



Runway to Recovery

A CONSUMER-FOCUSED ROADMAP FOR CANADIAN AVIATION

SUBMISSION TO THE AIR SECTOR RECOVERY SUMMIT
DECEMBER 2022



CANADIAN
AIRPORTS
COUNCIL

CONSEIL DES
AÉROPORTS
DU CANADA

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Executive Summary

Since being transferred to locally managed airport authorities in the early 1990s, Canada's airports have operated successfully as business corporations where all revenues generated are reinvested back into airport infrastructure. Canadian Airport Authorities manage their operations in a fiscally prudent manner, delivering value for Canadians, visitors and communities. Well-run facilities have enabled the continuous growth of air services for passengers and cargos while supporting tourism, trade and connectivity.

Our airports are natural engines of economic development and enablers of global connectivity for our cities and communities, generating thousands of jobs every year across economic sectors, from logistics to aircraft maintenance, repair, and overhaul, and tourism.

The COVID-19 pandemic showed that Canadian airports can also operate as essential services during disruptive times and help protect Canada's critical supply chains. But it also exposed areas of degradation.

Canadian airports have no shareholders – which means all revenues are reinvested back into operations and capital investments. But in 2020 and 2021, revenues were scarce. The pandemic decimated our finances and hurt thousands of workers, while disrupting supply chains across Canada. The subsequent resurgence of travel demand in 2022 led to flight delays, cancellations and service gaps that upended Canadians' lives.

To restore our long-standing reputation for reliability, Canada's airports recommend a series of concrete steps for the months ahead. Our vision puts the passenger at the centre; traveller experience remains at the top of our minds. To address this, we

recommend the adoption of innovations to streamline the traveller journey, changes to improve transparency and collaboration in the sector, and investments to address infrastructure needs, all with the goal of better air travel for Canadians.

Looking into the future, the Canadian Airports Council (CAC) believes there is an urgent need to protect Canada's historical position as one of the most attractive, competitive, and reliable aviation ecosystems in the world. This white paper outlines concrete recommended steps that we have structured in three action areas.

Deliver measurable improvements to the passenger experience

- To adopt opt-in facial confirmation at all Canadian airports with the objective of increasing the efficiency of passenger flows for domestic and international flights and reduce processing times at the airport.
- To deploy a new security screening Trusted Traveller Program for immediate use at Canadian airports by summer 2023, which should be adequately staffed and focus on reducing wait times at checkpoints.
- To establish a Security Screening Innovation Task Force in Canada, using the integrated model developed by the U.S. Transportation Security Administration (TSA) in 2016, with a view to increase data transparency across the aviation ecosystem and leverage the benefits of open Application Program Interface (API) environments.
- To adopt minimum service-level standards at each step of the travel journey and for each stakeholder involved, accompanied by mutually agreed expectations and regular reporting obligations.

Collaborative transparency and commonality of purpose

- To support data sharing across the entire Canadian aviation ecosystem (i.e., airports, airlines, border security agencies, air navigation providers and aviation suppliers), accompanied by the required legal safeguards to protect commercial confidentiality and address privacy concerns.
- To establish a collaborative framework that provides an accountability structure for each stakeholder within Canada's aviation ecosystem, supported by a common agreement on minimum service levels for normal and irregular operations, and a digitization approach based on a single API.
- To support digitization initiatives that focus on improving the passenger experience at Canadian airports and the achievement of sustainability goals such as reduction of carbon emissions from aviation.

Infrastructure investment at Canadian airports

- To reinvest rents for the next decade with a view to ensure that Canada's airport infrastructure remains modern, efficient, competitive, and capable of supporting long-term sustainability and decarbonization priorities.
- Further capital investments in the form of additional debt may result in higher user fees as Canadian airports are seeking to remain competitive vis-à-vis their U.S. counterparts who have recently received over \$40 billion. The financial outlook is particularly acute for smaller regional airports.
- A reinvestment of rent of \$400 million annually would create nearly 1,400 direct jobs, generate \$110 million in wages with an average salary per job of \$79,700, and contribute approximately \$160 million to Canada's GDP. If we include indirect and induced impacts, the number of jobs could reach 2,400 across Canada, with \$285 million in contributions to GDP.
- Other benefits that could result from direct investments in airport infrastructure include improvements in baggage systems and passenger processes, operational efficiencies resulting in higher aircraft utilization, reduced maintenance costs and energy savings.
- To deploy targeted funding programs for the greening of airport assets and the achievement of ambitious carbon reduction and net-zero objectives.
- To recapitalize the Airports Capital Assistance Program (ACAP), as it is no longer meeting the needs of small regional airports. In particular, we recommend capitalizing ACAP at \$95 million annually and widening the eligibility criteria. Going forward, it is important to ensure that the program is aligned with the evolving needs of smaller airports.

1. Introduction

Since being transferred to locally managed airport authorities in the early 1990s, Canada's airports have operated as business corporations that reinvest all revenue back into airport infrastructure. Canadian airports manage their operations in a fiscally prudent manner, driven by a strong commitment to contributing to the quality of life within local communities and delivering value for Canadians and visitors. Well-run airport facilities have enabled the continuous growth of air services for passengers and cargo, while supporting Canada's tourism and trade priorities through the continuous expansion of regional and global connectivity.

Canadian airports are natural engines of regional economic development, creating direct and indirect employment in and around their respective communities. Prior to the COVID-19 pandemic, our airports were directly responsible for **194,000 jobs**, supported **\$13 billion in wages** and had contributed **\$19 billion to Canada's gross domestic product¹**.

During the pandemic, airports operated as an essential service for Canadians, supporting the movement of medical supplies, vaccines and critical personal protective equipment. More recently, however, major disruptions have exposed areas of service degradation across the entire Canadian aviation ecosystem: airports, airlines, aviation suppliers, air navigation providers and government border and security services.

