



# Problem Analysis: Innovation Proposal

**BUS 240 D100 – Group 16**

**Amyr Somani**

Kaitlin Chan

Vincent Kwan

Angela Lim

Abdullah Bin Omer

Jaren Shen

Jennifer Yang



**AIR CANADA**

## Introduction

Air Canada is one of the largest airlines worldwide and the top airline in North America, providing domestic and international flights daily (SKYTRAX, 2025). In 2024, Air Canada operated an average of 1,032 daily flights and welcomed over 47.3M passengers (Statista, 2024). It demonstrated strong growth as they reported a record of C\$22.255B in revenue in the last fiscal year (Air Canada, 2024). However, they did experience a drop in profitability that reflected cost pressures, which were largely driven by a significant increase in labour and pension expenses.

Air Canada has faced many challenges following the lows after the pandemic. In response to the challenges, Air Canada introduced an AI chatbot in 2022; however, it resulted in legal issues due to the chatbot providing incorrect information to a customer (Yagoda, 2024). Not only have they failed with the chatbot in 2022, but they have also been struggling to maintain consistent flights, making Air Canada one of the worst in the industry for time performance. Air Canada is one of the lowest-ranked in the industry when it comes to customer satisfaction (Siekierska, 2024).

With all of this in mind, we introduce to you our incremental innovation, Maple, an interactive AI chatbot. With Maple, customers will experience a different side of customer service with the multilingual support options, 24/7 flight delay support, check-ins, and other inquiries, as well as an airport navigation system. We aim for Maple to assist approximately 100,000 customers within its first month of launch. This initial usage will provide valuable insights into which features are most effective, allowing us to prioritize and refine key components.

*(See Appendix H for all Interviews)*

From our survey, 83% of participants were interested in using this innovation, while 17% would use it to navigate but not to book flights, as they find AI to not be reliable (Appendix H). Our participants think this is a good solution, as one participant mentioned that it addresses common pain points with features including multilingual support, real-time assistance, and updates (Appendix H). We will utilize this innovation to create a positive impact on Air Canada customers and overall increase Air Canada's customer service ratings.

## Goals

Setting goals is one of the most common ways businesses improve. Not only will it help us improve, but it will also be one of the main ways to help us track and understand success. To do so, we outlined three goals: two short-term goals and one long-term goal.

### Short Term:

- Successfully assist 100,000 customers through the AI chatbot in the first month of integration
  - This goal will allow us to understand how fast our innovation creates a positive impact and how well the innovation is being adopted.
  - After assisting 100,000 customers, we can analyze which components within the AI chatbot are used the most to improve certain components to help future customers.
- Start to see an increase of 10% in overall ratings within 6 months after implementation
  - This goal will allow us to track our improvements with our AI chatbot and to help us understand if it is solving our customers' issues. With the current overall rating sitting at 3 out of 5 (Tripadvisor, n.d.), our goal is to elevate it to 4 or higher, demonstrating a measurable improvement in customer satisfaction and strengthening Air Canada's brand reputation.

**Long Term:**

- See an increase in customer satisfaction with customer service, as well as a reduction in stress
  - By implementing the AI chatbot, we will improve our customer service rating and help customers get the immediate support they are looking for.
  - After customers use the AI chatbot, a survey will pop up asking the customer specific questions about their experience. With the survey, we will pinpoint issues to focus on improving
  - By having an increased rating in customer service, we will change our reputation to gain more loyal customers and make customers feel less stressed about their flight.

**Tenets**

Air Canada primarily has three pillar tenets which guide their decision-making, actions, and objectives. These tenets serve to align Air Canada with its mission of connecting people from around the world, while strictly adhering to its values of dignity, safety, and customer excellence (Air Canada, 2023).

The first and most important tenet in regards to developing this innovation is a customer-centric focus. This tenet lays the foundation for any action or innovation, ensuring that the underlying needs of the consumer are strategically prioritized. Each business decision is designed to ensure a seamless customer experience, which is simple, clear and quick. As a company in the airline industry, safety and trust are an integral aspect of each action management makes. Decisions being made at Air Canada, whether big or small, can not come at the compromise of the safety of their passengers and staff. Building a relationship of trust, not only with their passengers but also with other stakeholder groups, is crucial in order to achieve their mission of connecting the world.

A commitment to maximize efficiency and operational excellence acts as the final piece that brings all of Air Canada's tenets together. As one of the largest airlines in the world, Air Canada must effectively manage its resources and supply chains. In the context of innovation, this means simplifying processes and unlocking untapped productivity from its employees, to allow them to fully utilize their unique individual talents.

**State of the Business**

Air Canada serves 188 direct destinations worldwide, with major ports in Toronto, Montréal, and Vancouver (Air Canada, 2024). Its business is structured into three core areas: passenger services, cargo operations, and a loyalty and vacation business (*See Appendix B for Customer Segmentation Visual*). This enables diversified revenue streams and allows Air Canada to serve clients from leisure and business to cargo globally.

Air Canada performed strongly in 2024. Air Canada's total operated capacity demonstrated a 5.05% increase of 104.3B (Air Canada, 2024). International expansion also improved, with new routes to Asia and Europe, such as Singapore, Manila, and Madrid (Air Canada, 2024). Air Canada's other revenue streams also showed success. Aeroplan, Air Canada's loyalty program, increased its active membership base to over 9M, Air Canada Cargo revenue increased by 7.25% in 2024, and Air Canada Vacations launched packages to Asia, Australia, New Zealand, and more (Air Canada, 2024).

Air Canada reported strong financial performance in 2024, though profitability was impacted by rising costs. The company reached C\$22.255B in revenue, from C\$21.833B in 2023 (Air Canada, 2024). Additionally, operating income totalled C\$1.263B, net income totalled C\$1.720B, and adjusted EBITDA

was C\$3.586B (Air Canada, 2024). However, the operating margin fell from 10.4% in 2023 to 5.7% due to cost pressures (Air Canada, 2024).

Cost pressures were mainly driven by labour and pension-related expenses. Wages, salaries, and benefits rose to C\$4.88B in 2024, a 23.39% increase from 2023, and pension costs also increased to C\$614M (Air Canada, 2024). Additionally, employee benefit funding fell C\$568M (Air Canada, 2024). The rise in costs has affected the company's profitability for the first quarter of 2025, but Air Canada remains resilient.

Overall, Air Canada remained financially resilient in 2024, with C\$9.154B in total liquidity, C\$4.918B in net debt, and C\$1.294B in free cash flow (Air Canada, 2024). These actions show a balanced approach to growth and investment.

Air Canada has also implemented several proposals that address customer service, digital transformation, and sustainability. Air Canada increased on-time performance, announced free Wi-Fi on North American flights starting May 2025, and enhanced digital identification boarding for domestic flights from Vancouver (Air Canada, 2024). To be more sustainable, the company purchased 78M litres of sustainable aviation fuel to meet its goal (Air Canada, 2024).

While risks like labour costs and fuel prices remain, Air Canada is looking to be operationally stable for 2025. With continued improvements on customer satisfaction, disciplined cost control, and network growth, Air Canada will maintain its competitive position.

### **Lessons Learned**

Air Canada has faced a number of challenges in the years following the global pandemic. The airline has made good progress in some areas to recover from its pandemic lows, but has also made several strategic blunders in recent years. The most high-profile of which was Air Canada's implementation of an artificial intelligence chatbot in 2022, which landed the company in legal trouble. The company's chatbot at the time provided incorrect instructions to a customer who was trying to get a discounted fare. Air Canada decided not to honour the deal which their chatbot had promised to the passenger. This situation was brought to a civil resolution tribunal, where it was ruled against Air Canada (Yagoda, 2024). The company demonstrated a severe lack of foresight, as they failed to perform the necessary due diligence when implementing the chatbot and created a public relations disaster afterwards, which they could've easily avoided by honouring the deal.

