Public Opinion Research Study on Examining the social acceptance of Advanced Air Mobility (AAM) by the Canadian public

FINAL REPORT

Prepared for Transport Canada

Supplier: Leger Marketing Inc.
Contract Number: T8053-23-0132
Contract Value: $71,873.65 (including HST)
Award Date: October 3, 2023
Delivery Date: March 26, 2024

Registration Number: POR 060-23
For more information on this report, please contact Transport Canada at TC.Publicopinion-Opinionpublique.TC@tc.gc.ca

Ce rapport est aussi disponible en français

This public opinion research report presents the results of two studies conducted by Léger Marketing Inc. on behalf of Transport Canada. The first study consisted in a quantitative study consisting in a survey conducted with 2,717 respondents between November 28 and December 12, 2023. The second study was qualitative research with four online focus groups and was conducted with 32 Canadians between January 30th and 31st, 2024.

Cette publication est aussi disponible en français sous le titre Étude de recherche sur l'acceptation sociale de la mobilité aérienne avancée (MAA) au sein du public canadien.

Catalogue Number:
T52-4/253-2024E-PDF

International Standard Book Number (ISBN):
978-0-660-70816-4

Related publications (registration number: ROP 060-23**):**

- T52-4/253-2024F-PDF
- 978-0-660-70818-8

Table of Contents

Executive Summary

Leger is pleased to present Transport Canada with this report on findings from a quantitative and a qualitative survey designed to examine Canadians' acceptance of advanced air mobility (AAM) technologies. This report was prepared by Léger Marketing Inc. who was contracted by Transport Canada (contract number T8053-23-0132 awarded October 3, 2023). This contract has a value of $63,605.00 (excluding HST).

1.1 Background and Objectives

As the federal institution responsible for regulating the safety and security of Canadian airspace and the aircraft that fly in it, Transport Canada (TC) closely studies new technologies to ensure a regulatory environment that keeps pace with innovation. AAM refers to a set of emerging and disruptive airborne technologies to transport goods, people, and services in new ways, such as autonomous drones, electric powered vertical take-off and landing (eVTOL) aircraft, flying air taxis, and more. In Canada, the deployment of AAM may offer social, economic, and environmental benefits, including improved access to remote communities, new business opportunities, and the potential for increased safety and reduced greenhouse gas (GHG) emissions; however, low levels of social acceptance by the Canadian public may limit the uptake of AAM in Canadian society.

Previous public opinion research conducted by the National Research Council of Canada (NRC) in July 2021 found that most respondents believed they did not have a solid understanding of the nature of AAM technologies and what their deployment in Canada could look like in their communities, which caused them to feel generally neutral toward the space. As such, the study suggested that the public needs more information about AAM in order to develop opinions on it, and that future research should reassess attitudes toward AAM once people are more informed.

The general objective of the research was to examine Canadians' acceptance of AAM technologies. The study examined the extent to which current and future AAM technologies are accepted by the general Canadian public in late-2023 to early-2024. The study also identified the nature of barriers to social acceptance of AAM, and ways in which social acceptance could be improved.

1.2 Quantitative Methodology

The quantitative research consisted of online surveys, using Computer Aided Web Interviewing (CAWI) technology. Fieldwork for the survey was carried out from November 28 to December 12, 2023. A total of 2,717 Canadians aged 18 years old and older were interviewed.

A pre-test of 53 interviews was completed before launching data collection to validate the programming of the questionnaire in both official languages.

Since an actual probability sampling method was not used, 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).

Sample Distribution

The sample frame has been designed using a regional stratification scheme designed to accurately reflect the geographic distribution of Canada's population, including the North (Yukon, Northwest Territories, and Nunavut). For weighting purposes, and as they represent less than 1% of the sample, respondents from Yukon, Northwest Territories, and Nunavut have been paired with other regions. The following table describes the regional quotas and the effective sample distribution achieved during the data collection.

Table 1. Sample Regional Distribution

	Proportion in the Canadian population (2021 Census)	% sample (n= 2,717)	Sample (n= 2,717)
n=			**2,717**
Atlantic	7%	7%	200
Québec	23%	23%	614
Ontario	39%	39%	1,026
Prairies (Manitoba + Saskatchewan and Nunavut)	7%	6%	204
Alberta (and Northwest Territories)	12%	11%	318
British Columbia (and Yukon)	13%	14%	355

The population targeted in this study was Canadian adults aged 18 and older. To meet the objectives of this research, the sample also had to include sufficient representation from the following key target groups:

- Indigenous People (First Nations, Inuit, Métis);
- People living in rural areas.

Quotas Structure

As per the specific target groups which need to be sufficiently represented to offer statistically valid results, Leger proposed a structure with quotas for each specific target.

The following table describes the quotas and the effective sample distribution achieved during the data collection for each of those specific targets.

Table 2. Sample Size for Specific Target Groups

		Proportion in the Canadian population (2021 Census)	% Achieved sample	Targeted Sample (n= 2700)	Achieved sample
	n=			**2,700**	**2,717**
INDIGENOUS STATUS	Non-indigenous person	95%	96%	2,550	2,562
	Indigenous person	5%	4%	150	155
PLACE OF RESIDENCE	Urban	82%	79%	2,214	2,166
	Rural	18%	19%	486	513

Note: Totals may differ slightly from 100% due to non-response.

Leger weighted the results of this survey by age, gender, region, presence of children in the household, and education level, according to 2021 national census data from Statistics Canada. Results were weighted to account for specific demographic profiles: Indigenous individuals and those residing in rural or urban areas. This approach ensures the accurate representation of respondents with these characteristics, preventing their intentional overrepresentation in the sampling frame from distorting the overall sample.

Leger meets the strictest quantitative research guidelines. The questionnaire was prepared in accordance with the Standards for the Conduct of Government of Canada Public Opinion Research—Series D—Quantitative Research. Details on the methodology, Leger's quality control mechanisms, the questionnaire, and the weighting procedures are provided in the appendix.

1.3 Overview of the Quantitative Findings

Awareness and Familiarity with AAM:

- Most respondents (77%) had never heard about AAM before, while less than a quarter of Canadians (23%) had heard about it before.
- Awareness of AAM is higher among respondents aged 18-34 years old (29%), those with a university diploma (29%), those belonging to BIPOC (Black, Indigenous, People of colour) communities (28%), men (28%), and people living in urban or suburban areas (24%).
- More than half of respondents (52%) believe the development of AAM is good for Canada, and 9% think it is bad.
- More than half of respondents who were aware of AAM (53%) said they are familiar with AAM, while 47% said they are unfamiliar with the concept.
- Two-thirds of respondents (67%) are aware of at least one application of AAM, while 31% have never heard of any of the applications presented. The applications most frequently mentioned by respondents are search and rescue operations (39%), emergency medical services (38%), and home deliveries (36%).

Level of comfort with AAM applications in urban areas:

- Most respondents are comfortable with the following AAM applications in urban areas: search and rescue operations (81% are comfortable), firefighting services (78%), emergency medical services (78%), aerial surveying and inspections (70%), and logistic and cargo transport (60%).
- Other types of applications receive a lower level of comfort, notably tourism and sightseeing (58%) and home deliveries (53%). Air mobility in urban areas is the only application falling below a 50% comfort level among respondents, with only 44% indicating comfort.

Level of comfort with AAM applications in rural areas:

- When it comes to rural areas, most respondents are comfortable with the following applications: search and rescue operations (80% are comfortable), firefighting services (80%), emergency medical services (79%), and aerial surveying (72%).
- Other applications, notably logistics and cargo transport (65%), tourism and sightseeing (62%), home deliveries (61%), and air mobility (52%) receive a lower level of comfort. Air mobility still ranks last; however, more respondents would be comfortable with this application occurring in a rural setting than in an urban one.

Likelihood of trying AAM technology and feeling of safety:

- Fewer than half of the respondents are likely to try any of the technologies surveyed. Drone delivery of consumer goods is identified as the technology most respondents are likely to try, with 45% indicating likelihood.
- Similar levels of likelihood are reported for air taxis with a pilot on board (41%) and autonomous delivery drones without a pilot (38%). Only one in five respondents are likely to try air taxis with a remote pilot (21%) or autonomous air taxis (20%).
- As pedestrians, half of respondents (52%) said they would feel safe if air taxis with a pilot on board would fly above them, 41% think the same about delivery of goods by drones with a remote pilot, 33% about autonomous delivery drones with no pilot, 27% about air taxis with a remote pilot and 25% consider autonomous air taxis to be safe.
- One out of four respondents (26%) would be comfortable living next to a vertiport. On the other hand, six out of ten respondents (60%) would be uncomfortable living next to a vertiport.

Perceptions of AAM:

- Most respondents (70%) agree that AAM will improve access to services for people living in remote areas. Other positive statement surveyed received a lower level of agreement. Around half of respondents (47%) agree that AAM is the future of transportation and the same proportion (47%) agree that AAM will contribute to the economic growth of Canada. Forty-five percent (45%) of respondents agree that they trust the Government of Canada to ensure that AAM technologies are safe, and forty-four percent (44%) of respondents agree that AAM will have a positive impact on the quality of life of Canadians. About the same proportion (43%) agree with the idea that AAM will improve access to services in their region, and 40% trust that AAM technologies will be safe. Around a third of respondents (38%) agree that the advantages of AAM technologies outweigh their disadvantages, and 31% agree that they are usually among the first to embrace new technologies.
- On the other hand, around half of respondents agree with some negative statements about AAM. More than one respondent out of two (52%) agree that AAM technologies will only benefit rich people, 47% agree that AAM technologies are too risky.

Attitude towards AAM:

- A majority of respondents (63%) have conditional support of AAM, indicating that their support depends on specific circumstances, such as application, operating environment, costs, benefits, risks, or aircraft characteristics.
- A small proportion of respondents (9%) oppose using AAM technology in all circumstances, and the same proportion (9%) support using AAM technology in all circumstances.
- Respondents who think the development of AAM is a bad thing for Canada (29%) are more likely to be opposed to AAM in all circumstances.

- Faster emergency response to disasters (60%), faster medical services (53%), and better connectivity to remote areas (46%) are the top three perceived benefits that respondents think AAM could bring. Only 4% of respondents think that AAM technology can't bring any benefits.
- When thinking about adjectives to describe AAM, more than half (58%) of respondents have positive feelings towards AAM, notably curiosity (41%), optimism (24%), excitement (14%) and confidence (8%). Half of the respondents (52%) have negative feelings towards AAM notably, skepticism (36%), suspicion (22%), fear (13%), and alarm (11%).

Concerns with regards to AAM:

- Safety or crashing concerns (54%), security threats (43%), and privacy concerns (37%) are the top concerns of respondents with AAM. It is followed closely by affordability (32%), noise pollution (28%), and impact on the environment (27%). Other concerns, such as job losses (19%) and locations of landing spots (17%), were mentioned to a lesser extent. A vast majority of respondents expressed concerns about AAM. Only one out of ten respondents said they had no concerns (2%), didn't know (7%), or preferred not to answer (1%).
- After being exposed to information on AAM, the same proportion (53%) think that the development of AAM is good for Canada, while 16% think that it is bad for Canada, and 30% don't know. Compared to the results before exposure to information on AAM, there is a noticeable 7-point increase in respondents who believe that the development of AAM is bad for Canada and an 8-point decrease among respondents who were unable to answer.

Reasons behind opinions towards AAM:

- Among respondents expressing positive views on the advancement of AAM in Canada, primary reasons for their positive stance include its potential as the future of transport (18%), its capability to enhance access to remote areas (15%), its expected improvement in emergency response times and life-saving capabilities (14%), and its ability to increase transportation efficiency (10%).
- Conversely, individuals with negative perceptions of AAM's development in Canada cite safety issues and perceived risks as their principal concern (32%), followed by worries about privacy (15%), job displacement (15%), and environmental impacts (14%). A smaller fraction of respondents (under 10%) pointed out additional concerns, such as the belief that AAM would predominantly benefit the affluent, noise pollution, and potential for criminal uses.
- A third of respondents (31%) have a low trust in the Government of Canada to handle the implementation of AAM technology, meaning they gave a score of one or two on a scale of 1 to 5. About the same proportion (34%) have a high trust in the Government of Canada, meaning they gave a score of four or five. A quarter of respondents gave a more neutral rating of three out of five (27%).

Information about AAM:

- Six respondents out of ten (60%) would be interested in being informed on matters and issues related to AAM, while a third (33%) would not be interested in being informed about AAM.
- The primary sources of information that respondents access when looking for information regarding AAM in Canada are social media platforms (23%), followed by advertising campaigns on TV (15%) and radio (13%). About a third of respondents (30%) don't access any sources to get information regarding AAM in Canada.
- Respondents aged 18 to 34 years old are more likely to access sources online like social media platforms (32%), online ads on specialty websites (13%), collaboration with YouTubers or influencers (10%), or advertising on specialized online retailers' websites (10%). In contrast, respondents aged 55 or older are more likely to look for advertising campaigns on TV (18%).

1.4 Qualitative Methodology

The qualitative portion of the study consisted of four focus group sessions with French-speaking and English-speaking Canadians. Conducting the groups online offered the opportunity to regroup people from all the regions in Canada. All groups were conducted with individuals who have positive, neutral (proponents) or negative (opponents) attitude towards Advanced Air Mobility (AAM). To classify them into two groups, participants were asked the following question:

In general, do you think that the development of Advanced Air Mobility is good or bad for Canada?

As a reminder, Advanced Air Mobility is a broad operational concept that refers to a variety of new and emerging ways to move people, goods and services by air. It describes an emerging future state for the aviation ecosystem and is often grouped into three categories: Urban Air Mobility, which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; Regional Air Mobility, which carries people and goods to rural and remote communities; and Remotely Piloted Aircraft Systems, or drones.

In the future, AAM could become an important part of our transportation system. Eventually, it is expected that some passenger aircraft will fly through remote piloting, or even autonomously.

Participants who answered "Very good", "Good", or "I don't know" were placed in groups 1 or 3 (If they spoke English, they were part of group 1; if they spoke French, they were placed in group 3). Those who answered "Bad" or "Very bad" were placed in groups 2 or 4 (If they spoke English, they were part of group 2; if they spoke French, they were placed in group 4).

Overall, two focus groups were conducted in French and the remaining two were conducted in English. Observers from Transport Canada attended the focus groups.

All groups were conducted with Canadians living across Canada, and with a diverse mix of age, gender, household income, education, place of residence (rural/urban) and province.

For each online discussion session, ten participants were recruited by our professional recruiters. A total of 32 recruits participated in the online discussion sessions. All participants in each discussion session received an honorarium of $125. All groups were scheduled to be held on January 30th and 31st, 2024. Groups were held in the following criterion on the dates specified in Table 1.

Table 3. Detailed recruitment

GR	Region	Recruits	Participants	Target	Language	Date	Time
1	Canada	10	7	Canadians with **positive or neutral attitude** towards AAM	English	January 30	5pm EST
2	Canada	10	7	Canadians with **negative attitude** towards AAM	English	January 30	7pm EST
3	Canada	10	10	Canadians with **positive or neutral attitude** towards AAM*	French	January 31	5pm EST
4	Canada	10	8	Canadians with **negative attitude** towards AAM*	French	January 31	7pm EST
Total		**40**	**32**				

* *Quebec residents may be overrepresented.*

1.5 Overview of the Qualitative Findings

Initial Perceptions of Advanced Air Mobility (AAM)

- Participants frequently associated Advanced Air Mobility (AAM) with the application of drones for pioneering services, including the delivery of packages and provision of food services.
- There was a general sense of optimism about how AAM could revolutionize transportation, emergency response, and logistics, mostly in proponent groups; however, this optimism was tempered by a strong call for careful integration of AAM technologies, mostly in opponent groups, emphasizing the need to address potential challenges related to weather adaptability, safety, and societal impact.

- Concerns about AAM also centered around regulatory, safety, and environmental issues, with skeptic participants highlighting the importance of establishing clear guidelines and ensuring the technology's reliability and non-harmful nature before widespread adoption.

Reaction After Definition of AAM

Once the AAM concept had been defined, some participants showed interest, particularly in its potential applications, while others maintained concerns about implementation and regulation.

- Supporters believed AAM could offer potential societal benefits, but they also emphasized the need for transparency in safety, sustainability, and regulations.
- Skeptics voiced concerns over safety, privacy, and environmental impacts, urging a focus on current transportation system improvements.
- Discussions uncovered linguistic disparities, where French-speaking participants highlighted social implications, while English-speaking participants concentrated on practical aspects, such as the logistics surrounding the deployment of AAM technology.

Medical/Healthcare Aviation

Medical/Healthcare Aviation was recognized for its ability to save lives by enabling quicker emergency responses and healthcare delivery to remote areas. Although there were persistent questions regarding its cost-effectiveness and reliability, the necessity of integrating this technology with traditional healthcare systems was recognized. Furthermore, the safe incorporation of remotely controlled and autonomous drones into healthcare logistics underscored the necessity for strict regulations and oversight, particularly concerning safety and the importance of human oversight.

Aerial Firefighting

Participants saw aerial firefighting technology, especially drones and autonomous systems, as transformative for firefighting efforts, providing rapid responses and accessing difficult areas. They valued the technology's potential to enhance efficiency, safety, and real-time strategy development without risking human lives. Despite this enthusiasm, concerns about operational reliability in challenging conditions and the necessity for human expertise persisted. Skepticism towards autonomous drones focused on decision-making capabilities in unpredictable scenarios, emphasizing the need for advanced AI, thorough testing, and a balance between technology and human judgment in firefighting operations.

Drone Delivery

Participants saw drone delivery as a way to make sending and receiving packages faster and more efficient, especially in areas hard to reach by traditional means. They believed drones could save fuel and reduce pollution compared to trucks and trains. However, concerns about privacy, safety, and the noise from drones flying overhead were significant. Questions about how to secure packages from theft or tampering, and how drones would navigate busy urban skies, also arose. The transition to fully autonomous drone delivery raised additional questions about the technology's readiness and the ability to respond to unexpected challenges without human intervention.

Regional Air Mobility

Regional Air Mobility (RAM) enjoyed support for its potential to enhance rural connectivity through quick, direct flights, using environmentally friendlier electric or hybrid technologies; however, there were significant concerns about safety, infrastructure development, and integration with existing transport systems. Economic feasibility and potential social inequalities also prompted discussion. The readiness of autonomous flight technology raised questions about safety and public trust, with a strong preference for human pilots, underscoring concerns about reliance on automation in transportation.

Urban Passenger-Carrying Aviation

Urban Passenger-Carrying Aviation was welcomed for its promise to improve city travel, offering quicker, cleaner alternatives to ground transport. Enthusiasm covered reduced travel times and the potential to ease road congestion with eco-friendly vehicles. However, concerns about safety, infrastructure, and the implications of autonomous systems tempered optimism. The balance of efficiency gains against safety and infrastructure investment challenges remained a focal point of discussion, highlighting the complexity of integrating new air mobility solutions into urban environments.

Living Near a Vertiport

Participants generally expressed discomfort with the idea of living near a vertiport, citing noise, privacy, and safety concerns. Those residing in urban centres feared increased pollution and infrastructure costs, while rural residents suggested locating vertiports away from homes. Despite some openness to the idea, if properly regulated, the consensus leaned towards improving existing transport systems rather than adding new ones. Concerns varied by location, with a universal emphasis on minimizing impact on residential areas.

General Feelings about AAM Technology

Participants generally viewed AAM technology with optimism for its revolutionary potential in transportation and services like medical services and firefighting. However, significant concerns existed about safety, regulation, environmental, and privacy impacts, especially without a pilot. To mitigate concerns, the importance of safety mechanisms, rigorous training for remote operators, advanced technology for error correction, and transparent communication about AAM's dependability was emphasized.

Transport Canada’s Communication

Participants suggested that Transport Canada's communication about AAM should have detailed safety protocols and environmental measures, emphasizing transparency and public involvement in decision-making. They recommended using both digital and traditional methods to inform and engage the public, ensuring accessibility and inclusivity in discussions about AAM's benefits and regulations.

Final Considerations

Initial interest in AAM shifted to cautious optimism as participants learned more, questioning infrastructure, regulation, and integration with existing systems. Skeptics concerned about relevance and environmental impacts became more receptive to AAM's benefits, like emergency services, swayed by safety and environmental assurances.

1.6 Notes on Interpretation of the Research Findings

The opinions and observations expressed in this document do not reflect those of Transport Canada. This report was compiled by Leger based on research conducted specifically for this project.

The results of the quantitative research use a sample drawn from an internet panel, which is not probabilistic in nature. As a result, the margin of error cannot be calculated for this survey and the results cannot be described as statistically projectable to the target population.

Qualitative research is designed to reveal a rich range of participants' opinions, perceptions and interpretations. It does not and cannot measure what percentage of the target population holds a given opinion or perception. Findings are qualitative in nature and cannot be used quantitatively to estimate the numeric proportion or number of individuals in the population who hold a particular opinion.

1.7 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.

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Detailed Results

2. Survey Results

2.1 Profile of the respondents

Table 3 presents the demographic profile of respondents involved in the study regarding their gender, age, education level, region of residence, area of residence, language spoken, household income, ethnicity, disability status, presence of children in the household, generation status, and occupation.

Table 3. Demographic profile of the respondents

Gender	
Woman	51%
Man	48%
Other gender	0,47%
I prefer not to say	0,05%

Age	
18-24	10%
25-34	17%
35-44	17%
45-54	16%
55-64	18%
65-74	16%
75 +	7%

Education	
Less than a High School diploma or equivalent	3%
High School diploma or equivalent	27%
Registered Apprenticeship or other trades certificate or diploma	7%
College, CEGEP or other non-university certificate or diploma	31%
University certificate or diploma below bachelor's level	5%
Bachelor's degree	17%
Post graduate degree above bachelor's level	8%
Prefer not to answer	1%

Region of residence	
British Columbia	14%
Alberta	11%
Saskatchewan	3%
Manitoba	3%
Ontario	39%
Quebec	23%
New Brunswick	2%
Nova Scotia	3%

Prince Edward Island	0,42%
Newfoundland and Labrador	1%
Northwest Territories	0,10%
Yukon	0,11%
Nunavut	0,08%

Urban or Rural Area

Urban area (with a population of 100,000 or more)	41%
Suburban area (with a population of at least 30,000 but under 100,000)	38%
Rural area (with a population below 30,000)	19%
I don't know	2%
I prefer not to say	0%

Language Spoken at Home*

English	72%
French	20%
Other	12%
Don't know	0%
I prefer not to say	1%

*Multiple answer allowed.

Income

Under $20,000	7%
$20,000 to just under $40,000	16%
$40,000 to just under $60,000	15%
$60,000 to just under $80,000	14%
$80,000 to just under $100,000	13%
$100,000 to just under $150,000	15%
$150,000 and above	9%
Prefer not to answer	10%

Ethnicity

Indigenous	4%
Arab	2%
Black	3%
Chinese	5%
Filipino	1%
Latin American	2%
South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)	5%
Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Thai, Laotian, etc.)	1%
West Asian (e.g., Iranian, Afghan, etc.)	1%
White	77%
Other	1%
I prefer not to say	2%

Respondents identifying as a person with a disability

Yes	14%
No	84%
I prefer not to say	2%

Children in the household

Yes	27%
No	73%
I prefer not to say	1%

Generation status

First generation	18%
Second generation	21%
Third generation	21%
Fourth generation or more	37%
I prefer not to say	4%

Occupation

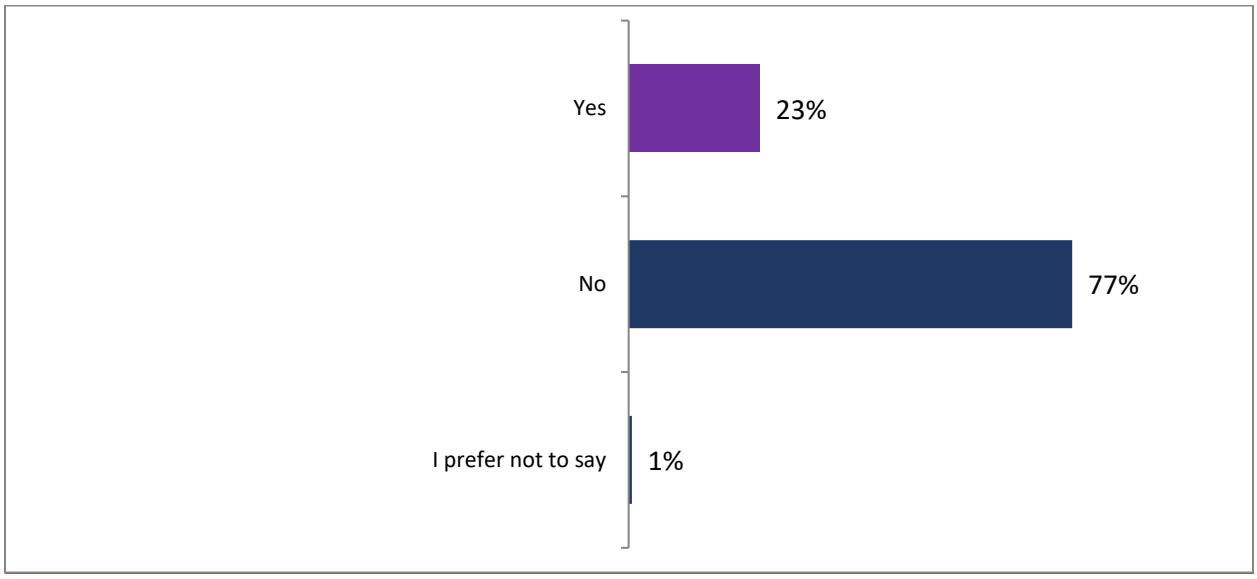
Working full-time, that is, 35 or more hours per week	40%
Working part-time, that is, less than 35 hours per week	11%
Self-employed	6%
Unemployed, but looking for work	3%
A student attending school full-time	5%
Retired	27%
Not in the workforce (Full-time homemaker, unemployed, not looking for work)	5%
Other	2%
Prefer not to answer	1%

2.2 Awareness of AAM and its applications

The majority of Canadians (77%) had never heard about advanced air mobility before, while less than a quarter of Canadians (23%) heard about it before.

