web Interviewing (CAWI) technology.

As a CRIC Member, Leger adheres to the most stringent guidelines for quantitative research. The survey was conducted in accordance with Government of Canada requirements for quantitative research, including the Standards of the Conduct of Government of Canada Public Opinion Research—Series E—Qualitative and Quantitative Research.

Respondents were assured of the voluntary, confidential and anonymous nature of this research. As with all research conducted by Leger, all information that could allow for the identification of participants was removed from the data, in accordance with the *Privacy Act*.

The questionnaire is available in Appendix D.

### A.1.1 Sampling Procedure

Computer Aided Web Interviewing (CAWI)

Leger conducted a panel-based Internet survey with a sample of adult Canadians. A total of 2,703 respondents participated in the survey: 2,002 Canadians non-drone users and 701 drone users. The exact distribution is presented in the following section. Participant selection was done randomly from Leo's online panel.

Leger owns and operates an Internet panel of more than 400,000 Canadians from coast to coast. An Internet panel is made up of Web users profiled on different sociodemographic variables. The majority of Leger's panel members (61%) have been recruited randomly over the phone over the past decade, making it highly similar to the actual Canadian population on many demographic characteristics.

Since an Internet sample is non-probabilistic in nature, the margin of error does not apply.

### A.1.2 Data Collection

Fieldwork for the survey was conducted from January 11, 2021 to January 31, 2021. The participation rate for the survey was 18.98%. A pre-test of 70 interviews was completed on January 11, 2021. More specifically, 60 interviews were conducted general public and 10 were conducted with drone users. Survey interviews lasted 10 minutes on average.

To achieve data reliability in all subgroups, a total sample of 2,703 Canadians were surveyed, in all regions of the country. A quota of 700 drone users was set up to ensure sufficient sample size to allow for analyses on this group of the sample.

Since a sample drawn from an Internet panel is not probabilistic in nature, the margin of error cannot be calculated for this survey. Respondents for this survey were selected from among those who have volunteered to participate/registered to participate in online surveys. The results of such surveys cannot be described as statistically projectable to the target population. The data have been weighted to reflect the demographic composition of the target population. Because the sample is based on those who initially self-selected for participation, no estimates of sampling error can be calculated.

Based on data from Statistics Canada's 2016 national census, Leger weighted the results of this survey by age, gender, region, language (mother tongue), education, presence of children in the household and the use of drones.

The following table details the regional distribution of respondents. The baseline sample attempted to replicate as closely as possible the actual distribution of the Canadian population.

**Table A.1 Regional Distribution of Respondents**

| Region | Number of respondents |
|---|---|
| Atlantic | 171 |
| Quebec | 613 |
| Ontario | 1060 |
| Prairies | 201 |
| Alberta | 302 |
| British Columbia | 356 |
| **Total** | **2,703** |

### A.1.3 Participation Rate

The overall participation rate for this study is 18.98%.

Below is the calculation of the Web survey's participation rate. The participation rate is calculated by dividing the number of completed questionnaires by the number of invitations sent. Typical participation rate for web-survey are between 20% and 30%. A response rate of 18.98% may seem a bit low, but given the quota of respondents of drone user profile, we had to spread the invitations more widely in the panel to achieve our objectives, which has an impact on the participation rate.

**Table A.2 Participation Rate Calculation**

| **Base Sample** | **29,302** |
|---|---|
| **Invalid cases** | 0 |
| Invitations mistakenly sent to people who did not qualify for the study | - |
| Incomplete or missing email addresses | - |
| **Unresolved (U)** | **23,530** |
| Email invitations bounce back | 22 |
| Email invitations unanswered | 23,508 |
| **EFFECTIVE SAMPLE*** | **5,795** |
| **In-scope non-responding units (IS)** | 229 |
| Respondent refusals | - |
| Language problem | - |
| Early break-offs | 229 |
| **Responding units (R)** | 5,566 |
| Completed surveys disqualified – quota filled | 2,828 |
| Completed surveys disqualified for other reasons | 35 |
| **COMPLETED INTERVIEWS** | **2,703** |
| **Participation rate** | **18,98%** |

### A.1.4 Unweighted and Weighted Samples

A basic comparison of the unweighted and weighted sample sizes was conducted to identify any potential non-response bias that could be introduced by lower response rates among specific demographic subgroups (see tables below).

The table below presents the geographic distribution of respondents, before and after weighting. There were almost no imbalances in geographical distribution in the unweighted sample. The weighting process has mainly adjusted some minor discrepancies.

**Table A.3 Unweighted and Weighted Sample Distribution by Province**

| Region | Unweighted | Weighted |
|---|---|---|
| Atlantic | 171 | 186 |
| Quebec | 613 | 634 |
| Ontario | 1,060 | 1,037 |
| Prairies | 201 | 176 |
| Alberta | 302 | 303 |
| British Columbia | 356 | 367 |
| **Total** | **2,703** | **2,703** |

The following tables present the demographic distribution of respondents, according to gender, age, language (mother tongue), education.

First, regarding gender, we can see that weighting has adjusted slightly the proportion of male and female. Male were a little bit overrepresented in this survey. The weight of the men was therefore diminished so as not to overestimate their actual weight in the results.

**Table A.4 Unweighted and Weighted Sample Distribution by Gender**

| Region | Unweighted | Weighted |
|---|---|---|
| Male | 1,386 | 1,313 |
| Female | 1,309 | 1,384 |
| **Total** | **2,695** | **2,697** |

* The complement corresponds to "other" and "refusal".

Regarding age distribution, the weighting process has corrected some minor discrepancies.

**Table A.5 Unweighted and Weighted Sample Distribution by Age Group**

| Region | Unweighted | Weighted |
|---|---|---|
| Between 18 and 34 | 820 | 737 |
| Between 35 and 55 | 1,015 | 921 |
| 55 and over | 868 | 1,044 |
| **Total** | **2,703** | **2,702** |

Minor imbalances with language distribution were corrected with weighting, as presented below.

**Table A.5 Unweighted and Weighted Sample Distribution by First Language**

| Region | Unweighted | Weighted |
|---|---|---|
| French | 564 | 562 |
| English | 1,748 | 1,789 |
| Other | 389 | 350 |
| **Total** | **2,701** | **2,701** |

* The complement corresponds to "other" and "refusal".

There is no evidence from the data that having achieved a different age or gender distribution prior to weighting would have significantly changed the results for this study. The relatively small weight factors (see section below) and differences in responses between various subgroups suggest that data quality was not affected. The weight that was applied corrected the initial imbalance for data analysis purposes and no further manipulations were necessary.

As with all research conducted by Leger, contact information was kept entirely confidential and all information that could allow for the identification of participants was removed from the data, in accordance with Canada's Privacy Act.