Air Canada has also been struggling to maintain consistent flights, with it being reported that around 37% of their flights arrived late in the past years (Associated Press, 2024). This makes them one of the worst in the industry when it comes to on-time performance, coming in last amongst major airlines in North America. It is important for Air Canada to minimize delays, as they come at significant costs to the airlines, not only monetarily but also to their brand. In the past, these inconsistencies have been attributed to weather, strained logistical networks, and staffing issues with air traffic controllers. These issues highlight the need for Air Canada to improve their demand forecasts and overall operational resilience.

Another area of concern for Air Canada has been its management of customer relationships, which also affects its brand identity. The airline has been facing record levels of complaints from passengers, averaging around 3,000 new complaints every month in 2024, leading to a backlog of almost 60,000 (Mighty Travels, 2024). Furthermore, Air Canada is one of the lowest ranked in the industry when it

comes to customer satisfaction across all cabin classes (J.D. Power, 2025). According to J.D. Power, this is exacerbated amongst economy class passengers as customers perceive Air Canada's service to be more similar to budget airlines such as West Jet and Spirit than other full-service carriers.

### Strategic Priorities

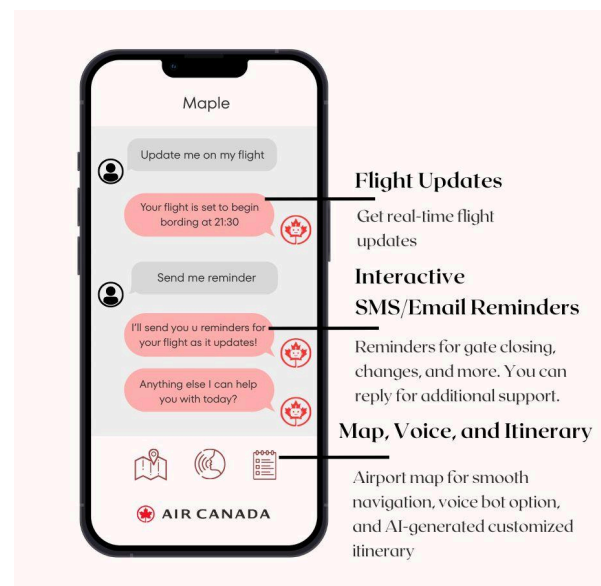
We find an opportunity for Air Canada to implement an AI automated chatbot feature on both their website and app. Our chatbot is named "Maple," after Air Canada's strong connection to Canada's Maple Leaf, as seen in its current logo of a maple leaf. "Maple" is designed with our target personas, first-time traveller Korie and student explorer Kai's needs in mind (*See Appendix C for Customer Personas*). Our system will provide a solution to the pains faced by our target personas: long wait times, poor communication during delays, language barriers, and on-demand, real-time support (Report, Assignment 2).

(*See Appendix D for Value Proposition Canvas*)

Maple will provide Air Canada customers and potential passengers with...

- Real-time AI chatbot for airport and transit navigation
- Auto-generated street view of the airport for efficient navigation at the airport
- Verbal support option for hands-free guidance
- Multilingual support (French, Mandarin, Punjabi, etc.)
- Interactive reminders and flight updates notifications
- Seamless flight booking, management, and support
- Create a custom itinerary partnered with Marriott
- Reduced wait times and the need for traditional customer service

(*See Appendix E for Solution and Prototype*)



Maple will reduce the long wait times faced by our target market of young adult solo passengers by offering them an alternative to the in-person counter. It will be able to support the majority of passenger needs at the in-person counters, including check-in, flight booking, and airport navigation assistance. Maple services will span beyond traditional customer service support, with multilingual support options to mitigate language pains faced by travellers going to international destinations, and AI-generated and customizable travel itineraries partnered with hotel giant Marriott to make travel planning stress-free and plannable all in one location. Safety is a high concern for our target personas (Appendix C). Our system supports this specific concern faced by students and first-time travellers by offering 24/7 travel support to passengers.

We will work with the existing app development team at Air Canada, along with key partners like Microsoft Azure and Eleken, to develop this innovation (*See Appendix A for the full list of Key Partners*). We will utilize Microsoft Azure's AI "customizable APIs and models" to support the development of

software for Maple's various capabilities (Microsoft, 2025). Eleken's user interface design service will play a key role in ensuring our system is easily user-friendly and intuitive.

We find that there is growing concern about AI systems' high level of carbon emissions (Griesser, 2025; McLean, 2023; Zewe, 2025). To mitigate the potential for unintended consequences, we will utilize Bronson Consulting's AI ethics auditors to ensure compliance with regulatory requirements and to account for any adverse ethical impacts resulting from our AI system.

Air Canada's customer service is a critical part of the travel experience. With the implementation of Maple, we directly address the common pain points of Air Canada customers' experience (Appendix H).

One of the leading frustrations for customers is the wait time to speak with an Air Canada representative about flight delays, check-ins, and other inquiries. With Maple's 24/7 instant support through an on-demand chat box, it significantly reduces wait times and dependency on call centers and in-person counters. This AI chatbot can answer routine questions about boarding times, gate location, and baggage, helping customers find out what they need as fast as possible. This reduces the attention on Air Canada's service members and allows them to focus on more complex issues, leading to more efficient customer service. With the proactive communication during disruptions through automated notifications, step-by-step rebooking, and real-time transparency on disruptions, this can contribute to higher satisfaction scores and reduced complaints about disruptions. This can be seen through Klarna's usage of AI to handle customer service interactions. Klarna uses its AI to handle two-thirds of customer service interactions and has had over 2.3M conversations in the past year (Marks, 2024). Air Canada, while not having to be on the same scale, can implement Maple and see results. The impact for Air Canada will shorten wait times for passengers, reduce congestion around service counters and support the goal of Maple serving 100,000 customers within the first month.

Maple is designed to help customers feel more confident in their decision to fly with Air Canada, whether in a solo flight trip or trying to navigate an international airport. To serve a diverse international customer base, Maple offers multilingual support in languages such as Mandarin and Spanish for a more personalized experience and support. Communicating with customers in their native language can improve the quality of interactions and strengthen the relationships with them. Multilingual support can enhance customer communication, contribute to a sense of worth and value and lower any misunderstandings (Ordorica, 2024). With language diversity, it can increase Air Canada's market access and expand its customer base, targeting new clients from regions where Maple can provide language support (Ordorica, 2024).

Along with the multilingual service provided, Maple takes navigating airports to the next level, pairing with the Air Canada app, maps of airports will now include AR viewing with arrows to help direct users to their desired location and voice-guided navigation for hands-free usage. This makes it easier and more convenient to follow along in the app.

Maple expands on customer service with proactive travel assistance and the ability to generate personalized itineraries. With the partnership with Marriott for seamless hotel booking in the app and customizable notifications, and reminders for flight connections and baggage, this can reduce travel anxiety and create a more streamlined planning process, being able to do everything on one platform. This will enhance customer loyalty and showcase Air Canada's dedication to being a passenger-focused airline, increasing ratings.

Implementing Maple into Air Canada's application offers a compelling value proposition not only for the passengers but also for Air Canada's financial performance and operational efficiency. The immediate effect is a better and improved customer experience, but in the broader lens, the business can be looking at reduced costs, increased revenue, and strengthened brand loyalty, making Maple a solid investment.