Awareness of AAM is higher among respondents aged 18-34 years old (29%), those with a university diploma (29%), those belonging to BIPOC (Black, Indigenous, People of colour) communities (28%), especially West Asians (53%), men (28%), and people living in urban or suburban areas (24%).

Figure 1: Awareness of AAM



Q1: Advanced Air Mobility (AAM) is a term that refers to new ways of moving people, goods, and services by air. AAM falls into two categories: Urban Air Mobility (UAM), which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; and Regional Air Mobility (RAM), which carries people and goods to rural and remote communities.

Services in these categories are being developed and tested in cities around the world. New technologies support these services, including electrical vehicle takeoff and landing (eVTOL) aircraft at new infrastructure called "vertiports", and various drone systems.

In the future, AAM could become an important part of our transportation system. Eventually, it is expected that some passenger aircraft will fly through remote piloting, or even autonomously.

Had you heard about Advanced Air Mobility or any of its examples before today? Base: All respondents (n= 2,717)

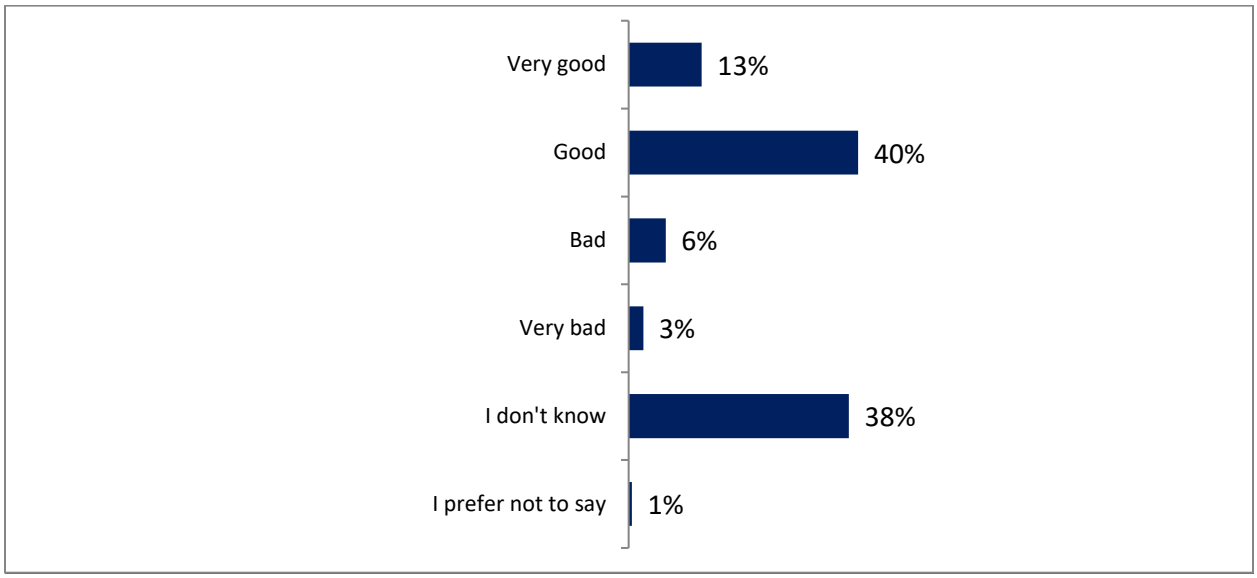
More than half of respondents (52%) believe the development of advanced air mobility is good for Canada with 13% who think it is a very good thing and 40% who think it is a good thing. On the other hand, 9% believe it is bad, including 3% who think it is very bad. More than a third (38%) of respondents did not know if the development of AAM is a good or a bad thing for Canada.

The positive perception of AAM is higher among those who are not born in Canada (62%), those with a university diploma (59%), 18-34 years old (56%), and men (58%).

Those who own or fly a drone (72%), those who have a background in aviation (70%), those who trust aviation in general (70%), and those who have heard of AAM before (68%) are also more likely to have a positive perception of AAM.

On the other hand, those who are familiar with AAM (15%) and those who have heard of AAM before (12%) are more likely to think that the development of AAM is bad for Canada.

Figure 2: Public Perception on the Impact of AAM in Canada



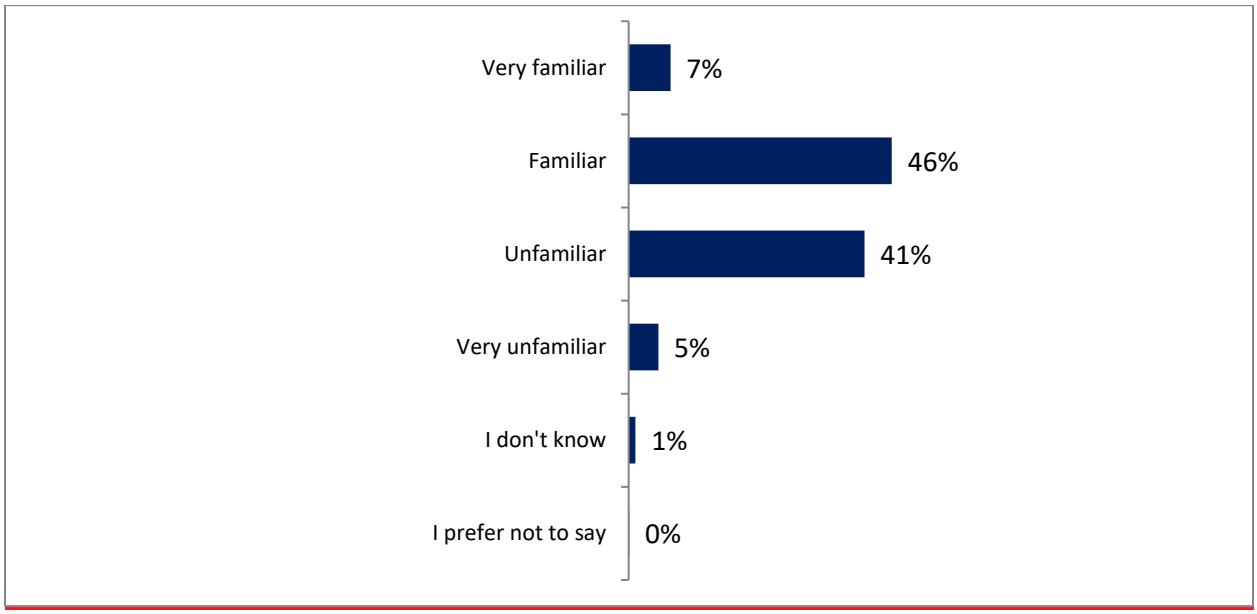
Q2: In general, do you think that the development of Advanced Air Mobility is good or bad for Canada?
Base: All respondents (n=2,727)

More than half of respondents who were aware of AAM (53%) said they are familiar with AAM, with 7% saying they are very familiar and 46% saying they are familiar with the concept. On the other hand, 46% of respondents said they are unfamiliar with the concept, with 41% saying they are unfamiliar and 5% saying they are very unfamiliar.

Familiarity with advanced air mobility is higher among those who own or fly a drone (76%), those who have a background in aviation (68%), those belonging to BIPOC (Black, Indigenous, People of colour) communities (67%), those who were born outside of Canada (65%), Ontarians (62%), 18-34 (61%), and men (58%).

Respondents living Quebec (66%), those aged 55 years or older (56%), those living in rural areas (56%), and women (53%) are more likely to be unfamiliar with AAM.

Figure 3: Familiarity with Advanced Air Mobility



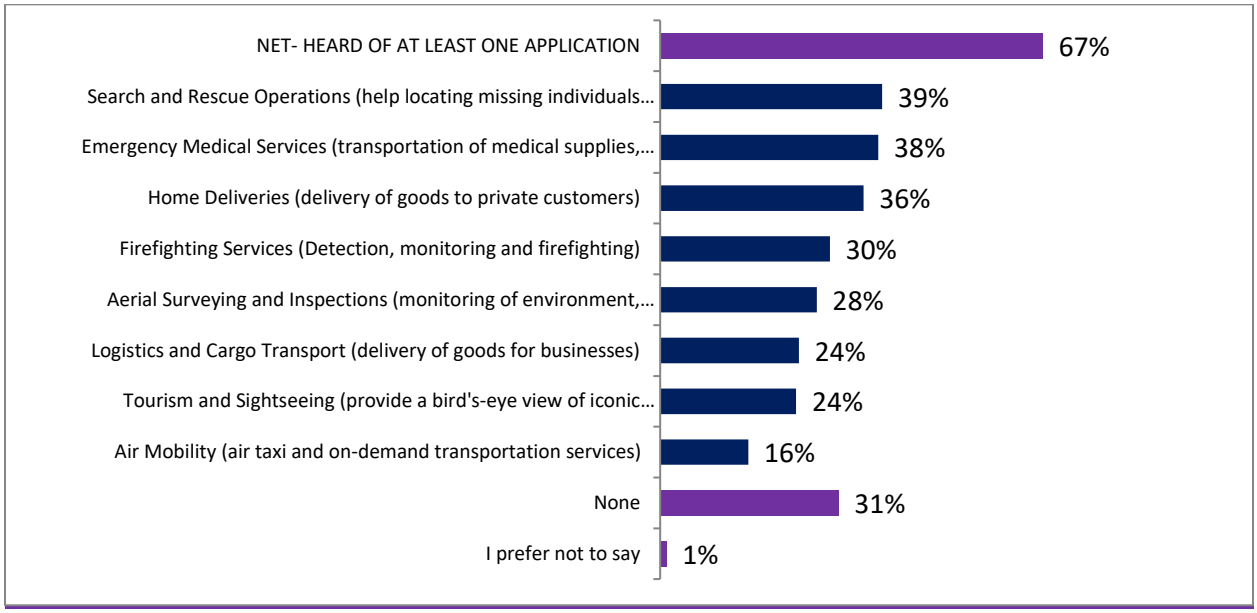
Q3: How familiar were you with Advanced Air Mobility before today? Base: Respondents who were aware of Advanced Air Mobility (n= 658)

Two-thirds of respondents (67%) are aware of at least one application of AAM, while 31% have never heard of any of the applications presented. More specifically, the applications most frequently mentioned by respondents are search and rescue operations (39%), emergency medical services (38%), and home deliveries (36%).

Women are more likely to be unaware of any applications of AAM (34% cannot mention any vs 29% among men).

Respondents who have heard of advanced air mobility before (97%), those who have an aviation background (94%), those who own or fly a drone (86%), those who think that the development of AAM is good for Canada (79%), those with a university degree (74%), and those living in an urban area (69%) are all more likely to know at least one application of AAM.

Figure 4: Awareness of Advanced Air Mobility applications



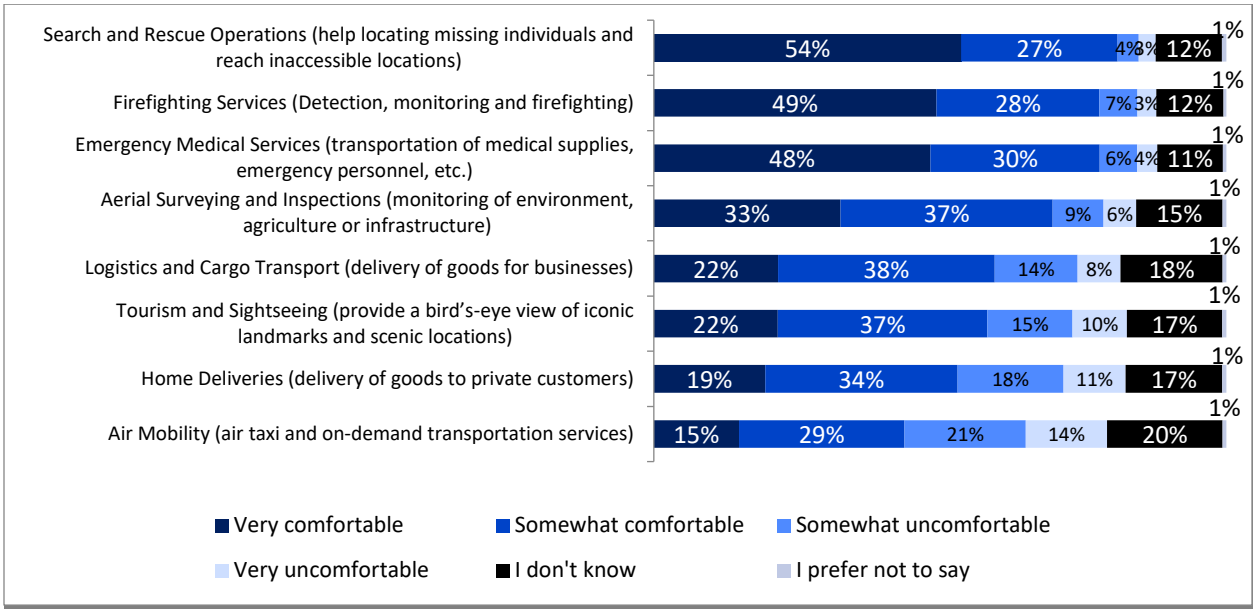
Q4: Which of these Advanced Air Mobility applications have you heard of before? Base: All respondents (n= 2,717)

2.3 Level of comfort with AAM applications in urban areas

When it comes to applications of advanced air mobility in urban areas, a majority of respondents are comfortable with search and rescue operations (81% are comfortable, with 54% being very comfortable and 27% being somewhat comfortable), with firefighting services (78% are comfortable, with 49% being very comfortable and 28% being somewhat comfortable), and with emergency medical services (78% are comfortable, with 48% being very comfortable and 30% being somewhat comfortable).

For other applications, notably aerial surveying and inspections (70%), logistics and cargo transport (60%), tourism and sightseeing (58%), and home deliveries (53%), more than half of respondents say they would be very or somewhat comfortable with those in urban areas. Air mobility in urban areas is the only application falling below a 50% comfort level among respondents, with only 44% indicating comfort. This includes 15% who are very comfortable and 29% who are somewhat comfortable with urban air mobility.

Figure 5: Level of comfort with Advanced Air Mobility applications in urban areas



Q5: How comfortable would you be with these applications of Advanced Air Mobility in urban areas?
Base: All respondents (n= 2,717)

Overall, respondents living in Quebec and women are less likely to be comfortable with almost all of the applications of AAM in urban areas. On the other hand, respondents living in Atlantic provinces, men, and those aged 55 and over are more likely to be comfortable with these applications. There are no significant differences between respondents living in urban areas compared to those living in rural areas. The following table provides more detailed information on the significant differences.

Table 4: *How comfortable would you be with these applications of Advanced Air Mobility in urban areas?*
Base: All respondents (n= 2,717)
Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	GENDER		AGE			Province					
% Total Comfortable (Very + somewhat)	**Women**	**Men**	**18-34**	**35-54**	**55+**	**ATL**	**QC**	**ON**	**Prairies**	**AB**	**BC**
Search and Rescue Operations (help locating missing individuals and reach inaccessible locations)	80%	81%	**74%-**	**78%-**	**87%+**	85%	**75%-**	82%	84%	85%	80%

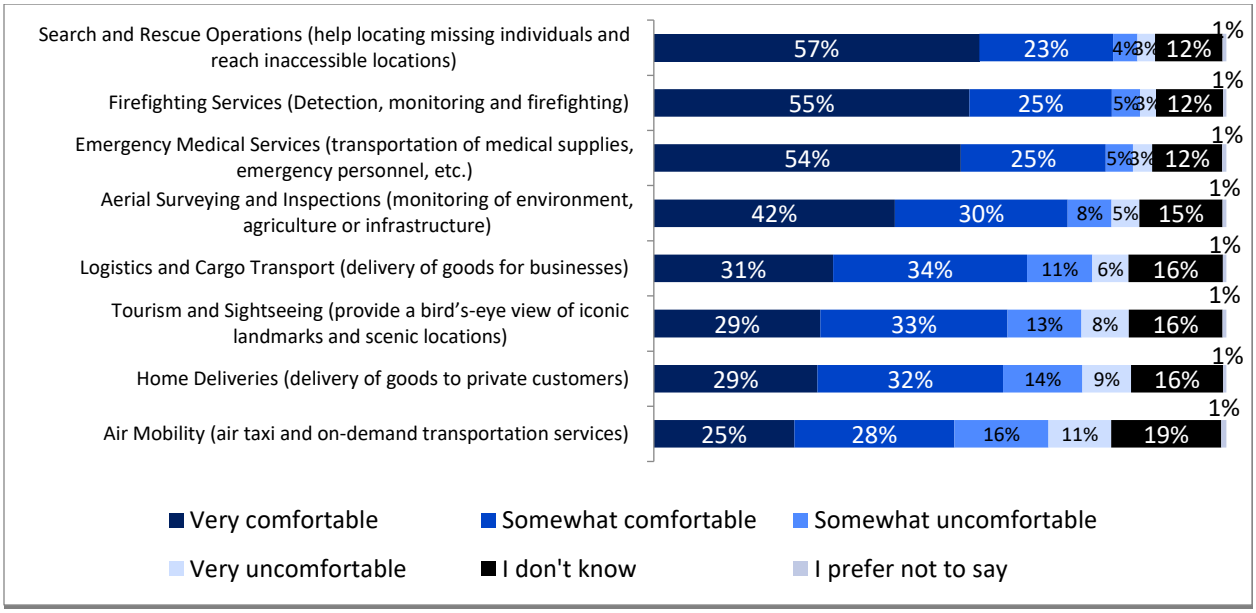
Firefighting Services (Detection, monitoring and firefighting)	77%	79%	73%-	74%-	84%+	81%	74%-	79%	82%	80%	77%
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.)	78%	78%	74%-	75%	82%+	82%	74%-	79%	79%	76%	78%
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure)	65%-	74%+	63%-	67%	76%+	76%	68%	69%	74%	70%	68%
Logistics and Cargo Transport (delivery of goods for businesses)	56%-	63%+	62%	56%-	61%	64%	53%-	62%	66%	59%	59%
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations)	55%-	62%+	60%	56%	59%	69%+	52%-	60%	63%	58%	56%
Home Deliveries (delivery of goods to private customers)	49%-	58%+	54%	54%	52%	62%+	48%-	54%	54%	55%	52%
Air Mobility (air taxi and on-demand transportation services)	40%-	48%+	47%	44%	42%	53%+	34%-	47%+	52%+	41%	46%

2.4 Level of comfort with AAM applications in rural areas

Regarding applications of advanced air mobility in rural areas, results are similar to the applications in urban areas. Most respondents are comfortable with search and rescue operations (80% are comfortable, with 57% being very comfortable and 23% being somewhat comfortable), with firefighting services (80% are comfortable, with 55% being very comfortable and 25% being somewhat comfortable), with emergency medical services (79% are comfortable, with 54% being very comfortable and 25% being somewhat comfortable), and with aerial surveying (72% are comfortable, with 42% being very comfortable and 30% being somewhat comfortable).

For other applications, notably logistics and cargo transport (65%), tourism and sightseeing (62%), home deliveries (61%), and air mobility (52%), more than half of respondents say they would be very or somewhat comfortable with those in urban areas. Air mobility still ranks last; however, more respondents would be comfortable with this application occurring in a rural setting than in an urban one.

Figure 6: Level of comfort with Advanced Air Mobility applications in rural areas



Q6: How comfortable would you be with these applications of Advanced Air Mobility in rural areas?
Base: All respondents (n= 2,717)

Overall, respondents living in Quebec, those aged 18 to 34, and women are less likely to be comfortable with almost all of the applications of AAM in rural areas. On the other hand, respondents living in Atlantic provinces, men, respondents aged 55 and over, and those living in urban areas are more likely to be comfortable with the applications. The following table provides more detailed information on the significant differences.

Table 5: *How comfortable would you be with these applications of Advanced Air Mobility in rural areas?*
Base: All respondents (n= 2,717)
Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	GENDER		AGE			Province						Area	
% Total Comfortable (Very + somewhat)	Women	Men	18-34	35-54	55+	ATL	QC	ON	Prairies	AB	BC	Urban	Rural
Search and Rescue Operations (help locating missing individuals and reach inaccessible locations)	80%	80%	74%-	77%-	87%+	86%+	76%-	80%	82%	84%	80%	81%	83%
Firefighting Services (Detection, monitoring and firefighting)	80%	80%	75%-	77%-	85%+	84%	76%-	80%	81%	83%	81%	81%	81%
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.)	79%	79%	75%-	77%	83%+	85%+	74%-	80%	80%	81%	78%	80%	79%
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure)	69%-	76%+	68%-	70%	77%+	74%	69%	72%	78%	75%	72%	74%+	70%
Logistics and Cargo Transport (delivery of goods for businesses)	61%-	70%+	64%	64%	67%	68%	57%-	67%	68%	70%	67%	66%+	63%
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations)	58%-	66%+	62%	60%	63%	71%	54%-	64%	65%	64%	61%	63%+	59%
Home Deliveries (delivery of goods to private customers)	58%-	64%+	59%	60%	63%	67%	54%-	63%	65%	63%	60%	62%+	59%
Air Mobility (air taxi and on-demand transportation services)	48%-	58%+	52%	50%	54%	56%	43%-	55%	61%+	51%	56%	53%	51%

Table 6. Differences in comfort levels with Advanced Air Mobility between rural and urban Areas

	*How comfortable would you be with these applications of Advanced Air Mobility in **urban areas**? (Q5)*	*How comfortable would you be with these applications of Advanced Air Mobility in **rural areas**? (Q6)*
Total	n=2,717	N=2,717
Search and Rescue Operations (help locating missing individuals and reach inaccessible locations	81%	80%
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.	78%	79%
Firefighting Services (Detection, monitoring and firefighting	78%	80%
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure	70%	72%
Logistics and Cargo Transport (delivery of goods for businesses)	60%	65%
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations	58%	62%
Home Deliveries (delivery of goods to private customers	53%	61%
Air Mobility (air taxi and on-demand transportation services	44%	52%

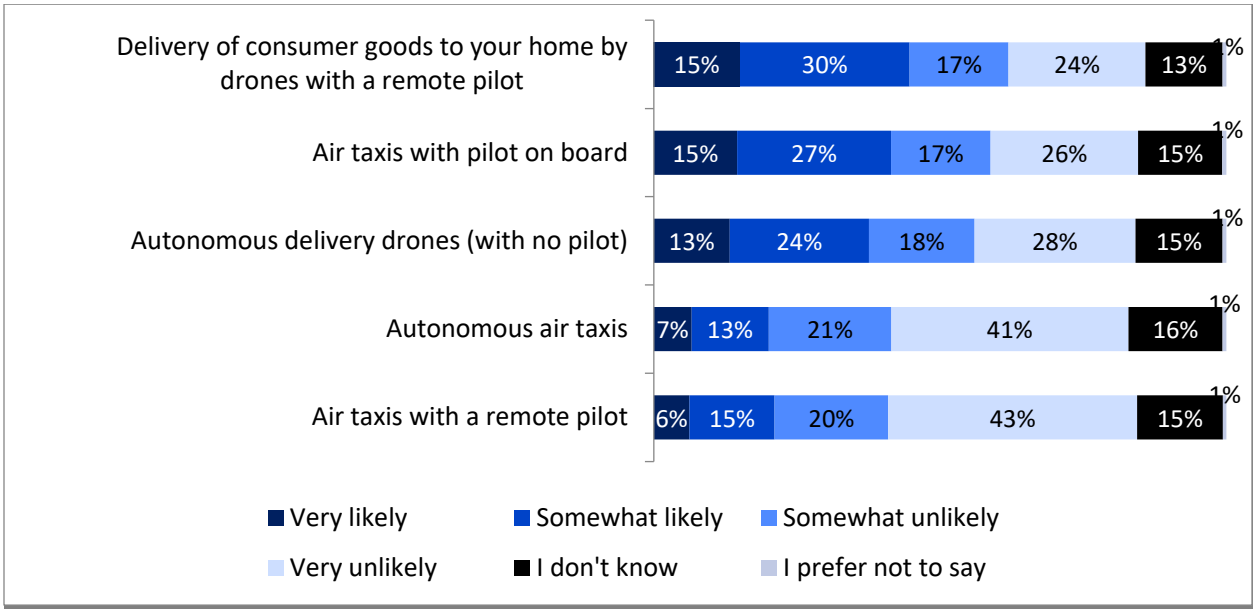
There are nearly identical comfort levels with the following applications in both urban and rural areas: Search and Rescue Operations (81% in urban vs. 80% in rural), Emergency Medical Services (78% in urban vs. 79% in rural), Firefighting Services (78% in urban vs. 80% in rural) and Aerial Surveying and Inspections (70% in urban vs. 72% in rural).