Our vision: collaboration and commonality of purpose

Our collective goal must be to deliver on the promise to make Canada one of the most attractive, competitive and reliable aviation ecosystems in the world. But we should also look beyond short-term or narrow interests. We all win when passengers feel respected; we should never take them for granted.

¹ Based on 2016 data. Canadian Airports Council (2017). Economic Impact: Canada's Airports in 2016. <https://canadasairports.ca/wp-content/uploads/2020/08/1.-CAC-Airports-Collection-of-Economic-Impact-Reports-1.pdf>

That is why we propose a vision that puts the passenger at the centre. Through collaboration and commonality of purpose, we can address the biggest challenge of the day for our industry: improving passenger experience while addressing key infrastructure gaps that put at risk any progress achieved through the adoption of digitization and data sharing.

Our approach: passenger-centric, solution-oriented

The recommendations in this white paper focus on concrete, proven and viable solutions that are supported by global best practices. Some of them have been talked about for years. Others are more recent, raised by airports across the country to address the recent challenges. All are advanced with the idea that airports want to be part of the solution going forward.

We also see ourselves as natural facilitators for the Canadian aviation ecosystem. Airports are well positioned to orchestrate solutions and contribute to tangible improvements in operational performance and passenger experience.

Our focus: sustainability and competitiveness

Our solutions are driven by an understanding that the aviation industry is naturally designed to play an important role in the achievement of Canada's sustainability objectives, such as reductions in carbon emissions and the 2050 net-zero agenda. Airport infrastructure is also called upon to buttress Canada's global competitiveness in tourism, travel, trade and foreign direct investment, while strengthening our supply chains.

REGAINING ALTITUDE

Toronto Pearson



TORONTO PEARSON: PRE-COVID NUMBERS

50
million
passengers
a year

300K
JOBS IN SURROUNDING
ECONOMIC ZONE

Toronto Pearson is our nation's front door for millions of visitors. The airport connects Canada to the global economy by enabling efficient travel, supporting Canadian exporters, encouraging foreign investment, driving tourism and trade and good, Canadian jobs.

Rent reinvestment over the next decade would unlock economic growth and improve travel for Canadians.
Pearson could invest in:

E-gates, check-in
tech & AI for
aircraft gating



Better on-time performance, digitized processes to improve flow

Baggage system
improvements



20% more capacity, greater reliability and resiliency

T3 transfer facility &
T1 expansion



Grow air service and connectivity for Canada



Airports also help new ideas take flight. Toronto Pearson is pioneering technologies like electronic gates, touchless check-in, AI-controlled baggage handling and virtual bookings that will make travel quicker and easier for Canadians. Airport ecosystems are crucial partners for innovative homegrown companies and ideal proving grounds for future net-zero technologies such as hydrogen-powered vehicles and sustainable fuels.



Pearson handles of Canada's air cargo **40%** and supports **\$42 billion** of GDP

An efficient, tech-enabled airport can be an economic powerhouse for Canada. But we are at risk of being uncompetitive. Airports faced enormous financial and operational challenges due to COVID and, having received relatively little government aid, they emerged from the pandemic with \$3.2 billion of additional debt. In response, Pearson alone deferred \$400 million in capital projects and added \$1 billion in debt. Meanwhile, the U.S. government is investing \$40 billion in its aviation infrastructure, potentially drawing international travellers away from Canada.



Named “Best Airport in North America...” 5 years in a row.

ACI World, 2017-2021

An efficient, tech-enabled airport can be an economic powerhouse.

With passenger numbers expected to double by 2040, several major airports including Pearson will soon hit capacity constraints, holding back the aviation industry and the economy. Pearson are in need of investments to address capacity constraints and modernization, to make up lost ground from the pandemic and ensure they stay ahead of the competition.

2. Passenger experience and the travel journey

The interconnected nature of Canada's aviation ecosystem

Canada's aviation ecosystem is highly integrated, both domestically and globally – disruptions can rarely be attributed to a single cause. Air passenger and cargo operations are inherently complex because of the number of stakeholders involved in delivering these services. And all these interdependencies are vulnerable to external factors, such as weather, staffing shortages and sudden threats to safety and security.

On any given flight departing from a major Canadian hub, individual passengers could be headed to 20 or more destinations, either direct or through connecting flights. The same flight might be subject to constraints including ground delay programs, unionized labour agreements, airline scheduling, flight duty time rules or safety maintenance cycles.