**Table A.6 Weighting by region, gender and age**

| Demographics | Weighting |
|---|---|
| British Columbia AND Male AND Between 18 and 24 | 0,0072 |
| British Columbia AND Male AND Between 25 and 34 | 0,0109 |
| British Columbia AND Male AND Between 35 and 44 | 0,0102 |
| British Columbia AND Male AND Between 45 and 54 | 0,0117 |
| British Columbia AND Male AND Between 55 and 64 | 0,0117 |
| British Columbia AND Male AND Between 65 and 74,75 or older, I prefer not to answer | 0,0141 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0068 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0111 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0108 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0125 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0125 |
| British Columbia AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0162 |
| Alberta AND Male AND Between 18 and 34 | 0,0181 |
| Alberta AND Male AND Between 35 and 44 | 0,0106 |
| Alberta AND Male AND Between 45 and 54 | 0,0099 |
| Alberta AND Male AND Between 55 and 64 | 0,009 |
| Alberta AND Male AND Between 65 and 74,75 or older, I prefer not to answer | 0,0083 |
| Alberta AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0062 |
| Alberta AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0114 |
| Alberta AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0104 |
| Alberta AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0098 |
| Alberta AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0089 |
| Alberta AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0096 |
| Saskatchewan, Manitoba AND Male AND Between 18 and 24 | 0,004 |
| Saskatchewan, Manitoba AND Male AND Between 25 and 34 | 0,0058 |
| Saskatchewan, Manitoba AND Male AND Between 35 and 44 | 0,0053 |
| Saskatchewan, Manitoba AND Male AND Between 45 and 54 | 0,0055 |
| Saskatchewan, Manitoba AND Male AND Between 55 and 64 | 0,0055 |
| Saskatchewan, Manitoba AND Male AND Between 65 and 74,75 or older, I prefer not to answer | 0,0059 |
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0038 |
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0058 |

| | |
|---|---|
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0053 |
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0055 |
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0056 |
| Saskatchewan, Manitoba AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0072 |
| Ontario AND Male AND Between 18 and 24 | 0,0223 |
| Ontario AND Male AND Between 25 and 34 | 0,0306 |
| Ontario AND Male AND Between 35 and 44 | 0,0292 |
| Ontario AND Male AND Between 45 and 54 | 0,0346 |
| Ontario AND Male AND Between 55 and 64 | 0,0316 |
| Ontario AND Male AND Between 65 and 74,75 or older,I prefer not to answer | 0,0363 |
| Ontario AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0212 |
| Ontario AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0315 |
| Ontario AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0319 |
| Ontario AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0365 |
| Ontario AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0338 |
| Ontario AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0441 |
| Quebec AND Male AND Between 18 and 24 | 0,0121 |
| Quebec AND Male AND Between 25 and 34 | 0,018 |
| Quebec AND Male AND Between 35 and 44 | 0,0189 |
| Quebec AND Male AND Between 45 and 54 | 0,0203 |
| Quebec AND Male AND Between 55 and 64 | 0,0211 |
| Quebec AND Male AND Between 65 and 74,75 or older, I prefer not to answer | 0,0239 |
| Quebec AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0118 |
| Quebec AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0181 |
| Quebec AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0189 |
| Quebec AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0203 |
| Quebec AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0217 |
| Quebec AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0295 |
| Atlantic AND Male AND Between 18 and 24 | 0,0034 |
| Atlantic AND Male AND Between 25 and 34 | 0,0046 |
| Atlantic AND Male AND Between 35 and 44 | 0,0049 |
| Atlantic AND Male AND Between 45 and 54 | 0,0061 |
| Atlantic AND Male AND Between 55 and 64 | 0,0065 |
| Atlantic AND Male AND Between 65 and 74,75 or older, I prefer not to answer | 0,0076 |
| Atlantic AND Female, Other, I prefer not to answer AND Between 18 and 24 | 0,0033 |
| Atlantic AND Female, Other, I prefer not to answer AND Between 25 and 34 | 0,0047 |
| Atlantic AND Female, Other, I prefer not to answer AND Between 35 and 44 | 0,0053 |
| Atlantic AND Female, Other, I prefer not to answer AND Between 45 and 54 | 0,0065 |
| Atlantic AND Female, Other, I prefer not to answer AND Between 55 and 64 | 0,0069 |

| | |
|---|---|
| Atlantic AND Female, Other, I prefer not to answer AND Between 65 and 74,75 or older, I prefer not to answer | 0,0089 |
| Total | 1 |

**Table A.7 Weighting by language and region**

| Demographics | Weighting |
|---|---|
| Quebec AND French | 0,1809 |
| Quebec AND English | 0,0537 |
| Rest of Canada AND French | 0,0271 |
| Rest of Canada AND English | 0,7383 |
| Total | 1 |

**Table A.8. Weighting by presence of children in the household and region**

| Demographics | Weighting |
|---|---|
| Children in the household AND Rest of Canada | 0,2181 |
| Children in the household AND Quebec | 0,0586 |
| No children in the household | 0,7233 |
| Total | 1 |

**Table A.9 Weighting by education**

| Demographics | Weighting |
|---|---|
| ELEMENTARY / HIGHSCHOOL / COLLEGE | 0,728 |
| UNIVERSITY | 0,213 |
| UNIVERSITY AND QUEBEC | 0,059 |

**Table A.10 Weighting by drone usage**

| Profile | Weighting |
|---|---|
| Drone owners | 0,131 |
| General population | 0,869 |

## A.2 Qualitative Methodology

Leger conducted a series of four online discussion sessions with French-speaking and English-speaking Canadians. Conducting the discussion sessions online offered the opportunity to regroup people from all the regions in Canada. Two sessions were held with drone non-users (general public) and two sessions were held with drone users. One session in English and one session in French were held with each target. The sessions were held in the format of Bulletin Boards, i.e. chat-type discussion sessions. For each online discussion session, fifteen participants were recruited by our professional recruiters. A total of 55 recruits participated in the online focus groups (see Table 3 for details). All participants in the focus group received an honorarium of $100.

Online discussion sessions were conducted using the itracks Bulletin Boards software to facilitate moderation and to ensure an optimal interface between moderator and participants. Participants could interact with one another and the moderator as the discussion unfolded. Each session was open for 12 hours in order to maximize the participation of as many recruits as possible.

All sessions allowed for remote viewing by Leger and Transport Canada observers.

Table 3. Details of the discussion sessions

| Session Detail | Date | Recruits | Participants | Language |
|---|---|---|---|---|
| Session 1 – General public (non-users) | February 23 | 15 | 12 | English |
| Session 2 – General public (non-users) | February 23 | 15 | 15 | French |
| Session 3 – Drone users | March 2 | 15 | 14 | English |
| Session 4 – Drone users | March 2 | 15 | 14 | French |

Recruitment was carried out by professional recruiters. The recruitment guide (available in the appendix B) ensured that the participants met the profiles sought for each session and that they were equipped to participate in an online discussion session. To do so, they had to confirm that they had a high-speed Internet connexion, a computer or a laptop.

**Moderation**

All focus group sessions were moderated and supervised by a senior Leger researcher assisted by a research analyst. Transport Canada employees were able to observe the discussion forum. The discussion guide (available in the appendix C) consisted of a semi-structured discussion guide. It allowed the moderator to follow the thread of the discussion and ensured that an array of themes were covered while leaving sufficient room for the participants to express themselves and develop in detail their experiences, ideas, opinions and perceptions.

The qualitative portion of the research provides insight into the opinions of a population, rather than providing a measure in percent of the opinions held, as would be measured in a quantitative study. The results of this type of research should be viewed as directional only. No inference to the general population can be done with the results of this research.

## A.2 Screening Guide

### DISCUSSION GROUPS DESCRIPTION (Drone users and general population)

**The discussion groups will be held online via the itrack Bulletin Board.**

The target population for this whole research project is comprised of two main groups of Canadians adults 18 and over:

- Drone users (incidence =17%).
- The general public in Canada (non-users).