To start, Maple directly addresses Air Canada's high labour costs associated with in-person and call centre customer service. According to the International Air Transport Association (IATA), global airline labour costs are expected to rise by 7.6% in 2024, with a similar rate of increase in costs also observed in 2023. Notably, North American carriers are facing the highest wage increases (IATA, 2024). Suppose we automate basic service interactions such as baggage inquiries, gate information, and rebooking. In that case, Maple can reduce dependency on human agents, leading to cost savings through more smarter and more efficient support systems as we saw from Marks (2024) that Klarna's adoption of AI for customer service enabled them to handle over 2.3M conversations in a year and reduced the need for 700 agents and cutting support costs by 40% (Marks, 2024). According to our financial analysis, the development of "Maple" will cost C\$400,000; however, it will have the capacity to generate 200% ROI within its first year of implementation, and the cost savings from Maple will allow it to break even within 4 months (*See Appendix G for Financial Details*).

Additionally, Maple supports higher customer retention and repeat bookings by addressing pain points like long wait times and miscommunication, which are critical factors that lead to negative reviews. A Harvard Business Review study found that improving customer service experience can increase customer retention by 5%, which can in turn boost profits by 25–95% (Gallo, 2014). For an airline like Air Canada, which used to carry over 45M passengers before COVID and is now rising back to those numbers (Statista, 2024), even a 2% increase in returning customers would lead to significant revenue gains.

Furthermore, multilingual support and airport navigation tools position Air Canada to attract and retain more international and first time solo travellers, especially students and newcomers which is a demographic that is to be a part of Canada for a long time to come as we see from The Canadian Bureau for International Education reporting near to 1,000,000 international students in Canada at the end of 2024 (Canadian Bureau for International Education, 2025). Maple's features can provide accessibility to that demographic and have a competitive edge over a demographic that's usually overlooked (*See Appendix F for Competitor Analysis*).

Finally, Maple's integration with Marriott and potential third-party services like ground transportation offers future revenue streams via strategic partnerships. These cross-promotional services increase average revenue per user while also providing additional customer convenience, which strengthens Air Canada's position as a customer-centric airline.

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## Appendices

### Appendix A — Business Model Canvas


The Business Model Canvas		Designed for: Air Canada	Designed by: Team 16	Date: Aug	Version: Final			
<b>Key Partnerships</b>  <ul style="list-style-type: none"> <li>Seamless.AI (Data providers)</li> <li>Airports to gain access to real-time flight and airport data, airport maps</li> <li>Microsoft Azure (existing AI/ML cloud platform)</li> <li>Eleken (UX research partner)</li> <li>Marriott Hotel and Resorts</li> <li>Bronson Consulting (AI ethics auditors)</li> </ul> 	<b>Key Activities</b>  <ul style="list-style-type: none"> <li>Develop and maintain chatbot &amp; navigation system</li> <li>Integrate with Air Canada's flight, booking, and airport systems</li> <li>Partner with airport authorities for maps and data sharing</li> <li>Improving AI chat bot functions</li> </ul>	<b>Value Propositions</b>  <ul style="list-style-type: none"> <li>Real-time AI chatbot for airport navigation and assistance</li> <li>Auto-generated airport maps street view for efficient navigation at the airport</li> <li>Verbal hands-free guidance</li> <li>Multilingual support (French, Mandarin, Punjabi, etc.)</li> <li>Interactive reminders and flight updates notifications</li> <li>Seamless flight booking and management, and support</li> <li>Reduced wait times and need for traditional customer service</li> </ul>	<b>Customer Relationships</b>  <ul style="list-style-type: none"> <li>AI 24/7 personal travel assistant</li> <li>Personalized travel updates and preferences</li> <li>Proactive alerts (e.g., gate changes, boarding reminders)</li> </ul>	<b>Customer Segments</b>  <ul style="list-style-type: none"> <li>Young Adult Solo Traveller: Student Explorer</li> <li>Young Adult Solo Traveller: First Time Traveller</li> </ul> 	<b>Key Resources</b>  <ul style="list-style-type: none"> <li>Airport authorities/staff (YVR, YYZ, etc.)</li> <li>Data storage center</li> <li>Software development expertise</li> <li>Airline staff for customer issues beyond AI capacity</li> </ul>	<b>Channels</b>  <ul style="list-style-type: none"> <li>Integrated into the Air Canada mobile app</li> <li>Integrated into Air Canada Website</li> <li>Smartwatch notifications</li> <li>Email/Text alerts</li> </ul>	<b>Cost Structure</b>  <ul style="list-style-type: none"> <li>AI and software development</li> <li>Map generation and real-time data licensing</li> <li>Data cloud storage structures</li> <li>Marketing costs</li> </ul>	<b>Revenue Streams</b>  <ul style="list-style-type: none"> <li>Increased customer retention and satisfaction</li> <li>Operational cost savings from reduced live support demand</li> <li>Potential premium subscription for VIP/travel concierge features</li> <li>Monetization through partnerships during voice calls or embedded within text and email reminders (e.g., airport retail ads/navigation sponsorships)</li> </ul>



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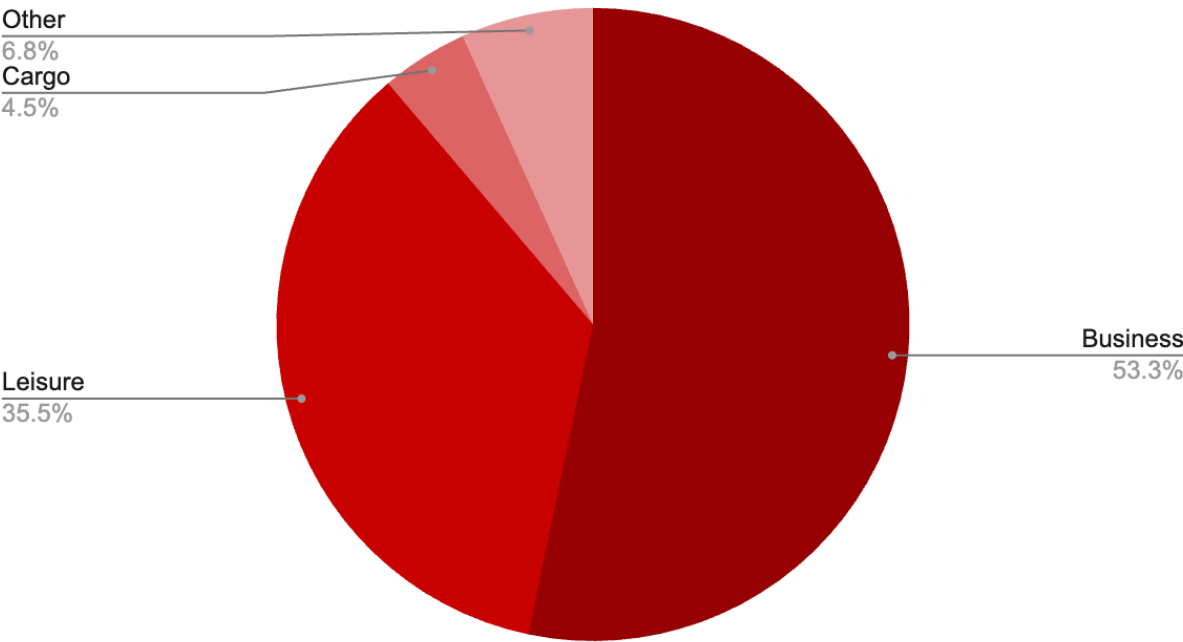
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Appendix B — Customer Segmentation Visual