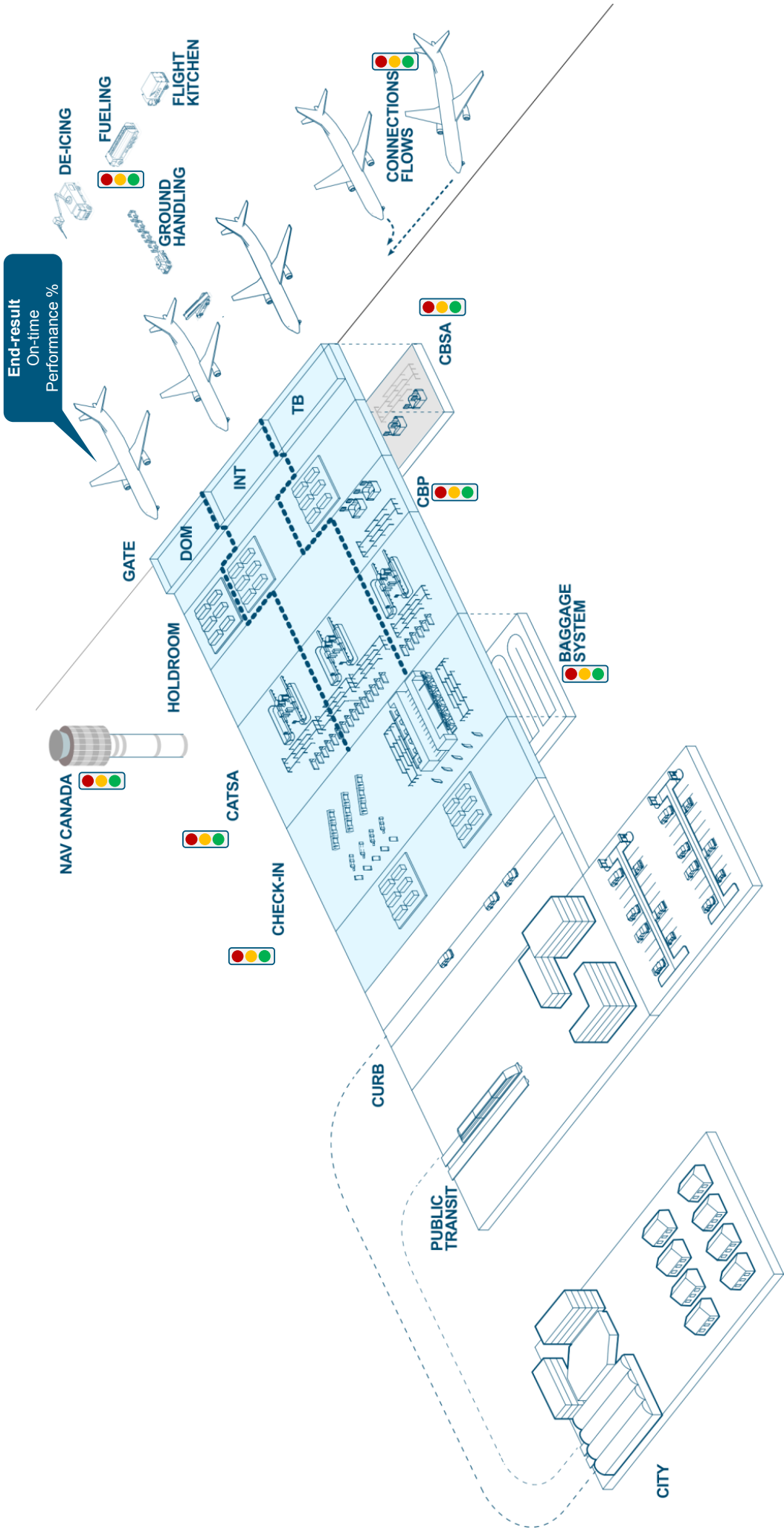
Staffing levels among border and screening officers, air traffic controllers, baggage handlers and other workers can affect the speed of passenger processing, causing flight delays, cancellations and missed connections. A study published by Eurocontrol in October 2022 found that an aviation ecosystem's ability to adjust capacity to fluctuating travel demand has a direct effect on on-time performance (OTP)².

Currently, there is not enough data sharing to address these friction points and related challenges across Canada's aviation ecosystem.

Competing jurisdictions in the U.S. and Europe have and continue to benefit from greater data sharing across their ecosystems, which has reduced disruptions on air operations and the passenger travel journey.

² Eurocontrol, "Data Snapshot #33 comparing On-Time Performance in the United States and Europe" (October 10, 2022), available at: <https://www.eurocontrol.int/publication/eurocontrol-data-snapshot-33-comparing-time-performance-united-states-and-europe> ("

Figure 2.1: Snapshot of Canada's aviation ecosystem: Airport environment

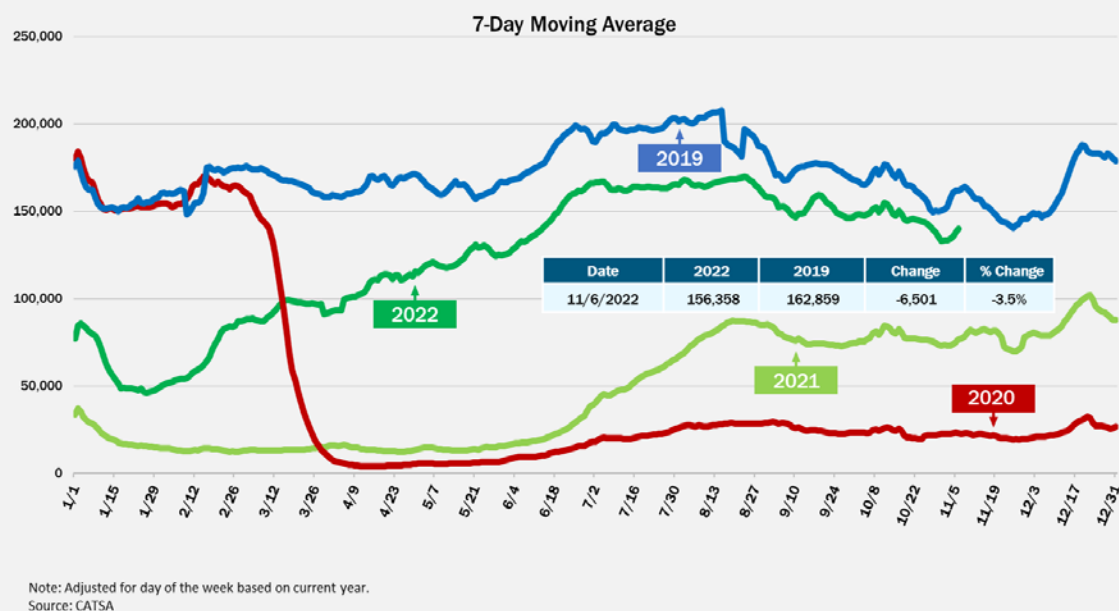


Post-pandemic air travel recovery: trials and tribulations

The wave of flight delays and cancellations across Canada's aviation ecosystem during the spring and summer of 2022 affected thousands of passengers. Negative publicity impacted our airports' longstanding reputation as reliable connecting hubs and stained Canada's brand as a major aviation market for international visitors.