**The objective is to recruit 15 participants per discussion group.**

| | DATE / HEURE | PARTICIPANT PROFILE |
|---|---|---|
| **GROUP 1**<br>15 participants | | **Group with drone users in English**<br>• Adults over 18 (varied sociodemographics)<br>• Gender: a good mix<br>• *Language spoken: English*<br>• *Drone-users* |
| **GROUP 2**<br>15 participants | | **Group with drone users in French**<br>• Adults over 18 (varied sociodemographics)<br>• Gender: a good mix<br>• *Language spoken: French*<br>• *Drone-users* |
| **GROUP 3**<br>15 participants | | **Group with the general population (non-users) in English**<br>• Adults over 18 (varied sociodemographics)<br>• Gender: a good mix<br>• *Language spoken: English*<br>• *Drone non-users* |
| **GROUP 4**<br>15 participants | | **Group with the general population (non-users) in French**<br>• Adults over 18 (varied sociodemographics)<br>• Gender: a good mix<br>• *Language spoken: French*<br>• *Drone non-users* |

For each participant, collect the following information:

| | |
|---|---|
| Participant name: | |
| Phone number at home: | |
| Cell phone: | |
| Email address: | |
| Recruitment date: | Recruiter : |
| Group #: | Confirmation (date): |

## STEP 1 (WEB) – SCREENING AND PROFILING

**INTRO**

Hi, I'm _____ of Leger, a public opinion company. We are currently organizing discussion groups on behalf of Transport Canada. The objective of the discussion group is to collect opinions and perceptions about drone usage and regulation in Canada. You don't need to be an expert to participate.

We are preparing to hold a few discussion groups with Canadians like you. These discussion groups will be conducted "online" and will be led by a research professional with up to fifteen participants. All opinions will remain anonymous and will be used for research purposes only in accordance with laws designed to protect your privacy. We don't have anything to sell and we don't advertise and it's not an opinion poll on current events or politics.

Your participation is voluntary. All information collected, used and/or disclosed will be used for research purposes only and the research is entirely confidential. We are also committed to protecting the privacy of all participants. The names of the participants will not be provided to any third party. May I continue?

[INTERVIEWER NOTE: IF ASKED ABOUT PRIVACY LAWS, SAY: "The information collected through the research is subject to the provisions of the Privacy Act, the legislation of the Government of Canada, and to the provisions of relevant provincial privacy legislation.]

The discussion group will take place online on the (**INSERT DATE/TIME**) and will be a maximum of **2 hours**. The chat session will be open for about 12 hours to allow you to answer all the questions and exchange with other participants. You will be compensated **$100** for your time.

**Q0**

Are you available to participate in this focus group at **INSERT DATE/TIME**?

| | |
|---|---|
| Yes | 1 |
| No | 2 **THANK AND TERMINATE** |

A1. **Are you interested in participating?**

| | | |
|---|---|---|
| Yes | 1 | **CONTINUE** |
| No | 2 | **THANK AND TERMINATE** |

I would now like to ask you a few questions to see if you meet our eligibility criteria to participate.

A2. To participate in the online chat group you will need to use **a computer with** a **high-speed Internet connection**. Are you able to participate under these conditions?

| | | |
|---|---|---|
| Yes | 1 | **CONTINUE** |
| No | 2 | **THANK AND TERMINATE** |

## PROFILING

**INTRO1. Socio-demographic questions**

1. Do you or anyone in your immediate family work or have you ever worked in ...?

| | |
|---|---|
| Marketing Research | 1 **THANK AND TERMINATE** |
| Marketing and Advertising | 2 **THANK AND TERMINATE** |
| Public relations, communications | 3 **THANK AND TERMINATE** |
| Media (newspapers, television, radio, etc.) | 4 **THANK AND TERMINATE** |
| Telecommunications | 5 **THANK AND TERMINATE** |
| None of the above | 9 |

**Sex**

2. Are you…?.

| | |
|---|---|
| … a man | 1 |
| … a woman | 2 |
| Other | 3 |

**Province**

3. In which province or territory do you live?

| | |
|---|---|
| British Columbia | 1 |
| Alberta | 2 |
| Saskatchewan | 3 |
| Manitoba | 4 |
| Ontario | 5 |
| Quebec | 6 |
| New Brunswick | 7 |
| Nova Scotia | 8 |
| Prince Edward Island | 9 |
| Newfoundland | 10 |
| Northwest Territories | 11 |
| Yukon | 12 |
| Nunavut | 13 |

**3b. Area**

3. Do you currently live in a urban or rural area?

| | |
|---|---|
| Urban | 1 |
| Rural | 2 |

**Ensure a good mix in the group**

**Language**

4. What is your ***first official language spoken***?

| | | |
|---|---|---|
| French | 1 | GR 2; 4 |
| English | 2 | GR 1; 3 |

**AGE.**

5.What age category do you fall into?

| | | |
|---|---|---|
| Under 18 | 99 | THANK AND TERMINATE |
| 18 to 24 | 1 | |
| 25 to 34 | 2 | |
| 35 to 44 | 3 | |
| 45 to 54 | 4 | |
| 55 to 64 | 5 | |
| 65 and over | 6 | |

**EDUCATION.**

**6. What is the highest level of education you completed?**

| | |
|---|---|
| **Some high school or less** | **1** |
| **High school diploma or equivalent** | **2** |
| **Registered Apprenticeship or other trades certificate or diploma** | **3** |
| **College, CEGEP or other non-university certificate or diploma** | **4** |
| **University certificate or diploma below bachelor's level** | **5** |
| **Bachelor's degree** | **6** |
| **Postgraduate degree above bachelor's level** | **7** |

**OCCUPATION**

**7. Which of the following categories best describes your current employment status? Are you…**

| | |
|---|---|
| **Working full-time (35 or more hours per week)** | **1** |
| **Working part-time (less than 35 hours per week)** | **2** |
| **Self-employed** | **3** |
| **Unemployed, but looking for work** | **4** |
| **A student attending school full-time** | **5** |
| **Retired** | **6** |
| **Not in the workforce (full-time homemaker, full-time parent, or unemployed and not looking for work)** | **7** |
| **Other employment status. Please specify.** | **8** |

**8 – DRONE USERS (Exclusive choice 1 and 3; Exclusive choice 2 and 4)**

**Which of the following best applies to your current situation? (select all that apply)**

| | |
|---|---|
| Personally, own a drone or other model aircraft that you fly for recreational purposes (1) | **GR 1; 2** |
| Personally, own a drone or other model aircraft that you fly for work or research purposes (2) | **GR 1; 2** |
| Do not own a drone or other model aircraft but you fly them for recreational purposes (3) | **GR 1; 2** |
| Do not own a drone or other model aircraft but you fly them for work or research purposes (4) | **GR 1; 2** |
| You do not personally own a drone or model aircraft but someone else in your household does (5) | **GR3; 4** |
| Neither you nor another person in your household currently own a drone or model aircraft (6) | **GR3; 4** |

Privacy Notice

The personal information you provide to Transport Canada is governed in accordance with the *Privacy Act*. We only collect the information we need to conduct the research project.

**Purpose of collection:** We require your personal information to determine your eligibility and record your consent to participate in this research.

**Other uses or disclosures:** Your personal information will not be shared. In limited and specific situations, your personal information may be disclosed without your consent in accordance with subsection 8(2) of the *Privacy Act*.

**Do you consent to participate in this research?**

- ☐ **Yes (continue)**
- ☐ **No (STOP)**

**Participant Name:** _____

**Date:** _____

**INVITATION**

Thank you. We'd like to invite you to participate in the discussion group.

The discussion group will take place at [XX], on____XX____ (date/time) __XX__.

Just a quick reminder that you will need a computer, a high-speed Internet connection in order to participate in the chat group. You cannot participate using a mobile phone.

Representatives from Transport Canada and research analyst may observe the discussion group, but will not have access to any of your personal information. Do you consent to participate in this discussion group ?

| | |
|---|---|
| Yes | 1 |
| No | 2 **THANK AND TERMINATE** |

Now I have a few questions that relate to privacy, your personal information and the research process. We will need your consent on a few issues that enable us to conduct our research. As I run through these questions, please feel free to ask me any questions you would like clarified.