The level of comfort with the following applications is significantly higher when they are happening in rural areas: Logistics and Cargo Transport (60% in urban vs. 65% in rural), Tourism and Sightseeing (58% in urban vs. 62% in rural), Home Deliveries (53% in urban vs. 61% in rural) and Air Mobility (44% in urban vs. 52% in rural).

2.5 Likelihood of trying AAM

In terms of engaging with AAM technologies, fewer than half of the respondents demonstrate a likelihood of trying any of the technologies surveyed. Drone delivery of consumer goods is identified as the technology most respondents are likely to try, with 45% indicating likelihood (15% very likely and 30% somewhat likely). Similar levels of likelihood are reported for air taxis with a pilot on board (41%) and autonomous delivery drones without a pilot (38%). Furthermore, only one in five respondents are likely to try air taxis with a remote pilot (21%) or autonomous air taxis (20%). For these last two applications, the very likely level was less than one in ten respondents, showing that the absence of a pilot in the air taxi seems to have a significant impact on the willingness to try these AAM applications.

Figure 7: Likelihood of trying advanced air mobility technologies



Q7: How likely would you be to personally try the following Advanced Air Mobility technologies if they were available in the area where you live? Base: All respondents (n= 2,717)

Overall, respondents living in Quebec, women, white respondents, and respondents aged 55 years old or older are less likely to be willing to try AAM technologies. On the other hand, men, respondents aged 18 to 34, those living in urban areas, those who are a part of the BIPOC community, those who are familiar with AAM, and those with a university degree are more likely to be willing to try the AAM technologies.

The following tables provide more detailed information on the significant differences.

Table 7. *How likely would you be to personally try the following Advanced Air Mobility technologies if they were available in the area where you live? Base: All respondents (n= 2,717)*
Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	GENDER		AGE			Province						Area	
% Total Likely (Very + somewhat)	**Women**	**Men**	**18-34**	**35-54**	**55+**	**ATL**	**QC**	**ON**	**Prairies**	**AB**	**BC**	**Urban**	**Rural**

Delivery of consumer goods to your home by drones with a remote pilot	38%-	52%+	50%+	47%	40%-	50%	37%-	46%	47%	49%	47%	46%	43%
Air taxis with pilot on board	36%-	47%+	45%	43%	38%-	47%	30%-	44%	43%	45%	47%	43%+	38%
Autonomous delivery drones (with no pilot)	29%-	47%+	44%+	41%	31%-	40%	34%	38%	38%	42%	36%	38%	38%
Autonomous air taxis	15%-	27%+	31%+	23%	14%-	19%	17%-	24%+	21%	23%	20%	22%+	17%-
Air taxis with a remote pilot	14%-	26%+	29%+	23%+	12%-	20%	16%-	23%+	16%	23%	18%	21%+	16%-

Table 8. *How likely would you be to personally try the following Advanced Air Mobility technologies if they were available in the area where you live? Base: All respondents (n= 2,717)*
Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	Ethnicity		Education			Familiarity with AAM	
% Total Likely (Very + somewhat)	**White**	**BIPOC**	**HS or less**	**Trade/ College**	**Universtiy**	**Familiar**	**Not familiar**
Delivery of consumer goods to your home by drones with a remote pilot	41%-	57%+	42%	44%	49%+	61%+	48%-
Air taxis with pilot on board	38%-	53%+	39%	40%	46%+	42%+	23%-
Autonomous delivery drones (with no pilot)	34%-	50%+	35%	35%	43%+	42%+	23%-
Autonomous air taxis	16%-	36%+	20%	17%	26%+	68%+	55%-
Air taxis with a remote pilot	15%-	35%+	20%	16%	25%+	58%+	49%

2.6 Feeling of safety of AAM as a pedestrian on the ground

When it comes to the feeling of safety for pedestrians, half of respondents (52%) said they would feel very (17%) or somewhat safe (35%) if air taxis with a pilot on board would fly above them. Other AAM technologies surveyed were considered safe by a smaller proportion of respondents. Four respondents out of ten (41%) consider delivery of goods by drones with a remote pilot to be very (10%) or somewhat (31%) safe for pedestrians, a third (33%) consider autonomous delivery drones with no pilot to be very (8%) or somewhat safe (25%), a quarter (27%) consider air taxis with a remote pilot to be very (7%) or

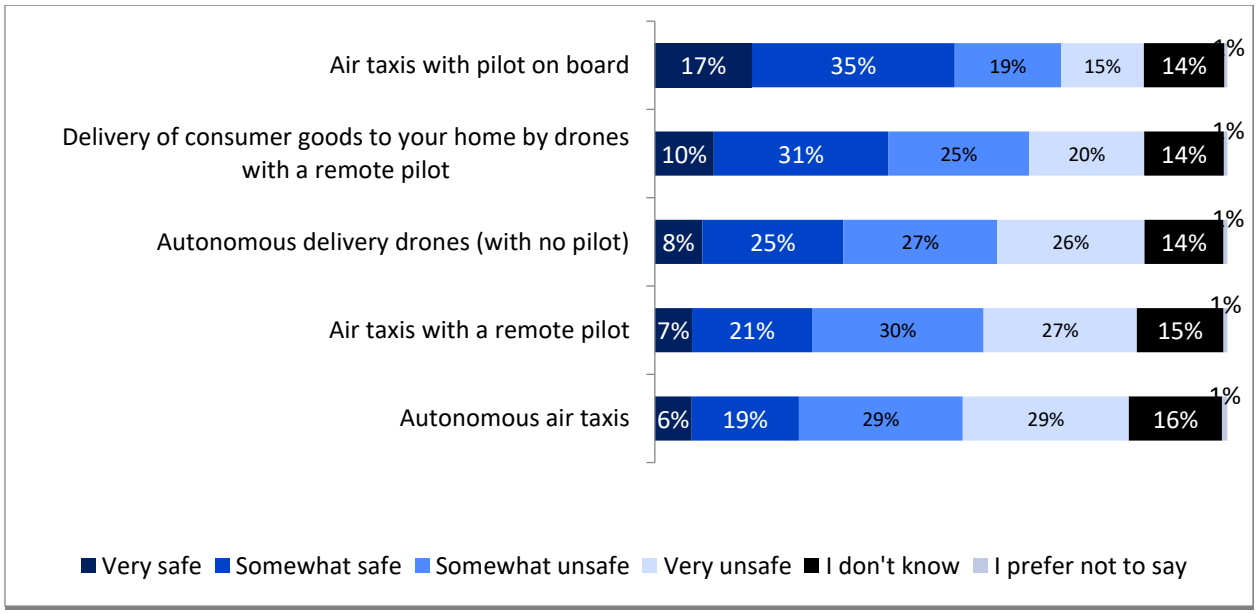
somewhat (21%), and the same proportion (25%) consider autonomous air taxis to be very (6%) or somewhat (19%) safe.

The feeling of safety as a pedestrian walking under a flying air taxi drops by 25 points (from 52% to 27%) if the air taxi is remotely piloted and by 27 points (from 52% to 25%) if the air taxi is autonomous compared to when the air taxi has a pilot on board.

The feeling of safety as a pedestrian walking under a delivery drone drops by 8 points (from 41% to 33%) if the drone is autonomous compared to when it is remotely piloted.

Autonomous drone delivery, air taxis with a remote pilot, or autonomous air taxis bring a higher level of discomfort among respondents. In fact, more than half of respondents say these AAM applications do not make them feel safe as a pedestrian.

Figure 8: Feeling of safety with Advanced Air Mobility technologies as pedestrians



Q8: As a pedestrian on the ground, how safe would you feel with the following Advanced Air Mobility technologies flying above you? Base: All respondents (n= 2,717)

Overall, women, white respondents, and respondents aged 55 or older are less likely to consider the AAM technologies as safe for pedestrians. On the other hand, men, respondents aged 18 to 34, and those who are a part of the BIPOC community, are more likely to consider them as safe. The following table provides more detailed information on the significant differences.

Table 9. *As a pedestrian on the ground, how safe would you feel with the following Advanced Air Mobility technologies flying above you? Base: All respondents (n= 2,717)*
Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

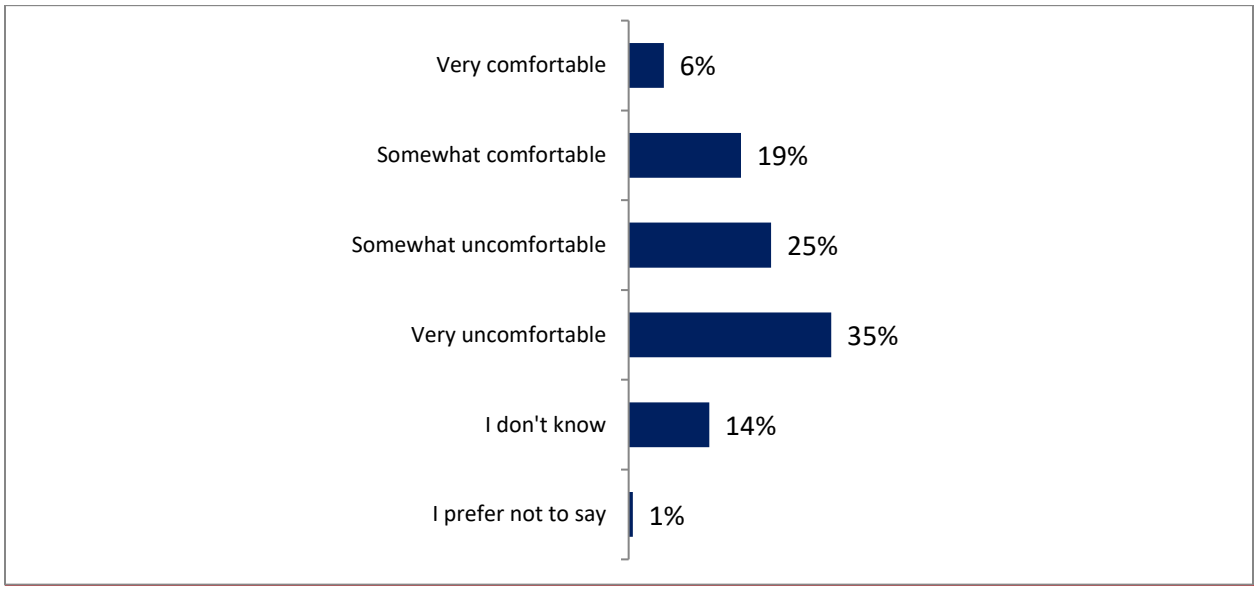
	GENDER		AGE			Ethnicity	
% Total Safe (Very + somewhat)	**Women**	**Men**	**18-34**	**35-54**	**55+**	**White**	**BIPOC**
Air taxis with pilot on board	**49%-**	**56%+**	54%	51%	53%	52%	**56%+**
Delivery of consumer goods to your home by drones with a remote pilot	**34%-**	**48%+**	**45%+**	41%	**38%-**	**38%-**	**48%+**
Autonomous delivery drones (with no pilot)	**25%-**	**41%+**	**39%+**	34%	**28%-**	**30%-**	**42%+**
Air taxis with a remote pilot	**20%-**	**35%+**	**35%+**	27%	**23%-**	**24%-**	**38%+**
Autonomous air taxis	**18%-**	**33%+**	**32%+**	26%	**20%-**	**22%-**	**36%+**

2.7 Level of Comfort living next to a vertiport

One out of four respondents (26%) would be very (6%) or somewhat (19%) comfortable living next to a vertiport. On the other hand, six out of ten respondents (60%) would be somewhat (25%) or very (35%) uncomfortable living next to a vertiport. These results clearly indicate that the majority of respondents would not feel comfortable living near a vertiport, given their current state of knowledge on the subject.

Respondents who own or fly a drone (55%), those who have an aviation background (46%), those who are familiar with AAM (46%), those living in the Atlantic provinces (37%), men (34%), and respondents aged 18 to 34 years old (33%) are more likely to be comfortable with living next to a vertiport.

Figure 9: Level of comfort with living next to a vertiport



Q9: How comfortable would you be living next to a vertiport (Advanced Air Mobility landing and departure area)? Base: All respondents (n= 2,717)

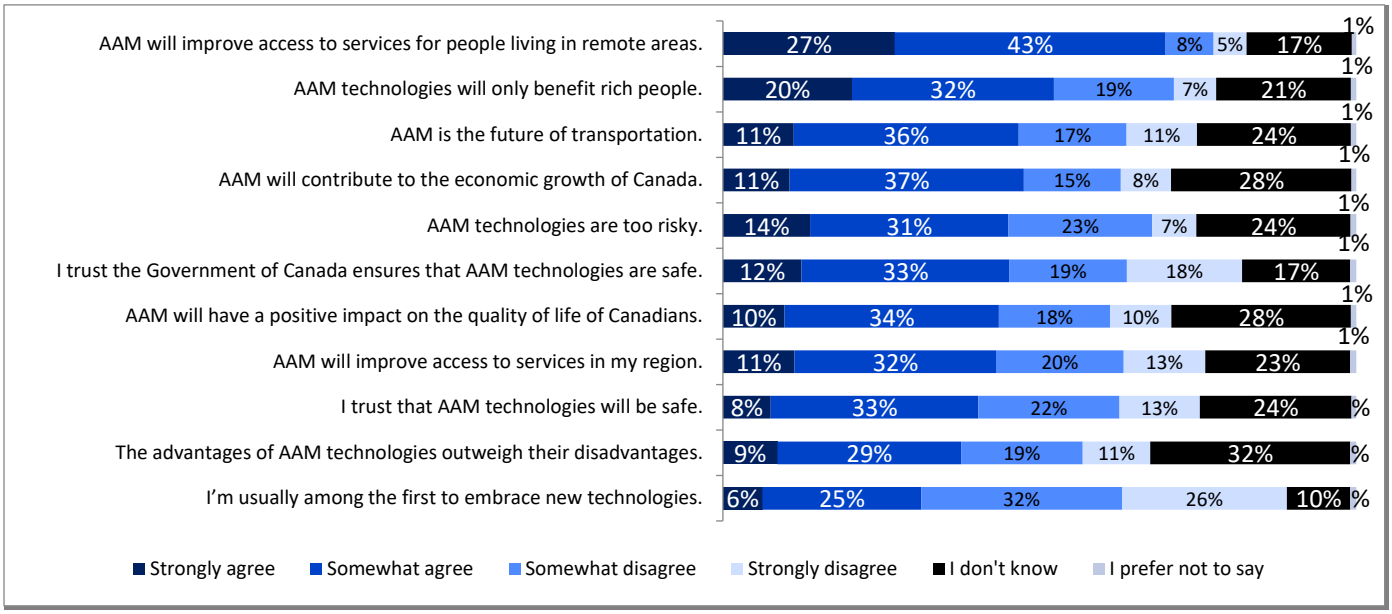
2.8 Detailed Perceptions of AAM

The statement that received the highest level of agreement among respondents is positive towards AAM. Indeed, most respondents (70%) agree (27% strongly and 43% somewhat) that AAM will improve access to services for people living in remote areas. Other positive statement surveyed received a lower level of agreement. Around half of respondents (47%) agree (11% strongly and 36% somewhat) that AAM is the future of transportation and the same proportion (47%) agree that AAM will contribute to the economic growth of Canada (11% strongly and 37% somewhat). Forty-five percent (45%) of respondents agree (12% strongly and 33% somewhat) that they trust the Government of Canada to ensure that AAM technologies are safe, and forty-four percent (44%) of respondents agree (10% strongly and 34% somewhat) that AAM will have a positive impact on the quality of life of Canadians. About the same proportion (43%) agree (11% strongly and 32% somewhat) with the idea that AAM will improve access to services in their region, and 40% trust (8% strongly and 32% somewhat) that AAM technologies will be safe. Around a third of respondents (38%) agree (9% strongly and 29% somewhat) that the advantages of AAM technologies outweigh their disadvantages, and 31% agree (6% strongly and 25% somewhat) that they are usually among the first to embrace new technologies.

On the other hand, around half of respondents agree with some negative statements about AAM. More than one respondent out of two (52%) agree (20% strongly and 32% somewhat) that AAM technologies will only benefit rich people, 47% agree (14% strongly and 31% somewhat) that AAM technologies are too risky.

The results show that there is a lack of awareness about AAM among respondents. Indeed, the level of "I don't know" is high for most of the statements evaluated in this study, showing that many respondents could not clearly state the benefits of AAM.

Figure 10: Level of agreement with statements of AAM



Q10: To what extent do you agree or disagree with each of the following statements? Base: All respondents (n= 2,717)

Overall, men, younger respondents (18-34), those living in an urban area, and those not born in Canada are more likely to agree with the different statements on AAM technologies. On the other hand, women, respondents aged 55 or over, and respondents born in Canada are less likely to agree with the statements about AAM technologies. The following table provides more detailed information on the significant differences.

Table 10: *To what extent do you agree or disagree with each of the following statements? Base: All respondents (n= 2,717)*

Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	GENDER		AGE			Area		Born in Canada	
% Total Agree (Strongly + somewhat)	**Women**	**Men**	**18-34**	**35-54**	**55+**	**Urban**	**Rural**	**Yes**	**No**
Positive statements									
AAM will improve access to services for	69%	71%	**65%-**	**66%-**	**76%+**	**72%+**	69%	70%	**74%+**

people living in remote areas.									
AAM is the future of transportation.	**43%-**	**50%+**	47%	45%	48%	**48%+**	44%	**45%-**	**58%+**
AAM will contribute to the economic growth of Canada.	**42%-**	**54%+**	49%	49%	45%	**49%+**	46%	**46%-**	**59%+**
I trust the Government of Canada ensures that AAM technologies are safe.	**40%-**	**51%+**	47%	45%	44%	**47%+**	**40%-**	**43%-**	**60%+**
AAM will have a positive impact on the quality of life of Canadians.	**38%-**	**50%+**	**48%+**	43%	**41%-**	44%	45%	**42%-**	**55%+**
AAM will improve access to services in my region.	**39%-**	**47%+**	**48%+**	44%	**39%-**	42%	**50%**	**42%-**	**53%+**
I trust that AAM technologies will be safe.	**33%-**	**48%+**	42%	40%	39%	41%	39%	**39%-**	**51%+**
The advantages of AAM technologies outweigh their disadvantages.	**32%-**	**44%+**	**42%+**	37%	35%	38%	36%	**36%-**	**49%+**
I'm usually among the first to embrace new technologies.	**25%-**	**38%+**	**41%+**	**36%+**	**21%-**	**33%+**	**27%-**	**30%-**	**38%+**
Negative statements									
AAM technologies will only benefit rich people.	51%	54%	**57%+**	53%	**49%-**	53%	53%	53%	52%
AAM technologies are too risky.	45%	45%	**49%+**	44%	43%	**46%+**	42%	45%	49%

Respondents who have heard of AAM before, those who think that AAM development is good for Canada, and those who are familiar with AAM are more likely to agree with the different statements on AAM when

compared with respondents who have never heard of AAM, those who think that AAM development is bad for Canada, and those who are not familiar with the concept.

Table 11. *To what extent do you agree or disagree with each of the following statements? Base: All respondents (n= 2,717)*

Reading note: Significantly lower differences are marked with a "-" sign, while significantly higher differences are marked with a "+".

	Heard of AAM		Development of AAM		Familiarity with AAM	
% Total Agree (Strongly + somewhat)	**Yes**	**No**	**Good**	**Bad**	**Familiar**	**Unfamiliar**
Positive statements						
AAM will improve access to services for people living in remote areas.	**80%+**	**67%-**	**84%+**	**49%-**	78%	83%
AAM is the future of transportation.	**61%+**	**43%-**	**67%+**	**19%-**	64%	59%
AAM will contribute to the economic growth of Canada.	**62%+**	**43%-**	**69%+**	**18%-**	**67%+**	58%
I trust the Government of Canada ensures that AAM technologies are safe.	**55%+**	**43%-**	**62%+**	**18%-**	**60%+**	**49%-**
AAM will have a positive impact on the quality of life of Canadians.	**57%+**	**40%-**	**65%+**	**14%-**	**64%+**	**50%-**
AAM will improve access to services in my region.	**55%+**	**40%-**	**63%+**	**16%-**	**61%+**	**50%-**
I trust that AAM technologies will be safe.	**55%+**	**36%-**	**59%+**	**12%-**	**60%+**	**49%-**
The advantages of AAM technologies outweigh their disadvantages.	**53%+**	**33%-**	**58%+**	**13%-**	**59%+**	**48%-**
I'm usually among the first to embrace new technologies.	**44%+**	**28%-**	**42%+**	**21%-**	**52%+**	**35%-**
Negative statements						
AAM technologies will only benefit rich people.	**59%+**	**50%-**	54%	**67%+**	59%	59%
AAM technologies are too risky.	48%	44%	**42%-**	**76%+**	**54%+**	**43%-**

2.9 General attitude towards AAM

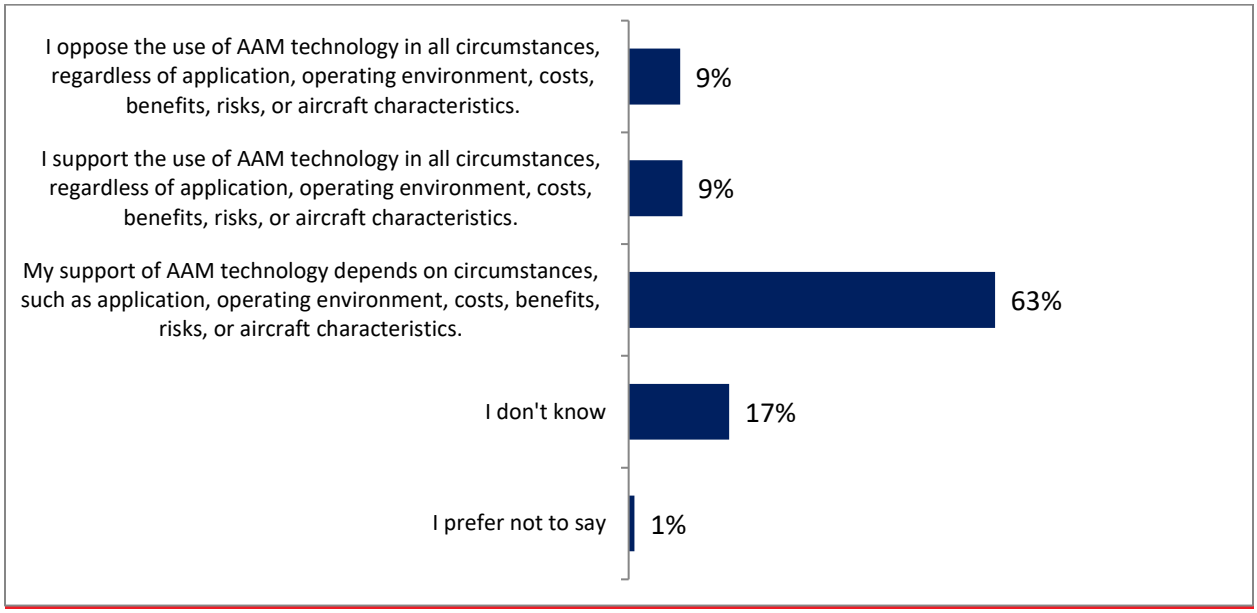
Six respondents out of ten (63%) have a conditional stance, indicating that their support for AAM technology depends on specific circumstances, such as application, operating environment, costs, benefits, risks, or aircraft characteristics. A small proportion of respondents, 9%, oppose using AAM technology in all circumstances, which includes considerations of application, operating environment, costs, benefits, risks, or aircraft characteristics. The same proportion (9%) support using AAM technology in all circumstances, irrespective of the same factors. Overall, three-quarters (73%) of respondents completely or conditionally support AAM technology. It should be noted that nearly one in five respondents (17%) cannot give an answer regarding their attitude towards AAM.