The root causes for these disruptions have been identified as the sudden surge in air travel demand experienced in the spring and summer of 2022 (as shown below), extended government health measures³ and ongoing staff shortages across the entire aviation ecosystem. Other countries and regions faced similar disruptions, including the United States and the European Union, two markets that are highly integrated into Canada's aviation ecosystem through airline alliances, transatlantic joint ventures and code-share agreements that support summer traffic to and from Canada.

Figure 2.2: CATSA throughput (January 2020–November 2022)



³ Health measures and other entry requirements in Canada were only removed in October 2022. See, Public Health Agency of Canada, "Government of Canada to remove COVID-19 border and travel measures effective October 1", News Release (September 26, 2022), available at: <https://www.canada.ca/en/public-health/news/2022/09/government-of-canada-to-remove-covid-19-border-and-travel-measures-effective-october-1.html>

Below is a set of measures that we believe can accelerate the adoption of digital solutions to support a more seamless passenger journey and restore public confidence in Canada's aviation ecosystem.

Recommendations

1) Adopt facial confirmation to increase efficiency of passenger flows

Canada has historically innovated on kiosk models for passenger processing, and it has deployed mobile technologies and e-gates in recent years. However, processes based on facial confirmation have not been fully deployed at this country's airports. By contrast, U.S. Customs and Border Protection (CBP) has already deployed facial recognition technologies at 32 airports to confirm departing traveller identities and at all airports for arriving international travellers⁴.

We strongly encourage Canada's federal government to adopt opt-in facial confirmation to increase the efficiency of passenger flows for domestic and international flights. Our view is that the deployment of facial recognition technologies could also be expanded in partnership with airlines for use during boarding, further enhancing a seamless travel experience. In addition to making it "opt-in," we encourage the federal government to ensure that these technologies are adopted with appropriate privacy safeguards.

2) Leverage trusted-traveller programs to reduce screening wait times

Canada is not keeping the pace with peer countries on the implementation of new processes, innovations and technologies for efficiently screening air passengers. While the global standard is 95% of passengers processed in 10 minutes or less, Canada underperforms, at 85% of passengers at 15 minutes, which is a national average and not a service-level standard that must be achieved at all checkpoints and during peak hours. This situation has a detrimental impact on the passenger experience of departing and connecting passengers and continues to affect the overall performance of Canada's air transportation system.

⁴ U.S. GAO, "CBP Traveler Identity Verification and Efforts to Address Privacy Issues", Testimony Before the Subcommittee on Investigations and Oversight, Committee on Science, Space, and Technology, House of Representatives, at: <https://www.gao.gov/assets/gao-22-106154.pdf>

We strongly encourage the federal government to deploy a new security screening trusted traveller program for immediate use in Canada during the summer of 2023. The new opt-in program should be made available to all Canadian citizens, permanent residents, RAIC holders and Global Entry and NEXUS card holders.

The Canadian Air Transport Security Authority should ensure that the program is sufficiently staffed to enable the expected benefits for air passengers, while also supporting the operational performance of Canada's air transportation network. Trusted travellers should have a wait time of no more than five minutes, measured in 15-minute intervals.

3) Create a security screening innovation task force

Based on the integrated model of the U.S. Transportation Security Administration (TSA) Innovation Task Force, launched in 2016⁵, Canada should pursue an open Application Program Interface (API) environment with the aim of increasing data transparency across aviation stakeholders and improving the travel journey.

Success on this front will require concerted action between government and industry. The TSA model is an example of government, airlines, airports and the vendor community working together to foster a common vision for the future, with the goal of introducing proven technologies to improve the efficiency of security screening processes and optimizing airport system capacity and efficiency.

4) Establish service-level standards at each step of the travel journey

We recommend the adoption of minimum service-level standards at each step of the travel journey and for each stakeholder involved across Canada's aviation ecosystem, accompanied by mutually agreed expectations and regular reporting obligations.

Service-level standards for airports should account for and adjust for differences in size, structure and type of traffic. The establishment of service-level standards is a fundamental step forward in terms of maintaining an adequate passenger experience during both normal and irregular operations.

As will be discussed in the following section, the establishment of service-level standards also requires three key ingredients: data transparency, stakeholder accountability and collaborative frameworks. This approach is not new in the

⁵ U.S. TSA, "Checkpoint of the Future: Evaluating TSA's Innovation Task Force Initiative", (April 27, 2017) available at: <https://www.tsa.gov/news/press/testimony/2017/04/27/checkpoint-future-evaluating-tsas-innovation-task-force-initiative>

industry, but the tools used to deliver higher levels of customer service vary across jurisdictions and specific airports.

For example, in the U.S., airlines are required to submit data under regulation⁶. Data provided publicly includes on-time performance, flight delays, mishandled baggage, oversales, consumer complaints and both TSA and CBP wait times. London Heathrow⁷, Amsterdam's Schiphol⁸ and Singapore Changi⁹ airports require the submission of operational data based on Conditions of Use or Rules and Regulations.

Going forward, Canada should support initiatives that point toward greater collaboration among aviation ecosystem stakeholders, based on accountability, data transparency and better data management.

The next section provides some specific recommendations based on global best practices. Our main objectives remain the same: Improve the passenger experience for Canadians and support our supply chains by enabling the efficient movement of goods across the border.