We need to provide the **online platform** and **session moderator** with the names and profiles of the people attending the discussion group because only the individuals invited are allowed in the session and the facility and moderator must have this information for verification purposes. Please be assured that this information will be kept strictly confidential.
**GO TO P1**

P1) Now that I've explained this, do I have your permission to provide your name and profile **to the online platform and moderator?**

| | |
|---|---|
| Yes | 1 GO TO P2 |
| No | 2 **THANK AND TERMINATE** |

P2) A recording of the discussion group session will be produced for the research project purposes. The recording will only be used by **the team of people working on the project at Léger and Transport Canada** to assist in preparing a report on the research findings.
Do you agree to be recorded for research purposes only?

| | |
|---|---|
| Yes | 1 COMPLETE THE INVITATION |
| No | 2 **Read information below and P2A** |

It is necessary for the research process for us to record the discussion group session as the researcher needs this material to complete the report.

P2a) Now that I've explained this, do I have your permission for recording the discussion group?

| | |
|---|---|
| Yes | 1 COMPLETE THE INVITATION |
| No | 2 **THANK AND TERMINATE** |

As we are only inviting a small number of people to take part, your participation is very important to us. If for some reason you are unable to participate, please call so that we can get someone to replace you. You can reach us at ____ at our office. Please ask for ____.

We will send your login information to the online chat group to your email address. Please confirm receipt of this information when it reaches you.

Your email address : _____

**Thank you very much!**

Name:
Phone number (during the day):

Phone number (during the evening):
Email address:

## A.3 Discussion Guide

**Moderator's guide- FINAL ENGLISH**
**Drones**
**Online Bulletin Boards**
General population: Tuesday, February 23rd
Drone users: March 2nd

Total anticipated time per participant: 2 hours

**Introduction**

Hello and welcome to the online discussion group! I am glad you could join me today.

We are Sébastien Poitras and Gabrielle Blais and we work for Leger Marketing Inc., a market research company based out of Montreal. We will be moderating the discussion today. Throughout the day, I ask that you log on and answer the questions that have been posted. I will be asking follow-up questions, so it is important for you to log on throughout the day. In total, you will be spending about 2 hours interacting with the group today.

If you're not familiar with online discussion groups, it's when a small gathering of people get together and discuss topics of interest. The discussion is directed by a moderator, who guides the participants through the topics. Focus groups are a common market research method and thousands of online and in-person groups are conducted annually. Things such as TV ads, consumer products, and online messaging are often tested via focus groups.

All your posts will be anonymous and confidential and only shared with those participating in the research group and the members of the research team. Your personal information such as your name and contact information are not shared with anyone.

Today we will be discussing a few different topics about drones. This research is sponsored by Transport Canada, a department of the Government of Canada.

I will be asking a series of questions and guiding the discussion from one topic to the next.

In addition to myself, I have colleagues from Leger and Transport Canada observing the discussion and taking notes. They won't take part in the discussion.

## Instructions

Now it's time for some housekeeping items and ground rules.

Throughout the group, please watch for follow-up questions that I may post.

All your posts will be anonymous and confidential and only shared with those participating in the research group and the members of the research team. Your personal information such as your name and contact information are not shared with anyone. I ask that what we discuss and share here today is not shared with others outside the group and everything remains confidential. Please understand that the nature of this discussion is of confidential and private nature. By participating in the discussion, you agree to not discuss anything learned or revealed during the session without permission.

The transcript of today's discussion will be retained and used for analysis and reporting. My report on the discussion group findings will be done only in the aggregate, which means we'll only report on the findings of the group as a whole. I will not attribute any comments to specific individuals.

I would also like to remind you that we'd like you to express your opinions freely and there are NO RIGHT OR WRONG ANSWERS. If you disagree with comments made by others in the group, that's perfectly fine and will make our discussion interesting. Feel free to respond and state your case. However, please note all answers and responses must be on topic and respectful of other participants. I reserve the right to remove any inappropriate messages posted by a participant.

**As we go through the questions and have our discussion, please keep in mind that I want you to answer based on your own thoughts, feelings, and personal perspectives. In other words, please answer based on your own opinions and not what you think others might believe or feel. I want to hear about you and your experiences.**

IF YOU HAVE ANY QUESTIONS AT ALL, technical, procedural, or otherwise, feel free to post questions where the group can read them or send a private message to me by checking **"Private Message"** before posting your reply.

## Warm-up

First off, we'd like you to introduce yourself to the group. Please post:

- your first name
- Some of your hobbies or interests or what keeps you busy these days

Thank you for sharing a few things about yourself – we certainly have a great mix of people in this group.

As we continue, just remember to answer to the best of your ability and if you don't know how to answer something, that is fine too.

**General population:** Can you tell me how much you know about drones?
Have you ever flown a drone before?
Do you know people who own and fly drones? Do you ever accompany these people when they fly their drone(s)? If so, how do they use it?

**Drone users:** Can you tell me what you use your drone(s) for? Is it for business or recreational use or both?
How often do you fly your drone(s)?
Where do you fly your drone(s)? PROBE: Where did you fly your drones – generally in urban or rural setting?
How do you use your drone? "(e.g. keeping your drone where you can see it, away from people, etc…)".

## SAFETY

**General population**: From what you know, are drones safe? What makes you say that?

As far as you know, is the use of drones well regulated by laws and regulations in Canada? Explain what you know about it.

Do you know how the regulations about drones are enforced?

Do you feel that Canada does a good job at catching and penalizing unsafe drone pilots?

Have you ever witnessed the improper use of a drone, an accident involving a drone, or any other event that made you question the safety of drones?
PROBE: How has this affected your opinion of drones?

In your opinion, should there be more rules surrounding the use of drones to ensure their safe operation?
PROBE: What should be done to improve the safety of their use?

**Drone users**:

How familiar would you say you are with the laws and regulations surrounding the use of drones in Canada?

Do you know how the regulations about drones are enforced?

Do you feel that Canada does a good job at catching and penalizing unsafe drone pilots?

Where did you learn or become aware of the laws and regulations on the use of drones?
Probe: did you participate in Transport Canada's Drone Safety Day on November 13, 2020?

In general, would you say that you always follow the laws and regulations on the use of drones or not?

Do you take precautionary measures when flying your drone to ensure its safe operation?
PROBE:What precautions do you take?

## INFORMATION AND NEW RULES

**General population**: Have you ever searched for information about drones? What type of information were you looking for? Was it driving tips? Was it maintenance advice? Was it safety tips?

If you had to search for information on this topic, what would you do? What sources of information would you use?

Have you ever searched for information about laws and rules on the use of drones?

If you had to search for information about laws and rules on the use of drones, what would you do? What sources of information would you use?
Probe: if you searched for information, was it easy to find?
Was it easy to understand?

**Drone users**: Have you ever searched for information about drones? What type of information were you looking for? Was it driving tips? Was it maintenance advice? Was it safety tips?

If you had to search for information on this topic, what would you do? What sources of information would you use?

Have you ever searched for information about laws and rules on the use of drones?
Probe: are you familiar with the Drone Management Portal, Transport Canada's public-facing online service delivery platform for drone users?

Have you ever taken courses or training to fly your drone?
Probe for more information on where they learned to fly their drone, such as youtube videos

How did you learn about the laws and rules surrounding the use of drones?

How do you keep up to date with the new rules and laws on this subject?

If you had to search for information on this topic, what would you do? What sources of information would you use?

Probe: if you searched for information, was it easy to find?
Was it easy to understand?