Respondents who are not familiar with the concept of AAM (79%), those aged 55 and over (73%), respondents who have heard of AAM before the survey (71%), and those with a university degree (68%) are more likely to support AAM technology depending on the circumstances.

Respondents who are familiar with the concept of AAM (21%), those aged 18 to 34 years old (18%), men (13%), respondents living in urban areas (11%), those who are a part of the BIPOC community (18%), especially South Asians (32%), and respondents who have heard of AAM (16%) are more likely to support AAM technologies in all circumstances.

Respondents who think the development of AAM has a bad impact on Canada (29%) and those living in Quebec (13%) are more likely to be opposed to AAM in all circumstances.

Figure 11: Attitude towards Advanced Air Mobility technology



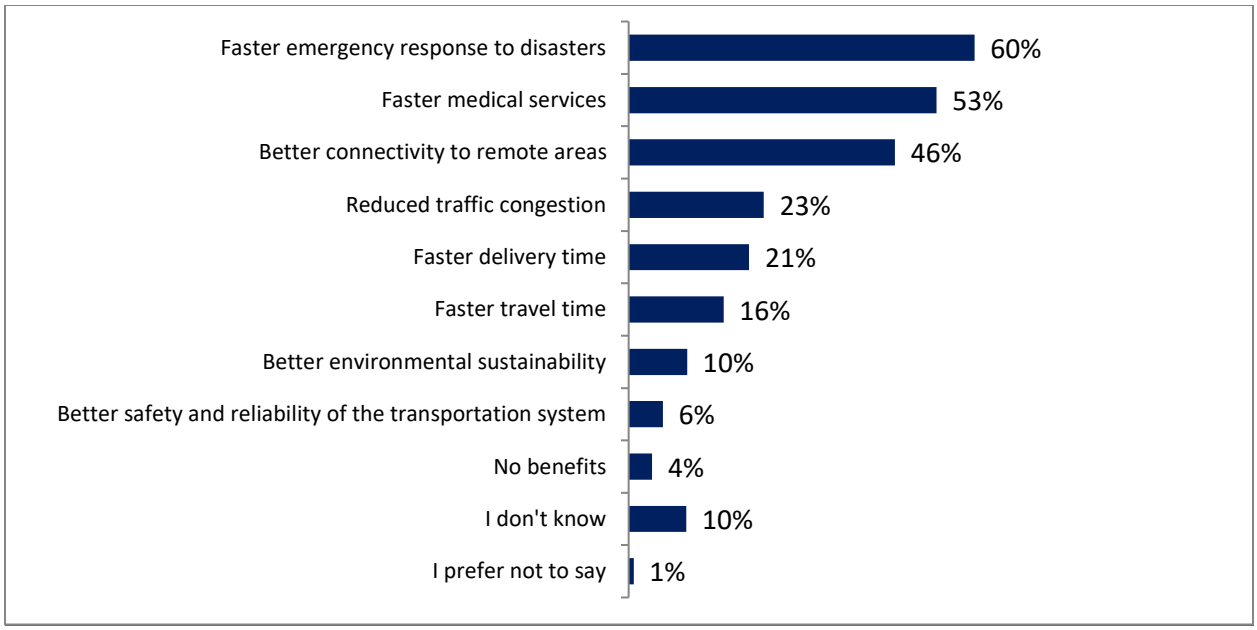
Q11: *Which option best represents your attitude towards Advanced Air Mobility technology? Base: All respondents (n= 2,717)*

2.10 Perceived benefits of AAM

Faster emergency response to disasters (60%), faster medical services (53%), and better connectivity to remote areas (46%) are the top three perceived benefits by respondents. Other benefits, such as reduced traffic congestion (23%), faster delivery time (21%), faster travel time (16%), better environmental sustainability (10%), and better safety and reliability of the transportation system (6%), were selected in a smaller proportion.

A small proportion of respondents (4%) think AAM have no benefits. Respondents who think that the development of AAM is bad for Canada (18%) and those who have a low trust in the government to handle risks associated with AAM (10%) are more likely to see no benefits in the use of AAM.

Figure 12: Perceived benefits of AAM



*Q12: What are the top 3 key benefits that you believe Advanced Air Mobility could bring? *Multiple answer allowed (Maximum of three). Base: All respondents (n= 2,717)*

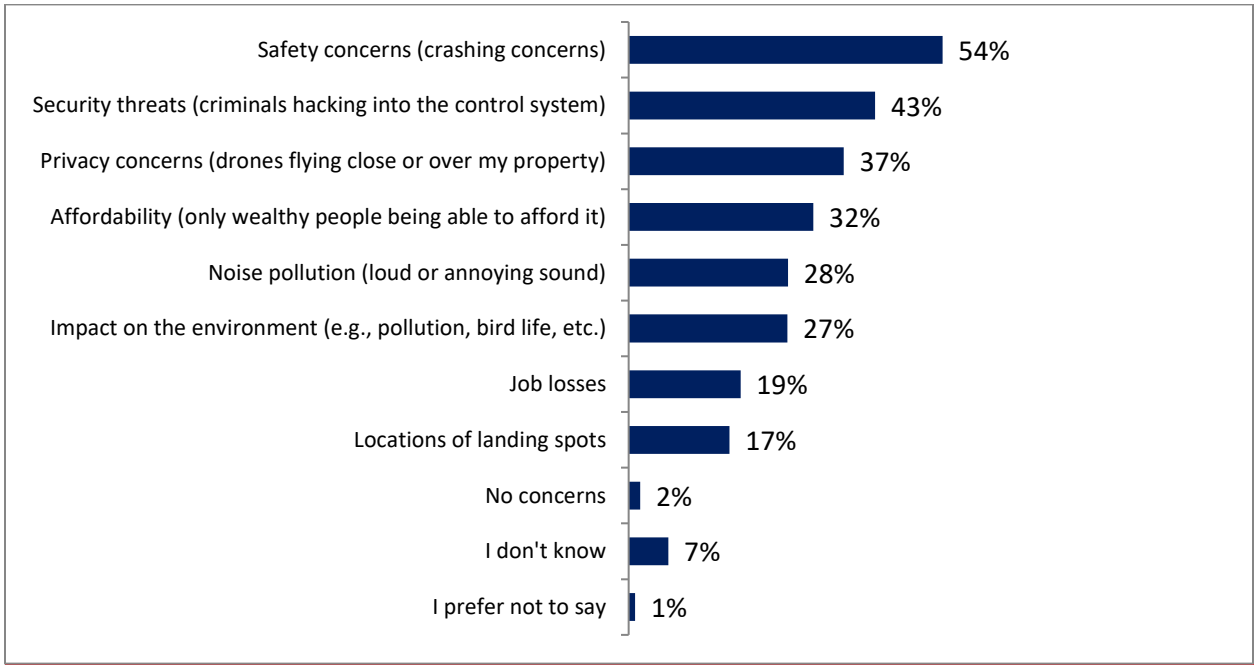
2.11 Concerns with AAM

Safety or crashing concerns (54%), security threats (43%), and privacy concerns (37%) are the top concerns of respondents with AAM. It is followed closely by affordability (32%), noise pollution (28%), and impact on the environment (27%). Other concerns, such as job losses (19%) and locations of landing spots (17%), were mentioned to a lesser extent. A vast majority of respondents expressed concerns about AAM. Only one out of ten respondents said they had no concerns (2%), didn't know (7%), or preferred not to answer (1%).

Some significant differences can be noted, notably respondents aged 18 to 34 years old who are more likely to mention the impact on the environment (33%), while respondents aged 55 and over are more likely to mention safety concerns (61%) and security threats (49%). Respondents living in Quebec are more

likely to be concerned with noise pollution (37%), respondents living in the Atlantic provinces are more likely to be concerned with privacy concerns (46%), and respondents living in British Columbia are more likely to be concerned with safety concerns (62%). Respondents living in rural areas are more likely to be concerned with security threats (49%) and privacy concerns (43%). Finally, respondents who are unfamiliar with AAM are more likely than respondents who are familiar with AAM to mention safety concerns (63% vs 50% among respondents who are familiar with the concept) and security threats (51% vs 40% among respondents who are familiar with the concept).

Figure 13: top concerns with AAM



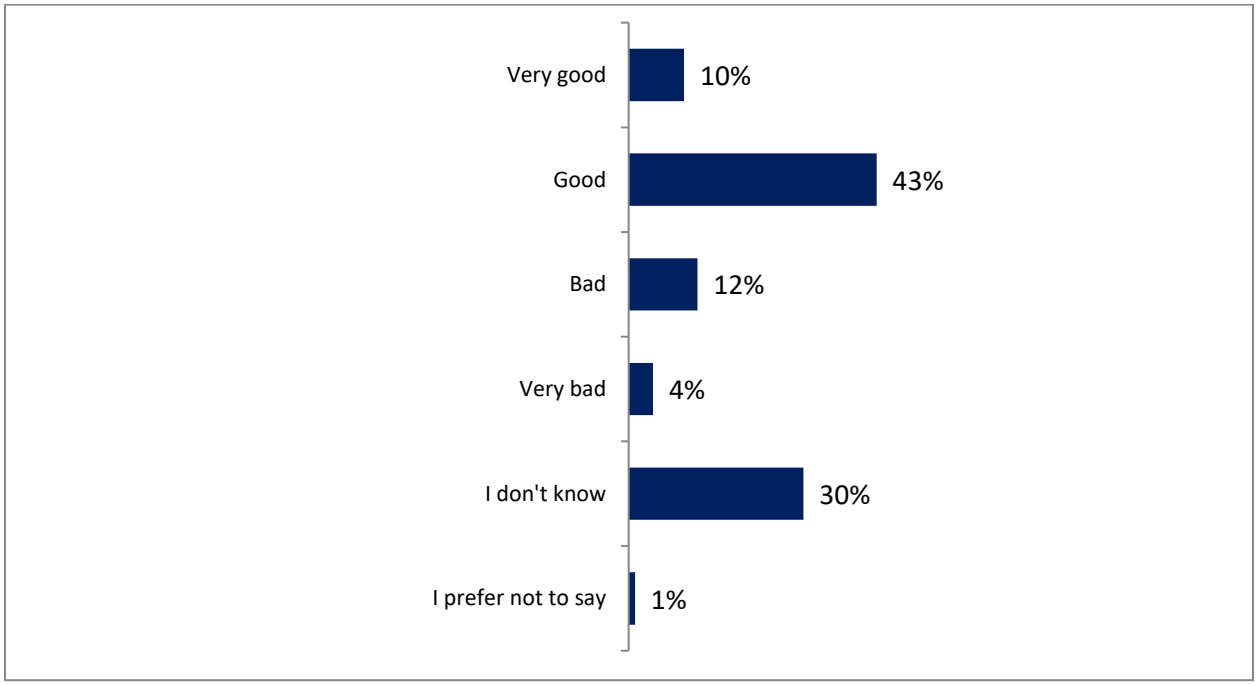
*Q13: What are the top 3 key concerns you have with regards to Advanced Air Mobility? *Multiple answer allowed (Maximum of three). Base: All respondents (n= 2,717)*

2.12 Opinion of AAM after exposure to information

After exposure to information about AAM, half of respondents think that the development of AAM is good, with 10% saying very good and 43% saying good. On the other hand, fewer than one respondent out of five (16%) now think that the development of AAM is bad for Canada, with 12% thinking it is bad and 4% thinking it is very bad, and about a third of respondents (30%) don't know. The same question was asked before exposure to the information (see Q2), and results after exposure are similar to the ones before exposure to information about AAM. Before exposure, 52% of respondents thought that the development of AAM was good for Canada, with 13% saying very good and 40% saying good, and 9% thought it was bad, with 6% saying it was bad and 3% thinking it was very bad. After being exposed to the information about AAM, significantly more respondents now think the development of that type of technology is bad for Canada (16% now vs 9%), and significantly fewer are now unable to give an answer to the question (30% now vs 38%). As the proportion of respondents who believe that the development

of AAM is good for Canada has remained the same, it can be inferred that people who were undecided before being exposed to information have now voiced their opinion and judged that the development of AAM is bad for Canada. As a following question (Q14B) will demonstrate, safety concerns are the main reason mentioned to explain respondents' negative opinion after being exposed to information on AAM. During the survey, respondents were exposed to various possible applications for AAM through statements that could be either positive or negative. This information seems to have had an impact on undecided respondents, making them doubt the safety of AAM development in Canada.

Figure 14: Opinion of AAM after exposure to information



Q14: *Now that you know more about Advanced Air Mobility, do you think that the development of Advanced Air Mobility is good or bad for Canada? Base: All respondents (n= 2,717)*

2.13 Reasons for positive opinion of development of AAM in Canada

Among respondents who have a positive opinion of the development of AAM in Canada, the main reasons to explain their view are that it is the future of transportation, new and advanced technology (18%), that it will improve accessibility to remote areas (15%), that it will improve emergency response times and save life (14%) and that it will enhance transport efficiency (10%). Other reasons were mentioned by respondents in lesser proportions (less than 10%), such as traffic reduction, improved delivery speed and efficiency, improved access to healthcare services, etc.

Table 12: Reasons for positive opinion of development of AAM in Canada

Reasons	Total
Base (*Those who have a positive opinion of AAM)*	**n=1,447**
The future of transportation / new technology / advanced technology	18%
Improved accessibility to remote areas	15%
Improved / faster emergency response times / saving lives	14%
Enhanced transportation efficiency (faster, easier, etc.)	10%
Traffic reduction / reduces traffic congestion	9%
Improved delivery speed and efficiency	9%
Improved access to health care services / delivering medical supplies	7%
Improved services/access to services in remote areas	7%
It's good / I like it (unspecified)	7%
Improved quality of life in remote areas / helpful/beneficial to remote communities	7%
Economic benefits / good for the economy	6%
Environmentally friendly / better for the environment	5%
Overall improvement in efficiency (cost, time, etc.)	5%
Improved firefighting capabilities / Forest fire management and prevention	3%
Improved search and rescue capabilities	3%
Job creation	2%
Improved disaster response and relief	2%
Safety / security (road safety, national security, etc.)	2%
Other	2%
No reason	1%
I don't know / refusal	9%

Q14A: Can you please explain why you think that the development of Advanced Air Mobility is good for Canada? Spontaneous answers.

2.14 Reasons for negative opinion of development of AAM in Canada

Among participants expressing negative perceptions towards the advancement of AAM in Canada, the main explanation for their stance is apprehensions related to safety concerns and the feeling that it is unsafe and dangerous (32%). It is followed by privacy concerns (15%), job losses (15%), and environmental concerns (14%). Respondents mentioned other reasons in lesser proportions (less than 10%), such as it will only benefit the wealthy, noise concerns, criminal activity, etc.

Table 13: Reasons for negative opinion of development of AAM in Canada

Reasons	Total
Base (*Those who have a negative opinion of AAM)*	**n=440**
Safety concerns / unsafe / dangerous	32%
Privacy concerns	15%
Job losses	15%
Environmental concerns / pollution	14%
It will only benefit the wealthy / no benefits for regular people	8%
Noise concerns / noise pollution	7%
Criminal activity / abuse / vulnerable to hacking	7%
Air traffic / congested air space	6%
It needs more testing / too many unknown variables	6%
It's not needed / unnecessary	5%
Costs / too expensive	5%
Distrust in governmental authorities	4%
It's bad / I don't like it (unspecified)	2%
Other	7%
No reason	3%
I don't know / refusal	13%

Q14B: Can you please explain why you think that the development of Advanced Air Mobility is bad for Canada?

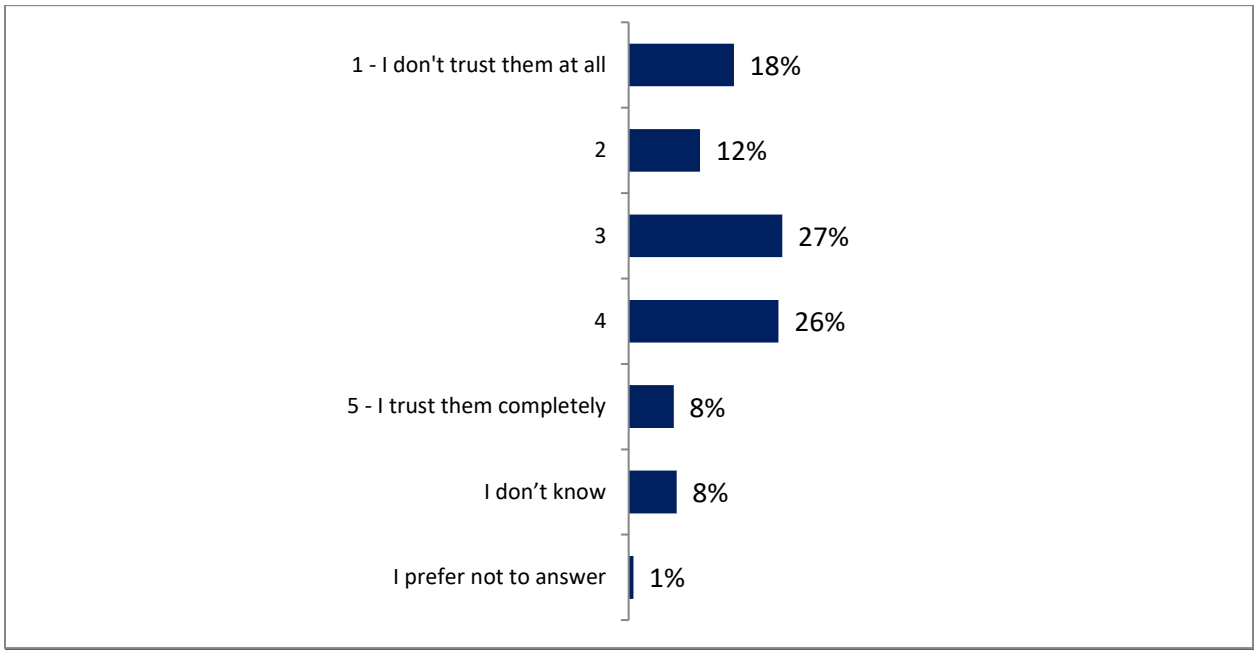
2.15 Trust of the Government of Canada to handle AAM implementation

A third of respondents (31%) have a low trust in the government of Canada to handle the implementation of AAM technology, meaning they gave a score of 1 or 2 on a scale of 1 to 5. About the same proportion (34%) have a high trust in the government of Canada, meaning they gave a score of 4 or 5. A quarter of respondents gave a more neutral rating of three out of five (27%).

Respondents who think that the development of AAM is a good thing for Canada after being exposed to information on the concept (52%), those who are familiar with AAM (51%), those who were not born in Canada (47%), those who are a part of the BIPOC community (45%), especially South Asians (57%), Latin American (51%), and Chinese respondents (50%) as well as men (39%) are more likely to have a high trust in the government.

On the other hand, respondents who think that the development of AAM is a bad thing for Canada after being exposed to information on the concept (68%), Indigenous respondents (44%), those living in rural areas (43%), Albertans (38%), and respondents aged 55 or older (36%) are more likely to have low trust in the government.

Figure 15: Trust in the Government of Canada to handle AAM implementation



Q15: To what extent do you trust the Government of Canada to handle the risks and adopt regulations needed to manage Advanced Air Mobility (including safety, noise control, environmental protection, security, cybersecurity, etc.)? Please use a scale from 1 to 5 where 1 means you don’t trust the Government of Canada at all and 5 that you trust them completely. Base: All respondents (n= 2,717)

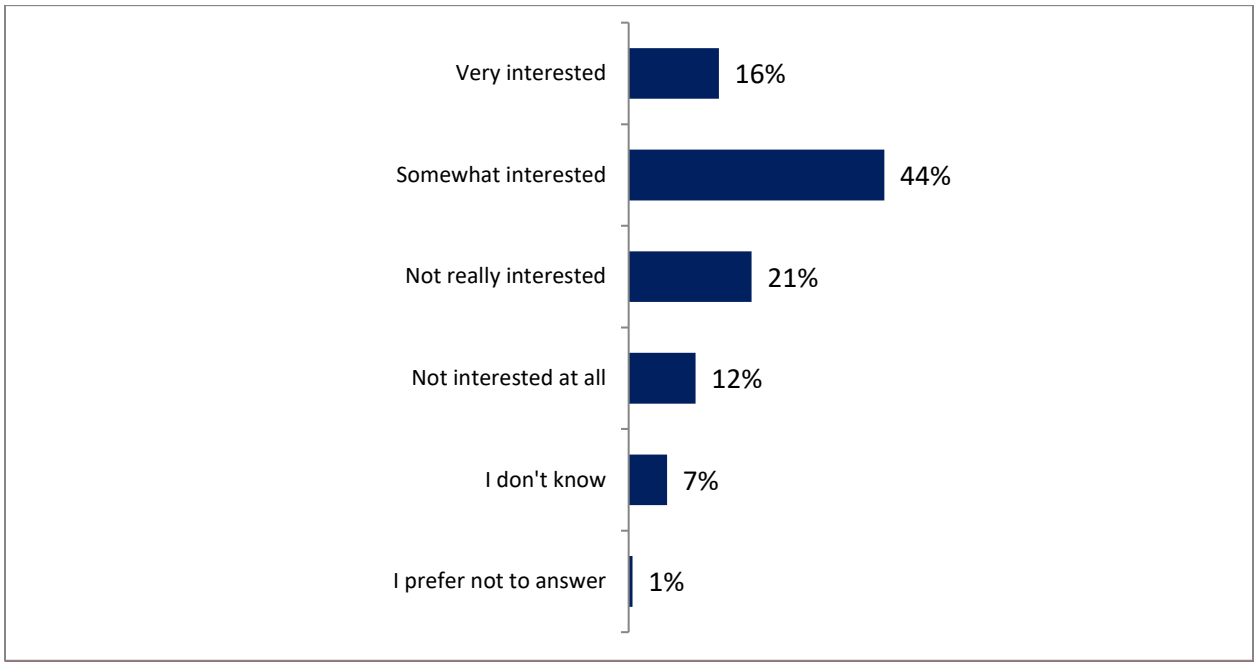
2.16 Interest of being informed on AAM

AAM tends to raise a great deal of interest among respondents. Six respondents out of ten (60%) would be interested in being informed on matters and issues related to AAM, with 16% being very interested and 44% being somewhat interested. On the other hand, a third (33%) would not be interested in being informed about AAM, with 21% being not really interested and 12% being not interested at all.

Respondents who are familiar with the concept of AAM (82%), those who think that the development of AAM is good for Canada after being exposed to information on the matter (78%), those who were not born in Canada (70%), those who are a part of the BIPOC community (66%), especially South Asians (73%), and Arabs (77%), as well as men (64%), and Ontarians (64%) are more likely to be interested in being informed about AAM.

On the other hand, respondents who think that the development of AAM is bad for Canada after being exposed to information on the matter (56%), those living in Quebec (44%), and women (37%) are more likely not to be interested in being informed on AAM.