⁶ See 14 CFR § 234 (Part 234: Airline Service Quality Performance Reports), available at: <https://www.ecfr.gov/current/title-14/chapter-II/subchapter-A/part-234>

⁷ See London Heathrow Airport – Conditions of Use documentation, available at: https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/doing-business-with-heathrow/flights-condition-of-use/conditions-of-use-documents/LHR_Conditions_of_Use_2022.pdf

⁸ See Schiphol Airport has – Charges and Conditions of Use, available at: <https://www.schiphol.nl/en/operations/page/charges-and-conditions-1-april-2019-31-march-2022/>

⁹ See Singapore Changi Airport – Conditions of Use documentation, available at: <https://www.changiairport.com/content/dam/cag/footer/conditions-of-use/CAG%20Conditions%20of%20Use%202017.pdf>

3. Collaborative transparency

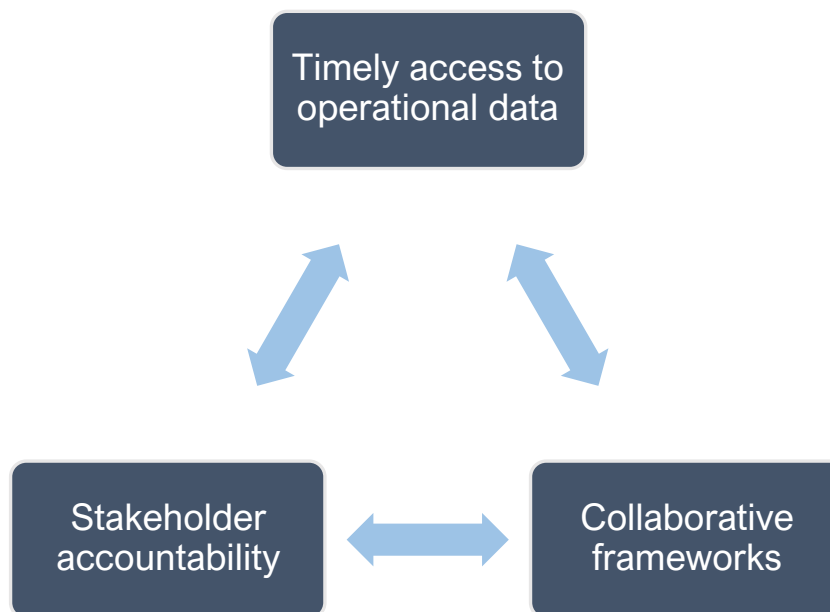
Aviation expends considerable human and financial resources to prevent or mitigate the disruptive effects of cyber incidents, sudden business interruptions, unexpected changes in legislation and government policies, disruptive market developments, natural catastrophes and more¹⁰.

However, as an industry, we currently possess few tools to normalize operations quickly enough after these disruptions occur. Most importantly, we cannot rely on any frameworks for sharing operational data with other aviation stakeholders as part of a broader industry-wide mitigation approach.

Data sharing and collaborative frameworks

Access to operational data and stronger collaboration among aviation stakeholders should be fundamental pillars of a new industry-wide paradigm focused on improving our ability to manage service disruptions and mitigate the effects of unforeseeable events, while also committing to maintain quality passenger experience.

Figure 3.1: Fundamental pillars of the collaborative transparency approach



¹⁰ Allianz, Aviation Risk Report 2020: Safety and the State of the Nation, (October 2019), available at: <https://www.agcs.allianz.com/news-and-insights/reports/aviation-risk-report.html>

The adoption of a collaborative transparency approach will inevitably require greater stakeholder accountability and the implementation of industry-wide frameworks focused on solutions.

As operators of critical national transportation assets, we believe that collaborative transparency can deliver on the wider goal of providing a more seamless experience for passengers while also supporting the efficient movement of goods by air.

Recommendations

1) Promote data sharing across Canada's aviation ecosystem

The Canadian aviation environment needs a standardized approach for digitization rooted on aviation Application Program Interfaces. This model is used worldwide to improve visibility. For example, Amsterdam Schiphol's Open API model has provided business partners and stakeholders with real-time data for various airport processes since 2019¹¹. Similarly, data transparency at the U.S. TSA includes a set of APIs available for critical operational information by checkpoint and airport¹².

Our vision for APIs is to allow the sharing of relevant data, both timely and efficiently, across stakeholders within Canada's aviation ecosystem. For instance, time off the gate and bag system data are critical for understanding where potential delays can occur and for adapting capacity to fluctuations in demand.

However, we cannot develop this vision alone: We need all parties: airports, airlines, border and security agencies (U.S. CBP, CBSA, CATSA), NAV Canada and aviation suppliers to be part of a single API system. Legal safeguards to protect the commercial confidentiality of participants and the privacy of travellers should also be considered.

¹¹ To explore some of Schiphol's APIs, access the Developer Center home page at: <https://www.schiphol.nl/en/developer-center/page/explore-all-schiphols-apis-in-the-developer-center/>

¹² U.S. Transportation Security Administration, "Checkpoint of the Future: Evaluating TSA's Innovation Task Force Initiative" (April 27, 2017), available at: <https://www.tsa.gov/news/press/testimony/2017/04/27/checkpoint-future-evaluating-tsas-innovation-task-force-initiative>

It is our view that the operational performance of Canada's aviation ecosystem is dependent on the free flow of relevant data to support with planning, mitigation, reset and recovery. Data transparency is essential for coping with disruptions, protecting the passenger experience and measuring progress over time. Data-sharing models currently used throughout Europe and at some U.S. airports have demonstrated that APIs can be used creatively to improve passenger experience.

Some hold the view that enough data is already shared with airports. It is true that much is shared, but too much of it is fragmented – shared informally or disjointly through e-mails, Excel files, proprietary websites and other scattered practices. Canada must move to a single API to reduce manual data re-entry and gain the benefits of commercial privacy-protected data sharing. Competing jurisdictions do this and they gain from higher-quality decisions and responses to events both predictable and unpredictable.