## OPINIONS

**General population**: In general, what is your opinion on the use of drones? Is it positive or negative? Explain your answer.
Probe: Comfort levels in different contexts, such as micro-drones vs drone above 250g, Park vs concert for example

Do you have any concerns about the use of drones? What are your concerns about it?

What could be done to alleviate your concerns?
Probe: Knowledge of pilot affecting perceptions of safety? SFOC, Advanced, basic pilot certificate

**Drone users**: Do you have any concerns about the use of drones? What are your concerns about it?

What could be done to alleviate your concerns?

## OPINIONS OF REGULATIONS

**General population**:

Right now, Federal government regulations govern who can fly drones and how or where they can be flown.

a. Drones cannot be flown higher than 400 feet (122m) from the ground
b. Unless the pilot is properly qualified and coordinates with air traffic control, drones can only be flown…
    i. at least 5.6 km from any airport;
    ii. at least 1.9 km from any heliport; and
    iii. in uncontrolled airspace.
c. Drones must remain at least 30m horizontally from bystanders. Pilots with special qualifications can fly at least 5m horizontally from bystanders or over them.
d. Drones can only be flown at least 9 km from any natural hazard or disaster area
e. A drone must always be kept within visual line of sight
f. Only drones that are registered with Transport Canada can be legally flown in Canada

Please indicate what components of these regulations improve or undermine your perception of drone safety.

PROBE: Why?

**Drone users**: Right now, Federal government regulations govern who can fly drones and how or where they can be flown.

a. Drones cannot be flown higher than 400 feet (122m) from the ground
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i. at least 5.6 km from any airport;
ii. at least 1.9 km from any heliport; and
iii. in uncontrolled airspace.

c. Drones must remain at least 30m horizontally from bystanders. Pilots with special qualifications can fly at least 5m horizontally from bystanders or over them.
d. Drones can only be flown at least 9 km from any natural hazard or disaster area
e. A drone must always be kept within visual line of sight
f. Only drones that are registered with Transport Canada can be legally flown in Canada

Please indicate what components of these regulations improve or undermine your perception of drone safety.

PROBE: Why?

## OPINIONS OF FUTURE DRONE USE

**General population**:

Some people feel that, in the future, drones will become more commonplace and be put to different uses.

a) Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today.
b) Drones could be used to deliver prescriptions from the pharmacy right to your doorstep.
c) Drones could be used to deliver a meal from a nearby restaurant.
d) Drones with video recording capabilities could be used in security systems for homes and businesses.
e) Drones with video recording capabilities could be used by law enforcement to help support police operations
f) Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations.
g) Drones could be used to inspect critical infrastructure, like power lines.
h) Drones could be used to monitor and protect wildlife, like whales.
i) Drones could be used to transport people like a taxi or public transit service.
j) Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future.

Please tell me if you would be comfortable with these types of uses of drones in the near future.

PROBE: Why?

Are you comfortable with the concept of a flying taxicab? Why?

Would you be comfortable with flying taxicabs in urban areas?

Are you comfortable with drones being automatically piloted by a computer? Why do you think so?

**Drone users**:

Some people feel that, in the future, drones will become more commonplace and be put to different uses.

a) Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today.
b) Drones could be used to deliver prescriptions from the pharmacy right to your doorstep.

c) Drones could be used to deliver a meal from a nearby restaurant.
d) Drones with video recording capabilities could be used in security systems for homes and businesses.
e) Drones with video recording capabilities could be used by law enforcement to help support police operations
f) Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations.
g) Drones could be used to inspect critical infrastructure, like power lines.
h) Drones could be used to monitor and protect wildlife, like whales.

Please tell me if you would be comfortable with these types of uses of drones in the near future.

PROBE: Why?

Are you comfortable with the concept of a flying taxicab? Why?

Would you be comfortable with flying taxicabs in urban areas?

Are you comfortable with the concept of having a drone automatically piloted by a computer? Why do you think so?

**End of questions**

You have answered all the questions! Thank you. However, please note that as I go through your responses, I will be sending follow up questions. You will be notified by email when a follow-up question is sent and I ask that you log back on a few times throughout the day to check for these follow-up questions, engage with the other participants and respond to their posts as well.

[THANK YOU FOR YOUR VALUABLE INSIGHTS!]

We hope you enjoyed participating in the discussion group and interacting with the other participants.

Your **INCENTIVE** will be sent you shortly.

Thanks again for participating! We really appreciate your time and input.

## A.4 Survey Questionnaire

**Intro – Intro**

**Survey for the Government of Canada**

Please select your preferred language for completing the survey.

English
French

This research project is registered with the Canadian Research Insights Council (CRIC) Research Verification Service that allows you to verify its legitimacy and share your feedback with the research company.

Go to https://canadianresearchinsightscouncil.ca/rvs/home/ and use the RVS code: XXXXXXX to share feedback on this research.

The Government of Canada has hired Léger to conduct this research survey to gather information on the Canadian population.

The survey takes approximately 12 minutes to complete. Your participation in the study is voluntary and completely confidential. All your answers will remain anonymous and will be combined with responses from all other participants.

To view our privacy policy, click here.

**Prov – Prov – ask all**

In which province or territory do you live?

British Columbia (BC)
Alberta (AB)
Saskatchewan (SK)
Manitoba (MB)
Ontario (ON)
Quebec (QC)
New Brunswick (NB)
Nova Scotia (NS)
Prince Edward Island (PE)
Newfoundland (NF)
Northwest Territories (NT)
Yukon (YK)
Nunavut (NU)

**QAB – QAB – ask if prov = AB**

In which region of Alberta do you live?

Calgary (61)
Edmonton (62
Other regions of Alberta (63)

**QBC – QBC – ask if prov = BC**

In which region of British Columbia do you live?

Metro Vancouver (70)
Other region in British Columbia (71)

**QON – QON – ask if prov = ON**

In which region of Ontario do you live?

Hamilton – Niagara Peninsula (50)
Kingston – Pembroke (51)
Kitchener – Waterloo – Barrie (52)
Greater London area (53)
Muskoka – Kawarthas (54)
Northeast (55)
Northwest (56)
Greater Ottawa area (57)
Stratford – Bruce Peninsula (58)
Greater Toronto area (59)
Windsor – Sarnia (60)

**Q0QC – Q0QC – ask all**

In which region of Quebec do you live?

Bas-Saint-Laurent (1)
Saguenay-Lac-Saint-Jean (2)
Capitale-Nationale (3)
Mauricie (4)
Estrie (5)
Montréal (6)
Outaouais (7)
Abitibi-Témiscamingue (8)
Côte-Nord (9)
Nord-du-Québec (10)
Gaspésie/Îles-de-la-Madeleine (11)
Chaudière-Appalaches (12)
Laval (13)
Lanaudière (14)
Laurentides (15)
Montérégie (16)
Centre-du-Québec (17)

**Q0QCA – Q0QCA – ask if Q0QC = 14 (Lanaudière)**

Your city of residence may not appear on the list at the next question.

For statistical processing reasons, only certain cities outside of the Island of Montreal are identified. If this is the case, please select the response "other city".

In which city do you live?

L'Assomption (1)
Charlemagne (2)
L'Épiphanie (3)

Lavaltrie (4)
Mascouche (5)
Repentigny (6)
Saint-Sulpice (7)
Terrebonne (8)
Other Lanaudière city (96)

**Q0QCB – Q0QCB – ask if Q0QC = 15 (Laurentides)**

Your city of residence may not appear on the list at the next question.

For statistical processing reasons, only certain cities outside of the Island of Montreal are identified. If this is the case, please select the response "other city".

In which city do you live?