Air Canada Customer Segmentation

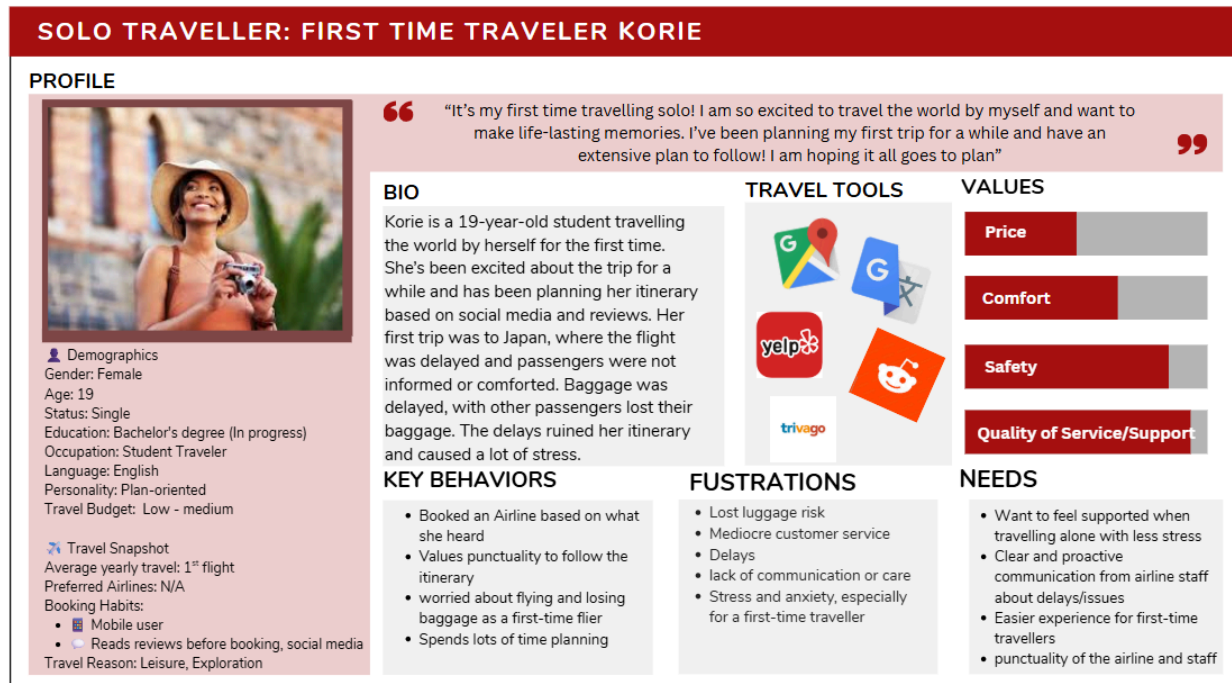


	Air Canada 2024 Revenue	
Business	11,856,000,000	
Leisure	7,904,000,000	19,760,000,000
Cargo	991,000,000	
Other	1,504,000,000	
	22,255,000,000	

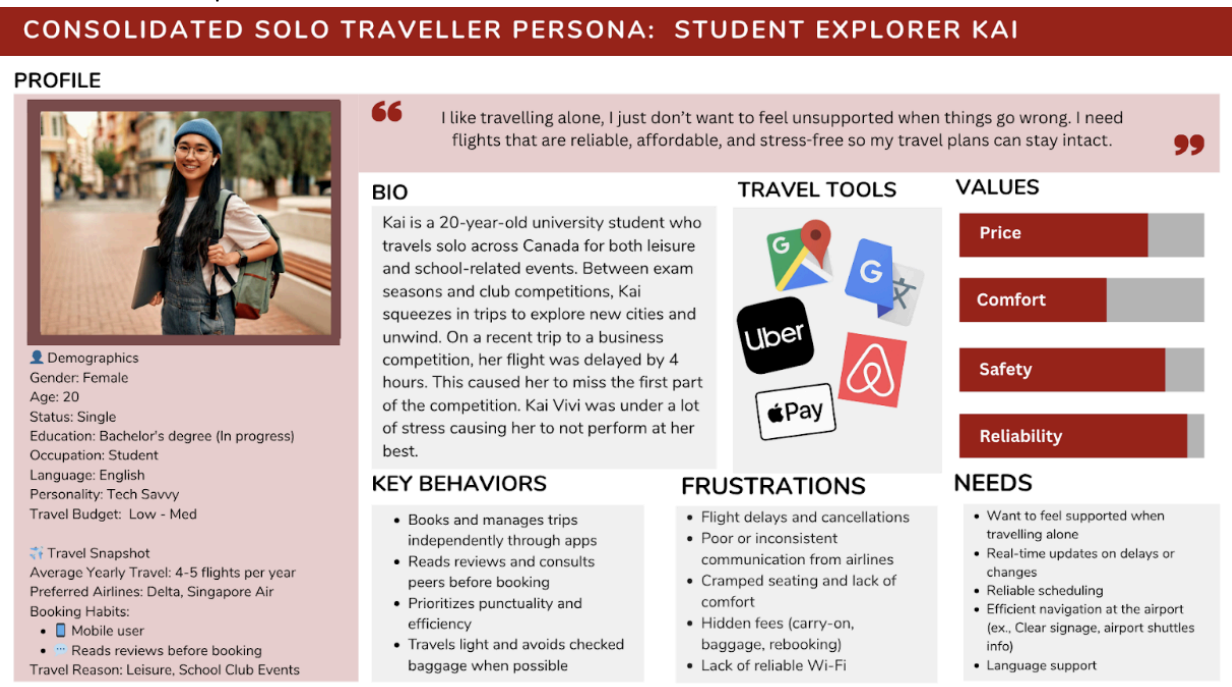
- **Assumption:** Passenger revenue is split into business and leisure travellers. Business travellers make up 60% of passenger revenue, while leisure travellers make up the remaining 40% in line with industry. Total passenger revenue is C\$19.76B (Air Canada, 2024).
  - We assume 60% of passenger revenue comes from business travellers because they tend to “buy more expensive seats, buy last-minute tickets, and are typically twice as profitable as other passengers” (Investopedia, 2024).
- Numbers taken from 2024 annual report (Air Canada, 2024).
- “Other” consists of its loyalty program, Aeroplan, and its vacation business, Air Canada Vacations