2) Implement collaborative frameworks to improve passenger experience

We believe that constructive engagement among aviation stakeholders is essential for improving passenger experience and coping with future disruptions to Canada's aviation ecosystem. We also believe that defining a collaborative way forward is in the best interest of the travelling public and the thousands of workers who help make Canada one of the world's safest and most reliable countries for aviation.

To maximize transparency and accountability, we propose the establishment of a collaborative framework based on (1) a general accountability structure for each participant, (2) a common agreement on adequate service levels for normal and irregular operations among aviation ecosystem stakeholders and (3) a well-defined digitization approach.

Figure 3.2: Components of a collaborative framework for Canada's aviation ecosystem



An effective digitization approach should enable data sharing through open API systems, provide consistency across the entire Canadian aviation ecosystem and address potential commercial sensitivities, which so often can be an initial barrier to data sharing, especially for airlines.

3) Support digitization initiatives at Canadian airports

Digitization is a key dimension of the fourth industrial revolution¹³ and a fundamental aspect of our industry's road towards a seamless and hassle-free travel journey.

For example, real-time data enabled by digital twinning technologies allows immediate access to performance-tracking systems linked to passenger experience and sustainability goals¹⁴. Several airports around the world, including Canada, are already using digital twinning to monitor and analyze passenger flows to improve passenger experience¹⁵ or trialing it as a platform to measure aircraft greenhouse-gas emissions¹⁶.

Aeroporti di Roma is a case in point that illustrates how digital twinning can improve operational performance for the benefit of travellers. Real-time data and visual analytics have enabled Aeroporti di Roma to schedule flights, gates, staff, baggage, car parking and security more effectively, including at times of disruption.

An aspirational goal would be to support the digital maturity of Canada's entire airport network – large hubs, medium-sized facilities, regional and remote airports – to ensure that none are left behind and that the integration of digital platforms focuses on improving passenger experience and operational performance.

¹³ World Economic Forum, "The Fourth Industrial Revolution: What It Means, How to Respond" (January 14, 2016), available at: <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

¹⁴ Airports Council International (ACI), "Digital Twin: A Real-Time Interactive Airport Visualization Tool" (August 31, 2021), available at: <https://blog.aci.aero/digital-twin-a-real-time-interactive-airport-visualization-tool/>

¹⁵ Diginomica, "Digital twin enables customer experience renaissance at Rome airport", (August 31, 2022), available at: <https://diginomica.com/digital-twin-enables-customer-experience-renaissance-rome-airport/> | Smart Cities World, "Airport Authority of Hong Kong progresses its smart airport initiatives" (June 16, 2020), available at: <https://www.smartcitiesworld.net/news/airport-authority-hong-kong-progresses-its-smart-airport-initiatives-5367>

¹⁶ Future Travel Experience, "YVR continues passenger experience innovation with launch of digital twin" (March 2022), available at: <https://www.futuretravelexperience.com/2022/03/yvr-continues-passenger-experience-innovation-with-launch-of-digital-twin/>

FINANCIALLY CONSTRAINED



Montréal-Trudeau
International
Airport

YUL MONTRÉAL-TRUDEAU: PRE-COVID NUMBERS (2019)

20.3
million
passengers

152
DESTINATIONS



35 Air
Carriers



After a long period of stagnation in its destination offering, YUL, Montréal-Trudeau International Airport has been on an impressive upswing for almost a decade now. 2019 saw record breaking traffic month over month and 2020 started with the same vigor until the pandemic suddenly put a stop to this growth.

Demonstrating once again its historical resilience, the air transportation industry has seen a return in passenger numbers since the summer of 2022.

This fall, YUL international traffic has already rebounded past its pre-pandemic peak.

This growth over the past few years can be explained by:

- Montreal's strong economy
- Sixth freedom strategy promoting YUL as a hub for North American passengers to international destinations
- Increase in immigration
- Progressive lack of international capacity in adjacent hub airports
- Air Canada has increased its service offering at YUL significantly in recent years.



Airside capacity constrained

In 2016, the addition of gates provided the first impetus to add capacity to international markets. The domestic gates is struggling to keep up with demand, making efficient connections to international destinations difficult. Two 1960's era runways are currently undergoing a complete overhaul.



City-side capacity becoming obsolete

The multi-level parking and pick-up and drop-off curb lanes are at the end of their useful life and will need substantial investment. This is a priority area for airport investment due to security.

If it were only a matter of adding infrastructure to accommodate passenger growth, YUL, like most other Canadian airports, would be doing just fine. YUL's challenge is financial. So it is difficult to look ahead and think about adding capacity, while dealing with so many outdated facilities.

The future – a financial challenge

There is a consensus among carriers on the need for rapid capacity addition on both the air and city sides. Construction program plans will be ready in 2025 and 2026.

Increased demand for the use of new technologies is raising the level of complexity of our operations.

Expectations related to sustainable development and decarbonization call for the addition of new functionalities to the platform, while some revenue sources are becoming less predictable to meet them.

In order to adequately address all of these challenges, all programs could be accelerated, thus contributing to a significant increase in YUL's debt level. The major investors in the bonds issued to date are pension plans and life insurance companies. However, their investment policies require that bond issuers have an "A" credit rating. Too much debt would impact our rating and overshadow any acceleration of our investment programs.

Currently, with record levels of debt, it is not feasible to provide air carriers and passengers with the facilities that meet their expectations.

YUL wants to play its role as a significant regional economic growth engine. In order to do so, we need rent reinvestment to address the following infrastructure priorities:



Baggage system

\$300 million
Digitize and
improve baggage



Gate capacity

Add 10 Gates
Reach 25 million
passengers by 2026



Prefab low-cost remote gates

\$300 million
Respond to
immediate growth

4. Airport infrastructure

Post-pandemic financial context

We recognize that the current model has enabled our airports to self-finance more than \$30 billion worth of infrastructure investments since the mid-1990s, consolidating our airports as award-winning transportation assets¹⁷ that are highly regarded by travellers around the world and a source of pride for Canadians.