Figure 16: Interest in being informed on matters and issues related to AAM



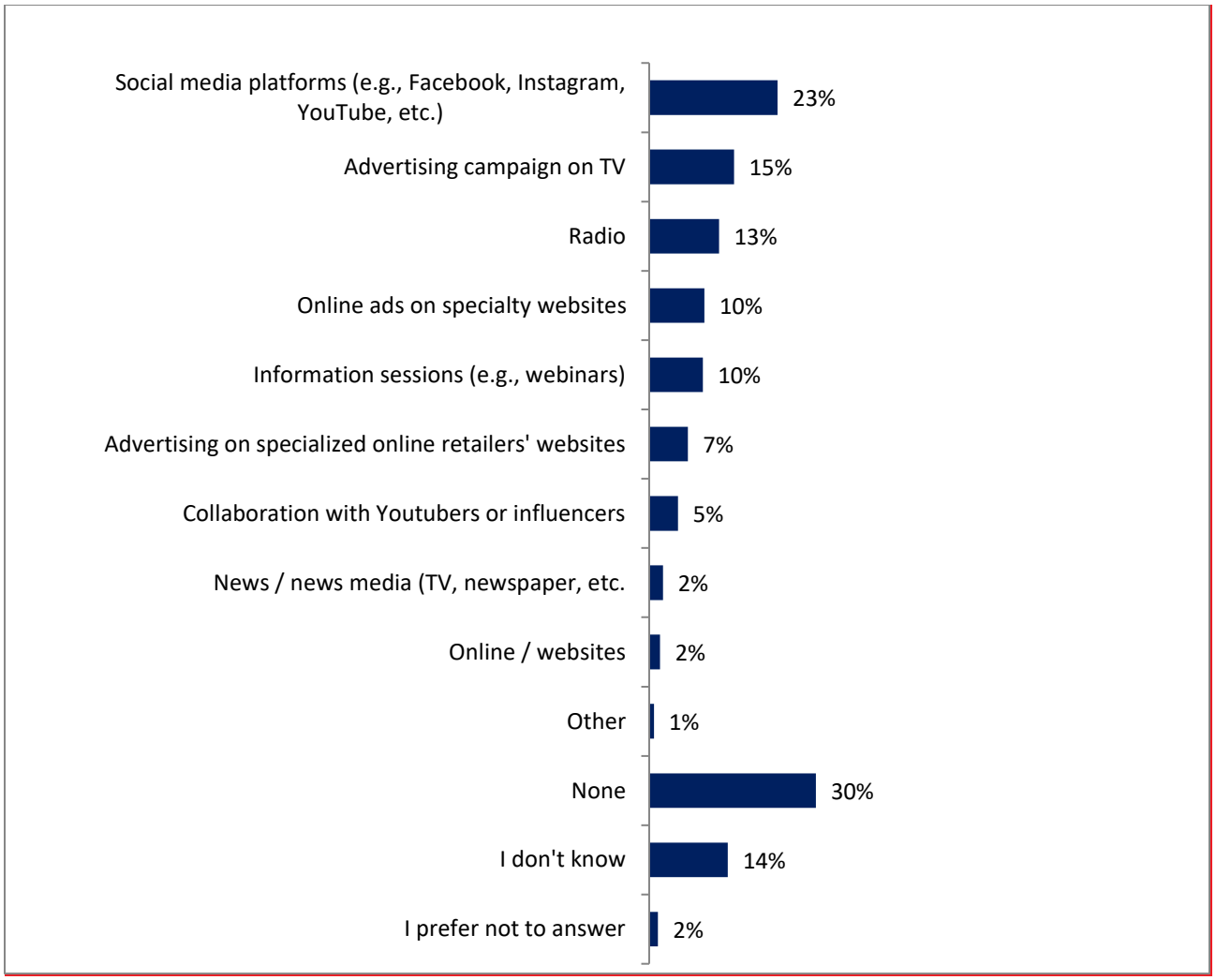
Q16: How interested would you be in being informed on matters and issues related to Advanced Air Mobility? Base: All respondents (n= 2,717)

2.17 Sources of information regarding AAM

The main source of information that respondents access when looking for information regarding AAM in Canada is social media platforms (23%), followed by advertising campaigns on TV (15%) and radio (13%). About a third of respondents (30%) do not access any sources to get information regarding AAM in Canada.

Respondents aged 18 to 34 years old are more likely to access sources online like social media platforms (32%), online ads on specialty websites (13%), collaboration with YouTubers or influencers (10%), or advertising on specialized online retailers' websites (10%), while respondents aged 55 or older are more likely to look for advertising campaigns on TV (18%).

Figure 17: Preferred sources when searching information regarding AAM in Canada



*Q17: What sources do you access when searching for information regarding AAM in Canada? *Multiple answer allowed (Maximum of three). Base: All respondents (n= 2,717)*

2.18 Feelings towards AAM

Six respondents out of ten (58%) have positive feelings towards AAM, notably curiosity (41%), optimism (24%), excitement (14%) and confidence (8%). Half of the respondents (52%) have negative feelings towards AAM, notably skepticism (36%), suspicion (22%), fear (13%) and alarm (11%).

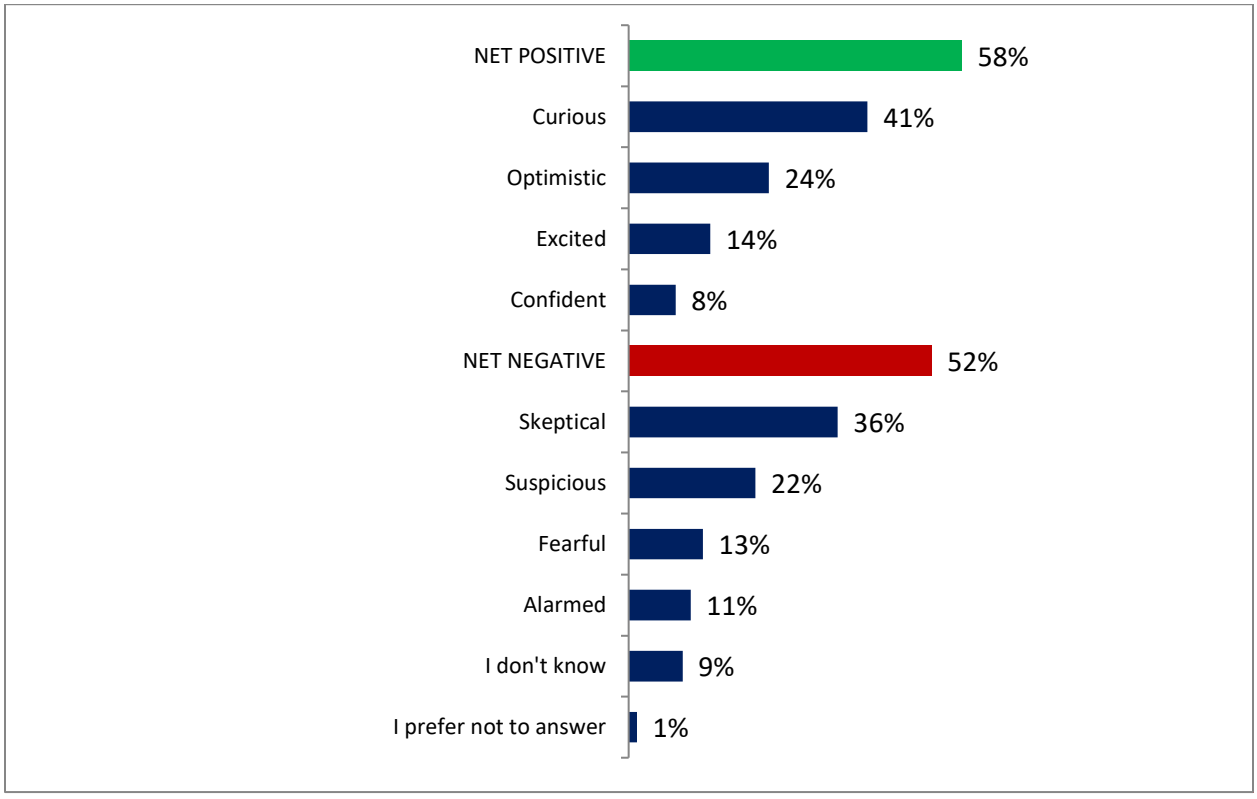
Respondents who think that the development of AAM is good for Canada after being exposed to information on the matter (84%), those who have heard of AAM before (70%), who are a part of the BIPOC community (68%), especially Chinese (72%) respondents and South Asians (76%), those with a university degree (64%), men (63%) are more likely to have positive feelings towards AAM. On the other hand, respondents who think that the development of AAM is bad for Canada after being exposed to

information on the matter (92%), women (57%), and respondents aged 18 to 34 (57%) are more likely to use negative adjectives when describing how they feel about AAM.

It is important to note that some respondents gave both positive and negative adjectives while answering the survey. Among those who chose positive adjectives, 36% also chose negative adjectives, with skepticism being the most common one at 26%. On the other hand, among respondents who chose negative adjectives, 39% also chose at least one positive adjective, with curiosity being the most common at 32%.

Overall, the data suggest that respondents from the BIPOC community tend to have a more positive attitude and a greater openness to AAM. In fact, they are more likely to describe AAM using positive adjectives, are more likely to be willing to try AAM applications, to feel safe as pedestrians while AAM are flying above them, are more likely to support the use of AAM in all circumstances, and they are more inclined to want to be informed about AAMs. When examining the socio-demographic profile of respondents from the BIPOC community, it is observed that 42% are aged 18-34, 31% live in urban areas, and 33% have a university degree. They are also more inclined to operate drones whether for recreational or professional purposes. These aspects likely influence their perceptions, leading them to view AAM favourably.

Figure 18: Feelings towards AAM



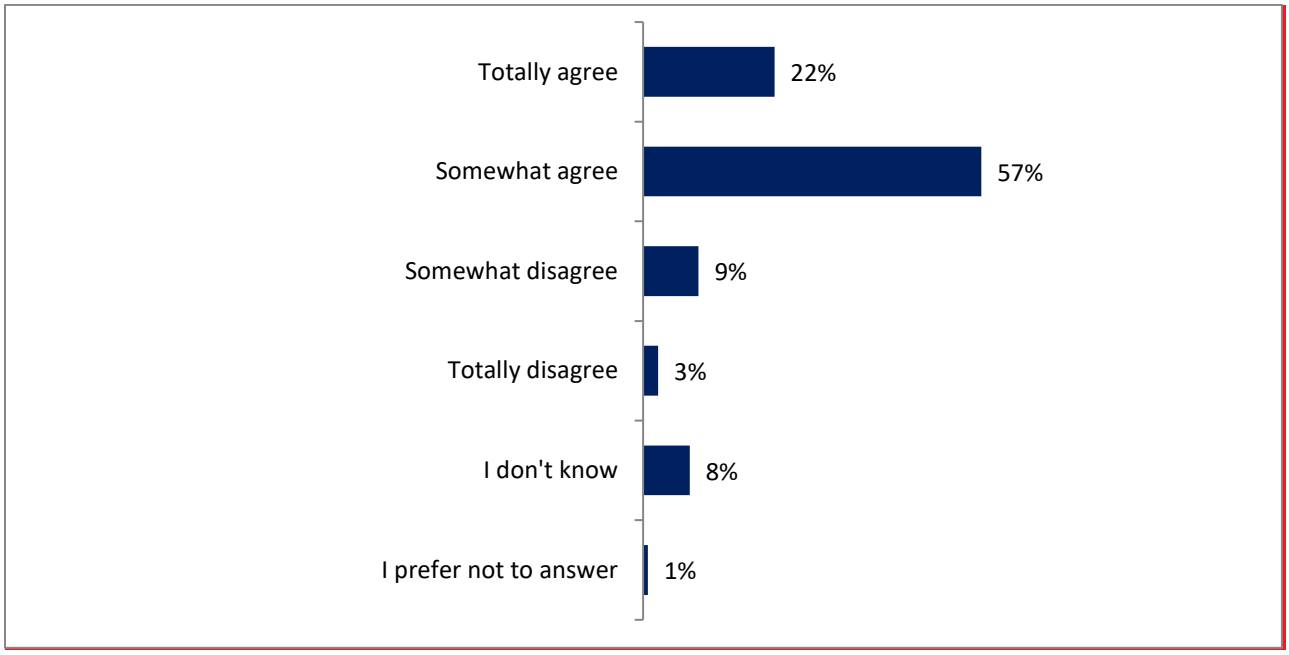
*Q18: Among the following adjectives, which ones best describe how you feel when thinking about Advanced Air Mobility? *Multiple answer allowed. Base: All respondents (n= 2,717)*

2.19 General Trust in Aviation

Eight respondents out of ten (78%) agree with the statement: *I trust that aviation in general is safe,* with a quarter (22%) saying they totally agree and more than half (57%) saying they somewhat agree. One respondent out of ten (12%) disagrees with the statement, with 9% saying they somewhat disagree and 3% saying they totally disagree.

Respondents who think that the development of AAM is good for Canada after being exposed to information on the matter (92%), those who use positive adjectives to describe AAM (89%), those aged 55 or older (85%), those with a university degree (85%), those living in Quebec (83%), and men (82%) are all likely to trust that aviation in general is safe. On the other hand, respondents who think that the development of AAM is bad for Canada after being exposed to information on the matter (32%), those who are opposed to AAM technology (32%), and those who are a part of the BIPOC community (16%), especially Indigenous respondents (19%) are more likely to disagree with the statement that aviation in general is safe.

Figure 19: Trust in aviation



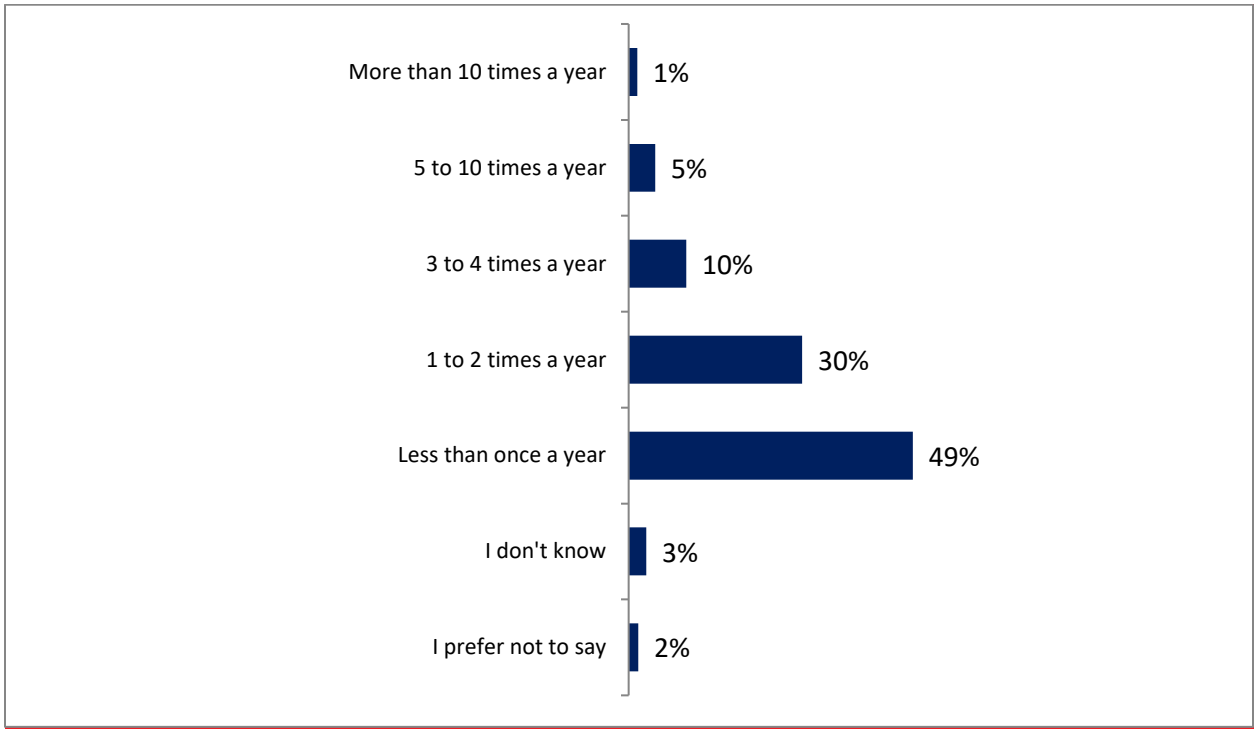
Q19: To what extent do you agree or disagree with the following statement: I trust that aviation in general is safe? Base: All respondents (n= 2,717)

2.20 Other Habits

Half of respondents (49%) reported traveling by plane less than once a year. Around a third (30%) of respondents reported traveling once or twice a year, and a lesser proportion mentioned traveling three to four times a year (10%), five to ten times a year (5%), or more than ten times a year (1%).

Respondents aged 18 to 34 (14%), those with an annual income of $150,000 and above (13%), and those who are a part of the BIPOC community (11%) are more likely to travel by plane five times or more per year.

Figure 20: Frequency of travel by airplane

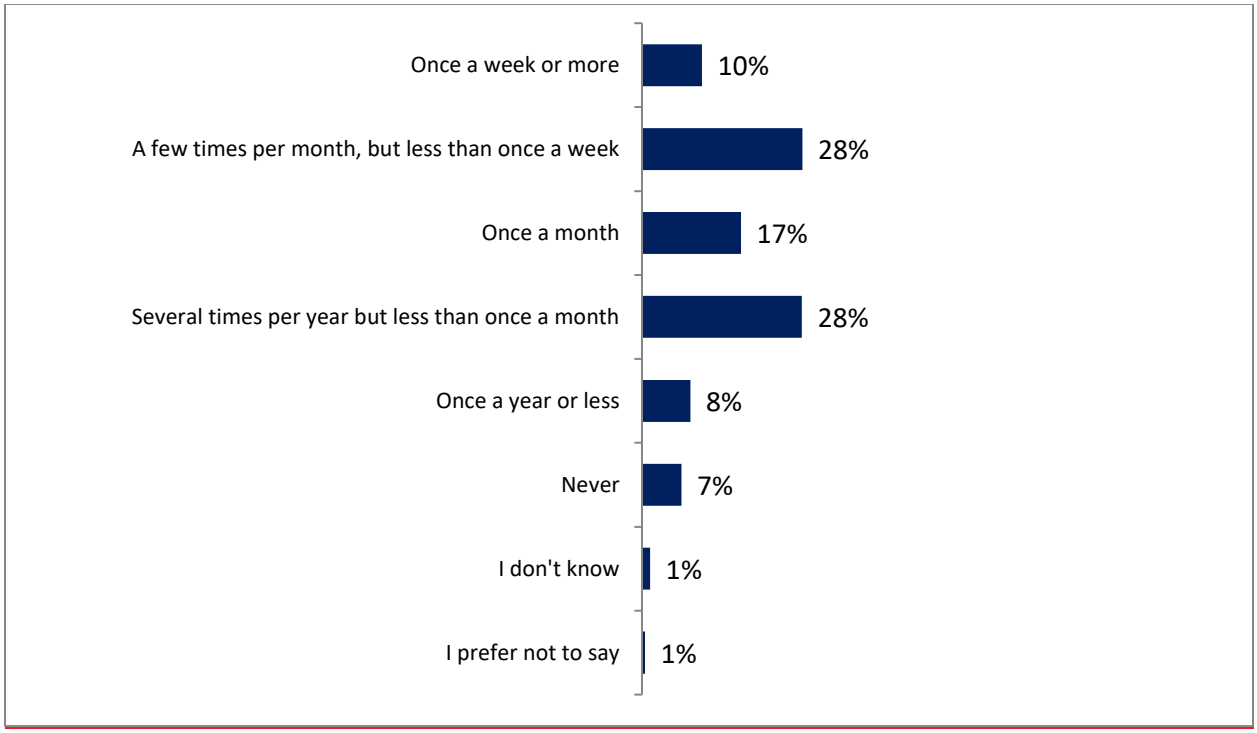


TRAVEL: In a typical year, how often do you travel by airplane for personal or business reasons? Please consider a typical year excluding the years where air travel was impacted by the pandemic. *Base: All respondents (n= 2,717)*

Overall, 91% of respondents say they order goods delivered to their home, while 7% say they never do so. One respondent out of ten (10%) says they order goods delivered to their home once a week or more. Around a quarter of respondents (28%) say they order goods a few times per month, but less than once a week. One-fifth of respondents (17%) say they order goods once a month, a quarter (28%) mentioned doing it several times per year but less than once a month, and 8% do so once a year or less.

Respondents who have an annual income of $150,000 or above (97%), those living in Quebec (95%), those who have children in their household (95%), respondents who are not born in Canada (95%), those aged 18 to 34 years old (93%), and those who are living in an urban area (93%) are more likely to order goods that get delivered to their home.

Figure 21: Frequency of ordering goods that get delivered home

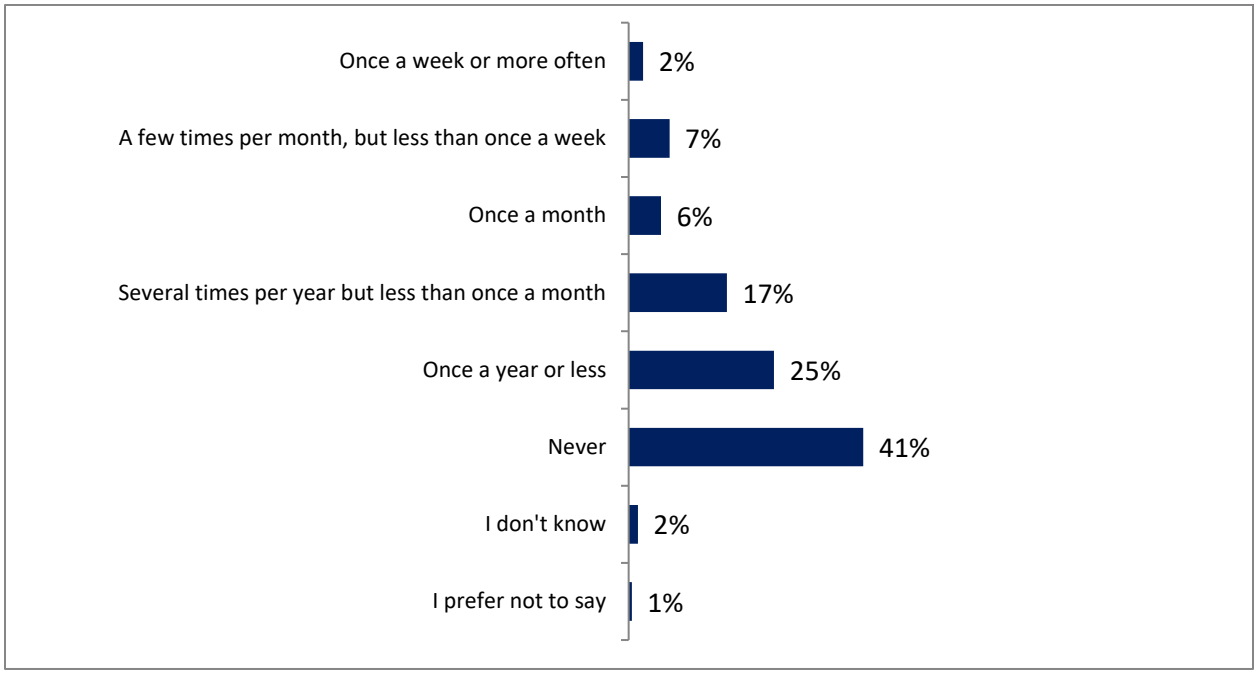


ORDER: How often do you personally order goods that get delivered to your home? *Base: All respondents (n= 2,717)*

Overall, 57% of respondents say they take a taxi or an on-demand transportation service, while 41% say they never do so. A small proportion of respondents (2%) say they take a taxi or an on-demand transportation service once a week or more, 7% say they do so a few times per month, but less than once a week, and 6% say they do so once a month. One-fifth of respondents (17%) say they take a taxi or on-demand transportation services several times per year, but less than once a month, and a quarter of respondents (25%) say they do so once a year or less.

Respondents aged 18 to 34 years old (74%), 35 to 54 years old (62%), Albertans (69%), Ontarians (62%), and respondents living in an urban area (68%) are more likely to take a taxi or an on-demand transportation service. On the other hand, respondents living in rural areas (62%) are more likely to have never taken a taxi or an on-demand transportation services.