## Appendix C — Target Customer Persona(s)

### 1. First-time traveller

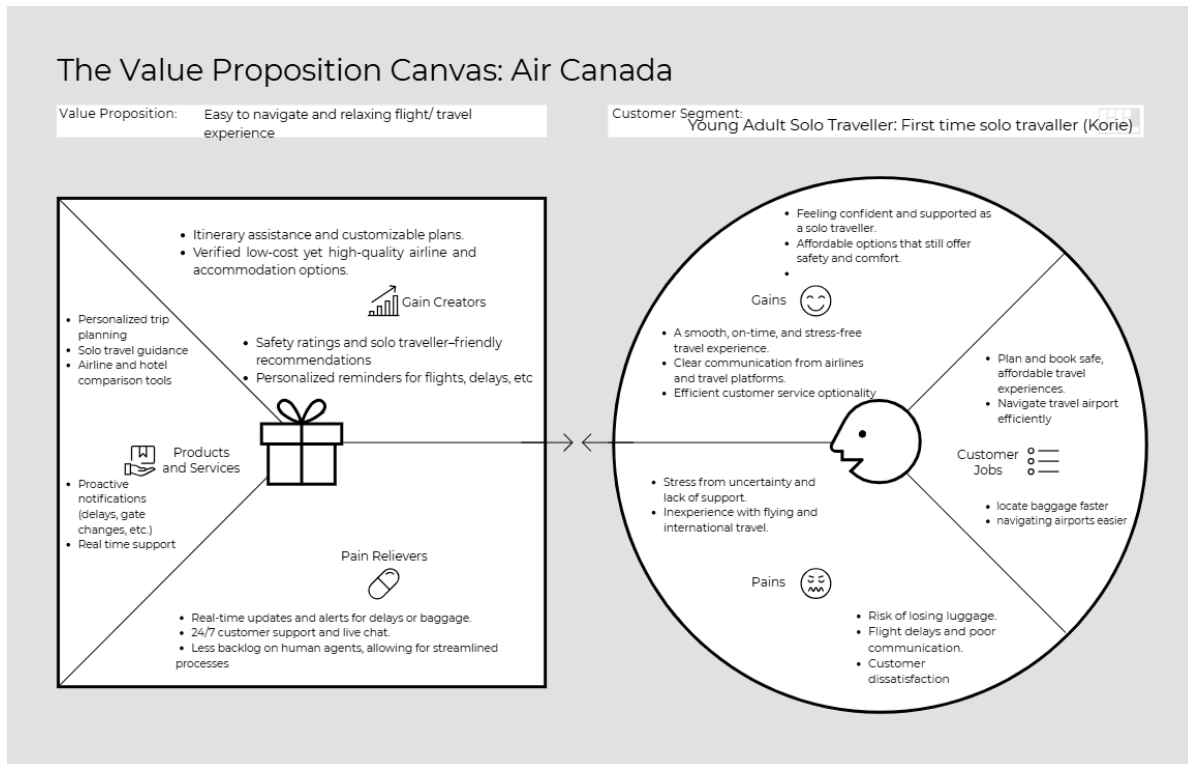


### 2. Student Explorer

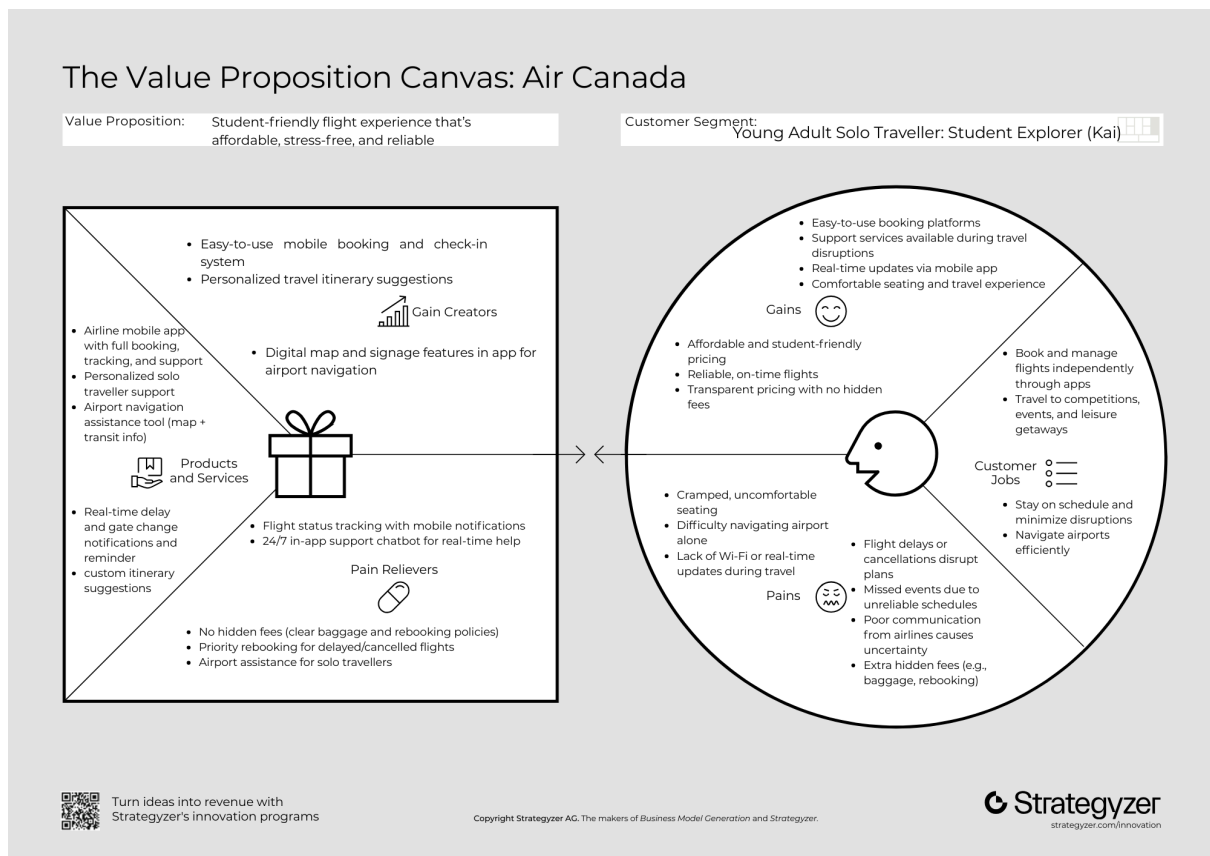


## Appendix D — Value Proposition Canvas

### 1. First-Time Traveller (Korie)



### 2. Consolidated Persona (Kai)



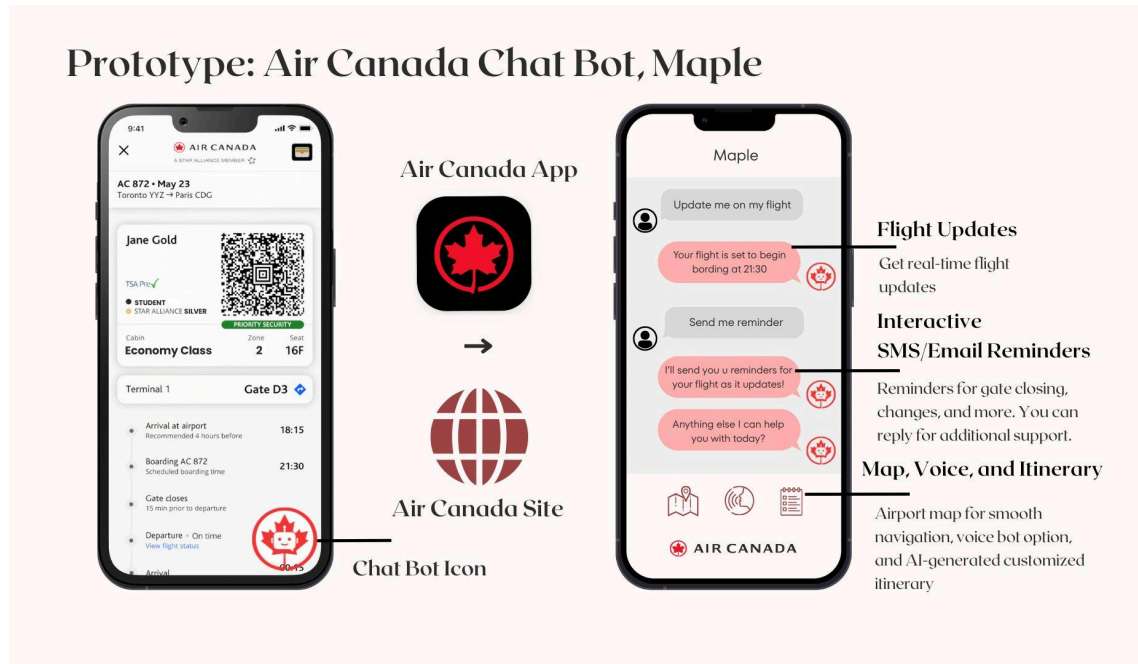
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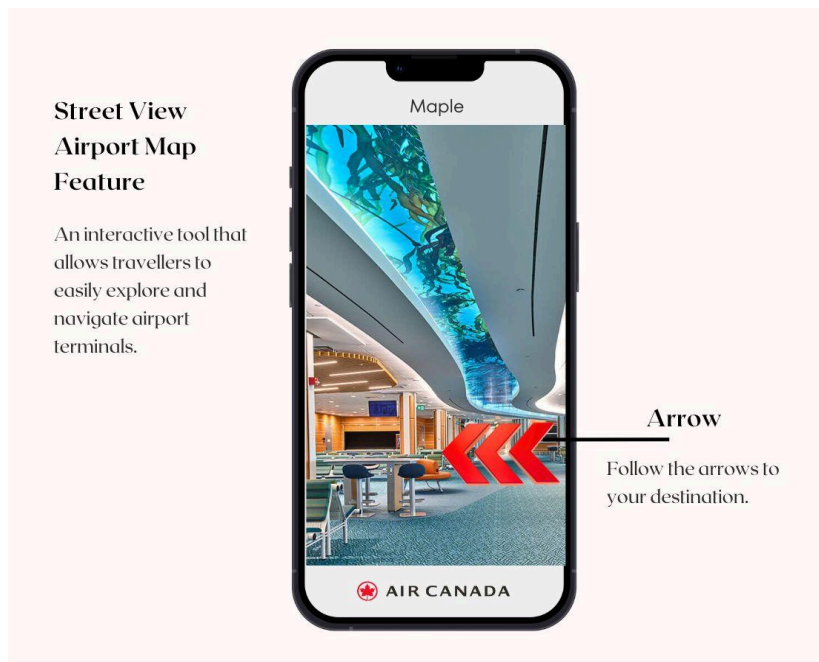