Blainville (1)
Boisbriand (2)
Bois-des-Filion (3)
Deux-Montagnes (4)
Gore (5)
Kanesatake (6)
Lorraine (7)
Mirabel (8)
Oka (9)
Pointe-Calumet (10)
Rosemère (11)
Saint-Colomban (12)
Sainte-Anne-des-Plaines (13)
Saint-Lin-Laurentides (20)
Sainte-Marthe-sur-le-Lac (14)
Sainte-Thérèse (15)
Saint-Eustache (16)
Saint-Jérôme (17)
Saint-Joseph-du-Lac (18)
Saint-Placide (19)

Other city of Laurentides (96)

**Q0QCC – Q0QCC – ask if Q0QC = 16 (Montérégie)**

Your city of residence may not appear on the list at the next question.

For statistical processing reasons, only certain cities outside of the Island of Montreal are identified. If this is the case, please select the response “other city.”

In which city do you live?
Beauharnois (1)
Beloeil (2)
Boucherville (3)
Brossard (4)
Candiac (5)
Carignan (6)

Chambly (7)
Châteauguay (8)
Coteau-du-Lac (9)
Delson (10)
Hudson (11)
Kahnawake (12)
La Prairie (13)
Léry (14)
Les Cèdres (15)
Les Coteaux (16)
L'Île-Cadieux (17)
L'Île-Perrot (18)
Longueuil (19)
McMasterville (20)
Mercier (21)
Mont-Saint-Hilaire (22)
Notre-Dame-de-l'Île-Perrot (23)
Otterburn Park (24)
Pincourt (25)
Pointe-des-Cascades (26)
Richelieu (27)
Saint-Amable (28)
Saint-Basile-le-Grand (29)
Saint-Bruno-de-Montarville (30)
Saint-Constant (31)
Sainte-Catherine (32)
Saint-Jean-sur-Richelieu (47)
Sainte-Julie (33)
Saint-Isidore (34)
Saint-Lambert (35)
Saint-Lazare (36)
Saint-Mathias-sur-Richelieu (37)
Saint-Mathieu (38)
Saint-Mathieu-de-Beloeil (39)
Saint-Philippe (40)
Saint-Zotique (41)
Terrasse-Vaudreuil (42)
Varennes (43)
Vaudreuil-Dorion (44)
Vaudreuil-sur-le-Lac (45)
Verchères (46)
Other city of Montérégie (96)

**Q0QCD – Q0QCD – ask if Q0QC= 3 (Capitale-Nationale)**

Your city of residence may not appear on the list at the next question.

For statistical processing reasons, only certain cities on the outskirts of Québec City are identified. If this is the case, please select the response "other city."

In which city do you live?

Ville de Québec (1)
Boischatel (2)
Château-Richer (3)
Fossambault-sur-le-Lac (4)
L'Ancienne-Lorette (5)
L'Ange-Gardien (6)
Lac-Beauport (7)
Lac-Delage (8)
Lac-Saint-Joseph (9)
Neuville (10)
Notre-Dame-des-Anges (11)
Saint-Augustin-de-Desmaures (12)
Saint-François-de-l'Île-d'Orléans (13)
Saint-Gabriel-de-Valcartier (14)
Saint-Jean-de-l'Île-d'Orléans (15)
Saint-Laurent-de-l'Île-d'Orléans (16)
Saint-Pierre-de-l'Île-d'Orléans (17)
Sainte-Brigitte-de-Laval (18)
Sainte-Catherine-de-la-Jacques-Cartier (19)
Sainte-Famille (20)
Sainte-Pétronille (21)
Shannon (22)
Stoneham-et-Tewkesbury (23)
Wendake (24)
Other city of Capitale-Nationale (96)

**Q0QCE – Q0QCE – ask if Q0QC = 12 (Chaudière-Appalaches)**

Your city of residence may not appear on the list at the next question.

For statistical processing reasons, only certain cities on the outskirts of Québec City are identified. If this is the case, please select the response "other city."

In which city do you live?

Ville de Lévis (1)
Beaumont (2)
Saint-Antoine-de-Tilly (5)
Saint-Henri (3)
Saint-Lambert-de-Lauzon (4)
Other city of Chaudière-Appalaches (96)

**Q0QCF – Q0QCF – ask if Q0QCD = 1**

Please indicate in which borough you live:

Borough of La Cité-Limoilou (1)
Borough of Sainte-Foy-Sillery-Cap-Rouge (2)
Borough of Les Rivières (3)
Borough of Beauport (4)
Borough of Charlesbourg (5)
Borough of La Haute-St-Charles (Lac-Saint-Charles, Saint-Émile, Loretteville, Les Châtels, Val-Bélair) (6)

**Q0QCG – Q0QCG – ask if Q0QCE = 1**

Please indicate in which borough you live:

Desjardins (1)
Chutes-de-la-Chaudière-Est (2)
Chutes-de-la-Chaudière-Ouest (3)

**AREA – AREA – ask all**

What type of area do you live in?
urban area (with a population of 100,000 or more) (1)
suburban area (with a population of at least 30,000 but under 100,000)(2)
rural area (with a population below 30,000)(3)
Do not know (98)
Prefer not to answer (99)

**Sexe – Sexe – ask all**

Please indicate your sex:

Note: As indicated by Statistics Canada, transgender, transsexual, and intersex Canadians should indicate the sex (male or female) with which they most associate themselves.

Male (1)
Female (2)
Other (96)
I prefer not to answer (99)

**Age – Age – ask all**

How old are you?

Under 18 (0)
Between 18 and 24 (1)
Between 25 and 34 (2)
Between 35 and 44 (3)
Between 45 and 54 (4)
Between 55 and 64 (5)
Between 65 and 74 (6)
75 or older (7)
I prefer not to answer (9)

**Langu – Langu – ask all**

What is the language you first learned at home in your childhood and that you still understand?

French (1)
English (2)
Other (3)
English and French (7)
French and other (4)
English and other (5)

Other and other (6)
I prefer not to answer (9)

**Enfa – Enfa – ask all**

Are there any children under 18 years old living in your household?

Yes (1)
No (2)
I prefer not to answer (9)

**Scol – Scol – ask all**

What is the highest level of formal education that you have completed?
Grade 8 or less (1)
Some high school (2)
High school diploma or equivalent (3)
Registered Apprenticeship or other trades certificate or diploma (4)
College, CEGEP or other non-university certificate or diploma (5)
University certificate or diploma below bachelor's level (6)
Bachelor's degree (7)
Post graduate degree above bachelor's level (9)
I prefer not to answer (8)

**Q1 – Q1 – ask all**

Which of the following best applies to your current situation? (select all that apply)

Personally, own a drone or other model aircraft that you fly for recreational purposes (1)
Personally, own a drone or other model aircraft that you fly for work or research purposes (2)
Do not own a drone or other model aircraft but you fly them for recreational purposes (3)
Do not own a drone or other model aircraft but you fly them for work or research purposes (4)
You do not personally own a drone or model aircraft but someone else in your household does (5)
Neither you nor another person in your household currently own a drone or model aircraft (6)
Do not know (98)
Prefer not to answer (99)

Q1A-Q1A - ask if Q1=6

Do you know a person close to you, friend or family, who flies a drone, either professionally or casually?

Yes (1)
No (2)
Don't know
I prefer not to answer (99)

Q1D-Q1D – ask if Q1 = 5-6 (gen pop)

Over the past 12 months, have you been in a place where a drone or drones were flying overhead or nearby? (it could be around your home, in a park, on a city street or anywhere else)

Yes (1)
No (2)

Don’t know (98)
I prefer not to answer (99)

Q1E-Q1E – ask if Q1 = 5-6 (gen pop)

Prior to that, have you ever been in a place where a drone or drones were flying overhead or nearby?