Figure 22: Frequency of taking a taxi or an on-demand transportation service

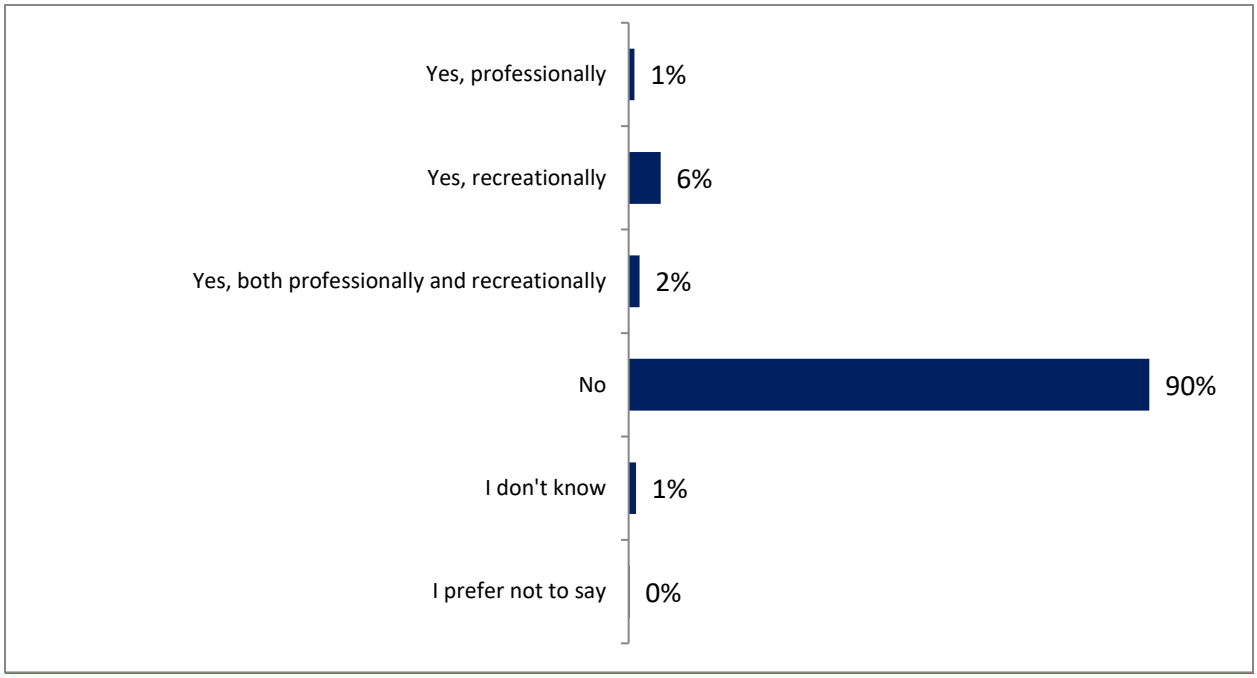


TAXI: How often do you take a taxi or an on-demand transportation services (e.g., Uber, Lyft, etc.)? *Base: All respondents (n= 2,717)*

Nine respondents out of ten (90%) say they neither own nor operate a drone, while 8% say they do. Among respondents who own or fly a drone, 1% do it professionally, 6% recreationally, and 2% do it both professionally and recreationally.

Respondents who are comfortable living near a vertiport (18%), those aged 18 to 34 years old (17%), those who are a part of the BIPOC community (16%), and those who have children in their household (15%) are more likely to own or fly a drone.

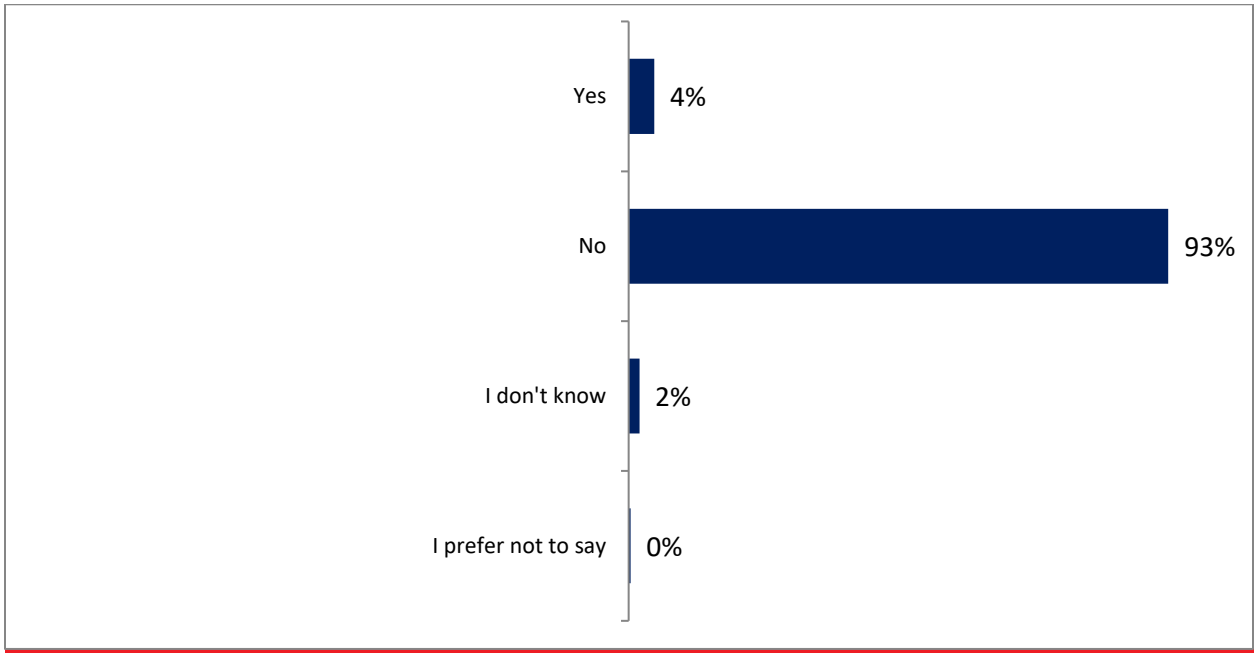
Figure 23: Usage of drones



DRONE: Do you own and/or fly a drone? *Base: All respondents (n= 2,717)*

A vast majority of respondents (93%) do not have a background in traditional or crewed aviation, while a small proportion (4%) say they do have a background in aviation.

Figure 24: Background in aviation



AVIATION: Do you have a background in traditional or crewed aviation (ex: flying lessons, pilot license, or anything related)? *Base: All respondents (n= 2,717)*

3. Detailed Qualitative Results

The qualitative study included four focus group sessions with both French-speaking and English-speaking Canadians to discuss Advanced Air Mobility (AAM). These sessions were held online, allowing participants from across Canada to join. Participants were selected based on their attitudes towards AAM—positive, neutral, or negative—and divided into groups accordingly. Those who viewed AAM development as "Very good," "Good," or were unsure, they were placed in either group 1 (French speakers) or group 3 (English speakers). Through this report, these respondents are identified as “proponents”. Those who viewed AAM as "Bad" or "Very bad" were allocated to group 2 (French speakers) or group 4 (English speakers). These respondents are identified as "opponents,". Participants represented a broad cross-section of the Canadian population, including diverse ages, genders, incomes, education levels, and urban or rural residences.

3.1 First Thoughts and Impressions About Advanced Air Mobility (AAM)

When participants were asked about AAM, many thought about drones, especially those used for package delivery. Some mentioned drones in restaurants and other service sectors. One proponent to AAM said “*When I think of AAM, I think about drones. I also think about deliveries of all kinds! For example, I heard about a pizzeria that had a drone to deliver their products!”*.

Participants with positive or neutral views (proponents) on AAM are excited about the improvements this technology can bring to society. They believe AAM could significantly change how we respond to emergencies, and manage deliveries. However, even with this optimism, there was a strong sense of caution about integrating AAM into our daily lives. Many participants stressed the importance of carefully introducing AAM technology, making sure it fits well with existing systems and society. They pointed out potential issues that need careful consideration to avoid further problems. For example, one of the participants argued: “*I think it (AAM) would be really convenient if this technology becomes a reality, I’m just concerned about our weather, theses drones need to be adapted to our extreme weather*”. (Proponent participant).

Participants with negative views on AAM were more skeptical about the implementation of this technology. They raised concerns about the need for more regulations around safety and privacy, worries about noise, the risk of job losses, and the demand for the technology to be safe, reliable, and not harmful to the environment. They questioned whether moving forward with AAM was a good idea given these unresolved issues. One opposing (to AAM) participant argued: "*This technology could eventually be beneficial for society, but my biggest concern is regulations and safety. Living without regulations or assurances of safety with this technology could be really dangerous for us*."

Overall, the feedback on AAM presented a landscape filled with anticipation and caution. It suggests a future where integrating AAM into society will need careful consideration of its benefits and challenges.

3.2 General Opinion Among Participants on AAM After a Definition Was Presented

During the second part of the discussion, participants from both opposing and supporting groups were invited to share their general opinions on AAM. Participants were shown the definition presented below before sharing their opinions.

Advanced Air Mobility is a broad operational concept that refers to a variety of new and emerging ways to move people, goods and services by air. It describes an emerging future state for the aviation ecosystem and is often grouped into three categories: Urban Air Mobility, which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; Regional Air Mobility, which carries people and goods to rural and remote communities; and Remotely Piloted Aircraft Systems, or drones.

Among proponents

Proponent participants were generally optimistic, viewing AAM as a significant advancement in transportation, especially for emergency medical services and remote areas. Their support was based on the potential societal benefits AAM could bring. To form a more comprehensive opinion and understanding of AAM technology, these participants emphasized the importance of transparency. They emphasized the importance of grasping safety protocols, becoming informed about Transport Canada's initiatives for environmental sustainability, and gain clarity on how regulatory frameworks would be implemented.

One proponent to AAM stated: "*I believe this technology is positive and it will help us in the future! But, as others have mentioned, I do have concerns about how we are going to operate all these different levels of vehicles […]. Safety is a big concern.*"
When asked about rural implementation, this group favoured AAM for its potential to address accessibility issues in rural areas. This perspective is rooted in the belief that AAM can bridge transportation gaps in less accessible areas, supporting community development and ensuring equitable benefits from technology. Additionally, using this technology in a rural setting is viewed as an advantageous way to test the technology in a simpler regulatory and safe environment compared to urban areas, offering insights into its practical application and effectiveness.

Among opponents

Participants expressing negative views towards Advanced Air Mobility (AAM), issues related to safety, privacy, and environmental impacts emerge as primary concerns. These individuals also hold the perspective that efforts should be concentrated on enhancing existing technologies instead of embracing new ones such as AAM, which, in their opinion, are not yet prepared for widespread adoption. These participants believe our current transportation systems need major fixes, and we should deal with those issues first. One of the participants stated: "*Visual and noise pollution are major concerns regarding this, and I don't understand why there's a push for it. So, we're just adding another layer of pollution to our environment. We already have other problems, let's focus on them*". (Opposed participant).

Most participants in this group argue that if this technology is ever to be used, it must first be backed by improved safety features, stricter regulations, and more robust privacy protections. They concede that beginning with AAM in rural areas might be acceptable due to the lower risks, but some remain unconvinced. They continue to question whether AAM is truly the optimal solution for our transportation challenges.

3.3 Opinion on AAM Applications and Technologies

Participants were shown five different technologies: Medical/Healthcare Aviation, Aerial Firefighting Technology, Drone Delivery, Regional Air Mobility, and Urban Passenger-Carrying. The goal was to gather their initial impressions, thoughts, and overall stance on these technologies.

3.3.1 Medical/Healthcare Aviation

Participants from all groups (proponents and opponents) generally view Medical/Healthcare Aviation positively, recognizing its potential to significantly enhance emergency response and healthcare delivery, particularly to remote or inaccessible areas. The speed and efficiency with which medical supplies and assistance can be dispatched were seen as major benefits for these participants, potentially saving lives by reducing response times in critical situations. Some participants stated:

- "*In this sort of health situation (emergencies), time is one of the most crucial factors. So, if this can reduce the time needed to deliver medical supplies or personnel to someone in need, then that's a definite positive*" (Proponent of AAM technology)

- "*Organ donation is very important. You don't want such things to go to waste. So, if it enables timely delivery to someone in need when it otherwise couldn't, then I think it's very important*". (Opponent to AAM technology).

However, alongside this optimism, there are pragmatic concerns about the feasibility of widespread implementation, mostly from participants opposed to AAM. Questions about the cost-effectiveness of such technology compared to existing healthcare infrastructure investments were raised, along with doubts regarding operational reliability under adverse conditions, such as bad weather or during emergencies. Skepticism also exists, mostly among groups with a negative view of AAM, about the over-reliance on technology for critical healthcare functions, highlighting the need for balanced integration with traditional healthcare systems.

Along the discussions, the prospect of remotely controlled or fully autonomous medical drones introduces a blend of anticipation and apprehension among participants. The potential for quicker delivery times and enhanced efficiency is acknowledged mostly among proponents of AAM but tempered by significant safety and reliability concerns. Trust in the technology's fail-safes, the adequacy of remote-control mechanisms, and the implications of operational errors were central to the discussion: "*What if something*

comes up? Let's say an emergency, how fast would we be able to correct the situation if we are far away? It's concerning considering we are talking about people's health" (opponent to AAM technology). Many participants (from all groups) advocate for stringent regulatory standards, thorough testing, and robust oversight mechanisms to ensure these systems can be safely integrated into healthcare logistics.

For fully autonomous drones, the excitement about their efficiency and the possibility of further reducing delivery times is matched by caution over the absence of human oversight. Many participants opposed to AAM have emphasized that human involvement is always necessary. Concerns focus on the drones' ability to navigate complex scenarios and make critical decisions without direct human intervention. The consensus suggests that the success of autonomous medical drones will heavily depend on the sophistication and reliability of the technology, necessitating advanced safety features, comprehensive monitoring capabilities, and clear guidelines for operation and emergency interventions.

3.3.2 Aerial firefighting technology

The application of firefighting aviation, particularly when discussing advanced technologies like drones or autonomous systems for aerial firefighting was recognized among most participants for its potential to revolutionize firefighting efforts, providing rapid response capabilities, and accessing hard-to-reach areas during wildfires or other fire emergencies. The ability to deploy firefighting resources quickly and accurately, without risking human lives in dangerous conditions, is seen as a significant advancement. Many participants appreciate the agility and precision that drones, and autonomous aircraft could bring to firefighting operations. These technologies could enhance the efficiency of water or retardant drops, monitor fire progress in real-time, and gather critical data to inform firefighting strategies—all while keeping pilots and ground crews at a safer distance from the blaze.

The participants highlighted this:

One proponent of AAM technology said: "*I believe utilizing drones for firefighting in densely forested areas is a brilliant idea. Many of these areas are hard to access, making ground efforts to combat fires extremely challenging. I have friends who are firefighters, and they've shared how difficult it is to reach these locations or to effectively surround and combat the fires. Deploying drones would allow us to attack the fire from various angles and strategies, potentially making a significant difference in firefighting efforts*".

One opponent of AAM technology said: "*Being evacuated from my home for the first time was, of course, very unsettling. So, I do believe that in such applications, there could be a significant benefit (to adapt this technology), considering that current aircraft might have limitations that could be overcome in other ways. And knowing that many people lost their homes, it makes me think about it differently*".

However, the reliance on such technology also raises several concerns, mostly among participants opposed to AAM. There were questions about the operational reliability of drones and autonomous systems in diverse and challenging environmental conditions, including strong winds, smoke, and high temperatures. Skepticism exists regarding the ability of these systems to perform complex firefighting tasks that traditionally rely on the expertise and judgment of human pilots and crews. One participant expressed concerns about environmental challenges: "*Many things can go wrong with it. You don't know*

what's happening in a fire, there's a lot of wildlife, there's a lot of birds and other problems that we don't know "(opponent to AAM technology).

The potential for technological failures and communication disruptions are additional points of apprehension. Some participants stress the importance of developing robust, fail-safe mechanisms and ensuring that these technologies are complemented by, rather than completely replacing, human expertise in firefighting efforts.

With regards to autonomous firefighting drones, the idea of operating without direct human control is both intriguing and worrisome. While the efficiency and safety benefits are clear among most participants, there's concern about the systems' decision-making capabilities in unpredictable scenarios. According to participants, the success of such technologies, would hinge on advanced artificial intelligence capable of making critical decisions, as well as rigorous testing and validation under real-world conditions to build trust and reliability.

3.3.3 Drone Delivery

Participants, mostly proponents of AAM, recognize the potential of drones to streamline delivery processes, offering faster, more efficient, and potentially environmentally friendly alternatives to traditional delivery methods. The ability to bypass traffic congestion and deliver goods directly to consumers' doorsteps or business to business, especially in remote or hard-to-access areas, is seen as a major advantage. One proponent of AAM said: "*Utilizing drones for deliveries could lead to significant fuel savings, compared to the current use of trucks that consume a lot of fuel and contribute to pollution. If the drones are operated by batteries, it could be more efficient regarding fuel consumption than the trucks and trains currently used for deliveries*".

Yet, alongside these optimistic views, there are substantial concerns regarding privacy, safety, and security, mostly among participants opposed to AAM. The prospect of drones constantly flying overhead, potentially equipped with cameras or other sensing equipment, raises privacy issues that have yet to be fully addressed. Safety concerns also loom large, with questions about drones' reliability, their ability to navigate complex urban landscapes without incident, and the risk of accidents or collisions.

Other security concerns were raised by groups opposed to AAM technology, particularly the risk of theft or tampering with drone-delivered packages. This has sparked discussions on the need for secure delivery mechanisms and robust authentication processes among these participants. Additionally, the noise pollution potentially generated by fleets of delivery drones adds another layer to the environmental considerations that participants said must be addressed". One participant opposed to AAM said: "*There's the potential for numerous drones to be in the air, raising questions about how these drones are monitored and managed. How would this work with drones, especially with many possibly flying overhead?"*

For fully autonomous drone delivery systems, the enthusiasm is tempered by a critical look at the technology's readiness to handle the nuances of real-world delivery tasks without human oversight. Trust in the technology's decision-making capabilities, especially in unpredictable or emergency scenarios, and the ability to ensure accountability in case of failures or loses, are pivotal factors influencing acceptance. It should be noted that these questions are mostly raised by opponents of AAM.

3.3.4 Regional Air Mobility

Regional Air Mobility (RAM) was generally well perceived by proponents of AAM. As for opponents of AAM, some thought it was a good idea but raised numerous security and implementation questions.

Enthusiasm for RAM, mostly but not only among participants supporting AAM, stems from its potential to offer quick, direct connections between rural areas, potentially transforming the connectivity landscape by making remote locations more accessible. Those who thought RAM was a good idea, among all groups, highlighted the adoption of electric or hybrid propulsion technologies as a key advantage, poised to reduce greenhouse gas emissions and decrease reliance on fossil fuels, aligning with broader environmental sustainability goals: *"I agree with the regional transportation of people and goods in the rural area. The use of this transportation could help with the reduction of the fossil fuels*" (Opponent to AAM technology).

However, alongside the optimism are critical considerations regarding the implementation and integration of RAM into existing transportation ecosystems: "*We already have other transportation means; I wonder how it's going to work and how they would adapt it (the technology) to our current infrastructures?*" (Opponent to AAM technology).

Infrastructure development presents a significant challenge, especially among participants from rural areas, requiring substantial investment in vertiports, maintenance facilities, and charging or refuelling stations. Concerns about such infrastructure, its environmental impact, and integration within local communities seem problematic for some participants, mostly those who are opposed to AAM technology and among people living in rural areas.

The economic feasibility of RAM, including service costs and affordability for the average consumer, was questioned by many participants as well. There was a discussion on the potential of RAM to worsen social inequalities if access is limited by high costs. Participants (mainly opponents but also some proponents), argued that if this mode of transportation proves to be as costly as existing alternatives, then it does not merit further consideration.

The technological readiness of autonomous or semi-autonomous flight systems, critical for maximizing the efficiency and safety of RAM, also generates debate among all participants. While the automation of flight operations could reduce operational costs, it introduces complex questions about accountability, cybersecurity, and public trust. Opponents of AAM technology argued that when it comes to human transport, a pilot is necessary: "*I just don't trust it. Maybe we haven't seen enough positive examples, as the news often highlights accidents with driverless cars, like driving into lakes. We don't hear about the successes. Perhaps when technology has proven itself more, but for now, there's no way I'm putting myself in that situation (with no pilot). I have no confidence in it, especially in the air. Being on land is one thing, but flying adds another layer of concern*" (Opponent to AAM technology).

3.3.5 Urban Passenger-Carrying

Urban Passenger-Carrying technology is seen as a potential advancement for urban travel among proponents of AAM technology, offering a more efficient, environmentally friendly alternative to traditional transportation.

These participants are enthusiastic about the possibilities that Urban Passenger-Carrying Aviation could unlock, such as significantly reducing travel times, alleviating congestion on roads, and providing a novel solution to bridge gaps in existing transportation networks. The prospect of electric or hybrid propulsion systems in these vehicles not only promises to cut down on greenhouse gas emissions but also to operate more quietly than conventional aircraft, addressing noise pollution concerns. One proponent participant said: "*Yes, I live just outside of Toronto. So, there are many options for getting to the airport that are fast and inexpensive. However, that's in Toronto, I can't use it because I live outside the city, which doesn't help me. If there was a way to be picked up outside of Toronto and taken to the airport, that would be great*".

However, this optimism is balanced by significant apprehensions regarding the viability, safety, and infrastructure requirements of such a system, mostly in rural areas. These questions were raised mostly by opponents to AAM technology: "*Accidents are a concern, especially when implementing this in an urban scenario where there are more people, buildings, cars, and children. It raises the question: is it worth it? In large metropolitan cities like Toronto or Vancouver, the situation is different due to higher risks*".

Safety remains the main concern, with questions about the reliability of new aircraft technologies, the readiness of regulatory frameworks to ensure safe operations, and the ability of emergency services to respond to incidents involving these new types of vehicles.

The infrastructure needed to support Urban Passenger-Carrying Aviation, such as vertiports and charging or refuelling stations, represents a considerable investment and logistical challenge among many participants. There's uncertainty about who will bear these costs and how such infrastructure will integrate with existing urban landscapes.

For systems proposing autonomous operations or limited pilot oversight, participants exhibit both curiosity regarding the potential for increased efficiency and concerns about ceding full control to machines. Some participants argued that they would not trust the transportation if it was not controlled by a human.

3.4 Sentiments on Living Near a Vertiport

To understand participants' sentiments and their feelings towards living near a vertiport, the question below was posed to them:

P2: How comfortable would you be living next to a vertiport?

In general participants across all groups expressed discomfort with the idea of living near a vertiport. They highlighted concerns about noise pollution, privacy, safety risks, and the logistics and costs of implementing such infrastructure. Concerns were higher among participants living in big cities; they

argued that adding vertiports and AAM technology to the city could make cities more polluted than they already are. Participants in rural areas were less uncomfortable, but not completely in agreement, arguing that these vertiports could be placed in locations like large parking lots or places further away from their homes.

One opponent to AAM technology said: "*Privacy intrusion? Absolutely. I live in Montreal. There's going to be constant air traffic. Also, repairs, they must conduct maintenance. It's going to bring noise. Hovering above my building, it's going to be over my head. I don't want this in the city center because I imagine, at the very least, it must be elevated, so it has to be on a downtown building. I don't want this as visual pollution and I didn't choose to live next to a vertiport*."

One proponent to AAM technology said: "*The noise concerns, the world is already noisy in our cities, why add vertiports and make things worse*?"

A recurring rationale for participants' discomfort was the belief that instead of introducing new transport infrastructure, efforts should focus on enhancing existing transport systems. This approach would improve cities without adding new concerns. This argument was primarily voiced by groups opposed to AAM technology.

Finally, participants who felt comfortable living next to a vertiport argued that if it is well implemented, with the right regulatory framework, it could work and benefit society (enhanced connectivity and access innovative transport solutions).

3.5 Feelings about AAM

The prevailing attitude towards AAM technology among many participants, especially among proponents of AAM, is characterized by optimism and enthusiasm, reflecting the perceived capacity of AAM to improve transportation and augment critical services, including medical and emergency services like firefighting. However, there are significant concerns regarding safety, regulations, and the impacts on the environment, infrastructure, and people's privacy, with these concerns being more pronounced among opponents of AAM. Moreover, when discussing the different AAM technologies, these opposing participants also mentioned that they did not feel comfortable without a pilot. This indicates that even if there is optimism among the participants, there is still some reluctance.

Feelings of optimism were notably fueled by the potential benefits of AAM technology, such as improved accessibility, emergency response capabilities, and the advancement of technology that could lead to less congested and more sustainable urban environments. Regarding concerns, they arise notably from the perception that AAM technologies will introduce new challenges in terms of safety regulations, environmental impact, and societal acceptance. The pace of technological development and the need for comprehensive policy frameworks to ensure safe and equitable implementation are pivotal points of consideration among many participants.

To mitigate concerns and foster positive perceptions towards pilotless AAM technology, participants highlighted the importance of integrating comprehensive safety mechanisms to address power loss scenarios. They emphasized the necessity for remote operators to undergo rigorous training, particularly

in managing emergencies, to ensure operational reliability. Additionally, the advancement of technology to swiftly correct errors and secure systems against hacking was deemed crucial. The use of AAM for delivering essential services, like medical supplies to hard-to-reach areas, was seen as a key application that could shift public opinion favourably. Finally, it was seen as crucial for participants to clearly explain how reliable and safe AAM is, showing it through tests, to help the general public trust and understand it better.