## Appendix E — Solution and Prototype



In addition, our AI system will be able to assist passengers with...

- Real-time AI chatbot for airport and transit navigation.
- Auto-generated street view of the airport for efficient navigation at the airport
- Verbal support option for hands-free guidance. (We provide customers with the option to verbally get assistance from Maple.)
- Multilingual support (French, Mandarin, Punjabi, etc.)
- Interactive reminders and flight update notifications (Rather than just receiving a passive text or email, passengers will be able to reply directly and chat with Maple about any concerns regarding their trip.)
- Seamless flight booking, management, and support.
- Generating a custom itinerary partnered with Marriott.
- Reduced wait times and need for traditional customer service





## Appendix F — Competitor Analysis

Three airlines have also implemented an AI chatbot to enhance their customer service: KLM Royal Dutch Airlines, Singapore Airlines, and Air France.

### KLM Royal Dutch Airlines

KLM's BlueBot (BB)	Air Canada's Maple
BB works across Facebook Messenger and is designed to assist customers with flight bookings, provide travel information, and manage reservations (KLM, 2017). BB mainly focuses on reservations and customer service, providing travel-related information such as flight status, booking inquiries, and check-in assistance, but does not go beyond this (KLM, 2017).	Maple is integrated into the Air Canada app and website and offers more features on top of what BB already offers. Maple offers auto-generated street views of airports, helping customers navigate terminals effectively. It also has verbal interaction for hands-free assistance and interactive flight updates, allowing users to respond directly to any questions or concerns.

While BlueBot offers basic assistance with booking, travel information, and reservations, Maple sets itself apart by providing real-time airport navigation through auto-generated street views, helping travellers easily find their way through complex terminals. Additionally, Maple offers verbal hands-free guidance, enabling passengers to get assistance without needing to type, making it more accessible during busy travel times. Unlike BlueBot, which is limited to text-based interactions, Maple also allows for interactive flight updates, ensuring passengers can engage directly and resolve issues in real-time. This fills the gap from BlueBot's more passive and static approach.

### Singapore Airlines

Singapore Airlines' Kris	Air Canada's Maple
Kris is also on Facebook Messenger and helps with basic travel information, including flight bookings, baggage policies, and check-in instructions (Singapore Airlines, n.d.). It performs exceptionally well at answering predefined queries, but does not engage users with interactive or real-time services (Singapore Airlines, n.d.).	Maple offers real-time, location-based guidance within airports, featuring auto-generated street views that help users effectively navigate their way around. Maple also offers interactive, real-time flight updates, letting passengers actively respond and ask follow-up questions about flight status or baggage handling. It also has a hands-free verbal support system for those who prefer to speak to the chatbot instead of typing.

Kris excels in answering basic travel inquiries but lacks features like real-time navigation or interactive flight updates. Maple offers auto-generated street views for seamless airport navigation, hands-free verbal support, enabling passengers to navigate airports without needing to type. Maple also allows for interactive communication with flight updates, providing a level of engagement that Kris does not, allowing passengers to ask questions and receive tailored responses about their journey. This proactive and personalized approach addresses the limitations of Kris, particularly for passengers navigating airports with limited information.

## Air France

Air France's Louis	Air Canada's Maple
Louis works through Air France's website and assists passengers with baggage inquiries (Air France, 2017). It provides personalized support by responding to customer queries based on their flight details, and can help customers with lost baggage and offer relevant information (Air France, 2017).	Maple offers comprehensive airport navigation, with auto-generated street views for users, improving the overall airport experience. The hands-free verbal support service also makes Maple stand out. Maple offers interactive, personalized flight updates for passengers to communicate directly through the app or the website. Maple also offers multilingual support to assist customers from all backgrounds.

Louis is focused on assisting with baggage-related inquiries but does not provide comprehensive assistance for other travel needs. Maple is a holistic travel assistant offering real-time airport navigation, hands-free verbal support, and interactive flight updates. By integrating all aspects of the travel experience into one seamless platform, Maple bridges the gap left by Louis, which is confined to baggage issues. Additionally, Maple's multilingual support ensures that passengers from diverse backgrounds have access to tailored assistance, filling the gap in accessibility that Louis lacks. Maple goes beyond baggage management to provide a comprehensive, personalized travel experience.

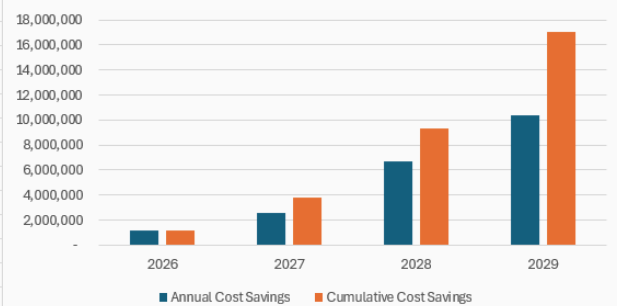
## Competitor Analysis Table

Feature	KLM's BlueBot	Singapore Airlines' Kris	Air France's Louis	Air Canada's Maple
Real-Time Airport Navigation				Auto-generated street view
Verbal Hands-Free Support				Verbal hands-free option available
Interactive Flight Updates				Reminders and notifications to respond directly
Multilingual Support	Limited	Limited	Very limited	Very diverse
Comprehensive Itinerary & Booking				Partnership with Marriott
Reduced Wait Times/Customer Service Interaction	Helps with booking & basic queries	Helps with flight bookings	Helps with baggage-related inquiries	Proactive support throughout

## Appendix G — Financial Details

Chat Bot Development:			App Development		
Items	Development Cost (low)	Development Cost (High)	Items	Development Cost (low)	Development Cost (High)
AI Type:	8000	15000	App characteristic and features	50000	200000
Conversational AI Chatbots	30000	60000	Development:		
Additional Funtionalities:			Planning/Discovery	5000	10000
Omni-Channel Capabilities	5000	10000	Ui/UX Design	8000	15000
Image Recognition	7000	15000	MVP Development	15000	35000
Speech Recognition	6000	10000	Testing & QA	5000	15000
Natural Language Processing	8000	20000	Deployemnt	7000	25000
Sentiment Analysis	5000	10000			
Push Notifications	2000	5000			
Other Expenses:					
Training Data (100k-500k records)	8000	20000			