Yes (1)
No (2)
Don’t know (98)
I prefer not to answer (99)

Q1B-Q1B – ask all

How concerned are you about drones being flown safely?

Very concerned (1)
Somewhat concerned (2)
Not very concerned (3)
Not concerned at all (3)
Don’t know (98)
I prefer not to answer (99)

Q1C – Q1C – ask if Q1B =1-2-3-4

What is the main reason why you are (INSERT ANSWER TO Q1B) about drone safety?

(96) Please specify:
I prefer not to answer (99)

Q1D-Q1D – ask all

How concerned are you about potential privacy issues related to drones?

Very concerned (1)
Somewhat concerned (2)
Not very concerned (3)
Not concerned at all (3)
Don’t know (98)
I prefer not to answer (99)

Q1E AND Q1F (IN ROTATION)

Q1E-Q1E – ask all

How comfortable would you be if a drone piloted by a <u>professional user</u> was close enough to identify you in the pictures or videos they take?

Very comfortable (1)
Somewhat comfortable (2)
Not very comfortable (3)
Not comfortable at all (3)

Don’t know (98)
I prefer not to answer (99)

Q1F-Q1F – ask all

How comfortable would you be if a drone piloted by a recreational user was close enough to identify you in the pictures or videos they take?

Very comfortable (1)
Somewhat comfortable (2)
Not very comfortable (3)
Not comfortable at all (3)
Don’t know (98)
I prefer not to answer (99)

All your answers will remain anonymous and will be combined with responses from all other participants. Your responses will not impact any interactions or requested services from the Government of Canada.

Q1G-QIG – ask if Q1=5

And is that person currently using a drone in your household a child or teenager under the age of 16?

Yes (1)
No (2)
Don’t know (98)
I prefer not to answer (99)

Q1H – Q1H – ask if Q1G = 1

And did you personally supervise that child or teenager as they were learning to fly the drone?

Yes (1)
No (2)
I did not, but someone else supervised them.
Don’t know (98)
I prefer not to answer (99)

Q1I – Q1I – ask if Q1H = 1

Did you consult safety information from the Government of Canada prior to supervising the child or teen while flying the drone?

Yes (1)
No (2)
Don’t know (98)
I prefer not to answer (99)

Q2 – Q2 – ask only of those who fly for both recreational and work reasons Q1=1-2-3-4

You indicated that you fly drones or model aircraft for both work or research and recreational purposes. Thinking about the total number of hours you fly, what is the percentage devoted to professional use versus recreational use?

% recreational (1)
% professional (2)

Q2REF – Q2REF – ask only of those who fly for both recreational and work reasons

Do not know (998)
Prefer not to answer (999)

Q3 – Q3 – recreational users only Q1= 1- or 3

How do you mainly use your drone or model aircraft?
Just for the fun of flying (1)
To film video or take pictures (2)
Other use (please specify) (96)
Do not know (98)
Prefer not to answer (99)

Q4 – Q4 – ask if Q1=1-2-3-4

Where do you most often fly your drone or model aircraft? (select all that apply)
urban area (with a population of 100,000 or more) (1)
suburban area (with a population of at least 30,000 but under 100,000)(2)
rural area (with a population below 30,000)(3)
Do not know (98)
Prefer not to answer (99)

Q4A-Q4A – ask if Q4=1

What kind of drone do you use when flying in an urban setting?

Large drone (above 25kg)
Medium drone (over 250 grams but below 25kg)
Micro drone (under 250 grams)
Other, please specify
I don't know (98)
I prefer not to answer (99)

Q5 – Q5 – professional use only

What is your main reason for flying a drone or model aircraft for work or research?
Research/academic research purposes (1)
Agricultural purposes (area surveys or inspections) (2)
Real estate (3)
Inspecting buildings, structures or roofs (area surveys, perimeter scans) (4)
Inspecting infrastructure (pipelines, power lines, railroads, highways) (5)
Filmmaking, videography or photography (6)
Other use (please specify) (96)
Do not know (98)
Prefer not to answer (99)

Q6 – Q6 – ask only if Q1 = 1, 2

How many drones or model aircraft do you currently own?
Insert number
Do not know (998)
Prefer not to answer (999)

Q6A – Q6A – ask if Q1=1-2-3-4

Do you ever fly more than one drone at the same time?

Yes (1)
No (2)
I don't know (98)
I prefer not to answer (99)

Q6B – Q6B – ask if Q1=1-2-3-4

Have you ever applied for a Special Flight Operations Certificate (SFOC) for your drone-related activities?
Yes (1)
No (2)
I don't know (98)
I prefer not to answer (99)

Q7 – Q7 – ask only if Q1 = 1, 2

Thinking of the drone or model aircraft you now fly most often, where did you purchase it?
In-store purchase (1)
Online retailer (such as Amazon)(2)

Direct from manufacturer (3)
Online through a website specializing in drones (4)
Second-hand (e.g. from a friend, online through Kijiji, etc.) (5)
I built it myself from a kit (6)
I built it myself from parts (7)
Other (please specify) (96)
Do not know (98)
Prefer not to answer (99)

Q8 – Q8 – ask only if Q1 = 1, 2 / do not ask if Q7 = 6

What is the make or brand of your drone or model aircraft you fly most often?

DJI (1)
Parrot (2)
3DR (3)
Yuneec (4)
EHang (5)
Walkera (6)
Syma (7)
Autel Robotics (8)
Blade (9)
Great Planes (10)
Sig (11)
Top Flite (12)

Horizon Hobby (13)
Sensefly
Other make or brand (please: specify) (96)
Do not know (98)
Prefer not to answer (99)

Q9A – Q9A – ask only if Q1 = 1, 2

Do you know the weight of your drone or model aircraft you fly most often?

Yes: [Insert weight in metric system] (grams) (1)
Yes: [Insert weight in imperial system] (pounds) (2)

Q9AREF – Q9AREF – ask only if Q1 = 1, 2

No, I do not know the weight of the drone (998)
Prefer not to answer (999)

Q10 – Q10 – ask all

Do you currently belong to a drone or model aircraft club or group?

Yes – please specify (96)
No (95)
No, but I'm looking to join one (97)
Do not know (98)
Prefer not to answer (99)

Q11A – Q11A – ask if Q1=1-2-3-4

Have you ever attended a drone flight school to learn how to operate a drone?

Yes (1)
No (2)
I don't know (98)
I prefer not to answer (99)

Q12 – Q12 – ask if Q11A=1

You mentioned attending a drone flying lesson. What kind of lesson was it?

Online class (1)
In class (e.g. school, community centre) (2)
Do not know (98)
Prefer not to answer (99)

Q13A – Q13A – ask all

Do you have a drone pilot certificate issued by the Government of Canada?

Yes (1)
No (2)

I'm in the process of obtaining one (3)
Do not know (98)
Prefer not to answer (99)

Q13B – Q13B – ask if Q13 = 1

How did you find the drone pilot certification process?

Very demanding (1)
Somewhat demanding (2)
Not very demanding (3)
Not demanding at all (3)
Don't know (98)
I prefer not to answer (99)

Q15A – Q15A – ask if Q1= 1-2-3-4-5

Have you ever received training or seen an instructional video on Transport Canada's drone safety regulations?

Yes (1)
No (2)
Do not know (98)
Prefer not to answer (99)

Q15B – Q15B –ask if Transport Canada training materials were used

You mentioned that you used training materials from Transport Canada. How well did the information from Transport Canada help you prepare for using a drone?