3.6 Transport Canada Communication

Most participants stressed that Transport Canada's communications about Advanced Air Mobility (AAM) should not only explain the stringent safety protocols and regulatory frameworks to ensure security and compliance of AAM operations but also clearly communicate the environmental practices implemented to reduce the ecological impact of these technologies. It's important to note that environmental concerns were primarily raised by some participants opposed to AAM technology.

Furthermore, many participants believe it is essential to communicate the concrete advantages that AAM offers to communities, such as improving accessibility and reducing response times in emergencies. Some participants also mentioned how important it was to get people involved by being transparent and inclusive; participants would feel more comfortable knowing that the public is part of the decision-making process, by expressing whether they feel comfortable or not. One proponent of AAM technology said: "*The education component is crucial. It's about understanding how it works, identifying websites for learning about safety or rules*", while another mentioned: "*It's all about accessibility of information, where these services will be provided, and how it might affect people's homes. There are many unknowns so far. These aspects need to be addressed before the general public can feel comfortable with it*."

One opponent of AAM technology said: "*We need to be more informed, especially about the laws that will regulate this*".

In general, respondents suggest that Transport Canada use a mix of digital and traditional communications approaches to share information on AAM. They recommend using the official website for clear details about AAM and social media for updates. They also advise having public meetings, both in person and online, so people can ask questions directly and get immediate answers. For those who prefer more traditional methods, they propose sending out brochures and information through the mail to ensure everyone gets the information they need.

3.7 Final Considerations

Most participants with an interest in air transport innovations were particularly open to the AAM technologies presented; however, as they learned more about AAM, some participants from this group began to raise questions. As discussions progressed, these groups started to delve deeper into the practicalities of AAM deployment, such as infrastructure needs, regulatory frameworks, and integration with current transport systems. Some of the statements mentioned by the participants are: "*Still positive (about AAM technology), but concerned, I have some questions. But excited*", "*I feel interested, but also*

intrigued, how is this going to affect us in the future?" and "*My perception did not change, there is a good innovation opportunity, but we have to take our time (to implement it)*".

Conversely, participants who initially harboured skepticism or outright negativity raised concerns about the immediate relevance of AAM, its environmental impact, unresolved safety challenges, and potential conflicts with existing transportation modes. However, throughout the course of the discussions, some of these participants engaged with concrete examples of AAM's potential benefits, like emergency medical services and access to remote areas, alongside reassurances about environmental and safety mitigations. Some of the statements mentioned by the participants are: "*If we are talking about emergencies, then it's a no brainer. We are going to save lives and put out fires, but when it comes to transportation, it's a no*", "*It would be okay to fight fires! But for deliveries? Just to be faster, is just not right*" and "*There are other aspects, such as wildfires, which I hadn't considered. But it has only opened my eyes to the opportunities. Now, am I ready to use it? A well put implementation is essential. Not just because of the technology, but because people need training*".

4. Conclusion - Quantitative and Qualitative Reports

The outlook on Advanced Air Mobility (AAM) in Canada is a complex blend of optimism and concern, shaped by different levels of awareness and interest across various groups. While a significant 77% of Canadians report a lack of familiarity with AAM, there's a notable increase in awareness among younger populations, university graduates, BIPOC communities, men, and those living in urban or suburban settings. Despite the overall limited knowledge, there's a broadly positive attitude towards the promise of AAM, particularly for its use in critical services like search and rescue, firefighting, emergency, and medical services.

The initial excitement for AAM is evident, with many Canadians acknowledging its potential. However, this enthusiasm is tempered by concerns over the practicality, affordability, and broader social impacts of AAM. Issues such as the safety and privacy risks associated with drone use, the environmental footprint of AAM operations, and the readiness for autonomous functions are especially significant worries. Yet, the interest in learning more about AAM indicates a public desire for more information from industry and from government.

Conversations on various AAM applications—whether in healthcare, firefighting, delivery, regional connectivity, or urban transport—underscore the potential advantages of AAM in offering quicker, more effective, and possibly more environmentally friendly alternatives to conventional methods. However, these discussions also uncover significant worries about the impact of AAM infrastructure, like vertiports, on living environments and the broader challenges of incorporating AAM into everyday life. Striking a balance between leveraging AAM's innovative capabilities and addressing widespread concerns about its effects is a pivotal aspect of ongoing dialogues, highlighting the importance of deliberate, transparent, and participatory planning and regulation.

In conclusion, the cautious optimism displayed by Canadians and wider audiences regarding AAM's future underscores its perceived benefits. Yet, it also sends a clear message about the necessity to tackle safety,

environmental, and social issues. Advancing AAM will require not just technological and regulatory progress but also a concerted effort to engage with the community, alleviate concerns, and ensure that AAM initiatives are in harmony with public values and needs.

Appendix

A.1 Quantitative Methodology

Quantitative research was conducted through online surveys using Computer Aided Web Interviewing (CAWI) technology. As a Canadian Research Insights Council (CRIC) Member, Leger adheres to the most stringent guidelines for quantitative research. The survey was conducted in accordance with the Government of Canada requirements for quantitative research, including the Standards of the Conduct of Government of Canada Public Opinion Research—Series D—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 A2.

A.1.1 Sampling Procedure

Computer Aided Web Interviewing (CAWI)

Leger conducted a panel-based Internet survey with a sample of Canadians adults. A total of 2,717 respondents participated in the survey, including a sample large enough to ensure a good representation of Indigenous respondents (n=155) and respondents living in rural areas (n=513). 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 to coast. An Internet panel is made up of Web users profiled on different sociodemographic variables. The majority of Leger's panel members, accounting for 61%, were randomly selected via telephone over the last ten years, ensuring a highly representative sample of the Canadian population across various demographic traits.

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 November 28 to December 12, 2023. The participation rate for the survey was 10.18%. A pre-test of 53 interviews was completed on the 28 November 2023.

To achieve data reliability in all subgroups, a total sample of 2,717 Canadians aged 18 years old and older were interviewed.

The data has been weighted to reflect the demographic composition of the target population.

Leger weighted the results of this survey by age, gender, region, presence of children in the household, and education level, according to 2021 national census data from Statistics Canada. Results were also adjusted by specific profiles, including Indigenous respondents and those living in rural or urban areas, to ensure these groups did not disproportionately affect the overall sample, due to their intentional overrepresentation in the sampling frame.

Table A.1 Regional Distribution of Respondents

Region	Number of respondents
Atlantic	200
Quebec	614
Ontario	1,026
Prairies (Manitoba + Saskatchewan and Nunavut)	204
Alberta (and Northwest Territories)	318
British Columbia (and Yukon)	355
Total	**2,717**

A.1.3 Answer Rate

The overall answer rate for this study is 10.18%.

Below is the calculation of the Web survey's participation rate. The participation rate is calculated using the following formula: Participation rate / response rate = R ÷ (U + IS + R). The table below provides details of the calculation.

Table A.2 Response Rate Calculation

Invalid cases	9
Invitations mistakenly sent to people who did not qualify for the study	9
Incomplete or missing email addresses	0
Unresolved (U)	
Email invitations that bounced back	52
Email invitations unanswered	25,045
In-scope non-responding units (IS)	
Non-response from eligible respondents	0
Respondent refusals	108
Language problem	0

Selected respondent not available (illness; leave of absence; vacation; other)	0
Early break-offs	190
Responding units (R)	
Completed surveys disqualified – quota filled	97
Completed surveys disqualified for other reasons	63
Completed interviews	2,717
POTENTIALLY ELIGIBLE (U+IS+R)	
Participation rate	**10.18%**

Typical participation rates for web surveys are between 20% and 30%. A participation rate of 10.18% may seem a bit low, but due to time constraints, we had to spread the invitations more widely in the panel to achieve our objectives, which has an impact on the participation rate.

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. As shown, the distribution before weighting is almost optimal and weighting has only corrected for small gaps in the distribution.

Table A.3 Unweighted and Weighted Sample Distribution by Province

Region	Unweighted	Weighted
Atlantic	200	182
Québec	614	625
Ontario	1,026	1049
Prairies (Manitoba + Saskatchewan and Nunavut)	204	176
Alberta (and Northwest Territories)	318	304
British Columbia (and Yukon)	355	380
Total	2,717	2,717

The following tables present the demographic distribution of respondents, according to gender, age, language, education level and the presence of children aged less than 18 years old in the household.

Regarding gender, we can see that weighting has adjusted slightly the proportion of male and female. The adjustments made by weighting are minor, and in no way can we believe that the small differences observed in the effective samples could have introduced a non-response bias for either of these sample subgroups.

Table A.4 Unweighted and Weighted Sample Distribution by Gender

Gender	Unweighted	Weighted
Male	1,321	1,310
Female	1,381	1,393
Other	*13*	*13*
Total	**2,715**	**2,715**

* The complement corresponds to "refusal".

Regarding age distribution, the weighting process has corrected some minor discrepancies. The actual distribution of the sample generally follows the distribution of age groups in the actual population. The adjustments made by weighting are minor, and in no way can we believe that the small differences observed in the effective samples could have introduced a non-response bias for either of these sample subgroups.

Table A.5 Unweighted and Weighted Sample Distribution by Age

Age	Unweighted	Weighted
18-34	725	726
35-54	872	875
55+	1120	1117
Total	**2,717**	**2,718**

* The complement corresponds to "refusal".

Regarding language, the weighting process has corrected some minor discrepancies. The actual distribution of the sample generally follows the distribution of first language spoken in the actual population. The weighting mainly inflated the weight of francophones and reduced the weight of non-francophones. In this case, it is unlikely that the observed distributions introduce a non-response bias for a particular group.

Table A.6 Unweighted and Weighted Sample Distribution by Language

Language	Unweighted	Weighted
Francophones	677	535
Non-Francophones	2,016	2,158
Total	**2,693**	**2,693**

* The complement corresponds to "refusal".

Regarding area, the weighting process has corrected some minor discrepancies. The actual distribution of the sample generally follows the distribution by urban and rural areas in the population. The weighting mainly inflated the weight of respondents living in suburban areas and reduced the weight of respondents living in urban areas. In this case, it is unlikely that the observed distributions introduce a non-response bias for a particular group.

Table A.7 Unweighted and Weighted Sample Distribution by Area

Area	Unweighted	Weighted
Urban area	1358	1119
Suburban area	808	1037
Rural area	513	503
Total	2,679	2,659

* The complement corresponds to "refusal".

Regarding education level, the weighting process has corrected some minor discrepancies. The actual distribution of the sample generally follows the distribution by education level. The weighting mainly inflated the weight of respondents who don't have a university degree and reduced the weight of respondents with a university degree. In this case, it is unlikely that the observed distributions introduce a non-response bias for a particular group.

Table A.8 Unweighted and Weighted Sample Distribution by Education Level

Education Level	Unweighted	Weighted
High School or less	621	814
Trade / College	811	1042
University	1267	838
Total	2,699	2,694

* The complement corresponds to "refusal".

Regarding the presence of children in the household, we can see that weighting has adjusted slightly the proportion of respondents who have children in their households and those who don't. The adjustments made by weighting are minor, and it is unlikely that the small differences observed in the effective samples could have introduced a non-response bias for either of these sample subgroups.

A.9 Unweighted and Weighted Sample Distribution by the Presence of Children in the Household

Children in the Household	Unweighted	Weighted
Yes	663	723
No	2039	1974
Total	2,702	2,697

* The complement corresponds to "refusal".

The weighting mainly had to adjust the weights of respondents with an Indigenous status. Since this group was artificially boosted by quotas, the weighting had to restore the real weight of this so that they did not skew the overall sample.

Table A.10 Unweighted and Weighted Sample Distribution by Indigenous Status

Indigenous	Unweighted	Weighted
Yes	118	155
No	2,562	2,599
Total	**2,717**	**2,717**

There is no evidence from the data that having achieved a different age, gender, area, education level or presence of children in the household 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.

The following tables present the weighting factors applied to the database according to the different respondent profiles.

Table A.11 Weight Factors by Profile

REGION X GENDER X AGE	%
BC + YK // Male // 18-24	0,69
BC + YK // Male // 25-34	1,18
BC + YK // Male // 35-44	1,12
BC + YK // Male // 45-54	1,04
BC + YK // Male // 55-64	1,16
BC + YK // Male // 65+	1,6
BC + YK // Female // 18-24	0,65
BC + YK // Female // 25-34	1,17
BC + YK // Female // 35-44	1,16
BC + YK // Female // 45-54	1,12
BC + YK // Female // 55-64	1,25
BC + YK // Female // 65+	1,83
AB + NT // Male // 18-24	0,61
AB + NT // Male // 25-34	1,01
AB + NT // Male // 35-44	1,09
AB + NT // Male // 45-54	0,92
AB + NT // Male // 55-64	0,91
AB + NT // Male // 65+	1
AB + NT // Female // 18-24	0,57
AB + NT // Female // 25-34	1,02
AB + NT // Female // 35-44	1,1
AB + NT // Female // 45-54	0,91

AB + NT // Female // 55-64	0,92
AB + NT // Female // 65+	1,13
MB/SK + NU // Male // 18-24	0,39
MB/SK + NU // Male // 25-34	0,57
MB/SK + NU // Male // 35-44	0,55
MB/SK + NU // Male // 45-54	0,48
MB/SK + NU // Male // 55-64	0,54
MB/SK + NU // Male // 65+	0,66
MB/SK + NU // Female // 18-24	0,36
MB/SK + NU // Female // 25-34	0,56
MB/SK + NU // Female // 35-44	0,56
MB/SK + NU // Female // 45-54	0,49
MB/SK + NU // Female // 55-64	0,55
MB/SK + NU // Female // 65+	0,78
ON // Male // 18-24	2,12
ON // Male // 25-34	3,31
ON // Male // 35-44	2,99
ON // Male // 45-54	2,98
ON // Male // 55-64	3,28
ON // Male // 65+	4,03
ON // Female // 18-24	1,97
ON // Female // 25-34	3,26
ON // Female // 35-44	3,18
ON // Female // 45-54	3,19
ON // Female // 55-64	3,46
ON // Female // 65+	4,83
QC // Male // 18-24	1,08
QC // Male // 25-34	1,79
QC // Male // 35-44	1,88
QC // Male // 45-54	1,75
QC // Male // 55-64	2,07
QC // Male // 65+	2,69
QC // Female // 18-24	1,04
QC // Female // 25-34	1,78
QC // Female // 35-44	1,89
QC // Female // 45-54	1,74
QC // Female // 55-64	2,1
QC // Female // 65+	3,2
ATL // Male // 18-24	0,32
ATL // Male // 25-34	0,46
ATL // Male // 35-44	0,46
ATL // Male // 45-54	0,52
ATL // Male // 55-64	0,63

ATL // Male // 65+	0,85
ATL // Female // 18-24	0,3
ATL // Female // 25-34	0,46
ATL // Female // 35-44	0,5
ATL // Female // 45-54	0,55
ATL // Female // 55-64	0,67
ATL // Female // 65+	0,98
PROVINCE	**%**
BC	13,88
AB	11,1
MB	3,5
SK	2,92
ON	38,6
QC	23,02
NB	2,15
NF	1,43
NS	2,7
PE	0,42
NT	0,1
YK	0,11
NU	0,08
PROVINCE X LANGUAGE	**%**
QC // Francophone	17,23
QC // Non-Francophone	5,79
ROC // Francophone	2,45
ROC // Non-Francophone	74,53
PROVINCE X LEVEL OF EDUCATION	**%**
QC // University	6,5
ROC // University	24,33
Not University	69,17
KIDS	**%**
Yes	27,33
No	72,67
ETHNICITY: INDIGENOUS	**%**
Yes	4,33
No	95,67
AREA	**%**

Urban	41,17
Suburbean	38,17
Rural	18,51
Don’ know / Refusal	2,15

A.2 Survey Questionnaire

Intro – ask all

Would you prefer to continue in English or French?

Préférez-vous continuer en français ou en anglais?

- English / Anglais
- French / Français

Thank you for agreeing to take part in this survey. We anticipate that the survey will take approximately 8 minutes to complete.

Background information
This research is being conducted by Léger Marketing, a Canadian public opinion research firm on behalf of the Government of Canada on current issues of interest to Canadians.

How does the online survey work?
You are being asked to offer your opinions and experiences through an online survey. We anticipate that the survey will take 10 minutes to complete. Your participation in the survey is completely voluntary. Your responses are confidential and will only ever be reported in aggregate – never in any way that can identify any individual respondent or their responses. Your decision on whether or not to participate will not affect any dealings you may have with the Government of Canada.

You can read our Privacy Policy here: https://www.legeropinion.com/en/privacy-policy/.

If you wish to verify the authenticity of this survey, visit:

https://www.canadianresearchinsightscouncil.ca/rvs/home/?lang=en

The CRIC Research Verification Service project code is: X

If you are experiencing technical issues while responding to the survey or have specific accessibility needs to participate in this research, please contact Leger's technical support team at support@legeropinion.com.

Your participation is greatly appreciated, and we look forward to receiving your feedback.

SECTION 1: SOCIODEMOS

These next few questions will allow us to compare the survey results among different groups of respondents. Your answers will remain anonymous and confidential.

Age – Age – ask all

How old are you?

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

Gender – ask all – single response.

What is your gender?

Woman (1)
Man (2)
Other gender (3)
I prefer not to say (9)

Prov – Prov – ask all – single response.

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 and Labrador (NL)
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 (Algoma, Sudbury, Cochrane, Timiskaming, Nipissing and Manitoulin) (55)
Northwest (Kenora, Rainy River and Thunder Bay) (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)

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)
I don't know (98)
I prefer not to say (99)

Ethnicity - ask all – multiple answer.

Which of the following best describes your race and/or cultural group. You may belong to one or more racial or cultural groups.

Please select all that apply.

Indigenous (1)
Arab (2)
Black (3)
Chinese (4)
Filipino (5)
Japanese (6)
Korean (7)
Latin American (8)
South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.) (9)
Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Thai, Laotian, etc.) (10)
West Asian (e.g., Iranian, Afghan, etc.) (11)
White (12)
Other (please specify) (96)
I prefer not to say (99)

SECTION 2: ADVANCED AIR MOBILITY

Q1- ask all – single answer.

Advanced Air Mobility (AAM) is a term that refers to new ways of moving people, goods, and services by air. AAM falls into two categories: Urban Air Mobility (UAM), which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; and Regional Air Mobility (RAM), which carries people and goods to rural and remote communities.

Services in these categories are being developed and tested in cities around the world. New technologies support these services, including electrical vehicle takeoff and landing (eVTOL) aircraft at new infrastructure called "vertiports", and various drone systems.

In the future, AAM could become an important part of our transportation system. Eventually, it is expected that some passenger aircraft will fly through remote piloting, or even autonomously.

Had you heard about Advanced Air Mobility or any of its examples before today?

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

Q2- Ask all – single answer.

In general, do you think that the development of Advanced Air Mobility is good or bad for Canada?

Very good (1)
Good (2)
Bad (3)
Very bad (4)
I don't know (8)
I prefer not to say (9)

Q3 - ask if Q1=1 – single answer.

How familiar were you with Advanced Air Mobility before today?

Very familiar (1)
Familiar (2)
Unfamiliar (3)
Very unfamiliar (4)
I don't know (8)
I prefer not to say (9)

Q4 - ask all – Rotate 1-8- multiple answers.

Which of these Advanced Air Mobility applications have you heard of before?

Please select all that apply.

Air Mobility (air taxi and on-demand transportation services) (1)
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.) (2)
Logistics and Cargo Transport (delivery of goods for businesses) (3)
Home Deliveries (delivery of goods to private customers) (4)
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure) (5)
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations) (6)

Search and Rescue Operations (help locating missing individuals and reach inaccessible locations) (7)
Firefighting Services (Detection, monitoring and firefighting) (8)
None (97)
I prefer not to say (99)

Q5 - ask all – Rotate 1-8 – simple grid.

How comfortable would you be with these applications of Advanced Air Mobility in **urban areas?**

- Very comfortable (1)
- Somewhat comfortable (2)
- Somewhat uncomfortable (3)
- Very uncomfortable (4)
- I don't know (8)
- I prefer not to say (9)

Air Mobility (air taxi and on-demand transportation services) (1)
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.) (2)
Logistics and Cargo Transport (delivery of goods for businesses) (3)
Home Deliveries (delivery of goods to private customers) (4)
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure) (5)
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations) (6)
Search and Rescue Operations (help locating missing individuals and reach inaccessible locations) (7)
Firefighting Services (Detection, monitoring and firefighting) (8)

Q6 - ask all – Rotate 1-8 – simple grid.

How comfortable would you be with these applications of Advanced Air Mobility in **rural areas?**

- Very comfortable (1)
- Somewhat comfortable (2)
- Somewhat uncomfortable (3)
- Very uncomfortable (4)
- I don't know (8)
- I prefer not to say (9)

Air Mobility (air taxi and on-demand transportation services) (1)
Emergency Medical Services (transportation of medical supplies, emergency personnel, etc.) (2)
Logistics and Cargo Transport (delivery of goods for businesses) (3)
Home Deliveries (delivery of goods to private customers) (4)
Aerial Surveying and Inspections (monitoring of environment, agriculture or infrastructure) (5)
Tourism and Sightseeing (provide a bird's-eye view of iconic landmarks and scenic locations) (6)

Search and Rescue Operations (help locating missing individuals and reach inaccessible locations) (7)
Firefighting Services (Detection, monitoring and firefighting) (8)

Q7 - ask all – Bloc 1= 1-3 / bloc 2 = 4-5- Rotate blocs and within blocs– simple grid.

How likely would you be to personally try the following Advanced Air Mobility technologies if they were available in the area where you live?

- Very likely (1)
- Somewhat likely (2)
- Somewhat unlikely (3)
- Very unlikely (4)
- I don't know (8)
- I prefer not to say (99)

Air taxis with pilot on board (1)
Air taxis with a remote pilot (2)
Autonomous air taxis (3)
Delivery of consumer goods to your home by drones with a remote pilot (4)
Autonomous delivery drones (with no pilot) (5)

Q8- ask all – Bloc 1= 1-3 / bloc 2 = 4-5- Rotate blocs and within blocs– simple grid.

As a pedestrian on the ground, how safe would you feel with the following Advanced Air Mobility technologies flying above you?

- Very safe (1)
- Somewhat safe (2)
- Somewhat unsafe (3)
- Very unsafe (4)
- I don't know (8)
- I prefer not to say (99)

Air taxis with pilot on board (1)
Air taxis with a remote pilot (2)
Autonomous air taxis (3)
Delivery of consumer goods to your home by drones with a remote pilot (4)
Autonomous delivery drones (with no pilot) (5)

Q9 - ask all – single answer.

How comfortable would you be living next to a vertiport (Advanced Air Mobility landing and departure area)?

Very comfortable (1)
Somewhat comfortable (2)
Somewhat uncomfortable (3)
Very uncomfortable (4)
I don't know (8)
I prefer not to say (9)

Q10 - ask all – rotate – simple grid.

To what extent do you agree or disagree with each of the following statements?

- Strongly agree (1)
- Somewhat agree (2)
- Somewhat disagree (3)
- Strongly disagree (4)
- I don't know (8)
- I prefer not to say (9)

The advantages of Advanced Air Mobility technologies outweigh their disadvantages. (1)
I trust the Government of Canada ensures that Advanced Air Mobility technologies are safe. (2)
I trust that Advanced Air Mobility technologies will be safe. (3)
Advanced Air Mobility is the future of transportation. (4)
I'm usually among the first to embrace new technologies. (5)
Advanced Air mobility will have a positive impact on the quality of life of Canadians. (6)
Advanced Air mobility technologies will only benefit rich people. (7)
Advanced Air mobility will improve access to services in my region. (8)
Advanced Air mobility will improve access to services for people living in remote areas. (9)
Advanced Air mobility will contribute to the economic growth of Canada. (10)
Advanced Air Mobility technologies are too risky. (11)

Q11 - ask all – single answer.

Which option best represents your attitude towards Advanced Air Mobility technology?

I oppose the use of AAM technology in all circumstances, regardless of application, operating environment, costs, benefits, risks, or aircraft characteristics. (1)
I support the use of AAM technology in all circumstances, regardless of application, operating environment, costs, benefits, risks, or aircraft characteristics. (2)
My support of AAM technology depends on circumstances, such as application, operating environment, costs, benefits, risks, or aircraft characteristics. (3)
I don't know (8)
I prefer not to say (9)

Q12 - ask all – Rotate 1-8- multiple answers max 3.

What are the top 3 key benefits that you believe Advanced Air Mobility could bring?