Customer Support Staff Cost Reductions



## Appendix H — Customer Final Interview Data

Question	What are your first impressions of this idea?
Interviewee	Answers
Muhammad Anas Nadeem	I think this is a really useful idea. It would make navigating the airport and managing flights way easier, especially with the reminders and maps. Multilingual support is a big plus, too.
Lucy price	It seems very helpful
Dorothy Yuen	Sounds very efficient and helpful
Kiana fok	I was very intrigued by this topic because this is a very relatable and common thing to investigate and research, and I have not heard anything like this before.
Varinder Singh	Efficient
Ayan Ali	Generic but necessary
Harkomal Kaler	It seems cool, I like the idea of a chatbot. I like that it has real-time assistance
Samuel McCallen	This would be a great value-add for Air Canada! However, I'm not sure I'd trust AI to get accurate information.
Rita Hu	This definitely was a good first impression. The details of the chat app would definitely be very helpful for people who have a hard time or are anxious about travelling, whether it be flying alone, with family, or friends.
Jason Palpal-latoc	It seems like a generally beneficial idea with modernization aiming to improve customer support features on digital services.
Steven Ho	Navigation features and quick information would be useful in time crunch scenarios, but not sure about using AI to book & manage flights, as there is a risk of unexpected results and incorrect bookings. Also, would not want AI to be collecting highly sensitive info like passport numbers, addresses, birthdays, etc.
Ethan Lauritzen	Addresses some of the common pain points associated with air travel, supported by practical features for multilingual support, integrated boarding passes, and real-time updates in one place. The visual design is clean and shows necessary information, reflecting an understanding of the needs of travellers for convenient experiences that adjust according to various factors.
Francine Halim	I think it's really cool to have an Air Canada Chat bot that can function on a mobile app. It seems interesting and something that I would use based on it's convenient features all in one app, showcasing flight details and airport maps.

Question	Does this sound like something you would use? Why or why not?
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Interviewee	Answers
Muhammad Anas Nadeem	Yes, I'd use it because it makes airport navigation and flight updates way easier, and it saves time.
Lucy price	Yeah, if I were in a foreign country where it's harder to understand the signs in the airport
Dorothy Yuen	If I travelled more, then I would
Kiana fok	Yes, it would definitely be super useful because I very commonly travel and am at the airport in all parts of the world.
Varinder Singh	Yes, if it saves time.
Ayan Ali	Yes, since airports can be a maze and if it can help and make my journey easier, then, of course, I will use it
Harkomal Kaler	Yes, I don't travel often, but if I do, this could be nice for airports, especially if u don't know the layout of the land and knowing if ur flights are delayed or not is helpful, especially if u have a connecting flight
Samuel McCallen	Yes, because it is a convenient and quick way to address doubts and concerns.
Rita Hu	Yeah, this definitely sounds like something I would use. Personally, I travel by myself sometimes to a different country, and I'm always anxious about flight booking, support, customer service as well as navigation, cause it gets really stressful to make sure everything goes right.
Jason Palpal-latoc	I would test it out; however, AI customer service chatbots tend to be frustrating to use at times or unreliable.
Steven Ho	I would use it to get info about the airport & the flight, but not to book or work with my personal information for the reasons stated above. It's impossible to guarantee that AI won't commit data collection, so I'd purely use it for convenience on the day of my flight
Ethan Lauritzen	I would give it a try to see how it performs in practice. The concept sounds appealing due to the accessibility of many things in one place. However, I would be skeptical about relying on the service heavily initially since dealing with flight connections and last-minute adjustments requires something a person can reliably depend on. But alongside my current travel tools, I would see how it delivers over time.
Francine Halim	I would definitely use this, and the main reason is not needing to scramble through the internet to find missing information I may need, if it is all able to be located through this app. Additionally, because I don't travel often, there may be information that I am missing or unsure of, so having an AI Chatbox would decrease my worry about waiting for an agent/help centre for any answers.

Question	What do you like about it?
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Interviewee	Answers
Muhammad Anas Nadeem	I like the real-time updates, reminders, and how it supports multiple languages. The hands-free feature is great too.
Lucy price	Seems like it could make travel easier
Dorothy Yuen	Fast responses and reminders for your specific flight
Kiana fok	I like how universally useful a tool to have, and I especially gravitate to the part about helping with language barriers. I find that this is a stressful struggle from both personal experience and family experience.
Varinder Singh	It is able to do most of the functions in one place, instead of having to switch apps.
Ayan Ali	The language, the navigation and and the updates
Harkomal Kaler	I like the real-time assistance, airport maps and knowing if a flight is delayed, and the itinerary is cool too.
Samuel McCallen	I like the ease of use.
Rita Hu	I like how it reduces wait times to get help and has automated reminders with navigation. It is one of the things that is most challenging for me when I travel alone. Getting regular reminders will help me stay on top of everything I need to do, and I won't be as anxious as having a map that helps me get to where I need, whether it's to pick up my luggage or get to my gate.
Jason Palpal-latoc	I think it is great to have multilingual support for airport travel, which serves people internationally who come from unique backgrounds and cultures. Automatic flight updates and airport navigation assistance help reduce the stress and confusion when airport roaming and staying up to date on one's travel itinerary. The name is appealing to Canada's culture.
Steven Ho	It makes information that can be found online more easily accessible and quicker to access.
Ethan Lauritzen	The real-time flight updates with automated notifications would provide peace of mind and help with planning. The seamless integration of all travel functions into one platform reduces the need for reliance on excessive platforms/services during travel.
Francine Halim	Sometimes waiting in line for customer service can be extremely frustrating, especially if I am at the airport and require assistance, and my flight is going to be soon. The chat box definitely makes this approach a lot easier without needing stress, and being able to get the answers/assistance I need right away.

Question	What would you change or improve?
Interviewee	Answers
Muhammad Anas	Maybe add offline support in case there's no Wi-Fi at the airport, and make

Nadeem	sure it's fast and doesn't lag.
Lucy price	Honestly don't know
Dorothy Yuen	Maybe add an option to chat with a real-life customer service if AI bots cannot answer specific questions
Kiana fok	I genuinely really like it, I might emphasize how helpful it can be for flight delays or cancellations assistance.
Varinder Singh	If the bot had access to a real human representative on the back end, so that in case it doesn't have the right answer, the bot can contact the human representative by itself and get the right information. Instead of having the customer wait again to talk to a human representative.
Ayan Ali	I would add the feature of it updating the user on whether their gate has been switched last minute and a system which gives you an estimated time of going through security and check in to the airplane, just in case you are running very late, something like that might come in handy, if all of this hasn't been added already
Harkomal Kaler	I would add in a feature where you could basically use it as google maps where it's not just a map but gives u directions on turning left when or turning right when and then also adding in a feature where u can take a photo of smt and it will tell you where u are in the airport and how long it'll take you to get to ur gate. It would also be cool to see if there is a customs delay, so I know I need to leave earlier
Samuel McCallen	Maybe some data validation screening?
Rita Hu	One thing I would add to improve would be the security of the tickets with passports, as well as a reassurance that if the phone were to be lost or stolen or broken during the trip, there will still be a way to make sure the account tickets are not lost and still be able to use them.
Jason Palpal-latoc	It's hard to know what needs to change or improve without being able to test the service, but I think a feature to move conversations from AI to a human customer service agent would be beneficial in situations where the AI Chatbot may not be useful. There are many flight complications that someone may have, but an AI Chatbot may be unable to discern or provide proper support, so communicating with another human may be better.
Steven Ho	I'd scrap the AI booking and flight management entirely just bc the public backlash about AI being used to potentially farm client data is too probable and may tank AC's already middling reputation
Ethan Lauritzen	To improve personalization, incorporate travel history and preferences to provide more targeted recommendations and proactive recommendations or assistance. Integration with ground transportation options such as ridesharing, public transit, and parking would expand the reach of the travel solution. And lastly, the app could benefit from offline functionality for situations with poor connectivity at airports.
Francine Halim	Something I would improve is possibly having the chatbox be able to notify