Very good preparation (1)
Fairly good preparation (2)
Not very good preparation (3)
Not good preparation at all (4)
Don't know (98)
I prefer not to answer (99)

Q16 – Q16 – ask if Q1 = 1-2-3-4-5

Have you ever searched for information on Canadian government regulations regarding drones or model aircraft?

Yes (1)
No (2)
Do not know (98)
Prefer not to answer (99)

Q17 – Q17 – only ask if Q16=1

Where did you go to find that information? (Select all that apply)

Search engine(e.g. Google. Bing, Yahoo, etc.) (1)
Government of Canada website (2)
hobbyist publication, article or magazine for drone users (3)

Asked a specialized retailer (whether online or in-store) (4)
Visited Transport Canada website (5)
Visited Drone Safety website (6)
Through social media (7)
Searched for drone flight influencer video on regulations (7)
Other sources (please specify) (96)
Do not know (98)
Prefer not to answer (99)

Q17B – Q17B – ask if Q17 = 6

You mentioned that you found information regarding Canadian government regulations of drones or model aircraft through social media. Please specify which platform(s). (Select all that apply)

Instagram (1)
Facebook (2)
LinkedIn (3)
Twitter (4)
Other (specify) (96)
Do not know (98)
Prefer not to answer (99)

Q20A – Q20A – ask all

What would you say is your level of knowledge of drones in general (i.e. how they work, how they are flown)?

Very knowledgeable (1)
Somewhat knowledgeable (2)
Not very knowledgeable (3)
Not knowledgeable at all (4)
Don't know (98)
I prefer not to answer (99)
Q20 – Q20 – ask all

How would you rate your level of knowledge of the Transport Canada regulations on drones and model aircraft?

Very knowledgeable (1)
Somewhat knowledgeable (2)
Not very knowledgeable (3)
Not at all knowledgeable (4)
Do not know (98)
Prefer not to answer (99)

Q20B – Q20B – ask all

Has your level of knowledge of the Transport Canada regulations on drones and model aircraft increased, stayed the same or decreased over last year?

Increased (1)
Stayed the same (2)
Decreased (3)
Do not know (98)
Prefer not to answer (99)

Q21 – Q21 – ask all

Were you aware of the following rules on drones or model aircraft currently in force in Canada?

Yes (1)
No (2)
Do not know (98)
Prefer not to answer (99)

- where you can see it **at all times**
- below 122 metres (400 feet) in the air
- away from bystanders, at a minimum horizontal distance of 30 metres for basic operations
- away from emergency operations and advertised events
    - **Avoid** forest fires, outdoor concerts and parades
- away from airports and heliports
    - 5.6 kilometres (3 nautical miles) from airports
    - 1.9 kilometres (1 nautical mile) from heliports
- outside controlled airspace (for basic operations only)
- **far away** from other aircraft
    - Don't fly anywhere near airplanes, helicopters and other drones

Q21A – Q21A – ask all

Right now, Federal government legislation regulates who can fly drones and how or where they can be flown. Please indicate if the following aspects of that legislation improves or undermines your perception of drone safety in your area.

Improves my perception of drone safety (1)
It doesn't change my perception of drone safety (2)
Undermines my perception of drone safety (3)
Don't know (98)
I prefer not to answer (99)

g. Drones cannot be flown higher than 300 feet (90m) from the ground
h. Drones can only be flown at least 5.6 km from any airport and at least 1.9 km from any heliport
i. Drones can only be flown outside controlled airspace
j. Drones can only be flown at least 9 km from any natural hazard or disaster area
k. A drone must always be kept within visual line of sight
l. Only drones that are registered with Transport Canada can be legally flown in Canada
m. Drone operators must have a Transport Canada Special Flight Operations certificates, unless they are exempt if their operation is considered low-risk

Q21B – Q21B – ask all

Some people feel that, in the future, drones will become more commonplace are put to different uses. Please tell me if you would be comfortable with these types of uses of drones in the near future.

Yes, I am comfortable with drones being used this way in the future (1)
No, I am not comfortable with drones being used this way in the future (2)
Don't know (98)
I prefer not to answer (99)

k) Drones could be used to deliver parcels to your door, instead of using a delivery person like we see today.
l) Drones could be used to deliver prescriptions from the pharmacy right to your doorstep.
m) Drones could be used to deliver a meal from a nearby restaurant.
n) Drones with video recording capabilities could be used in security systems for homes and businesses.
o) Drones could be deployed in emergency scenarios to help save people, like in search and rescue operations.
p) Drones could be used to transport people like a taxi service.
q) Autonomous drones that are driven by computers, just like autonomous vehicles that might soon be on roads, could be used in the future.

Q25 – Q25 – ask all

If Transport Canada wanted to make sure that you came across all relevant information regarding safely flying your drone in Canada, what is the best way for them to get that information to you?

Advertising campaign on TV (1)
Online ads on drone specialty websites (2)
Collaboration with Youtubers or influencers (3)
Advertising in specialized retailers (in-store) (4)
Advertising on specialized online retailers' websites (5)
Social media platforms (e.g. Facebook, Instagram, YouTube, etc.) (6)
Information sessions (e.g. webinars) (7)

Information on Transport Canada's Drone Safety Website
Other (please specify) (96)
Do not know (98)
Prefer not to answer (99)

Q27 – Q27 – ask all

Do you have a background in traditional or manned aviation (flying lessons, pilot license or anything related)?

Yes (1)
No (2)
Do not know (98)
Prefer not to answer (99)

Q28 – Q28 – ask all

Where do you go to find the latest trends about drones and model aircraft? (e.g. magazines, internet, social media, Youtube~~rs~~ – please be specific)

Your answer:
(96)
Do not know (98)
Prefer not to answer (99)

QSCTDEMO – QSCTDEMO

The following questions are for statistical purposes only.

Occup – Occup – ask all

What is your current main occupation?

N.B. we are referring to paying jobs only.

Even if you are on a sabbatical, maternity/paternity, illness or work-related accident leave, please select your occupation.

Office worker (cashier, office clerk, accounting clerk, secretary, etc.) (1)
Personnel specialized in sales (insurance agent, salesperson, sales clerk, real estate agent, real estate broker, sales rep, etc.) (2)
Personnel specialized in services (security agent, taxi driver, hairdresser, cook, esthetician, clergy member, military force member, police officer, etc.) (3)
Manual worker (farmer, packer, day labourer, labourer, miner, fisherman, forestry worker, etc.) (4)
Skilled, semi-skilled worker (bricklayer, truck driver, electrician, machine operator, mechanic, painter, etc.) (5)
Science and technologies worker (computer specialist, programmer-analyst, technician, audio-technician, lab technician, etc.) (6)
Professional (archeologist, architect, artist, lawyer, banker, biologist, accountant, consultant, foreman, dentist, etc.) (7)
Manager/administrator/owner (director, administrator, editor, entrepreneur, executive, manager, businessperson, politician, president, self-employed, etc.) (8)
Homemaker (9)
Student (full-time or whose studies take up most of his/her time) (10)
Retired (pre-retired or annuitant) (11)
Unemployed (unemployment, welfare) (12)
Other (96)
I prefer not to answer (99)

Reven – Reven – ask all

Among the following categories, which one best reflects the total INCOME, before taxes, of all the members of your household in 2019?

$19,999 or less (1)
Between $20,000 and $39,999 (2)
Between $40,000 and $59,999 (3)
Between $60,000 and $79,999 (4)
Between $80,000 and $99,999 (5)
$100,000 or more (6)
I prefer not to answer (99)

MessComplete – MessComplete

The questionnaire is now complete.

Thank you for your participation.