Reduced traffic congestion (1)
Faster travel time (2)
Faster delivery time (3)
Better environmental sustainability (4)
Better safety and reliability of the transportation system (5)
Faster emergency response to disasters (6)
Faster medical services (7)
Better connectivity to remote areas (8)
Other (please specify_____) (96)
No benefits (97)
I don't know (98)
I prefer not to say (99)

Q13 - ask all – Rotate 1-8- multiple answers max 3.

What are the top 3 key concerns you have with regards to Advanced Air Mobility?

Noise pollution (loud or annoying sound) (1)
Safety concerns (crashing concerns) (2)
Impact on the environment (e.g., pollution, bird life, etc.) (3)
Job losses (4)
Security threats (criminals hacking into the control system) (5)
Privacy concerns (drones flying close or over my property) (6)
Affordability (only wealthy people being able to afford it) (7)
Locations of landing spots (8)
Other (please specify_____) (96)
No concerns (97)
I don't know (98)
I prefer not to say (99)

Q14 – ask all – single answer.

Now that you know more about Advanced Air Mobility, do you think that the development of Advanced Air Mobility is good or bad for Canada?

Very good (1)
Good (2)
Bad (3)
Very bad (4)
I don't know (8)
I prefer not to say (9)

Q14A – ask if q14=1 or 2 – open

Can you please explain why you think that the development of Advanced Air Mobility is good for Canada?

_____

Q14B – ask if q14=3 or 4 – open
Can you please explain why you think that the development of Advanced Air Mobility is bad for Canada?

_____

Q15 - ask all – single answer.

To what extent do you trust the Government of Canada to handle the risks and adopt regulations needed to manage Advanced Air Mobility (including safety, noise control, environmental protection, security, cybersecurity, etc.)?

Please use a scale from 1 to 5 where 1 means you don't trust the Government of Canada at all and 5 that you trust them completely.

- 1– I don't trust them at all
- 2
- 3
- 4
- 5 – I trust them completely
- I don't know (98)
- I prefer not to answer (99)

Q16 - ask all – single answer.

How interested would you be in being informed on matters and issues related to Advanced Air Mobility?

Very interested (1)
Somewhat interested (2)
Not really interested (3)
Not interested at all (4)
I don't know (98)
I prefer not to answer (99)

Q17- ask all – rotate 1-8- multiple answers.

What sources do you access when searching for information regarding AAM in Canada? [please choose your top 3]

Advertising campaign on TV (1)
Online ads on specialty websites (2)
Collaboration with Youtubers or influencers (3)
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 website (8)
Radio
Other (please specify) (96)
None (97)
I don't know (98)
I prefer not to answer (99)

Q18- ask all – Rotate - Multiple

Among the following adjectives, which ones best describe how you feel when thinking about Advanced Air Mobility?

Excited (1)
Optimistic (2)
Curious (3)
Confident (4)
Suspicious (5)
Fearful (6)
Skeptical (7)
Alarmed (8)
Other (please specify) (96)
I don't know (98)
I prefer not to answer (99)

Q19 - ask all – single answer.

To what extent do you agree or disagree with the following statement?

I trust that aviation in general is safe.

- Totally agree (1)
- Somewhat agree (2)
- Somewhat disagree (3)
- Totally disagree (4)
- I don't know (98)
- I prefer not to answer (99)

SECTION 3: DEMOS

The following questions are for statistical purposes only.

TRAVEL - ask all – single answer.

In a typical year, how often do you travel by airplane for personal or business reasons? Please consider a typical year excluding the years where air travel was impacted by the pandemic.

More than 10 times a year (1)
5 to 10 times a year (2)
3 to 4 times a year (3)
1 to 2 times a year (4)
Less than once a year (5)
I don't know (98)
I prefer not to say (99)

ORDER - ask all – single answer.

How often do you personally order goods that get delivered to your home?

Once a week or more (1)
A few times per month, but less than once a week (2)
Once a month (3)
Several times per year but less than once a month (4)
Once a year or less (5)
Never (6)
I don't know (98)
I prefer not to say (99)

TAXI - ask all – single answer.

How often do you take a taxi or an on-demand transportation services (e.g., Uber, Lyft, etc.)?

Once a week or more often (1)
A few times per month, but less than once a week (2)
Once a month (3)
Several times per year but less than once a month (4)
Once a year or less (5)
Never (6)
I don't know (98)
I prefer not to say (99)

DRONE - ask all – single answer.

Do you own and/or fly a drone?

Yes, professionally
Yes, recreationally
Yes, both professionally and recreationally
No (2)
I don't know (98)

I prefer not to say (99)

AVIATION - ask all – single answer.

Do you have a background in traditional or crewed aviation (ex: flying lessons, pilot license, or anything related)?

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

DISABILITY – ask all – single response.

Do you identify as a person with a disability?

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

GENERATION - ask all – single answer.

Generation status refers to whether or not you or your parents were born in Canada. What is your generation status as a person in Canada?

First generation (born outside of Canada and immigrated here) (1)
Second generation (Born in Canada and at least one of your parents were born outside of Canada (2)
Third generation (Both you and your parents were born in Canada) (3)
Fourth generation or more (At least you, your parents and grandparents were born in Canada) (4)
I prefer not to say (99)

LANGUAGE –ask all

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

Select all that apply.

French (1)
English (2)
Other (3)
Don't know
I prefer not to say (9)

CHILDREN –ask all

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

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

SCHOOL –ask all

What is the highest level of formal education that you have completed?

Less than a High School diploma or equivalent (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)
Post graduate degree above bachelor's level (7)
Prefer not to answer (99)

OCCUPATION –ask all – single answer.

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

Working full-time, that is, 35 or more hours per week (1)
Working part-time, that is, 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, unemployed, not looking for work] (7)
Other (8)
Prefer not to answer (99)

REVENUE –ask all

Which of the following categories best describes your total household income last year (2022)? That is, the total income of all persons in your household combined, before taxes?

Under $20,000 (1)
$20,000 to just under $40,000 (2)
$40,000 to just under $60,000 (3)
$60,000 to just under $80,000 (4)
$80,000 to just under $100,000 (5)
$100,000 to just under $150,000 (6)
$150,000 and above (7)
Prefer not to answer (99)

RECRUIT – ask all

In addition to this survey, Léger will conduct focus groups on behalf of the Government of Canada, regarding the same subject matter to explore certain topics in greater depth. The 90-minute focus groups will be conducted virtually (online) in January 2024. The groups will take place in the evening.

To be eligible, you must have access to a computer equipped with a camera and microphone, as well as a high-speed Internet connection. People who participate in the entire discussion will receive a $125 thank-you gift.

If you are interested, please enter your contact information so that we can contact you at the appropriate time.

Full name: _____

Phone number : _____

E-mail: _____

No, I'm not interested in participating in a focus group.

A3. Recruitment Screener

PROJECT DESCRIPTION

The groups will be held online via CMNTY.
4 groups in total: two group in French (2) with French speakers (all provinces) and two (2) groups in English (all provinces)
Note: residents of Quebec province might be overrepresented in the French groups.
The objective is to have 8 participants per focus group (recruit 10 per group).

	DATE / TIME	PARTICIPANTS
GROUP 1 8 participants	JANUARY 30, 2024, 5PM EST	**Groups with Canadians with positive or neutral attitude towards AAM (English)** • *Canadians aged 18 years and older* • *Positive or neutral attitude towards AAM* • *A good mix of: Age, Gender, Income, education, place of residence (rural/urban) and province* • *First official language spoken: English* • *Province: All*
GROUP 2 8 participants	JANUARY 30, 2024, 7PM EST	**Groups with Canadians with negative attitude towards AAM (English)** • *Canadians aged 18 years and older* • *Negative attitude towards AAM* • *A good mix of: Age, Gender, Income, education, place of residence (rural/urban) and province* • *First official language spoken: English* • *Province: All*
GROUP 3 8 participants	JANUARY 31, 2024, 5PM EST	**Groups with Canadians with positive or neutral attitude towards AAM (French)** • *Canadians aged 18 years and older* • *Positive or neutral attitude towards AAM* • *A good mix of: Age, Gender, Income, education, place of residence (rural/urban)* • *First official language spoken: French* • *Province: All* • *Quebec residents may be overrepresented.*
GROUP 4 8 participants	JANUARY 31, 2024, 7PM EST	**Groups with Canadians with negative attitude towards AAM (French)** • *Canadians aged 18 years and older* • *Negative attitude towards AAM*

		• *A good mix of: Age, Gender, Income, education, place of residence (rural/urban)* • *Quebec residents may be overrepresented.* • *First official language spoken: French* • *Province: All* • *Quebec residents may be overrepresented.*

For each participant, collect the following information:

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

INTRODUCTION

Hello/Bonjour, I'm _____ of Leger, a marketing research company. We are organizing a research project on behalf of Transport Canada. The research's objective is to collect opinions from Canadians on Advanced Air Mobility.

As a reminder, Advanced Air Mobility is a broad operational concept that refers to a variety of new and emerging ways to move people, goods and services by air. It describes an emerging future state for the aviation ecosystem and is often grouped into three categories: Urban Air Mobility, which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; Regional Air Mobility, which carries people and goods to rural and remote communities; and Remotely Piloted Aircraft Systems, or drones.

We're reaching out to you because you showed interest in participating in these focus groups when answering a survey on this topic a few weeks ago.

We are now preparing to hold a few research sessions with people like yourself. Participation is completely voluntary. We are interested in your opinions. The format is an "online" discussion led by a research professional with up to ten participants. All opinions will remain anonymous and will be used for research purposes only in accordance with laws designed to protect your privacy. You don't need to be an expert to participate. We don't have anything to sell and we don't advertise and it's not an opinion poll on current events or politics. We are organizing several of these discussions. We would be interested in possibly having you participate.

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 focus group would take place online on the (**INSERT DATE/TIME**) and will be a maximum of **90 minutes**. You will be compensated **$125** for your time.

I repeat that participation is entirely voluntary, and all information you provide is completely confidential. The full names of participants will not be provided to any third party.

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

Yes	1	**CONTINUE**
No	2	**THANK AND CONCLUDE**

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

When you conclude, say: Thank you for your cooperation. We have already reached the number of participants with a profile similar to yours. Therefore, we cannot invite you to participate.

A2. The group discussions we are organizing are going to be held **over the Internet**. They are going to be "online focus groups". Participants will need to have **a computer**, a **high-speed Internet connection,** and a **WebCam** in order to participate in the group. Would you be able to participate under these conditions?

Yes	1	**CONTINUE**
No	2	**THANK AND CONCLUDE**

PROFILING

INTRO1.
Do you or anyone in your immediate family work or have you ever worked in ...?

Marketing Research	1 **THANK AND CONCLUDE**
Marketing and Advertising	2 **THANK AND CONCLUDE**
Public relations, communications	3 **THANK AND CONCLUDE**
Media (newspapers, television, radio, etc.)	4 **THANK AND CONCLUDE**
Telecommunications	5 **THANK AND CONCLUDE**
Aviation or Air transport	6 **THANK AND CONCLUDE**
None of the above	9

Gender
Please indicate the gender of the person.

Male	1
Female	2
Other	3

Gender: Ensure a good mix during the recruitment, Other is not a screening criteria

IMM1
Were you born in Canada?

Yes	1
No	2

AGE
What age category do you fall into?

18 to 24	1
25 to 29	2
30 to 44	3
45 to 54	4
55 to 64	5
65 to 75	6
76 and over	7

Age: Ensure a good mix of age during the recruitment

Language
Which of French or English is your primary spoken language?

INT: If respondent mentions a language other than French or English, determine which language they are most familiar with between French and English.

French	1
English	2

AAM.
In general, do you think that the development of Advanced Air Mobility is good or bad for Canada?

As a reminder, Advanced Air Mobility is a broad operational concept that refers to a variety of new and emerging ways to move people, goods and services by air. It describes an emerging future state for the aviation ecosystem and is often grouped into three categories: Urban Air Mobility, which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; Regional Air Mobility, which carries people and goods to rural and remote communities; and Remotely Piloted Aircraft Systems, or drones.

In the future, AAM could become an important part of our transportation system. Eventually, it is expected that some passenger aircraft will fly through remote piloting, or even autonomously.

Very good	1 **GROUP 1 OR 3**
Good	2 **GROUP 1 OR 3**
Bad	3 **GROUP 2 OR 4**
Very bad	4 **GROUP 2 OR 4**
I don't know	5 **GROUP 1 OR 3**

Age: Ensure a good mix Group 1 and 3 (Good/don't know), Group 2 and 4 (Bad/Very Bad).

Province
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 and Labrador	10
Northwest Territories	11
Yukon	12
Nunavut	13

Province: Ensure a good mix in English groups. Quebec may be overrepresented in French groups, but include French speaking participants from other provinces if possible.

AREA
What is the size of the community you live in?

Major metropolitan area with population of 1,000,000 or more	**1**
Large urban centre with population of 100,000 or more	**2**
Medium population centre with population of between 30,000 and 99,999	**3**
Small population centre with population between 1,000 and 29,999	**4**
Rural area with population of less than 1,000	5

Ensure a good mix of community sizes

EDUCATION
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

Ensure a good mix for all groups if possible during the recruitment

OCCUP.
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.	98

Ensure a good mix for all groups if possible during the recruitment

GROUP ATTRIBUTION

	#
AAM = 1,2 or 5 AND Language = 2	**Group #**1
AAM = 3 OR 4 AND Language = 2	**Group #**2
AAM = 1,2 or 5 AND Language = 1	**Group #**3
AAM = 3 OR 4 AND Language = 1	**Group #**4

PSPC POR1

Have you ever attended a discussion group or taken part in an interview on any topic that was arranged in advance and for which you received money for participating?

Yes	1
No	2 **GO TO PSPC POR2**

PSPC POR2

When did you last attend one of these discussion groups or interviews?

Within the last 6 months	1 **THANK AND CONCLUDE**
Over 6 months ago	2

PSPC POR 3

Thinking about the groups or interviews that you have taken part in, what were the main topics discussed?
RECORD: _____ **THANK/TERMINATE IF RELATED TO AVIATION OR AIR TRANSPORT**

PSPC POR4

How many discussion groups or interviews have you attended in the past 5 years?

Fewer than 5	1
Five or more	2 **THANK AND CONCLUDE**

CONCLUSION

Q1.
By participating in this focus group, you will be asked to discuss with other participants and share your opinion on Advanced Air Mobility. Please note that you do not need to be an expert to participate. You may also be asked to read during the meeting.

How comfortable do you feel in such an environment?

Read the answer choices.

Very comfortable	1
Somewhat comfortable	2
Not very comfortable	3 **THANK AND CONCLUDE**
Not at all comfortable	4 **THANK AND CONCLUDE**

INVITATION

Thank you. We'd like to invite you to participate in this focus group.

We are thrilled to have you as one of our participants in this study; your profile perfectly fits the target respondent we are looking for. We would like to invite you to participate in an online focus group that will be facilitated by an experienced professional moderator and will last approximately 90 minutes. The session will take place at [XX], on____XX____ (date/time) __XX__.

For your participation, you will receive a financial incentive of $125.

Please note that the session will be recorded. Your interview may also be observed by people who are directly working on the research study.

Just a quick reminder that the groups of discussion are going to be held over the Internet. They are going to be "online focus groups". You will need a computer, a high-speed Internet connection, and a WebCam in order to participate in the group.

INV1.
Are you still interested in participating in this research study?

Yes	1
No	2 **THANK AND CONCLUDE**

The information provided by you will be kept confidential and will only be disclosed to those who are directly working on the research that is relevant to the topic of discussion.

INV2.
Representatives from Transport Canada may observe the discussion, but will not have access to any of your private information. You will be asked to sign a consent form in order to participate in this research. Would you be willing to do this?

Yes	1
No	2 **THANK AND CONCLUDE**

PRIVACY SECTION
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.

P1) First, we will provide **the online platform** and **session moderator** with a list of respondents' names and profiles (screener responses) so that they can sign you into the group. Do we have your permission to do this? I assure you it will be kept strictly confidential.

Yes	1 GO TO P2
No	2 **Read information below and P1A**

We need to provide the **online platform** and **session moderator** with the names and background of the people attending the focus 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 P1A**

P1a) Now that I've explained this, do I have your permission to provide your name and profiles **to the online platform and moderator?**

Yes	1 GO TO P2
No	2 **THANK AND CONCLUDE**

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

Yes	1 GO TO INVITATION
No	2 **Read information below and P2A**

It is necessary for the research process for us to record the 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?

Yes	1 GO TO INVITATION
No	2 **THANK AND CONCLUDE**

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 ____.

To ensure that the focus groups run smoothly, we remind you:

- To make sure you are connected to the Internet and logged on 15 minutes in advance of the group
- To turn off your cellular phones – to avoid disruptions during the group.
- Make sure your WebCam is ON and functional
- To bring reading glasses, if necessary, to be able to go over the material.
- To make sure you will be located in a clear room (luminous)
- That the session will be recorded for analysis purposes only.

Email address : _____

Thank you very much for your assistance!

CONTACT INFORMATION

Someone from our company will contact you to confirm the group. Could you leave me a phone number where we can reach you in the evening as well as during the day?

Name :

Phone number: **Cell phone:**

Recruited by:

Confirmed by:

A4. Discussion guide

BLOC 1	**INTRODUCTION AND EXPLANATION**
Length	**10 MINUTES**

WELCOME AND PRESENTATION
- Reception of participants
- Introduction of the moderator
- Presentation of Leger

PRIMARY AIM
- The research is being conducted by Léger Marketing on behalf of Transport Canada. The objective of the meeting is to learn about your opinion and perception on Advanced Air Mobility to help inform government actions and decisions.

- You are in this group this evening because you have expressed (INSERT DEPENDING ON THE GROUPS: positive or neutral / negative) opinions on Advanced Air Mobility.

RULES OF DISCUSSION
- Dynamics of the discussion (duration, discussion, round table)
- No wrong answers
- Importance of giving personal, spontaneous and honest opinions
- Importance of reacting respectfully to the opinions of others
- Importance of speaking one person at a time

PRESENTATION OF THE GROUP ROOM
- Audio and video recording for subsequent analysis
- Presence of observers from the Transport Canada

SPECIFY: Observers from TC are only here to ensure things run smoothly and provide subject matter details if necessary.
- Presence of analyst to take notes

RESULTS CONFIDENTIALITY
- The discussions we will have this evening will remain confidential at all times.
- Your name will never be mentioned in the report
- Information collected for study purposes only

Do you have any questions before we get started?

INTRODUCTION OF PARTICIPANTS
- What's your first name?
- Your place of residence (province and city)?
- What keeps you busy these days?

BLOC 2	**WARM-UP**
LENGTH	**10 MINUTES (concluded by 20 minutes in)**

Today, we will be talking about Advanced Air Mobility.

- When you think of Advanced Air mobility, what comes to your mind?
  PROBE: Do you think it is something that will become a reality in the future? If yes, how soon do you expect it to happen? Why?

- What are some applications of Advanced Air Mobility that you can think of?
- What technologies related to Advanced Air Mobility can you think of?

BLOC 3	**GENERAL OPINION ON AAM**
LENGTH	**10 MINUTES (concluded by 30 minutes in)**

I will now present a definition of Advanced Air Mobility so we can all be on the same page:

MODERATOR: SHOW THE DEFINITION AND READ IT TO THE PARTICIPANTS.

Advanced Air Mobility is a broad operational concept that refers to a variety of new and emerging ways to move people, goods and services by air. It describes an emerging future state for the aviation ecosystem and is often grouped into three categories: Urban Air Mobility, which refers to carrying people or goods by air within cities, such as by "air taxi" or drone delivery; Regional Air Mobility, which carries people and goods to rural and remote communities; and Remotely Piloted Aircraft Systems, or drones.

In this group today we have people who have a (DEPDENDING ON THE GROUP: positive or neutral /negative) opinion on Advanced Air Mobility.

- Can you tell me more about your opinion? Why do you think so?
- For those who are (DEPENDING ON THE GROUP: neutral/unsure or who don't think it is positive). What could be done to improve your general opinion on Advanced Air Mobility?
- What if it was implemented only in rural areas? How would you feel about this?

BLOC 4	**OPINION ON AAM APPLICATIONS AND TECHNOLOGIES**
LENGTH	**40 MINUTES (concluded by 70 minutes in)**

We will now talk about different applications and technologies related to Advanced Air Mobility.

I will present boards showcasing various technologies and applications. While some scenarios are not yet implemented, others might already be in place. For these scenarios, we are seeking your feedback on how these technologies may evolve in the future.

MODERATOR: SHOW EACH BOARD AND THEN ASK THE QUESTIONS BELOW BEFORE MOVING TO THE NEXT BOARD.

BOARD 1: MEDICAL / HEALTHCARE AVIATION

BOARD 2: AERIAL FIREFIGHTING TECHNOLOGY

BOARD 3: DRONE DELIVERY (IN URBAN/SUBURBAN AREA)

BOARD 4: REGIONAL AIR MOBILITY

BOARD 5: URBAN PASSENGER-CARRYING

- Do you believe it is a good or bad thing if this were implemented? Why?
    - **PROBE**:
        - What are the potential benefits of this technology/application?
        - What are the potential concerns for this technology/application?
- DO NOT ASK FOR HEALTHCARE AVIATION OR AERIAL FIGHTING: How likely are you to try it? Why?
    - MODERATOR: IF PARTICIPANTS MENTION COSTS, CLARIFY THAT WE WANT THEM TO CONSIDER THIS IS AS ACCESSIBLE TO THEM AS ANY OTHER MEANS OF TRANSPORTATION/DELIVERY
- Would you feel safe if it were flying above you? Why?
- FOR DRONE DELIVERY: what if it were for delivering goods for businesses?

- DO NOT ASK FOR DRONES: Now, let's imagine if the pilot were not on board but instead piloting the aircraft remotely. How do you feel about this? Does this change your opinion? Why?
    - **PROBE:** What would make you more comfortable with not having a pilot on board?

- Now let’s imagine if the aircraft was autonomous (with no pilot). How do you feel about this? Does this change your opinion?
    - **PROBE:**
        - What would make you more comfortable with the aircraft being autonomous?

- FOR PASSENGER-CARRYING AND REGIONAL AIR MOBILITY:
    - How different do you feel this is compared to autonomous cars or taxis?
    - Have you already tried them? How was your experience?

- What would improve your opinion in general of this technology?
  MODERATOR: IF ALL THE GROUP HAVE A POSITIVE OPINION ASK: What could be done to improve other people’s opinion of this technology?

MOVE TO NEXT BOARD.

ONCE ALL BOARDS ARE COVERED:

- Now we have discussed different technologies and applications of Advanced mobility, do you have any other concerns regarding Advanced Air Mobility?

  PROBE IF NECESSARY: crash concerns, security (risk of hacking), environment, privacy, noise, job losses, affordability?

BLOC 5	VERTIPORT
LENGTH	5 MINUTES (concluded by 75 minutes in)

MODERATOR: SHOW VERTIPORT DEFINITION AND READ IT TO THE PARTICIPANTS.

I will now show a presentation of a vertiport.

MODERATOR: SHOW POLL.

P2. How comfortable would you be living next to a vertiport?

Very comfortable
Somewhat comfortable
Somewhat uncomfortable
Very uncomfortable
I don't know / I'm not sure.

MODERATOR: DISCUSS ANSWERS

- Why do you think so?
- What would make you more comfortable living next to a vertiport?

PROBE IF NECESSARY:

- In which areas do you think vertiports should be built?

BLOC 6	FEELINGS ABOUT AAM
LENGTH	5 MINUTES (concluded by 80 minutes in)

Now that you have more information about Advanced Air Mobility, how do you feel about it in general?

MODERATOR: ASK PARTICIPANTS TO WRITE IN THE CHAT.

You can write more than one word if you want to express different feelings.

MODERATOR: DISCUSS THE ANSWERS.

- Why do you think so?
- What would make you feel less (moderator: include negative emotions mentioned)?

BLOC 7	**TC COMMUNICATION**
LENGTH	**5 MINUTES (concluded by 85 minutes in)**

• If Transport Canada were to communicate or share information about Advanced Air Mobility, what specific information would be relevant for you to include? Why?

• Where would you prefer to access this communication or receive information about Advanced Air Mobility?

BLOC 8	**CONCLUSION**
DURÉE	**5 MINUTES (concluded by 90 minutes in)**

We're almost finished, but before you go, I'd like to ask if your feelings and opinions about AAM have changed since participating in this group compared to how you felt about it at the beginning of the focus group. How?

Do you have any final comments you would like to add on the topics we just discussed?

CONCLUDE AND END THE MEETING.
THANK YOU VERY MUCH FOR YOUR PRECIOUS COLLABORATION!