	security or certain people if I am having any related-issues.
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Question	Would you be willing to pay for this product either directly through a subscription or indirectly through higher fares? If so, how much?
Interviewee	Answers
Muhammad Anas Nadeem	No, unless it's free with the ticket.
Lucy price	No probably not
Dorothy Yuen	Probably. I'm not sure
Kiana fok	I'm not quite certain until the final product, but I would highly consider paying around \$50 a year.
Varinder Singh	Ideally, I would prefer free. But maybe during booking a ticket, there could be a small additional charge, such as \$5.99
Ayan Ali	No, I wouldn't prefer paying for this product initially as I would use other methods to get around like the ones I am currently using, but once I use something like that and get used to it then perhaps I might consider paying for it and not more than 15 dollars, and that too indirectly through higher fares.
Harkomal Kaler	No, I think it should already be included in your ticket that you pay cuz a lot of people pay a lot of money for their tickets!
Samuel McCallen	No, I would not.
Rita Hu	I would pay indirectly through higher airline fares since people, including me. I don't travel much, so having to pay an annual or monthly subscription seems unnecessary if I only fly 2-3 times a year. I would pay maybe \$10 more or \$15 more on top of the ticket I paid for.
Jason Palpal-latoc	Definitely not through any form of subscription service; Flying often occurs 1-2 times a year, so paying for a subscription would not be beneficial. Higher fares would also make me unlikely to choose Air Canada to begin with when booking. If there are additional charges for an AI chatbot, I will be unlikely to use it.
Steven Ho	Would not pay for this. I'd appreciate it as a free upgrade to the app, but I would not pay to speed up my internet searches by a minute or two
Ethan Lauritzen	I would not want to pay for this product through subscriptions or higher fares. However, I would be comfortable with the service generating revenue through integration with airline rewards systems and upgrade notifications. (ex. notifications of available seat upgrades, lounge access, or other opportunities with a small commission on those purchases, or if it helped optimize discounts with partner services.
Francine Halim	I would not be willing to pay for the product as a subscription, but I prefer an



	indirect approach by having higher fares. I would say between \$2-5.
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Question	What would make you more likely to try this chatbot?
Interviewee	Answers
Muhammad Anas Nadeem	If it's free and easy to use without needing a lot of setup.
Lucy price	If I saw other people using it and talking about it (maybe on social media)
Dorothy Yuen	If I travelled more
Kiana fok	Good reviews and other people talking about it.
Varinder Singh	Flight status and gate navigation, and also if it can track my luggage, that will be helpful.
Ayan Ali	Curiosity
Harkomal Kaler	If there were no price tag for it, or a free subscription version.
Samuel McCallen	Direct advertisements.
Rita Hu	Having discounts or awards, or gamifying the system, when I am travelling. So maybe I can shop for things directly from the app that they provide at the airport or on the plane.
Jason Palpal-latoc	I think Maple is a user-friendly addition to ease the experience of flying for customers by making the entire process easier and more understandable when customer service agents may be busy or unavailable.
Steven Ho	I'd already be willing to try it if it were built directly into the AC app. Possibly would be willing to try it more if it could help with Aeroplan points management, such as viewing recent points transactions and whatnot, but it cannot have the ability to make purchases or manage my account on my behalf
Ethan Lauritzen	A free trial period of 30 days with complete feature access without being necessary to add a payment method would be my personal requirement. The value proposition of using the app versus alternatives would have to be clearly supported by strong privacy handling practices and transparent policies that detail how my personal data is being used.
Francine Halim	Judging by how it's made for Air Canada and it's meant to act as a functioning support, I wouldn't particularly enjoy the idea of having to pay a fee. But, I would be more likely to try the app if I heard good feedback from people around me.

Question	Do you have any concerns about the fundamental viability of the innovation?
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	<b>If so, what are they?</b>
<b>Interviewee</b>	<b>Answers</b>
Muhammad Anas Nadeem	Maybe if the app lags or doesn't work well without the internet at airports.
Lucy price	No
Dorothy Yuen	nope
Kiana fok	No
Varinder Singh	I feel like Air Canada already has a bot like this. And I think they were sued a few years ago due to faulty information.
Ayan Ali	I don't think so
Harkomal Kaler	No
Samuel McCallen	Accuracy of data provided.
Rita Hu	Nope, I do not.
Jason Palpal-latoc	AI Customer Service Chatbots are often frustrating to communicate with, especially when complications may arise with flight travel plans, which is very stress-inducing for customers. It is typically easier to communicate, empathize, or come to solutions when problems arise when human interaction is in play rather than human-computer.
Steven Ho	Must be careful with how AI is implemented to make it as neutral as possible, to avoid security and privacy concerns.
Ethan Lauritzen	My first concern is the technical complexity required to integrate and deliver live information from data coming in across a wide range of airports and systems, which could lead to inaccurate information, which in my opinion, is worse than no information. I am uncertain if the AI would have enough data points to handle highly complex travel scenarios.
Francine Halim	No, I do not have any concerns.

<b>Question</b>	<b>What's missing from this innovation that would make it more useful to you?</b>
<b>Interviewee</b>	<b>Answers</b>
Muhammad Anas Nadeem	Offline maps and maybe a quick help option for emergencies.
Lucy price	Nothing
Dorothy Yuen	I think it has everything that I would need
Kiana fok	As I said, maybe something about delays and cancellations, because when that happens, it is super frustrating and takes a long time and a lot of inconvenience. Overall, I love it

Varinder Singh	None atm.
Ayan Ali	At the moment, nothing
Harkomal Kaler	Nothing
Samuel McCallen	Make it desktop compatible. Why just a mobile app?
Rita Hu	I'm not too sure, but I think having some sort of security with it would make me want to use it more, so I don't have to worry about what happens if my phone is broken or stolen
Jason Palpal-latoc	One feature may be adding Air Canada Terms of Service, policies, and accessible knowledge for customer compensation, rights, or entitlements when flight complications arise. The Chatbot should be able to provide such legislation when necessary, as well as answer customer questions, even when it may indicate faults with Air Canada. The ability to check in to flights, change seats, or upgrade flight classes.
Steven Ho	Aeroplan, as stated above
Ethan Lauritzen	More integration with ground transportation and local services would be beneficial. Social features to enable the sharing of updates and travel plans with friends/family would greatly benefit overall utility. Integration with numerous calendar apps with automatic schedule adjustments.
Francine Halim	I'm not sure, the innovation itself already looks very useful!

**Appendix I — Interview Participants' Contact Information**

<b>Interviewee</b>	<b>Email Address</b>	<b>Interviewer</b>
Muhammad Anas Nadeem	muhammadanas073727@gmail.com	Abdullah Bin Omer
Lucy price	Lucyprice3242@gmail.com	Kaitlin Chan
Dorothy Yuen	dorothyuen27@gmail.com	Jennifer Yang
Kiana fok	kianayfok@gmail.com	Jennifer Yang
Varinder Singh	Varindergill855@gmail.com	Abdullah Bin Omer
Ayan Ali	Ayanali0234@gmail.com	Abdullah Bin Omer
Harkomal Kaler	hka197@sfu.ca	Kaitlin Chan
Samuel McCallen	sjm25@sfu.ca	Vincent Kwan
Rita Hu	shanyahu2004@gmail.com	Angela Lim
Jason Palpal-latoc	jpa195@sfu.ca	Jaren Shen
Steven Ho	stevenho2360@gmail.com	Jaren Shen
Ethan Lauritzen	ewl11@sfu.ca	Angela Lim
Francine Halim	francine.halim@gmail.com	Vincent Kwan