However, the COVID-19 pandemic decimated our finances due to the sudden loss of revenue caused by low levels of air traffic, especially during the period from March, 2020, to March, 2022¹⁸. Despite some relief measures introduced by the federal government, such as rent deferrals and temporary programs aimed at protecting regional connectivity¹⁹, we have taken an additional \$3.2 billion in debt to cover fixed operational expenses and attend to immediate maintenance needs. Meanwhile, we have had to cancel most capital projects.

Canadian aviation is a network of hubs and smaller regional airports feeding them, and we need the entire system to be healthy. For many regional and small airports, traffic has yet to recover – some are still at 50% of pre-pandemic traffic.

This puts additional pressure on their financial positions. Many of these airports cannot turn to the debt market and are left with just one option: increasing their fees. Regional and small airports need different considerations for the challenges they face.

¹⁷ Canada's main hubs have been consistently ranked in the top10 of North American airports and Canadian airports have figured in the top 100 of Skytrax since at least 2010.

¹⁸ Air travel was restricted throughout the pandemic, including domestic travel, impacting both aeronautical and passenger driven non-aeronautical revenue for airports.

¹⁹ See, Section 2.1.11 on Support for the Air Sector in Canada's Fall Economic Statement 2020, available at: <https://www.budget.gc.ca/fes-eea/2020/report-rapport/toc-tdm-en.html>

Current needs and foreseeable risks

We are currently in a situation where additional capital is needed to ensure that we meet the needs and expectations of the travelling public. If this capital comes only in the form of additional debt, we may be required to increase user fees in order to remain competitive with our peers south of the border, who have received more than \$40 billion in operational and infrastructure funding from the U.S. government²⁰.

The reality is that Canada's airport system finds itself at a competitive disadvantage. Without decisive and concrete actions to reverse the situation, this can translate into a permanent loss of competitiveness versus U.S. airports in the coming years, especially as we battle to attract more visitors and connecting traffic through Canada from emerging and high-growth regions in Asia and Latin America.

Without capital injections, our airports risk long-term capacity constraints that may limit our ability to attract international visitors, support Canada's supply chain and invest in greener and more sustainable infrastructure.

Losing passengers to U.S. airports and other global competitors can ultimately curtail Canadian airports' ability to support economic activity in our communities. For example, a hypothetical loss of 10 million passengers per year – less than 10% of the total number of passengers we served in 2019 – would equate to roughly 16,000 direct jobs and approximately \$1.4 billion in direct GDP.

With a long-term view of better managing cost pressures and not compromising on the level of service provided to travellers, we have developed the following set of recommendations, which we believe will also strengthen the Canadian airport system's resilience to future external shocks and black-swan events.

²⁰ We note that \$25 billion was made available to airports through the Bipartisan Infrastructure Law alone, available at: <https://www.whitehouse.gov/bipartisan-infrastructure-law/>

Recommendations

1) Reinvest rents and allow for flexible capital financing

A reinvestment of \$400m in airport infrastructure annually would create nearly 1400 direct jobs across the country, generate \$110m in wages with an average salary per job of \$79,700, and contribute approximately \$160m in GDP. If we also include the indirect and induced impacts of such an investment, we could expect 2400 jobs and \$285m in contributions to Canada's GDP.

Figure 4.1: Economic impact of capital infrastructure investment in Canada (~\$400m)

	Employment (jobs)	Labour income (\$ millions)	GDP (\$ millions)	Output (\$ millions)
Direct	1,378	110	160	400
Indirect	660	46	73	132
Induced	406	21	52	81
Total	2,444	177	285	612

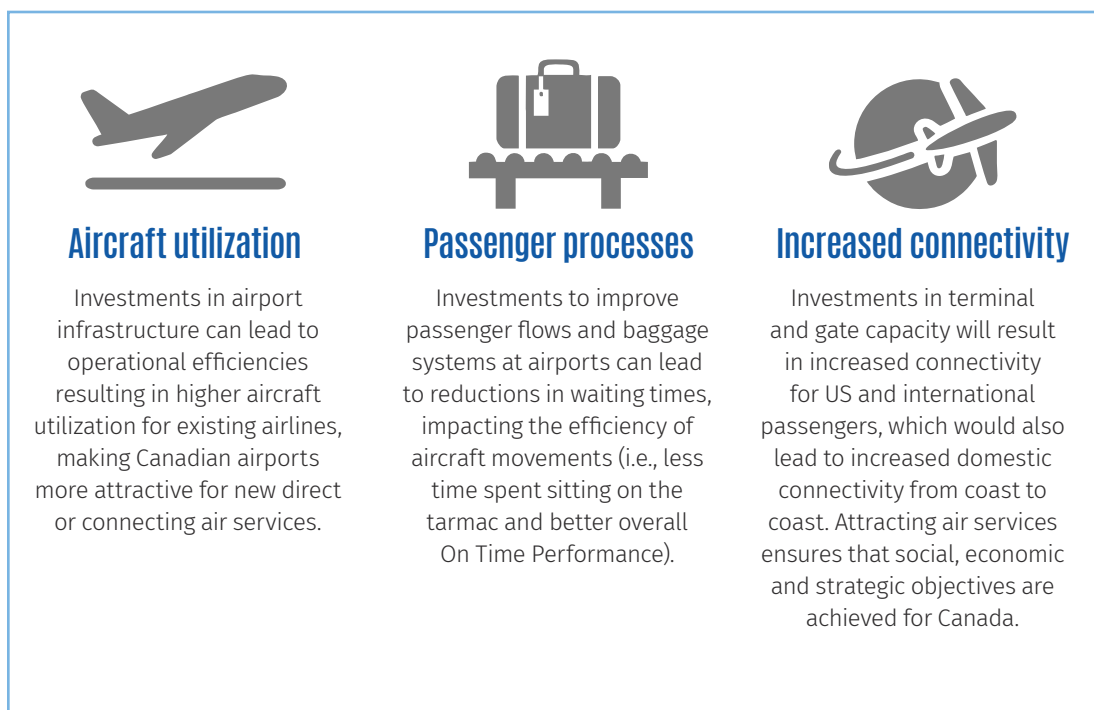
Note: Monetary impact (labour income, GDP, and output) are stated in 2022 dollars.

A recent study published by Airports Council International – North America estimated that each dollar invested in airport infrastructure has the potential to generate up to \$2.50USD in economic growth in the United States²¹. Canada's greater dependency on aviation to support trade relations, foster travel and tourism, and protect its supply chains would signal an even greater return on investment (ROI) as a result of rent reinvestments in airport infrastructure.

Other potential benefits would include reduced maintenance costs as newer facilities and systems can create cost-efficiencies at the level of energy consumption and management of passenger flows. Investments in infrastructure can also provide greater reliability of baggage systems due to the introduction of newer technologies. These improvements can have a direct, tangible, and measurable impact on the improvement of the passenger journey and increase the competitiveness of Canadian airports vis-à-vis their U.S. counterparts.

²¹ ACI-NA, "Building the Runway to Economic Growth" (March 2021), available at: 2021ACINAIInfrastructureNeedsStudy.pdf (airportscouncil.org)

Figure 4.2: Some Examples of how Airport Rent Reinvestments Benefits Canadians & Visitors



Rent reinvestments cannot be attached to limits on the airports' ability to levy charges. The removal of airports ability to set charges would have unintended consequences regarding current and future debt covenants.

In addition, allowing for more flexible capital financing options would also help airport authorities to address the current infrastructure deficit beyond the options of debt through loans and bonds, and user fees.

2) Deploy funding programs for the greening of airport assets

The air sector has committed to the Net Zero 2050 agenda²² and is actively working on an Aviation Carbon Reduction Plan in partnership with the government of Canada²³. But greening airport infrastructure comes with a steep price tag.

As outlined above, COVID-19 has forced Canadian airports to take on substantial debt levels. Given the critical importance of greening airport infrastructure assets, we recommend that the federal government deploy targeted funding programs to

²² Airports Council International (ACI) World, Long Term Carbon Goal for Airports, <https://aci.aero/wp-content/uploads/2021/09/LTCG-FAQ.pdf>

²³ See Canada's Aviation Climate Action Plan, <https://tc.canada.ca/en/corporate-services/policies/canada-s-aviation-climate-action-plan>

help support the required investments, similar to the programs in place related to safety upgrades but available to all levels of airports. Having the federal government set up a technology or innovation funding program that airport authorities would be able to access would help airports remain competitive and on track with climate change action commitments.

For example, in the U.S., the government has recently provided 76 grants to airports focused on improving sustainability of airport terminals (including funds for a zero-carbon electricity plant in Dallas-Fort Worth).²⁴ Similarly, under the European Green Deal, the EU has funded €75 million towards research and innovation programs for airports²⁵.

3) Recapitalize the Airports Capital Assistance Program (ACAP)

The Airports Capital Assistance Program (ACAP) is no longer meeting the needs of small regional and local airports across the country. Funding has been frozen at \$38 million for 20 years and industry had already estimated (before the pandemic) that ACAP would need to be funded at \$95 million annually to keep pace with inflation and regulatory requirements. The funding has only been meeting the most acute needs.

ACAP is an essential tool to ensure airports can keep up with their safety and security investment requirements and for delivering long-term investment in regional economic development and prosperity.

We recommend capitalizing ACAP at \$95 million annually and have the eligibility criteria be widened. Specifically, the funding levels and criteria changes made during the COVID-19 pandemic should be made permanent to ensure that the program meets the increased needs of smaller airports.

²⁴ White House Press Release (2022) <https://www.whitehouse.gov/briefing-room/statements-releases/2022/07/07/biden-administration-announces-nearly-1b-in-bipartisan-infrastructure-law-funding-improving-airport-terminals-across-u-s/>

²⁵ See here for more information on the three programs <https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20programme%2Fcode%3D%27LC-GD-5-1-2020%27&p=1&num=10&srt=/project/contentUpdateDate:decreasing>

5. Conclusion

Our airport members are committed to working with the federal government and all stakeholders within Canada's aviation ecosystem to meet and surpass passengers' needs in the weeks, months and years ahead. At the same time, we are mindful of the urgent need to address certain structural gaps that put at risk the long-term competitiveness of our airport ecosystem, especially in the areas of digitization, collaboration, data sharing and capital investments. We are prepared to make the changes necessary to meet passengers' needs, maintain reasonable user fees and build sustainable infrastructure, but due to the financial impacts of the pandemic, we require temporary support to continue our recovery.

We recommend that the federal government allow for more flexible financing options and reinvest the \$400 million airports pay in annual rent toward infrastructure improvements. It should also deploy targeted funding programs for green infrastructure and recapitalize the Airports Capital Assistance Program at \$95 million annually to help small regional and local airports keep up with their safety and security investment requirements.

This white paper is a concerted effort across our membership to put forward concrete solutions that have been proven and tested in competitor markets such as the U.S., Europe and Asia. The viability of our solutions depends on the establishment of collaborative frameworks that set the basis for greater data sharing, transparency and accountability. We believe that this approach can improve the ability of Canada's aviation ecosystem to manage service disruptions and mitigate the effects of black swan events such as pandemics.

As natural facilitators within the aviation ecosystem, we are well positioned to orchestrate the implementation of data-sharing solutions and collaborative frameworks that can bring tangible and measurable improvements to the passenger experience and travel journey.

